

# JADAVPUR UNIVERSITY



## ANNUAL REPORT

2019-2020



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Annual Report 2019-20

# ANNUAL REPORT

(APRIL 2019- MARCH 2020)

यादवपूर विश्वविद्यालय



**JADAVPUR UNIVERSITY**  
KOLKATA 700032  
INDIA

**Annual Report 2019-20**

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JADAVPUR UNIVERSITY

KOLKATA 700032

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JADAVPUR UNIVERSITY

## Annual Report 2019-20

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PROFESSOR SURANJAN DAS  
VICE-CHANCELLOR

अध्यापक सुरञ्जन दास  
उपाचार्य



JADAVPUR UNIVERSITY  
KOLKATA-700 032,INDIA

OFFICE OF THE VICE-CHANCELLOR : AUROBINDO BHAVAN ANNEXE

As with any other university, 2020 was an extremely difficult year for Jadavpur University. The pandemic had a disruptive impact on the higher education system the world over, and our University did not escape its effect.. Yet, the University community sought to address the challenge through innovative means.

Our University was forced to put on hold the time-tested method of physical class-room teaching. But instead of falling back on conventional online classes we opted for the use of electronic/digital means for academic activities, including teaching. In doing this, too, we strove to address the issue of the digital divide by mobilizing resources to provide access to those of our students who could not have otherwise joined the new digital based teaching-learning process.

It goes to the credit of the University that even in the midst of such a stressful period it could sustain its quest for excellence, which received appropriate national and international recognition. The 2020 National Ranking Framework accorded the University the 5<sup>th</sup> position among the country's universities. The Times Higher Education World University Ranking 2021 placed Jadavpur University among the best universities of the country; the QS India Ranking 2021 has also accorded us the second position among the country's state universities; in the 2021 QS World University Ranking our University is ranked among India's top 14 higher education institutions, which include only two state universities – Jadavpur University and Savitribai Phule University, Pune. Jadavpur's excellence in the teaching-learning field has received deserved recognition in a 2020 Stanford study which has included 30 of our fellow scientists among the top 2% scientists of the world.

What has been particularly striking about our University is its ability to fulfill its social commitment along with the pursuit of academic excellence. On the one hand, during the Amphan natural calamity and the pandemic situation the University community was involved with organizing community kitchens, providing medical relief, distributing sanitizers, constructing shelters and holding night classes for the socially disadvantaged. At the same time, the teachers, researchers and students joined hands to produce masks at an affordable price, develop models of low cost ventilators and formulate the blueprint of a device to detect from a distance those who are not using masks. True to its legacy, the University has also been able to keep alive the spirit of what Amartya Sen calls, the 'argumentative Indian', remembering the advice of Gurudev Rabindranath Tagore:

We can only rouse the best in others by means of the best in ourselves, and in this best will lie the welfare of both. (Convocation Address, University of Calcutta, 1937)

I take this opportunity to put on record the University's gratitude to the Joint Registrar Dr. Sanjay Gopal Sarkar, the Publication Officer Debarati Sinha Chaudhuri, and the staff of the University Press for their tireless efforts in producing the 2020 Annual Report at a time when the current pandemic has jeopardized the normal functioning of the campus.

Professor Suranjan Das  
Vice-Chancellor

যাদবপুর বিশ্ববিদ্যালয়

DR. PRADIP KUMAR GHOSH  
PRO-VICE-CHANCELLOR  
ডঃ প্রদীপকুমার ঘোষ  
সহ-উপাচার্য



JADAVPUR UNIVERSITY  
KOLKATA-700 032,INDIA

OFFICE OF THE PRO-VICE-CHANCELLOR : AUROBINDO BHAVAN ANNEXE

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MESSAGE

I am pleased to know that alike previous years Jadavpur University is going to publish “Annual Report” for the year 2019-2020. It is indeed a great achievement for a university to prepare “Annual Report” which highlights the achievements and academic attainments of the faculties, Research Scholar, students & other stakeholders of the university as a whole. Their contributions also help the university to showcase to the society at large.

The report also provide us the information about various extra-curricular activities of the university. I take this opportunity of congratulating the entire university community for their hard work & dedication to publish such an excellent Annual Report.

I wish every success of this publication of this Annual Report.

Dr. Pradip Kumar Ghosh  
Pro-Vice Chancellor



যাদবপুর বিশ্ববিদ্যালয়

PROF. CHIRANJIB BHATTACHARJEE  
PRO-VICE-CHANCELLOR  
অধ্যাপক চিরঞ্জীব ভট্টাচার্য  
সহ-উপাচার্য



JADAVPUR UNIVERSITY  
KOLKATA-700 032,INDIA

OFFICE OF THE PRO-VICE-CHANCELLOR : AUROBINDO BHAVAN ANNEXE

MESSAGE

It is great to know that we are preparing Annual Report for Jadavpur University on the basis of its activities over the year 2019-2020. Generally, Annual Report is published on the day of Convocation. We all know that Jadavpur University religiously observes its Annual Convocation on 24<sup>th</sup> December every year. December 24<sup>th</sup> has its own significance for two major reasons, i) Jadavpur University was founded on December 24, 1955, and ii) 24<sup>th</sup> December is also the birth date of the founder Vice-Chancellor of Jadavpur University, Prof. Triguna Sen.

As per my understanding and believes, the Annual Report of an institution is always considered as the mirror image of the institutional growth and progress. The year 2020 was something different from all the earlier years in the context of prevailing world wide COVID-19 pandemic situation. The normal functioning of the University, as well as research activities have got seriously affected because of the lockdown prevailing over the major portion of the calendar year due to this COVID-19 pandemic, and with a commitment to maintain the social distancing protocol as prescribed by World Health Organisation (WHO).

Convocation 2020, which was supposed to be held on 24<sup>th</sup> December, 2020 has been kept in abeyance, instead all the degree certificates are being provided to the candidates directly without organising any degree-awarding ceremony event. I am hopeful, 2021 will be something different and we will be able to go back to normal schedule because of the massive vaccination drive undertaken by the Government. We will go for NAAC accreditation in this year, so we have to work hard to reach the milestone, which we deserve in terms of its National and International recognition.

The progress and achievements of an academic institution like ours is the result of hard work and commitment for the excellence by various stakeholders of the University ecosystem. Apart from academic achievements, this report always provides us the information about our achievements, milestones and major accomplishment and various extra-curricular activities of the university in various areas during last one year.

I would like to thank everyone whose hard work, dedication and perseverance make it possible to bring such an excellent and accurate Annual Report for the year 2019-20 for Jadavpur University. Undoubtedly, I feel privileged to be associated with the publication of this Annual Report, and Jadavpur University, as a whole.

Prof. Chiranjib Bhattacharjee  
Pro-Vice Chancellor

Annual Report 2019-20

**SPECIAL CONVOCATION  
AND THE  
63<sup>RD</sup> ANNUAL CONVOCATION ADDRESS  
BY  
PROFESSOR SURANJAN DAS\*  
JADAVPUR UNIVERSITY  
24 December 2019**

**HIS EXCELLENCY SHRI JAGDEEP DHANKHAR THE CHANCELLOR OF THE UNIVERSITY AND HON'BLE GOVERNOR OF WEST BENGAL; RESPECTED PROFESSOR C.N.R. RAO, RESPECTED PROFESSOR SANKHA GHOSH, RESPECTED PROFESSOR SANGHAMITRA BANDYOPADHYAY, RESPECTED MR. SALMAN HAIDAR, EMINENT MEMBERS OF THE COURT AND EXECUTIVE COUNCIL, MY ESTEEMED PRO-VICE CHANCELLORS, MY DISTINGUISHED DEANS OF FACULTIES AND REGISTRAR, MY DISTINGUISHED COLLEAGUES, EMINENT ALUMNI, PROUD PARENTS AND RELATIVES OF GRADUATING STUDENTS, FRIENDS FROM THE MEDIA AND, OF COURSE, MY DEAR STUDENTS**

On behalf of the University community let me take this opportunity to warmly welcome you to this 64<sup>th</sup> Annual Convocation of this University, which as you know, has been able to create its own niche in the world of learning both at national and international levels. Incidentally, on this day, the University also commemorates its Foundation Day. I express my gratitude to the Hon'ble Chancellor Shri Dhankhar for kindly agreeing to preside over today's ceremony. Hon'ble Chancellor Sir, welcome to this, your first convocation of our University. The University is extremely fortunate to welcome the country's foremost scientist Professor C.N.R. Rao, who has kindly consented to deliver the Convocation Address and receive an Honorary Doctorate Degree in Science. We enthusiastically await his Address, which is bound to be, as always, stimulating and rewarding. The University is also deeply honoured to confer Honorary Doctorate degrees on the eminent littérateur and former colleague of ours, Professor Sankha Ghosh, to the distinguished statistician Professor Sanghamitra Bandyopadhyay and to the renowned diplomat Mr. Salman Haidar. We respectfully and sincerely welcome these distinguished personalities among us.

It is with a sense of embarrassment that I extend this welcome to you, since I had ended my Address at last year's Convocation—the 63<sup>rd</sup> of this University – on a note of farewell. However, since my term as Vice-Chancellor was extended after the 2018 Convocation, and I have always tried to serve this University to the best of my ability, I am here again today to report on the attainments of Jadavpur University over the past twelve months. As always, I remain grateful to my colleagues for the help, advice, support and constructive criticism I have received, and look forward to receiving more of the same, as I strive to help steer this remarkable higher education institution of which all of us are proud, remembering what Gurudev Rabindranath Tagore remarked on 14 August 1906 on the occasion of the foundation of the Bengal National College, the precursor of the present Jadavpur University:

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\* Address by the Vice-Chancellor, Jadavpur University

## Annual Report 2019-20

জগতের মধ্যে ভারতবাসীর যে-একটি বিশেষ অধিকার আছে সেই অধিকারের জন্য আমাদের জাতীয় বিদ্যালয় আমাদেরকে প্রস্তুত করিবে, আজ এই মহতী আশা হৃদয়ে লইয়া আমরা এই নূতন বিদ্যাভবনের মঙ্গলাচরণে প্রবৃত্ত হইলাম। সুশিক্ষার লক্ষণ এই যে, তাহা মানুষকে অভিভূত করে না, তাহা মানুষকে মুক্তিদান করে।

At this year's Convocation Graduate Degrees will be awarded to 609 students in Arts, 988 students in Engineering and Technology, and 203 students in Science. Post Graduate degrees will be awarded to 818 students in Arts, 428 students in Engineering and Technology, and 291 students in Science. 198 candidates will receive their M.Phil Degrees. Ph.D. Degrees will be conferred upon 111 scholars in Arts, 128 scholars in Engineering and Technology, 18 scholars in Pharmacy and 163 scholars in Science. Medals will be presented to students and scholars in recognition of their attainments. The University warmly congratulates the recipients of degrees and prizes after years of concentrated hardwork. I compliment the Controller of Examinations and his staff for completing the examination programme in time.

### I. THE UNIVERSITY'S TEACHING-LEARNING PROCESS

This Convocation marks yet another landmark in the University's constant quest for excellence. I am happy to report that since the last Convocation of 24 December 2018, our Institution's 37 Departments, 21 Schools of Interdisciplinary Research and 41 Interdisciplinary Research Centres have collectively and individually significantly enriched our country's knowledge economy. This has been aptly recognized both at home and abroad.

#### *I.1 National and International Recognitions*

The QS World University Rankings Asia 2020 released on 27 November 2019 has accorded Jadavpur University in the first position among the state universities of the country with an Asian rank of 136.

The 2020 QS World Ranking has placed us among the top 651-700 Universities in the world among the 28,077 universities surveyed world-wide, which places the University within the first 2.5% of world universities. It has placed the University in the first position among the state universities of the country.

The 2019 National Ranking Institute Framework placed the University in 6<sup>th</sup> position in National Institute Ranking Framework (NIRF) amongst the Universities.

The Ministry of Human Resource Development, Government of India, and the University Grants Commission have recognized Jadavpur University as one of the country's top ten State Universities, which has enabled the institution, the only one from eastern India, to win a Rs.100 crore grant from the Rashtriya Uchchatar Siksha Abhiyan.

The Jadavpur University is amongst the ten public institutions of the country which has been accorded, by the Government of India, the status of 'Institution of Eminence', although we are encountering some stumbling blocks to receive a grant of Rs.1,000 crores that is scheduled to come with this status.

## Annual Report 2019-20

The UGC has granted the Graded Autonomy (Category-I) status to the University, the only one from this region.

The University enjoys the UGC's 'University with Potential For Excellence' status. Ours was among the country's first five universities to receive this recognition.

The National Assessment and Accreditation Council awarded Jadavpur University CGPA 3.68 out of 4 with Grade A.

The University has been brought under the second phase of the Department of Science and Technology, Government of India, (DST)-PURSE Scheme.

The University has been included in the Phase-III of the World Bank funded Technical Education Quality Improvement Programme (TEQIP) Scheme, with a total allocation of Rs.7 crores and a special grant of Rs. 5 crores for a Centre of Excellence in the area of Phase Transformation and Product Characterization.

In collaboration with The Defence Research and Development Organization, (DRDO) Government of India, Jadavpur University has established the Jagadish Chandra Bose Centre For Advanced Technology to conduct scientific and applied research in directed areas of advanced defence technology.

The Government of West Bengal has declared the University as a Centre of Excellence, announced a financial grant of Rs. 100 crores and provided us with a piece of land in the New Town area.

The UGC has recognized the academic excellence of 15 Departments within the ambit of its Special Assistance Programme. The Geology Department received CAS-VI status; Philosophy and Production Engineering Departments received the CAS-V status; Economics, English and Comparative Literature Departments received CAS-III status; Food Technology & Biochemical Engineering, Sanskrit, International Relations and Chemistry Departments received CAS-II; Pharmacy Department received CAS-I status; Chemical Engineering Department received DRS-III status; Bengali Department received DRS-II status and History and Physics Departments received DSA-I status.

The Economics Department has won the unique distinction to become the Nodal Department for the Government of India's Rashtriya Uchchatar Siksha Abhijan (RUSA) programme of upgrading the teaching and research in Economics in the country.

The Physics Department is offering a specialized post-M.Sc. Diploma course on 'Medical Physics' in collaboration with Chittaranjan Cancer Institute, Kolkata. This course is producing properly skilled medical physicists who have good job prospects both in India and abroad.

I may take this opportunity to add that in recent national and international rankings West Bengal's two leading universities – Jadavpur University and Calcutta University – has secured either first or second positions among State Universities of the country. This indicates the level of excellence attained by the higher education sector in our state, which would not have been possible without the state government's support. It is a matter of deep regret that this achievement is often ignored.

### ***I.II Faculty Recognition***

Professor Farooq Rahman of Mathematics Department has been elected a Fellow of the Royal Astronomical Society, London.

Professor Om Prakash Mishra of International Relations Department and Professor Nitin Chattopadhyay of Chemistry received the 2019 Shiksha Ratna awards of the Government of West Bengal.

Professor. Suddhasatwa Chakraborty, Department of Electrical Engineering, was selected as Visiting Scientist in Chair of Lighting Technology, Department of Energy & Automation Technology, Technical University of Berlin (TUB), Germany in a collaborative research project entitled "Contrast threshold with marking light in road lighting."

Professor Amitava Chatterjee, Department of Electrical Engineering, became Fellow of Indian National Academy of Engineering (FNAE), with effect from November 01, 2018.

Professor Achintya Mukhopadhyay, Department of Mechanical Engineering, received the INSA Teachers Award 2018, Indian National Science Academy, New Delhi.

Professor Rajib Dey, Department of Metallurgical and Material Engineering, received Steelies India 2018 Award For Excellence and Mining Geological and Metallurgical Institute's Gold Medal.

Professor L.K. Ghosh, Department of Pharmaceutical Technology, has been selected as one of the Board of Governors of National Institute of Pharmaceutical Education and research (NIPER), Guwahati

Professor Pulok Kumar Mukherjee, Department of Pharmaceutical Technology, was awarded the Birbal Sahni Birth Century Award (2019) from Indian Science Congress Association, Kolkata, India during the 106<sup>th</sup> Science Congress at Jalandhar, Punjab.

Professor Bijoy Bhattachryya, Department of Production Engineering, was elected a Fellow of Indian National Academy of Engineering (IANE) in IANE Annual Convention-2018 at Hyderabad.

Professor Chittaranjan Sinha, Department of Chemistry, has been elected Fellow of West Bengal Academy of Science and Technology, 2018.

Professor Subrata Nath Koner, Department of Chemistry, was elected, Fellow of West Bengal Academy of Science and Technology, 2018.

Dr. Anupam Ghosh, Department of Geological Sciences, was selected for Indian Arctic Expedition 2018-19 under the call of Ministry of Earth Sciences (MOES) and National Centre for Polar and Ocean Research (NCPOR), 31<sup>st</sup> July -5<sup>th</sup> September, 2018.

Dr. Susanta Chaudhuri, Department of Geological Sciences, received the 'Outstanding Paper Award' in the 'Environmental Science' section of the Conference Proceedings entitled "Post-monsoon Geo-Hydrological Scenario of Indpur and Taldangra Block, Bankura District, West Bengal, India - a Comparative Study" in the 3<sup>rd</sup> Regional Science & Technology Congress December 2018, South Zone.

## Annual Report 2019-20

Professor Bibhas C. Giri, Department of Mathematics, received best paper award at the 1<sup>st</sup> International Conference on Frontiers of Operations Research & Business Studies (FORBS 2018), Calcutta Business School.

Professor Joydeep Chowdhury, Department of Physics, was elected as Fellow of West Bengal Academy of Sciences & Technology (FASc & T) for the year 2018 in Physical Sciences.

Dr. Piyali Basak, School of Bioscience and Engineering, received Outstanding Young Scientist Award in Bio-materials at the RULA International Innovation and Betterment Awards 2018 ceremony in Tiruchirappalli, Tamil Nadu, India.

Professor Nitin Chattopadhyay, Department of Chemistry, was awarded Professor. S. R. Mohanty Memorial Lecture Award of Orissa Chemical Society.

Dr. Tridib Mondal, Department of Geological Sciences, received K. Naha award for structural Geology from the Geological Society of India.

Dr. Paltu K. Dhal, Department of Life Science and Biotechnology, received Phos Agro/ UNESCO/IUPAC Green Chemistry for Life Research Grant.

Dr. Dipankar Mandal, Department of Physics, has been recognized as the India Top Cited Author Award 2019 from IOP Publishing House, UK

Sri Ishan Chakraborty, Department of English, was awarded the “Abul Kashem Rahimuddin Samman” for his excellence in the field of elocution and recitation by the “Tathya o Sanskriti Daptar, Pascimbanga Sarkar” (Information & Cultural Affairs Department, Government of West Bengal) on 23<sup>rd</sup> February 2019 at the inauguration ceremony of the “Kavita Utsav 2019”.

Professor Subir Sarkar, Department of Electronics and Telecommunication Engineering, has received the “IETE- Brig. M.L. Anand Award” of 2019.

The audio documentary titled RATAN BAI VS. NEW THEATRES, (Dual Chanel Sound Project, 2019) of Dr. Madhuja Mukherjee, Department of Film Studies, was selected at 15<sup>th</sup> IAWRT Asian Women’s Film Festival, New Delhi, March 2019. She taught in the Winter Semester 2018-19 at Institut für Ethnologie, Westfälische Wilhelms-Universität Münster, Germany.

Professor P. Das, Department of Chemical Engineering, was awarded the 8<sup>th</sup> National Award (Runner up) for Technology Innovation for the nomination “Novel Biodegradable natural filler reinforced hybrid polymer Composites”, under the category of Green/ Biodegradable Polymer by Department of Chemicals and Petrochemicals, Govt. of India.

Professor. Pulok Kumar Mukherjee, School of Natural Product Studies, was awarded the Birbal Sahni Birth Century Award (2019) from Indian Science Congress Association, Kolkata, India during the 106<sup>th</sup> Science Congress at Jalandhar, Punjab. He has been selected as a member of the WHO Expert committee for safety evaluation of herbal medicine and their interaction, 2019 by World health organisation, Geneva.

Professor Sadhan Kumar Ghosh, Mechanical Engineering Department, delivered the *Opening Plenary Speech* at 33<sup>rd</sup> International Conference on Solid Waste Technology and Management, on “Zero Water and Zero Waste Jute Ribboning” at the Widener University at Maryland, Washington DC, USA. He was invited to act as the expert in preparation of Status Report and Sub-regional Roadmap for Implementing the Global Waste



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Management Goals towards addressing SDGs in South Asian countries; meetings held at Nepal in March, Dhaka in June and in Colombo, Sri Lanka in Sept. invited by SACEP (South Asian Countries Environmental Programme) and IGES Centre Collaborating with UNEP on Environmental Technologies (CCET), Japan in 2019-2020. He was the head of delegation of the Cycling Team in the Summer Cycling Programme in Taiwan invited by the Chinese Taipei University Sports Federation (CTUSF) and Fu Jen Catholic University with two officers, Dr. Rajat Ray, Dean of Students and Dr. Aparup Konar, Director of Physical Instruction and ten students of Jadavpur University for expanding of bilateral relationship.

Professor Niladri Chakraborty of Power Engineering Dept. served as the jury for the prestigious ENCON award of the Confederation of Indian Industries. He is also specialized Energy Expert of the Govt. of West Bengal and has become a member of the Energy and Environment Committee of the Bengal Chamber of Commerce.

Dr. P. Ghosh, Department of Construction Engineering received a patent on “Technique for different free RCC Chimney shell construction by using Slip-Form Method” September 2019.

### ***I.III: Research Projects***

My faculty colleagues are currently involved with 54 sponsored research projects, of which 41 projects are funded by Department of Science and Technology, GOI (DST); 07 projects are funded by Council of Scientific and Industrial Research (CSIR); 2 projects each funded by the Department of Bio-Technology, GOI (DBT), Department of Atomic Energy, GOI (DAE) and Defence Research and Development Organisation, GOI (DRDO); and 1 project funded by UNESCO.

Some of the recent ongoing projects those sanctioned during the year under review are:

1. LPG Equipment Research Centre, Bangalore has sanctioned the second phase of the Research Project on “Development of a High Efficiency Domestic LPG Stove Through Numerical Simulation” under Dr. Amitava Datta of Power Engineering Department.
2. CSIR has sanctioned a Research Project on “Project-Modelling and analysis. incidence.” under Dr. Nandadulal Bairagi of Mathematics Department.
3. SERB (DST) has sanctioned a Research Project on “Synthesis of new palladium and platinum complexes with azo/imine functional ligands: Exploration of potential catalytic and biological activity” under Dr. Tapan Kumar Mondal of Chemistry Department.
4. SERB (DST) has sanctioned a Research Project on “Perpendicularly Polarized Spin Transport in Semiconductors: An Investigation using Electrical Spin Injection and Detection” under Dr. Bharati Tudu of Physics Department.
5. SERB (DST) has sanctioned a Research Project on “Mathematical model development and analysis of bullwhip effect in closed-loop supply chain under uncertainties” under Professor. Bibhas Chandra Giri of Mathematics Department. Professor Giri is also pursuing a CSIR sanctioned project on “Development and analysis of supply chain models concerning environmental sustainability”.
6. SERB (DST) has sanctioned a Research Project on “Development of Electrodes for

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- Electronic Tongue Using Molecular Imprinted Techniques for detection of important chemicals in Medicine plants” to Dr. Bipan Tudu of IEE Department.
7. DST, MST through IIT Kharagpur (Nodal Institute) has sanctioned a Research Project on “Center for Technological Excellence in Water Purification” to Professor Chiranjib Bhattacharjee of Chemical Engineering Department.
  8. SERB has sanctioned a Research Project on “Spatially Explicit Estimation of Wetland Carbon Stocks in the Contai-Baleshwar Coastal Stretch, India by Integrating Elemental Analysis and Geospatial Technologies” under Dr. Debajit Datta of Geography Department.
  9. ICHR has sanctioned a Research Project on “Numismatography of Pre-Modern North East India Princely State-A Study in Historical Perspective” under Dr. Debajit Dutta of History Department.
  10. SERB (DST) has sanctioned a Research Project on “Design of entangled dynamic metal organic frameworks for hydrogen storage property” to Dr. Debajyoti Ghoshal of Chemistry Department.
  11. Department of Science & Technology and Biotechnology, Govt. of West Bengal has sanctioned a Research Project on “Local Lighting prediction and warning system.” under Dr. Debangshu Dey of Electrical Engineering Department.
  12. SERB has sanctioned a Research Project on “Teachers Associateship for Research Excellence -TARE” to Dr. Debangshu Dey of Electrical Engineering Department under the mentorship of Dr. Sanghamitra Bandyopadhyay at Indian Statistical Institute, Kolkata.
  13. Science & Technology and Biotechnology Department, Govt. of West Bengal, has sanctioned a Research Project on “Unusual catalysts to meet energy demand conversion of carbon dioxide to most promising synthetic fuels” under Dr. Arunabha Thakur of Chemistry Department.
  14. SERB (DST) has sanctioned a Research Project on “Realization of oxide based solar cells: Glass-Mo/Cu<sub>2</sub>O/CuO/ZnO/Al-ZnO/ITO heterojunction solar cell with improved performance” under Dr. A. K. Pal of Instrumentation Science Department.
  15. SERB (DST) has sanctioned a Research Project on “Molecular Recognition and Sensing at the Lipid Bilayer-Water Interface and Inside the Lipid Membrane under Dr. Samit Guha of Chemistry Department.
  16. SERB (DST) has sanctioned a Research Project on “Moving beyond the folds: Design of DNA origamis as breadboard mimicking scaffolds and their interactions with nanoparticles through SERS” under Dr. Joydeep Chowdhury of Physics Department.
  17. SERB has sanctioned a Research Project on “Solar Energy driven Green Hydrogen Generation from Water using Reduced Graphene Oxide based Photo-catalyst and Co-catalyst” under Dr. Kajari Kargupta of Chemical Engineering Department.
  18. SERB (DST) has sanctioned a Research Project on “Birkhoff-James orthogonality and its application in the geometry of Branch spaces” under Dr. Kallol Paul of Mathematics Department.
  19. Department of Higher Education, Science & Technology and Biotechnology Department,

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- Govt. of West Bengal has sanctioned a Research Project on “Study of Zinc Oxide thin films as gas sensor under high relative humidity” under Dr. Kaustuv Das of Physics Department.
20. Department of Higher Education, Science & Technology and Biotechnology, Govt. of West Bengal has sanctioned a Research Project on “Study on QGP and its properties using correlation and fluctuation phenomena in ultra-relativistic collisions” under Dr. Mitali Mondal of Physics Department.
  21. 1st year grant for project under WOS-A has sanctioned a Research Project on “Integration of data mining in biodiversity application to forest diversity” under Dr. Moumita Ghosh of Information Technology Department.
  22. SERB (DST) has sanctioned a Research Project on “Dynamics Preserving Discretization Technique for Nonlinear System of Differential Equations” under Dr. Nandadulal Bairagi of Mathematics Department.
  23. West Bengal Commission For Protection of Child Rights has sanctioned a Research Project on “Study on-Dip Stick Assessment on Impact of Domestic Violence on Children under Nandita Banerjee Dhawan of School of Womens Studies.
  24. SERB (DST) has sanctioned a Research Project on “Automatic Generation of Cytological Images to Augment Data for Diagnosis of Ductal Carcinoma Using Deep Learning” under Dr. Nibaran Das of Computer Science Department.
  25. Department of Higher Education, Science & Technology and Biotechnology, Govt. of West Bengal has sanctioned a Research Project on “Development of cardiovascular waveform simulator for training of medical Professionals” to Dr. Palash Kumar Kundu of Electrical Engineering.
  26. SERB (DST) has sanctioned to Dr. Paltu Kumar Dhal of Life Science and Bio-technology Department Research Projects on “Endophytic Bacterial Community of Rice Root from Saline Zone of Sundarban – West Bengal” and “Development of Microbial bio Fertilizers using Indigenous Micro Organism base Technology for Higher Rice Production”.
  27. SERB (DST) has sanctioned a Research Project on “Synthesis of Graphene oxide coated natural waste materials and its application for simultaneous treatment of wastewater containing fluoride and chromium; Reactor performance in batch, fluidized bed and membrane reactor.” to Dr. Papita Das of Chemical Engineering Department.
  28. DBT, MST, has sanctioned a Research Project on “Development of polyherbal based functional biopolymer hydrogel for delivery of novel healing agents in excision and burn wound” to Dr. Parimal Karmakar of Life Science and Bio-Technology Department.
  29. Indira Gandhi Centre for Atomic Research has sanctioned a Research Project on “Generation of Creep-Fatigue Interaction Properties of Alloy 617” to Professor Pravash Chandra Chakraborti of Metallurgical and Material Engineering.
  30. DST, MST, has sanctioned an Indo-Russian Joint Research Project on “Development of models of immune-dependent disorders and finding optimal strategies for their treatment: analytical and computational approaches” to Dr. Priti Kumar Roy of Mathematics Department.

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31. SERB (DST) has sanctioned a Research Project on “Medicinal plants of Cucurbitaceae family Metabolomic Study and Therapeutic Evaluation” to Dr. Pulok Kr. Mukherjee of Pharmaceutical Technology Department.
32. SERB (DST) has sanctioned a Research Project on “Design, Development and control of a lightweight Anthropomorphic Robot Arm by Morphological Computation” to Dr. Ranjit Kumar Barai of Electrical Engineering Department.
33. Universitat De Barcelona has sanctioned a EQUAMBI (Enhancing Quality Assurance Management and Benchmarking Strategies in Indian Universities) to the Director, Internal Quality Assessment Cell, Prof. Samantak Das.
34. DST, MST, has released funding for a Research Project on “Estimation of errors in the measurement of mass from gravitational wave data” to Ms. Sangita Chatterjee of Physics Department.
35. Department of FTM & TDF, DRDO, New Delhi has sanctioned a Research Project on “Development of High Speed Manet For Intelligent Collaboration” to Dr. Sarmistha Neogy, of Computer Science Engineering Department.
36. Gas Turbine Research Establishment, DRDO, Bengaluru, has sanctioned a Research Project on “Robustness analysis of AFADEC Control Laws covering redundancy management concepts” to Dr. Smita Sadhu Ghosh of Electrical Engineering.
37. SERB (DST) has sanctioned a Research Project on “Symmetries in differential equation and its application to classical and quantum cosmology” to Prof. Subenoy Chakraborty of Mathematics Department.
38. CSIR has sanctioned a Research Project on “Chiral Induction into metal-organic Framework for Heterogeneous Asymmetric catalysis” to Dr. Subrata Nath Koner of Chemistry Department.
39. Department of Higher Education, Science & Technology and Biotechnology, Govt. of West Bengal, has sanctioned a Research Project on “Geoinformatics led inquiries into Tourism Development in the Indian Sundarban and its impacts on Landuse-Landcover Change: Understanding for Better Planning” to Dr. Suchandra Bardhan of Architecture Department.
40. SERB (DST) has sanctioned a Research Project on “Integral equation and its application to the problems on interaction of water waves with obstacles present in ocean” under Professor Sudeshna Banerjee of Mathematics Department.
41. CSIR has sanctioned a Research Project on “Design of multichannel receptors for anions by taking profit of metal-ligand interaction” to Dr. Sujoy Baitalik of Chemistry Department.
42. SERB (DST) has sanctioned a Research Project on “Systematic study of molluscs and other benthic faunal diversity and their Palaeoecological, Palaeobiogeographical distribution during Jurassic-Cretaceous transition in Kutch, western India” to Dr. Sunipa Mandal of Geological Sciences Department.
43. DST, MST, (NRDMS) has sanctioned a Research Project on “Scientific Assessment of Coastal Vulnerability and Sustainable Ecosystem Management under Changed Climate Scenario” to Dr. Pankaj Roy of School of Water Resource Engineering.

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44. UNICEF, Kolkata, has sanctioned a Research Project on “Youth Community Reporters” to Professor Nilanjana Gupta of School of Media, Communication and Culture.
45. Under the leadership of Emeritus Professor Sukanta Chaudhuri, the School of Cultural Texts & Records has made impressive progress with *Shabdakalpa*, a computer-based historical dictionary of the Bengali language, searching the entire mass of printed Bengali texts to trace the origin and chronology of every sense of every word in the language. The pioneering software is 90% ready. Apart from the *Oxford English Dictionary* (compiled in pre-computer times), virtually no language in the world has a computationally-based historical dictionary. This venture can serve as a model and template for other languages, including those in scripts other than the Roman. *Shabdakalpa* was made possible through a project grant under RUSA 2.0.
46. Volkswagen Foundation of Germany has granted Rs. 4 crores for an international research project on “Special Economic Zones: A force for good to reduce inequality?” in which Professor Saikat Sinha Roy of Economics Department is a principal research investigator.
47. The DST, Government of India, has sanctioned an amount of Rs.39 lakhs for a research project on “Stacking fault energy (SFE) mediated deformation mechanisms in some twinning induced (TWIP) Steels”, of which Professor Pravash Chandra Chakraborti of Metallurgical and Material Engineering Department and Dr. Puspendu Sahu of Physics Department are project investigators.

### ***I.IV: Interdisciplinary Research***

The University has the unique distinction of having a separate Faculty to promote interdisciplinary studies. Under the auspices of Centres and Schools it continues to attain significant breakthroughs in interdisciplinary research.

In the last 34 years, **the Computer Aided Design Centre (CAD)** has trained more than 10,000 industry professionals, students and researchers in Computer Aided Design, Geographic Information System, Remote Sensing, Multimedia, and related areas. The Centre has also executed several R&D and Industrial projects since 1987. Recently the Centre is focusing to offer several cutting-edge technologies to the industry professionals and higher education students.

**The Centre for Studies in Cultural Diversity and Wellbeing** (formerly known as Special Education & HEPSN Cell) has started two new courses:

- (i) One year Diploma in Psychological Counselling in collaboration with ‘Caring Minds Psychological wellness Centre’, Kolkata in 2018. The course is centered around providing in-Department knowledge of Human Psychology, with special emphasis given on skills and techniques of counselling, interactive sessions, group discussions and role plays. It is a practice-oriented course with regular mock sessions and project work.
- (ii) Six-month certificate course on Psychotherapy in collaboration with ‘Caring minds Psychological Wellness Centre’, Kolkata. The course focuses on: Behaviour Therapy,



Ellis's Rational Emotive Behaviour Therapy, Beck's Cognitive Therapy, Third wave therapies – Mindfulness-based Cognitive Therapy, Dialectical Behaviour Therapy and Acceptance & Commitment Therapy, Interpersonal Therapy, Humanistic and Existential Therapy.

**Global Change Programme** at Jadavpur University (GCP-JU) marks the beginning of a multidisciplinary and comprehensive approach in India at the University level to address the issues of global change and related issues like climate change. GCP-JU comprising theoretical, empirical and action research projects as well as outreach activities seeks to have a direct impact on policy implementation and global change related negotiations at the local, national and international levels. Specifically, GCP-JU has been providing research inputs to The Intergovernmental Panel on Climate Change (IPCC), Millennium Assessment Report (2005), Stern Review Report (2006), and Global Energy Assessment of IASA (International Institute for Applied Systems Analysis) at the international level. The research centre has also worked with Ministry of Environment and Forest towards preparation of NATCOM (National Communication) for United Nations Framework Convention on Climate Change (UNFCCC) and helps in capacity building within India and many developing countries. At the state level, GCP-JU is involved in the preparation of comprehensive report to ascertain the climate change impact, vulnerability and mitigation potential within the state of West Bengal. GCP-JU provides an ideal platform to researchers, working professionals, government and non-government organizations to research, network and collaborate on various local, national and international global change issues. GCP-JU collaborates with various governmental and non-governmental organizations to organize state level, national and international seminars, meetings and workshops which stimulate intellectual dialogue and facilitate policy making.

**Centre for Distributed Computing** has developed and implemented Jadavpur University Management System (JUMS), with comprehensive modules for Student Admissions/Information, Muster Roll Section, end-to-end Examination management, Post-Graduate (Engineering & Technology) Application/Admission, Under-Graduate (Engineering & Technology) Decentralized Counseling, Convocation Application, Ph.D Application, Non-NET Fellowship Application, Chief Librarian and Librarian Recruitment, and Finance Management (including receipts management, fund management, RUSA fund tracking system etc.). The Centre has provided support and handholding services to officers, staff, teachers, students and applicants from August 2016 till March 2019.

**The School of Media, Communication and Culture** operates the University's Community Radio: 90.8 Community Radio JU (Convener: Professor Nilanjana Gupta). Launched on 14 April 2008, 90.8 MHz Community Radio JU is the first of its kind in eastern India. It provides an interactive platform for students, teachers, research scholars, staff of JU and local people around JU to showcase their talent, creativity, innovations and community work. Programmes broadcast by the radio station reach listeners within a radius of 10 km around the University. Thematic focus: Education, Sports, Health & Hygiene, Traditional & Folk Song, Culture & Heritage, Music & Entertainment, Youth Issues, Child Rights, Law, Drama on Social Issues, Disability Issues, Travel etc. The UGC-approved 6-month certificate course 'Radio Production' offered by the School uses the resource and expertise of the Community Radio extensively for training students. Jadavpur University Community Radio (90.8 Hz) celebrated their **12<sup>th</sup> Foundation Anniversary Day** with amid Cultural Programme on 12<sup>th</sup> April 2019 in Vivekananda Hall, JU.



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**School of Mobile Computing** is involved with a collaborative project on “Remote Health: A Framework for Healthcare Services using Mobile and Sensor-Cloud Technologies” in which six institutions are participating. Funded by the ITRA Media Lab Asia, the project is being coordinated by Jadavpur University Professor Nandini Mukherjee.

**School of Environmental Studies** under Dr. Joydeep Mukherjee has initiated a new teaching course on Advanced Diploma in Industrial Safety & Environmental Management in collaboration with Nuvoco Vistas Corp. Ltd. (Formerly Lafarge India Pvt. Ltd.).

### *I.V: Faculty Participation in Seminars/Workshops*

During the past one year my colleagues have continued to register their effective and rewarding presence in national and international academic conferences. The following list is indicative, but not certainly exhaustive.

Dr. Barendu Mandal, Department of Bengali, delivered a lecture at a seminar in Rajshahi University, Dhaka, Bangladesh.

Professor Parthasarathi Bhaumik, Department of Comparative Literature, delivered two invited talks on ‘Research in the British Library’, ‘Chevening Explores’ and on ‘Partition of Bengal (1905): Tracing Popular Reactions in the British Library Holdings’ at the Knowledge Centre and Panizzi Room, British Library, London 23 May 2018

Professor Kavita Panjabi, Department of Comparative Literature, delivered a Special Lecture entitled “Stories/Histories of Calcutta: Baffling Paradoxes Indefatigable Citizenry” at the International Forum on Megacities, organized by 17, Institute of Critical Studies and The National School of History and Anthropology (ENAH) in Mexico City, September 10<sup>th</sup>-12<sup>th</sup>, 2018.

Professor Epsita Halder, Department of Comparative Literature, delivered lectures at the seminar on Music in Muslim Cultures at the Department of Music, King’s College London, British Library, London and at the School of Oriental and African Studies, University of London. She also chaired a session on Religion and Post-coloniality, at South Asia Institute.

Sri Sumit Kumar Barua, Department of Comparative Literature, delivered an invited lecture at the International Seminar on “Buddhism in shaping India-Japan Relations”, organized by JSPS India-Japan Bilateral Research Project with Indian Council of Historical Research, India at Research Institute for Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies (TUFS).

Dr. Debashree Datta Ray, Department of Comparative Literature, presented a paper on “Intersectionality and the Politics of Location: (En)gendering Resilience in Indigenous Canadian and Dalit women’s Narratives” at the 40<sup>th</sup> Annual Conference of the Association for Canadian Studies in German-speaking Countries entitled “Intersectionality: Theories, Policies, Practices” at Grainau, Germany.

Dr. Kaustav Bakshi, Department of English, was invited as discussant on the panel, ‘Sexing India: Hindutva, LGBTQ (Lesbian, Gay, Bisexual, Transgender, Queer) Rights, and Global Philanthropy’, at CLAGS, City University of New York on 2 April 2018. He also

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presented a paper entitled, “Public versus private in the discourses of women’s movement in Sri Lanka: The contemporary Sri Lankan English novel and its critique of ‘respectability’” at the 25<sup>th</sup> European Conference on South Asian Studies (ECSAS 2018) held in Paris from 24 July to 27 July 2018.

Dr. Doyeeta Majumder, Department of English, delivered an lecture on ‘Equity, Exception, Hermeneutics’ at Law and Poetics in Early Modern England and Beyond” at the Cambridge University.

Dr. Sutanuka Ghosh, Department of English, presented a paper on “Revisiting Rajput (his) stories with Kiran Nagarkar’s Cuckold,” at the Historical Fictions Research Network Conference, Manchester, UK.

Professor Arpita Ghose, Department of Economics, delivered lecture on “Total Factor Productivity Growth of Elementary Education in India and its Determinants” at 16<sup>th</sup> *International Conference on Data Envelopment Analysis (DEA 2018)* held at Jiangnan University, China.

Dr. Rilina Basu (Banerjee), Department of Economics, delivered lecture on “Macroeconomics of Demonetisation: A Short period equilibrium” at the 3<sup>rd</sup> Development Economics Conference organised by the University of Lincoln.

Professor Saikat Sinha Roy, Department of Economics, delivered lecture on “SEZ related data issues: India” at the Workshop on Special Economic Zones: A force for good to reduce inequality organized by the Kiel Centre for Globalization, Institute for World Economy (IfW), Kiel, Germany.

Professor Moinak Biswas, Department of Film Studies, delivered lectures at the Workshop on Ritwik Ghatak; the 1<sup>st</sup> session at University of California, Irvine and the 3<sup>rd</sup> session at the Columbia University, New York. He was the Panelist Speaker, Presidential theme panel on ‘Textual Transactions in an Era of Global Uniformity’, Modern Language Association Convention Chicago. He also delivered lectures on ‘Sharir, parisar, o sampratik Bharatiyachalachchitra’, organized by Loghu-Guru, Niketan, Dhaka, Bangladesh and on ‘That which Flows: Across Borders of Fiction and Film’, organized by the Centre for Advanced Theory, University of Liberal Arts Bangladesh, Dhaka.

Dr. Madhuj Mukherjee, Department of Film Studies, was Speaker at the 2<sup>nd</sup> Bangladesh Summit, *Forms of Sovereignty: Art, Cinema and Popular Culture*, University of California, Berkeley; Institute Colloquium, Institute of Ethnology, Westphalian Wilhelms-University, Münster, Germany and at the 25<sup>th</sup> *European Conference on South Asian Studies*, Centre d’Etudes de l’Inde/Asie du Sud, Paris.

Professor Mahua Sarkar, Department of History, presented a paper on “*The United States and India: Moving towards a Partnership on Nature*”, the Fulbright Alumni Conference of the Multinational Institute of Education, New York, and Florence, Italy.

Professor Rup Kumar Barman, Department of History, presented a paper on “State Policies and Forced Migrations: A Study on the *Lhotshampas (1953-2015)*” at the International Conference on State and Society in South Asia: A Historical Perspective organized by the Department of History, Jagannath University, Dakha, Bangladesh.

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Dr. Debajit Dutta, Department of History, presented a paper on “Saivism as the Popular Culture of Northern West Bengal: A Socio-Psychological Study” at the 25<sup>th</sup> European Conference on South Asian Studies at Paris and on “Monetization of Medieval North-East Indian Economy: A Review” at the 15<sup>th</sup> International Conference organized by *Itihas Academy*, Dhaka, Bangladesh.

Professor Madhumita Chattopadhyay, Department of Philosophy, presented a paper on “The Logic of Interrogations: An Alternative Approach from the Pâli Buddhist Sources” in an International Hetuvidya conference organized by Guangzhou University, Guangzhou, China.

Professor Sashinungla, Department of Philosophy, presented a paper “Reconsidering Ethics of Shame– A Feminist Account” at the International Conference on Terrors of Injustice: Gender Violence and Ethics of Shame, Utrecht University, The Netherlands. She also chaired a session at the same conference.

Dr. Maitreyee Datta, Department of Philosophy, presented a paper jointly with Dr. Sugata Nandi, Assistant Professor of History, West Bengal State University titled ‘Idyll of Idleness: Time Discipline and Resistance in Colonial India’ at the International Conference on The Social Life of Time: Power, Discrimination and Transformation held at the Edinburgh University, Edinburgh, UK. She also presented a paper titled ‘Is *three time argument* of Nagarjuna an adequate one?’ at the 14<sup>th</sup> *Hetuvidyà* conference held at the Institute of Logic and Cognition, Sun Yat-Sen University, Guangzhou, China. She presented another paper entitled “Classical Indian Dialectics Used to Refute the Reality of Tense in *Mâlamadhyamakakàrikà* and *Khandanakhandakhàdya*,” at the ULB-KUIS Joint Conference entitled “Asian Philosophical Texts” organized by the Research Centre for East Asian Studies (EASt) at the Université libre de Bruxelles (ULB).

Dr. Gargi Goswami, Department of Philosophy, delivered lecture titled “The Nature of Dharma in Ramayana: Understanding Matilal’s Perspective” in a two day International Seminar on “Hinduism and Buddhism in South East Asia (with special reference to Ramayana)” organized by Sanskrit Studies Centre and Department of Oriental Languages, Silpakorn University, Bangkok.

Professor Sanjib Mridha, Department of Physical Education, delivered lecture on “Yoga for Health and Wellness in the 21st Century” at the Yunan Technology and Business University, China, and on “Yoga for Physical Fitness and Mental Health” at Munster University, Germany, on 13<sup>th</sup> Novemeber 2019. He also visited other European Centers of Higher education, including the International Olympic Studies Centre, Lausanne, Switzerland on 18<sup>th</sup> November 2019.

Professor Amites Mukhopadhyay, Department of Sociology, delivered a lecture on “*Cross Border Entanglements in Eastern South Asia*” at the Annual South Asia Conference at the University of Wisconsin, Madison, USA.

Mr. Abdul Matin, Department of International Relations, delivered invited lecture on ‘The Sachar Committee Report and the Idea of Social Justice: Rethinking Minority Question in West Bengal’ at BRAC University, Dhaka, Bangladesh.

Professor Shibashis Chatterjee, Department of International Relations, participated at a Roundtable on “India’s Role as an Emerging Power: Challenges, Potentials, and Future Directions” at the ISA Conference, Hong Kong and presented a paper on “India as a Post-colonial Power”. He presented two papers titled “Western/Non-Western IR: Situating the

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Divergences” and “West Bengal’s Communal Politics: Electoral Politics or Civic Disengagement?” in the 60<sup>th</sup> International Studies Association Annual Convention: Re-visioning International Studies: Innovation and Progress at Toronto, Ontario, Canada.

Professor Parama Ghoshal, Department of Chemical Engineering, presented a paper on “Mechanism of reactive convective-dissolution in the geological storage of carbon dioxide” at the *Eighth International Symposium on Bifurcations and Instabilities in Fluid Dynamics (BIFD)* 2019 held at the University of Limerick, Ireland. She also presented another paper on “Reactive convective-dissolution in a Hele-Shaw cell” at the *14<sup>th</sup> International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics* held in Ireland.

Professor Ujjaini Sarkar, Department of Chemical Engineering, presented two papers on “Enzyme based hydrolysis of a fibrous and a woody biomass: A novel protocol” and on “Selective Hydrogenation of Succinic Acid to 1,4-Butanediol using Palladium-Alumina Bimetallic Catalyst: Effects of calcination temperature, pressure and reaction time” at the 4<sup>th</sup> International Conference on Alternative Fuels, Energy and Environment (ICAFEE): Future and Challenges, held at Feng Chia University, Taichung, Taiwan. She also presented two papers on “Selective Hydrogenation of Bio-refined Succinic Acid into 1,4-Butanediol using various Bimetallic Catalysts: Effects of calcination temperature, pressure and reaction time” and on “Implication of fractal kinetics and diffusion limited reaction on biomass hydrolysis” at 69<sup>th</sup> Canadian Chemical Engineering Conference, held at Halifax, NS.

Professor Kaushik Bandyopadhyay, Department of Construction Engineering, participated and chaired a technical session in the 16<sup>th</sup> Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, 16 ARC held at *Taipei International Convention Center (TICC)*, Taipei, Taiwan. He also participated and chaired a technical session in the 2<sup>nd</sup> International Conference on Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering (EGRWSE 2019) held during June, 16 – 20, 2019 in Chicago, USA.

Professor D. Bandyopadhyay, Department of Construction Engineering, has participated in the 7<sup>th</sup> International Conference on ‘Experimental Vibration Analysis for Civil Engineering Structure, EVACES 2019, at China.

Professor P.P. Biswas, Department of Construction Engineering, attended International Airfield and Highway Pavement Conference at Chicago, USA, (21<sup>st</sup>-24<sup>th</sup> July 2019) organized by the American Society of Civil Engineers. He visited the University of Texas at San Antonio from 29<sup>th</sup> July-2<sup>nd</sup> August, 2019.

Professor Suddhasatwa Chakraborty, Department of Electrical Engineering, delivered a talk in the workshop at the Technical University of Berlin, Germany.

Professor Subir Kumar Sarkar, Department of Electronics and Telecommunication Engineering, delivered an invited lecture on “Trust Management and Energy Efficient Schemes in Wireless Self-Organizing Networks” at the School of Computing, Engineering and Mathematics of Western Sydney University, Australia. He delivered guest seminar lecture on “Trust Management System in Wireless Self-organizing Networks” at the School of Electrical and Data Engineering, Faculty of Engineering and IT of University of Technology Sydney, Australia. He also delivered invited

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seminar presentation on “Computation without Power Dissipation: Searching Possibilities” organized by Macquarie University, Sydney, Australia.

Professor Bhaskar Gupta, Department of Electronics and Telecommunication Engineering, chaired a session in MMS 2018, the 18th Mediterranean Microwave Symposium, Istanbul, Turkey. He also chaired a session in 9th Annual IEEE Information Technology; Electronics and Mobile Communication Conference (IEEE IEMCON 2018) at the University of British Columbia, Vancouver, Canada.

Dr. Sayan Chatterjee, Department of Electronics and Tele Communication Engineering, chaired a session on “MWCD-3” in IEEE MMS-2018 in Istanbul, Turkey.

Dr. Pratyusha Rakshit, Department of Electronics and Tele Communication Engineering, presented a paper in 2018 IEEE World Congress on Computational Intelligence at Rio de Janeiro, Brazil.

Dr. Paramita Bhattacharjee, Department of Food Technology and Biochemical Engineering, delivered invited talk (Guest Lecture) on ‘Can nanoliposomes of supercritical carbon dioxide extracted spiceticals of yellow mustard and small cardamom seeds be natural alternatives of statin in redressing hypercholesterolemia?’ Asian Symposium on Medicinal Plants, Spices, and other Natural Products XVI (ASOMPS XVI 2018) at Colombo, Sri Lanka.

Professor Rajib Bandyopadhyay, Department of Instrumentation and Electronics Engineering, was invited to deliver a lecture on “Recent advances on Near infrared and Raman spectroscopy for estimation of quality of agro products” at Information Technology, Mechanics and Optics (ITMO) University, St. Petersburg, Russia. He also presented a paper on “Exploration of near Infrared Spectroscopy for Andrographis paniculate: Discrimination between samples with different andrographalide content at The Sixth Asian Near Infra Red Symposium (ANS 2018), held at Kunming, China.

Professor Sadhan Kumar Ghosh, Department of Mechanical Engineering, delivered invited Speech on “Waste Management in India and SBM” in International Conference on Technology and Waste Management in Hefei University, Hefei, China; on “Waste Management under legal Framework in India” at the ISWA World Congress 2018, Centre at Kuala Lumpur, Malaysia; at the 5th 3R International Scientific Conference on Material Cycles and Waste Management (3RINCs) held from 27 Feb-1 Mar, 2019 at Bangkok, Thailand. He delivered lecture and acted as the rapporteur at the 9th Regional 3R Forum in Asia and the Pacific organised by Thailand Government, UNCRD and Govt. of Japan at Bangkok, Thailand. He delivered Keynote Speeches(i) on “Marine Littering and Micro Plastics” at the International Conference on Waste Management and Technology, Tsinghua University, Beijing, China, and (ii) at the 1<sup>st</sup> Sub-Regional workshop on Preparation of Status Report and Sub-regional Roadmap for Implementing the Global Waste Management Goals towards addressing SDGs in South Asia Kathmandu, Nepal. He delivered the Opening Plenary Speech at the Annapolis, Maryland, Washington DC, on “Sustainable Waste Management in Ribboning & Retting of Jute : Alternative to Plastics”, in the 34th International Conference on Solid Waste Technology and Management, by Widener University, USA



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Professor Sudipta De, Department of Mechanical Engineering, delivered lecture on 'Energy Transitions–Academic Opportunities and Challenges in India' in one day workshop on 'Energy Transitions–Opportunities and Challenges in Germany, India and Norway' at University of Stavanger, Norway.

Professor Amitava Gupta, Department of Power Engineering, delivered Keynote address in International Conference on Information and Educational Technology 2019 at Dhaka University, Bangladesh.

Professor Pratulananda Das, Department of Mathematics, delivered invited the 30<sup>th</sup> Srinivasa Ramanujan Memorial Award Lecture at the 85<sup>th</sup> Annual Conference of the Indian Mathematical Society at IIT, Kharagpur.

Professor Rina Ghosh, Department of Chemistry, delivered lecture on “Synthesis of a tetrasaccharide derivative related to the cell wall polysaccharide of *B. anthracis* utilizing one-pot glycosylation reactions” in the International Symposium on Green Chemistry: ISGC-2019 held in La Rochelle, France.

Professor Jnan Prakash Naskar, Department of Chemistry, delivered a lecture on “Biological Perspective of Some Novel Oxime-based Palladium Compounds” at the 2<sup>nd</sup> Euro Chemistry Conference organized by Scient Global Conferences in Valencia, Spain.

Professor Subrata Nath Koner, Department of Chemistry, delivered a lecture on ‘“Heterogeneous Catalysis over Metal-Organic Framework” at the Graduate School of Science, Yokohama City University, Yokohama, Japan. He also delivered lecture on “Heterogeneous Catalysis over Porous Solids” at the Graduate School of Chemistry, Kyushu University Campus, Fukuoka, Japan. He also delivered lecture as visiting Professor on “Heterogeneous Catalysis” Zhengzhou University, Henan Province, China.

Dr. Debajit Datta, Department of Geography, delivered lecture on “Landscape modification, livelihood losses, and socio-political conflicts: a geospatial analysis of coastal aquaculture practices in West Bengal, India” at Tenth IALE World Congress on ‘Nature and society facing the Anthropocene challenges and perspectives’ at University of Milano-Bicocca, Italy and on “Co-existence of co-operation and conflict: reconstructing identities in the Koch-Rajbanshi sovereignty politics of India” (As a co-author with C. Sengupta) at Third Ireland India Institute Conference on South Asia, 2019 organized by the Ireland India Institute at Dublin City University, Ireland. He also delivered lecture on “Ethnic sovereignty movements and electoral democracy: deconstructing the Koch-Rajbanshi identity politics of North-East India” at 14th Biennial Conference of Asian Studies in Israel at Hebrew University of Jerusalem, Israel.

Dr. Paltu Kumar Dhal, Department of Life Science and Biotechnology, delivered invited Lecture at the ZMT regional alumni conference in Southeast Asia at Universitas Padjadjaran (UNPAD), Bandung, Indonesia and at 8th IUPAC International Conference on Green Chemistry (ICGC) at Bangkok (Thailand).



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Professor Kallol Paul, Department of Mathematics, delivered an invited talk at International workshop on Operator Theory and its Applications held at East China Normal University, Shanghai, China and another invited talk at International workshop on Matrices and operators at Shanghai University, China.

Professor Nandadulal Bairagi, Department of Mathematics, delivered seminar lectures on Mathematical Biology organized by Czech Academy of Sciences, Prague, Czech Republic, on population dynamics at ICT SAIFR, Brazil and on dynamical system at Beijing Technology and Business University, Beijing, China.

Professor Priti Kumar Roy, Department of Mathematics, delivered an invited talk at Xinyang Normal University, Henan 464000, P.R. China and at Henan Normal University, Xinxiang Shi, Henan Sheng, China, 453002.

Professor Sudeshna Banerjee, Department of Mathematics, delivered a lecture on “Scattering Problems in Water wave theory” at the University of Ghent Belgium.

Professor Sujit Kumar Sardar, Department of Mathematics, delivered invited talk and chaired a session at International Conference on Algebra and Geometry (ICAG 2018) organized by the Department of Mathematics, Thaksin University held at Maritime Park and Spa Resort, Krabi, Thailand.

Mr. Abiral Tamang, Department of Physics, made oral presentation on “Redox sensing in live cells through microfluidic non-endocytic delivery of quantum dots” at the Bionano-Summer School held in Hirschegg, Kleinwalsertal, Austria.

Professor B. D. Chattopadhyay, Department of Physics, Avishek Chatterjee, Saroj Mandal. (2019) delivered a talk as Key-Note Speaker on “Bacteria incorporated 100% Fly ash geopolymer: A new hope for an alternative and sustainable construction material” at International Civil Engineering and Architecture Conference 2019 (ICARC-19) at Trabzon, Turkey.

Dr. Saikat K. Seth, Department of Physics, delivered a lecture on “Salt-bridge (SB) interaction at work in building extended supramolecular networks: Experimental and theoretical study” at the 12<sup>th</sup> International Conference and Exhibition on Materials Science and Chemistry held in Zurich, Switzerland, from 20/05/2018 to 22/05/2018.

Dr. Bharati Tudu, Department of Physics. presented a paper at “9th Joint European Magnetic Symposia (JEMS) 2018, held in Mainz, Germany during 3rd-7th September 2018”.

Dr. Dipankar Mandal, Department of Physics, delivered a Contributory Talk on “Human Skin Interactive Bio-e-skin for Self-powered Health Care Monitoring and All Organic Piezoelectric E-Skin Sensor for Self-Powered Wearable Electronics and Human Physiological Signal Monitoring” at the MRS Spring Meeting 2019, Phoenix, Arizona, USA.

Dr. Piyali Basak, School of Bioscience and Engineering, delivered invited lecture at 1<sup>st</sup> Indo-Bangladesh workshop on Biomaterials at Pilot Plant Process Development Centre, Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh. She also chaired two Technical Sessions in the 21<sup>st</sup> International Conference in Advances in Materials and Processing Technologies Conference (AMPT) 2018 held in Dublin City University, Dublin, Ireland.

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Professor Amita Chatterjee, School of Cognitive Science, presented a paper on 'Gender Gap in Mathematics and Science: Some Observations from the Indian Perspective' in a seminar organized at the University of Taipei, Taiwan, representing the International Union of the History of Science and Technology and delivered a lecture on 'Thought Experiments as a Method of Cognitive Science', in a conference organized by the University of Salzburg.

Dr. Joydeep Mukherjee, School of Environmental Studies, delivered a lecture on "Identification of marine sponge pathogen and purification and characterization of virulence factor, collagenase enzyme" at the American Society for Microbiology (ASM) Conference, Atlanta, USA. He also delivered a lecture on "Effect of surface materials, planktonic and biofilm growth on production of exocellular polysaccharides from intertidal cyanobacteria for both health as well as for industrial application" at the 3<sup>rd</sup> European Conference on Biodeterioration of Stone Monuments, Cergy-Pontoise, France.

Dr. Punyasha Chatterjee, School of Mobile Computing and Communication, attended 3<sup>rd</sup> International Conference of Data Management, Analytics and Innovation (ICDMAI 2019), Kuala Lumpur, Malaysia.

Professor Nandini Mukherjee, School of Mobile Computing and Communication, attended 47th International Conference on Parallel Processing (ICPP 2018) held at University of Oregon, Eugene, Oregon, USA.

Professor Pulok Kumar Mukherjee, School of Natural Product Studies, attended World Health Organization (WHO) Consultation Meeting on Traditional, Complementary and Integrative Medicine (TCI), Service Delivery and Safety Department (SDS) at Beijing; the Annual General meeting of the Japan Society for Cookery Science (JSCS) at Nakamura Gakuen University, Fukuoka, Japan; and International Frontiers Forum on Traditional Chinese Medicine & 2nd Editorial Board Meeting of World Journal of Traditional Chinese Medicine at Shenzhen, China. He delivered lectures at the 1st International Conference on Integrative Medicine at Mae Fah Luang University, Chiang Rai, Thailand; at the 19th International ISE Congress "Ethnopharmacology-bridging cultures and continents" at Technische Universität Dresden, Germany and at the International conference on Modernization of Chinese Medicine & Health Products (ICMCM) at Hong Kong Convention and Exhibition Centre, Hong Kong.

Dr. Tuhin Ghosh, School of Oceanographic Studies, worked as panel member in the 'Global Challenge Summit' at University of Newcastle, UK. He was a panel member at the 'International Symposium on 'Disaster Resilience and Sustainable Development' on "Education, Capacity Development and Disaster Resilience" at AIT-Thailand. He attended UKRI GCRF LIVING DELTAS Workshop at Hanoi, Vietnam. He delivered/thematic talk on Topsy-turvy in migration decisions: Evidences from Indian Sundarban Delta in the International Conference on 'Environmental Non-Migration: Frameworks, Methods and Cases' at Technische Universität Dresden, Dresden, Germany. He also Chaired a session on "Methodological approaches in Environmental Non-Migration studies" in the International Conference on 'Environmental Non-Migration: Frameworks, Methods and Cases' Technische Universität Dresden, Dresden, Germany.

Professor Sugata Hazra, School of Oceanographic Studies, visited University of Southampton (UK) for the e DECCMA project Writeshop and University of Edinburgh (UK) and NIO Goa for review of the progress of UKIERI-DST project.

Professor Aishika Chakraborty, School of Women's Studies, delivered lectures on "Dancing Dirty at Sacral Theatre: Cabaret in Calcutta" at the International Council for

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Traditional Music, ICTM, Chulalongkorn University, Bangkok, Thailand; on 'Politics, Performance and Urbanism: The Cabaret Queen of Calcutta' at the International Conference of the International Federation of Theatre Research at Shanghai Theatre Academy, Shanghai; on 'Chandalika: Ek sariri spadhar uccharoan' at Bangladesh Itihas Parishad, Dhaka University; Sufia Kamal Memorial Lecture Series at Department of Women and Gender Studies, University of Dhaka, Bangladesh; on 'Nacher Nokshi-Kantha: Kolkatar Nritya Katha' at Central Women's University, Dhaka, Bangladesh; on 'Navanritya: Gender, Body and Dance' at International Theatre Institute, Dhaka, Bangladesh and on 'Partition, Migration, Independence: Refugee Dancers of Bengal' at International Federation of Theatre Research, University of Arts, Belgrade.

Dr. Nandita Banerjee Dhawan, School of Women's Studies, presented papers on, "Does Representation Matter: Uma Bharati in Hindutva Politics in India" at a conference on "Voices and Choices: Intersecting Global Feminisms" at Ulster University, Belfast, UK and on "Gender and Caste Equalities in Higher Education in India" in a seminar organized by School of Social Sciences, Education and Social Work, Queen's University, Belfast.

Dr. Santwan Chattopadhyay and Dr. P. S. Chakraborty, Department of Adult, Continuing Education and Extension, presented papers respectively on "University – Community Partnership: University beyond its Boundary" and "Emergence of End-to-End Encryption and Perception among Social Media Users in Kolkata" organized by Research fora in Osaka, Japan.

Professor Biswajit Mukherjee, Dr. V. Ravichandran Centre for Advanced Research in Pharmaceutical Sciences, delivered an invited talk and chaired sessions at the International Conference on Biotechnological Innovations in Food and Health Care at Dubai. He also participated at the 44<sup>th</sup> Annual conference of the European Radiation Research Society in Pecs, Hungary and the International conference on Asian Symposium on Medicinal Plants, Spices and other Natural products XVI (ASOMPS) at Colombo, Sri Lanka.

Dr. S.C. Sarkar, Centre for Rural and Cryogenic Technology, visited Oxford University and Cryogenic Energy Storage Laboratory of Birmingham University UK and presented a paper at International Conference on Cryogenic and Material Engineering.

Dr. Subhadip Basu, Centre For Microprocessor Applications For Training Education And Research, delivered invited lecture on "Bioimage Informatics@JU-Methods & Applications", Hannover Medical School, Germany.

Dr. Susmita Ghosh, Centre For Microprocessor, Applications For Training Education And Research, Microprocessor, delivered a series of lectures in a Workshop on "Neural Networks and Learning Systems" at the School of Information Technology, King Mongkut's University of Technology, Thonburi, Thailand.

Dr. Debotosh Bhattacharjee, Centre For Microprocessor Applications For Training Education And Research, presented a paper entitled, "A Transfer-learning Based Deep Learning Framework for Automated Classification of Pap Smear Cervical Images," at ICMMI 2019 held in Tokyo, Japan. He also participated in a seminar on "Breast Cancer Detection using Thermal Imaging" at Northumbria University, United Kingdom.

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Professor Nandini Mukherjee, Centre For Microprocessor Applications For Training Education and Research participated at the 47th International Conference on Parallel Processing (ICPP 2018) held at University of Oregon, Eugene, Oregon, USA.

Professor Rajib Bandyopadhyay of Instrumentation and Electronics Engineering delivered the Key Note Address on “Opportunities and Challenges of NIR Spectroscopy for Agricultural Applications in India: A Few Case Studies” at a conference in Tokyo organized by the Japan Council of Near Infra-Red Spectroscopy from 17 to 21 November.

### ***I.VI: Research Publications***

The research expertise of my faculty colleagues and research scholars is aptly reflected in high quality of their publications. During the period under review my colleagues have published 1,958 articles/papers in peer-reviewed national and international journals and 258 books/book chapter. The high quality of such publications is attested to by 149 H-Index, as per Scopus estimate.

### ***I.VII: Seminars/Workshops***

During the period under review the University regularly organized national and international seminars and workshops to provide fruitful and engaging intellectual platforms on cutting-edge areas of teaching and research. Since the last Convocation the University organized 72 such programmes, of which 09 were international and 13 were national. The following list indicates the variety and depth of themes addressed in these academic programmes.

**School of Women’s Studies** organized the ‘9<sup>th</sup> Sulekha Dasgupta Memorial Lecture’ on 17<sup>th</sup> January 2019 at Vivekananda Hall, JU. On this event a book ‘**Kolkatar Nachh: Samakalin Nagarnrityo**’ written by Dr. Aishika Chakraborty.

**Department of Architecture** held ‘**Invited Talks & Exhibition**’ on 19<sup>th</sup> January 2019 by eminent academics and technocrats from both government and private sectors on such issues as manufacturing and application of building materials.

**Centre for Disability Studies** organized a ‘**Workshop-cum-Seminar**’ on ‘**Disability and Art: In Search of New Definitions of Access and Effective Participation**’ on 18<sup>th</sup> January 2019.

**School of Media, Communication and Culture** a Screen Show and Discussion of a short film titled ‘**Bideshi**’ (Director: Saumitra Adhikari,) on 29<sup>th</sup> January 2019. After the show Sri Partha Pratim Moitra spoke on ‘**NRC and the Citizenship Amendment Bill**’.

**Department of Instrumentation Science** in association with Western Regional Instrumentation Centre (WRIC) organized a One Week National Workshop on ‘**Instrumental Techniques, Maintenance and Servicing of Analytical & Laboratory Instruments**’ from 04-08 February 2019.

**Faculty of Engineering & Technology** organized an Interactive Session with Mr. Ajit Sivadasan of Lenovo on ‘**Digital Technology & Digital Marketing**’ on 6 February 2019.

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UGC Sponsored two-day International Seminar on '**Present Scenario of People with Disabilities in Bengal: Society, Education & Literature**' was jointly organized by **Centre for Disabilities, JU and Byanjanbarna Foundation**, Kolkata during on 15 and 16 February 2019. Sri Biman Banerjee, Hon'ble Speaker West Bengal Legislative Assembly, inaugurated the Seminar; Professor Basab Choudhury, Hon'ble Vice-Chancellor of West Bengal State University delivered the Keynote Address; Professor Debkumar Mukhopadhyay, Hon'ble Vice-Chancellor, Coochbehar Panchanan Barma University was the Guest in Chief in the said Seminar.

**School of Languages & Linguistics** in collaboration with CIIL, ICSSR and UGC organized the 7<sup>th</sup> International Conference on '**Endangered and Lesser Known Languages**' on 22 and 23 February. Dr. Upendranath Biswas, Chairman, SC, ST & OBC Development Finance Corporation, Govt. of West Bengal was the Guest in Chief in the Conference.

**Department of Bengali** celebrated '**International Mother Language Day**' on 21<sup>st</sup> February 2019. Dr. Pradip Kumar Ghosh, Hon'ble Pro-Vice-Chancellor inaugurated the Programme.

**School of Environmental Studies** organized on 25 February 2019 a seminar in the memory of **Dr. Dipankar Chakraborti**, Founding Director of SOES on 15<sup>th</sup> March 2019.

**Department of Chemistry** organized a National Seminar on '**Chemical Science: Today & Tomorrow**' under the UGC Centre for Advanced Studies, II Programme on 14 March 2019.

**Department of Computer Science & Engineering**, organized a workshop on '**Machine Learning and Data Analytics**' from 26 to 28 March 2019. Professor Pushpak Bhattacharyya, Director of IIT Patna delivered the inaugural speech in the workshop.

**Department of Physical Education** organized a Workshop on '**BP. Ed & MP. Ed Curriculum (NCTE Regulation, 2014)**' on 19 March 2019.

An international workshop on '**Application of NIR Spectroscopy in Food and Agriculture**' was organized jointly by Jadavpur University, Tea Research Association and Japan Council of Near Infrared Spectroscopy at Science City, Kolkata on 23<sup>rd</sup> March 2019.

Department of Economics, JU organized the 3<sup>rd</sup> **Professor Debesh Chakraborty Memorial Lecture** on '**Quantitative Techniques in Applied Economics**' on 25<sup>th</sup> February 2019. Professor Dilip Nachane, Professor. Emeritus, Indira Gandhi Institute of Development Studies, Mumbai delivered his lecture on '**Financial Liberalization, Development and Inequality**'.

**Department of Comparative Literature** in collaboration with Goethe-Institut/Max Mueller Bhavan presented a week of event '**1968: Global Youth Protest-Kolkata/Germany**', which included an Exhibition, panel discussions, Film Show, Street Play and Music of protest from 25<sup>th</sup> Feb. to 2<sup>nd</sup> March 2019 to commemorate the 15<sup>th</sup> Anniversary of the global student protest in 1968 and its aftermath.

**Department of Bengali** and the West Bengal Bangla Academy in association with JU celebrated '**Centenary of Amiyabhusan Majumdar**' on 23<sup>rd</sup> February 2019.



Bangiya Jatiya Shiksha Parishad in association with **Jadavpur University** celebrated its '**113<sup>th</sup> Foundation Day**' on 11<sup>th</sup> March 2019. Professor Amita Chatterjee, former Vice-Chancellor of Presidency University, Kolkata, was the Guest-in-Chief.

**School of Media Communication and Culture** presented conversation on '**Porous City**', i.e. visual storytelling to allow urban youth for exploring the possibilities beyond borders of circumstance on 11 April 2019. On this occasion the Fulbright-Nehru project website.

**Department of Comparative Literature**, JU organized the '**11<sup>th</sup> Annual Debrupa Bal National Students Seminar**' on 16 and 17 April 2019 on the theme of '**Re-course into the popular Discourse: Tracing the Popular**'.

**Dr. V. Ravi Chandran Centre for Advanced Research in Pharmaceutical Sciences (CARPS, JU)** and **Pharmaceutics Research Laboratory, Department of Pharmaceutical Technology, JU** jointly organized an **invited lecture** which was delivered by **Mr. Bijay Gopal Chakraborty**, Vice-President and Manufacturing Head- Biologics Division of Dr. Reddy's Laboratories, Hyderabad on 24<sup>th</sup> April 2019.

**Regional-Cum-Facilitation Centre (RCFC)**, JU and National Medicinal Plants Board (NMPB), Ministry of Ayush, Govt. of India jointly organized the '**Regional Workshop cum Buyer-Seller Meet on Medicinal Plants**' on 25<sup>th</sup> April 2019. The day long Workshop was attended by representatives of all category of stakeholders from the eastern region as well as experts and entrepreneurs in the field from across the Country.

**School of Environmental Studies and School of Energy Studies** organized a lecture on '**Energy and Environment–an Indian Perspective**' by Dr. Sanat Kumar Saha, member, West Bengal State Council of Higher Education, on 13<sup>th</sup> May 2019.

Jadavpur University organized a Public Lecture by the noble laureate **Professor Amartya Sen** on '**Kolkata After Independence: a personal memoir**' on 5<sup>th</sup> July 2019. Professor Partha Chatterjee of Anthropology and South Asian Studies, Columbia University, and former Director, Centre for Studies in Social Sciences, Kolkata, presided over the session.

**Department of English, Jadavpur University**, in collaboration with the Ministry of Culture, Govt. of India, and University of Liverpool, organized a thematic exhibition on "**Sustainable Heritage and Policy in Kolkata**" at Victoria Memorial Hall on 8<sup>th</sup> July 2019. Professor Sukanta Chaudhuri, Emeritus Professor, Jadavpur University, inaugurated the programme.

**School of Women's Studies** organised the first Radharani Debi Memorial Lecture on 15 July 2019. Gayatri Chakravorty Spivak spoke on '**Inaugurating Gender**'.

**Department of Sociology** a two-day National Seminar on '**Articulating Multiple Childhoods: Demystifying the Normative**' on 8<sup>th</sup> and 9<sup>th</sup> August 2019. Smt. Ananya Chakraborti, Chairperson of West Bengal Commission for Protection of Child Rights, was the Guest-in-Chief; Professor Bula Bhadra of Sister Nivedita University delivered the Keynote Address.



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**Department. of Film Studies** organized an international seminar on ‘**The Indian New Wave: Revisiting Fifty Years**’ from 7 to 9 August 2019.

**Centre for Sri Aurobindo Studies, the Department of Philosophy**, organized ‘**36<sup>th</sup> Annual Sri Aurobindo Memorial Lecture**’ on 22<sup>nd</sup> August 2019. Professor Krishna Roy delivered his lecture on ‘**Revisiting Some Social Ideas of Sri Aurobindo**’. Dr. Pradip Kumar Ghosh, Hon’ble Pro Vice-Chancellor, JU presided over the programme.

**Under the Ryorchi Sasakawa Young Leaders Fellowship Fund (Sylff) programme** an interactive session was held with Professor. Yuko Nikaido, Associate Professor of Economics, Musashi University, on 26<sup>th</sup> August 2019.

**Department of Sanskrit** organized a national workshop on ‘**Vedic Recitation: Theory and Practice**’ from 27.08 to 02.09.2019. Dr. Snehamanju Basu, Registrar, JU inaugurated the programme. Professor. Didhiti Biswas, former Professor. Department. of Sanskrit, Calcutta University delivered the Keynote Address.

**Department of Education** in association with Mental Health Foundation, Kolkata and Suicide Prevention Speciality Section of Indian Psychiatric Society and West Bengal Academy of Pediatrics organized a one-day UGC Sponsored National Conference on ‘**Suicide Prevention: Role of Media in Community Awareness**’ on 12<sup>th</sup> September 2019. Professor Sekhar Seshadri (NIMHANS) delivered the Key Note Address on ‘**Portrayal of Suicide in Media-Why should we be concerned**’.

Department of Education, Jadavpur University observed ‘**Teachers’ Day**’ on the theme of ‘**A teacher is like a candle, it consumes itself to light the way for others**’ on 5<sup>th</sup> September 2019.

**Condensed Matter Physics Research Centre, Department. of Physics**, organized a National Seminar on ‘**Physics at Surface and Interfaces of soft Materials**’ on 26 and 27 September 2019.

**Department of Film Studies** organized the first **Narendra Dev Memorial Lecture** by Adoor Gopalakrishnan on “**Indian Cinema: How Indian is it?**” on 27 September 2019. Mr. Goutam Ghose, renowned film director chaired the session

**School of Studies in Environmental Radiation and Archaeological Sciences** organized a national conference on “**Environmental Radiation: Impact on Society and its implications**” on 15 and 16 November 2019.

### **I.VIII: University Press (Publication)**

The University has an active Press (Publication) section. Its publication record is impressive and has attracted international and national attention. The following six titles were published since 24 December 2018:

1. Hariprabha Takeda, *The Journey of a Bengali Woman to Japan and other essays*, trans. Somdatta Mandal.
2. Subrata Sinha, *Adhunikatar Kabayatattvao Sudhindra Nath Dutta*.
3. Amartya Sen, *Calcutta After Independence: A Personal Memoir*.

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4. *Indian Drama in English: The Beginnings*, ed. Ananda Lal.
5. *Desiring India: Representations through British and French Eyes 1584-1857*, ed. Niranjana Goswami.
6. *XI Structural Engineering Convention 2018 (SEC 18) Abstracts*.

The Publication Unit proposes to publish the following in 2020:

1. Ursula le Guin, *Irasingdhurek Jadukar*, trans. Sudeshna Datta Chaudhuri.
2. Girindra Sekhar Basu, *Laal-kaalo*, trans. Sukanta Chaudhuri, illustrated by Kaustav Chakraborty
3. Graham Shaw, *Subaltern Squibs and Sentimental Rhymes: the Raj Reflected in Light Verse*
4. Kanishka Sarkar, ed. *Bangali Narir Odhikar, Unnayan o Kshamatayan*
5. D. N. Bandyopadhyay, *Evolving India: Phanerozoic Eon; A Book on Stratigraphy*
6. Hansda Showvendra Shekhar, *The Adivasi will Not Dance*, trans. Damayanti Dasgupta, Rita Ray, Abdul Kafi, Epsita Halder, Sujit Kumar Mondal

It is indeed a matter of pride that the University's Press (Publications) unit has received the following foreign grants to undertake the following publication projects:

A grant of 1000 Euros from the Poland Translation Programme for the translation and publication of a volume 100 poems in Bengali translation, by the Nobel Prize winning Polish poet Czeslaw Milosz. The translation is to be done by Kamil Siedczynski.

A grant of 300 Euros from the Publishing Support Programme of the Camões Instituto da Cooperação e da Língua Portugal, Government of Portugal, for the translation and publication of a volume of poems in Bengali translation by the Portuguese author Fernando Pessoa. The translation is to be done by Dr. Rita Ray.

A funding from the Utrecht University, the Netherlands, to publish an open-access online edition titled 'Urban Utopias'.

### ***I.IX: The University and International Connectivity***

In tune with the demands of globalization India has been participating in the internationalization of its higher education. I am happy to report that Jadavpur University has considerably enriched this process.

During the period under review the University signed 15 Memorandums of Understanding with such international institutions of higher learning as Silesian University of Technology; University of California, Berkeley; University of South Florida; University of Newcastle; Goldsmiths' College, London; Nippon Hoso Kyokai, (NHK); University of Derby; European Union (EU); Aston University, Institute of South and Central Asia, Charles University; University of Haifa, Israel; University of La Rochelle, France.

The University hosted high-level delegations from the University of Bayreuth, Germany, on 10<sup>th</sup> December 2018, Arizona State University, USA, on 6 March 2019 and The

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University of Auckland, New Zealand, on 02 December 2019 to develop academic programmes in research and teaching-learning process. Diplomatic representatives from Fiji and Maldives visited the University to explore academic collaborations.

Professor Sugata Hazra of the School of Oceanographic Studies, along with two other universities of West Bengal— Amity University and Bidhan Chandra Krishi Viswavidyalaya — is collaborating with the University of Southampton, UK, the Stockholm Resilience Centre, Sweden, in a UKIERI-DBT funded interdisciplinary project on ‘Opportunities and trade-offs between the Sustainable Development Goals for food, welfare and the environment in deltas’.

University of Liverpool and Jadvpur University jointly presented a Thematic Partnership report on ‘**Sustainable Heritage and Policy in Kolkata**’ on 4 September 2019.

Jadavpur University and the Exeter University, UK, are collaborating to produce a graphic work titled ‘Famine Tales from India and Britain’.

Subsequent to the signing of MOU with Edinburgh University, a team of researchers from the Institute of Energy System and Ocean Engineering, Edinburgh, visited the University between 23 and 26 November to interact with their Indian counterparts under the UKIERI-DST programme on “Tidal Energy for Sustainable Village Electricity Supply in the Indian Sundarbans Biosphere Reserve Area”. The programme was coordinated by the School of Oceanographic Studies.

Professor Ranjana Chowdhury of Chemical Engineering is conducting INNO-INDIGO Project on Bio-based Energy in collaboration with University of Eastern Finland and UFZ, Leipzig, Germany

Jadavpur University participated in the ‘**Annual Summer Cycling Programme**’ invited and funded by Chinese Taipei University Sports Federation (CTUSF) for encouraging physical exercise and cultural exchanges among youth, held during 02-07.10.2019 at Taipei, Taiwan.

Following two colleagues are involved with the UGC’s prestigious “Scheme for Promotion of Academic and Research Collaboration (SPARC) for international research collaboration.

Professor Subrata Koner of Chemistry Department is working with Professor Yasuhiro Nakazawa and Dr. Hiroki Akutsu of Osaka University and Professor Ashis Bhattacharjee of Visva Bharati for the project “Single Molecule Magnets and Molecular Magnetic Coolers from Lanthanide-based Metal-Organic Framework Materials”.

Professor Achintya Mukhopadhyay and Professor Swarnendu Sen of Mechanical Engineering Department are collaborating with Professor Asok Ray and Professor Jacqueline O’Connor of Pennsylvania State University for a project on “Data-driven Early Prediction of Abnormal Behaviour of Combustion Systems using Machine Learning Strategies”.

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My faculty colleagues have received foreign attachments in recognition of their academic proficiency.

Dr. Subhadip Basu, Centre For Microprocessor Applications For Training Education And Research is the Honorary Research Scientist, Department of Electrical and Computer Engineering, University of Iowa and DAAD Visiting Scientist, Hannover Medical School, Germany.

Professor Suddhasatwa Chakraborty of Electrical Engineering Department is associated with Technical University of Berlin (TUB), Germany for a collaborative research project entitled “Contrast threshold with marking light in road lighting.”

Dr. Paltu K. Dhal of Life Science and Biotechnology Department served as External Researcher at Japan Agency for Marine-Earth Science and Technology, Yokohama, Japan from 1<sup>st</sup> July to 15<sup>th</sup> August 2019.

Professor Paromita Chakravarti, Department of English, received international Fellowship by Sapienza University to Rome to facilitate collaborative research on “Transcultural Readings: The Bengal Italy Encounter in the 20<sup>th</sup> Century”.

In 2003-2004, Jadavpur University became the First Indian University among the 69 SYLFF (The RYOICHI SASAKAWA YOUNG LEADERS FELLOWSHIP FUND) Institutions across 44 countries to earn SYLFF status and received an endowment of one million US dollars (US\$1,000,000) from the Nippon Foundation. The JU-SYLFF program provides a unique opportunity for students in Social Sciences and Humanities as fellowships are awarded to postgraduate students whose studies focus on the broad theme: Tradition, Social Change and Sustainable Development and those which adopt a Holistic Approach, that is, any issue or problem relevant to contemporary Indian society. It provides unique research opportunity to the postgraduate students of the M.A. and M.Phil. and Ph.D. level and is one of the highest-valued scholarships in India.

### ***I.X: Rashtriya Uchchatar Siksha Abhiyan (RUSA)***

Jadavpur University is eastern India's only university to find a place in the top ten state universities of the country which has entitled it to receive Rs. 100 crores under the Government of India's RUSA 2.0 Scheme for enriching its academic programmes and infrastructure facilities. In a recent video-conference with the Ministry of Higher Education, Government of India, the Government complimented Jadavpur University for effective and fruitful utilization of the RUSA grant which has 60% central government component and 40% state government component.

- University's 94 registered doctoral scholars are receiving fellowships in following Faculties:
  1. Faculty of Arts - 33
  2. Faculty of Science - 23
  3. Faculty of Engineering And Technology (FET) - 31

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4. Faculty of Faculty of Inter-disciplinary Studies, Law and Management (FISLM) – 7
  - 42 Post-Doctoral Fellowships have been awarded to:
    1. Faculty of Arts – 11
    2. Faculty of Science – 10
    3. FET – 14
    4. FISLM – 7
  - 203 Travel Grants have been released to faculty members to attend seminars and workshops.
  - 263 Projects have been sanctioned to faculty members based on evaluation of their proposals by Research Boards consisting of external experts with a maximum limit of Rs. 10 lakhs for major projects and a maximum of Rs. 2 lakhs for minor research projects. The sanctioned projects fall under one of the research thrust areas:
    - i. Advanced Materials Research
    - ii. Translational Research
    - iii. Smart and Intelligent Cyber-Physical Systems
    - iv. Sustainable Development
    - v. Studies in the Global South
  - 62 Departmental Projects have been approved for research upgradation with a maximum limit of Rs. 25 lakhs under the above-mentioned five thrust areas.
  - 355 Project/Research/Office/Technical Assistants are working for the different approved research projects.
  - Travel Grants have been sanctioned to 210 full-time regular students and full-time registered research scholars of the University for attending conferences/workshops in and outside India.
  - 48 Grants sanctioned have been approved for organizing seminars/conferences/workshops by Departments/Schools of the University with a maximum support of Rs. 4 lakhs.
  - 10 international and national experts/teachers have been invited to help build networks of research and academic collaboration.
  - The University's Braille library has been enriched.
  - A University delegation visited University of South Florida for arranging collaboration to set up an Incubation Centre and initiate Entrepreneurship Development Programme.
  - An Entrepreneurship and Incubation Centre has been developed.



## II: UGC-HUMAN RESOURCE DEVELOPMENT CENTRE (HRDC)

On behalf of the University I compliment the Director and his staff for effectively organizing the programmes of HRDC. During the year under review it conducted 04 Orientation and 9 Refresher Courses, 1 Course for teacher's educators, 4 Short-Term Courses and 1 Winter School.

The HRDC has the unique distinction of initiating an impressive publication programme:

- A Contract has been signed between Routledge India (Taylor & Francis) and the UGC-HRDC, JU, in publishing a Book Series entitled **Contemporary Issues in Social Science Research**, with Rajat Acharyya (Director) and Nandan Bhattacharya (Assistant Director) as Series Editors. As per the agreement on Book Series, HRDC-JU and Routledge India will publish six (6) volumes in four years.
- The first three volumes in this Book Series are on Research Methodology for Social Sciences, Studies in Peace and Conflict, and History and Philosophy of Science. These volumes are primarily based on lectures delivered by experts in the relevant fields in different UGC-sponsored teachers' training courses (like Refresher Courses, Orientation Programme, Short Term Courses) that UGC-HRDC, JU, has conducted during 2014-2018. The interdisciplinary approach is the key aspect of each volume and the Book Series in general.
- The first volume in the Series, Research Methodology for Social Sciences, has already been published in November 2019.

## III: THE UNIVERSITY LIBRARY

The University's constant quest for excellence is nourished by a rich library collection and the dedication of the Library staff. The total collection of Central Library along with the Departmental Libraries is about 6,85,043 (approx.) volumes of books, 4813 e-books in perpetual mode, 122 Braille books, 82,154 bound volumes of journals, 8688 (hardcopy) theses, 8631 dissertations and 3047 CDs of theses and dissertations 3000 standards & 37,000 items of non-book materials such as reports, pamphlets, maps and micro-forms. Besides, the Salt Lake Campus Library has about 35,203 (approx.) volumes of books.

Journals subscribed by Central Library are: Print 304, Online 5704, Print + Online 29 and Online Databases 20. The total number of journals subscribed by the Salt Lake Campus Library are: in Print 49, Online 11 and Print+Online 10. In addition to the subscribed journals, the University provides access to 6430 (approx.) online journals and 4 databases from eSodh Sindhu (INFLIBNET).

The Accessible Library for Persons with Disabilities was inaugurated on 5<sup>th</sup> September 2018 at the ground floor of the Jadavpur University Central Library. The Accessible Library has five staff members and the number of users is about 45. About 42 number of audio books were prepared for the students. They also access e-books from Sugam Pustakalaya, Bookshare and JStore. The Accessible Library uses Jaws Professional, NVDA, MAGIC 14, OPEN BOOK 9, Read (Braille) softwares to access the e-resources. The Accessible Library has purchased 35 Braille

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books from Lalbihari Shah Braille Academia and 14 Braille books from Ramakrishna Mission Blind Boys' Academy, Narendrapur. All these purchased books are being processed and uploaded in the Jadavpur University OPAC. Apart from that 18 volumes of Rabindra Rachanabali in Braille were presented to this Library by the Society for the Visually Handicapped. The Accessible Library has about 1000 old audio books.

The University is exploring the possibility of air-conditioning certain sections of library for preservation of rare materials and books and for the benefit of the readers. To cater to the needs of the students we are also examining the issue of longer library hours.

### IV: STUDENT EXCELLENCE

Our students constantly bring laurels to the University through their curricular, co-curricular and extra-curricular attainments. At the same time, they remain critical and constructive members of the civil society, aware of the happenings outside their campus. Significantly, ours is perhaps the only university of the world which, as the institution's distinguished alumnus Madhabendra Nath Maitra reminded us in an interesting essay, was the product of a students' struggle, a struggle that had begun in Bengal in the context of the 1905 Swadeshi Movement to demand a National University as a counterpoise to colonial education that was been being imparted by the first three universities established by the British Raj: Calcutta, Bombay and Madras universities. Blessed by none other than Rabindranath Tagore, Chittaranjan Das, Abdul Rasul, Bipin Chandra Pal, Surendranath Banerjee, Satish Chandra Mukherjee, Aurobindo Ghosh and other luminaries of the time, the National Council of Education Bengal was formed on 11 March 1906, which became a forerunner of this University. Not unnaturally, the 12,000 strong student community – of which 97 are foreign students, 474 belong to minority community, 2602 to Scheduled Caste community, 504 to Scheduled Tribe community, 1216 to Other Backward Class and 163 to the Physically Challenged category - remains a driving force for our University. Within its financial constraints, the University seeks to meet the requirements of the students, although not to the fullest satisfaction of either the student community or the administration. I try my best to respect the democratic rights of the students and remain committed to student empowerment, although I do hope that my worthy students would exercise their democratic rights within democratic parameters.

Our students/research scholars demonstrated their research acumen at the East Zone Inter-University Research Convention, *ANVESHAN* 2018-19, organized by Central University of Jharkhand, Ranchi, under the sponsorship of the Association of Indian Universities (AIU), New Delhi, held on February 18-19, 2019:

#### I. Area: Engineering & Technology

- |                           |                                       |        |
|---------------------------|---------------------------------------|--------|
| 1 <sup>st</sup> position: | a) Debangana Das – Research Scholar,  | I.E.E. |
|                           | b) Barnali Ghatak – Research Scholar, | I.E.E. |
| 3 <sup>rd</sup> position: | a) Akanksha Rai – B.E-IV, E.T.C.E.    |        |
|                           | b) Shoureen Deb – B.E-IV, E.T.C.E.    |        |

## II. Area: Basic Science

1 <sup>st</sup> position:	a) Souravi Bardhan – Research Scholar,	Physics
	b) Shubham Roy – Research Scholar,	Physics
	c) Shilpa Maity – Research Scholar,	Physics
3 <sup>rd</sup> position:	a) Dipsikha Tamili – Research Scholar,	F.T.B.E.
	b) Soumi Chakraborty – Research	Scholar, F.T.B.E.

## III. Area: Social Sciences

1 <sup>st</sup> position:	a) Suchi Priyadarshini – B.E-IV,	Architecture
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At the national-level of ANVESHAN 2018-19, organized by Ganpat University, from March 12-14, 2019 our students/research scholars demonstrated the same expertise.

### I. Area: Engineering & Technology

1 <sup>st</sup> position:	a) Debangana Das – Research Scholar,	I.E.E.
	b) Barnali Ghatak – Research Scholar,	I.E.E.

## II. Area: Basic Science

2 <sup>nd</sup> position:	a) Souravi Bardhan – Research Scholar,	Physics
	b) Shubham Roy – Research Scholar,	Physics
	c) Shilpa Maity – Research Scholar,	Physics

Jadavpur University's performance in each National Inter-University Youth Parliament Competition organized by the Ministry of Parliamentary Affairs, New Delhi, has been impressive. The University won the 2<sup>nd</sup> Runner-up position in the '**15<sup>th</sup> National Inter University Youth Parliament Competition 2019-20 (National Level)**' on 9<sup>th</sup> September 2019. Dr. R.S. Shukla, IAS, Secretary, Ministry of Parliamentary Affairs, Govt. of India was the Chief Guest in the Programme. Following eight students received merit certificates for their skill:

1. Puja Basu
2. Mushfiq Khan
3. Sayak Nandan
4. Faiza Hazarika
5. Ananya Chatterjee
6. Doiyta Basu
7. Shubhangi Dutta
8. Farhin Kurshid Bhat

Shri Ujan Natic, PG-I, International Relations bagged 2<sup>nd</sup> Runner-up position in State Level Debate Competition on Youth Parliament/ Democracy.

At the 34<sup>th</sup> Zonal AIU Inter-University Youth Festival at L. N. Mithila University in January 2019, following were the prize winners -

- Bietri Pathak, I.R. – 2<sup>nd</sup> in COLLAGE ART.
- Animesh Tamang, Chem. Engg. – 1<sup>st</sup> in WESTERN – VOCAL (Solo)

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- Swarnenu Mondal, Geog. Sci. – 1<sup>st</sup> in CLASSICAL INSTR.(Non-Percussion)
- Souvick Chakroborty, Eng. – 1<sup>st</sup> in CLASSICAL INSTR. (Percussion)
- Madhumay Roy, Geog. Sci. – 1<sup>st</sup> in WESTERN INSTRUMENTAL (Solo)

At the 34<sup>th</sup> National AIU National Youth Fest (National) at Chandigarh University, in February 2019, following were the prize winners –

- Souvick Chakroborty, Eng. – 2<sup>nd</sup> in CLASSICAL INSTR. (Percussion)
- Bietri Pathak, I.R. – 3<sup>rd</sup> in COLLAGE ART.  
Animesh Tamang, Chem. Engg. – 3<sup>rd</sup> in WESTERN – VOCAL (Solo)
- Swarnenu Mondal, Geog. Sci. – 3<sup>rd</sup> in CLASSICAL INSTR. (Non-percussion)  
Madhumay Roy, Geog. Sci. – 4<sup>th</sup> in WESTERN INSTRUMENTAL (Solo)

At The 12<sup>th</sup> AIU SOUTH ASIAN UNIVERSITIES FESTIVAL (SAUFEST) at Pt. Ravishankar Shukla University, Raipur in February, 2019, Taishi Nandi of Comparative Literature, represented Indian Universities Contingent in the Light Vocal event and enthralled the audience.

The University supports cultural activities of the students through a number of Clubs and Societies. The students have not only demonstrated their own competence and enthusiasm in participating in a range of cultural activities, but on many occasions they themselves took the initiative in organizing and coordinating various functions, which certainly deserve to be complemented.

This year the Mountaineering and Hiking Club organized an expedition to an unnamed peak (20,000 feet plus). But due to inclement weather the mission had to stop only 150 feet before the post.

Jadavpur University Science Club had organized the following events in the academic year 2017-18.

1. Tech Know Cradle '18
2. Some Like It Correct '18
3. IMAGINEER v. 4
4. Srijan '19 Robotics events
5. Jontro Tontro '19

Jadavpur University Painting Club organized PICTURESQUE which included a series of fine arts events like cartooning, collage making and rangoli, poster making, mehendi art, on spot painting, charcoal art, hand/ face painting, junk art as well as clay modelling and graffiti.

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The 15<sup>th</sup> edition of “**QRIOSITY**” was held on 22<sup>nd</sup> and 23<sup>rd</sup> September. The two-day festival was attended by around 20 school students, almost 100 college or university students below the age of 25, and over 70 working professionals.

**The Debating Society** organised the ‘Vox-Pop’. Jadavpur University Photographic Club organized Basic Training Course on photography for the Fresher’s on 5th September 2018.

**J.U. Music Club Dance Division**, like previous years, organized “*Ibtida’19*”. It comprised of total 9 events, namely Safarnama (Eastern group dance), Lalkaar (Street play), Numaish (Fashion show), Noor (Duet vocals), Taabir (Duet dance), Kaaynaat (Stage play), Raqs (Western group dance), Atish (Band performance), Takraar (Rap battle). The two-day event was successfully conducted with huge turnout and participation by different colleges.

**The Film Society** hosted a ‘Film Making Workshop’

**The Art and Literary Society** organized the ‘JU-Model United Nations’ sessions

**The JU Drama Club** organised its first inter-departmental drama event, **Natyabhabna** on September 2018.

**The preceding year was particularly eventful for students participation in sports and games.**

Jadavpur University participated in the ‘Annual Summer Cycling Programme’ invited and funded by Chinese Taipei University Sports Federation (CTUSF) for encouraging physical exercise and cultural exchanges among youth, held during 02-07.10.2019 at Taipei, Taiwan.

The University’s Men Chess team comprising Arpan Das, (BA-II Philosophy), Kaustav Kundu, (BSc-I Geo. Sc), Bodhisatya Pal (BE-III Electrical Engg), Debankan Dhara (BE-I Chemical Engg), Aditya Chowdhury, (BE-III Com. Sc. Engg) and Sayan Mazumdar (BE-III, Chemical Engg) became Champion of the East Zone Inter-University Chess Championship 2018-19 and got 8<sup>th</sup> position in Inter-Zonal Inter-University Chess Championship 2018-19.

Shreya Brahmachari (MSc-II Chemistry), Shramana Saha (BA-II English), Sweta Brahmachari (BA-II International Relations), Semanti Choudhury (Linguistics-I German) secured 2 Gold medals in *500m & 2k.m Fours in All India Inter-University Rowing (Women) Championship 2018-19*. Shramana Saha and Sweta Brahmachari also won two Gold Medals in 2 K.M. and 500m pairs.

Srishti Basu, (BA-I Sociology) won 2 *Silver Medals in 50 mt & 100 mt Breast Stroke in All India Inter-University Aquatics (Women) Championship 2018-19*. Rakhi Podder (BSc-I Math) won 1 *Bronze Medal in 10m High Board Diving in All India Inter-University Aquatics (Women) Championship 2018-19*. Aparna Das (BE-III Architecture) won 2 *Bronze Medals in Gi& NoGi:Below-62 Kg. in All India Inter-University Grappling (Women) Championship 2018-19*.

Our American football team comprising Paritosh Saini, BE- III (C.S.E); Subhodip Chatterjee, BE-III (Civil Engg.); Jagatpati Gaorain, Linguistics- I (French); Amit Manhas, BE - II (C.S.E); Mutasim Farooq, BE - I (C.S.E); Fanzo Bhutia, BE - IV (Chem. Engg.); Samir Roy, BA- II (C.L); Joydeep Nandi, BE -I ( E.T.C.E); Nazbul Gazi, MA- I (Film



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Studies); Swawat Singh, BE - I (C.S.E); Milind Khatiwada, MA-I (CL); Tshering. N. Sherpa, BA- III (I.R); Koushik Mondal, M.P.Ed- I; Subhasish Murmu, B.P.Ed- II; Nunglyen R. Lepcha, BA- II (Philosophy); Ankit Kumar, BE- II (F.T.B.E); Dinchen Tamang, BA- II (English); Indranil Roy, MA-II (Mass Comm.); Hasan Raza Ansari, BE - III (Elect. Engg.); Nikhilendu Saha, B.P.Ed- II; Soumik Sengupta, MA-I (C.L); Kartick Paul, M.P.Ed-I; Goutam Mondal, M.P.Ed- I; Jayana Biswas, M.P.Ed- I and Gyazin Lama, BA- II (Economics) got 3<sup>rd</sup> Position in Tackle Version and 4<sup>th</sup> Position in Flag Version in All India Inter-University American Football Championship 2018-19. Prashanta Hembrom of UG-II (BPed) received Best Defender Prize in Flag version & Milind Khatiwada of PG-I (CL) won the Best Defender Prize in Tackle version in American Football (Men).

Surbhi Patwari, BA-I (Economics) won 2 Gold medals in Table Tennis (U-21 yrs girls Singles & Doubles) in Khelo India Youth Games 2019.

Shristi Basu, BA-I (Sociology) won Bronze medal in Swimming (4 x 100m Free Style Relay) in Khelo India Youth Games 2019.

Rohan Ganguly, BA-I (History) won two Gold medals in Karate kata & kumite in International Sports Championship 2019.

Mintu Sardar of MP.Ed-II was awarded the “Star of Bengal” of Men Team of 7<sup>th</sup> State Badminton Championship 2019.

Seven Cricket players — *Turja Chowdhury, Krishna Kumar, Rohon Sarkar, Indranil Mondal, Soham Sarkar, Abhranil Bhattacharjee and Prayas Ghoshal* were selected to represent in different Combined University teams (Blue & Yellow).

Rohan Ganguly of UG-II won Gold medal in the event of senior male individual kata in the 5th international karate championship 2019 organized by-all India Seishinkai Shito-ryu Karate-do Federation (member of Karate Association of India) & Karate Association of Bengal, recognized by-Govt. of India from 26-28 July, 2019 at Netaji Indoor Stadium, Kolkata.

Shrishti Basu won 2 Gold medals in the event of 50m and 100m Breast Stroke and broken State record in 50m; Ranajit Dutta got Silver medal in 200m Breast Stroke and Sunanda Dutta received 2 Bronze medals in 50m and 100m Back Stroke in the State Senior Aquatic Championship 2019 held from 2-4 August, 2019 organized by Bengal Amateur Swimming Association.

Shramana Saha won Silver medal in 2000 m Pairs and Sweta Brahmachari won Bronze medal in 2000 m Single in the ‘4th Indoor National Rowing Championship 2019’ held at Patna, Bihar from 7 to 8 September, 2019.

The Women Table Tennis team - consisting of Surbhi Patwari, B.A (Economics) IYR; Brototi Nandan, B. A (Sociology) III YR; and Sudarshana Patra, B.Sc. (Chemistry) IYR secured the 3rd Position in the East Zone Inter- University Table Tennis Tournament 2019-20 held from 6-9 October, 2019 organized by Kalinga Institute of Technology, Bhubaneswar, and qualified for All India Inter University Competition.

The Men’s Chess team - consisting of Arpan Das, B.A (Philosophy) IIIYR; Kaustav Kundu, B.Sc.(Geological Sciences) IYR; Debankan Dhara, B.E (Chemical Engineering) IYR.; Ritabroto Ganguly, B.E (C.S.E) IYR; Arka Sen Gupta, B.E (IT) IYR; Aneek Das, BA (IR)

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IYR-became the champion for the 2nd consecutive year in the East Zone Inter University Chess Tournament 2019-20 organised by the Centurion University of Technology and Management, Paralekhamundi, Odisha, from 29<sup>th</sup> October to 1<sup>st</sup> November, 2019.

The Women Badminton team — with Sudeshna Saha, Engg (IT) II YR; Atreyi Bhanja, Engg (ETCE) IV YR; Pritha Raha DAS B.A (English) II YR – won the 4th position in the East Zone Inter University Badminton Tournament 2019-20 organised by Atal Bihari Bajpayee University from 3-5 November, 2019 at Bilashpur and qualified for All India competition.

Women Tennis team consisting of Madhurima Mazumdar, B.A (English I YR. & Guritika Saini, ISLM, won the ‘Runners Up’ Trophy in the East Zone Inter University Tennis (Women) Championship 2019-20 held from 5th to 7th November 2019, organized by Assam Royal Global University, Betkuchi, Guwahati.

JU Women Diving team won 1 Silver and 2 Bronze medals in the All India Inter University Aquatics (Diving: W) Championship 2019-20 held from 6 to 8 November, 2019, organised by Lovely Professional University, Jalandhar, Punjab. Rakhi Podder of UG II, Math got Silver medal in 1m Diving and Bronze medal in 10m High Board Diving events & Nandini Khotari of UG I, Chem. Engg. received Bronze medal in 1m Diving event. The Team was the 2<sup>nd</sup> Runner-Up Trophy in Team Championship in Diving group.

Women Basketball team received the ‘Championship Trophy’ in the Inter-College Basketball (women) Tournament 2019 held from 7-10 November, 2019, organized by Indian Maritime University, Kolkata. Swagata Dey of M. PED.-II was adjudged the “Best Player of the Tournament”.

Surbhi Patwari of UG-II, Economics received a Gold Medal in Youth Girls Doubles and two Silver Medals in Youth Girls Singles & Youth Girls Team in the UTT 81<sup>st</sup> Jr. & Youth National and Inter State Table Tennis Championship 2019 held at Jammu from 2-8 December, 2019. She also won 1 Bronze medal in Women’s Team at the 49<sup>th</sup> All India Inter Institutional Table Tennis Championship 2019 held at Ajmer, Rajasthan, from 24-30 November, 2019.

The University’s Sports Board on its own successfully hosted some international and national sporting events. This has enhanced the institution’s standing in the realm of sports administration. Particular mention may be made of:

‘**WUKF Asia International Karate Championship 2019**’ from 18 to 20 January at the University’s Open Air Theatre in collaboration with Nehru Yuva Kendra Sangathan (NYKS), Government of India, in the presence of Professor Liviu Crisan (President of WUKFo & Dr. Roberto Perii (General Secretary of WUKF).

West Bengal Youth Chess Championship was hosted by the University Sports Board in collaboration with Purba Medinipur Haldia Karate Games from 5-6 January 2019.

The University’s Sports Board hosted the State Super Cup Mixed Ball Badminton Competition 2019 in collaboration with West Bengal Badminton Association on 16<sup>th</sup> February 2019

Examination for selection of **Federation Technical Officials** (FTO) on 6 and 7 July

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2019 in collaboration with the West Bengal Athletic Association.

**Seminar-cum-Workshop on Athletic Technical Rules** in cooperation with West Bengal Athletic Association from 26 to 28 July 2019.

We steadfastly try to meet their needs and aspirations, of course, within our limited resources. The University has 10 boys' hostels and 4 girls' hostels in which 1314 boys and 587 girls are being accommodated. Needless to say, more hostel accommodation is required. The existing hostels also require to be urgently renovated and modernized. A portion of the RUSA fund is being utilized for this purpose. But the process requires to be accelerated.

Financial support is provided to needy students by the University to the best of its ability. During the period under review full free studentship has been sanctioned to 798 students and half-free studentship has been awarded to 367 students. Out of the total 1165 beneficiaries, 427 students belong to the General category, 345 to SC community, 48 to ST category, 323 to OBC and Minority community and 22 to physically challenged students. One-time financial assistance has been given from university's Fund to the needy students for their study at Jadavpur University. A few students also receive financial help to continue their studies from some Endowment Scholarships.

Under the auspices the SC & ST Cell of the University conducted coaching for Soft Skill Development and Communicative English which benefitted about 75 students across faculties. The Cell also conducted classes for about 400 students classes for UGC NET Paper-I. It is indeed a matter of deep regret that the UGC fund for such coaching schemes are no longer forthcoming, and we have to continue these programmes from University's own resources.

### **V: THE UNIVERSITY-INDUSTRY PARTNERSHIP PROGRAMME**

Jadavpur University has to its credit the pioneering of academia-industry linkage in West Bengal. In the process it has been significantly contributing to the transformation of inventions to innovations. The University's contribution in this realm has received apt recognition from the National Institutional Ranking Framework which has accorded it the topmost position in Industry-Institute Partnership programme. Our University's Industry-Institute Partnership Cell, under the leadership of its director and his colleagues, has already generated in the current financial year a revenue of Rs.19.50 crores through consultancy and testing services. The Cell works closely with about 161 industries/ organisations like Tata Steel, Airport Authority of India, Haldia Docks, Kolkata Port Trust, Simplex, Bajaj Electricals, L & T, Kolkata Municipal Corporation, WBHIDCO, KMDA, HRBC, Central Public Works Department, NCC Ltd., Rail Vikas Nigam Ltd., Eastern Railway, CESC, Shapoorji Pallonji, Zoo Authority, Bridge & Roof Co.(India) Ltd., Mackintosh Burn Ltd. and Ambuja Housing and Urban Infrastructure. My colleagues in Engineering faculty are regularly consulted by the State Government in matters concerning public construction exercises.

The University faculty constantly enrich the Research and Development profile of the country through their innovative exercises, evident from their impressive record in the grant of patents.

Professor Kalyan Kumar Chattopadhyaya, Department of Physics, along with U.K. Ghorai, S. Mondal, J. Sarkar and A. Gain have been granted patent for on "Large Scale synthesis

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of Cobalt Pthalocyanine nanotubes for super capacitor applications”.

A.K. Bera, M.M. Verma, M. Das, A. Datta and R. Ganguly, Department of Power Engineering, have been granted Indian patent for their work on “Spill-tray and pan support for thermal efficiency enhancement of a domestic LPG stove”.

Professor Biswajit Mukherjee, Dr. V. Ravichandran Centre for Advanced Research in Pharmaceutical Sciences, along with Soma Sengupta and Paramita Paul have filed application for patent for their research on “Process and carrier for targeting drugs/diagnostics of peripheral and central nervous system.”

My colleagues particularly deserve to be congratulated since the University due to its financial constraints cannot always provide the necessary financial support for filing patents.

### ***V.I: Campus Recruitment***

Yet another indication of University’s success in fostering its linkage with the industry is our impressive record in the matter of campus recruitment. Out of 750 eligible students in UG Faculty of Engineering 620 received placement with a median salary of Rs. 5.30 lakhs per annum. The highest salary offered was Rs. 42 lakhs per annum. Major recruiters were Amazon, Microsoft, Sales Force Goldman Sachs, Samsung, Tata Metallica, Texas Instruments, Calcutta Electric Supply Corporation, Maruti, Hero Motocorp, Bajaj Auto, Novonordisk, Honeywell, ITC, L&T, Tata Consultancy Services, Wipro, IBM, Infosys, Mercedes Benz, Synopsis, PWC, Siemens, Deutsche Bank, ADB, ZS Associates, Air Products, Fluor Daniel, Reliance, HSBC, Oracle, Vedanta, Jindal and Capgemini. More than 80 students from the PG Engineering Departments also received jobs through campus recruitment with a median salary of Rs. 4.32 lakhs per annum. I am happy to report that during the last year about 39 students from Arts Faculty and 07 students from Science Faculty also received placements,

## **VI: THE UNIVERSITY AND THE COMMUNITY**

The University sustains its legacy of maintaining a constructive relationship with the broader society. Primarily through the National Social Service Scheme (NSS) we have been able to fulfill our social and national obligations.

The Pulse Polio Immunization drive and Health check-up and Awareness Camps of the NSS unit benefitted respectively 300 children and 3400 people, especially from low-income groups.

This year the Science Talent Search Programme was conducted by the NSS unit, which recorded more than 900 School students participation.

NSS volunteers organized donation of more than 800 units of blood and planting of more than 1800 saplings in Kolkata and its adjacent areas.

The NSS unit also collaborated with NGOs and local clubs in distribution of clothes among the needy.

Subhankar Halder (Department of Sanskrit, P.G-II) participated in the International Youth Exchange programme at Republic of China, organized by the Ministry of Youth Affairs and Sports, Govt. of India.

Ranjit Jana (Department of Education, U.G.-II), Ractima Baidya (Sanskrit, U.G.-II), Monalisha Basuri (Department of Education, P.G.-I), Payel Barman (Department of Sociology, P.G.-II) participated in the National Integration Camp at Sayajirao University of Baroda.

Priya Addya (Department of Sociology, P.G.-II) participated in the National Integration Camp at SOA University, Bhubaneswar.

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Uday Karmakar (Department of Sanskrit, P.G-II), Rita Mondal (Department of Education, P.G.-I), Radharani Adak (Department of Education, P.G.-I), Koushik Palui (Department of Education, P.G.-I), Monalisha Basuri (Department of Education, P.G.-I) were selected for Pre-Republic day Parade Camp at University of Science & Technology, Meghalaya. Surjodeb Basu (Department of Language & Linguistics) participated in National Integration Camp at University of Rajasthan.

Monalisha Basuri (Department of Education, P.G.-I) was selected for Republic Day Parade Camp at Rajpath, Delhi.

Koushik Palui (Department of Education, P.G.-I) was selected for Republic Day Parade Camp at Red Road, Kolkata.

Ujan Natic (Department of International Relations, UG-III), Miss Sutirtha Majumder (Department of History, U.G.-III) participated in the National Integration Camp & 15<sup>th</sup> Pravasi Bharatiya Diwas at Varanasi, Uttar Pradesh.

Twenty NSS student volunteers from Jadavpur University participated in State Integration Programme at Rabindra Bharati University, Jorasako Campus, Kolkata on 6<sup>th</sup> March, 2019.

The University's **90.8 MhZ Community Radio**, the only one of its kind in West Bengal, plays a rewarding role in generating popular social and political consciousness on a range of issues.

Community Radio participated in the Election Awareness Programme organized by the Election Commission of India (ECI) and made 5 election awareness programmes which were highly appreciated and shared on the ECI's national portal.

Community Radio launched some programmes this year which are currently high on popularity chart: Ebong Rabindranath, Amar Nazrul, On-Spot Adda, Roshe Boshe.

Community Radio won the 3<sup>rd</sup> prize at the national competition titled 'Radio Saving Lives' and collaborated with UNICEF, New Delhi, to organize a programme on disaster management on 25 and 26 February 2019.

The Community Radio also joined the Vigyan Prasar in broadcasting matters relating to science and technology.

Within the campus itself the University encourages and supports recreational and welfare activities.

The Day Care Centre-established in 1 September, 2011-renders crucial support to the members of the University community. Teachers, non-teaching staff, research scholars and students of Jadavpur University can register their wards at the Centre. There are 10 wards registered as 'regular' and 6 wards using the Centre on casual basis. Throughout the year, the Day Care Centre organizes various programmes including recitation, singing, painting, dance, plays, story-reading, creative writing and sports. The Centre has been provided with additional space adjacent to its current premises.

The University Staff Recreation Club organized '**J.U Women Employees Sports Carnivals 2018**' on 24 and 25 January 2019 at the Main Play Ground.

The Staff Recreation Club organized a '**Cultural Competition Programme**' for the children of the Faculties, Officers and Non-Teaching Staff of the University at the University Open Air Theatre on 23 February 2019.

The University Sports Board organized the '**4<sup>th</sup> Sports Inspiration 2019**' on 6<sup>th</sup> February 2019 for the University community. **Mr. Joydeep Karmakar**, Olympian, World Cup Medalist and Arjun Awardee was the Guest-in-Chief.

Jadavpur University Staff Recreation Club organized a '**Blood Donation Camp and Eye**



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**Checkup Camp**’ on 2<sup>nd</sup> April 2019 at the Salt Lake Campus.

Jadavpur University Staff Recreation Club organized an **‘Intra-Staff Cricket Tournament 2019’** during 31<sup>st</sup> January to 12<sup>th</sup> April, 2019. The Final Match was held on 12<sup>th</sup> April 2019 at JU Main Campus Playground.

Jadavpur University Staff Recreation Club organized a Cultural Programme on the eve of 158<sup>th</sup> **Rabindra Jayanti** on 8<sup>th</sup> May 2019.

The Faculty of Engineering & Technology Students Union, Jadavpur University organized a **‘Mixed Gender Sports Events’** on 21 and 22 January 2019.

### VII: THE ALUMNI SUPPORT

As has been aptly remarked:

Creating an engaged, supportive alumni network is crucial to an institution’s success.

If communication stops once graduates leave an institution, their understanding of the university will become stale. Instead, they should be kept informed so they can remain engaged and keep abreast on the progress of the university.

The alumni of Jadavpur University represent the best of the symbiotic relationship between the alumni and the institution. With the support of regional, national and international chapters, the alumni have unwaveringly upheld the cause of the alma mater – providing financial help in implementing the University’s mandate of providing inclusive quality education, standing by it in times of any crisis and staunchly counteracting motivated moves of defaming its record. Our alumni remain the best emissaries of their institution, which had opened to them to one of the best teaching-learning processes that this country can offer.

During the current academic year, the Alumni Association has allocated a sum of Rs. 50 lakhs to help 547 needy students.

The Association awards gold plated silver medals to students who top the merit list in all Departments. In the last year 79 such toppers received awards.

Spoken English classes for students are conducted by the Alumni Association.

Every year the Mumbai Chapter of the Association Jadavpur University organizes the Award Ceremony of the **‘Supriya Basu Scholarships’**.

Each year the Association holds four memorial lectures to perpetuate the memories of illustrious alumni.

A Global Jadavpur University Alumni Foundation has been registered in the USA to facilitate alumni networking and enhance the branding of the University.

To commemorate its centenary in 2020, the Alumni Association of the Main Campus proposes to initiate such measures to improve the infrastructure of the campus as setting up a Composting Plant to deal with kitchen waste from hostel kitchens and strengthening the air-conditioning system in the Central Library. It has also instituted an annual gold-plated medal for the best girl sportsperson of the University.

The University gratefully places on record the help and guidance it receives from the alumni and the National Council of Education, the parent body of the University.

### VIII: UNIVERSITY GOVERNANCE

The University has been able to sustain its continuous quest for excellence because of its cooperative system of governance, based on the involvement of all sections of the University community to meet the challenges of administration. I compliment the dexterity and dedication of all my officers – the two Pro Vice-Chancellors, the Registrar, the Finance Officer, the Controller of Examinations, the Joint Registrars, the Deputy Registrar, the Secretaries of Faculties, the Development Officer, the Dean of Students, the Director of Youth Welfare, the Officer on Special Duty Placement and Training, the Director of Physical Instruction, the Chief Librarian, the Accounts Officer, the Audit Officer, the Assistant

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Registrar, the Accounts Officer, the Audit Officer, the Assistant Controller of Examinations, the System Administrator and Scientific Officer. The Deans of Faculties have proved to be the efficient anchor of academic administration. I also record University's sincere gratitude to my following faculty colleagues for effectively discharging additional duties: Professor Samantak Das for being the Director of the Internal Quality Assurance Cell, Professor Abhijit Gupta for coordinating the functioning of the publications section, Professor Gupinath Bhandari for acting as the University Engineer, and Professor Samiran Chattopadhyaya for overseeing the Jadavpur University Management System. The teachers' associations and all sections of employees have always been cooperative and have unhesitatingly lent helping hands in addressing complicated issues of governance. The University administration remains committed to maintaining its transparency and societal responsibility.

### IX: UNIVERSITY FINANCE

Our University shares with other state universities the agony of inadequate financial support from federal funding agencies. The contribution from the University Grants Commission accounts for only 11.43% of the University's annual budget.

We remain indebted to the Government of West Bengal for providing us with 77.97% of our financial requirements. I particularly express gratitude to the State Government for providing financial help in 2019-20 to 2750 students of the University under *Kanyashri and Aikyashree Prakalpa*, *Swami Vivekananda Merit-cum-Means Scholarship*, and *Swami Vivekananda Non-NET Fellowship Scheme*. Without such unqualified support of the State Government, the University would not have been able to sustain itself in this increasingly global and national competitive milieu. I put on record my appreciation of the efforts being undertaken in modernizing the accounting system and adopting measures for optimum utilization of resources.

### X: THE IDEA OF THE UNIVERSITY IN THE HIGHER EDUCATION SCENARIO OF THE COUNTRY

Compared to the countries which won independence at the same time as India, our country's education system has expanded significantly, making it the second largest in the world, next to China. Yet, the structure remains plagued by multiple insufficiencies. Our Gross Enrolment Ratio (GER) is still about 23%, far lower than the world average, and considerably below the threshold of 40%, which is usually considered as the basic requirement for moving into the stage of broad-based higher education. We thus have to meet the challenge of expansion. But this expansion has to be in tune with the principle of equity, addressing the challenges of the distortions of class, caste, gender and region. At the same time, despite pockets of excellence, the average quality of the country's higher education institutions is far below the world standard. It is indeed a matter of regret that even after 70 years of independence an Indian institution is yet to figure among the first 200 in global rankings. The requirement to make the products of higher education employable is yet another challenge, a need forcefully driven home by a Confederation of Indian Industries report that only 25% of graduates in professional courses are immediately employable.

To meet the challenges of higher education in the country, the Indian Government has adopted schemes such as the Rashtriya Uchchatar Siksha Abhiyan (RUSA), establishment of Institutions of Eminence, promotion of international global academic connectivity, introduction of choice-based credit system in the teaching-learning process and

enhancement of the quality of teachers. The latest move in this process is the draft 2019 National Education Policy, which is scheduled to become a reality in the coming days. This new Policy is certainly innovative in many ways, but it has also raised some valid concerns and apprehensions which need to be addressed. Such concerns include higher education becoming the victim of over centralization, commercialization, elitism and homogenization, undermining cultural and regional pluralism.

However, the basic need of the hour is to sustain within the Indian education system the idea of a university, an issue which regrettably has not been adequately addressed by policy planners. Thinkers — from Immanuel Kant to John Henry Newman, Wilhelm von Humboldt to Rabindranath Tagore and Mahatma Gandhi – had distinguished the modern university from its medieval forerunners by envisaging for it an autonomous sphere in relation to the emerging nation-state. It was conceived as an inclusive institution for producing learners who would theorize and question existing knowledge, thus becoming embodiments of modernity. And, the state was urged to support the process, a necessity aptly underscored by the October 1998 UNESCO declaration:

Public funding of higher education reflects the support that society provides to higher education and must be further strengthened to ensure the development of higher education, increase its efficiency and maintain its quality and relevance.

Universities are thus required to be “incubators of ideas and innovations”, and not produce, as Noam Chomsky reiterated, mere “manufacturers of consent”. We need to develop universities as sites for deliberations and debates where the community should be trained to learn, unlearn and re-learn, reminding ourselves of Derrida’s pertinent comment:

The university professes the truth, and is its profession. It declares and promises an unlimited commitment to the truth. (Tom Kohen ed. *Jacques Derrida and the Humanities: A Critical Reader*, Cambridge 2001, p. 24)

For a country like India, which bears a legacy of pluralism, multiculturalism and an assimilative civilization, a modern university needs to particularly nurture the spirit of cohesion and “engagement of citizens”, remembering Tagore’s ideal of a university developing a “bond of federation” (*Creative Unity* 1922), and Martha Nussbaum’s stress on the university becoming a space for “global citizenship” (*Not for Profit: Why Democracy Needs the Humanities*, 2010).

Honourable Chancellor Sir, distinguished personalities present, and my dear students, the time has come to question if after more than seventy years of independence we have effectively looked at education as a necessary public good or a useful social capital to make our higher education institutions produce enlightened and eclectic minds and remain alive to socio-economic challenges plaguing our society. Perhaps not. The father of our nation, Mahatma Gandhi, had reminded us:

True education must correspond to the surrounding circumstances or it is not a healthy growth.

Are our universities being driven by this spirit? Perhaps not. Instead, there is a fear that our universities are being increasingly trapped by forces of commodification, where, as one critic aptly remarks, “professors will be known as educational entrepreneurs”, designing

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courses according to “market compatibility” and promoting straight-jacketed and homogenized teaching processes in a bid to secure for their institutions a high place in academic rankings.

Jadavpur University does participate in ranking competitions, and its record has been commendable, usually coming a close second to federal institutions, which receive disproportionately higher funding from central bodies than we do. Yet, the University consciously seeks not to remain a “neat and discrete entity”. Instead, it aims to be a site of imagination, stands for, as our first Prime Minister Jawaharlal Nehru visualized, humanism, tolerance and reason, strives to pursue that education which, in Swami Vivekananda’s words, “is the manifestation of the perfection already in man”, and to produce students who, as our philosopher President Sarvepalli Radhakrishnan hoped, “would wipe out the redundant and decadent”.

While I stress the importance of preserving the idea of a university, I pay my tributes to the memory of the distinguished litterateur Nabaneeta Dev Sen, who was one of our most eminent alumnae, and later served this university with distinction. She symbolized the true spirit of a university and her untimely death has deprived us of someone on whom we always counted for support in confronting distortions within our higher education structure.

As I conclude, let me on my own behalf, and on behalf of the University, extend heartiest congratulations to my students, who will be receiving today their hard-earned and well-deserved degrees. But let me also take this opportunity to remind my students that “Graduation is not the end; it’s the beginning”. You will be now entering a new and a difficult world; some of you may have to travel along hitherto uncharted paths. But I am sure that, fortified with the liberal education that you have received from this temple of learning, you will be able to meet all challenges in your life and remain the best ambassadors of your alma mater, wherever you live and whatever profession you join. May I remind my graduating students how Aurobindo Ghosh dreamt of the Bengal National College, the precursor of our University:

Such a time has now arrived for our motherland when nothing is dearer than her service, when everything else is to be directed to that end. If you will study, study for her sake; train yourselves body and mind and soul for her services.

*(Four Memorable Speeches Revealing The Ideals And Aspirations of The National Council of Education, Bengal (Kolkata: July 2012, p. 22)*

I do hope that, driven by this spirit, the students receiving their degrees today will become positive and creative members of a civil society to make India, and the world, a better place to live in.

Thanking you and wishing you a happy and peaceful 2020.

**Suranjan Das**

24 December 2019

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**SECTION A**  
**[As on 23.12.2020]**

**ADMINISTRATIVE PROFILE**



## GENERAL INFORMATION OF JADAVPUR UNIVERSITY

Jadavpur University has a long and distinguished heritage. The years 1905-06 are memorable in the history of Bengal and indeed in that of India. The attempt by the Government to partition Bengal led to a countrywide agitation and an intense nationalist movement which, though political at the outset, had important economic and cultural implications. The economic aspect of the movement found expression in the production and use of *swadeshi* goods. The cultural impact was felt in the regeneration of Indian art and music, but most of all in a reaction against the prevalent system of education and the devising of an alternative planned entirely on national lines and directed towards serving the national interest.

It was in this way that the National Council of Education, Bengal, was started in 1906 'to impart education—literary and scientific as well as technical and professional—on national lines and exclusively under national control, not in opposition to, but standing apart from the existing system of primary, secondary and collegiate education, attaching special importance to a knowledge of the country, its literature, history and philosophy, and designed to incorporate the best oriental ideals of life and thought, the best assimilable ideals of the West and inspire students with the genuine love for and desire to serve the country.'

The foundation of the National Council of Education, Bengal, was made possible by the munificence of three generous donors, Raja Subodh Chandra Vasu Mallik, Brojendra Kishore Roy Chowdhury of Gouripur and Maharaja Surya Kanta Acharyya Chowdhury Bahadur of Mymensingh. The first President of the National Council of Education was Sir Rash Behari Ghose, and in its early days, nearly all notable figures of the time were associated with it – some of whom, such as Rabindranath Tagore and Aurobindo Ghosh, later won international recognition.

In 1906, the year of the foundation of the National Council of Education, Bengal, another association was set up known as the Society for the Promotion of Technical Education in Bengal, also under the presidentship of Sir Rash Behari Ghose, with the aim of imparting scientific and technical education to the people of India to further industrial progress. Under the auspices of this Society, the Bengal Technical Institution (later known as the College of Engineering and Technology, Bengal) was started, financed mainly by Sir Taraknath Palit. In 1910, the Society for the Promotion of Technical Education in Bengal was amalgamated with the National Council of Education, Bengal.

The National Council of Education, Bengal, started with courses in Arts, Science and Technology courses, but finding the public demand for the latter more insistent, the Council came to devote almost all its resources to technical education through its College of Engineering and Technology.

In 1921, the Council had the good fortune to receive a donation of about 13 lakhs of rupees under the will of Sir Rash Behari Ghose. This bequest enabled the Council in 1924 to construct a number of buildings and workshops on its present site at Jadavpur. Besides the donations and endowments of the founders mentioned above, the Council also received a sum of about 10 lakh rupees as donations from various other persons. The present site itself is a gift of the Corporation of Calcutta, which leased out 64 acres of land to the Council at a nominal rent.

At the time of Independence in 1947, the College of Engineering and Technology, Bengal, was virtually functioning as a university. In view of this fact, and in order that the degree of the National Council of Education, Bengal, might receive statutory recognition, the Government of West Bengal with the concurrence of the Government of India enacted the necessary legislation for the establishment of a University at Jadavpur under the name of JADAVPUR UNIVERSITY, which started life on 24 December 1955.

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A new Jadavpur University Act was passed in 1981. It aimed ‘to reconstitute the Jadavpur University to enable it to function more efficiently as a University encouraging and providing for instruction, teaching, training and research in various branches of learning and courses of study, promoting advancement and dissemination of knowledge and learning, and extending higher education to meet the growing needs of society and to make the constitution of various authorities or bodies of the University more democratic, consistent with the objectives of the National Council of Education, Bengal and the Dawn Society.’

### FOUNDERS

We recall with pride and gratitude the names of the great men who conceived of, established and nurtured the National Council of Education, Bengal, the precursor to the University.

- Tarak Nath Palit (1831-1914)
- Sir Gooroodas Banerji (1844-1918)
- Sir Rash Behari Ghose (1845-1921)
- Basanta Kumar Basu (1850-1935)
- Surya Kanta Acharyya Chowdhury (1851-1908)
- Gopal Chandra Sinha (1852-1926)
- Haradaya Nag (1853-1942)
- Byomkesh Chakravarti (1855-1929)
- Promatho Nath Bose (1855-1935)
- Sir Ashutosh Chaudhury (1860-1924)
- Acharya Prafulla Chandra Roy (1861-1944)
- Acharya Satish Chandra Mukhopadhyay (1865-1948)
- Satyananda Basu (1866-1948)
- Hirendranath Dutta (1868-1942)
- Sakharam Ganesh Deuskar (1869-1912)
- Aurobindo Ghosh (1872-1950)
- Abdul Rasul (1872-1917)
- Brojendra Kishore Roy Chowdhury (1874-1957)
- Raja Subodh Chandra Vasu Mallik (1879-1920)
- Bidhan Chandra Roy (1882-1962)
- Benoy Kumar Sarkar (1887-1949)

### CHANCELLORS/PRESIDENTS

- Bidhan Chandra Roy (24.12.1955-1.7.1962)
- Triguna Sen (2.7.1962-24.10.1962)
- Satish Chandra Bhattacharyya (4.6.1967-24.12.1967)
- Arun Kumar Mukherjee (25.12.1967-6.12.1969)
- Triguna Sen (7.12.1969-25.4.1970)
- Sudhir Chandra Chakraborty (10.4.1971-20.12.1971)

### STATE GOVERNORS AS CHANCELLORS (EX-OFFICIO)

- Anthony Lancelot Dias (21.12.1971-5.11.1977)
- Sankar Prasad Mitra (10.9.1974-5.10.1974);  
[officiated during absence on leave of Anthony Lancelot Dias]
- Tribhuban Narayan Singh (6.11.1977-11.9.1981)
- Bhairab Dutta Pande (12.9.1981-9.10.1983)

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- Anant Prasad Sharma (10.10.1983-15.8.1984)
- Satish Chandra (Officiating, 16.8.1984-30.9.1984)
- Uma Sankar Dikshit (1.10.1984-12.8.1986)
- Saiyid Nurul Hasan (12.8.1986-1.3.1989)
- T. V. Rajeswar (3.3.1989-6.2.1990)
- Saiyid Nurul Hasan (7.2.1990-13.7.1993)
- K. V. Raghunath Reddy (14.7.1993-23.2.1998)
- A. R. Kidwai (24.2.1998-18.5.1999)
- Shyamal Kumar Sen (Officiating, 22.5.1999-3.12.1999)
- Viren J. Shah (4.12.1999-13.12.2004)
- Gopal Krishna Gandhi (14.12.2004-14.12.2009)
- Devanand Konwar (Officiating, 14.12.2009-24.01.2010)
- M. K. Narayanan (24.01.2010-30.06.2014)
- D.Y. Patil (03.07.2014-17.07.2014)
- Keshari Nath Tripathi (24.07.2014-29.07.2019)
- Jagdeep Dhankar (30.07.2019-Continuing)

### VICE CHANCELLORS

- Triguna Sen (24.12.1955-31.7.1966, Rector/Vice Chancellor)
- Hem Chandra Guha (1.8.1966-31.7.1970)
- Gopal Chandra Sen (Officiating, 1.8.1970-30.12.1970)
- Anil Kumar Majumdar (1.1.1971-15.8.1971)
- Arabinda Nath Basu (16.8.1971-20.11.1979)
- Manindra Mohan Chakrabarty (21.11.1979-31.8.1985)
- Santosh Kumar Sarkar (1.9.1985-28.2.1986)
- Sankar Kumar Sen (1.3.1986-12.4.1991)
- Ajit Kumar Pal (Officiating, 13.4.1991-5.8.1991)
- Pratip Kumar Mukherjee (6.8.1991-31.12.1993)
- Subodh Chandra Som (31.12.1993-29.6.1998)
- Ashok Nath Basu (29.6.1998-29.06.2006)
- Shyamal Kanti Sanyal (30.06.06-14.10.2007)
- Pradip Narayan Ghosh (15.10.07-14.04.2012)
- Abhijit Chakrabarti (15.04.2012-31.07.2012)
- Souvik Bhattacharyya (1.08.2012-27.10.2013)
- Abhijit Chakrabarti (28.10.2013 : for 6 months  
(28.04.2014 : for 6 months  
(10.10.2014 - 18.01.2015)
- Ashish S. Verma (Officiating, 19.01.2015 - 15.07.2015)
- Suranjan Das (16.07.2015 - Continuing)

### REGISTRARS

- P. C. V. Mallik (1955-30.6.73)
- A. K. Gupta (1.7.73-1.6.88)
- B. Banerjea (26.8.88-31.10.97)
- R. Bandyopadhyay (27.12.97-31.08.2008)
- S. C. Chakraborty (Officiating, 1.09.2008-19.01.2009)
- P. K. Ghosh (20.01.2009-31.08.2017)
- P. P. Lahiri (Officiating, w.e.f. 01.09.2017 - for 6 months)
- Professor Chiranjib Bhattacharjee (Acting, w.e.f. 05.03.2018 for 6 months & w.e.f. 19.09.2018)
- Dr. Pradip Kr. Ghosh (Acting, w.e.f. 05.09.2018)
- Dr. Snehamanju Basu (w.e.f. 05.11.2018 - Continuing)

## **THE CAMPUS**

The University stands on 60 acres of land on 188 Raja Subodh Chandra Mallik Road at Jadavpur in South Kolkata (apart from its new 7.6 acre adjacent new campus). It is 8 km by rail from Sealdah Station, 15 km by road from Howrah Station, 25 km by road from Netaji Subhas Chandra Bose International Airport, and 3 km by road from the Metro Railway Terminus at Tollygunge. The campus is close to Jadavpur Railway Station, and is approachable by public transport from all parts of Kolkata.

Various other research and academic institutions have grown up around the University, creating a belt of scientific and academic activity. Among these centres are the Indian Institute of Chemical Biology, the Central Glass and Ceramic Research Institute (both CSIR laboratories), the Indian Association for the Cultivation of Science, the academic complex of the National Council of Education, Bengal, the Regional Institute of Printing Technology, the Acharya P. C. Ray Polytechnic, and other organizations of repute. The campus itself houses the Department of Electronics Accredited Computer Courses (DOEACC) Centre and the headquarters of the Indian Institute of Chemical Engineers.

## **SECOND CAMPUS**

The rapid growth of the University created a demand for more space. The Government of West Bengal granted the University 21.3 acres of land at Block IB, Plot No.8, Bidhan Nagar (Salt Lake City), Kolkata 700 098, 13 km away from the main campus at Jadavpur. Here, the University plans to promote an area of 5 lakh sq ft in the form of a building complex to accommodate various departments, as well as an administrative office, seminar halls, staff quarters etc. A library, hostel and computer centre have already come up at the site. At present, the following departments function from the second campus: Construction Engineering, Information Technology, Instrumentation Engineering, Power Engineering and Printing Engineering. The campus has a well-equipped gymnasium and a cricket ground that hosts state-level tournaments. The Eastern Regional Office of the UGC and the Inter-University Consortium for Atomic Energy are also located on this campus.

## **WEST ANNEXE CAMPUS**

National Instruments Limited (NIL) was a Central Public Sector Enterprise under the Ministry of Heavy Industries and Public Enterprises, Govt. of India. NIL was engaged in the field of sophisticated Optical, Opto-Mechanical and Opto-Electronics Instruments manufacturing and maintenance and in the year 1992 it was referred to BIFR (Board of Industrial and Financial Reconstruction) under section 15(1) of the Sick Industrial Companies Act, 1985 as a sick industry.

The Jadavpur University and the University of Calcutta expressed interest in taking over the assets, liabilities and manpower of NIL for further expansion of their academic activities. Government of West Bengal decided in favour of Jadavpur University in view of close proximity of its main campus to NIL.

A meeting of all the stakeholders of the company, the representatives of the Govt. of India, Govt. of West Bengal, Regional Provident Fund Commissioner, Jadavpur University and workers/officers Union/ Association was held on 24.06.2005 to consider the proposal of taking over assets, liabilities and manpower of NIL.

BIFR, based on the draft scheme submitted by the operating agent, the State Bank of India, and an affidavit submitted by the Jadavpur University, prepared a scheme for revival of the sick company, the NIL, which included transfer of assets and liabilities of NIL along with transfer of existing employees with effect from 01.04.2007 in favour of Jadavpur University for utilization of the company's infrastructure for R&D purpose of the JU and the Board approved the said scheme on 04.08.2008.

Accordingly, NIL was transferred to Jadavpur University by an agreement made between NIL and the JU on the basis of the direction of BIFR, G.O.I and Govt. of West Bengal on and from 01.01.2009.

The erstwhile NIL campus is now the third campus of the JU and is known as West Annexe Campus of the University.

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Jadavpur University with its strong research culture and experienced faculty has been associated with DRDO since 1970s. Notable contributions are in Control, Guidance, Fault Tolerance of Missile Systems and Information Security. A Multi-Institute Collaborative Directed Basic Research facility will be created as “Jagadish Chandra Bose Centre for Advanced Technology : A DRDO-JU Initiative” (JCBCAT) with generous funding from DRDO. This joint venture is envisioned to emerge as a centre of excellence in conducting scientific and applied research in directed areas of advanced technology for defence. The Centre will be located in part of the West Annexe Campus (erstwhile National Instruments Ltd. Campus) of the University. The JCBCAT will involve all the universities, IITs and NITs and research institutes of the region as well as ISI and IISER as participating institutions.

The University has many plans for expansion in the new campus. For example, setting up a Business Incubator, an Institute of Management Studies, Tagore Research Centre etc. Classes of few of the new courses are already going on in the campus and few other new plans are still in the pipeline.

### **JURISDICTION**

The local limits of jurisdiction of the University extend to a radius of three and a half kilometres from the place where the University has its administrative nucleus.

Further, statutory provisions have been made so that any college or institution situated beyond the statutory area may also apply to the University for affiliation or recognition of any course or courses of study leading to a degree, diploma or certificate. The University may, subject to such conditions and restrictions as it may, with the approval of the State Government, think fit to impose, affiliate to itself, or recognize the course or courses of study conducted by, such college or institution, and admit the latter to all privileges of the University.

The colleges and institutions currently affiliated to the University are: Institute of Business Management under the control of National Council of Education, Bengal, and J.D. Birla Institute of Home Science, Kolkata. Further, the following institutions have been recognized as those at which research may be conducted leading to the Ph.D. degree of the University: Saha Institute of Nuclear Physics; School of Tropical Medicine, Kolkata; VECC (Bhabha Atomic Research Centre), Kolkata; Indian Association for Cultivation of Science, Kolkata; Indian Institute of Chemical Biology; Central Glass and Ceramic Research Institute; Bose Institute; Indian Statistical Institute, Kolkata; Jute Technological Research Laboratory; Chittaranjan National Cancer Research Centre; S.N. Bose National Centre for Basic Sciences; All India Institute of Hygiene and Public Health.

### **EMBLEM**

The University adopted for its seal and emblem a design of three lamps encircled in lotus petals, executed under the direction of Nandalal Bose (1883-1966). The lamp represents knowledge, while the three flames are emblematic of intellectual training, integration of emotion, and imagination and spiritual development. The petals in the periphery represent philosophy, the fine arts and culture.

### **FEATURES**

Jadavpur University is primarily a unitary teaching and research university, grouped into the three facilities of Arts, Science, and Engineering and Technology. It also has statutory authority to affiliate other institutions. All authority is vested in one body, the Court of the University which has four main advisory Councils: the Executive Council and the three Faculty Councils for Postgraduate and Undergraduate Studies. Advisory Committees under the authority of the Court include the Boards of Studies, the Finance Committee, the Working Committee, the Planning and Development Committee, and such other authorities as may be established under the statutes.

The Court functions on broad-based democratic principles and norms. It comprises representatives of University teachers, officers, non-teaching staff, students, research scholars, registered graduates and



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affiliated colleges. It also has one member each from the registered trade unions, primary school teachers' association and secondary school teachers' association within the territorial jurisdiction of the University. Besides these, the Court has ex-officio members from the senior ranks of Central and State Government bodies and institutions; three representatives of donors; and four elected members from the National Council of Education, Bengal, in addition to the President of the Council.

The University has three Faculties: Arts, Science, and Engineering and Technology with 35 departments under them: 12 in Arts, 17 in Engineering and Technology, and 6 in Science. Some of these departments have contributed to the development of new disciplines in the country, such as Chemical Engineering, Comparative Literature, International Relations, Film Studies and Production Engineering. The University has also evolved an interdisciplinary and interfaculty system of Schools devoted primarily to research but in some instances offering taught courses; as well as a number of Centres for research, primarily within a given discipline but branching outwards towards interdisciplinary work.

In 2001, the University Grants Commission declared Jadavpur University as one of five leading 'universities with potential for excellence'. An exceptional number of departments have been identified by the UGC as Departments of Special Assistance and Centres of Advanced Studies, or for its COSIST programme. Recently, the Department of Science and Technology, Government of India, has identified a number of departments for its FIST programme. Besides, a number of projects are granted every year by the CSIR, the MHRD, the DST, the DBT, the DOD, the ICMR, the ICSSR and other funding agencies. An index of such research activities is the increasing participation by teachers of the University in national and international conferences, not to mention the increasing number of conferences hosted every year at Jadavpur.

These awards and honours are at least in part the result of some notable features of the internal organization of the University:

- (i) a close relationship between teacher and taught, with a joint Student-Teacher Committee in each department;
- (ii) close links with ex-students;
- (iii) lively extra-curricular activities;
- (iv) a tutorial system.

This unitary University is in spirit and intention, though not in actual fact, a residential institution, and as such lays emphasis on the development of corporate life among the students. Students are expected to participate in co-curricular activities to realize their potentials, enrich their personality, and further the ends of corporate life.

What we want here is not merely to give you a little information, not merely to open to you careers for earning a livelihood, but to build up sons for the motherland to work and to suffer for her. That is why we started this College and that is the work to which I want you to devote yourselves in future. What has been insufficiently and imperfectly begun by us, it is for you to complete and lead to perfection.

[From the speech by Aurobindo Ghosh delivered on 22 August, 1907 before the students and teachers of Bengal National College.]

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### **VISION AND MISSION**

#### **VISION**

The National Council of Education, Bengal, was established in 1906 in the wake of the nationalist movement. It was led by intellectuals, statesmen and the middle-class intelligentsia, and its aim was to cultivate the best of global learning and technology in order to build a self-reliant industrial base for India. Bengal Technical Institute was among the educational institutions founded by NCE, Bengal. Its mission was to impart training to Indian students in the appropriate technology so that the country could produce indigenous consumable materials. This Institute, later renamed College of Engineering and Technology, was in turn converted to Jadavpur University in 1955. The founders believed that the Technology Faculty could not sustain itself without active Faculties of the Basic Sciences and the Humanities. While playing a vital role in technical education in the country, the University may be said to rest on three pillars - Technology, Science and Arts. Jadavpur University is at present an internationally recognised premier university of the country. It is an urban university with a global perspective and is dedicated to creating leaders who will fashion a more humane and just world. Following in the footsteps of its predecessor, the University not only engages itself in teaching and research of international quality, but also provides societal services for the benefit of rural and urban populations. The programmes are directed towards achieving excellence in education and extending the benefits of improved technology to the society as a whole. The faculty members are encouraged to add value to the courses so that students can secure employment or attempt entrepreneurship. Extension programmes and several other courses provide opportunities for the drop-outs at different levels to continue their education. The objective is that they should be able to earn a living and derive the impersonal pleasure of learning at the same time. The University also contributes in evolving modes of digital distance education as part of the National Mission on Education.

#### **MISSION**

- The University wishes to grow further as a diverse and socially responsible learning community, providing a high quality of scholarship and equal opportunity for all. The University's core values include a commitment to:
- The highest standards of excellence in teaching, research, creative expression and service to the community;
- Advanced learning as a humanising social practice rather than as a competitive exercise;
- Regarding the production and dissemination of knowledge as inseparable goals;
- Upholding the principle that the culture of reason and learning is indivisible from a concern for the world beyond the campus;
- Maintaining principles of democratic governance and intellectual and institutional freedom;
- Abiding by principles that do not discriminate on the basis of religion, race, caste, gender and economic status.

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**COURSES OFFERED**

**A. FACULTY OF ARTS**

**M.Phil Courses:**

1. Master of Philosophy in Bengali
2. Master of Philosophy in Comparative Literature
3. Master of Philosophy in Economics
4. Master of Philosophy in Education
5. Master of Philosophy in English
6. Master of Philosophy in History
7. Master of Philosophy in International Relations
8. Master of Philosophy in Library & Information Science
9. Master of Philosophy in Philosophy
10. Master of Philosophy in Sanskrit
11. Master of Philosophy in Sociology

**Post-Graduate Courses :**

1. Master of Arts in Bengali
2. Master of Arts in Comparative Literature
3. Master of Arts in Economics
4. Master of Arts in Education
5. Master of Arts in English
6. Master of Arts in Film Studies
7. Master of Arts in History
8. Master of Library & Information Science
9. Master of Library & Information Science (Digital Library)
10. Master of Arts in Linguistics
11. Master of Arts in Philosophy
12. Master of Physical Education
13. Master of Arts in Political Science with International Relations
14. Master of Arts in Sanskrit
15. Master of Arts in Sociology

**Under-Graduate Courses :**

1. Bachelor of Arts in Bengali
2. Bachelor of Commerce (J.D. Birla Institute)
3. Bachelor of Arts in Comparative Literature

## Annual Report 2019-20

4. Bachelor of Arts in Economics
5. Bachelor of Education
6. Bachelor of Arts in English
7. Bachelor of Arts in History
8. Bachelor of Library & Information Science
9. Bachelor of Arts in Philosophy
10. Bachelor of Physical Education
11. Bachelor of Arts in Political Science
12. Bachelor of Arts in Sanskrit
13. Bachelor of Arts in Sociology

### OTHER COURSES (OFFERED BY THE DEPARTMENTS/CENTRES/SCHOOLS)

1. Department of International Relations : One year Diploma Course in Human Rights and Duties Education
2. Department of Sociology : a) First degree-level course in Applied Sociology  
b) PG Diploma course in Society, Religion and Social Work
3. Bhasacharya Suniti Kumar Chatterji  
Centre for Language Studies : One year certificate course on Voice Training  
and Speech Production
4. Centre for Counselling Services and  
Studies in Self- Development : a) UGC-Sponsored 3 year Career Oriented Certificate  
course on Stress Management  
b) 2 year PG Diploma course in Counselling and Stress  
Management
5. Centre for Translation of Indian : a) One year Certificate course in Translation as a Skill  
Literatures (CENTIL)
6. Centre for Yoga : a) Post-graduate Diploma in Yoga
7. ICPR Centre for Buddhist Studies : Certificate course in Buddhist Studies recommended by  
ICPR

## B. FACULTY OF ENGINEERING & TECHNOLOGY

### Post-Graduate Courses:

1. Master of Architecture
2. Master of Automobile Engineering
3. Master of Bioprocess Engineering
4. Master of Chemical Engineering
5. Master of Civil Engineering
6. Master of Clinical Pharmacy & Pharmacy Practice
7. Master of Computer Science & Engineering
8. Master of Computer Application

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9. Master of Computer Technology
10. Master of Construction Engineering
11. Master of Control System Engineering
12. Master of Electrical Engineering
13. Master of Electronics & Tele-Communication Engineering
14. Master of Illumination Engineering
15. Master of Instrumentation & Electronics Engineering
16. Master of Intelligent Automation & Robotics
17. Master of Food Technology & Biochemical Engineering
18. Master of Mechanical Engineering
19. Master of Metallurgical Engineering
20. Master of Material Engineering
21. Master of Pharmacy
22. Master of Power Engineering
23. Master of Printing Engineering & Graphic Communication
24. Master of Production Engineering
25. Master of Software Engineering
26. Master of VLSI Design & Microelectronics Technology

### **Under-Graduate Courses:**

1. Bachelor of Architecture
2. Bachelor of Chemical Engineering
3. Bachelor of Civil Engineering
4. Bachelor of Civil Engineering (5-Year Evening Courses)
5. Bachelor of Computer Science Engineering
6. Bachelor of Construction Engineering
7. Bachelor of Electrical Engineering
8. Bachelor of Electrical Engineering (5-Year Evening Courses)
9. Bachelor of Electronics & Tele-Communication Engineering
10. Bachelor of Food Technology & Biochemical Engineering
11. Bachelor of Information Technology
12. Bachelor of Instrumentation & Electronics Engineering
13. Bachelor of Mechanical Engineering
14. Bachelor of Mechanical Engineering (5-Year Evening Courses)
15. Bachelor of Metallurgical Engineering
16. Bachelor of Pharmaceutical Technology
17. Bachelor of Power Engineering
18. Bachelor of Printing Engineering
19. Bachelor of Production Engineering



### **OTHER COURSES (OFFERED BY THE CENTRES)**

- 1 Centre for Computer Aided Design:
  - a) One year P.G. Diploma in applied GIS and Remote Sensing
  - b) One year Diploma in Multimedia and Animation
  - c) Auto CAD with AutoLisp
  - d) Structural Analysis and Design
  - e) Advanced 3D Modelling
- 2 Centre for Welding Technology:
  - a) Certificate course in Welding Inspection and Testing,
  - b) Training course for Welders (MMAW/TIG/Pipe Welding) / Supervisors,
  - c) Six Module-based Post-Diploma course for Engineers.

### **C. FACULTY OF SCIENCE**

#### **Post-Graduate Courses:**

1. Master of Philosophy in Oceanography and Coastal Management (See under Faculty of ISLM)
2. Master of Science in Applied Geology
3. Master of Science in Biotechnology
4. Master of Science in Chemistry (Day & Evening) 2-year Day Course/3 year Evening Course
5. Master of Science in Electronics Science
6. Master of Science in Geography
7. Master of Science in Composite Home Science (Human Development, J.D.Birla Institute)
8. Master of Science in Home Science (Resource Management, J.D.Birla Institute)
9. Master of Science in Home Science (Textiles and Clothing, J.D.Birla Institute)
10. Master of Science in Home Science (Food and Nutrition, J.D.Birla Institute)
11. Master of Science in Instrumentation Science
12. Master of Science in Mathematics (Day & Evening) 2-year Day Course/3 year Evening Course
13. Master of Science in Physics (Day & Evening) 2-year Day Course/3 year Evening Course

#### **Under-Graduate Courses:**

1. Bachelor of Science in Chemistry
2. Bachelor of Science in Food Science & Nutrition Management (J.D. Birla Institute)
3. Bachelor of Science in Geography
4. Bachelor of Science in Geological Sciences
5. Bachelor of Science in Home Science (J.D. Birla Institute)
6. Bachelor of Science in Human Development (J.D. Birla Institute)
7. Bachelor of Science in Interior Designing (J.D. Birla Institute)
8. Bachelor of Science in Mathematics
9. Bachelor of Science in Physics
10. Bachelor of Science in Textile Science, Clothing & Fashion Studies (J.D. Birla Institute)

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### Other Courses (Offered by the Departments/Centres)

- 1 Department of Physics : Post-M.Sc. Diploma in Medical Physics

### COURSES (OFFERED BY INTERDISCIPLINARY SCHOOLS)

1. School of Bioscience and Engineering: Master of Engineering in Biomedical Engineering
2. School of Cultural Texts and Records:
  - a) Post-Graduate Certificate course in Editing and Publishing
  - b) PG Diploma course in Digital Humanities and Cultural Informatics
3. School of Education Technology:
  - a) Master in Multimedia Development,
  - b) M.Tech.in IT (Courseware Engineering)
4. School of Energy Studies: M. Tech. in Energy Science and Technology
5. School of Environmental Studies:
  - a) M.Tech in Environmental Bio-Technology
  - b) Post-graduate Diploma in Environmental Management and Regulations
6. School of Languages:
  - a) M.Phil and M.A. in Linguistics
  - b) Certificate courses in Bengali, French, German, Italian, Korean, Portuguese, Spanish, Hindi, Functional Communicative English, Japanese
  - c) Diploma courses in Bengali, French, German, Italian, Portuguese, Spanish, Hindi, Japanese, Sanskrit
  - d) Advanced Diploma Courses in Bengali, Sanskrit, Portuguese, French, Japanese
  - e) Certificate Course in Linguistics
7. School of Material Science and Nanotechnology: M.Tech. in Nanoscience and Technology
8. School of Mobile Computing and Communication: M. Tech in Distributed and Mobile Computing
9. Multimedia Digital Distance Education Mode:
  - a) PG Diploma in Multimedia and Web Technology
  - b) PG Diploma in Risk Management and Financial Engineering
10. School of Nuclear Studies and Application: Master of Engineering in Nuclear Engineering
11. School of Oceanographic Studies:
  - a) M. Phil in Oceanography and Coastal Management
  - b) PG Diploma in Remote Sensing
12. School of Water Resources Engineering: Master of Engineering in Water Resources and Hydraulic Engineering
13. School of Women's Studies: a) M. Phil in Women's Studies.

**D. FACULTY OF INTERDISCIPLINARY STUDIES LAW & MANAGEMENT**

**Ph.D. Courses under FISLM**

1. School of Advanced Studies on Industrial Pollution Control Engineering
2. School of Automotive Engineering
3. School of Bioscience & Engineering
4. School of Cognitive Science
5. School of Cultural Texts & Records
6. School of Education Technology
7. School of Energy Studies
8. School of Environmental Radiation and Archaeological Sciences
9. School of Environmental Studies
10. School of Illumination Science, Engineering & Design
11. School of International Relations and Strategic Studies
12. School of Languages & Linguistics
13. School of Laser Science & Engineering
14. School of Material Science & Nano Technology
15. School of Media, Communication & Culture
16. School of Mobile Computing & Communication
17. School of Natural Product Studies
18. School of Nuclear Studies and Application
19. School of Oceanographic Studies
20. School of Water Resources Engineering
21. School of Women's Studies
22. Department of Adult Continuing Education & Extension

**M.Phil Courses under FISLM**

1. School of Cognitive Science
2. School of Languages & Linguistics
3. School of Oceanographic Studies
4. School of Women's Studies

**M.E./M.Tech. Courses under FISLM**

<b>Name of the Schools</b>	<b>ME/M. Tech Courses</b>
1 School of Bioscience & Engineering	Biomedical Engineering & Science
2 School of Education Technology	IT (Courseware Engineering) Multimedia Development
3 School of Energy Studies	Energy Science & Technology
4 School of Environmental Studies	Environmental Biotechnology

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5	School of Illumination Science, Engineering & Design	Illumination Technology & Design (6-Semester)
6.	School of Laser Science & Engineering	Laser Technology
7.	School of Material Science & Nano Technology	Nano Science & Technology
8.	School of Mobile Computing & Communication	Distributed & Mobile Computing
9.	School of Nuclear Studies and Application	Nuclear Studies and Applications
10.	School of Water Resources Engineering	Water Resources & Hydraulic Engineering (4-Semester) Water Resources & Hydraulic Engineering (6-Semester)

### Post-Graduate Courses under FISLM:

- |    |  |   |
|----|--|---|
| 1. | Department of Adult Continuing Education & Extension Communication | M.A. in Journalism & Mass-Communication |
|----|--|---|

### 1 Year Post Graduate Diploma Courses under FISLM

Schools/Departments	Courses
1. School of Oceanographic Studies	Post Graduate Diploma in Remote Sensing & GIS
2. Department of Adult Continuing Education & Extension	Post Graduate Diploma in Mass-Communication

### Diploma Courses under FISLM

- |    |                                 |   |
|----|---------------------------------|---|
| 1. | School of Environmental Studies | Diploma in Industrial Safety and Environmental Management |
|----|---------------------------------|---|

### 1 Year Post Graduate Certificate Courses under FISLM

- |    |                                     |                             |
|----|-------------------------------------|-----------------------------|
| 1. | School of Languages and Linguistics | Introduction to Linguistics |
|----|-------------------------------------|-----------------------------|

## Annual Report 2019-20

### UNIVERSITY OFFICERS (As on 23rd December, 2020)

1. Professor Suranjan Das : Vice-Chancellor (16.07.2015 - Continuing)
2. Dr. Pradip Kr. Ghosh : Pro Vice-Chancellor (19.08.2017 - Continuing)
3. Professor Chiranjib Bhattacharjee : Pro Vice-Chancellor(31.07.2019 - Continuing)
4. Professor Om Prakash Mishra : Dean, Faculty of Arts
5. Professor Amitava Datta : Dean, Faculty of Engineering and Technology
6. Professor Subinoy Chakraborty : Dean, Faculty of Science
7. Professor Pankaj Kumar Roy : Dean, Faculty of ISLM
8. Dr. Snehamanju Basu : Registrar (05.11.2018-Continuing)
9. Dr. Sanjay Gopal Sarkar : Joint Registrar (Academic)
10. Dr. Kaniska Sarkar : Asst. Registrar Sr. Scale
11. Dr. Ujjwal Kumar Mondal : Asst. Registrar Selection Grade
12. Sri Pranab Kumar Gayen : Deputy Registrar
13. Sri Gour Krishna Pattanayak : Finance Officer
14. Sri Debasish Pal : Joint Finance Officer
15. Sri Depanjan Ray Chaudhuri : Audit Officer, Selection Grade
16. Sri Shiladitya Chatterjee : Accounts Officer, Sr. Scale
17. Atikur Rahaman : Accounts Officer
18. Dr. Satyaki Bhattacharyya : Controller of Examinations
19. Sri Indrajit Banerjee : Secretary, Faculty of Arts
20. Sri Samit Pahari :
  - Information Scientist, Selection Grade
  - Secretary, Faculty of Engineering and Technology (Look after)
  - Secretary, Faculty of Interdisciplinary Studies, Law & Management (Look after)
21. Dr. Atiskumar Chattopadhyay : Principal Secretary, Faculty of Science
22. Dr. Shrabana Ghosh : Chief Librarian (Officiating)
23. Dr. Sanku Bilas Roy : Librarian (Salt Lake Campus)
24. Dr. Rajat Ray : Dean of Students
25. Dr. Bappa Mullick : Sr. Director of Youth Welfare
26. Dr. Debabrata Saha : Principal Development Officer
27. Prof. Dipankar Chakraborty : University Engineer (Look after)
28. Sri Dinabandhu Tripathi : Asst. Engineer (Civil)
29. Dr. Badal Sarkar : Asst. Engineer (Electrical) Selection Grade
30. Dr. Aparup Konar : Director of Physical Instruction, Sr. Scale
31. Dr. Nandini De : Sr. Documentation Officer
32. Ms. Debarati Sinha Chaudhuri : Publication Officer
33. Ms Samita Bhattacharya : OSD, Placement & Training (Contractual)
34. Sri Indranil Mukherjee : OSD, Admission & System Operation (Contractual)
35. Sri Shyamal Bose : OSD, System Administrator (Contractual)

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MEMBERS OF THE COURT [2020-2024]  
(As on 23rd December, 2020)

1. **Chancellor**  
**Shri Jagdeep Dhankhar**  
**[Ex-officio Chairman]**  
Hon'ble Governor of West Bengal  
Raj Bhavan  
Kolkata – 700 062
2. **Vice-Chancellor**  
**Prof. Suranjan Das**  
**[Ex-officio Member and Vice-Chairman]**  
Jadavpur University  
Kolkata- 700032
3. **Pro-Vice-Chancellor**  
**Dr. Pradip Kumar Ghosh**  
**[Ex-officio Member ]**  
Jadavpur University  
Kolkata- 700032
4. **Pro-Vice-Chancellor**  
**Prof. Chiranjib Bhattacharjee**  
**[Ex-officio Member]**  
Jadavpur University  
Kolkata- 700032
5. **Dean, Faculty of Arts**  
**Prof. Om Prakash Mishra**  
**[Ex-officio Member]**  
Jadavpur University  
Kolkata- 700032
6. **Dean, Faculty of Engineering & Technology**  
**Prof. Amitava Datta**  
**[Ex-officio Member]**  
Jadavpur University  
Kolkata- 700032
7. **Dean, Faculty of Science**  
**Prof. Subenoy Chakraborty**  
**[Ex-officio Member]**  
Jadavpur University  
Kolkata- 700032
8. **Dean, Faculty of Interdisciplinary Studies, Law & Management**  
**Prof. Pankaj Kumar Roy**  
**[Ex-officio Member]**  
Jadavpur University  
Kolkata- 700032



9. **Secretary/Nominee, Higher Education Department**  
Govt. of West Bengal  
**[Ex-officio Member]**  
**Shri Jaydip Mukhopadhyay, WBCS (Exe.)**  
Special Secretary  
Department of Higher Education  
Bikash Bhavan  
Salt Lake  
Kolkata-700091
10. **Secretary/Nominee, Finance Department, Govt. of West Bengal**  
**[Ex-officio Member]**  
**Shri Malay Ghosh, IAS**  
Additional Secretary  
Government of West Bengal  
Finance Department  
Nabanna, Howrah – 711102
11. **Nominee of Chairman of W.B State Council of Higher Education**  
**[Ex-officio Member]**  
**Prof. Soma Bandyopadhyay**  
Vice-Chancellor  
West Bengal University Teachers Training, Education  
Planning and Administration  
25/2 & 25/3, Ballygunge Circular Road  
Kolkata – 700 019
12. **President, West Bengal Council of Higher Secondary Education**  
**[Ex-officio Member]**  
Vacant
13. **President, West Bengal Board of Madrasa Education**  
**[Ex-officio Member]**  
Vacant
14. **President, West Bengal Board of Secondary Education**  
**[Ex-officio Member]**  
Vacant
15. **UGC Nominee**  
Vacant
16. **AICTE Nominee**  
**Prof. Sudhir Kumar**  
Department of Civil Engineering  
Malaviya National Institute of Technology, Jaipur  
JLN Marg, Jaipur -302017  
Rajasthan
17. **NCTE Nominee**  
Vacant

**Heads of the Departments of the University**

18. **Adult Continuing Education & Extention**  
Prof. Partha Sarathi Chakraborty
19. **Architecture**  
Dr. Debashish Das
20. **Bengali**  
Dr. Rajyeswar Sinha
21. **Chemical Engineering**  
Prof. Ujjaini Sarkar
22. **Chemistry**  
Prof. Chittaranjan Sinha
23. **Civil Engineering**  
Prof. Shibnath Chakraborty
24. **Comparative Literature**  
Dr. Sayantan Dasgupta
25. **Computer Science & Engineering**  
Prof. Anupam Sinha
26. **Construction Engineering**  
Dr. Gokul Chandra Mondal
27. **Economics**  
Prof. Sushil Kumar Haldar
28. **Education**  
Dr. Muktipada Sinha
29. **Electrical Engineering**  
Prof. Kesab Bhattacharya
30. **Electronics & Telecommunication Engineering**  
Prof. Ananda Shankar Chowdhury
31. **English**  
Prof. Rimi Barnali Chatterjee
32. **Film Studies**  
Dr. Anindya Sengupta
33. **Food Tech. & Bio-Chemical Engineering**  
Dr. Dipankar Halder

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34. Geography  
Dr. Debajit Datta
35. Geological Sciences  
Prof. Sisir Kanti Mondal
36. History  
Prof. Kaushik Roy
37. Informtion Technology  
Dr. Uttam Kumar Roy
38. Instrumentation & Electronics Engineering  
Dr. Sankar Narayan Patra
39. Instrumentation Science  
Dr. Anup Kumar Ghosh
40. International Relations  
Prof. Anindya Jyoti Majumdar
41. Library & Information Science  
Prof. Subarna Kumar Das
42. Life Science & Bio-Technology  
Prof. Ratan Gachhui
43. Mathematics  
Prof. Sudeshna Banerjea
44. Mechanical Engg.  
Prof. Sumanta Neogy
45. Metallurgical & Material Engineering  
Dr. Amrita Kundu
46. Pharmaceutical Technology  
Prof. Kunal Roy
47. Philosophy  
Prof. Aparajita Mukhopadhyay
48. Physical Education  
Prof. Sanjib Mridha
49. Physics  
Prof. Sukhen Das
50. Power Engineering  
Prof. Amitava Datta

51. **Printing Engineering**  
Prof. Kanai Chandra Paul
52. **Production Engineering**  
Dr. Biplab Ranjan Sarkar
53. **Sanskrit**  
Dr. Ashok Kumar Mahata
54. **Sociology**  
Prof. Piyali Sur
55. **Elected Teacher-Representatives (5 Members):**  
(Faculty of Arts)  
Vacant
56. **Elected Teacher-Representatives (5 Members):**  
(Faculty of Engg. & Technology)  
Vacant
57. **Elected Teacher-Representatives (5 Members):**  
(Faculty of Science)  
Vacant
58. **Elected Representative : Officer (one member)**  
Vacant
59. **Elected Representative : Non-teaching staff (one member)**  
Vacant
60. **Representative: National Council of Education, Bengal**  
Vacant
61. **Nominated Members (Chancellor's Nominee) (5 Members):**  
Vacant
62. **Registrar**  
[Non-Member Secretary]  
Dr. Snehamanju Basu  
Jadavpur University  
Kolkata- 700032

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MEMBERS OF THE EXECUTIVE COUNCIL  
(As on 23rd December, 2020)

1. **Vice-Chancellor**  
**Prof. Suranjan Das**  
**[Ex-officio Member and Vice-Chairman]**  
Jadavpur University  
Kolkata- 700032
2. **Pro-Vice-Chancellor**  
**Dr. Pradip Kumar Ghosh**  
**[Ex-officio Member]**  
Jadavpur University  
Kolkata- 700032
3. **Pro-Vice-Chancellor**  
**Prof. Chiranjib Bhattacharjee**  
**[Ex-officio Member]**  
Jadavpur University  
Kolkata- 700032
4. **Dean: Faculty of Arts**  
**Prof. Om Prakash Mishra**
5. **Dean: Faculty of Engineering & Technology**  
**Prof. Amitava Datta**
6. **Dean: Faculty of Science**  
**Prof. Subenoy Chakraborty**
7. **Dean: Faculty of Interdisciplinary Studies, Law & Management**  
**Prof. Pankaj Kumar Roy**
8. **Secretary/Nominee, Higher Education Department, Govt. of West Bengal**  
**Shri Jaydip Mukhopadhyay, WBCS (Exe.)**  
**[Ex-officio Member]**  
Special Secretary  
Bikash Bhavan, Salt Lake, Kolkata - 700 091
9. **Secretary/Nominee, Finance Department, Govt. of West Bengal**  
**[Ex-officio Member]**  
**Shri Malay Ghosh, IAS**  
Additional Secretary  
Government of West Bengal  
Finance Department  
Nabanna, Howrah – 711102

10. **Secretary/Nominee of Chairman of W.B State Council of Higher Education**  
***[Ex-officio Member]***  
Prof. Soma Bandyopadhyay  
Vice-Chancellor  
West Bengal University Teachers Training, Education  
Planning and Administration  
25/2 & 25/3, Ballygunge Circular Road, Kolkata – 700 019

**Members: 12 Heads of the Departments (for rotation of one year in alphabetical order)**

11. **International Relations**  
Prof. Anindya Jyoti Majumdar
12. **Library & Information Science**  
Prof. Subarna Kumar Das
13. **Life Science & Bio-Technology**  
Prof. Ratan Gachhui
14. **Mathematics**  
Prof. Sudeshna Banerjea
15. **Mechanical Engineering**  
Prof. Sumanta Neogy
16. **Metallurgical & Material Engineering**  
Dr. Amrita Kundu
17. **Pharmaceutical Technology**  
Prof. Kunal Roy
18. **Philosophy**  
Prof. Aparajita Mukhopadhyay
19. **Physical Education**  
Prof. Sanjib Mridha
20. **Physics**  
Prof. Sukhen Das
21. **Power Engineering**  
Prof. Amitava Datta



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22. **Printing Engineering**  
**Prof. Kanai Chandra Paul**
23. **Elected Teacher-Representatives (3 Members):**  
**(Faculty of Engineering & Technology)**  
Vacant
24. **Elected Teacher-Representatives (3 Members):**  
**(Faculty of Arts)**  
Vacant
25. **Elected Teacher-Representatives (3 Members):**  
**(Faculty of Science)**  
Vacant
26. **Elected Teacher-Representatives (1 Member):**  
**(Faculty of Interdisciplinary Studies Law & Management )**  
Vacant
27. **Nominated Members (Chancellor's Nominee)(2 Members)**  
Vacant
28. **Registrar [Non-Member Secretary]**  
**Dr. Snehamanju Basu**  
Jadavpur University  
Kolkata- 700032

## **Annual Report 2019-20**

### **DAY CARE CENTRE**

Phone: 033-2457-2950

Coordinator: Prof. Nilanjana Gupta

Jadavpur University Day Care Centre (JUDCC) began its operations on 1 September, 2011. The additional space of the Centre adjacent to its current premises on the ground floor of Multi-Storey building, inaugurated in 2017, has helped the Centre take in a number of new wards in 2019-20

Children aged between one and twelve stay at the centre. Teachers, non-teaching staff, research scholars and students of Jadavpur University can register their wards at JUDCC. There are 10 wards registered as 'regular' and 6 wards using the Centre on casual basis. Some of the children come from their schools and some from home. They engage in games as well as various creative activities daily

Round the year, the Day Care Centre organizes various programmes including recitation, singing, painting, dance, plays, story-reading, creative writing and sports. The Centre celebrated Rabindra Jayanti and Nazrul Jayanti this year. The children rehearsed for this programmes enthusiastically and put up performances that were enjoyed by all. For brochure and application form, click here: [http://www.jaduniv.edu.in/day\\_care\\_centre.php](http://www.jaduniv.edu.in/day_care_centre.php)

### **CENTRAL LIBRARY**

Phone : 033-2457-2260/033-2414-6460

:033-2335-6578/033-2340-6180 [Salt Lake Campus]

Chief Librarian : Dr. Shrabana Ghosh (Officiating)

E-mail : [chief librarian@jadavpuruniversity.in](mailto:chief librarian@jadavpuruniversity.in)

The University Library System comprises the Central Library, Salt lake Campus Library, Departmental Libraries and the Libraries attached with different Schools and Centres for higher studies; along with Centre for Digital Library and Documentation

The Central Library of Jadavpur University is housed in the three-storied building on Jadavpur Campus. Its shelving space and working space is about 36,000 sq. ft. (approx.) and is extended by new construction of four-storied building Annexe Building (each floor 5500sq. ft). There are more than 14 service units/sections in Central Library to run the total library system. The Check counter, Membership Registration, Circulation Section, Book Dispatch Section, General Reading Room, Bound volume Section (mezzanine floor) are located in the ground floor of the Old Building. The first floor has the BKS0 Section, Old and Rare Section, Serials Section, Binding Section, Office of the Chief Librarian and the Xerox Section. The second floor has the Cataloguing Section, Reference Section, Labeling Section and the Librarian's room. The ground floor of the Annexe Building houses the Bound Volume Journals. The Centre for Digital Library and Documentation including the Learning Resource Center is operational in the first floor of the Annexe building; the 2<sup>nd</sup> floor has the Bound Volume Journals (Science & Bengali) and the 3<sup>rd</sup> floor houses the Theses Section. The Central Library has eight reading rooms, carrels, and an alcove for bound volume journals. The total sitting arrangement is near about 800 readers at a time

There is a separate library building on the Second Campus at Salt Lake. The total floor area of the library is near about 6,940 sq. ft.(approx.) in ground floor. The first floor of the library building is completed with

## Annual Report 2019-20

same floor area of ground floor. The total sitting arrangements in the reading rooms for the readers are 80 seats; 5 for faculty members and 75 for student members at a time respectively

Most of the Departments in the main campus have Departmental Libraries. Reading and borrowing facilities in the appropriate manner are given in the Departmental Libraries to the faculty members and students, scholars of the Department. All the computers in the campus are connected through LAN and are IP address authenticated so that all e-resources can be accessed from all the computers

On Salt Lake Campus, there are 5 (five) Departments, 1 (one) School and 1 (one) Centre (Nuclear Engineering) in Power Engineering Dept. under the Faculty of Engineering and Technology of the University. There is an Academic Staff College (UGC). There are no department libraries at Salt Lake Campus. But the Academic Staff College and Centre for Mobile Computing and Communication each has separate library. All Faculty Members, Students, Research Scholars, Officers and Non-Teaching staff members enjoy library service facilities from only one Campus Library. Since 1989, all Library Administrative and library functions are systematically organized and done by Salt Lake Campus Library following the integrated and uniform library rules, under the Jadavpur University library system, separately

### Centre for Digital Library and Documentation:

The Centre for Digital Library and Documentation has been established in November 2003 in the first floor of the new Annexe Building of Central Library under the Potential for Excellence Program-I of UGC. The Digital Library has a Learning Resource Centre (LRC) with 60 Nos. of terminals, 4 Nos. of servers and one reading room for users. The Digital Library Data Management Software *D-space* has been installed. The digital resources are made available to the users through the Library Portal

All the facilities of Digital Library are available on the Salt Lake Campus Library which is linked with the Central Library. There are two servers for managing the Digital Library connectivity & 16 terminals for Learning Resource Centre for students

### Accessible Library:

The **Accessible Library for Persons with Disabilities** was inaugurated on 5<sup>th</sup> September 2018 at the ground floor of the Jadavpur University Central Library. The Accessible Library has five staff members and the number of users is about 45

Audio books were prepared for the students. They also access e-books from Sugam Pustakalaya, Bookshare and Jstor. The Accessible Library uses **Jaws Professional, NVDA, MAGIC 14, OPEN BOOK 9, Read (Braille)** softwares to access the e-resources

The Accessible Library has purchased 35 Braille books from **Lalbihari Shah Braille Academia** and 14 Braille books from **Ramakrishna Mission Blind Boys' Academy, Narendrapur**. The Accessible Library has purchased 178 Braille books in the year 2019-20. All these purchased books are being processed and uploaded in the Jadavpur University OPAC. Apart from that 18 volumes of Rabindra Rachanabali in Braille were presented to this Library by the Society for the Visually Handicapped. The Accessible Library has about 1000 old audio books

### Library Collection:

The total collection of Central Library along with the Departmental Libraries is about **6,91,744 (approx.)** volumes of books, **5504** e-books in perpetual mode, **122** Braille books, **82,154** bound volumes of journals, **8831 (hardcopy)** theses, **8631** dissertations and **3047** CDs of theses and dissertations **3000** standards & **37,000** items of non-book materials such as reports, pamphlets, maps and micro-forms. In addition to that, Salt Lake Campus Library has about **35,796 (approx.)** volumes of books. The total number of theses uploaded in **Sodhganga** is **925**

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The total number of books added during April 2019 to March 2020 were **6701** in Central Library and **593 donated** books in Salt Lake Campus Library. The total number of e-books (online in perpetual mode) added during this period was **691** (approx.)

The total number of theses accessioned and processed was **788**

The total number of journals subscribed by Central Library in **Print** is **103**, **Online** is **5573** and **Print + Online** is **14** and **Online** databases is **14**. The total number of journals subscribed by Salt Lake Campus Library in **Print** is **2**, **Online** is **10** and **Print + Online** is **13** and **45 Indian popular magazines**. In addition to the subscribed journals, the University has access to **7097**(approx.) **Online** journals and **5** databases from **eSodhSindhu (INFLIBNET)**. The Library subscribes to the **LNCS and LNP ebook series** which had approx. **630** titles. The Library also subscribes to **EBook Central of ProQuest** which has approx. **186197** titles

The total number of books catalogued was **5065** (approx.), **3930** (approx.) books were labeled and **4322** (approx.) books were dispatched to the different Departments

The total number of books issued was **18535** (approx.) and returned was **15165** (approx.) in Central Library and the transaction in Circulation Section in Salt Lake Campus Library is **28041** (approx.)

The number of users visited General Reading Room and Reference Section were **14625** (approx.) and **8750**(approx.) respectively and that of Salt Lake Campus Library was **4994**. About **205** users visited the Bound Volume Journal Section

The total number of users in Centre for Digital Library and Documentation was **8561**(approx.); the services provided to users through pendrive/CD was **454**

The total number of Library Members in Central Library is about **12500**. Approx. **3752** members were added during 2018-19

The **Libsys 7 web version** software is used for library automation. Databases of books, journals and theses etc. are created and being updated. The Web-OPAC facilities are available for searching the databases. The databases are also available through the Library portal on the internet. Facilities for searching Databases and Internet are also available to all users in the different floors of Central Library and also through all network enabled computers in both the campuses

A considerable part of the Library's collection consists of gifts from individuals and institutions, the largest book donation having been from Sri Uday Kumar Das, Kumar S. C. Nandy of Cossimbazar, NCE Bengal, the British Council, USIS, Asia Foundation, the late A. K. Chanda, Srinath Das, Hemchandra Dasgupta, Hemendraprasad Ghosh, Prof. Triguna Sen, Prof. Gopal Sen, Taraknath Das, Sudhindranath Datta and others. The gift collections contain a good stock of old materials valuable for research in the Humanities and Social Sciences. The in-house preservation and conservation work of the letters and diaries of H.P. Ghosh under a project of Department of History was undertaken in the Old and Rare Section of Central Library

### Library Activities:

#### **Eighth Internship Programme of BLISC students and Second Internship Programme of MLISc Students:**

1. A six month training of the BLISC passed students under the Ninth Internship Programme (July-January) was organised in the different Sections of Central Library and Departmental Libraries. A six month training of the MLISc passed students under the Third Internship Programme (September-February) was organised in the different Sections of Central Library and Departmental Libraries
2. A user awareness programme of the **New Library Portal for all the Departmental Librarians and HODs** was organized in the Central Library on 22 May, 2019

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3. A one day workshop on “Interaction with users” for the Library supporting staff was organised under TEQIP III of Jadavpur University in the Central Library on 26 June, 2019
4. A one day workshop on “Information Services from open access information sources” for the Library professional staff was organised under TEQIP III of Jadavpur University in the Seminar Hall of Chemical Engineering Department on 28 June, 2019
5. A user awareness programme on **Web of Science, End Note, Incites and The Journal Citation Reports (JCR)** by the publisher **Clarivate Analytics** was organized in the **Central Library** on 18 July, 2019

### MEMORANDUM OF UNDERSTANDING

(APRIL 2019–MARCH 2020)

#### (MoU/MoA–Date of Execution–Contact Person–Scope of Work–Between/Duration–(s)/Address)

- F-1 **GOLDSMITHS’ COLLEGE & JU-05.04.2019 till 31.07.2019**-Nandita Dhawan School of Women’s Studies-Project titled “A room of One’s Own : Challenging Poor Women’s Marginalisation in Urban Housing Regimes in India”
- G-2 **ENDOWMENT DEED BETWEEN MR. AMIT KUMAR HAZRA & JU-17.04.2019**-S.G.S. Jt. Registrar-Dr. P.K. Mukherjee Memorial Scholarship
- G-3 **ENDOWMENT DEED BETWEEN DR. NABANEETA DEV & JU-25.04.2019**-S.G.S. Jt. Registrar-Narendra Deb Memorial Lecture on CinemaNarendra Deb Memorial Lecture Fund
- G-4 **ENDOWMENT DEED BETWEEN DR. NABANEETA DEV & JU-25.04.2019**-S.G.S.Jt. Registrar-Radharani Debi Memorial Lecture on Women’s Studies Radharani Debi Memorial Lecture Fund
- G-5 **ENDOWMENT DEED BETWEEN Mr. PARTHA PANDE & JU-29.04.2019**-S.G.S.Jt. Registrar-Premananda Pande Memorial Scholarship
- F-6 **UNIVERSITY OF DERBY & JU-29.04.2019** 3 years-Prof. Subrata Mukhopadhyay Department of Chemistry-wish to explore academic collaboration-29.04.2019 3 years-Confidentiality agreement & Investigate opportunities with all Easmus+ key action areas
- G-7 **DHIRUBHAI AMBANI INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY & JU-13.05.2019** 3 years-Prof. Lopamudra Chowdhury Department of Philosophy-Academic and Research collaboration
- F-8 **NIPPON HOSO KYOKAI (NHK) & JU-17.05.2019** 1 year-Dr. Imankalyan Lahiri Community Radio, JU-rebroadcasting NHK WORLD - JAPAN news and programs
- F-9 **EUROPEAN UNION (EU) OF INDIA & JU-27.05.2019**-Prof. Subrata Mukhopadhyay Department of Chemistry-Certificate of Partnership with EU in India for Green Pledge by JU
- G-10 **DBT & JU-30.05.2019** 4. 5 YEARS-Prof. Sadhan Kr. Ghosh, Department of M.E.-INDIA-H2O (Bio-mimetic and phyto-technologies Designed for low-cost purification and recycling of Water)
- G-11 **LPG EQUIPMENT RESEARCH CENTRE(LERC) & JU-04.06.2019** 18 months-Prof. Amitava Datta,

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Department of Power Engg.-For optimization of components of the domestic LPG Stove through numerical simulation for increased thermal efficiency

- P-12 **SAGE PUBLICATION PVT. LTD. & JU-12.06.2019** 5years-(gothroughB (2) Prof. Shibashis Chatterjee Department of IR-General Data Protection Regulation (GDPR) agreement
- G-13 **IIT ROORKEE & JU-19.06.2019-3 years**-Tarit Roychowdhury Associate Professor School of Environmental Studies-Arsenic and other contaminants free drinking water production of ~20,000 L/Day in the arsenic affected area of India using laterite and ferromanganese slag based technology
- F-14 **ASTON UNIVERSITY & GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT & JU-19.06.2019 till 31st March, 2021**-Prof. Sadhan Kr. Ghosh, Department of M.E.-Circular economy adoption within small and medium sized Enterprises in India and the UK
- P-15 **SURYODAYA BOOKS & JU-24.06.2019**-Prof. Aparajita Mukhopadhyay Dr. Gargi Goswami Department of Philosophy-Publishing a book provisionally entitled “Ethics and Culture: some contemporary Indian reflections”, volume III
- G-16 **ENDOWMENT DEED BETWEEN DR. PRABIR KUMAR MUKHOPADHYAY & JU-01.08.2019**-Dr. Sanjay Gopal Sarkar, Jt. Registrar-Late Satinath Mukherjee Memorial Scholarship
- G-17 **WIPRO LIMITED, IIT PATNA, IIT HYDERABAD & JU-20.08.2019** 3years-Dipankar Das, Assistant Professor Department of Computer Science & Engg.-Implementation of the Project titled “Sevak-An Intelligent Indian Language Chatbot”, IMPRINT - II
- F-18 **ARDHI UNIVERSITY & JU-14.08.2019** 3 Years-Dr. Mainak Ghosh Department of Architecture -Academic Cooperation
- G-19 **GLA UNIVERSITY & JU-28.08.2019** 3 years-Prof. Rajib Bandyopadhyay Department of Instrumentation and Electronic Engineering-Academic Cooperation
- F-20 **Institute of South and Central Asia, Charles University, Prague & JU-29.08.2019**-Dr. Debashree Dattaray Dept. of Comparative Lit.-Erasmus+
- F-21 **Universiti of Teknologi PETRONAS (UTP) & JU-30.08.2019** 3 years-Prof. Matangini Chattopadhyay School of Education Technology-Student and Faculty Exchange, collaborative research and publication, exchange of academic materials
- G-22 **TCS & JU-11.09.2019** 1 years-Prof. Swarnendu Sen, Department of Mechanical Engg.-TCS-iON - Industry Honour Certification
- F-23 **UNIVERSITY OF HAIFA, ISRAEL & JU-17.09.2019** 5 years-Sutanuka Ghosh Asst. Professor Department of English-Framework of Academic Collaboration
- G-24 **TATA CONSULTANCY SERVICES LTD. (TCS) & JU-25.10.2019** 1st Oct, 2019 to 30th Sept, 2020-Prof. Ratna Ghosh IEE to explore the possibility of using endosomatic bio potential for assessing mental state affecting behavior of an individual
- F-25 **UCL BUSINESS PLC LONDON & JU-06.11.2019**-Prof. Sukhen Das Department of Physics-Revenue Sharing Agreement
- F-26 **THE UNIVERSITY OF EXETER, ENGLAND & JU-13.11.2019** 1years-Prof. Samantak Das Director School of Cultural Texts & Records-Famine Tales from India and Britain
- G-27 **NARULA INSTITUTE OF TECHNOLOGY (NIT) & JU-19.11.2019** 3 years 2019-2022-Prof. Subir Kumar Sarkar Department of Electronics and Telecommunication Engg.-certificate course in ‘VLSI Design & Microelectronics Technology’
- G-28 **BAKRESWAR DEVELOPMENT AUTHORITY (BKDA) & JU-27.11.2019** 1 years-Prof. Jayita Guha Niyogy Prof. Suchandra Bardhan Department of Architecture-Preparation of Existing Land Use Map & Registrar



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(LUMR) as well as Land Use Development & Control Plan (LUDCP) for BKDA

- F-29 **GOLDSMITHS' COLLEGE UNIVERSITY OF LONDON & JU-04.12.2019** 1 years-Dr. Nandita Banerjee Dhawan School of Women's Studies-A Room of One's Own : Challenging Poor Women's Marginalisation in Urban Housing Regimes in India
- G-30 **ENDOWMENT DEED BETWEEN ALUMNI ASSOCIATION NCE BENGAL AND JU -09.12.2019-S.G.S.Jt.** Registrar-Alumni Association JU gold medal fund
- P-31 **PRIMUS BOOKS & JU-16.12.2019-Dr. Nupur Dasgupta** Professor Department of History-publication of monographs under the UGC DSA - 1 SAP programme of the Department of History
- P-32 **MAHA BODHI BOOK AGENCY & JU-16.12.2019-HoD,** Department of Philosophy-publication of book entitled BHASARVARJNA SAMMATA PRAMANATATTVA authored by Dr. Ratna Dutta Sharma, retd. Professor
- P-33 **MAHA BODHI BOOK AGENCY & JU-16.12.2019-Prof. Gangadhar Kar,** Department of Philosophy-publication of book entitled NEEL AKASHER NICHE
- G-34 **HYATT Regency And Jadavpur University-07.02.2020-S.G.S.Jt.** Registrar-Special Corporate Rate Offer
- [ G - General, P - Publisher, F - Foreign ]

### OFFICE OF THE DEAN OF STUDENTS

Phone : 033-2414-6188

: 2457-2279/2386

Dean of Students : Dr. Rajat Ray

E-mail: deanstudents@jadavpuruniversity.in

#### Hostels:

**Jadavpur University** is not a residential university. However, we try our best to provide accommodation to needy students from areas outside Kolkata or from other parts of the country

#### No. of Hostels:

##### (for Main Campus)

- |  | <b>Total No:</b> |
|--|------------------|
| • Boys Hostel (UG) – 04 Nos.   | 675 Boarders     |
| • Boys Hostel (PG) – 03 Nos.   | 225 Boarders     |
| • Boys Hostel (RS cum PG) – 01 No.   | 30 Boarders      |
| • G.C. Sen Memorial Chhatrabas– 01 N.<br>(Boys' Hostel) (Physical Education) | 100 Boarders     |
| • Women Hostel – 03 No.  | 562 Boarders     |

##### (Salt Lake Campus)

- |  |              |
|--|--------------|
| • Salt Lake Campus Hostel (Boys) – 01 No.  | 260 Boarders |
| • Salt Lake Campus Hostel (Girls) – 01 No. | 60 Boarders  |

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### Name of the Hostel Superintendent as on 31/3/2020 :

#### Hostel Superintendent

• A-1 Block Main Hostel	Sri. Tapan Jana
• A-2 Block Main Hostel	Sri. Tapan Jana
• B Block	Sri. Dipayan Datta
• C & D Block	Sri. Dipayan Datta
• New Block Hostel	Sri. Goutam Mukherjee
• Old P.G. Hostel	Sri. Goutam Mukherjee
• New P.G. cum R. S. Hostel	Prof. Subarna Kr. Das/Dr. Tapan Ray
• New Boys Hostel	Dr. Tapan Ray
• G. C. Sen Memorial Hostel	Prof. Sridip Chatterjee/Dr. Tapan Ray (Officiating)
• Women Hostel -1	Smt. Aparna Kar Chowdhury
• Women Hostel – 2	Smt. Gulsenara Khatun
• Women Hostel – 3	Smt. Keya Roy
• Salt Lake Campus Hostel(Boys)	Sri. Shibsankar Bhunia
• Salt Lake Campus Hostel(Girls)	Smt. Ashima Das
Prof. Runu Bannerjee(Ray) (Part-Time)	

#### Facilities Available at Each Hostel:

# T.T. Room, # Common Room, # Canteen, # Magazine & Newspapers, # Play Ground, # Television, # Visitors Room, # Security Arrangement, # Telephone, # Internet (Partial), # K.M.C. Drinking Water # Water Cooler cum Purifier

- **L.P.G. as Cooking Fuel at hostel-kitchens:**

All the kitchens of the Jadavpur University Hostels have been equipped with Liquid Petroleum Gas (on subsidized rate) as cooking-fuel. So the cooking at the hostel has become very easy, instantaneous, hygienic, controlled with less time/effect in respect to earlier system (coal)

#### \*\*Number of students applied for hostels and students allotted hostel seats in the year 2019-2020

#### U. G. (FRESHERS)

Category	Applied	Allotted
Boys	310	254
Girls	260	93

#### U. G. (NON-FRESHERS)

Category	Applied	Allotted
Boys	29	29
Girls	40	22

#### P. G. (EXTERNAL)

Category	Applied	Allotted
Boys	125	68
Girls	90	49

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### P. G. (INTERNAL)

Category	Applied	Allotted
Boys	35	35
Girls	46	46

### Concession in Fees :

The concession in fees, in terms of full and half-free studentship, are awarded to needy students of the day – courses as well as evening courses (except Engg. evening students) on the recommendation of the University constituted Committee. After due notification by the Dean of Students, application forms, are issued at the beginning of the session, from the Office of the Dean of Students

### STATEMENT ON FREESHIP FOR THE SESSION 2019-2020

[Following no. of students have been granted free-studentship in due year 2019-2020]

<u>Faculty of Arts</u>				
Department	Total Applicants	Full Free	Half Free	Total No. of Beneficiaries
1. Bengali	152	69	43	112
2. Comparative Literature	13	11	nil	11
3. Economics	13	12	nil	12
4. Education	136	19	92	111
5. English	06	06	nil	06
6. Film Studies	02	nil	nil	nil
7. History	93	57	30	87
8. International Relations	51	46	nil	46
9. Library & Info. Science	29	19	05	12
10. Philosophy	130	57	35	92

Department	Total Applicants	Full Free	Half Free	Total No. of Beneficiaries
11. Physical Education	113	15	07	22
12. Sanskrit	208	60	40	100
13. Sociology	15	12	nil	12
14. Linguistics	05	02	nil	02
<b>Total</b>	<b>966</b>	<b>397</b>	<b>252</b>	<b>649</b>

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**Faculty of Science**

1.	Chemistry	47	41	nil	41
2.	Geography	01	01	nil	01
3.	Geological Sciences	11	10	nil	10
4.	Instrumentation Science	03	02	nil	02
5.	Life Science & Bio-Tech. Engg.	05	05	nil	05
6.	Mathematics	62	49	02	51
7.	Physics	56	52	nil	52
	<b>Total</b>	<b>185</b>	<b>160</b>	<b>02</b>	<b>162</b>

**Faculty of Engineering & Technology**

1.	ACEE: Journalism & Mass	35	09	18	27
2.	Architecture	03	03	nil	03
3.	Chemical Engineering	63	38	20	58
4.	Civil Engineering	80	26	15	41
5.	Computer Science & Engg.	30	28	nil	28
6.	Electrical Engineering	58	26	16	42
7.	Electronics & Tele-Comm. Engg.	30	18	nil	18
8.	Food Tech. & Bio-Chemical Engg.	27	15	07	22
9.	Mechanical Engineering	56	30	16	46
10.	Met. & Mat. Engineering	11	11	nil	11
11.	Pharmaceutical Technology	102	45	17	62
12.	Production Engineering	15	11	nil	11
	<b>Total</b>	<b>510</b>	<b>260</b>	<b>109</b>	<b>369</b>

**SALT LAKE CAMPUS**

13.	Construction Engineering	20	12	nil	12
14.	Information Technology	63	05	26	31
15.	Instrumentation & Electronics Engg.	20	11	02	13
16.	Power Engineering	25	07	10	17
17.	Printing Engineering	11	10	nil	10
	<b>Total</b>	<b>139</b>	<b>45</b>	<b>38</b>	<b>83</b>

**Free-Studentship Allotment: Grand Total= 1263**

<b>General Students</b>	<b>SC</b>	<b>ST</b>	<b>OBC+ Minorities</b>	<b>PD</b>
<b>570</b>	<b>310</b>	<b>46</b>	<b>337</b>	<b>29</b>

## Annual Report 2019-20

- **Financial Assistance:**

One time Financial Assistance has been given from University's Fund to the needy students for their continuity and effective study at Jadavpur University

**120 (One Hundred Twenty)** students received Financial Assistance @**Rs. 5,000/- (Rupees Five Thousand only)** each

- In addition to granting Free-ship and awarding Endowment Scholarship / Other Scholarship, few students were financially helped by the University for the Continuity of their study as special cases

### **Anti-ragging Activities:**

Jadavpur University has accepted all the directions / guideline issued by Hon'ble Supreme Court of India and regulatory bodies to eradicate ragging in the university campuses. Jadavpur University is working intensively from the very beginning of issue of such directions in the year 1998. Following activities (in brief) were taken up in the year 2019-20 to stop ragging in the campuses

### **Actions taken for prevention of ragging in the year 2019-2020**

1. The Anti-Ragging Committee and Anti-Ragging Squad have been re-constituted as per the latest circular of the UGC on the title "UGC Regulation on Curbing the Menace of Ragging in Higher Educational Institutions, 2009
2. There are thirty-seven Departmental Anti-Ragging Volunteer Teams, fifteen Hostel Anti-Ragging Volunteer Teams and two Common Area Anti-Ragging Volunteer Teams covering both the campuses
3. The first Anti-ragging Committee meeting with the members of newly constituted body held on **16-04-2019**, for taking actions for the year 2019-20
4. A Joint-Meeting of the Anti-Ragging Committee Members and Anti-Ragging Squad Members was held on **12-06-2019**, for taking appropriate Anti-Ragging measures as per the direction of the UGC and AICTE
5. Anti-Ragging Squad Meeting was organized inside the hostel premises on **27-08-2019** at 06:00 P.M. in the Office of the C&D Block, Jadavpur University Main Hostel with the Hostel Anti-Ragging Volunteer Teams of A-1, A-2, B and C & D Block
6. First phase of Anti-Ragging Posters & Banners have been displayed in the third week of July, 2019 to create awareness among the university community
7. Issuance of 'UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009' in the form of booklet, to all the Head of the Departments was made on June, 2019
8. Issue of 'UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009' in the form of booklet, to all the first year students (2019-20) of the University was made at the time of admission
9. Circular has been issued by the Registrar of the University on **27-06-2019** about the constitution of the Anti-Ragging Committee 2019-20 with the names of the Anti-Ragging Committee members and their telephone numbers, wherein the responsibility and accountability of the university community towards curbing the menace of ragging was stated
10. Circular has been issued by the Registrar of the University on **27-06-2019** about the constitution of the Anti-Ragging Volunteer Team Members with the names for Departments, Hostels and Common Area, wherein the responsibility and accountability of the university community towards curbing the menace of ragging was stated
11. Circular has been issued by the Registrar of the University on **03-07-2019** about the constitution of the Anti-Ragging Squad 2019-20 with the names and Mobile Numbers of the Members was stated
12. Anti-ragging undertakings by the newly admitted students were done accordingly

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13. The notice of Anti-Ragging Committee, Anti-Ragging Squad and Anti-Ragging Volunteer Teams for the year 2019-20 have been uploaded in the university website
14. All the first year Engineering Students were addressed about the Anti-Ragging measures of the University by the Dean of Students during first day of Induction Programme of the fresher
15. Anti-Ragging Undertaking taken during the admission in the Jadavpur University Hostels
16. The first Anti-ragging Squad meeting with the members of newly constituted body held on **11-07-2019**, for taking actions for the year 2019-20
17. Anti-Ragging Squad 2019-20, subsequently held meeting on the following dates:  
12-17-2019; 22-07-2019; 24-07-2019; 30-07-2019; 31-07-2019; 09-08-2019; 27-08-2019; 29-08-2019; 12-09-2019; 19-09-2019; and 13-03-2020
18. The Anti-Ragging Committee held meetings, to discuss and resolute on various ragging issues on the following dates:  
12-06-2019; 14-08-2019; 30-08-2019; and 22-10-2019

### OFFICE OF THE DIRECTOR OF PHYSICAL INSTRUCTION (SPORTS BOARD)

Phone: 033-2457-2309

Director of Physical Instruction: Dr. Aparup Konar

E-mail: dir.phy.ins@jadavpuruniversity.in

#### I. Sports Achievement & Participation of National University Games:

- A. **East Zone Inter University Level : (Name of the Competition-Sports Event-Position-Name of the Players-Present Class)**
  1. East Zone Inter-University Chess (M) Championship 2019-20-Chess (Men)-'**Champion**'-Kaustuv Kundu (c)Arpan Das, Debankan Dhara, Arka Sengupta, Ritabroto Ganguly, Aneek Das-UG-II (Geo.Sc)UG-III (Philo)UG-II (Chemical Engg.)UG-I ( IT) UG-I (C.S.E) UG-I (IR)
  2. East Zone Inter-University Tennis (W) Championship 2019-20-Tennis (Women)-'**Runners Up**'-Madhurima Mazumdar, Guritika Saini-UG-I (English) UG-I (Commerce: JDBI)
  3. East Zone Inter-University Table Tennis (W) Tournament 2019-20-Table Tennis (Women)**3rd Position** Survhi Patwari, Brototi Nandan, Sudarshana Patra-UG-II (Economics) UG-III (Sociology) UG-I (Chemistry)
  4. East Zone Inter-University Badminton (W) Tournament 2019-20-Badminton (Women)-**4<sup>th</sup> Position**Pritha Das, Sudeshna Saha, Atreyi Bhanja-UG-II (English) UG-II ( IT) UG-IV (ETCE)
  5. East Zone Inter-University Kho-Kho (W) Tournament 2019-20-Kho-Kho (Women)-**Played in 3<sup>rd</sup> Round**
  6. East Zone Inter-University Cricket (M) Tournament 2019-20-Cricket (Men)-**Played in 3<sup>rd</sup> Round**
  7. East Zone Inter-University Basketball (W) Tournament 2019-20-Basketball (Women)-**Played in 2<sup>nd</sup> Round**
  8. East Zone Inter-University Football (M) Tournament 2019-20-Football (Men)-**Played in 2<sup>nd</sup> Round**
  9. East Zone Inter-University Kho-Kho (M) Tournament 2019-20-Kho-Kho(Men)-**Played in 2<sup>nd</sup> Round**
  10. East Zone Inter-University Kabadi (M) Tournament 2019-20-Kabadi (Men)-**Played in 2<sup>nd</sup> Round**
  11. East Zone Inter-University Badminton (M) Tournament 2019-20-Badminton (Men)-**Participated**



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12. East Zone Inter-University Basketball (M) Tournament 2019-20-Basketball(Men) **Participated**
13. East Zone Inter-University Table Tennis (M) Tournament 2019-20-Table Tennis (Men)-**Participated**
14. East Zone Inter-University Volleyball (M) Tournament 2019-20-Volleyball (Men)-**Participated**

### B. All India Inter Zonal Inter University Level:

- 1 Inter-Zonal Inter-University Chess (M) Championship 2019-20-Chess (Men)-**'Champion'** Arpan Das and Kaustuv Kundu won the **Individual 1st prize** on boards 1 and 4 respectively. Arka Sengupta won the **Individual 2nd prize** on board 2.-Kaustuv Kundu (c) Arpan Das, Debankan Dhara, Arka Sengupta, Aneek Das-UG-II (Geo.Sc)UG-III (Philo)UG-II (Chemical Engg.)UG-I (IT) UG-I (IR)
- 2 Inter-Zonal Inter-University Tennis (W) Championship 2019-20-Tennis (Women)-**Participated**
- 3 Inter-Zonal Inter-University Badminton (W) Tournament 2019-20 -Badminton (Women)-**Participated**
4. Inter-Zonal Inter-University Table Tennis (W) Tournament 2019-20-Table Tennis (Women)-**Qualified but not participated**
5. Vizzy Trophy Cricket Tournament 2019-20-Cricket (Men)-Selected to represent East Zone **Combined University** Cricket Team(only player who selected from all WB Universities)-Mehul Dutta-MBA Final Year ( IBM, JU)

### C. All India Inter University Level:

1. All India Inter-University Aquatics (Diving -W)Championship 2019-20 Diving (Women)**I Silver Medal(1m Diving)I Bronze Medal(10m High Board Diving)I Bronze Medal(1m Diving)**JU Team (W) brought**2<sup>nd</sup> Runner-Up Trophy** in Team Championship in Diving Group.-Miss Rakhi Podder, Miss Nandini Khotari, UG-II(Math)UGI (Chem.Engg.)
2. All India Inter-University American Football (Women: Flag Version)-Championship 2019-20-American Football (Women)-**'Runners-Up'** Tejasweeta Pradhan awarded "**Most Valuable Player**" in Flag Version -Tejasweeta Pradhan, Sudipa Patra, Pem Dechen Bhutia, Swagata Dey, Tenzin Nyima Bhutia, Susmita Das, Sharon Neopany, Priyanjana Pariyar, Aaishma Moktan, Subeksha Tamang, Priti Dilip Jha, Puja Halder, Simran Basel -UG- III (CL) UG- II (Bengali)UG- III (Sociology) UG- II (Phy. Edu.) PG-II (English) PG-I (History) UG- III (Sociology) PG-II (Sociology) UG- III (Sociology) UG- II (Sociology) UG-II (Pharm) PG-I (History) UG-II (History)
- 3 All India Inter-University American Football (Men: Tackle Version) Championship 2019-20 - American Football (Men) - **3<sup>rd</sup> Position** - Paritosh Saini, Joydeep Nandi, Saswat Singh, Amit Manhas, Prashant Kumar, Subham Kumar Singh Tshewang N. Sherpa, Diwash Tamang, Jegme Lobsang, Ankit Prasad, Gyazin Lama, Subhodip Chatterjee Sakchham, Chowhan- Bharat Toto, Ankit Kumar, Tshering Norbu Sherpa, Rewang Tamang, Dinchen Tamang, Samir Roy, Mutasim Farooq, Hasan Raza Ansari- UG-IV (CSE), UG-II (ETCE), UG-II (CSE), UG-III (CSE), UG-II (FTBE), UG-I (FTBE), PG-I (IR), UG-II (ME), UG-II (IEE), UG-(ETCE), UG-III (Economics), UG-IV (Civil), PG-I (Philosophy), UG-II (History), UG-III (FTBE), PG-I (IR), UG-III (History), UG-III (English), UG-III (CL), UG-II (CSE), UG-III (.EE)
4. All India Inter-University American Football (Men: Flag Version) Championship 2019-20-American Football (Men)-**Played in Q. Final Rd.**
5. All India Inter-University Yoga (M &W) Championship 2019-20-Yoga (Men & Women)-**Participated(Women Team ranked 27/144)**
6. All India Inter-University Ball Badminton (W) Tournament 2019-20-Ball Badminton (Women)-**Played in 2<sup>nd</sup> Round**

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7. All India Inter-University Aquatics (Swimming-W) Championship 2019-20-Swimming-(Women)-**Participated**
8. All India Inter-University Aquatics (Swimming-M)- Championship 2019-20-Swimming (Men)-**Participated**
9. All India Inter-University Kick Boxing (M) -Championship 2019-20-Kick Boxing (Men )-**Participated**
10. All India Inter-University Taekwondo (M)- Championship 2019-20-Taekwondo (Men)-**Participated**
11. All India Inter-University Ball Badminton (M)-Tournament 2019-20-Ball Badminton (Men)-**Participated**

### D. Khelo India University Games 2020:

1. 1st Edition Khelo India University Games 2020-Swimming (Women)-**1 Bronze Medal (4x100m Medley Relay)**-Srishti Basu, Shree moyee Chakraborty, Sunanda Datta, Dwipanwita, Mondal, Ankana Roy-UG-II (Sociology), UG-I (Physics), UG-II (History), UG-I (Bengali), UG-I (Bengali)
2. 1st Edition Khelo India University Games 2020-Tennis (Women)-**Participated**-Madhurima Mazumdar, Guritika Saini-UG-I (English), UG-I (Commerce: JDBI)
3. 1st Edition Khelo India University Games 2020-Table Tennis (Women)-**Participated**-Survhi Patwari, Brototi Nandan, Sudarshana Patra-UG-II (Economics), UG-III (Sociology), UG-I (Chemistry)
4. 1st Edition Khelo India University Games 2020-Badminton (Women)-**Participated**-Pritha Das, Sudeshna Saha, Atreyi Bhanja,- UG-II (English), UG-II (IT), UG-IV (ETCE)

## I. Sports Achievement & Participation other than National University Games for the session 2019-2020:

### A. NationalLevel: (Name of the Competition-Sports Event-Position-Name of the Players-Present Class)

1. UTT 81st Jr. & Youth National and Inter State Table Tennis Championship 2019-Table Tennis (Women)-**1 Gold Medal(Youth Girls Doubles) 2 Silver Medals(Youth Girls Singles & Youth Girls Team)**-Surbhi Patwari-UG-II (Economics)
2. 49th All India Inter Institutional Table Tennis Championship 2019-Table Tennis (Women)-**1 Bronze Medal (Women Team)**-Survi Patwari-UG-II (Economics)
3. 81st Senior National & Inter-State Table Tennis Championship 2019-Table Tennis (Women)-**2 Silver Medals (Women Doubles & Team Event)**-Survi Patwari-UG-II (Economics)
4. 4th Indoor National Rowing Championship 2019-Rowing(Women)-**1 Silver Medal(2000 m Pairs)1 Bronze Medal (2000 m Single)**-Shramana saha, Shweta Brahmachari-UG-III (English)UG-III (I.R)

### B. Pro-National Level:

1. 3<sup>rd</sup> Khelo India Youth Games 2020-Swimming (Women)-**2 Gold Medals(50m Breaststroke&4x100m Medley Relay)1 Bronze Medal (4x100m Freestyle Relay)**-Shristi Basu-UG-II (Sociology)
2. 3<sup>rd</sup> Khelo India Youth Games 2020-Table Tennis (Women)-**1 Silver Medal (Doubles)-1 Bronze Medal (Singles)**-Survi Patwari-UG-II (Economics)

### C. International Level:

1. 5<sup>th</sup>International Karate Championship 2019-Karate (Men)-**1 Gold medal(Senior male individualkata)**-Rohan Ganguly-UG-II (History)

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### D. State (WB) Inter-University / Inter-College Level:

1. State Senior Aquatic Championship 2019-Swimming (Men & Women)-2 **Gold Medals**(50m & 100m Breast Stroke) **Broken State record in 50m Breast Stroke**1 **Silver medal**(200m Breast Stroke)2 **Bronze Medals**(50m & 100m Back Stroke)-Shristi Basu, Ranajit Dutta, Sunanda Dutta-UG-2 Sociology UG-I (Geography), UG-II (History)
2. 5<sup>th</sup> BRC Inter-College Rowing Championship 2020-Rowing (Women)-1 **Gold Medal**(Indoor Rowing)-1 **Silver Medal**(Fours)-Sweta Brahmachari, Shreyaa Brahmachari, Sweta Brahmachari, Sudarshana Patra, Tania Mitra-BA-III (I.R), PG-II (Chemistry), UG-III (I.R), UG-I (Chemistry), UG-III (English)
3. State Level Inter-College Basketball (W) Tournament 2019 (organized by Indian Maritime University, Kolkata)-Basketball (Women)-**'Champion'**Swagata Dey became the **"Best Player of the Tournament"** -Swagata Dey-UG- II (Phy. Edu.)
4. Ajoy Ghosh Memorial Trophy Cricket (M) Tournament 2019-20-Cricket (Men)-**Participated**
5. Inter-University T-20 Cricket (M) Tournament 2019-20-Cricket (Men)-**Participated**
  - a. **Tshering N.Sherpa** of UG, I.R. a player of American Football men team was awarded as **"Best Sports Person of the year 2019"** during the Annual Convocation of Jadavpur University held on 24.12.2019
  - b. **Shristi Basu** of UG-2 Sociology is felicitated by our Honorable Education Minister **Mr. Partha Chatterjee** and other Ministers of West Bengal for her outstanding performance in Swimming

### Organized Professional/Collaborative Sports Programmes for the Session 2019-2020:

1. JU Sports Board hosted the Inaugural programme of a **Seminar cum Workshop on Athletic rule followed by FSTO exam 2019** in collaboration with WBAA under the care of AFI from 5-7 July, 2019 at 10.30am at the OPT Seminar hall, AC building, JU Main Campus
2. A Symposium of **'Indo-Taiwan Collaboration'** was organized by Jadavpur University under the MoU with Fu Jen Catholic University, New Taipei, Taiwan, held on 8 August, 2019 at 10.45 am onwards at the Seminar Room: 1st Floor, Mechanical Engineering Building, JU. The delegation of both universities interacted and shared each other about the exchange of cultural values of Sports, Academics, Tradition, History, Environment and Language to establish an international link and build up a strong relation with Partner University
3. The **"Flag off Ceremony"** was held on 30 August, 2019 at 3.30 pm in CR-1 on the occasion for participation of a delegation of JU in the **"Annual Summer Cycling Program"**, held from 2-7 September, 2019 at Taipei in Taiwan, organized by Chinese Taipei University Sports Federation to promote international university sports development, exchange the culture and increase the knowledge of sports
4. Jadavpur University from India was invited as the participating University of **'Annual Cycling Programme 2019'** which was held from 2-7 September, 2019 at Taipei in Taiwan, organized by Chinese Taipei University Sports Federation (CTUSF). This became the first time ever in the history of Jadavpur University that officially a delegation with ten students & three officials represented JU in an international sports collaborative event as invited and sponsored by the foreign country. Also this was the first time that Jadavpur University and the Fu Jen Catholic University entered into a sports and athletic collaboration with each other. The Inauguration of **"Annual Summer Cycling Programme"** was held on 3rd September, 2019 at Taipei, Taiwan, with gracious presence of Kao, Chin Hsung, Director General, Sports Administration, Ministry of Education, APCE Sports Policy Network; Vincent Ma, Secretary, Chinese Taipei University Sports Federation and Leszek Niewdana, Vice president, Fu Jen Catholic University
5. Sports Board of JU hosted a **Seminar cum Workshop on Athletic technical rules followed by Federation Technical Official (FTO) Exam 2019** in collaboration with WBAA under the care of Athletics Federation of India from 6-8 September, 2019 at the OPT Seminar hall, AC building, JU Main Campus

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where 60 FSTO passed candidates from WB, Assam & Odisha appeared in the said National level Athletic Official's examination

6. Sports Board of Jadavpur University hosted "**WB Kickboxing State Championship 2019**" and "Red Fighting Championship" (Pro Kickboxing) in collaboration with Bengal Kickboxing Association under the aegis of Kickboxing Federation of India and World Kickboxing Federation from 21–22 September, 2019 at OAT, JU Main Campus
7. JU Sports Board hosted a **Clinic on Ball Badminton Rules** followed by **State Officials Exam** in collaboration with West Bengal Ball Badminton Association on 30th November, 2019 at 1.00 pm onwards at the OPT Seminar hall, AC building, JU Main Campus

### Co-curricular Activities for the Session 2019-2020:

**Karate Coaching Programme:** Karate coaching programme successfully ran under the aegis of Sports Board of Jadavpur University twice in a week every Tuesday & Thursday at OAT, JU Main Campus from 5.30 pm to 7.30 pm under supervision of Karate Instructor and Lady Karate Instructor for all the students including girls of JU with the aim to promote self-defense activity in the university

**Multi-Gym & Fitness Training Centre:** Multi-Gym & Fitness Training programme with Weight & Power Lifting conducted efficiently every Monday to Friday from 6.30 am to 9.30 am for girls and from 4.30 pm to 7.30 pm for boys in the Gymnasium at Main Campus under the guidance of Gym Trainer and Lady Gym Trainer for the development and promotion of health & sports performance for all the students including girls of JU

### Project Undertaken / Publication / Journal Referee/ Paper Presentation / Workshop or Course Participation by: Dr. Aparup Konar, Director of Physical Instruction

#### Project Undertaken as P.I:

Title: "**Identification of Changes in Immune Components in Response to Acute Exercise**" under the JU RUSA 2.0 Major Research Support, 30 May, 2019, Jadavpur University, Kolkata, West Bengal

#### Paper Published:

"**Changes in Immune Response to Moderate Exercise in Active Trainees**", Enhancing Health and Sports Performance by Design, Proceedings of the 2019 Movement, Health & Exercise (MoHE) and International Sports Science Conference (ISSC), Springer Nature Singapore Pte Ltd. 2020 : MoHE 2019, LNBE, pp. 13–20, 2020. [https://doi.org/10.1007/978-981-15-3270-2\\_2](https://doi.org/10.1007/978-981-15-3270-2_2)

#### Journal Refereed:

Reviewing of the "**International Journal of TROPICAL DISEASE & HEALTH**", 2020, Hooghly, West Bengal, India / Regent Street, London, UK

#### Paper Presented:

1. "**Changes in Immune Response to Moderate Exercise in Active Trainees**", International Conference on Movement, Health & Exercise (MoHE) and International Sports Science Conference (ISSC), 30 September– 2 October, 2019 in Kuching, Sarawak, Malaysia
2. "**Sports Management at the University Level for Development & Promotion of Sports Culture**", International Conference on Physical Education and Sports Science - ICPESS 2020, 9-11 January, 2020 organized by Manipal University, Jaipur

#### Workshop /Course Participated:

1. Participated in **Seven days online Faculty Development Programme (webinar)** on "**Sports Coaching & Sports Science**", organized by Swarnim Gujarat Sports University from 23– 29 June, 2020

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2. Participated in the **Six days National Webinar Series (12 Session) on “Knowledge Generation in Education during COVID-19 Pandemic – Qualitative Research”**, organized by Bombay Teachers’ Training College, HSNC University, Mumbai & Department of Education, University of Mumbai, 1–6 June, 2020
3. Participated in the **Five days National Webinar Series on “Holistic Wellness in Combating the COVID-19 Pandemic”**, organized by the Department of Physical Education, Sri Padmavati Mahila Vishvavidyalayam, Tirupati, 17–21 June, 2020
4. Participated in the **International Forum on Quality and Safety in Healthcare virtual Workshop: “Improving safety post pandemic”**, 30 July, 2020, BMJ, Institute for Healthcare Improvement
5. Participated in the **International Forum on Quality and Safety in Healthcare virtual Workshop: “Leadership and Culture for Change during COVID-19”**, 6 August, 2020, BMJ, Institute for Healthcare Improvement

### OFFICE OF THE DIRECTOR OF YOUTH WELFARE

Phone: 033-2457-2247

Sr. Director of Youth Welfare: Dr. Bappa Mullick

E-mail: [diryw@jadavpuruniversity.in](mailto:diryw@jadavpuruniversity.in)

Jadavpur University students did well in the co-curricular areas in the year 2019-20. There was a steady growth in students’ participations at various levels, including students clubs /societies, intra-murals, extra-murals etc. wherein they demonstrated their zeal for participation in cultural, literary, artistic and adventure sports’ activities. Students also exhibited their competence, coordination and enthusiasm in organizing of major events independently and while assisting the university. It was heartening to see the camaraderie and understanding amongst the members of various clubs in organizing of events, assisting in finding sponsors, and in sharing of rooms for their sessions. The Science Club, JUMHC, JUPC, QFDS, Film Society, Music Club, Art & Literary Society, Painting Club and Chess Club attracted huge memberships, with overwhelming participation from the new entrants. Outreach activities of the Office were also well attended by the members of various clubs and JU students in general

**35th AIU INTER-UNIVERSITY YOUTH FEST (ZONAL), Venue - Royal Global University, Assam, 3–7 January, 2019**

#### Merit list

- Bietri Pathak, International Relations – 2nd in COLLEGE ART
- Samiriddhi Dutta, Sociology 3rd in RANGOLI
- Swarnenu Mondal, Geological Sciences, – 2nd in CLASSICAL INSTR. (Non-Percussion)
- Madhumay Roy, Geological Sciences, – 2nd in WESTERN INSTRUMENTAL (Solo)
- Taishi Nandi, International Relations - 2nd in LIGHT VOCAL



**35th NATIONAL AIU YOUTH FEST (NATIONAL), Venue – Amity University, Noida,  
1–5 February, 2020**

**Merit list**

- Madhumay Roy, Geog. Sci. – 4th in WESTERN INSTRUMENTAL (Solo)
- Bietri Pathak, I.R. – 4th in COLLAGE ART

**J.U Students Club/ Societies Activities:**

**Jadavpur University Photographic Club (JUPC):**

As the session 2019-2020 comes to an end, Jadavpur University Photographic Club (JUPC) took part in various activities of different natures. Here is a brief report of everything:-

**1. Training Sessions**

The Basic Training Session was organised from 4–29 September, 2020. Three theory classes were held during that period on Wednesdays, at the OPT Hall, Amenities Centre Building. While the first two theory classes focussed on introducing basic ideas about photography and cameras to the students, the final class dealt with a discussion on the evolution of photography. The theory classes were followed by practical classes every corresponding Sunday to acquaint the students with operating DSLR cameras and provide them with a hands-on experience. The practical classes were held at the Victoria Memorial, Rabindra Sarobar and in Gourdah, a village in the outskirts of Kolkata. The students were taught about composition of photos once they were familiar with the basics of photography. A class was conducted to train the students in editing using Adobe Lightroom, a photo editing software. The Training Session was extended with the club members taking the freshers out for photography on following Sundays to Mullick Ghat, Princep Ghat, Bhowanipore and other parts of Kolkata

The Training Session saw an excellent turnout, with a full house in the introductory class and equally remarkable attendance on the following classes. Enthusiastic students from across the departments and courses came together to capture the world through their lenses and exchange ideas, and it appears that they have found in JUPC an opportunity to channel their shared passion. JUPC provides them a haven for cultivating their passion and would be able to encourage their endeavours with proper assistance from the authorities in procuring digital cameras for the promising young photographers. The Advanced Training Session comprised of classes which educated the continuing freshers about more intricate and detailed techniques and methods of photography and the recapitulation of the older concepts as well. The classes were taken at the end of the session after the end of the year semester exams. The topics included Dark Room and SLR camera technicalities, Studio Photography and Photo Editing. These classes were taken by the then 2nd year members of the club

**2. Convocation**

Like every year, the club has provided the Convocation services to the degree receiving students taking photographs of the degree recipients on the Annual Convocation Day, 24 December, 2019. Following the efforts in the previous year's convocation, it was fully digitized

The convocation was held at University Open Air Theatre. It went smoothly. The size of the hard copies was the same as last year. And like last year we continued with the system of providing laminated photos for those who required them

A new coding system was used to make the distribution of photographs easier corresponding with the roll number in the convocation list

The club members did a spectacular job in ensuring the smooth running of the Service and we were able to fulfill our duties with diligence and efficiency. I thank the authorities for allowing us to do this service as



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well as supporting and providing us with technical assistance throughout the event

### 3. Annual Event

The Annual Event for the session was an international contest which included categories like photo-story, single image and short film followed by an exhibition of the selected entries at our home campus, Jadavpur University. Montage'20 was conducted from 26–29 February, 2020. 1423 entries in the OPEN category along with 151 entries from international participants. 369 entries in the THEMATIC category (Time) along with 35 international submissions. 54 submissions were registered for the short film category, out of all 15-20 entries were shortlisted in all the above categories by our esteemed panel of judges- Soumya Shankar Bose, Ronny Sen, Debiprasad Mukherjee, Sudipto Das, Kushal Gangopadhyay. The event was inaugurated by our Pro Vice-Chancellor Mr. Chiranjib Bhattacharya. The exhibition witnessed a huge footfall and received a lot of appreciation from distinguished photographic circuits and photographers

### Photographic Tours

There was one photographic tours in this session:- 11 members of the Jadavpur University Photographic Club had taken off on the 10 July, 2019 for their annual Long Ramble on mountainous trails to the high altitude alpine lake of Beas Kund at 12,772 feet. This 4-day trek, like every year, was an attempt to practice photographing the nature and lifestyle outside the limited bounds of the metropolis

### Jadavpur University Debating Society (JUDS)

The following report is based on all events and operations that took place in the Academic Calendar of 2019-20 in the Jadavpur University Debating Society (JUDS)

#### Events Organized

1. Gunilla Gerland Memorial Debating Festival (30 August, 2019)
2. Intra Model United Nations (1 –2 September, 2019)
3. Voxpop (23– 24 October, 2019)

### Jadavpur University Quiz Forum:

Enquiry, the quiz forum of Jadavpur University, is one of the most active quiz clubs in the city. Under the guidance of the Director of Youth Welfare, and with the assistance of the Office of the Director of Youth Welfare, the club conducts sessions, an annual quiz festival, and the biggest inter-college fresher's quiz competition in eastern India

Enquiry also organizes quiz sessions regularly and is among the very few clubs to regularly conduct quiz sessions in the city. The sessions are informal, uncompetitive in nature, and they do not have prizes. In the last 8 months, Enquiry has organized 6 sessions, which has had an average footfall of 20 college or university level quizzers from across the city. Some of those sessions were also attended by school students and some were attended by quizzers from outside the city who were in Kolkata during the time. All sessions were extremely well received by the attendees. The quizmasters at these sessions have been a mix of students from various disciplines. Quizzes have been general themed but also on more specialized topics such as music, movies, literature, entertainment, unusual goods and services.

### List of Achievements in 2019-2020:

1. **THIRD** – Loreto Shield Quiz 2019, Loreto College, Kolkata
2. **THIRD** – Les Quizzerables, Presidency University Inter-college Freshers' Quiz 2019
3. **THIRD** – Inquisition, Jadavpur University Inter-college Freshers' Quiz 2019
4. **FIRST** – Bengal Chamber Technology Quiz 2020, JIS University, Agarpara

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5. **THIRD** – Fast and Curious 2020, Biztech Quiz at St. Xavier's College, Kolkata
6. **THIRD** – Quiz at GROUND ZERO V.5 2020, Rotaract Club of Central Calcutta
7. **FIRST** – General Quiz at Invictus 2020, JDBI Institute, Kolkata
8. **THIRD** – My Bloody Valentine 2020, Horror Quiz at Jadavpur University
9. **FIRST** – Sports Quiz at Xavotsav 2020, St. Xavier's College, Kolkata
10. **THIRD** – Quizzard 2020, General quiz at Institute of Engineering and Management, Kolkata
11. **SECOND** – Mindspark, General quiz at Srijan 2020, the annual techno-management fest of Jadavpur University
12. **SECOND** – Pop-Culture Quiz at Carnival of Rust, St. Xavier's College, Kolkata

### Operations:

JUDS has conducted plenty of Public Speaking/Debating/MUNing workshops in the year involving freshers, college students and students from outside. These workshops were conducted mostly at the OPT Seminar Hall and some at the TEQIP Building

### Jadavpur University Painting Club:

2019-2020 was a colorful session for Jadavpur University Painting Club. They participated in a lot of Inter College and Inter University Competitions throughout and have won prizes in various categories. J.U Painting Club organized their annual exhibition in January to exhibit their works which they have done through the year. Various departments of the university came together to exhibit their stories on canvas and paper

J.U Painting Club also have arranged a freshers competition for the new comers and found some really inspiring artworks too. The student members had taken part in a lot of competitions throughout the year. They are:

Bijetri Pathak, a Masters First year student from International Relations Department had won First place in Collage painting in Youth Festival organised by Ministry of Youth Affairs, Government of India ( Eastern Zone) on November 2019 and Fourth Position in the same category in the Nationals on January 2020. She had also won third position in T-shirt painting in Xavotsav, organised by St. Xaviers College, Kolkata in 2020

Samriddhi Dutta, a third year undergraduate student from Sociology Department had won Third place in Rangoli in Youth Festival organised by Ministry of Youth Affairs, Government of India (Eastern Zone) on November 2019

Riddhi Mahaldar, a third year undergraduate student from Economics Department had been enlisted among top 25 artists all over the world in a painting competition named Art from Heart Contest by Voice of Specially Abled People (VOSAP) in 2020. She was also the winner for an Art competition on Amphan, organised by Elixir, a magazine in 2020

Jyoti Sarkar, a fourth year student of Architecture Department, had won second position in Rangoli in Xavotsav, organised by St. Xaviers College, Kolkata in 2020.

Sagarika Das, a fourth year student of Architecture Department, had won second position in Junk Art (Best out of Waste) in Xavotsav, organised by St. Xaviers College, Kolkata in 2020.

Devatra Pathak, a second year undergraduate student from Economics Department had won Second Position in Poster Making in Inter college competition organised by Lady Brabourne College in September, 2019. She had also won third place in Doodling and second place in Quilling in Xavotsav, organised by St. Xaviers College, Kolkata in 2020.

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Ankita Paul, a second year undergraduate student from Economics Department had won third place in T-shirt Painting in Xavotsav, organised by St. Xaviers College, Kolkata in 2020.

Swarnali Bhattacharya, a second year student from Department of Life Science and Biotechnology had won third place in face painting in Xavotsav, organised by St. Xaviers College, Kolkata in 2020

Antara Das, a second year undergraduate student from Economics Department had won Second place in Quilling in Xavotsav, organised by St. Xaviers College. She has also won first place in Mandala Art organised by @mandala\_drawings, Second place in doodling organised by #octobergram, First place in Mandala art organised by @mandalayellowframes in 2020. These are the online art competitions held during the period of lockdown over social media.

Zeba Nasrin, a second year undergraduate student from Architecture Department had won tenth position in Agantuk, a national painting competition, sixth in Nostalhiya, Winner of July Art Contest, Special selection in August Art contest, Paper Cut Monthly June Award for Best Artist, Selected on VOICE OF ART by VIVEL INDIA, Best Artist October by Twist of Tales, Best Artist October by Entangled Tales, Paper Cut Yearly Award for best Artist

### **Jadavpur University Science Club:**

JUSC has been gracious in handling our Technical and scientific understanding of various concepts which we were unaware of. The events that they have organized have ignited deep interest in fields like robotics, automation etc. They organized Robosoccer and helped each individual in understanding it to the core. From buying materials to building, they got guidance in every possible way. Robosoccer was a grand success. Students from each department participated with vigor. In SRIJAN, JUSC organized events like Blitzkreig Ball, Highway to Hell, Homecoming, and Escape Room which tested not only our science and tech knowledge but also our wit and intelligence. Our knowledge of Robotics and automation were tested greatly by the before mentioned first 3 events. It gave them a chance to explore something which their curriculum doesn't allow. Thus, being scientific and fun, SRIJAN was a huge success for JUSC. Not only technical, JUSC has been a torch bearer in spreading awareness in scientific and technical advancements. JUSC has been posting about Scientists and major scientific events in social media platforms and in their weekly blog. This has helped us understand recent development and research areas in various related fields. Another important aspect about those posts is that we remember so many scientists who had contributed so immensely but are forgotten by the society. They had organized an online poster making competition to spread awareness on Van Mahotsav, which was an online success and students from various colleges participated

Another magnanimous step taken by JUSC was conducting JontroTontro online. When they were getting bored in lockdown, JUSC relieved us by organizing this online fest. It was a grand success too, with participants from various colleges throughout Kolkata. Students enjoyed this fest very much and were able to learn a lot too

### **Jadavpur University Mountaineering and Hiking Club:**

Achievements / Participants of JUMHC

In July 2019, JUMHC organised Unnamed Peak Expedition (6111 meters). 6 student members were the part of this expedition along with 2 senior passout members made their full efforts to climb, we reached up to the height of 5900 meters at 6 A.M. Also during June 2019, 2 students of Jadavpur University completed Basic Mountaineering Course from ABVIMAS Manali

JUMHC conducted 5 Rock Climbing practices at Susunia hills(2) and Mathaburu hills (3) during the claender year

JUMHC conducted its 44th Rock climbing course at Mathaburu Hills during January 2020

## Annual Report 2019-20

### **Jadavpur University Chess Club (JUCC):**

- JU Chess Club conducted regular sessions of chess almost on a daily basis throughout the year. The total membership of the club increased manifold
- There was a training session for chess enthusiasts hosted by the JU Chess Club in January 2020 which was attended by 30 students
- JU Chess Club organized intra-university chess tournament during the month of January, 2020, with a participation of 40 students. The tournament was held up at OPT Seminar Hall, AC Canteen Building

### **Jadavpur University Art and Literary Society (JUALS):**

In 2020 the JU Journal, the subsidiary of The Jadavpur University Arts and Literary society took a bold step of bringing together various clubs and societies of JU in an attempt to bring together the students of this vast university who barely know anyone beyond their own department

### **Jadavpur University Music Club:**

Musical concerts Annual Convocation and Prof. G.C Sen Memorial Ceremony Student-participants of J.U, led by Music Club, took part at the Annual Convocation and Prof. G.C. Sen Memorial Ceremony on 24 December 2019 and 30 December 2019, respectively. The participants were Bietri, Prithiviraj, Sayan, Soutik, Saptak, Taishee – student participants and Pralay Banerjee; Staff of DYW Office

The year of 2019-20 has been very eventful for Jadavpur University Music Club (dance division). JUMC has successfully organised the Dance Festival called INDAK in the month of November, 2019 and celebrated IBTIDA in the month of February, 2020 in collaboration with Jadavpur University Drama Club, Jadavpur University Literary Society

JUMC has also participated along with Jadavpur University Women Conclave in the closing ceremony in the month of March, 2020. JUMC also organized TAAL in the month of September, 2019 as a successful freshers welcome and bonding event of different batches in the Forum. JUMC has also embarked its place in various competition over the state, in remarkable events like Spring Fest in IIT Kharagpur, and Xavotsav and Goonj by Xavier College, Samagam in Loreto College, Shri Sikhshayatan College, NSHM Knowledge Campus, etc.

Members of the JUMC has occupied the first position in Duet Dance Segment in Spring Fest, occupied second position in Xavullash (organised by Bengali literary society of Xavier's college), first position in Samagam (Loreto College) and Shri Sikshayatan College as well. JUMC also qualified for Xavotsav after an audition round amongst a pool of eminent dance troupes around the city. INDAK, emerged as a well-known Dance Festival around the country for being a celebration one of a kind. Even after postponing of dates, it acquired huge participation in the competition segment, had a successful panel in the conference segment consisting of speakers like Rimi B. Chatterjee, Abhishek/Arna Poddar, etc. The Judges of the competition consisted of Roshmi Bandyopadhyay, Soma Subedi, Swapan Roy. The showcase segment consisted of eminent dancers like Arshia Rosaleen and famous troupes such as Lasya-Belly Dance troupe, Subhangik, Caper Maniac Crew, etc. IBTIDA also gained recognition via media coverage by Ishq FM and was a huge event. The Dance competitions were judged by eminent face in the world of art, Dance and culture, such as Arshia Rosaleen, Nandini Sinha, Devalina Kumar, etc and had showcase performances from teams like "fullstop". It was a huge success with participation from over 50 colleges for the different competitions

JUMC organised free workshops in the month of January for 4 days consisting of Eastern and Western dance training. Even during the COVID-19 pandemic, JUDF did not stop but encouraged students to come forward with practice routines. The Forum also organised free dance online workshops in the month of April and May where dancers came forward to share their part of knowledge to aspiring students. The workshops welcomed dancers from all genres like Aakriti Prasad with Belly Dancing, Pinaki Sarkar with

## Annual Report 2019-20

House-Style, Arshia Rosaleen with Kathak, Amit Shaw with contemporary, Noel Datta with Manipuri, Subhangi Sanyal with Bharatnatyam, Aniket Lepcha with HipHop, Shalini Subedi with Freestyle Popping, Sayani Chakraborty with Bharatnatyam, Raj Shaw with B-Boying, Arunima Aditya with Classical expression and freestyle. The engagement in such virtual ventures were huge and we are glad for such overwhelming participation

### Other Activities/Responsibilities towards promotion and welfare of Students:

#### Best All-Round Graduates and Post-Graduate Awards 2019

The processing and selection for the recipients of the Annual Best All-Round Graduates and Post-Graduate awards 2019 was carried out by the office. Following are the award winners:

#### The list of Best All-Round Graduate and Post-Graduate awardees for the year 2019:

##### Best All-Round Graduate Award for the year 2019

1. Prativa Moyee Gold Centered Silver Medal for the Best All-Round Female Graduate (including all the Faculties): **Bijetri Pathak, International Relation, Roll-001600701043**
2. Alumni Association Gold Centered Silver Medal for the Best All-Round Graduate combining all the three faculties: **Ujaan Ganguly, English, Roll-001600401004**
3. Purna Chandra Laha Silver Medal for the Best All-Round Graduate including all the faculties: **Ujaan Ganguly, English, Roll-001600401004**
4. Prafulla Kanti Banerjee Silver Medal to be given to the Best All-Round Graduate from the remaining two faculties: **Pratyoy Das, Computer Science and Engg., Roll-001510501029**
5. Monibala Roy Gold Centered Silver Medal to awarded to the Best All-Round Girl Graduate of the Engg. & Tech. Faculty only: **None**
6. Dipak Kumar Choudhury Memorial Gold Centered Silver Medal for the Best All-round Graduate combining all the three Faculties: **Ujaan Ganguly, - English, Roll-001600401004**

##### Best All-Round Post-graduate Award for the Year 2019

1. B. D. Mukherjee Memorial Gold Centered Silver Medal for Best All-Round Post Graduate Award: **None**

##### Personal Accident-cum-Medical Insurance for students of Jadavpur University:

Below is the list of students who got the claimed amount for the session 2019-20

1. Dudh Kumar Malik - 14,980/-
2. Piyali Kayal - 25,000/-
3. Shrabonti Dinda - 25,000/-
4. Altaf Uddin Laskar - 25,000/-

## Annual Report 2019-20

### OFFICE OF THE FINANCE DEPARTMENT

Phone : 033 - 2414-6799  
: 2457-2278

Finance Officer : Sri Gour Krishna Pattanayak

E-mail : fo@jadavpuruniversity.in

fooffice@jadavpuruniversity.in

Total approved officers Post in Finance department is four [the Audit Officer is not under Finance department, it's a post directly reporting to Vice-Chancellor]. In the year 2018-19, in few months, the FO was the lone officer in Finance Department. The present status of vacancies and persons in position are as follows:

<u>Posts</u>	<u>Nos.</u>	<u>In position, at present</u>	<u>From when vacant</u>	<u>Remarks</u>
Finance Officer	1	Yes	-	-
Dy. Finance Officer	1	Yes	Join back on 18.12.2020, after lien from 11.10.2017	Audit officer was looking after as additional charge to help us
Accounts Officer-I	1	Yes	Vacancy created on August 2017 filled up on 25 January 2019	No officer was available in vacancy period
Accounts Officer-II	1	Yes	Join back on 11.08.2020, after lien from 28.11.2018	One retired officer from AG-West Bengal was appointed as OSD
<b>Total</b>	<b>4</b>	<b>4</b>	<b>-</b>	<b>-</b>

### University Annual Receipt for the Year 2019-20 [Both the Capital & Revenue]

<b>Particulars</b>	<b>Amount [Rs. ]</b>
University Grants Commission	5,88,17,096
Other Central Government Department	25,87,89,440
State Government	252,51,28,918
Other State Govt. Grants	1,17,41,886
Consultancy/ Technical Fees [Gross]	7,16,74,999
Grants from Others	24,87,17,789
Donations	25,25,000
Tuition Fees	7,57,89,522
Other Fees	3,48,37,042
Interests	2,20,37,750
Sale of Application Forms etc.	5,19,801
Other Income	5,32,75,925
<b>Total</b>	<b>336, 38, 55168</b>



## Annual Report 2019-20

During the year, since last Convocation, we had completed the Audit process of three years Annual Accounts (2015-16, 2016-17 & 2017-18), where the same has just been completed immediately before the lockdown started. The target date of completion of the Annual Accounts for the year 2018-19 & 2019-20 was December 2020. As planned, the Annual Accounts for the year 2018-19 & 2019-20 has not progressed much as the Lockdown started from Mid-March and the lockdown forced us to truncate our activities; where upto June 2020 we had to function with only 10% staff and from July to September 15-20% were present

Naturally, the two available Trainees were dedicated for the job of Ledger Section, for the almost entire period to keep the payment function running, in absence of inadequate and irregular flow of staff

The planned cycle for the completion of accounts will be followed henceforth in coming years, as full strength of officers are available now. The Accounts for the year 2018-19 will be ready by March 2021 and 2019-20 by July 2021

The Cash, Accounts, Pay, RB Cell, UGC Cell and Research Section [payment function] functioned very well, although the strength of staff was not at desired level. Further, only two officers were available during the year under review, we are forced and locked into the day to day functioning to keep payment process smoothly

The major event done during the year under review is that implementation of revision of Pay and Pension, effective from January 2020. Even during the worst-affected Pandemic period, where we got services of only a few staff-members for the job, we could implement the revision, where more than 3,500 employees and Pensioners are benefited. We are grateful to all concerned who helped to implement the revision and disbursement of all the dues arising out thereof.

The next employee friendly contribution is the introduction of a portal for the employees of the University, in the web, with individual dashboard for all the employees. This has helped all employees to get their fixation sheets, Pay slips from March 2020 onwards, sitting at home during the pandemic period. Further, we had introduced a system of obtaining option of receiving HRA declaration and we had provided a module in the E-portal for the IT calculation under both the options, the old and as well as the new one provided by the GoI this year

All receipts are being done through JUMS software and students' collections are linked to SBI on line payments, in the pandemic. This will be strengthened further with completion of linking full Students' database with SBI, for instant dues calculation and updation of all payments instantly, once our website is certified to be safe and secure. Making the full on-line and real-time data generation and round the clock collections is our ultimate target

Process will be started for a on-line portal for bills/documents tracking, with the verification of status of bill payments & files in Finance department, which will be launched next year, if everything goes in the right track. None have to meet anybody in Finance for follow-up of his/her case, the location of the file/documents with delay will be reflected in the system

## Annual Report 2019-20

### SC/ST/OBC CELL

Phone : 2457-2580/2632

Dr. Kaniska Sarkar

Member Secretary

Scheduled Caste and Scheduled Tribes have been identified as the two most backward groups of Indian Society. They include all such castes, races or tribes which have been declared as scheduled castes and scheduled tribes by the Constitution of India under the provisions of Article 341 & 342

Jadavpur University has established a SC/ST Cell in 2007 for the benefit of the University students and employees belonging to SC/ST community. Its function is also to help the students and employees belonging to SC/ST categories to integrate with the mainstream of the University community and to remove difficulties which they may be experiencing. The cell was constituted as a measure of strengthening the implementation machinery for planning, evaluation and monitoring of the policies of the Govt. of India as well as Govt. of West Bengal in the field of higher education and also the programmes of the University Grants Commission with the objective to improve the life style of SC/ST candidates and to lift up them to the general level as compared to the other communities. The cell is monitoring the reservation policies a laid down time to time by the Govt. of West Bengal. It also provides information on fellowship and other activates to the SC/ST candidates. The SC/ST Cell has taken up problems of the SC/ST students and employees with the university authorities and has solved some of them amicably. The cell has been a user friendly counsellor to all SC/ST employees and students. The cell is collecting and furnishing statistical date and other information which the Govt. Of India and UGC as well as other agencies like MHRD, SC/ST welfare and National Commission for SC/ST may seek pertaining to the welfare of the SC/STs allied matters. This cell also replies to the Parliamentary questions on reservation from Lok Sabha and Rajya Sabha in different times.

#### Committee Members

Prof. Suranjan Das	Hon'ble Vice Chancellor, JU. CHAIRMAN
Prof. Subarna Kumar Das	Department of Lib. & Inf. Sc., Liaison Officer
Prof. Debasish Lohar	Department of Physics
Prof. Priti Kumar Roy	Department of Mathematics
Prof. Sanjib Mridha	Department of Physical Education
Prof. Papita Das	Department of Chemical Engineering
Prof. Sudhanbindu Roy	Department of ETCE
Dr. Prokash Ch. Roy	Department of Mechanical Engineering
Dr. Ratan Mondal	School of Energy Studies
Dr. Kaniska Sarkar	Member Secretary

**This year the Cell organised the following free coaching for the University students FREE COACHING OF UGC NET PAPER – I FOR UNIVERSITY STUDENTS**

#### Details Program-

Year	Type of program	Enrollment of Students in	
		Offline Mode Class	Online Mode Class
2020	Coaching For UGC	400	531

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**FACULTY PROFILE**

(As on 31.03.2020)

**FACULTY OF ARTS & ISLM**

<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
1 Bengali	Dr. Sekhar Kumar Samaddar	Professor
2 Bengali	Dr. Sampa Chaudhuri	Professor
3 Bengali	Dr. Ananya Baruya	Professor
4 Bengali	Smt. Sutapa Sengupta	Associate Professor
5 Bengali	Sri Saswata Bhattacharya	Assistant Professor
6 Bengali	Abdul Kafi	Assistant Professor
7 Bengali	Dr. Barendu Mandal	Associate Professor
8 Bengali	Dr. Rajayeswar Sinha	Associate Professor
9 Bengali	Dr. Joydeep Ghosh	Assistant Professor
10 Bengali	Dr. Payel Basu	Assistant Professor
12 Comparative Literature	Dr. Suchorita Chattopadhyay	Professor
13 Comparative Literature	Dr. Kavita Panjabi	Professor
14 Comparative Literature	Dr. Kunal Chattopadhyay	Professor
15 Comparative Literature	Dr. Samantak Das	Professor
16 Comparative Literature	Dr. Smt. Sucheta Bhattacharya	Professor
17 Comparative Literature	Sri Aweek Majumder	Assistant Professor
18 Comparative Literature	Dr. Sujit Kr. Mandal	Associate Professor
19 Comparative Literature	Dr. Sayantan Dasgupta	Associate Professor
20 Comparative Literature	Dr. Debashree Datta Ray	Associate Professor
21 Comparative Literature	Dr. Epsita Halder	Associate Professor
22 Comparative Literature	Dr. Parthasarathi Bhaumik	Associate Professor
23 Comparative Literature	Dr. Sumit Kumar Barua	Assistant Professor
24 Economics	Dr. Ajitava Raychaudhuri	Professor
25 Economics	Dr. Joyashree Roy	Professor
26 Economics	Dr. Rajat Acharyya	Professor
27 Economics	Dr. Ambar Nath Ghosh	Professor
28 Economics	Dr. Siddhartha Mitra	Professor
29 Economics	Dr. Malabika Roy	Professor
30 Economics	Dr. Arpita Ghose (nee Dhar)	Professor
31 Economics	Dr. Jugaratan Barman	Associate Professor
32 Economics	Dr. Saikat Sinha Roy	Professor
33 Economics	Dr. Vivekananda Mukherjee	Professor
34 Economics	Dr. Sushil Kr. Haldar	Professor
35 Economics	Dr. Amit Kundu	Professor
36 Economics	Dr. Tanmoyee Banerjee Chatterjee	Professor
37 Economics	Dr. Swapnendu Bandyopadhyay	Professor
38 Economics	Smt. Soma Mondal	Assistant Professor
39 Economics	Dr. Sanmitra Ghosh	Associate Professor
40 Economics	Dr. Vikas Dixit	Assistant Professor
41 Economics	Dr. Bidisha Chakraborty	Assistant Professor
42 Economics	Dr. Poulomi Roy	Associate Professor
43 Economics	Dr. Simontini Das	Assistant Professor

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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
44 Economics	Dr. Rilina Basu (Banerjee)	Assistant Professor
45 Economics	Dr. Tamal Krishna Kayal	Assistant Professor
46 English	Dr. Nilanjana Gupta	Professor
47 English	Dr. Prodosh Bhattacharya	Professor
48 English	Dr. Santanu Biswas	Professor
49 English	Dr. Chandreyee Niyogi	Professor
50 English	Dr. Abhijit Gupta	Professor
51 English	Dr. Paromita Chakravarti	Professor
52 English	Dr. Nandini Saha	Professor
53 English	Dr. Rimi Barnali Chatterjee	Professor
54 English	Dr. Nilanjana Deb	Associate Professor
55 English	Dr. Saswati Halder	Associate Professor
56 English	Dr. Monojit Mondal	Professor
57 English	Dr. Rafat Ali	Associate Professor
58 English	Dr. Sonia Sahoo	Professor
59 English	Dr. Smt. Sutanuka Ghosh	Assistant Professor
60 English	Dr. Ramit Samaddar	Assistant Professor
61 English	Dr. Abhishek Sarkar	Assistant Professor
62 English	Dr. Kaustav Bakshi	Assistant Professor
63 English	Sri Ishan Chakraborty	Assistant Professor
64 English	Dr. Doyeeta Majumder	Assistant Professor
65 Education	Dr. Bishnupada Nanda	Professor
66 Education	Dr. Muktipada Sinha	Associate Professor
67 Education	Sri Debashis Mirdha	Assistant Professor
68 Education	Dr. Lalit Lalitav Mohakud	Assistant Professor
69 Education	Dr. Prokash Biswas	Associate Professor
70 Film Studies	Dr. Moinak Biswas	Professor
71 Film Studies	Dr. Abhijit Roy	Professor
72 Film Studies	Dr. Madhuja Mukherjee	Professor
73 Film Studies	Sri Anindya Sengupta	Assistant Professor
74 Film Studies	Dr. Shradhanjali Tamang	Assistant Professor
75 Film Studies	Sri Arijeet Mandal	Assistant Professor
76 History	Dr. Ranjan Chakrabarti	Professor
77 History	Dr. Mahua Sarkar	Professor
78 History	Dr. Anuradha Roy	Professor
79 History	Dr. Nupur Dasgupta	Professor
80 History	Dr. Kaushik Roy	Professor
81 History	Dr. Sudeshna Banerjee	Associate Professor
82 History	Dr. Subhashis Biswas	Professor
83 History	Dr. Rup Kumar Barman	Professor
84 History	Dr. Suchetana Chattopadhyay	Associate Professor
85 History	Dr. Maroona Murmu	Associate Professor
86 History	Sri Samir Das	Assistant Professor
87 History	Dr. Tilottoma Mukherjee	Associate Professor
88 History	Dr. Chandrani Banerjee Mukherjee	Assistant Professor
89 History	Dr. Samarpita Mitra	Assistant Professor
90 History	Dr. Debajit Dutta	Assistant Professor

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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
91 History	Dr. Utsa Ray	Assistant Professor
92 International Relations	Dr. Om Prakash Mishra	Professor
93 International Relations	Dr. Sumita Sen	Professor
94 International Relations	Dr. Partha Pratim Basu	Professor
95 International Relations	Dr. Anindya Jyoti Majumdar	Professor
96 International Relations	Dr. Shibashis Chatterjee	Professor
97 International Relations	Mrs. Rochona Das Poddar	Associate Professor
98 International Relations	Dr. Kanak Chandra Sarkar	Professor
99 International Relations	Dr. Kakoli Sengupta	Associate Professor
100 International Relations	Dr. Imankalyan Lahiri	Assistant Professor
101 International Relations	Dr. Herken Neadan Toppo	Associate Professor
102 International Relations	Dr. Bijaya Kr. Das	Assistant Professor
103 International Relations	Dr. Kaushik Sen	Assistant Professor
104 International Relations	Dr. Bhagaban Behera	Assistant Professor
105 International Relations	Sri Arup Bhattacharyya	Assistant Professor
106 International Relations	Sri Subhajit Naskar	Assistant Professor
107 International Relations	Smt. Urbi Das	Assistant Professor
108 International Relations	Dr. Sukanya Ray	Assistant Professor
109 International Relations	Sk. Abdul Matin	Assistant Professor
110 International Relations	Dr. Kamaran M.K Mondal	Associate Professor
111 Library and Information Science	Dr. Sunil Kumar Chatterjee	Professor
112 Library and Information Science	Dr. Udayan Bhattacharjya	Professor
113 Library and Information Science	Dr. Goutam Maity	Professor
114 Library and Information Science	Dr. Subarna Kr. Das	Professor
115 Library and Information Science	Dr. Tarun Kumar Mondal	Assistant Professor
116 School of Languages	Dr. Atanu Saha	Assistant Professor
117 School of Languages	Dr. Samir Karmakar	Assistant Professor
118 Philosophy	Dr. Rupa Bandyopadhyay	Professor
119 Philosophy	Dr. Madhumita Chattopadhyay	Professor
120 Philosophy	Dr. Sadhan Chakraborti	Professor
121 Philosophy	Dr. Soumitra Basu	Professor
122 Philosophy	Dr. Gangadhar Kar	Professor
123 Philosophy	Dr. Atashee Chatterjee (Sinha)	Professor
124 Philosophy	Dr. Lopamudra Choudhury	Professor
125 Philosophy	Dr. Proyash Sarkar	Professor
126 Philosophy	Dr. Sashi Nungla	Professor
127 Philosophy	Dr. Aparajita Mukhopadhyay	Professor
128 Philosophy	Dr. Jhuma Chakraborty	Professor
129 Philosophy	Dr. Dipayan Pattanayak	Professor
130 Philosophy	Dr. Maushumi Guha	Professor
131 Philosophy	Shri Arun Mahata	Associate Professor
132 Philosophy	Dr. Maitreyee Datta	Associate Professor
133 Philosophy	Dr. Preetam Ghoshal	Associate Professor
134 Philosophy	Mrs. Rubai Saha	Assistant Professor
135 Philosophy	Dr. Gopi Nath Mondal	Assistant Professor
136 Philosophy	Dr. Samar Kumar Mondal	Professor
137 Philosophy	Smt. Gargi Goswami	Assistant Professor

**Annual Report 2019-20**

<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
138 Philosophy	Dr. Madhucchanda Sen	Professor
139 Philosophy	Dr. Tamoghna Sarkar	Assistant Professor
140 Physical Education	Dr. Sudip Sundar Das	Professor
141 Physical Education	Dr. Ashoke Kumar Biswas	Professor
142 Physical Education	Dr. Gopal Chandra Saha	Professor
143 Physical Education	Dr. Sanjib Mridha	Professor
144 Physical Education	Dr. Asish Paul	Associate Professor
145 Physical Education	Dr. Atanu Ghosh	Assistant Professor
146 Physical Education	Dr. Papan Mondal	Assistant Professor
147 Physical Education	Dr. Sridip Chatterjee	Assistant Professor
148 Sanskrit	Dr. Debarchana Sarkar	Professor
149 Sanskrit	Dr. Piyali Praharaj	Professor (VRS 1.11.20)
150 Sanskrit	Dr. Tapan Sankar Bhattacharya	Professor
151 Sanskrit	Dr. Ashok Kumar Mahata	Associate Professor
152 Sanskrit	Dr. Shiuli (Ghosh) Basu	Associate Professor
153 Sanskrit	Dr. Kakali Ghosh	Associate Professor
154 Sanskrit	Dr. Debdas Mandal	Assistant Professor
155 Sanskrit	Dr. Chinmay Mandal	Assistant Professor
156 Sanskrit	Mr. Bikash Sardar	Assistant Professor
157 Sociology	Dr. Dalia Chakraborty	Professor
158 Sociology	Dr. Amites Mukhopadhyay	Professor
159 Sociology	Smt. Nutan Marian Tigga	Assistant Professor
160 Sociology	Dr. Piyali Sur	Associate Professor
161 Sociology	Smt. Nabanita Das	Assistant Professor
162 School of Womens Studies	Dr. Aishika Chakraborty	Professor
163 School of Womens Studies	Dr. Nandita (Banerjee) Dhawan	Assistant Professor
164 School of Cognitive Science	Dr. Amrita Basu	Assistant Professor

**FACULTY OF ENGINEERING & TECHNOLOGY & ISLM**

1 Adult, Continuing Education and Extension	Dr. Tandra Mitra	Professor
2 Adult, Continuing Education and Extension	Dr. Partha Sarathi Chakraborty	Professor
3 Adult, Continuing Education and Extension	Sri Santwan Chattopadhyay	Associate Professor
4 Architecture Engineering	Dr. Shubhrajit Das	Professor
5 Architecture	Dr. Jayita Guha Niyogi	Professor
6 Architecture	Dr. Tapas Kumar Bhattacharyya	Professor
7 Architecture	Dr. Shivashish Bose	Professor
8 Architecture	Dr. Madhumita Roy	Professor
9 Architecture	Dr. Sanjib Nag	Professor
10 Architecture	Dr. Smt. Suchandra Bardhan	Professor
11 Architecture	Dr. Debashish Das	Associate Professor
12 Architecture	Ms Sanghamitra Sarkar	Assistant Professor



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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>	
13	Architecture	Dr. Mainak Ghosh	Associate Professor
14	Architecture	Ms. Dechen Donka Bhutia	Assistant Professor
15	Architecture	Mr. Tanmoy Datta	Assistant Professor
16	Chemical Engineering	Dr. Ranjana Chowdhury	Professor
17	Chemical Engineering	Dr. Chiranjib Bhattacharjee	Professor
18	Chemical Engineering	Dr. Kajari Kar Gupta	Professor
19	Chemical Engineering	Dr. Avijit Bhowal	Professor
20	Chemical Engineering	Dr. Prasanta Kumar Banerjee	Associate Professor
21	Chemical Engineering	Dr. Debashis Roy	Professor
22	Chemical Engineering	Dr. Ujjaini Sarkar	Professor
23	Chemical Engineering	Dr. Chanchal Mondal	Associate Professor
24	Chemical Engineering	Dr. Rajat Chakraborty	Professor
25	Chemical Engineering	Dr. Papita Das (Saha)	Professor
26	Chemical Engineering	Dr. Mehabub Rahaman	Assistant Professor
27	Chemical Engineering	Dr. Ratna Dutta	Assistant Professor
28	Chemical Engineering	Dr. Parama Ghoshal	Assistant Professor
29	Chemical Engineering	Dr. Shyamal Roy	Assistant Professor
30	Chemical Engineering	Dr. Sudeshna Saha	Assistant Professor
31	Chemical Engineering	Ms. Sujata Sardar	Assistant Professor
32	Civil Engineering	Dr. Somnath Ghosh	Professor
33	Civil Engineering	Dr. Somnath Mukherjee	Professor
34	Civil Engineering	Sri Shibnath Chakrabarty	Professor
35	Civil Engineering	Dr. Arup Guha Neogi	Professor
36	Civil Engineering	Dr. Ramendu Bikash Sahu	Professor
37	Civil Engineering	Dr. Dipankar Chakraborty	Professor
38	Civil Engineering	Dr. Sibapriya Mukherjee	Professor
39	Civil Engineering	Dr. Saroj Mondal	Professor
40	Civil Engineering	Dr. Partha Bhattacharya	Professor
41	Civil Engineering	Dr. Anupam Deb Sarkar	Associate Professor
42	Civil Engineering	Dr. Amit Dutta	Professor
43	Civil Engineering	Dr. Gupinath Bhandari	Associate Professor
44	Civil Engineering	Sri. Pritam Aitch	Associate Professor
45	Civil Engineering	Dr. Sumit Kr. Biswas	Associate Professor
46	Civil Engineering	Dr. Subhasish Roy Choudhury	Assistant Professor
47	Civil Engineering	Dr. Tumpa Hazra	Associate Professor
48	Civil Engineering	Dr. Sreyashi Das (nee Pal)	Associate Professor
49	Civil Engineering	Dr. Kalyan Kr.Mondal	Associate Professor
50	Civil Engineering	Sri. Amit Shiuly	Assistant Professor
51	Civil Engineering	Sri Santosh Kr. Das	Assistant Professor
52	Civil Engineering	Sri Narayan Roy	Assistant Professor
53	Computer Science and Engineering	Dr. Mita Nasipuri	Professor
54	Computer Science and Engineering	Dr. Atal Chaudhuri	Professor
55	Computer Science and Engineering	Dr. Mahantapas Kundu	Professor
56	Computer Science and Engineering	Dr. Anupam Sinha	Professor
57	Computer Science and Engineering	Dr. Nandini Mukhopadhyay	Professor
58	Computer Science and Engineering	Dr. Chandan Majumdar	Professor

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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>	
59	Computer Science and Engineering	Dr. Sivaji Bandyopadhyay	Professor
60	Computer Science and Engineering	Dr. Ujjwal Maulik	Professor
61	Computer Science and Engineering	Dr. Chitrita Chaudhuri	Associate Professor
62	Computer Science and Engineering	Dr. Nirmalya Chowdhury	Professor
63	Computer Science and Engineering	Dr. Sarmistha Neogy	Professor
64	Computer Science and Engineering	Dr. Susmita Ghosh (Nee De)	Professor
65	Computer Science and Engineering	Dr. Sanjoy Kumar Saha	Professor
66	Computer Science and Engineering	Dr. Jamuna Kanta Singh	Professor
67	Computer Science and Engineering	Dr. Kamal Sarkar	Professor
68	Computer Science and Engineering	Dr. Debotosh Bhattacharjee	Professor
69	Computer Science and Engineering	Dr. Diganta Saha	Professor
70	Computer Science and Engineering	Dr. Mridul Sankar Barik	Assistant Professor
71	Computer Science and Engineering	Dr. Subhadip Basu	Professor
72	Computer Science and Engineering	Dr. Sarbani Roy	Professor
73	Computer Science and Engineering	Dr. Ram Sarkar	Associate Professor
74	Computer Science and Engineering	Dr. Chandreyee Chowdhury	Assistant Professor
75	Computer Science and Engineering	Sri Nibaran Das	Associate Professor
76	Computer Science and Engineering	Dr. Chintan Kumar Mandal	Assistant Professor
77	Computer Science and Engineering	Dr. Sudip Kumar Naskar	Associate Professor
78	Computer Science and Engineering	Dr. Dipankar Das	Assistant Professor
79	Computer Science and Engineering	Dr. Anasua Sarkar	Assistant Professor
80	Computer Science and Engineering	Sri. Anil Tudu	Assistant Professor
81	Construction Engineering	Dr. Subhajit Saraswati	Professor
82	Construction Engineering	Dr. Partha Pratim Biswas	Professor
83	Construction Engineering	Dr. Debasish Bandyopadhyay	Professor
84	Construction Engineering	Dr. Gokul Ch. Mondal	Associate Professor
85	Construction Engineering	Dr. Kaushik Bandyopadhyay	Professor
86	Construction Engineering	Dr. Partha Ghosh	Associate Professor
87	Construction Engineering	Dr. Sayan Nandi	Assistant Professor
88	Construction Engineering	Dr. Manoj Kumar Sahis	Assistant Professor
89	Electrical Engineering	Dr. Subrata Paul	Professor
90	Electrical Engineering	Dr. Swapan Kumar Goswami	Professor
91	Electrical Engineering	Dr. Sugata Munshi	Professor
92	Electrical Engineering	Dr. Kesab Bhattacharya	Professor
93	Electrical Engineering	Dr. Sivaji Chakravorti	Professor
94	Electrical Engineering	Dr.(Mrs.) Suparna Kar Choudhury	Professor
95	Electrical Engineering	Dr. Mrs. Smita Sadhu (Ghosh)	Professor
96	Electrical Engineering	Dr. Abhijit Mukherjee	Professor
97	Electrical Engineering	Dr. (Mrs.) Saswati Mazumdar	Professor
98	Electrical Engineering	Dr. (Mrs.) Mita Dutta	Professor
99	Electrical Engineering	Dr. Palash Kumar Kundu	Professor
100	Electrical Engineering	Dr. Madhubanti Maitra	Professor
101	Electrical Engineering	Dr. Arabinda Das	Professor
102	Electrical Engineering	Dr. Ranjit Kr. Barai	Professor
103	Electrical Engineering	Dr. Amitava Chatterjee	Professor
104	Electrical Engineering	Sri Madhab Roy	Associate Professor

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<b>Department</b>	<b>Name</b>	<b>Present</b>	<b>Designation</b>
105	Electrical Engineering	Dr. Biswanath Roy	Professor
106	Electrical Engineering	Dr. Nikhil Mondal	Associate Professor
107	Electrical Engineering	Dr. Debashis Chatterjee	Professor
108	Electrical Engineering	Dr. Biswajit Bhattacharyya	Associate Professor
109	Electrical Engineering	Dr. Gautam Sarkar	Professor
110	Electrical Engineering	Dr. Smt. Sunita Halder (nee Dey)	Professor
111	Electrical Engineering	Dr. Sovan Dalai	Associate Professor
112	Electrical Engineering	Dr. Biswendu Chatterjee	Associate Professor
113	Electrical Engineering	Dr. Arindam Kumar Sil	Assistant Professor
114	Electrical Engineering	Dr. Susanta Ray	Assistant Professor
115	Electrical Engineering	Dr. Debanghsu Dey	Assistant Professor
116	Electrical Engineering	Dr. Suddhasatwa Chakraborty	Assistant Professor
117	Electrical Engineering	Dr. Ayan Kumar Tudu	Assistant Professor
118	Electrical Engineering	Ms. Madhumita Mandal	Assistant Professor
119	Electrical Engineering	Dr. (Ms.) Sudipta Debnath	Professor
120	Electrical Engineering	Sri Dipten Maity	Assistant Professor
121	Electrical Engineering	Dr. Sayantan Chakraborty	Assistant Professor
122	Electrical Engineering	Sri Mihir Hembram	Assistant Professor
123	Electrical Engineering	Sri Arpan Kumar Pradhan	Assistant Professor
124	Electronics and Telecommunication Engg.	Dr. Subir Kumar Sarkar	Professor
125	Electronics and Telecommunication Engg.	Dr. Iti Saha Misra	Professor
126	Electronics and Telecommunication Engg.	Dr. Bhaskar Gupta	Professor
127	Electronics and Telecommunication Engg.	Dr. Amit Konar	Professor
128	Electronics and Telecommunication Engg.	Dr. Mrinal Kanti Naskar	Professor
129	Electronics and Telecommunication Engg.	Dr. Chayanika Bose (Majumder)	Professor
130	Electronics and Telecommunication Engg.	Dr. Palanikndavar Venkateswaran	Professor
131	Electronics and Telecommunication Engg.	Dr. Sheli Murmu (Sinha Chaudhuri)	Professor
132	Electronics and Telecommunication Engg.	Dr. Ananda Shankar Chowdhury	Professor
133	Electronics and Telecommunication Engg.	Dr. Manotosh Biswas	Professor
134	Electronics and Telecommunication Engg.	Dr. Sudhabindu Ray	Professor
135	Electronics and Telecommunication Engg.	Dr. Sudipta Chattopadhyay	Professor
136	Electronics and Telecommunication Engg.	Dr. Sayan Chatterjee	Associate Professor
137	Electronics and Telecommunication Engg.	Dr. Chandrima Mondal	Assistant Professor
138	Electronics and Telecommunication Engg.	Sri Nirmoy Modak	Assistant Professor
139	Electronics and Telecommunication Engg.	Smt. Pratyusha Rakshit	Assistant Professor
140	Electronics and Telecommunication Engg.	Dr. Jaydeb Bhaumik	Associate Professor
141	Food Technology and Biochemical Engg.	Dr. (Ms.) Runu Chakraborty	Professor
142	Food Technology and Biochemical Engg.	Dr. Uma Ghosh	Professor
143	Food Technology and Biochemical Engg.	Dr. Paramita Bhattacharjee	Associate Professor
144	Food Technology and Biochemical Engg.	Dr. Dipankar Halder	Associate Professor
145	Food Technology and Biochemical Engg.	Dr. Prasanta Kumar Biswas	Associate Professor
146	Food Technology and Biochemical Engg.	Dr. Debabrata Bera	Assistant Professor
147	Food Technology and Biochemical Engg.	Dr. Sunita Adhikary (nee Pramanik)	Associate Professor
148	Information Technology	Dr. Samiran Chattopadhyay	Professor
149	Information Technology	Dr. Parama Bhaumik	Associate Professor
150	Information Technology	Dr. Bibhas Ch. Dhara	Professor

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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
151	Information Technology	Dr. Uttam Kumar Roy Associate Professor
152	Information Technology	Dr. Bhaskar Sardar Associate Professor
153	Information Technology	Dr. Kartick Chandra Mondal Assistant Professor
154	Information Technology	Tohida Rehman Assistant Professor
155	Instrumentation and Electronics Engg.	Dr. Sankar Narayan Patra Associate Professor
156	Instrumentation and Electronics Engg.	Dr. Bivas Dam Professor
157	Instrumentation and Electronics Engg.	Dr. Subhankar Bandyopadhyay Professor
158	Instrumentation and Electronics Engg.	Dr. Ardhendu Ghosal Professor
159	Instrumentation and Electronics Engg.	Dr. Rajib Bandyopadhyay Professor
160	Instrumentation and Electronics Engg.	Dr. Kalyan Majumdar Associate Professor
161	Instrumentation and Electronics Engg.	Dr. Bhaswati Goswami Professor
162	Instrumentation and Electronics Engg.	Dr. Kumardeb Banerjee Professor
163	Instrumentation and Electronics Engg.	Dr. Rajanikanta Mudi Professor
164	Instrumentation and Electronics Engg.	Dr. Ratna Ghosh Professor
165	Instrumentation and Electronics Engg.	Dr. Bipan Tudu Professor
166	Instrumentation and Electronics Engg.	Dr. (Ms.)Runu Banerjee Roy Professor
167	Instrumentation and Electronics Engg.	Dr. Prolay Sharma Assistant Professor
168	Instrumentation and Electronics Engg.	Mr. Abhijit Chandra Assistant Professor
169	Instrumentation and Electronics Engg.	Ms. Shyamali Mitra Assistant Professor
170	Mechanical Engineering	Dr. Goutam Majumder Professor
171	Mechanical Engineering	Dr. Goutam Pohit Professor
172	Mechanical Engineering	Dr. Sumanta Neogi Professor
173	Mechanical Engineering	Dr. Dipankar Sanyal Professor
174	Mechanical Engineering	Dr. Swarnendu Sen Professor
175	Mechanical Engineering	Dr. Sudipta De Professor
176	Mechanical Engineering	Dr. Achintya Mukhopadhyay Professor
177	Mechanical Engineering	Dr. Prasanta Sahoo Professor
178	Mechanical Engineering	Dr. Sadhan Kr. Ghosh Professor
179	Mechanical Engineering	Dr. Goutam Sutradhar Professor
180	Mechanical Engineering	Dr. Buddhadev Oraon Professor
181	Mechanical Engineering	Dr. Asish Bandyopadhyay Professor
182	Mechanical Engineering	Dr. Prabir Kumar De Professor
183	Mechanical Engineering	Dr. Dipak Laha Professor
184	Mechanical Engineering	Sri Ranajit Kumar Chakraborti Associate Professor
185	Mechanical Engineering	Dr. Abhijit Mukhopadhyay Associate Professor
186	Mechanical Engineering	Dr. Amit Karmakar Associate Professor
187	Mechanical Engineering	Dr. Snehamoy Majumder Professor
188	Mechanical Engineering	Dr. Rajat Shubra Sen Professor
189	Mechanical Engineering	Dr. Sanjib Acharyya Professor
190	Mechanical Engineering	Dr. Debasish Roy Professor
191	Mechanical Engineering	Dr. Arunava Chanda Professor
192	Mechanical Engineering	Dr. Somnath Bhattacharjee Associate Professor
193	Mechanical Engineering	Dr. Titas Nandi Professor
194	Mechanical Engineering	Dr. Balaram Kundu Professor
195	Mechanical Engineering	Dr. Arghya Nandi Professor
196	Mechanical Engineering	Dr. Koushik Ghosh Professor

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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
197 Mechanical Engineering	Sri Goutam Nandi	Associate Professor
198 Mechanical Engineering	Dr. Tarun Kanti Naskar	Professor
199 Mechanical Engineering	Dr. Kashinath Saha	Associate Professor
200 Mechanical Engineering	Dr. Snehangshu Mandal	Associate Professor
201 Mechanical Engineering	Dr. Himadri Chattopadhyay	Professor
202 Mechanical Engineering	Dr. Dulal Krishna Mandal	Professor
203 Mechanical Engineering	Dr. Saikat Mookherjee	Professor
204 Mechanical Engineering	Dr. Samar Chandra Mandal	Professor
205 Mechanical Engineering	Dr. Debabrata Nag	Professor
206 Mechanical Engineering	Dr. Abhijit Chanda	Professor
207 Mechanical Engineering	Dr. Subhas Chandra Panja	Professor
208 Mechanical Engineering	Sri Susenjit Sarkar	Professor
209 Mechanical Engineering	Dr. Nirmal Kumar Manna	Professor
210 Mechanical Engineering	Dr. Rana Saha	Professor
211 Mechanical Engineering	Sri Nipu Modak	Associate Professor
212 Mechanical Engineering	Dr. Debabrata Das	Professor
213 Mechanical Engineering	Dr. Dipten Misra	Assistant Professor
214 Mechanical Engineering	Dr. Sandip Das	Assistant Professor
215 Mechanical Engineering	Dr. Tapan Kr. Barman	Associate Professor
216 Mechanical Engineering	Dr. Sudip Simlandi	Associate Professor
217 Mechanical Engineering	Dr. Prokash Chandra Roy	Associate Professor
218 Mechanical Engineering	Mr. Pranibesh Mandal	Assistant Professor
219 Mechanical Engineering	Sri Siddhartha Patra	Assistant Professor
220 Mechanical Engineering	Dr. Suman Kalyan Das	Assistant Professor
221 Mechanical Engineering	Dr. Anirban Mitra	Assistant Professor
222 Mechanical Engineering	Dr. Anindya Sundar Das	Assistant Professor
223 Mechanical Engineering	Sri Sourav Sarkar	Assistant Professor
224 Mechanical Engineering	Dr. Shouvik Ghosh	Assistant Professor
225 Mechanical Engineering	Sri Hareram Lohar	Assistant Professor
226 Mechanical Engineering	Dr. Tanmoy Bandyopadhyay	Assistant Professor
227 Mechanical Engineering	Mr. Nabendu Ghosh	Assistant Professor
228 Mechanical Engineering	Mr. Suman Nihar	Assistant Professor
229 Mechanical Engineering	Mr. Priyankar Datta	Assistant Professor
230 Mechanical Engineering	Dr. Sandip Sarkar	Associate Professor
231 Mechanical Engineering	Mr. Abhishek Mandal	Assistant Professor
232 Metallurgical and Material Engineering	Dr. Subir Pal	Professor
233 Metallurgical and Material Engineering	Dr. Pravash Chandra Chakraborti	Professor
234 Metallurgical and Material Engineering	Dr. Akshay K. Pramanick	Professor
235 Metallurgical and Material Engineering	Dr. Rajib Dey	Professor
236 Metallurgical and Material Engineering	Dr. Sathi Banerjee (Nee Mallick)	Assistant Professor
237 Metallurgical and Material Engineering	Dr. Amrita Kundu	Associate Professor
238 Metallurgical and Material Engineering	Smt. Shilabati Hembram	Assistant Professor
239 Metallurgical and Material Engineering	MD. Basiruddin Sk	Assistant Professor
240 Pharmaceutical Technology	Dr. Tanmoy Bera	Professor
241 Pharmaceutical Technology	Dr. Tarun Jha	Professor
242 Pharmaceutical Technology	Dr. Lakshmi Kanta Ghosh	Professor



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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>	
243	Pharmaceutical Technology	Dr. Tapan Kumar Maity	Professor
244	Pharmaceutical Technology	Dr. Mrs. Jasmina Khanam	Professor
245	Pharmaceutical Technology	Dr. Amalesh Samanta	Professor
246	Pharmaceutical Technology	Dr. Pulok Kr. Mukherjee	Professor
247	Pharmaceutical Technology	Dr. Kunal Roy	Professor
248	Pharmaceutical Technology	Dr. Sanmoy Karmakar	Professor
249	Pharmaceutical Technology	Dr. Biswajit Mukherjee	Professor
250	Pharmaceutical Technology	Dr. Subhash Chandra Mondal	Professor
251	Pharmaceutical Technology	Dr. Pallab Kanti Halder	Professor
252	Pharmaceutical Technology	Dr. Saikat Dewanjee	Associate Professor
253	Pharmaceutical Technology	Dr. Ketousetuo Kuotsu	Assistant Professor
254	Power Engineering	Dr. Bireswar Majumdar	Professor
255	Power Engineering	Dr. Niladri Chakraborty	Professor
256	Power Engineering	Dr. Amitava Datta	Professor
257	Power Engineering	Dr. Amitava Gupta	Professor
258	Power Engineering	Dr. Apurba Kumar Santra	Professor
259	Power Engineering	Dr. Mousumi Basu	Professor
260	Power Engineering	Dr. Kamal Krishna Mondal	Professor
261	Power Engineering	Dr. Ranjan Ganguly	Professor
262	Power Engineering	Dr. Gargi Konar	Assistant Professor
263	Power Engineering	Dr. Debashis Palit	Assistant Professor
264	Power Engineering	Sri Bhimsen Tudu	Assistant Professor
265	Power Engineering	Sri Subrata Mondal	Assistant Professor
266	Power Engineering	Dr. Nirmalendu Biswas	Assistant Professor
267	Power Engineering	Dr. Prithwiraj Purkait	Professor
268	Printing Engineering	Dr. Arun Kiran Pal	Professor
269	Printing Engineering	Dr. Swati Bandyopadhyay	Associate Professor
270	Printing Engineering	Dr. Kanai Ch. Paul	Professor
271	Printing Engineering	Dr. Pradip Kundu	Assistant Professor
272	Printing Engineering	Sri Soumen Basak	Associate Professor
273	Printing Engineering	Dr. Arpitam Chatterjee	Assistant Professor
274	Printing Engineering	Smt. Shilpi Naskar	Assistant Professor
275	Printing Engineering	Ms. Mahasweta Mandal	Assistant Professor
276	Production Engineering	Dr. Bijan Sarkar	Professor
277	Production Engineering	Dr. Bijoy Bhattacharyya	Professor
278	Production Engineering	Dr. Shankar Chakraborty	Professor
279	Production Engineering	Dr. Biswanath Doloi	Professor
280	Production Engineering	Dr. Souren Mitra	Professor
281	Production Engineering	Dr. Debmalya Banerjee	Professor
282	Production Engineering	Dr. Arunansu Sekhar Kuar	Professor
283	Production Engineering	Sri Subir Kr. Debnath	Associate Professor
284	Production Engineering	Dr. Ajoy Kumar Dutta	Professor
285	Production Engineering	Dr. Soumya Sarkar	Professor
286	Production Engineering	Dr. Biplab Ranjan Sarkar	Associate Professor
287	School of Bio-Science and Engineering	Dr. Monisha Chakraborty	Professor
288	School of Bio-Science and Engineering	Dr. Piyali Basak	Assistant Professor
289	School of Education Technology	Dr. Smt. Matangini Chatopadhyay	Professor
290	School of Education Technology	Dr. Ranjan Parekh	Professor



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Department	Name	Present Designation
291 School of Energy Studies	Dr. Tushar Jash	Associate Professor
292 School of Energy Studies	Dr. Ratan Mondal	Associate Professor
293 School of Illumination Science, Engg. and Design	Dr. Kamalika Ghosh	Assistant Professor
294 School of Illumination Science, Engg. and Design	Parthasarathi Satvaya	Assistant Professor
295 School of Material Science and Nanotechnology	Dr. Chandan Kumar Ghosh	Assistant Professor
296 School of Material Science and Nanotechnology	Sri Sourav Sarkar	Assistant Professor
297 School of Mobile Computing and Communication	Smt. Arpita Sarkar	Assistant Professor
298 School of Mobile Computing and Communication	Dr. Punyasha Chatterjee	Assistant Professor
299 School of Water Resource Engineering	Dr. Asis Majumder	Professor
300 School of Water Resource Engineering	Mr. Subhasish Das	Assistant Professor
301 School of Water Resource Engineering	Dr. Pankaj Kumar Roy	Professor

### FACULTY OF SCIENCE & ISLM

1 Chemistry	Dr. Ambikesh Mahapatra	Professor
2 Chemistry	Dr. Chittaranjan Sinha	Professor
3 Chemistry	Dr. Kalyan Kumar Das	Professor
4 Chemistry	Dr. Mahammad Ali (Lien)	Professor
5 Chemistry	Dr. Nitin Kumar Chattopadhyay	Professor
6 Chemistry	Dr. Rina Ghosh	Professor
7 Chemistry	Dr. Samaresh Bhattacharya	Professor
8 Chemistry	Dr. Subrata Mukhopadhyay	Professor
9 Chemistry	Dr. Swapan Kumar Bhattacharya	Professor
10 Chemistry	Dr. Biplab Bhattacharjee	Associate Professor
11 Chemistry	Dr. Gourhari Maiti	Professor
12 Chemistry	Dr. Jnan Prakash Naskar	Professor
13 Chemistry	Dr. Kajal Krishna Rajak	Professor
14 Chemistry	Dr. Kausikisankar Pramanik	Professor
15 Chemistry	Dr. Pradip Kr. Mahapatra	Associate Professor
16 Chemistry	Dr. Sanjay Bhar	Professor
17 Chemistry	Dr. Subrata Nath Koner	Professor
18 Chemistry	Dr. Sujay Baitalik	Professor
19 Chemistry	Dr. Soumen Ghosh	Professor
20 Chemistry	Dr. Umasish Jana	Professor
21 Chemistry	Dr. Umesh Chandra Halder	Professor
22 Chemistry	Dr. Chandan Kumar Mondal	Professor
23 Chemistry	Dr. Arup Gayen	Professor
24 Chemistry	Dr. Suman Das	Professor
25 Chemistry	Dr. Partha Pratim Parui	Associate Professor
26 Chemistry	Dr. Tanurima Bhaumik	Associate Professor
27 Chemistry	Dr. Saubhik Haldar	Associate Professor
28 Chemistry	Dr. Debajyoti Ghoshal	Professor
29 Chemistry	Dr. Saurabh Das	Professor
30 Chemistry	Dr. Partha Ray	Professor

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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
31 Chemistry	Dr. Shouvik Chattopadhyay	Associate Professor
32 Chemistry	Dr. Amrita Saha	Associate Professor
33 Chemistry	Dr. Tapan Kumar Mondal	Professor
34 Chemistry	Dr. Bhibhuti Bhusan Show	Assistant Professor
35 Chemistry	Dr. Arunabha Thakur	Assistant Professor
36 Chemistry	Dr. Amit Saha	Assistant Professor
37 Chemistry	Dr. Samit Guha	Assistant Professor
38 Chemistry	Dr. Mohabul Alam Mondal	Assistant Professor
39 Chemistry	Dr. Partha Mahata	Assistant Professor
40 Chemistry	Dr. Manas Kumar Panda	Assistant Professor
41 Chemistry	Dr. Asamanjoy Bhunia	Assistant Professor
42 Chemistry	Sri Satyadeep Waiba	Assistant Professor
43 Physics	Dr. Argha Deb	Professor
44 Physics	Dr. Ajay Kumar Ghosh	Professor
45 Physics	Dr. Asim Kumar Ghosh	Professor
46 Physics	Dr. Avijit Mukherjee	Associate Professor
47 Physics	Dr. Basudev Ghosh	Professor
48 Physics	Dr. Brajadulal Chattopadhyay	Professor
49 Physics	Dr. Debasish Biswas	Professor
50 Physics	Dr. Debasish Lohar	Professor
51 Physics	Dr. Kalyan Kr. Chattopadhyay	Professor
52 Physics	Dr. Ruma Ray	Professor
53 Physics	Dr. Subhankar Ray	Associate Professor
54 Physics	Dr. Sukhen Das	Professor
55 Physics	Dr. Sulava Bhattacharyya	Associate Professor
56 Physics	Dr. Tapas Kr. Ballabh	Associate Professor
57 Physics	Dr. Nabin Baran Manik	Professor
58 Physics	Dr. Dhruva Banerjee	Assistant Professor
59 Physics	Dr. Dipankar Mandal (Resign)	Assistant Professor
60 Physics	Dr. Puspendu Sahu	Associate Professor
61 Physics	Dr. Subrata Sarkar	Assistant Professor
62 Physics	Mr. Abiral Tamang	Assistant Professor
63 Physics	Dr. Sk. Saiyad Ali	Associate Professor
64 Physics	Dr. Bharati Tudu	Assistant Professor
65 Physics	Dr. Subhadipta Mukhopadhyay	Associate Professor
66 Physics	Dr. Jayoti Das	Professor
67 Physics	Dr. Pabitra Kumar Paul	Associate Professor
68 Physics	Dr. Partha Pratim Ray	Professor
69 Physics	Dr. Sanjoy Kumar	Professor
70 Physics	Dr. Sarmistha Mandal	Assistant Professor
71 Physics	Dr. Sanat Karmakar	Professor
72 Physics	Dr. Joydeep Chowdhury	Professor
73 Physics	Dr. Abhijit Samanta	Assistant Professor
74 Physics	Dr. Saikat Kumar Seth	Assistant Professor
75 Physics	Dr. Mitali Mondal	Professor
76 Physics	Sri Soumen Mondal	Assistant Professor

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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
77 Mathematics	Dr. Ashis Kr. Sarkar	Professor
78 Mathematics	Dr. Sudeshna Banerjea	Professor
79 Mathematics	Dr. Prabir Kumar Kundu	Professor
80 Mathematics	Dr. Prakash Chandra Mali	Professor
81 Mathematics	Dr. Shamik Ghosh	Professor
82 Mathematics	Dr. Subenoy Chakraborty	Professor
83 Mathematics	Dr. Abhijit Lahiri	Professor
84 Mathematics	Dr. Anup Bandyopadhyay	Professor
85 Mathematics	Dr. Arindam Bhattacharyya	Professor
86 Mathematics	Dr. Bibhas Ch. Giri	Professor
87 Mathematics	Dr. Dipak Kr. Kesh	Professor
88 Mathematics	Dr. Farook Rahaman	Professor
89 Mathematics	Dr. Kallol Paul	Professor
90 Mathematics	Dr. Nandadulal Bairagi	Professor
91 Mathematics	Dr. Narayan Chandra Majee	Associate Professor
92 Mathematics	Dr. Pratulananda Das	Professor
93 Mathematics	Dr. Priti Kumar Roy	Professor
94 Mathematics	Dr. Sagnik Sinha	Professor
95 Mathematics	Dr. Subhas Ch. Mondal	Professor
96 Mathematics	Dr. Sujit Kumar Sardar	Professor
97 Mathematics	Dr. Swapna Debnath	Professor
98 Mathematics	Sri. Buddhadeb Sau	Professor
99 Mathematics	Dr. Manasi Mandal	Associate Professor
100 Mathematics	Dr. Sukhendu Kar	Professor
101 Mathematics	Dr. Nilanjana Mahata	Associate Professor
102 Mathematics	Sri Santosh Biswas	Assistant Professor
103 Mathematics	Dr. Alaka Das	Professor
104 Mathematics	Dr. Gopal Chandra Shit	Professor
105 Geological Sciences	Dr. Nibir Mondal	Professor
106 Geological Sciences	Dr. Pulak Sengupta	Professor
107 Geological Sciences	Dr. Subir Mukhopadhyay	Professor
108 Geological Sciences	Dr. Dipak Ch Pal	Professor
109 Geological Sciences	Dr. Sanjoy Sanyal	Professor
110 Geological Sciences	Dr. Sisir Kanti Mondal	Professor
111 Geological Sciences	Dr. Subir Sarkar	Professor
112 Geological Sciences	Dr. Subrata Karmakar	Professor
113 Geological Sciences	Dr. Supriya Mondal	Professor
114 Geological Sciences	Dr. Anupam Ghosh	Assistant Professor
115 Geological Sciences	Dr. Sadhana M. Chatterjee	Assistant Professor
116 Geological Sciences	Dr. Susanta Kr. Samanta	Professor
117 Geological Sciences	Dr. Babar Ali Shah	Assistant Professor
118 Geological Sciences	Dr. Sunipa Mandal	Assistant Professor
119 Geological Sciences	Dr. Tridib Kumar Mondal (Lien)	Assistant Professor
120 Geological Sciences	Dr. Susanta Chaudhuri	Assistant Professor
121 Geological Sciences	Dr. Soumik Mukhopadhyay	Assistant Professor
122 Life Science and Bio-Technology	Dr. Ratan Gachhui	Professor

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<b>Department</b>	<b>Name</b>	<b>Present Designation</b>
123 Life Science and Bio-Technology	Dr. Parimal Karmakar	Professor
124 Life Science and Bio-Technology	Dr. Biswadip Das	Professor
125 Life Science and Bio-Technology	Dr. Paltu Kumar Dhal	Assistant Professor
126 Instrumentaion Science	Dr. Anup Kumar Ghosh	Associate Professor
127 Instrumentaion Science	Dr. Sachindranath Das	Assistant Professor
128 Geography	Dr. Lakshmi Shivaramakrishnan	Professor
129 Geography	Dr. Debajit Dutta	Assistant Professor
130 Geography	Dr. Arijit Majumder	Assistant Professor
131 School of Oceanographic Studies	Dr. Sugata Hazra	Professor
132 School of Oceanographic Studies	Dr. Tuhin Ghosh	Professor
133 School of Oceanographic Studies	Dr. Abhra Ghosh	Assistant Professor
134 School of Oceanographic Studies	Dr. Rahi Soren	Assistant Professor
135 School of Environmental Studies	Dr. Joydeep Mukherjee	Associate Professor
136 School of Environmental Studies	Dr. Tarit Roy Chowdhury	Associate Professor

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**SECTION B**  
**[ACADEMIC REPORT (01.04.2019 –31.03.2020) ]**

**ACHIEVEMENTS OF PROF. CHIRANJIB BHATTACHARJEE**  
**Pro-Vice-Chancellor (Academic)**  
**JADAVPUR UNIVERSITY**

## Annual Report 2019-20

**Prof. Chiranjib Bhattacharjee**  
**Pro-Vice-Chancellor (Academic),**  
**Jadavpur University**  
**[ Achievements during April 2019-March 2020]**

### **Papers Published** **(International journal)**

#### **2020**

Ankita Mazumder, Swati Das, Dwaipayan Sen, Chiranjib Bhattacharjee, “Kinetic analysis and parametric optimization for bioaugmentation of oil from oily wastewater with hydrocarbonoclastic *Rhodococcus pyridinivorans* F5 strain”, *Environmental Technology & Innovation*. 17 (2020), 100630. DOI: 10.1016/j.eti.2020.100630

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1. Shubhrajit Sarkar, Santanu Sarkar, Samya Subhra Das, Chiranjib Bhattacharjee, “Colour removal from industrial wastewater using acid modified tea-leaf, a domestic waste”, *Desalination and Water Treatment* 161 (2019): 188-202
2. Souptik Bhattacharya, Dwaipayan Sen, Chiranjib Bhattacharjee. “In vitro antibacterial effect analysis of stabilized PEGylated allicin-containing extract from *Allium sativum* in conjugation with other antibiotics.” *Process Biochemistry* 87 (2019) 221-231. DOI: 10.1016/j.procbio.2019.09.025
3. S. Putatunda, S. Bhattacharya, D. Sen, C. Bhattacharjee, “A review on the application of different treatment processes for emulsified oily wastewater”, *International Journal of Environmental Science and Technology*, Springer, 16(5) (2019) 2525-2536, DOI: 10.1007/s13762-018-2055-6

### **Book Chapters**

1. S. Sarkar, S. Sarkar, C. Bhattacharjee (2019). “Green Synthesis of Novel Photocatalysts.” In *Nanophotocatalysis and Environmental Applications*, pp. 241-261. Springer, Cham. [https://doi.org/10.1007/978-3-030-10609-6\\_9](https://doi.org/10.1007/978-3-030-10609-6_9)
2. S. Sarkar, S. Sarkar, C. Bhattacharjee, S. Sarkar (2019). “Novelty in Designing of Photocatalysts for Water Splitting and CO<sub>2</sub> Reduction.” In *Nanophotocatalysis and Environmental Applications*, pp. 41-65. Springer, Cham. [https://doi.org/10.1007/978-3-030-04949-2\\_3](https://doi.org/10.1007/978-3-030-04949-2_3)
3. A. Mazumder, S. Bhattacharya, C. Bhattacharjee (2019). “Role of nano-photocatalysis in heavy metal detoxification”, *Nanophotocatalysis and Environmental Applications: Detoxification and Disinfection*, Series volume 30, Chapter 1, eBook ISBN: 978-3-030-12619-3, DOI: 10.1007/978-3-030-12619-3, Publisher: Springer International Publishing, 2020, pp. 1-33
4. S. Bhattacharya, A. Mazumder, D. Sen, C. Bhattacharjee (2019), “Bioaugmentation technology to remove oil from oily wastewater using isolated Actinobacteria”, *Advances in Environmental Research*, Volume 79, chapter 3, ISBN: 978-1-53618-879-0, Nova Publishers. (In Press)
5. A. Mazumder, D. Sen, C. Bhattacharjee (2019). “Mass transport through composite asymmetric membranes.” *Diffusion Foundations*, Trans Tech Publications Ltd, Switzerland, vol. 23, pp 151–172. ISSN: 2296-3642. DOI:10.4028/www.scientific.net/DF.23.151
6. A. Mazumder, D. Sen, C. Bhattacharjee (2020). “Optimization of oily wastewater treatment process using neurofuzzy adaptive model.” “*Computational Intelligence. Theoretical Advances and Advanced Applications*”, Walter De Gruyter, Germany. DOI: 10.1515/9783110671353-011



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7. S. Banerjee, R. Das, C. Bhattacharjee, "Biofuel cells for water desalination", *Biofuel Cells: Materials and Challenges*, Wiley-Scrivener, ISBN 1119724694, 9781119724698
8. R. Das, S. Das, C. Bhattacharjee, "CO<sub>2</sub> sequestration using Algal biomass and its application as bio-energy", Chapter 32, *Encyclopedia in Renewable & Sustainable Materials*, Vol. 9, Ed: Dr. GautamMajumdar, Elsevier-UK. (<https://doi.org/10.1016/B978-0-12-803581-8.11030-6>) ISBN:978-0-12-812780-3
9. R. Das, B. Samanta, C. Bhattacharjee, "Traditional Biomass: a replacement for Petro-fuels", Chapter 41, 'Encyclopedia in Renewable & Sustainable Materials', Vol. 9, Ed: Dr. Gautam Majumdar, Elsevier-UK. (<https://doi.org/10.1016/B978-0-12-803581-8.11039-2>) ISBN: 978-0-12-812780-3

### Conference

1. A. Mazumder, Z. Chowdhury, D. Sen and C. Bhattacharjee, "Destabilization and de-emulsification of emulsified oily wastewater using electrocoagulation." National symposium on application of engineering and technology towards sustainable growth, 4 June, 2019, Kolkata
2. Shubhanwita Saha, Debashis Roy, Chiranjib Bhattacharjee, "Graphene and its Composites: Promising and Sustainable Nanomaterial for Bioenergy Production" Proceedings in National Symposium on "Applications of Engineering & Technology towards Sustainable Growth" on 4 June 2019 with TEQIP III Twinning Program of Faculty of Engineering & Technology, Jadavpur University, P-30
3. S. Bhattacharya, P. Chakraborty, D. Sen, C. Bhattacharjee, "Inhibition kinetics analysis of Bacillus subtilis and Escherichia coli using natural thiosulfinate drug", "6th Convention: Society for Ethnopharmacology (SFE - INDIA) and National seminar on Translational Research of Traditionally used Indian medicinal plants with special reference to (Tinosporacordifolia)", Organized by School of Natural Product Studies, Jadavpur University, September 07-08, 2019, Kolkata
4. R. Das, C. Bhattacharjee, "Antihypertensive Properties of Peptide: A Novel Drug Alternative", In 6th Convention: SFE-India, 7-8 September, 2019, Kolkata, India
5. S. Bhattacharya, D. Sen, C. Bhattacharjee, "Modern drug carrier system for enhanced stability and sustained delivery of phytopharmaceuticals", "Young Scientists' Conference, India International Science Festival (IISF-2019)", 5-7 November, 2019, Biswa Bangla Convention Centre, Kolkata
6. A. Mazumder, D. Sen and C. Bhattacharjee, "De-emulsification and separation of oil from emulsified oily wastewater using hybrid electrocoagulation enabled membrane process", Young Scientist Conference, 5-8 November, 2019, Kolkata
7. Shubhanwita Saha, Debashis Roy, Chiranjib Bhattacharjee, "2D sheet supported nanomaterials: Promising antimicrobial agents in waste water treatment" in Young Scientists' conference (YSC) organized by India International Science Festival 2019, 5 -7 November, 2019 at Biswa-Bangla Convention Centre, Kolkata
8. Paramita Das, Chiranjib Bhattacharjee, 'Removal of Hazardous Dyes from Waste Water using Natural Adsorbent-A green and cost effective step towards "Swachh Bharat" in Young Scientists' conference (YSC) organized by India International Science Festival 2019, held on 5-7 November, 2019, at Biswa-Bangla Convention Centre, Kolkata, India
9. R. Das and C. Bhattacharjee, "Membrane Reactor: A Sustainable Approach to Get Value from Waste", in Young Scientists' conference (YSC) organized by India International Science Festival 2019, on 5-7 November, 2019 at Biswa-Bangla Convention Centre, Kolkata, India
10. R. Das and C. Bhattacharjee, "Application of nanotechnology for pharma industry Effluent treatment - a sustainable process development", The 9th International Conference on Sustainable Waste Management towards Circular Economy, 27 - 30 November , 2019, KIIT University, Bhubaneswar, India
11. S. Bhattacharya, D. Sen, C. Bhattacharjee, "Molecular docking studies and shelf life enhancement of bioactive thiosulfinate drug extracted from Allium sativum using micelle carrier system", "International

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- Conference on Functional Materials and Chemical Engineering (ICFMCE 2019)", 15-17 December, 2019 Chulalongkorn University, Bangkok, Thailand
12. Lopamudra Das, Papita Das, Avijit Bhowal, Chiranjib Bhattacharjee. "Extracted Cellulose/ Graphene Oxide nano-composite preparation and application for fluoride removal", International conference on Nanotechnology (ICNT-2019), 28-29 December, 2019 by Institute of Fire and Safety Engineering, Haldia, WB, India, Proceedings:-978-93-5361-912-1, page-69
  13. Paramita Das, Pallavi Chakraborty, Chiranjib Bhattacharjee, "Synthesis and application of high performance metal oxide/polymer mixed matrix membrane for removal of toxic heavy metal ions from waste water" in CHEMCON-2019, held on 16-19 December, 2019, at Indian Institute of Technology, Delhi, India
  14. S. Bhattacharya, D. Gupta, D. Sen, C. Bhattacharjee, "Development of micellized antimicrobial thiosulfinate: A contemporary way of drug stability enhancement", "2nd International Conference on Advances in Bioprocess Engineering and Technology (ICABET-2020)", 20-22 January, 2020, Heritage Institute of Technology, Kolkata
  15. A. Mazumder, Z. Chowdhury, D. Sen and C. Bhattacharjee, "Study on application of novel synthesized silver metallosurfactant for membrane cleaning", ICABET 2020, Heritage Institute of Technology, Kolkata, India, 20-22 January, 2020
  16. Shubhanwita Saha, Debashis Roy, Chiranjib Bhattacharjee, "Reduced Graphene Oxide (RGO) based nanocatalyst for inhibition of pathogenic bacteria towards enhancement of water purification", in 2nd International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET 2020), on 20-22 January, 2020, at Heritage Institute of Technology, Kolkata, India
  17. A. Das, R. Das, C. Bhattacharjee, "Isolation and Characterization of Arsenic Tolerant Bacteria from Industrial Soil and Analyzing its Metal Removal Potency", In International Conference on Advances in Bioprocess Engineering and Technology (ICABET-2020), 20-22 January, 2020 at Heritage Institute of Technology, Kolkata, India pp 24
  18. Pallavi Chakraborty, Paramita Das, Ranjana Das, Chiranjib Bhattacharjee, "Fabrication and Characterization of a Novel Mixed Matrix Membrane For Removal of Heavy Metal from Waste Water" in the 2nd International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET 2020), held on 20-22 January, 2020, at Heritage Institute of Technology, Kolkata, India
  19. Shubhanwita Saha, Debashis Roy, Chiranjib Bhattacharjee, "Graphene supported nanomaterial: An efficient photocatalyst for enhanced waste water remediation", in the National Conference On "Issues & Challenges in Water Treatment and allied research for Sustainable environment" on 23-25 January, 2020 at IIT Guwahati
  20. R. Das, C. Bhattacharjee, "Studies on Application of Photomembrane Reactor for Treatment of Persistent Organic Chemicals in Pharmaceutical Effluent", National Conference on Issues and Challenges in water treatment and allied research for Sustainable Environment 23rd -25th January, 2020, IIT Guwahati, India. pp 17
  21. Manjusha Chakraborty, Ranjana Das, Chiranjib Bhattacharjee, "Removal Of Arsenic Toxicity Using Layered Double Hydroxide Derived Adsorbents" in the National Conference On "Issues & Challenges in Water Treatment and allied research for Sustainable environment" on 23-25 January, 2020 at IIT Guwahati
  14. Shubhanwita Saha, Debashis Roy, Chiranjib Bhattacharjee, "Synthesis and Characterization of Reduced Graphene Oxide (RGO) supported nanocatalyst for the construction of membrane based photocatalytic reactor in wastewater purification" in the International Conference on Sustainable Water Resources Management under Changed Climate during 13-15 March, 2020 at Jadavpur University
  15. Manjusha Chakraborty, Ranjana Das, Chiranjib Bhattacharjee, "Development Of Layered Double Hydroxide Derived Adsorbents for Removal of Arsenic Toxicity", in the 'International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE)-2020' held on 5-7 March, 2020 at National Institute of Technology, Rourkela

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16. Manjusha Chakraborty, Ranjana Das, Chiranjib Bhattacharjee, "Removal of Arsenic Toxicity Using Novel Layered Double Hydroxide Derived Adsorbents" in the International Conference on Sustainable Water Resources Management under Changed Climate during 13 -15 March, 2020 at Jadavpur University
17. Paramita Das, Chiranjib Bhattacharjee, "Natural Adsorbent Incorporated Polymeric Mixed Matrix Membrane- A Cost Effective Solution for the Removal of Hazardous Dyes from Waste Water" in the 2nd International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET 2020), held on 20-22 January, 2020, at Heritage Institute of Technology, Kolkata, India
18. Paramita Das, Chiranjib Bhattacharjee, "Removal of Hazardous Dyes from Waste Water in a Green and Cost Effective Way" in the International Conference on Sustainable Water Resources Management under Changed Climate, held on 13-15 March, 2020, at Jadavpur University, Kolkata, India
19. S. Banerjee, R. Das, C. Bhattacharjee, "Removal of Arsenic from Groundwater by a Novel Mixed Matrix Membrane", in the National Conference on "Issues & Challenges in Water Treatment and allied research for Sustainable environment" on 23-25 January, 2020 at IIT Guwahati
20. S. Basu, S. Banerjee, S. Saha, C. Bhattacharjee, "Water and Media: A Multi-disciplinary Approach in Developing Guidelines for Media In the Age of Climate Change" in the International Conference on Sustainable Water Resources Management under Changed Climate during 13 -15 March, 2020 at Jadavpur University
21. Lopamudra Das, Niladri Saha, Papita Das Saha, Avijit Bhowal and Chiranjib Bhattacharjee, "Application of Synthesized Nanocellulose Material for Removal of Malachite Green from Wastewater." Recent Trends in Waste Water Treatment and Water Resource Management, [https://doi.org/10.1007/978-981-15-0706-9\\_2](https://doi.org/10.1007/978-981-15-0706-9_2)

### Awards

1. Received Best paper/presentation award for the paper "Molecular docking studies and shelf life enhancement of bioactive thiosulfinate drug extracted from *Allium sativum* using micelle carrier system", authored by S. Bhattacharya, D. Sen, C. Bhattacharjee in International Conference on Functional Materials and Chemical Engineering (ICFMCE 2019) held at Chulalongkorn University, Bangkok, Thailand, December 2019
2. Received Research Innovation Award (1st Prize), R. Das, C. Bhattacharjee, A Sustainable Approach for Environmental Pollution Control with Photomembrane Reactor In 'National Symposium on Applications of Engineering and Technology towards Sustainable Growth' Organised by TEQIP III Twining Programme, FET, JU and Vivekananda Institute of Environment and Management, 4 June, 2019, Jadavpur University, Kolkata
3. Received NSSWM Excellent Paper Award-2019 for R. Das, C. Bhattacharjee, Application of Nanotechnology for Pharma Industry Effluent Treatment - A Sustainable Process Development, In National Symposium on Sustainable Waste Management (NSSWM-2019), 20 April, 2109, Institute of Engineering and Management, Kolkata
4. Received 2nd Best paper award for Shubhanwita Saha, Debashis Roy, Chiranjib Bhattacharjee, 'Graphene supported nanomaterial: An efficient photocatalyst for enhanced waste water remediation', in the National Conference on "Issues & Challenges in Water Treatment and allied research for Sustainable environment" on 23-25 January, 2020 at IIT Guwahati

**SECTION B**  
**[ACADEMIC REPORT (01.04.2019 –31.03.2020) ]**

**FACULTY COUNCIL OF ARTS**  
**D E P A R T M E N T S**

## Annual Report 2019-20

### BENGALI

Phone : 033-2414-6267

: 033-2457-2232/2124

H.O.D: Dr. Barendu Mondal

E-mail: hod.bengali@jadavpuruniversity.in

#### 1. A. Courses Offered:

UG, PG, M.Phil., Ph.D.

#### 1. B. Number of Faculty Members:

In Position 10

Sanctioned Post 16

#### 2. A. Area of Research Activity:

A. Modern Bengali Literature

B. Tagore Studies

C. 19<sup>th</sup> Century Bengal

D. Literary Theory

E. Theatre Studies

F. Folklore

#### 2. B. Major Research Projects:

##### Prof. Sekhar Samaddar

Esthetics of Indian Theatre (With special emphasis on Bengali Theatre) funded by UGC DRS-SAP, Phase II, Department of Bengali

##### Prof. Shampa Chowdhury

Digitization of Bengali Periodicals, funded by UGC DRS-SAP, Phase II, Department of Bengali

##### Prof. Ananya Baruya

Lokashilpa O Samskriti (Jharkhand and South Bengal), funded by UGC DRS-SAP, Phase II, Department of Bengali

##### Sutapa Sengupta

Contemporary Indian Poetry: Definitive Attributes, RUSA 2.0

##### Dr. Barendu Mandal

Paschimbanger Sundarbaner Kheya, funded by UGC DRS-SAP, Phase II, Department of Bengali

##### Dr. Rajyeswar Sinha

1. Atmaparichayer Khonj O Musalman Bangalir Sahitya Samskriti Chinta (1863-1900), funded by UGC DRS-SAP, Phase II, Department of Bengali
2. Gangeya Dakshinbanger Majar-Kendrik Akhyan, RUSA 2.0

##### Dr. Joydeep Ghosh

Smritikathay Shantiniketan, funded by UGC DRS-SAP, Phase II, Department of Bengali

#### 3. A. Invited Lectures Delivered/Sessions Chaired:

##### Prof. Sekhar Samaddar

1. Lecture Delivered on Khaled Choudhury at Drama Department, Rabindra Bharati University, January 2020

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2. Delivered Lecture on 'Bangla Theatre: Binodini Theke Akhon' organized by Times Of India, December 2019
3. Lecture delivered on 'Paschimbanger Natyacharcha' in a seminar organized by Paschimbanga Natya Academi on September 2019
4. Lecture delivered on 'My Theatre' in a National Theatre Seminar organized by Minarva on September 2019

### Prof. Shampa Chowdhury

1. Chaired a session on 'Amar Theatre' organized by SAP DRS Phase II, Department of Bengali and Centre for Theatre Studies, JU, on 13.02.2020
2. Lecture delivered on 'Adhunik Madhyajug Charcha' in Refresher Course organized by HRDC-Bengali Department, JU, November 2019

### Prof. Ananya Baruya

1. Lecture delivered on 'Anya Jiban Anya Katha: Debesh Ray' organized by Shyamaprasad College, August 2019

### Sutapa Sengupta

1. Lecture delivered in Multilingual Writer's Meet at Arunachal Pradesh, November 2019
2. Lecture Delivered in International Literary Festival, Assam University, Silchar, November 2019

### Dr. Barendu Mandal

1. Delivered Key-Note Address on 'Adhunik Bangla Sahitya Samskritir Nana Matra', Comparative Literature Department, JU, March 2020
2. Lecture delivered on 'Bhasha Andolan : Ekush Theke Unishe', Lady Brabourne College, February 2019
3. Lecture delivered on Bhasha Andolan O Bharotiya Upamahadesher Bhasha Rajniti, 76<sup>th</sup> Orientation Programme, UGC-HRDC, JU, February 2020
4. Lecture delivered on 'Deshbhager Sahitya Jebhabe Pori', The Bhawanipur Education Society College, February 2020
5. Lecture delivered on 'Prasanga:Chhitmahaler Galpo', 3<sup>rd</sup> International Seminar, NSOU, Kolkata, March 2020
6. Delivered 21<sup>st</sup> February Memorial Lecture in Alia University, Kolkata, February, 2020
7. Delivered Lecture on 'Bangaldesher Galpo : Utso, Sristi, Anubritti', Galpomela Barshik Adhibeshan, Chandannagar, December 2019

### Dr. Rajyeswar Sinha

1. Lecture delivered on *Adhunik Bangladesher Sahitya Samskritir Nana Matra*, Department of Comparative Literature, JU and Hirendranath Datta Foundation, March 2020
2. Lecture delivered on Akshya Kumar Datta and Contemporary Bengali Culture, The Asiatic Society, February 2020
3. Lecture delivered on *Bangla Rannar Boi O Samaj Samskritir Itihas* at School of Language and Cultural Studies, Tokyo University of Foreign Studies, Japan, July 2019

### Dr. Joydeep Ghosh

1. Badal Sarkar Memorial Lecture organized by Paschimbanga Natya Academy, 9<sup>th</sup> February 2020
2. Lecture delivered on Vidyasagarer Juktikram, Netajinagar Day College, 26 September 2019



**3 F. Seminar/Workshop/Symposium/Conference Attended:**

**Prof. Sekhar Samaddar**

1. Workshop on 'Nijer Lekha Natok' Organized by Paschimbanga Natya Academy, January-February 2020

**3 G. Seminar/Workshop/Symposium/Conference Organized:**

1. Organized Refresher Course on '*Adhunikar Madhyayug Charcha*', with UGC-HRDC, JU, December 2019
2. Organized a National Level Ineter-University Scholars' seminar on September 2019, with UGC DRS-SAP, Phase II, Department of Bengali
3. Organized Seminar on 'Amar Theatre, Amar Samayer Theatre', February 2020, with UGC DRS-SAP, Phase II, Department of Bengali and Theatre Studies
4. Organized Seminar on '*Adhunikatar Nana Matra : Unish O Bish Shataker Abhiggata*' with UGC DRS-SAP, Phase II, Department of Bengali, March 2020

**4 A. Books/Monographs etc. Published:**

**Prof. Sekhar Samaddar**

1. *Dui Shatabdir Bangalir Natyachinta*, Ebang Mushayera, January 2020

**Prof. Shampa Chowdhury**

1. *Uttar Oupanibeshikata, Prantik Manush O Mahashwetar Kathasahitya*, Spark Book Company, Kolkata, February 2020

**Dr. Joydeep Ghosh**

1. Prashantachandra Mahalanabish O Rabindra Grantha Prakasher Daay Dayitwa, Spark Book Company, Kolkata, February 2020

**4. B. Articles Published in Journals:**

**Prof. Sekhar Samaddar**

1. 'Dipendu Chakrabartir Boi' Desh, September 2019
2. 'Sisirkumar Bhadury' *Sisir Katha*, Edited by Bratya Basu, Minarva Natya Charcha Kendra, September 2019

**Prof. Shampa Chowdhury**

1. *Jotil Samparker Saral Akhyan*, Boier Desh, January-March 2020

**Prof. Ananya Baruya**

1. "*Lokasamskritir Amimansito Proshno*", Bangla Bibhagiya Patrika, Ramsaday College, Howrah, March 2020
2. '*Swalpo Dairgher Chhobi: Deshbhag*', *Tabu Ekalavya*, February 2020

**Sutapa Sengupta**

1. *Haoar Dana*, Anubhab Patrika, Purulia, May 2019
2. *Shabder Rekhob*, Bhinnochokh Publication, January 2020
3. *Kabitar Satya, Daay O Edit*, Shabdobodh Patrika, February 2020

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### Dr. Barendu Mandal

1. *Muktijuddher Sahitya O Samar Sahitya: Ekti Tulanamulak Path*, Gabeshana Parishad Patrika, Bangla Bibhag, Rajshahi University, Bangladesh, December 2019
2. *Parthapratim Bandyopadhyay O Tnar Chintajagat*, Kha Patrika, November 2019
3. 'Latif Hossain-er Galpopather Bhumika', *Iblishnama* by Latif Hossain, Abhijan Publication, Kolkata, January 2020
4. 'Tushar Kanjilal O Amader Katha', *Sundarbaner Mastermashai Tushar Kanjilal*, Edited by Jyotirindranarayan Lahiri, Sudhu Sundarban Charcha, February 2020

### Dr. Rajyeswar Sinha

1. *Atmaparichayer Khonj O Unish Shateker Banglar Rannar Boi*, Bangla Bibhagiya Patrika, October 2019
2. 'Anna Prakaran O Bangalir Parichay Prasanga', Subhashree, 1425-26 Bangabda. Kolkata

### Dr. Joydeep Ghosh

1. Bikalpa Goyendar Utthan : Prasanga Narayan Sanyalaer Kanta Series, Dipan, Kolkata, April 2019
2. Granthanirman O Rabindranath, Bangla Bibhagiya Patrika, Department of Bengali, JU, October 2019

## COMPARATIVE LITERATURE

Phone: 033-2414-6690 : 2457-2223

H.O. D: Dr. Sayantan Dasgupta

E mail: hod.comp.lit@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the Course	Duration	No of Students Enrolled
B.A (Honours)	3 years; 6 semesters	213
B.A (ED/GE)	Semesters 1, 2, 3, 4	5
M.A.	2 years; 4 semesters	111
MPhil	2 years; 4 semesters	19
Registered for PhD		9
Certificate Course in Translation	6 months	26

### 1. B. Number of Faculty Members:

**Permanent: Sanctioned posts:** 15 (2 Professor; 3 Associate Professor; 10 Assistant Professor)

**In position:** 11 (5 Professor; 4 Associate Professor; 2 Assistant Professor)

**On lien:** 1 (Assistant Professor)

**Vacant:** 3 (1 Professor; 1 Associate Professor; 1 Assistant Professor; of these all 3 posts have been advertised)

**Guest Faculty:** 2

**2. A. Area of Research Activities: (Broad Areas)**

Areas identified by Board of Studies (BOS) and External Experts for research under the Centre of Advanced Study (CAS) Phase III are:

**(a) Comparative Literature: Texts, Contexts, Methods**

- Issues and aspects related to Comparative Literature pedagogy specifically keeping in mind the Indian context
- With the recent considerable growth of Comparative Literature Departments, as well as Centres and Schools
- A demand is growing for text material for core courses on ‘Comparative Literature: Definition, Scope, History’, which will be sought to be met

**(b) Inter-literary Transactions: Indian and Asian Contexts**

- In today’s globalized world, there is an ever greater need to find the right balance between opening the doors to the world and understanding Indian literatures in their multiplicity, and the interconnections within India and among Asian languages, literatures and cultures, without shutting the doors on non-Asian language literatures

**(c) Interactions between Literature and other Knowledge Systems**

- issues related to orality, oral history
- testimonial literature
- the storytelling tradition
- performance

**2. B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)**

**Departmental Research Project**

RUSA 2.0 Project (Departmental) - “Academic Social Responsibility and the United Nations Sustainable Development Goals: Towards a New Humanities in India”

PIs – Professor Kunal Chattopadhyay and Dr. Sayantan Dasgupta

- Aimed to reformulate Humanities education in India by –
  - (a) constructing a model for Humanities education that is interdisciplinary, and that brings into the curriculum less visible communities and their cultural texts
  - (b) result in positive social change by highlighting in the curriculum existing systems of injustice and inequality,
  - (c) make more visible the hierarchies between centres of power and the margins

The department aimed to, in a modest way, redefine the national Higher Education imaginary, via outreach and impact initiatives fostered by Jadavpur RUSA 2.0 programme to make it more pluralistic, multi-directional and sustainable

- The project has collaborated with the students of Sikkim University and Darjeeling Government College to create a set of graphic narratives in multiple languages including in Nepali, a form of literature that will be first of it’s kind in Nepali. The whole process was carried out through a period of three months that included three workshops
- The project has also collaborated with Shikshaniketan, a Burdwan based NGO, that along with providing free education to the economically challenged section of the society, aims at creating sustainable living practice as well as a sustainable economy. The students of the Department of Comparative Literature, as part of the project, have worked with the NGO to develop a better framework for primary education that gets into a dialogue with a sustainable way of living

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- The project also has worked in collaboration with the ‘Humanities in India’ programme of the University of East Anglia to organize a number of workshops and seminars on sustainable development
- Publication of a volume of graphic narratives in Nepali, Bangla and English is in process
- Project Assistant Recruited: 2
- Funding Agency: RUSA 2.0
- Grand Total Budget: 24,36,800/-

### Erasmus+ Staff Mobility Exchange with Charles University, Prague. 2019 – 2020

Faculty from Charles University, Prague visited the Department in March 2020 for internationalization of curriculum and exchanges on linguistic and literary traditions from Bengal and the Czech Republic with students, faculty and scholars.

Dr. Sayantan Dasgupta, Dr. Sujit Kumar Mandal, Dr. Parthasarathi Bhaumik and Dr. Debashree Dattaray of Jadavpur University collaborated and facilitated the exchange along with Dr. Martin Hribek and Ms. Zuzana Spicova of Charles University, Prague

### Kunal Chattopadhyay

- Principal Investigator, RUSA 2.0, Departmental Project titled Academic Social Responsibility and the UN Sustainable Development Goals: Towards a New Humanities in India
- Principal Investigator, RUSA 2.0, Individual Project titled Locating the Progressive Writers Movement in an All India Perspective: Socialism, Anti-Imperialism and Popular Culture

### Sayantan Dasgupta

- Principal Investigator, RUSA 2.0, Departmental Project titled Academic Social Responsibility and the UN Sustainable Development Goals: Towards a New Humanities in India
- RUSA 2.0 Project- “Redefining Indian Literature: Archiving and Translating Indigenous and Marginalised Traditions” (UGC RUSA 2.0) Project Assistant Recruited: 1
- RUSA 2.0 Project- “Digital Interventions: The Changing Contours of Media, Communication and Culture in India” project of the School of Media, Communication and Culture, Jadavpur University (2019-2020) [with Professor Abhijit Roy]
- “The Contemporary Bodo Short Story,” project funded by The Asiatic Society, Kolkata (2019)

### Kavita Panjabi

- “Interfaces between Central Asian & Indian Literatures & Cultures – Through the Lens of Indian Balti Villages” Funding Agency: RUSA 2.0

### Suchorita Chattopadhyay

- Principal Investigator, Locating Indigeneity in the Global South: Revival, Conservation, Sustainability, RUSA 2.0 Scheme, Jadavpur University, 2019 - 2020

### Sucheta Bhattacharya

- Principal Investigator “Understanding Borders and borderlands through cultural representations with special emphasis on the border between India and Bangladesh”  
Funding agency: RUSA 2.0 Scheme, Jadavpur University, 2019 - 2020

### Sujit Kumar Mandal

- Co-investigator: “*Famine Tales from India and Britain*”, Arts and Humanities Research Council (UK), British Library (London), Royal Albert Memorial Museum (University of Exeter, UK) and SCTR, JU, 2019-2020; Fund: £30,148.02 (GBP)  
Project website: <http://faminetales.exeter.ac.uk/people>
- Blog: <http://foodsecurity.exeter.ac.uk/>
- CAS-III Projects

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- Co-investigator: “*Centering Borders, Border Crossings & Borderlands in Comparative Literary and Cultural Studies*”, UGC-CAS-III, Dept. of Comparative Literature, 2016—2020; Fund: Rs. 3.15 lakhs
- PI: “*Translating Performance Text: In search of a Methodology*”, UGC-CAS-III, Dept. of Comparative Literature, 2016-2020; Fund: Rs. 0.6 lakh
- Co-investigator: “*Project Dastangoi*”, UGC-CAS-III, Dept. of Comparative Literature, 2016—2020; Fund: Rs. 2.0 lakhs
- PI: “*Comparative Literature in India—Discipline, Departments and Centers: A Historiography*”, UGC-CAS-III, Dept. of Comparative Literature, 2016—2020

### Parthasarathi Bhaumik

- Individual Project- “Jibananda Das Papers: Digitization of Manuscripts of Jibananda Das” RUSA 2.0, UGC
- RUSA 2.0 Project- “Digital Humanities and Literary Mapping: Pedagogy and Curricula”
- CAS-UGC Project- “Centering Borders, Border crossings and Borderlands in Comparative Literary and Cultural Studies”

### Epsita Haldar

- Individual Project- “Archiving Muharram Mourning: Collection and Digitization of Shia Elegies, Oral Narratives and Heritage of the Imambaras” RUSA 2.0 Programme, Jadavpur University

### Debashree Dattaray

- Principal Investigator, Locating Indigeneity in the Global South: Revival, Conservation, Sustainability, RUSA 2.0 Scheme, Department of Comparative Literature, Jadavpur University, 2019 – 2020
- RUSA 2.0 Project- “Digital Humanities and Literary Mapping: Pedagogy and Curricula”

### Sumit Kumar Barua

- Departmental Project- 2019-2020- “A Collection of Fictional and Historical ‘Buddhist’ Short Stories of Twentieth Century in Bengali Literature”  
Funding Agency: RUSA 2.0

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

#### Kunal Chattopadhyay

- “Teaching Roman History’ –State Level teacher training workshop on *Aspects of Teaching Early History: From Pre-History to the Decline of Rome*, 10th August 2018, organised by Department of History, West Bengal State University and Department of History, RKSM Vivekananda Vidyabhavan, at the Muktiprana Sabhagriha, RKSM Vivekananda Vidyabhavan
- Chaired a session at the XIV CLAI Biennial International Conference on Studying South Asian Narratives through Pluralist and Dialogic Frames (March 11-14, 2019), Maulana Azad National Urdu University (MANUU) Hyderabad; Panel on Multilingualism and South Asian Narrative Tradition, March 12, 2019

#### Kavita Panjabi

- Delivered a Special lecture on “Multiculturalism & Gender Equality” at a Seminar on Gender Equality: Issues and Challenges organized by J.D. Birla Institute at the Vidya Mandir Auditorium, Kolkata. 23<sup>rd</sup> April, 2019.
- Delivered an invited talk on “A Unique Grace” delivered at Partition: Memories & Texts, organized by the Bhawanipore Education Society College, Kolkata, 7 February 2020

## Annual Report 2019-20

### Suchorita Chattopadhyay

- Delivered a talk on “Locating Indigeneity in the Global South: The Indian Context” at the Department of Malay Studies, National University of Singapore
- Moderator, Roundtable discussion on “Endangered Languages: If not now, when?” – organized by the Centre for Canadian Studies in collaboration with the School of Languages and Linguistics, Jadavpur University, 7 February, 2020

### Samantak Das

- Delivered the Plenary Lecture on “Digital Humanity: Reflections on Life in Cyberia” at the International Conference under JU RUSA 2.0 on “Digital Humanities and Literary Mapping: Pedagogy and Curricula”; organized by the School of Cultural Texts and Records in collaboration with the Department of Comparative Literature, Jadavpur University on 7 - 9 January, 2020

### Sujit Kumar Mandal

- Delivered an invited lecture on “Oral Tradition and Verbal Arts: Research Methodology” in a 6 day long research methodology workshop on Comparative Literary Studies, organized by the department of Comparative Indian Language and Literature, CU, held from 2-7 March, 2020
- Delivered an invited lecture on “Scroll Paintings of Bengal”, organized by the Forum for Bengal Studies, Japan at Tokyo University of Foreign Studies, Tokyo, Japan on 30 June, 2019
- Delivered invited lecture on “Idea of Secularism: A Case Study of Indian Religious Cultures” on 12 June 2019 at Tokyo University of Agriculture and Technology, Tokyo, Japan

### Sayantan Dasgupta

- “Introducing the Theme of the Seminar-Workshop on Translating Bodo Short Stories” at the Asiatic Society, 21 October, 2019
- Presented Keynote Address at the seminar on “Crossing the Border: Multiculturality in Eastern Indian Literature”, organized by Sahitya Akademi, 1 September, 2019
- Invited presentation on Translation Workshop-cum-Seminar at the Asiatic Society, 16 May, 2019

### Parthasarathi Bhaumik

- Resource person, ‘Digital Archive and Research’, Adamas University, Barasat, West Bengal. 2 Hrs
- Resource person, Digitising Endangered Archives: Practical Ethical Issues and Challenges, Workshop on Building Digital Archives: Tools, Techniques, Approaches EAP 1247, The British Library, 6 November, 2019, School of Cultural Texts and Records, Jadavpur University. 1 Hr
- Resource person, Digital Archive as Resource: Issues of Development and Use, School of Media, Communication and Culture and the Centre for Microprocessor Applications for Training, Education and Research, Jadavpur University. 1 Hr
- Presented an invited paper on “Pedagogy, Relevance, Comparativism: A Historical Narrative” at Three-Day National-level Centenary Commemoration Seminar on The Establishment of the Department of Modern Indian Languages at the University of Calcutta. Organised by Department of CILL, University of Calcutta. 7 May, 2019 (6-8 May, 2019)

### Epsita Halder

- Delivered a lecture on “Digital Muharram: The (Im)possible Archive,” at a three day International Conference on Digital Humanities and Literary mapping: Pedagogy and Curricula, organized by School of Cultural texts and Record, JU in collaboration with the Department of Comparative Literature, Jadavpur University on 7-9 January, 2020

### Debashree Dattaray

- Invited Lecture on “Mizoram: A Historical Trajectory from North East India” for graduate students of the University of Haifa, Israel organized by the Department of English, Jadavpur University, 10 February, 2020



## Annual Report 2019-20

- Panelist in a roundtable discussion on “Endangered Languages: If not now, when?”-organized by the Centre for Canadian Studies in collaboration with the School of Languages and Linguistics, Jadavpur University, 7 February, 2020
- Invited lecture on “Rearticulating Memory and Trauma: (Dis)locating “Home” in North East India” as a Resource Person at the international workshop entitled “Through English Densely: Rethinking the Postcolonial” organized at the University of Haifa, Israel in the week of December 8-12, 2019

### Sumit Kumar Barua

- Invited to Chair an academic session in Seminar of the MPhil Researchers, Department of Bengali, Jadavpur University, Kolkata, 07 May, 2019
- Invited to deliver a lecture on “Banglar Nabayagaran o Vidyasagar” in the One-day Seminar on the occasion of the “*Celebration of Bi-Centenary Birth Anniversary of Vidyasagar*”, organized by Prasannadeb Women’s College, Jalpaiguri, 26 August, 2019
- Invited to deliver a lecture on “*A Narrative Exposition of Japanese Travellers in India: Nichiki Kimura in Bengal*” in the International Seminar titled “*India in Travel Writings 1500-2000: Producing Knowledge, Fashioning Selves and Others*”, organized by Nehru Memorial Museum & Library, New Delhi, 29 & 30 August, 2019
- Invited to Chair an academic session in a One day International Seminar titled “*Pali and Buddhist Literature*”, “*Fourth Lecture Session*”, organized by Santiniketan Ambedkar Buddhist Welfare Mission in collaboration with Department of Indo-Tibetan Studies, Visva-Bharati, Santiniketan on 1 November, 2019
- Invited to Chair an academic session in a Two day International Conference titled “*Adhunik Bangladesher Sahitya-Sanskritir Nana Matra*”, organized by Department of Comparative Literature, in collaboration with Hirendranath Dutt Foundation, Jadavpur University, Kolkata, 13 March, 2020

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

#### Kunal Chattopadhyay

- **Presented a paper on** “The Progressive Movement and some aspects of the Debate Over Bangla Poetry”. International Comparative Literature Association, XXIIInd Congress, 29 July–2 August, 2019, Panel **1263851 The Progressive Movement in India and its Successors, 1 August**

#### Sujit Kumar Mandal

- Presented a paper in an international conference organized by International Comparative Literature Association (ICLA) from 29 July 2019 to 2 August 2019 at University of Macau, Macau, SAR, China
- Participated in a workshop on “Pedagogy involved in teaching Bengali to foreign learners”, organized by the Dept. of Bengali, JU in September 2019

#### Epsita Halder

- Presented a paper on “The Lament Rose Up to the Sky: Community and Identity in Women’s Lament Ritual in Muharram” at an International Conference on Sounds, Bodies and Power: Politics and Poetics of Religious Sound, organized by South Asia Institute, National University, Singapore on 27-28 February, 2020
- Presented a paper on “Acoustemology and Shia Citizenship: Muharram as a Site of Contestation in Kolkata and Dhaka,” at an inter-faculty international seminar on Megacities: Conviviality and Its Limits, Jadavpur University, 26-28 February, 2020
- Presented a paper on “Shia Devotional Masculinity: A Comparative Study (Kolkata and Calgary),” at a three day international conference on Canada and/in Global south: Fragmented Identities and new Partnerships, organized by the Centre for Canadian Studies, Department of Comparative Literature, Jadavpur University on 4-6 February, 2020

## Annual Report 2019-20

### Debashree Dattaray

- Presented a paper on “Glocal transitions across borders: Interrogating landscape ecology in *The Mill on the Floss* and *Pather Panchali* at the International Conference on “Antipodean George Eliot” in the week of 12–17 February, 2020 at the University of Sydney, NSW 2006, Australia
- Presented a paper on “Rearticulating Memory and Selfhood: Subverting ‘nationalism’ in Northeast India and Poland” at an International Workshop on “Nationalism in a Transnational Age” at Nord Universitet in Bodø, Norway, on 25-26 November, 2019

### Sumit Kumar Barua

- Presented a paper on “*Kayes Ahemeder ‘Mahakaler Khndra’: Bangladesher Kathasahityer Drishtite Nakshal Andolon*” in an International Seminar titled “*Literary Trends of two Bengals: From 1970 to 2019*”, organized by South Calcutta Girls’ College, Department of Bengali, Kolkata on 16 September, 2019
- Presented a paper on “*Lokoshikkhay Prakritir Sushama Byabostha r Proyog: Prasanga ‘Dharmapada*”, in a One day International Seminar titled “Pali and Buddhist Literature”, organized by Santiniketan Ambedkar Buddhist Welfare Mission in collaboration with Department of Indo-Tibetan Studies, Visva-Bharati, Santiniketan on 1 November, 2019
- Presented a paper on “*Sivali Vratakatha: Bangaladesher Lokayata B auddha Bhabnar Rupantar*” in an International Seminar titled “*Literary Trends of two Bengals: From 1970 to 2019*”, organized by Department of Comparative Literature, in collaboration with Hirendranath Dutt Foundation, Jadavpur University, Kolkata on 13 March, 2020

### 3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

#### Kunal Chattopadhyay:

- **Coordinator** and Panel Chair at the International Comparative Literature Association, XXIIInd Congress, 29 July—2 August, 2019, Panel **1263851 The Progressive Movement in India and its Successors, 1 August**
- With Sayantan Dasgupta, RUSA 2.0 workshop organisers —Translating Nepali Short Stories into Graphic Narratives, September 16-20, 2019, Department of Comparative Literature, JU in collaboration with Humanities in India Programme, University of East Anglia
- With Sayantan Dasgupta, RUSA 2.0 workshop organisers –Production of Graphic Narratives in Nepali, Bangla, Punjabi and English from Nepali short Stories, 19 December, 2019
- With Sayantan Dasgupta, RUSA 2.0 Seminar, Department of Comparative Literature in collaboration with School of Media, Communication and culture, J.U. On AI Translation, 18 February, 2020

#### Kavita Panjabi

- Coordinator, RUSA 2.0 International Seminar on Megacities: Conviviality & its Limits, at Jadavpur University from 26-28 February, 2020

#### Suchorita Chattopadhyay

- Coordinator, International Conference on “Canada and/in the Global South: Fragmented Identities and New Identities” organized by the Centre for Canadian Studies, Jadavpur University on 4-6 February, 2020
- Coordinator of 4 days translation workshop on “Comparative Literature: Texts, Contexts, Concepts” under RUSA 2.0 Departmental Seminar Grant

#### Samantak Das

- Joint Coordinator (with Dr. Sumit Kumar Barua), International Creative Writing Workshop organized for students of the Departments of English and Comparative Literature, organized by Department of Comparative Literature, Jadavpur University in collaboration with the University of Chicago, on 22 January, 2020

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### Sujit Kumar Mandal

- Organized an international conference on “Adhunik Bangladesher Sahitya-Sanskritir Nana Matra”, funded by the Department of Comparative Literature, JU and Hirendranath Datta Foundation, held at Prof. Anita Bannerjee Memorial Hall, JU on 12-13 March, 2020

### Parthasarathi Bhaumik

- Joint Coordinator, International Conference under JU RUSA 2.0 on “Digital Humanities and Literary Mapping: Pedagogy and Curricula” organized by the School of Cultural Texts and Records in collaboration with the Department of Comparative Literature, Jadavpur University on 7-9 January, 2020

### Debashree Dattaray

- Joint Coordinator, International Conference on “Canada and/in the Global South: Fragmented Identities and New Identities” organized by the Centre for Canadian Studies, Jadavpur University on 4-6 February, 2020
- Joint Coordinator, International Conference under JU RUSA 2.0 on “Digital Humanities and Literary Mapping: Pedagogy and Curricula” organized by the School of Cultural Texts and Records in collaboration with the Department of Comparative Literature, Jadavpur University on 7 - 9 January, 2020

### Sumit Kumar Barua

- Joint Coordinator (with Professor Samantak Das), International Creative Writing Workshop organized for students of the Departments of English and Comparative Literature, organized by Department of Comparative Literature, Jadavpur University in collaboration with the University of Chicago, on 22 January, 2020

## 4. A. Books/Monographs etc. Published:

### Suchorita Chattopadhyay

- Nation-Building, Education and Culture in India and Canada: Advances in Indo-Canadian Humanities and Social Sciences Research* edited by K. Gayithri, B. Hariharan, Suchorita Chattopadhyay (Springer: Singapore, 2019)

### Sayantan Dasgupta

- The Dalit Lekhika* (ed. with Kalyani Thakur). Kolkata: Stree-Samya Books, 2020

### Parthasarathi Bhaumik:

- ‘পৃথিবীর সুন্দরতম ডুবে যাওয়া পুরুষটি’ (অনুবাদ), তর্জমায় বিশ্বসাহিত্য, সম্পাদনা: তমাল বন্দোপাধ্যায়, মুদ্রা প্রকাশন, ২০১৯
- ‘ওরহান পামুক’, নোবেল ভাষণ ও সাহিত্য, সম্পাদনা: দীপ ঘোষ, একলব্য

### Sumit Kumar Barua

- Brahmadharma o Bauddhasanskriti*, Kolkata: Chhoya, January 2020, ISBN- 978-81-9427772-2-4
- Shishu-Kishor Patrika: Prasanga Bauddhasanskriti* (Edited & Introduced), Kolkata: Centre of Advanced Study, Phase III, & Comparative Literature, Jadavpur University, March 2019, ISBN- 978-93-88923-41-5
- Kavita Singher Kabita Sangraha*, Volume One (Edited & Introduced), Kolkata: Dey’s Publishing, ISBN- 978-93-89377-54-5

## 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

### Kunal Chattopadhyay

- ‘টুটস্কি, লেনিন এবং রুশ বিপ্লবের শ্রেণিচরিত্র ও পথ’, স্বরাস্তর, জানুয়ারি ২০২০, পৃঃ ৮৭-১৪০ ;ISSN 2395-0935
- ‘স্তালিন ও অক্টোবর বিপ্লব: একটি দলিল ভিত্তিক আলোচনা, ইতিহাস অনুসন্ধান-৩৪’, পশ্চিমবঙ্গ ইতিহাস সংসদ, কলকাতা, জানুয়ারি ২০২০, (Peer Reviewed volume, ISBN: 978-81-939476-2-3), পৃঃ ৮১৭-৮২৭

**Kavita Panjabi**

- “Modernity” in *Keywords for India: A Conceptual Lexicon for the 21st Century*, Eds. Rukmini Bhaya Nair & Peter Ronald de Souza. London: Bloomsbury, February, 2020

**Sayantan Dasgupta**

- “A Ghost Story” in Duncan Large et al ed., *My BCLT: Celebrating 30 Years of the British Centre for Literary Translation*. University of East Anglia, 2019
- “Trailokyanath Mukhopadhyay’s *Kankabati*” in *Indian Literature* 313, New Delhi: Sahitya Akademi, September-October 2019
- “Studying Translation in India” in *Indian Literature* 312. New Delhi: Sahitya Akademi, July-August 2019
- “Manto Reloaded, Hussein Remixed: Exploring Intermedial Translation in South Asia” in *Jadavpur Journal of Comparative Literature*, Kolkata: Jadavpur University, 2019

**Parthasarathi Bhaumik**

- ‘Bengal Almanac and Knowing the Unfamiliar: the Personal Guide-Books for the *East India Company* Men in Bengal’, *Jadavpur Journal of Comparative Literature*, Volume 55. 2019

**Epsita Halder**

- “Shia Women and their Place-making: Gendered Agency in the Muharram Gatherings in Kolkata,” in Panchali Ray (ed) *Women Speak Nation: Gender, Culture and Politics*, Routledge, 2019 ISBN 978-1-138-36374-8
- The Sound of the Heart: A Polemic on Sufism in the Age of Islamic Reform in Bengal (1880-1920) In *Sufism: A Peregrination through Manuscripts and Popular Culture* (eds) Nandini Bhattacharya and Nayeem Anis (New Delhi: National Mission for Manuscripts, 2019) ISBN 978-93-80829-69-2

**Debashree Dattaray**

- “A Sea for Encounters: Changing Epistemologies in T.S. Pillai’s *Chemmeen*” in Proceedings Of The Sari 2017 Conference On Reinventing The Sea. fhal-02455760f <https://hal.archives-ouvertes.fr/hal-02455760>, January, 2020
- “Youth and Education: Interrogating Indigenous Knowledge Systems in Canada and India” in *Nation-Building, Education and Culture in India and Canada: Advances in Indo-Canadian Humanities and Social Sciences Research* edited by K. Gayithri, B. Hariharan, Suchorita Chattopadhyay (Springer: Singapore, 2019), pp. 83 – 92. 978-981-13-6740-3

**Sumit Kumar Barua**

- “Narayan Sanyaler ‘Aitihāsik Kathasahitya’-er Swarup o Anandaswarupinee: Bauddher Punornirman”, Kolkata: *Dipan*, N. Julfikar (Edited), p. 91-123, 2019, ISSN 0975-4237
- “Sojan Badiyar Ghat: Ashrusajal Bedanapunjer Kathakavya”, *Sahitya Takko*, Udayratan Mukherjee (Edited), p. 144-158, April 2019, ISSN 2320-6160
- “Avataranika” (Introduction), *Buddhachetaner Galpaguccha*, Kolkata: Bauddha Dharmankur Sabha, November 2019, p. 9-57, ISBN 978-81-86551-80-6
- “Banmantha Nepal Majumdarer Gadyabikkha: Jatiya Prekkhite Antarjatic Sandhitsu”, Kolkata: *Ebong Mushayara*, Nari Oupnyasik Sankhya, Year 25, Issue 2 & 3, Subal Samanta (Edited), p. 64-91, July-September & October-December 2019, ISSN- 0976-9307
- “Jatiyatabadee Dhara Buddhacharyar Dhara: Ekti Paryalochona”, Kolkata: *Bauddhapurattawa*, Year 2, Issue 2, Buddhist Cultural Research Society, Asish Barua (Edited), p. 39-45, January 2020

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### 5. Collaborative Programmes:

#### Kunal Chattopadhyay

- Kunal Chattopadhyay and Sayantan Dasgupta, RUSA 2.0 workshop organisers, Department of Comparative Literature, JU, in collaboration with Humanities in India Programme, University of East Anglia—Translating Nepali Short Stories into Graphic Narratives, September 16-20, 2019
- Kunal Chattopadhyay and Sayantan Dasgupta, RUSA 2.0 Seminar, Department of Comparative Literature in collaboration with School of Media, Communication and culture, J.U. On AI Translation, 18 February 2020

#### Sayantan Dasgupta

- “Translating Bodo Short Stories”, collaboration of CENTIL with the Asiatic Society, 2019-20

### 6. Major Achievements:

#### Sayantan Dasgupta

- Awarded the Global Challenges Research Fellowship at the University of East Anglia, Norwich, UK, from 15 April to 14 June, 2019

## ECONOMICS

Phone: 033-2414-6328

033-2457-2226

H.O.D: Prof. Malabika Roy

E-mail: hod.economics@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the Course	Duration	No of Students Enrolled
B.A (Honours)	3 years; 6 semesters	240
M.A.	2 years; 4 semesters	140
MPhil	2 years; 4 semesters	04
PhD	5 years	06

### 1. B. Number of Faculty Members : Twenty-one (21)

### 2. A. Area of Research Activities : (Broad Areas)

- I. International trade
- II. Public Finance
- III. Economics of Social Sector
- IV. Resource & Environmental Economics



**Prof. Amit Kundu**

**Paper Published in International Refereed Journals:**

1. "Demand for Micro-insurance of Health among the Informal workers: A discrete Choice Experiment in India" (with Sauvik Dasgupta); *International Journal of Behavioral and Health Care Research* Vol.7 No.1 (2019) pp. 1-19
2. "An Analysis of Poverty among the Informal Workers of India" (with Rajyasri Roy) *Theoretical and Applied Economics* Vol. XXVII (2020), No.1 (622), pp. 87-104
3. "Subjective Well-being of the informal workers: An Empirical Study for Hooghly District of West Bengal, India" (with Breeta Banerjee) *International Journal of Happiness and Development*, Vol-6. No.1,(2020), pp. 1-25
4. "Financial Sustainability of a Health Micro-Insurance Scheme: A Theoretical Investigation" *International Journal of Economic Policy in Emerging Economics* (forthcoming)

**Paper Published in National Refereed Journal:**

1. "Evaluation of Decent Work Index for Informal Workers: An Empirical Study from Hooghly District, West Bengal, India" (with Breeta Banerjee) *Indian Journal of Human Development* Vol.14, No.12020, pp. 77-98

**Prof. Arpita Ghose**

**Paper published in International refereed Journals:**

"Non CO2 Emission from cropland based agricultural activities in India: A Decomposition Analysis and Policy Link", *Journal of Cleaner Production*, Vol . 225, 637-646, Elsevier, 2019. (coauthored with S. Some and J. Roy)

**Paper published in Edited Books:**

- (i) "Joint Estimation of Fiscal Policy, Income Inequality, Trade and Economic Growth: Evidence from Emerging Market Economy", in Bhattacharyya, R (Eds) *The Gains and Pains of Financial Integration and Trade Liberalization: Lessons from Emerging Economies*, (coauthored with D. Pal and C. Chakraborty), Emerald Publishing, 2020
- (ii) "Total factor productivity growth of elementary education in India and its determinants :Evidence from a Non-parametric Data Envelopment Approach" in Bandyopadhyay, S, Dutta, M (Eds.), *Opportunities and Challenges in Development, Essays for Sarmila Banerjee*, Springer, 2019
- (iii) "Problem of Endogeneity in Social Research", in Acharyya, R and N.Bhattacharyya (Eds), *Research Methodology in Social Sciences*, Rutledge, 2019

**Conference and Seminar Organized:**

- (i) Organized a *Five-day Training/Workshop on Macroeconomic Modeling using DSGE* under the Programme on Entrepreneurship Training plus Seminar, RUSA 2.0, organized by the Department of Economics, Jadavpur University, during 23-27 September, 2019 (Acted as Joint coordinator)
- (ii) Organized a Four -day Training /Workshop on Big Data Analysis under the Programme on Entrepreneurship Training plus Seminar, RUSA 2.0, 2020 in collaboration with Department of Computer Science and Engineering, Jadavpur University, during 20, 21, 22 and 24 January, 2020.(Acted as Joint coordinator)

**Ph. D awarded:** One

**Dr. Bidisha Chackraborty**

**Papers in International Journals:**

- Will an increase in landholding size reduce child labour in the presence of unemployment? A Theoretical Analysis, *Economic Annals*, June 2019(Vol LXIV, No 221), 85-106, ISSN: 0013-3264 (with Kamalika Chakraborty)



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- Service good as an intermediate input and optimal government policy in an endogenous growth model, *South Asian Journal of Macroeconomics and Public Finance* (June 2019) 8(1), 57-91, ISSN: 22779787 (with Senjuti Gupta and Tanmoyee Banerjee)

### Ongoing Projects:

- Project titled “Subaltern Culture and Happiness in Tribal Communities of West Bengal” (joint work with Dedipya Basak) of Rs 1,00,000/- funded by Planning and Development Unit, Department of Economics, Jadavpur University in the financial year 2019-20
- Project titled “Women Empowerment and its Impact on Child Health and Child Education among Slum Dwellers of Kolkata” (joint work with Dr. Simontini Das) of Rs 1,25,000/- funded by Centre for Advanced Studies, Department of Economics in the financial year 2019-20

### Conference Organised/Attended:

- Organized Annual Conference on Contemporary Issues in Development Economics (Jointly with Dr. Soma Mandal) in December, 2019 at Department of Economics, Jadavpur University
- Presented the paper “Wealth Distribution and Skills Generation Under Public and Private Education Systems” at University of Lincoln, UK in 3<sup>rd</sup> Development Economics Conference DEC2019 held on 17-19 June, 2019

### Prof. Malabika Roy

#### Articles in Edited books:

1. “Sampling methods”, A survey in Research Methodology in Social Sciences edited by Rajat Acharyya and Nandan Bhattacharya, Routledge India & HRDC, Jadavpur University, January 2020
2. A Study of Volatility of Five Major Stock Indices of Indian Stock Market (Jointly with Ayanangshu Sarkar) Opportunities and Challenges in Development: Essays for Sharmila Banerjee edited by Simanti Bandyopadhyay and Mousumi Dutta Springer. January 2020

#### Projects/ Consultancy Done

“A micro-econometric study of sustainability of handloom clusters in West Bengal” RUSA 2.0 Program, Jadavpur University, Kolkata Amount: Rs.5,00,000, (2019-2020)

### Dr. Poulomi Roy

1. Project title: Change in pattern of intergenerational educational mobility and its determinants among different socio-ethnic and demographic groups: A case study of selected districts of South Bengal Funding Agency: CAS, Dept. of Economics, JU, Rs. 1,25,000 Duration: 1 year 6 months
2. Project title: Time poverty Women wellbeing and Intra-household Gender Gap: A time use survey on West Bengal Funding Agency: CAS, Dept. of Economics, JU, Rs. 1,25,000

### Prof. Rajat Acharyya

#### Paper published in International refereed Journals:

1. Acharyya, R., Hamid Beladi and Saibal Kar, 2019, “Trade, migration costs and asymmetric migration patterns”, *The World Economy*, 42: 2629-2648 (May)

#### Books edited:

1. *Research Methodology for Social Sciences* (co-edited with N. Bhattacharya), Volume 1 in the Book Series: *Contemporary Issues in Social Sciences Research* (Series Editors: Rajat Acharyya and Nandan Bhattacharya), UGC-Human Resource Development Centre, Jadavpur University, and Routledge India: London and New York, 2020

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### Seminar Presentation:

Indian Economy in Global Perspective, Keynote Address, 1<sup>st</sup> Annual Economic Summit, St. Xavier's University, March 14, 2020

M.Phil awarded: One (1)

### Dr. Rilina Basu (Banerjee)

#### Paper published in National Journals : 1

“Openness, Inflation and Output under Alternative Monetary Policies : A Structuralist Approach” in the special issue of Foreign Trade Review on theoretical models of International Trade and Finance, Vol. 54(2), May 2019, ISSN: 09717633.

#### Conference and Seminar Presentations: 3

- a. Presented paper titled “Macroeconomics of Demonetisation: A Short period equilibrium” in 3<sup>rd</sup> Development Economics Conference 2019 organised by University of Lincoln on 17–19 June, 2019
- b. Presented paper titled “Financial Innovation and Banks' Performance: An Empirical Analysis of Indian Commercial Banks” at the 11th International Conference on “Contemporary Issues in Development Economics” during 19-20 February, 2020
- c. **Discussant of the paper** “The Direct and Indirect Link Between International Financial Integration and Economic Growth: Empirical Evidence From India” at the 11th International Conference on “Contemporary Issues in Development Economics” during 19-20th February, 2020
- d. Attended short term course on Gender Sensitization from 12 –18 March, 2020, organised by School of Women's Studies, Jadavpur University

### Saikat Sinha Roy

#### Paper Published in Edited Books:

- ‘Exchange Rate Pass-through to Sectoral Import Prices in an Emerging Market Economy: An Indian Evidence’, in S. Bandyopadhyay and M. Datta (eds.), *Opportunities and Challenges in Development: Essays for Sarmila Banerjee*, Singapore: Springer. (with Pradyut Kumar Pyne). 2019
- ‘SDG 10 - A Probe into the Factors Underlying Differences in Inequality: Evidence at the Sub- National Level in India’, Ch. 7 in S. Chaturvedi et al. (eds.), *2030 Agenda and India: Moving from Quantity to Quality: Exploring Convergence and Transcendence*, Singapore: Springer. (with Rudra Prosad Roy), 2019

#### Conference and Seminar Presentations:

- Delivered a lecture as invited speaker on “Foreign Assistance and the Risk of Sovereignty” at the ICHR, New Delhi, sponsored National Seminar on *Nation, Nationalism and Beyond: Issues and Challenges* organized by the Social Science Forum, Bhairab Ganguly College, Kolkata, during 12-13 April, 2019
- Presented a paper on “SEZ related data issues: India” at the Workshop on *Special Economic Zones: A force for good to reduce inequality* organized by the Kiel Centre for Globalization, Institute for World Economy (IfW), Kiel, Germany, during 29-30 April, 2019
- Delivered 3 lectures on “Time Series Analysis and Applications of Time Series Techniques in Trade Modelling using E-views” at the *Fourth RIS-EXIM Bank Summer School on International Trade Theory and Practices* at the Research and Information System for Developing Countries (RIS), New Delhi, during 12-13 June, 2019
- Presented a paper on “Services Trade and Choice of Industries: Studying Intergenerational Mobility of Indian workers” at the Seminar *Econ Talk* organized by Economic & Social Science Group, Indian Institute of Management, Bangalore on 25 July, 2019

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- Delivered 10 lectures as a part of the optional course on Open Economy Macroeconomics Visiting Professor, Symbiosis School of Economics, Symbiosis International University, Pune during 16-19 September, 2019
- Presented a paper on “The political economy of the world trading system, WTO and beyond” at the National Seminar on *The Political Economy of International Trade* organized by Symbiosis School of Economics, Symbiosis International University, Pune, on 16 September, 2019
- Organized a Workshop on ‘Macroeconomic Modelling using DSGE’ at the Department of Economics, Jadavpur University, Kolkata, under RUSA 2.0 during 23-27 September, 2019
- Delivered three lectures each on “Time Series Econometrics” and “Simultaneous Equation Systems” for the Masters course in Economics at the Department of Humanities and Social Sciences (HSS), IIT Kharagpur during 28-29 October, 2019
- Presented a paper on “Does WTO improve market access? Maybe, but with maturity” as academic visitor at the seminar organized by Department of Humanities and Social Sciences, IIT Madras, Chennai, on 05 November, 2019
- Presented a paper on “Services Trade and Choice of Industries: Studying Intergenerational Mobility of Indian workers” at a Seminar organized by the Madras Institute of Development Studies, Chennai, on 06 November 2019. Chaired the Session 5(b) on Trade and Foreign Aid at the *15<sup>th</sup> Annual Conference on Economic Growth and Development*, Indian Statistical Institute, Delhi Centre, New Delhi, held during 18-20 December, 2019
- Presented a paper on “Services Trade and Choice of Industries: Studying Intergenerational Mobility of Indian workers” at the Session 5(b) on Trade and Foreign Aid, *15<sup>th</sup> Annual Conference on Economic Growth and Development*, Indian Statistical Institute, Delhi Centre, New Delhi, during 18-20 December, 2019
- Panelist at a Panel Discussion on “Leveraging Trade Databases for Policy Inference” at the 102<sup>nd</sup> Annual Conference of the Indian Economic Association held at Auro University, Surat, held during 27-29 December, 2019
- Presented a paper on “Responses to Trade Reforms: Some Explorations on India’s Trade Performance” at the *1<sup>st</sup> National Symposium on Issues in Indian Economy* organized by the Department of Economics and Finance, BITS Pilani, Hyderabad Campus, Hyderabad, during 14-17 February, 2020
- Delivered a Special Lecture on “Missing Middle’ in Indian Manufacturing during Recession: Explorations with firm-size distribution in Eastern and North-eastern States” at the UGC-SAP DRS III Seminar on *Regional Development Issues of East, Northeast India, and the neighbouring countries of India: The Prospects and Challenges* organized by Department of Economics, North Bengal University, Raja Rammohanpur, West Bengal, held during 13-14 March, 2020

### Dr. Simontini Das

#### Publication in international refereed journal:

- Chatterjee, A., and S. Das (2019), ‘Information communication technology diffusion and financial inclusion: an inter-state analysis for India’, *Innovation and Development*, October, 2019, pp 1-23. (Taylor and Francis)

#### Invited Lecture:

“Globalisation and Indian States: Export Performance and Its determinants”, at A Two-Day International seminar on “Globalisation through the Lenses of Cultural Pluralism and National Identity: Social, Economic and Historical Perspectives”, sponsored by the Internal Quality Assurance Cell of Gobardanga Hindu College, on 7 January, 2020

M.Phil: 1 (awarded)

**Prof. Siddhartha Mitra**

1. "Identification of the Conditions for Increasing Dimensionality of the Income Expansion Path" *Economics Bulletin* (co-authored with Nilangshu Acharya & Samir Kumar Bhandari vol. 39(4), pages 2664-2673, 2019
2. "Controlling Terrorism Through the Nudging of Social Interactions" *South Asian Journal of Macroeconomics and Public Finance* vol. 8(2), pages 180-190, December, 2019

**Conference Organised/Attended:**

Organised *Symposium on Conflict management, peace economics & peace science*, 11 February, 2020

**M.Phil./Ph.D. submitted/awarded (details):**

PhD (1 student passed viva-voce and will be awarded degree in Convocation), MPhil (2 students passed viva-voce and were awarded degree in Convocation)

**Prof. Sushil K. Halder**

**Papers in peer reviewed Journals:**

1. Sushil Kr. Halder (with Poulomi Roy and Soma Ray): 2019: 'Socio-economic Determinants of Multidimensional Poverty in Rural West Bengal: A Household Level Analysis', *Journal of Quantitative Research*, Springer, The Indian Econometric Society (TIES), 17(3), September, 603-622
2. Sushil Kr. Halder (with Sulekha Hembram and Souparna Maji): 2019: 'Club Convergence among the Major Indian States During 1982-2014: Does Investment in Human Capital Matter?', *South Asia Economic Journal*, Institute of Policy Studies of Srilanka, 20(2), 184-204, September
3. Sushil Kr. Halder (with Sulekha Hembram): 2019: 'Beta, Sigma and Club Convergence: Indian Experience from 1980 to 2015', *Indian Economic Review*, Springer, 54(2), 343-366, December
4. Sushil Kr. Halder (with Antara Bhattacharyya): 2020: 'Does U Feminization Work in Female Labour Force Participation Rate? India, A Case Study', *The Indian Journal of Labour Economics*, Springer, 63(1), 143-160, March

**Chapter in Edited Book:**

Sushil Kr. Halder (2019): "Construction of different types of indices in social science research" in *Research Methodology for Social Sciences* (edited by R. Acharyya and N. Bhattacharya), Volume 1 in the Book Series: *Contemporary Issues in Social Sciences Research*, UGC-Human Resource Development Centre, Jadavpur University, and Routledge India: London and New York, 2019, November, DOI: 10.4324/9780367810344-8

**Seminar presentation:**

'Perspective and Future of Indian Economy' in KB Patil College, Vasi-Nabi Mumbai, Keynote Address, and Multidimensional Human Deprivation in India at Sub-National Level: Does Club Convergence Exist? Exploring NFHS (1-4) Data. March 07, 2020

**M.Phil awarded:** One (1)

**Prof. Swapnendu Banerjee**

**Paper published in International refereed Journals:**

- 1) Technology Selling and Innovation with Bargaining. (with Sougata Poddar and Yuanzhu Lu). (Accepted in February, 2020 **Bulletin of Economic Research, Blackwell**)
- 2) Outsourcing Womb with Social Ignominy (with Amrita Pramanick), **Economics Bulletin (Vanderbilt, USA)**, Vol-40, Issue-1, 653-664, March 2020

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- 3) Technology licensing and innovation—A correction on two-part tariff analysis. (with Yuanzhu Lu and Sougata Poddar). **Economics Letters (Elsevier)**, Oct 2019, Vol-183, Article 108591
- 4) ‘To sell or not to sell’: Licensing versus Selling by an Outside Innovator. (with Sougata Poddar). **Economic Modelling (Elsevier)**, 2019, Vol-76, Pages: 293-304
- 5) Incentive conscious agents and moral Hazard (with OindrilaDey). **Indian Economic Review (Springer)**, 2019, Vol-54, Pages-149-169

### Paper Published in Edited Books:

- 1) Game Theory: Strategy design in conflict situations, in Rajat Acharyya eds. *Research Methodology for Social Sciences (Routledge, London and New York)*, 2019, Pages: 91-110

### Paper Presentations:

- 1) Seminar at the **Economics Department, University of California, Irvine USA**, February 2020
- 2) Seminar at the **Economics Sciences Institute, Chapman University, California, USA**, February 2020
- 3) Seminar at the **Economics Department, IIM Bangalore**, May 2019
- 4) Annual Growth and Development Economics Conference, **ISI Delhi**, December 2019

### Dr. Tamal Krishna Kayal

#### Papers in National Refereed Journals:

- “Primary Education in India: An Analysis of Comparative Performance of Districts”, *Indian Journal of Human Development*, Vol. 13, No. 3, 2019, SAGE

### Prof. Tanmoyee Banerjee

#### Paper published in International refereed Journals:

1. Basu, Paulomi, and Tanmoyee Banerjee. “Transaction Utility of End-User Pirates—An Analysis.” *Review of Marketing Science* 16, no. 1 (2019): 109-132
2. Gupta, Senjuti, Bidisha Chakraborty, and Tanmoyee Chatterjee Banerjee. “Optimal tax policy in an endogenous growth model with a consumable service good.” *Economic Annals* 64, no. 220 (2019): 117-150

#### Paper Published in National Journals:

1. Senjuti Gupta, Bidisha Chakraborty, and Tanmoyee Banerjee. “Service Good as an Intermediate Input and Optimal Government Policy in an Endogenous Growth Model.” *South Asian Journal of Macroeconomics and Public Finance* 8, no. 1 (2019): 57-91
2. Moumita Poddar, Tanmoyee Banerjee, and Ajitava Raychaudhuri. “An economic analysis of the determinants of pattern of institutional borrowing in India.” *Journal of Social and Economic Development* 21, no. 1 (2019): 54-92

#### Paper Published in Edited Books:

Banerjee, Tanmoyee. “Designing a primary survey-based research.” In *Research Methodology for Social Sciences*, pp. 167-180. Routledge India, 2019

Ph, D awarded /submitted M.Phil awarded or submitted. M.Phil : 1

### Dr. Vikash Dixit

#### Articles in Edited books:

Rashtriya Uchcharitar Shiksha Abhiyan: Issues of Access, Equity and Effectiveness (pp.21-34) *Emerging Trends and Issues in Higher Education*, S.F. Khan (ed) ABS Books, 2020 (ISBN: 978-93-87 229-26-6)



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### Projects/ Consultancy Done:

Impact of Restructuring and Rationalisation of Centrally Sponsored Schemes on the Adequacy, Effectiveness and Efficiency of Public Expenditure on Education and Health  
Planning and Development Unit, Economics, JU / NITI Aayog, Rs.75000, Duration; 10 months

### Dr. Vivekananda Mukherjee

#### Paper Published in International Refereed Journals:

- (i) ‘**Threshold Effect of Bank-specific Determinants of Non-performing Assets: An Application to Indian Banking**’, (with Samaresh Bardhan and Rajesh Sharma), *Journal of Emerging Market Finance*, 18 (1), S1 – S34, 2019
- (ii) ‘**Capital Endowment and Race to the Bottom in a Federation**’ (with Moumita Chel), *Indian Growth and Development Review*, 12(1), 66-82, 2019
- (iii) ‘**Lobbying and Bribery**’ (with Amrita Kamalini Bhattacharya), *Studies in Microeconomics*, 7(2), 238 – 251, 2019
- (iv) ‘**Globalization, Inequality and Economic Policy**’ (with Udo Broll and Alexander Kemnitz), *Economics and Business Review*, 5(19), No.1, 3 – 11, 2019
- (v) ‘**On General and Specific Transfers for Child Support in Divorce**’, (with Tilak Sanyal), *Journal of Quantitative Economics*, 17, 197-213, 2019
- (vi) ‘**Incidence of Corruption on Formal and Informal Sector: Is There Any Symmetry?**’ (with Aparajita Roy), *Journal of Economic Development*, 44 (3), 79 – 99, 2019
- (vii) ‘**Seeking Rent in the Informal Sector**’, (with Sugata Marjit, Biswajit Mondal and Saibal Kar), *Annals of Public and Cooperative Economics*, 91(1), 151-164, 2020
- (viii) ‘**Bureaucratic Competition vs. Monopoly: Measuring Corruption and Welfare**’, (with Panchali Banerjee), *Indian Economic Review*, 55, 51 – 65. DOI 10.1007/s41775-020-00080-8, 2020

#### Paper Published in Edited Books:

‘**Red Tape, Corruption and ICT**’ (with Poulomi Bhattacharya) in D. Maiti, C. Fulvio and M. Arne (ed.) *Digitization and Development: Issues for India and Beyond*, Springer, Singapore, 345 – 360, 2019

#### Conference and Seminar Presentations:

- (i) **Silvaplana Conference on Political Economy, 2019 at Potresina, Switzerland**

#### Presented Paper:

- (i) ‘Allocation of Village Public Goods at Community Level: Does Political Reservation Help?’, Australian Public Choice Society Conference, 2019 at Brisbane, Australia
- (ii) ‘Market Competition, Relocation and Lobbying’ ‘Extortion, Competition among States and Private Investment in a Federation’, India Gold Policy Conference, 2020 at New Delhi
- (iii) ‘Assessing the Scope of Gold Refineries in India: Evidence from Survey Data’

#### Ph.D. awarded /submitted M.Phil awarded or submitted. Just mention the number

**M. Phil:** 1 (awarded)

**Ph.D:** 1 (submitted)



## Annual Report 2019-20

### EDUCATION

Phone: 033-2457-2882

H.O.D: Prof. Bishnupada Nanda

E-mail: hod.education@jadavpuruniversity.in

#### 1. A. Courses Offered :

Name of the Course	Duration	No of Students Enrolled
B.Ed.	2 Years	100
M.A. in Education	2 Years	68
M.Phil. in Education	2 Years	19
Ph.D. in Education	-	as per rules

#### 1. B. Number of Faculty Members: 9

#### 2. A. Area of Research Activities:

- Special and Inclusive Education
- Rehabilitation Psychology and Counselling
- Educational Technology
- Cognitive Psychology
- Creativity
- Buddhism and Mindfulness
- Life-Skill Education
- Educational Philosophy
- Educational Sociology

#### 2. B. Major Research Project: (Name of Faculty-Name of Project-Funding Agency)

- 1 Prof. Bishnupada Nanda-Education, Health, Culture, Religious Belief and Language of Kora Tribal Society-A Cross Sectional Survey-RUSA 2.0
- 2 Dr. Muktipada Sinha-Mental Health Problem among School Going Adolescents: A Comparative Study between Three Urban Areas of Bhutan, Bangladesh and India-RUSA 2.0
- 3 Dr.Prokash Biswas-A Study of Sustainable Development for the Education of the Descendants of the Refugees in West Bengal with Special Emphasis on Nadia, North and South 24 Parganas-RUSA 2.0
- 4 Dr. Soma Dutta (Principal Investigator) & Dr. Debashis Mridha (Co-Investigator)-Assessment of Ethical Values of Young Children in the Present Scenario: A Way to Develop a Responsible Citizen for the Future World-RUSA 2.0
- 5 Dr. Samir Chattopadhyay-Changing Scenarios of Bhadu and Tusu: A Study on Festivity of Rarh Bengal-RUSA 2.0

#### 3. B. Seminar/Workshop/Conference/Symposium Attended :(Name of Faculty-Name of Paper presented-Name of Seminar-Place-Duration)

1. Dr. Muktipada Sinha-delivered lecture as resource person-UGC-sponsored two days International Seminar on *Rethinking Rabindranath: Modernity, Coloniality, Decoloniality* Jadavpur University-6 and 7 January, 2020
2. Dr. Muktipada Sinha-delivered lecture as resource person-UGC- sponsored one day National Seminar on *Suicide Prevention: Role of Media in Community Awareness*-Jadavpur University-12 September, 2019

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3. Dr. Muktipada Sinha-delivered lecture as resource person-UGC- sponsored two days International Conference on “Community and Mental Health: Connect, Communicate and Care”-Jadavpur University- 3–4 January, 2020
- 3. C. Seminar/Workshop/Conference/Symposium Organised: (Name of Faculty-Name of Paper presented (if any)-Name of Seminar-Place -Duration)**
  1. Dr. Muktipada Sinha-UGC sponsored one day national seminar on “Suicide Prevention: Role of Media in Community Awareness” Jadavpur University 12 September, 2019
  2. Dr. Muktipada Sinha-UGC-sponsored International Conference on “Community and Mental Health: Connect, Communicate and Care”-Jadavpur University -3–4 January, 2020
  3. Dr. Muktipada Sinha-UGC- sponsored two days International Seminar as Coordinator on *Rethinking Rabindranath: Modernity, Coloniality, Decoloniality* on 6-7 January, 2020, Jadavpur University
- 4. Collaborative Programmes:**
  1. On 21st February, 2020 the Department observed “Bhasha Dibas” jointly with The Centre for Studies in Cultural Diversity and Wellbeing, Jadavpur University. The programme was inaugurated by Dr. Muktipada Sinha

### ENGLISH

Phone: 033-2457-2145/2224

H.O.D. : Prof. Nandini Saha

E-mail: hod@english.jdvu.ac.in

hod.english@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of the Course	No of Students Enrolled
• BA Honours	3 years, 6 semesters	74 current
• MA	2 years, 4 semesters	74 current
• M Phil	2 years	19 per year
• PhD registered by coursework (new UGC regulations)		85 approx.

1. B. Number of Faculty Members: 20 (Emeritus: 2, Professor: 9, Associate: 3, Assistant: 6)

#### 2. A. Area of Research Activities:

**The Department of English is a Centre of Advanced Study (CAS) under the UGC’s SAP Programme, the only CAS in English in India.** It was recognized by the UGC for the status of Departmental Special Assistance (DSA) in 1991 and became a Centre of Advanced Study in 2004. The existence of the Centre was a major factor in the Department gaining another UGC award (ASIHSS, 2006-11) for strengthening infrastructure and research facilities. The Centre’s programme of activities is mainly directed at research, but its influence is felt through the Department at all levels, in the University, the region and the country. It received funds from the UGC for **equipment and infrastructure, library acquisitions, conferences, visiting faculty, and travel.** It engages in **international collaboration** for the purposes of research. It is expected to provide leadership in developing

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new areas of Indian scholarship and in fostering academic exchange. **The CAS status was renewed in 2010, the second phase extending from 2010 to 2015.** The specified Thrust Area for CAS Programme Phase II (2010-15) was **Cultural Transactions**

**On 1 June, 2015, at the Interface meeting for renewal of the CAS Programme, the UGC recommended upgrading it to CAS Phase III for five years, with funding of Rs 1.28 crore plus emoluments for two project fellows.** The overall thrust area would remain **Cultural Transactions**, with the following special research interests:

1. **Translation**
2. **Shakespeare in Bengal**
3. **Incipient Modernities — India and the World**
4. **Archiving Local Knowledge Systems**
5. **World Literature to Indian Film**

**CAS Phase III began from the 2016-17 financial year for the next five years.**

The Second Meeting of the Advisory Committee, UGC- CAS English (Phase III) was held on 27 March, 2018 in the Department of English, Jadavpur University

The Centre of Advanced Study has also been recognized by the Research Councils UK (RCUK) in their report, *Arts and Humanities Research Landscape in India*, as a Centre of Excellence in Research in the Humanities. See: <http://www.rcuk.ac.uk/documents/india/Additionalcentres.pdf> under <http://www.rcuk.ac.uk/international/Offices/OfficeinIndia/landscape/Pages/Arts.aspx>

### **Brief account of CAS Phase I and CAS Phase II:**

**The broad field identified for research under Phase I (2004-2009) was *Textuality and Culture* with the following “thrust areas”:**

- Renaissance Studies
- Nineteenth Century Studies
- Twentieth Century Studies
- Translation Studies

### **The following areas had additionally been identified as important fields of study:**

- Literature and the Other Arts
- History of the Book
- Theatre Studies
- Literature and Psychoanalysis
- Popular Culture
- Medieval English and European Literature

**The major objectives** set out under the broad field of **Textuality and Culture** were the study of the cultural history of texts and the social, physical and material conditions of literary production, as well as the tasks of documentation, resource collection and archive building in all the specified thrust areas, integrating them into a common programme. This would include extension into wider cultural fields and emerging areas such as: study of non-canonical texts, popular literature and paraliterature, translation studies and cultural history, history of book production, publishing and circulation, study of literature in relation to other arts, textual studies and editorial method, inter-departmental and inter-faculty links in film studies, electronic media, women’s studies, cultural history of texts and study of material culture, the social, physical and material conditions of literary production, documentation, resource collection and archive-building

**In Phase II (2010-2015), the specific thrust area was identified as *Cultural Transactions*.** It was understood that the Centre would continue to focus on its areas of strength, but bring them into the frame of the encounters and transactions between cultures that India's history reflects, resulting from **travel, contact, colonization, migration, scientific and technological advances and exchanges**, leading to **new literary expressions**

### **CAS PHASE III THRUST AREA TEXTUALITY AND CULTURE II: CULTURAL TRANSACTIONS**

**BROAD FIELD: Textuality and Culture.** This includes the study of the cultural history of texts and the social, physical and material conditions of literary production, as well as the tasks of documentation, resource collection and archive building in all the specified thrust areas, integrating them into a common programme. This would include extension into interdisciplinary and emerging areas such as popular literature and paraliterature, translation studies and cultural history, history of book production, publishing and circulation, study of literature in relation to other arts, textual studies, editorial method, digital humanities, cultural history of texts, and study of material culture and the circulation of commodities

#### **Thrust Area: Cultural Transactions**

**The focus of the CAS III is the following areas:**

1. Translation
2. Shakespeare in Bengal
3. Incipient Modernities –India and the World
4. Archiving Local Knowledge Systems
5. World Literature to Indian Film

These would extend the earlier focus on **transactions between cultures**, resulting from **travel, contact, colonization, migration, scientific and technological advances and exchanges**, leading to **new literary expressions**

The study of English literature in India may itself be regarded as one of the products of these **cultural transactions** that have taken place in our history. It is important for English departments in India to focus attention on the nature of these cultural transactions, and to understand the far-reaching changes brought about by them, not simply in the context of colonization, but over a very long period of cultural contact across the world, and through migration and travel. The cultural production of texts and their distribution and influence depends on a host of factors including technological and social changes brought about by contact with other cultures. Moreover, just as commodities and human beings travel, so do ideas

#### **Objectives:**

1. To create a better understanding of intercultural exchanges in the intellectual and material realms, to explore interfaces between literature, arts and sciences, and to open new horizons for the discipline of English studies in India
2. To extend the study of print culture and textuality pioneered by the Department, create digital and print resources for research, train personnel in archiving and materials collection, and develop web-based programmes
3. To become a nodal centre for research in the Thrust Area: **CULTURAL TRANSACTIONS**

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### OTHER CENTRES IN THE DEPARTMENT:

The Department hosts the **Jadavpur University Society for American Studies**. With support from the Italian Embassy Cultural Centre, New Delhi, and the UGC-ASIHSS Programme, a **Renaissance Resource Centre** was established in the Department in 2009. The Department also houses the **Rabindranath Studies Centre**, established under the UGC Epoch-Making Thinkers Scheme in 2011, and temporarily serves as the office for the **Tagore Cultural Complex** to be constructed with funding from the Ministry of Culture, Government of India, which released the first instalment of Rs 4.5 crores in 2014-15, matched by Rs 1 crore from the Government of West Bengal

### CENTRE FOR VICTORIAN STUDIES

Coordinator : Saswati Halder

Joint Coordinator : Sutanuka Ghosh

The **Centre for Victorian Studies** was set up in 2010 with the objective of making it a meeting place for fruitful research in the area. The Centre has collaborated with the 'Victorian Studies Centre' of the **University of Leicester (UK)** whose members have expressed a keen interest to work with the faculty of Jadavpur University. **The Centre has an interdisciplinary approach to research and has worked in collaboration with the sister departments of the Arts Faculty of Jadavpur University, like Comparative Literature, History and Bengali.** We hope to make it function as a nodal centre for all researchers / college teachers working in the area in other Colleges and Universities of West Bengal as well

### 2. B. Major Research Project:

#### **Emeritus Prof. Sukanta Chaudhuri**

Joint Co-ordinator, 'Shabdakalpa': a computerized historical dictionary of the Bengali language: School of Cultural Texts and Records, Jadavpur University; RUSA project; in progress

#### **Emerita Prof. Supriya Chaudhuri**

Advisor/ Co-PI with Professor Abhijit Gupta, International Collaborative Project on *Sustainable Heritage and Policy in Kolkata*, Jadavpur University and University of Liverpool, March-August 2019 (approx. GBP 6000). Successfully completed and Project Report submitted

#### **Prof. Nandini Saha**

Member of the Departmental Project under RUSA 2.0 'Narratives of Faith: Devotional Songs and Poetry in the Eastern Regions of India'

#### **Prof. Nilanjana Gupta**

'UNICEF Youth Radio Reporters', at the School of Media Communication & Culture [funding: Rs. 28 lacs]

Member of the Departmental Project under RUSA 2.0 'Narratives of Faith: Devotional Songs and Poetry in the Eastern Regions of India'

Member of the RUSA 2.0 project 'Digital Interventions' at the School of Media, Communication & Culture [funding: 15 lacs]

#### **Prof. Abhijit Gupta**

Co-Investigator, 'Famine Tales from India and Britain', with University of Exeter, Nov 2019-Oct 2020

Principal Investigator, 'Sustainable Heritage and Policy in Kolkata', with Liverpool University, March-August 2019

Principal Investigator, 'Academic Publishing in India: Issues and Challenges', funded by RUSA 2.0, March 2019-March 2020

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Co-investigator, 'Two Centuries of Indian Print', with the British Library UK, funded by the AHRC and the Newton Fund, 2016-20[Funding in India: Rs. 18 lacs approx.]

### **Prof. Paromita Chakravarti**

Principal Investigator of the CAS 'Shakespeare in Bengal' project

Coordinator of the collaborative project on Shakespeare in Bengal between School of Cultural Texts and Records, Jadavpur University and the Folger Library, Washington, USA (2018-19)

Co-investigator in the collaborative research project "Transcultural Readings: The Bengal Italy Encounter in the 20th Century" funded by Sapienza University Rome through the Bando AccordiInternazionale 2017 to facilitate joint research between Sapienza University, Rome and Jadavpur University, Kolkata (ongoing since 2017)

Principal Investigator of Project "Ananyo — Mobilising Single Women in West Bengal", under Sappho for Equality, funded by American Jewish World Service

Principal Investigator of project entitled "Bodies of Difference: Pedagogies of the Marginal in the Global South" sanctioned under the RUSA 2.0 in research thrust area "Global South", February 2019

### **Prof. Santanu Biswas**

Principal Investigator of project on "Conservation, Digitization, and Metadata Creation of Rare and Endangered Recordings of Indian Classical Music" sanctioned under the RUSA 2.0 scheme of the Government of India funding: Rs. 5,20,000

### **Prof. Sonia Sahoo**

Co-Principal Investigator, 'Narratives of Faith: Devotional Songs and Poetry in the Diverse Traditions of Eastern Regions of India', funded by RUSA 2.0, March 2019-March 2020

### **Prof. Manojit Mandal**

'*Rabijibani* (Life of Rabindranath Tagore) in English', a RUSA 2.0 project at the Centre for Studies in Cultural Diversity and Wellbeing, JU since March 2019 [funding: 25 lacs]

"Tagore in English: Essays of Decolonization" a RUSA 2.0 project at the Department of English [funding: 8.25 lacs]

A project on cultural diversity and status of mental health at Jadavpur University, along with Dr. Muktipada Sinha of the Department of Education since March 2019 [funding: 3.5 lacs]

### **Dr. Nilanjana Deb**

Principal investigator of British Library Endangered Archives Programme Project EAP 922 "Digitisation and conservation of endangered paper records of the British Indian Association" September 2016-March 2019; project report accepted by British Library in March 2019; Project award: £34,120

Co-researcher for 'Bodies of Difference: Pedagogies of the Marginal in the Global South', in research group along with Prof. Paromita Chakravarti, Dr. Kaustav Bakshi, and Shri Ishan Chakraborty. A RUSA 2.0 project, commenced March 2019, ongoing. Funding: 12 lakhs

### **Dr. Saswati Halder**

Principal Investigator of Project titled 'Literary Ecology in Nineteenth Century Bengal' under RUSA 2.0 (February 2019 – March 2020)

Co-Investigator of Project titled 'Narratives of Faith: Devotional Songs and Poetry of the Eastern Regions of India' under RUSA 2.0 (February 2019 – March 2020)

### **Dr. Rafat Ali**

Co-Principal Investigator, "Narratives of Faith: Devotional Songs and Poetry in the Diverse Traditions of Eastern Regions of India" under RUSA 2.0, UGC, March 2019-March 2020



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### **Dr. Sutanuka Ghosh**

Co-Principal Investigator with Dr. Saswati Halder of the Department of English, Jadavpur University of a major research project “Literary Ecology in 19th century Bengal” funded under the RUSA 2.0 scheme of the Govt. of India

### **Dr. Abhishek Sarkar**

Principal Investigator of the RUSA 2.0 funded individual major research project entitled “The First World War and Bengali Self-Representation” [funding: Rs. 4.80 lacs]

Joint Co-ordinator of the “Shakespeare in Bengal” project, held under CAS in English (Phase III) in collaboration with the Folger Shakespeare Library, Washington DC

### **Dr. Ramit Samaddar**

Archive on “Brahma Kumaris in Kolkata” under RUSA 2.0 Project “Narratives of Faith: Devotional Songs and Poetry in the Diverse Traditions of Eastern Regions of India” (Principal Investigators: Dr. Rafat Ali and Prof. Sonia Sahoo)

### **Dr. Kaustav Bakshi**

Project Coordinator of the RUSA 2.0 funded project entitled, ‘Bodies of Difference: Pedagogy of the Marginal in the Global South’

### **Dr. Doyeeta Majumder**

July 2019- present: Co-coordinator, ‘Jibanananda Papers’, School of Cultural Texts and Records, Jadavpur University

January 2019-present: Co-coordinator, ‘Shabda Kalpa: A Historical Dictionary of the Bengali Language’, School of Cultural Texts and Records, Jadavpur University

8-15 November, 2019: Public Exhibition on Shakespeare in Bengal, in collaboration with Victoria Memorial Hall

### **Sri Ishan Chakraborty**

“Bodies of Difference; Pedagogies of the Marginal in the Global South” under the RUSA 2.0 scheme, in collaboration with Prof. Paromita Chakravorty, Dr. Nilanjana Deb and Dr. Kaustav Bakshi of the Department of English, JU

“Shabdakalpa: A Historical Dictionary of The Bengali Language” under the RUSA 2.0 scheme at the School of Cultural Texts and Records, Jadavpur University, in collaboration with Dr. Parthasarathi Bhaumik (Comp. Lit.) and Dr. Doyeeta Majumder (English)

## **3. A. Invited Lectures Delivered/Sessions Chaired:**

### **Emeritus Prof. Sukanta Chaudhuri**

‘One India, Many Shakespeares’: Folger Shakespeare Library, Washington DC, USA, April 2019

‘Tagore’s Vision of an India Beyond India’: Tagore Memorial Lecture, Rabindranath Tagore Institute, Mauritius, May, 2019

‘Where is Kolkata?’: Victoria Memorial Hall, Kolkata, August, 2019

### **Prof. Nilanjana Gupta**

Invited Lecture: “Cultural Theory,” Bhawanipur College, September, 2019

Invited Lecture: “Detective Fiction,” Women’s Christian College, November, 2019

Paper Presented at IAWS Conference, New Delhi with Ahana Ganguly: “Newer Challenges for the Constitution of India in Defining the Crucial Identity of ‘Citizenship’: A Case from the Contemporary Discourse on NRC in West Bengal”

Plenary Address: “Calcutta & Conviviality,” at the International Forum on ‘Megacities: Conviviality and its Limits’, JU, February, 2020

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### **Prof. Nandini Saha**

Plenary lecture titled “Tribal Life and Cultural Identity in West Bengal”, at National seminar “Rethinking Tribal Identity”, organised by the Department of English, Mizoram University, Aizawl, on 28 and 29 March, 2019

Plenary lecture “Tribal Life in Bengal: A South Asian Perspective”, at International Conference on “South Asian Literatures and Cultures”, at Bidhan Chandra College, Asansol, on 4-5 January, 2020

### **Prof. Paromita Chakravarti**

Invited lectures on “Feminist Leadership Vs Women’s Leadership” and “Sexual Harassment Policies: An international Perspective” (26 March, 2019) at a 4 week training course entitled Creating Change Makers: Enhancing Skills of Women Professionals for women professionals, organized by the Administrative Staff College of India and funded by the Ministry of External Affairs (MEA, Government of India) at the Administrative Staff College of India, Hyderabad between 4 and 29 March, 2019

Visiting professor at La Sapienza, Rome, Italy between 8 and 30 May, 2019. Delivered a series of three lectures at the Department of Oriental Studies, Sapienza University:

- (a) “Translating Cultures: Italian Dramatists on Bengali stage” (14th May, 2019)
- (b) “Living On the Edge”: Mapping Homeless Women’s Mobilisation in Kolkata (13th May, 2019)
- (c) “From Mother India to India’s Daughters: Feminist Struggles for Autonomous Citizenship” (17th May, 2019)

Invited Lectures on Adaptations and Culture at IIM, Lucknow—6–7 July, 2019

Chaired session on Early Modern Women (16th Nov, 2019) at the ‘Renaissance Man: Reappropriation and Reinvention’ international conference held at Jadavpur University between 14–16 November, 2019

### **Prof. Sonia Sahoo**

Chaired a session at the International Conference on English Learning and Teaching Skills organised by the Department of Basic Science and Humanities, Institute of Engineering and Management, Kolkata, 25-27 July, 2019

Chaired a session in ‘Movements: Body, Space, Politics’, National Conference for Research Scholars organised by the Centre of Advanced Study, Department of English, Jadavpur University, 7-8 November, 2019

Chaired a session at the International Conference on ‘Renaissance Man: Reappropriation and Reinvention’, organised by CAS, Department of English, Jadavpur University, 14-16 November, 2019

### **Prof. Manojit Mandal**

Delivered a lecture on “Emerging Trends in Research in Humanities: Problems and Perspectives” in an international workshop on “Research in Culture and Humanities: Methodological Issues and Emerging Trends” organised by the Centre for Cultural Diversity and Wellbeing in collaboration with Dept. Of Bengali, Dr. Shyama Prasad Mukherjee University, Ranchi, Dept. Of Mass Communication, Gour Banga University and Byanjanbarna Foundation, Kolkata, in October, 2019

### **Dr. Nilanjana Deb**

Invited lecture on “Bruno Latour and Political Ecology” at the Department of English, Presidency University, 13 March, 2019

Invited lecture on “Postcolonial Feminisms” at the Department of English, Loreto College, April 30, 2019

Invited talk on “Gandhi: The Diversity of Opinions on Ethics” on DD Bangla, 3 December, 2019

Invited lecture on “Conscientization in the Indian Classroom: An Experiment in the Critical (Un) Learning of Postcolonial Literature”, in International Workshop on Aesthetic Education: Humanities Pedagogy

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Confronting Colonialism at Utrecht University, Supported by KNAW, the Royal Dutch Academy of Sciences and by the Modern and Comparative Literature Research Group, ICON (Institute for Cultural Inquiry), Utrecht University, 19-21 February, 2019

Invited Lecture on “Reflections on Artificial Intelligence, Consciousness and the Post-Human” in “Humanism and After: Literature’s Journey from Humanism to Cyber Culture & Other Form of Post Humanism” organized by Midnapore College (Autonomous), Midnapore, Paschim Medinipur, 24–25 September, 2019

### **Dr. Rafat Ali**

Chaired a session at the Professor Debabrata Mukherjee Memorial Annual Intra-Departmental Students’ Seminar titled ‘Time Present and Time Past: Making and Un-Making Memory,’ Department of English, Jadavpur University, 29 March, 2019

Evaluator for paper presentations on 24.07.2019 in the 73rd Orientation Programme organized by the UGC-HRDC, Jadavpur University, 8–27 July, 2019

Chaired a session at the ‘Renaissance Man: Re-appropriation and Reinvention’ International Conference organized by the CAS, Department of English, Jadavpur University, 14 -16 November, 2019

Delivered two lectures on 05.12.2019 at a Refresher Course in English organized by the Department of English and UGC-Human Resource Development Centre, Aligarh Muslim University. 28 November -11 December, 2019

Evaluator for paper presentations on 12.12.2019 in the 75th Orientation Programme organized by the UGC-HRDC, Jadavpur University. 25 November–14 December, 2019

### **Dr. Saswati Haldar**

Chaired a session in a one-day state level seminar ‘200 Years of Keats’s Great Odes’ at the Department of English, Jadavpur University, in September, 2019

### **Dr. Kaustav Bakshi**

Invited as a key resource person to a one-day seminar on Homonationalism and Pinkwashing in Contemporary India at the Department of Sociology, Ambedkar University, Delhi on 21 February, 2020

Invited as a key resource person for a one-day workshop on “Academic Writing in Linguistics” at the Department of Linguistics, Jadavpur University on 13 February, 2020

Invited to teach at the Department of English, Delhi University as a Visiting Fellow from 16 February-1 March, 2020

### **Sri Ishan Chakraborty**

Delivered an Invited Lecture titled “Rabindrasahitye dui nari: Mrinal o Nandini” on 29.09.2019 at the Kabir Road Centre of the elocution and recitation institute run by Bratati Parampara

Delivered an Invited Lecture titled “Rabindrakabita: aadhunikata o abritti” on 16.07.2019 at the Behala Centre of the elocution and recitation institute run by Bratati Parampara

Invited as a resource person to speak on “Diversity and Inclusiveness in Academia” on 17.01.2019 in a Leadership for Academicians Program organized by IISER Kolkata

Chaired an academic session in a two-day national conference for research scholars titled “Movements: Body, Space, Politics” organized by Centre of Advanced Study, Department of English, Jadavpur University on 08.11.2019

Conducted a “Workshop on Disability” under the Youth Community Reporters Project organized by School of Media Communication and Culture, Jadavpur University in collaboration with UNICEF on 01.10.2019

Delivered an invited lecture titled “Disability and Inclusion: Challenging the Ableist Structures in Education” on 24.02.2020. to all B.Ed. and Education students at the Auditorium of Loreto College, Kolkata

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### **Dr. Doyeeta Majumder**

27 April, 2019: Invited lecture at Seth Soorajmull Jalan Girls' College on Shakespeare's Comedies

15 June, 2019: 'Law of Nature in Inns of Court Drama' at King's College, London (via Skype)

20 September, 2019: Master-class on Ibsen and Tennessee Williams at Modern High Girls School

### **3. B. Seminar/Workshop/Conference/Symposium Attended:**

#### **Emeritus Prof. Sukanta Chaudhuri**

'The Human and the Digital: Extending the Dialogue': conference on Digital Humanities, Dartmouth College, USA, April, 2019

'Vidyasagar: Scholarship and Humanity': Asiatic Society, Kolkata, October, 2019

'Shakespeare as Big Data': conference on the Renaissance, Jadavpur University, November, 2019

'The Creation of Memory': Social Sciences Workshop, French Institute, Pondicherry, November, 2019

'Digital Disciplines': conference on pedagogy and digitization, Jadavpur University, January, 2020

'Identifications': keynote lecture, annual conference of the Indian Association of Comparative Literature, Kolkata, February, 2020

#### **Emerita Prof. Supriya Chaudhuri**

The Making of a City: Religion and Society in Early Modern Bengal' UrbRelColloquium, Max Weber Kolleg Humanities Centre for Advanced Studies, University of Erfurt, Germany, 21 May, 2019

'Significant Lives: Autobiography, Biography and Women's History in South Asia' Keynote at International Conference on Inscribing Biographies in the Global South, Oxford Centre for Life Writing, Wolfson College, Oxford, 1 June, 2019

'Virginia Woolf and Compost' at International Conference on Recycling Woolf, University of Nancy, Lorraine, 27-29 June, 2019

'Politics and Play in Thomas Middleton's A Game at Chess' at International Conference on Gambling and Cheating in Early Modern England, Sorbonne University of Paris, 13 September, 2019

'Between dulce and utile: itinerant knowledge in the travels of Ludovico di Varthema' at International Conference on Migrant Knowledge: Early Modern and Beyond, CRASSH, University of Cambridge, 15-17 September, 2019

'We have never been human: reflections on politics and society' at Conference on Humanism and After: Literature's Journey from Humanism to Cyber Culture and Other Forms of Post Humanism, Midnapore College, 24-25 September, 2019

'From Human to Animal: Knowledge, Power and Renaissance Theriomorphy' at International Conference on Renaissance Man: Re-appraisal and re-invention, Jadavpur University, 14-16 November, 2019

'Region, Nation, Border: Some Reflections on Bengali Literature and History' at International Conference on Dui Bangla: Bangladesh and West Bengal from Environmental Issues to Cultural Perspectives, University of Chicago Centre in Paris and INALCO, Institut National des langues et civilisations orientales, Paris, 15-17 December, 2019

#### **Prof. Nilanjana Gupta**

"The Limits of Post-colonialism: Arguments in Favour of Moving On" at University of Haifa, Israel, in International Symposium on "Through English Densely: Rethinking the Postcolonial" December, 2019

"E/merging Spaces: Performance, Power & Our Cityscape." Launch of digital repository of performance in Kolkata [www.projectperformance.in](http://www.projectperformance.in), November, 2019

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### **Prof. Santanu Biswas**

“The Different Approaches to Mental Health”, Orientation Programme, UGC Human Resource Development Centre, Jadavpur University, August 2019

“Post-Freudian Psychoanalysis”, Short Term Course on Counselling and Stress Management, Centre for Counselling Services and Studies in Self Development, Jadavpur University, September, 2019

Evaluator for the Survey based Group Project and Discussion at the 76th Orientation Programme organised by the UGC-HRDC at Jadavpur University, February, 2020

### **Prof. Abhijit Gupta**

‘Aliens in Calcutta, 1966-2019: the many avatars of Bengali SF’, Postcolonial Print Cultures, New York University, Abu Dhabi, 22-23 January, 2020

### **Prof. Nandini Saha**

Plenary lecture “Tribal Life in Bengal: A South Asian Perspective”, at International Conference on “South Asian Literatures and Cultures”, at Bidhan Chandra College, Asansol, on 4–5 January, 2020

### **Prof. Paromita Chakravarti**

Presentation on “The quest for autonomous citizenship: Representing women’s singleness in contemporary cinema” made at the Indian Association for Women’s Studies Conference held in Delhi between 28-31 January, 2019

Invited paper on “Women, singleness and Sexualities” (15 March, 2019) in Sexuality Academy organized by Sappho for Equality between 13-17 March, 2019

Delivered Plenary lecture entitled “Framing Femininities: Shakespeare’s Heroines and Indian Cinema” at the international conference on Women and Indian Shakespeares held at Queen’s University, Belfast, UK, 30 October –1 November, 2019

### **Prof. Sonia Sahoo**

Presented a paper on ‘Portuguese Missionary Knowledge Archiving’ at the International Conference on Asian Studies organised by International Academic Forum (IAFOR) at Tokyo, Japan, 25-27 May, 2019

### **Prof. Manojit Mandal**

Delivered a lecture on Library Culture and the Rural-Urban Digital Divide in contemporary India in an international Seminar on Education and Library Culture in Digital Era, organised by Centre for Cultural Diversity and Wellbeing, JU & Library, Salt Lake Campus, JU in collaboration with Byanjanbarna Foundation, Kolkata in August, 2019

Delivered a Special inaugural lecture on “Tagore and Decolonization” at the international seminar on “Rethinking Rabindranath: Modernity, Coloniality and Decoloniality” organised by Centre for Cultural Diversity and Wellbeing in collaboration with Department of Political Science, SKBU, Purulia and Byanjanbarna Foundation, Kolkata in January, 2020

### **Dr. Saswati Halder**

Presented a paper on ‘Imperial Captive: The Elephant as an Emblem of Shared Heritage’ at the International Conference on ‘Rethinking Romanticism’, The Bhawanipur Education Society College, Kolkata, January, 2020

### **Dr. Abhishek Sarkar**

Presented a paper entitled “The Renaissance Man’s Body on Display: Paul Robeson as a Nude Model” at the three-day International Conference on “Renaissance Man: Re-Appraisal and Re-Invention” organized by the Department of English, Jadavpur University on 14-16 November, 2019



**Dr. Ramit Samaddar**

“The Barnabys in America: Frances Trollope’s Anti-Slavery Novel” at the International Conference on “Transatlantic Connections: Africa, The Caribbean, The Americans, & Victorian Studies”, organized by the Victorians Institute (US) on 31 October, 1st and 2nd November, 2019

“Divakaruni’s Draupadi” at the International Conference on “Re-imagi(ni)ng Identities: Challenges, Transgressions and Articulation”, organized by IACLALS in association with the Department of English, Jadavpur University from 5-7 February, 2020

“Sarah Grand’s *The Beth Book: The Rise of the New Woman*” (Plenary talk) at the State-Level Conference on “Exploring the Victorian Era: Class, Gender, Power, Knowledge,” organised by the Department of English, Santipur College, on 25 February, 2020

**Dr. Kaustav Bakshi**

Presented a paper entitled, “The Adultery Law, Female Sexuality and Marriage: ‘Unfaithful’ women in Indian cinema” at the international conference, “Sexing South Asia – Law, Activism, and Sexual Justice” organised by Jindal Global Law School in association with University of Connecticut and Sussex University in New Delhi on 19 –20 July, 2019

Presented a paper entitled, ‘Gay Boys and Coming of Age Narratives in Sri Lanka: A reading of Shyam Selvadurai’s *Funny Boy* and *Swimming in the Monsoon Sea* and *The Hungry Ghosts*’ at the two-day national seminar on ‘Articulating Multiple Childhoods: Demystifying the Normative’ under financial support from RUSA 2.0 ‘Support towards seminar/conference’ at the Department of Sociology, Jadavpur University held on 8-9 August, 2019

Participated in a panel discussion on “Love, Sex and Rock and Roll” at the national seminar on ‘Myth, Protest and Race in Twentieth Century American Poetry’ organized by the Jadavpur University Society for American Studies (JUSAS) on 29 November, 2019 at Jadavpur University

Presented a paper entitled ‘A Queer Indian in London: literature, sexuality and a familiar cityscape known through literary texts’ at the international workshop on ‘Cross Border Queers: The Story of South Asian LGBTQ Migrants in the UK’ on 13 December, 2019 in the British Deputy High Commission in Kolkata. The workshop was jointly organized by Loughborough University, Strathclyde University, The British Deputy High Commission and funded by the British Academy

**Sri Ishan Chakraborty**

Presented a paper titled “Information and Communication Technology (ICT) and Disability in Higher Education: Scopes and Challenges” in a one-day international seminar titled “ICT Integration in Teaching and Learning: Scopes and Challenges in Higher Educational Institution” organized by IQAC, Muralidhar Girls’ College on 17.08.2019

Presented a paper titled “The Limping America; a Dialogue between the Disability and the American Identities in Flannery O’Connor’s short stories” in a seminar on *The Split Self: Identity Crisis in American Literature and Art*, organized by the Jadavpur University Society of American Studies (JUSAS), on 19.03.2019

Presented a paper titled “It is in the small things we see it”: Protest in the Poetry of Plath and Sexton in a seminar organized by the Jadavpur University Society for American Studies (JUSAS) on Myth, Protest, and Race in Twentieth Century American Poetry on 29 November, 2019

Participated in a panel discussion on “Love, Sex, and Rock and Roll: Cultures of Protest in Twentieth Century American Poetry by Women” in a seminar organized by the Jadavpur University Society for American Studies (JUSAS) on Myth, Protest, and Race in Twentieth Century American Poetry on 29.11.2019

Presented a paper titled “Queer-Crippling Mainstream Bengali Media in the Context of COVID-19 Lockdown” (video podcast presentation) at the two-day Cripposium Virtual Conference, organized by the Department of English, King’s College London, on 6 and 13 June, 2020



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Delivered a lecture titled “Online Education and Visual Disability: Inclusion in the Areas of Curriculum, Pedagogy and Evaluation” at the three-day international webinar on “Inclusive Education: Challenge to COVID-19,” organized by the Department of Education, Siddhinath Mahavidyalaya (affiliated to Vidyasagar University), on 09.08.2020

### 3. C. Seminar/Workshop/Conference/Symposium Organized:

#### Prof. Abhijit Gupta

Organiser, ‘Two Centuries of Indian Print: Issues and Challenges’, Digital Humanities and Literary Mapping, Jadavpur University, 7-9 January, 2020

#### Prof. Nandini Saha

Organised the International Conference titled “Reimagi(n)g Identities in the Global South: Challenges, Transgressions and Articulation” with IACLALS, from 5-7 February, 2020

#### Prof. Paromita Chakravarti

Co-organised (with colleagues and researchers) an exhibition on Shakespeare in Bengal with Victoria Memorial Kolkata from 13-20 November, 2019

Spoke at a discussion on the occasion held on 13th November, 2019 in a panel consisting of Prof. Sukanta Chaudhuri, Mr. Eric Johnson (Folger Library), moderated by Dr. Doyeeta Majumder

#### Prof. Sonia Sahoo

Organising Committee, IACLALS Annual Conference on ‘Reimag(in)ing Identities in the Global South: Challenges, Transgression and Articulation’, co-hosted by the Department of English, Jadavpur University, 5-7 February, 2020

Presented a paper on ‘In-between Lives: The Ambivalence of Identity in The Travels of Dean Mahomed’, at the IACLALS Annual Conference on ‘Reimag(in)ing Identities in the Global South: Challenges, Transgression and Articulation’, co-hosted by the Department of English, Jadavpur University, 5-7 February, 2020

#### Dr. Nilanjana Deb

Co-organised international workshop on “Decolonial Practices in the Spanish-speaking Borderlands: Latinx Poets against Colonisation and Neoliberalism” with CAS Visiting Fellow Dr. Jorge Diego Sánchez (University of Salamanca, Spain) from 15-18 January, 2020 at Jadavpur University

Co-organised international workshop on “Creative Criticality in Colonial and Indigenous Archives”, April 22-23, with Prof. Edgar Garcia, Department of English, University of Chicago, at The University of Chicago Center in Delhi

#### Dr. Saswati Halder

Organized a workshop on ‘Jal, Jangal, Jameen and Us’ sponsored by a RUSA 2.0 Major Research Project ‘Literary Ecology in Nineteenth Century Bengal,’ January, 2020

#### Dr. Sutanuka Ghosh

Organised an International Workshop “Through English Densely: Rethinking the Postcolonial” in collaboration with Dr Ayelet Ben-Yishai, Chair and Associate Professor, Department of English, University of Haifa, Haifa, Israel

Presented Partition, Nationalism and the ‘Anti-national Poet’, in the International workshop titled “Through English Densely: Rethinking the Postcolonial”, University of Haifa, Israel (8 December, 2019)

Organised a two-day workshop titled “Jal, Jangal, Jameen and Us” as part of the major research project “Literary Ecology in 19th century Bengal” funded by RUSA 2.0 (along with Co-Principal Investigator Dr Saswati Halder)

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Organised a two-day conference titled “Global South Conversations: Eco-Cosmopolitanism, Ethics of Proximity and Anthropocentric Anxieties in the Time of Climate Change” as part of the major research project “Literary Ecology in 19th century Bengal” funded by RUSA 2.0 (along with Co-Principal Investigator Dr Saswati Halder)

### **Dr. Abhishek Sarkar**

Organiser, “200 Years of Keats’s Great Odes,” a one-day state-level seminar on Keats organised under CAS (III), the Department of English, 13 September, 2019

Organized a two-day international conference entitled “The First World War and Bengali Identity” on 15 and 16 January 2020 under the RUSA 2.0 sponsored individual major research project “The First World War and Bengali Self-Representation”

### **Dr. Ramit Samaddar**

Co-Convener of One-Day State-Level Seminar titled “From ‘the Great Tradition’ to Spin-Offs: Rereading Jane Austen,” organised by the Department of English, Jadavpur University, on 27 February, 2019

### **Dr. Kaustav Bakshi**

Organized a National Students’ Conference on “Queering Political Assemblages: The Question(s) of Citizenship(s), Belonging(s), Intimacies” on 7 March, 2020. Funded by the departmental seminar fund

### **Dr. Doyeeta Majumder**

Organised the International conference ‘Renaissance Man: Reappraisal and Reinvention’ at Jadavpur University (funded by UGC CAS III), 14-16 November, 2019

## **3. D. Orientation Courses/ Refresher Courses Attended:**

### **Sri Ishan Chakraborty**

Participated and successfully completed the online ‘Summer School on Disability Studies’, organised by the Gujarat National Law University through its Centre for Disability Studies (GCDS) from 08-16 August, 2020

## **4. A. Books/Monographs etc. Published:**

### **Emeritus Prof. Sukanta Chaudhuri**

(Edited and contributed) *The Cambridge Companion to Rabindranath Tagore*, Cambridge University Press, 2020

(Translated) *Red Ant, Black Ant*: translation of the Bengali *LalKalo* by Girindrashekar Basu, Jadavpur University Press, Kolkata, 2020

### **Prof. Paromita Chakravarti**

Co-editing *Ageing, Ageism and Cultures* (forthcoming from Routledge)

Co-editing *All the World’s His Stage: Asian Interventions in Global Shakespeare* (forthcoming from Routledge International)

### **Prof. Santanu Biswas**

Editor, *Jadavpur University Essays and Studies XXXIII*, Literature and Lacan (Forthcoming)

### **Prof. Manojit Mandal**

Edited and published the 2018-19 Issue of the UGC listed peer reviewed journal, *International Journal for Persons with Special Needs and Rehabilitation Management* from the Centre for Studies in Cultural Diversity and Wellbeing

**Dr. Nilanjana Deb**

Editor, *Jadavpur University Essays and Studies XXXII* (in press)

**Dr. Kaustav Bakshi**

*Popular Cinema in Bengal: Genre, Stars, Public Cultures* (Abingdon: Routledge, 2020) [Co-edited with Madhuja Mukherjee (Jadavpur University)]

Co-editing, *Ageing, Ageism and Cultures* (working title) with Routledge

**4. B. Articles Published in Journals/Chapters in Books: (Including National/International & Peer-reviewed Journals)**

**Emerita Prof. Supriya Chaudhuri**

On Making Noise: Hokkolorob and its place in Indian Student Movements', *Postcolonial Studies* (2019), DOI: 10.1080/13688790.2019.1568168

'Nishchindipur: The Impossibility of a Village Utopia'. *Open Library of Humanities*, 5(1): 25 (2019), pp. 1–28. DOI: <https://doi.org/10.16995/olh.395>

'Bhadralok', in *Keywords for India: A Conceptual Lexicon for the 21st century*, ed. Rukmini Bhaya Nair and Peter Ronald de Souza (Delhi: Bloomsbury, 2020)

'Imagined Worlds: the prose fiction of Rabindranath Tagore', in *The Cambridge Companion to Rabindranath Tagore*, ed. Sukanta Chaudhuri (Cambridge: Cambridge University Press, 2020), 131-57

'Not fit for any other pursuit': Shifting places, shifting identities in Ludovico de Varthema's 'Itinerario' in *Eastern Resonances in Early Modern England*, ed. Claire Gallien and Ladan Niayesh (London: Palgrave Macmillan, 2019), 17-34

'Seeing Things: Tagore's Sense of the Real', in *Tagore, Einstein and the Nature of Reality: Literary and Philosophical Reflections*, ed. Partha Ghose (London: Routledge, 2019), 73-91

'Eyes Wide Shut: Seeing and Knowing in Othello' and 'What does the Slave know? A Response to Stephen Spiess' in Subha Mukherji, ed. *Blind Spots of Knowledge in Shakespeare and his World* (Medieval Institute Publications: University Press at Kalamazoo/ De Gruyter, 2019) 75-88; 153-55

'Writing Travel in India', in *The Cambridge History of Travel Writing*, ed. Nandini Das and Tim Youngs (Cambridge University Press, 2019), 159-74

'Modernist Literary Communities in 1930s Calcutta: the politics of Parichay', in *Modernist Communities across Cultures and Media*, ed. Caroline Pollentier and Sarah Wilson (University Press of Florida, 2019), 177-96

**Prof. Prodosh Bhattacharya**

'The Suffragette Movement and Marie Corelli' in *The Confidential Clerk*, Vol. 5 (2019) 65-78

**Prof. Nilanjana Gupta**

"Geographies of Knowledge: Learning from the Other," *Essays & Studies*, forthcoming

"Ends or Means: Education, Women and Islam in Kerala" in *Women and Education in India*, Jogamaya Devi College, 2020

**Prof. Abhijit Gupta**

'Publishing and the History of the Book in South Asia', in Alex Tickell, ed. *The Oxford History of the Novel. Vol 10. The Novel in South and South East Asia since 1945* (Oxford: Oxford University Press, 2019)

'Gilead's gripping secrets bared', *The Telegraph*, 20 December 2019 (review of Margaret Atwood's *The Testaments*)

'Bidyasundar: stories a romance can tell', *The Telegraph*, 20 September 2019 (review of Tapti Roy's *Print and Publishing in Colonial Bengal*)

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'The Dazzle in the Darkness', *The Telegraph*, 2 May 2019 (review Joan DeJean's *The Queen's Embroiderer*)

### **Prof. Nandini Saha**

"Speaking in a Different Voice: Dalit Women Writing in Bengali"; in an edited volume to be published by Routledge by the School of Women's Studies, JU, forthcoming

### **Prof. Paromita Chakravarti**

"Globalising the Local: Millennial Kolkata films and the bard" in *All the World's His Stage: Asian Interventions in Global Shakespeare* (Routledge, London and New York, forthcoming)

"Indian Learns, ageing and Culture" in *Ageing, Ageism and Cultures in India* (Routledge India, forthcoming)

"Of Homes, Hostels and Addresses: Intergenerational Perspectives on Habitations and Single Women in Kolkata" (forthcoming in book on *Single in the City*, Heidelberg University)

"Hok Kalorob, Campus Politics and the pre-histories of "me too" (forthcoming, Zubaan)

### **Prof. Rimi Barnali Chatterjee**

Short story published, 'A Night with the Joking Clown', in *The Gollancz Book of South Asian Science Fiction*, edited by Tarun Saint and Manjula Padmanabhan, Hachette, 2019

### **Prof. Sonia Sahoo**

Book review on Carlos Luis Zafon's *The Labyrinth of Spirits*, *The Telegraph*, 19 April, 2019

Book review on Aakash Singh Rathore's *A Philosophy of Autobiography: Body and Text*, *The Telegraph*, 18 October, 2019

### **Prof. Manojit Mandal**

Tagore and Decolonization, *Vidyasagar University Journal of History*, ISSN 2321-0834, 2018-19; Vidyasagar University, West Bengal (Forthcoming)

Decolonizing Education: Tagore and his Alternative Pedagogy, *Yearly journal Evolving Horizon*, ISSN 2319-6521, vol.7, 2018, Satyapriyo Roy College of Education (Post Graduate Teacher Education Institute), Kolkata-64

### **Dr. Nilanjana Deb**

"Conscientization in the Indian Classroom: An Experiment in the Critical Learning of Postcolonial Literature" in the *Cambridge Journal of Postcolonial Literary Inquiry* 7.2 (in press)

### **Dr. Rafat Ali**

Review of Wael B. Hallaq, *Restating Orientalism: A Critique of Modern Knowledge* (New York: Columbia University Press, 2018) in *Postcolonial Interventions: An Interdisciplinary Journal of Postcolonial Studies*, ISSN 2455-6564. <https://postcolonialinterventions.files.wordpress.com/2019/02/4.1reviewali-1.pdf>.

'Re-mapping the Idea of Europe in the Age of Re-discovery: The Racialization of Savagery in the Muslim World in the Economic Tracts of Daniel Defoe', *Jadavpur University Essays and Studies* vol. 33 (in press)

### **Dr. Sutanuka Ghosh**

Book review titled "Motherhood and the Nation" of Paulomi Chakraborty's *The Refugee Woman: Partition of Bengal, Gender, and The Political* (OUP, 2019) in *The Telegraph* on 2 August, 2019

### **Dr. Kaustav Bakshi**

'Harper Lee'. *The American Novel from Hawthorne to Heller: Cultural Contexts and Critical Perspectives*. Eds. Ashok K Mohapatra, Pritha Chakraborty, S Banerjee Mukherjee (New Delhi: Macmillan Education, 2020), pp. 291-315

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‘A brief introduction to popular cinema in Bengal: genre, stardom, public cultures’. *Popular Cinema in Bengal: Genre, Stars, Public Cultures*. Eds. Madhuja Mukherjee and Kaustav Bakshi (Abingdon: Routledge, 2020) [Revised and reprinted], pp. 1-9

‘From Teen Kanya to Arshinagar: feminist politics, Bengali high culture and the stardom of Aparna Sen’. *Popular Cinema in Bengal: Genre, Stars, Public Cultures*. Eds. Madhuja Mukherjee and Kaustav Bakshi (Abingdon: Routledge, 2020) [co-author: Rohit K Dasgupta of Loughborough University, UK] [Reprinted], pp. 92-110

‘Rituparno Ghosh, performing arts and a queer legacy: an abiding stardom’. *Popular Cinema in Bengal: Genre, Stars, Public Cultures*. Eds. Madhuja Mukherjee and Kaustav Bakshi (Abingdon: Routledge, 2020) [Reprinted], pp. 205-220

### Dr. Abhishek Sarkar

“The Scottish ‘Ploughman Poet’ Among the Bengali Intelligentsia: Appreciating Robert Burns in Colonial Bengal,” *Scottish Literary Review*, vol. 11, no. 2 (Autumn/Winter 2019): 101-24. <https://muse.jhu.edu/article/741713>

“Shakespeare’s Ariel versus Kalidasa’s Yaksha: Revisiting a Comparative Study from 19th-Century Bengal,” *Literature Compass*, e12554. <https://doi.org/10.1111/lic3.12554>

“The Great War, Communal Identity and Personal Emotions in the Fiction of Kazi Nazrul Islam,” *South Asian History and Culture*, vol. 10, issue 2 (August 2019). <https://doi.org/10.1080/19472498.2019.16>

“Translating Robert Burns into Bengali: A Case Study of Rabindranath, Dwijendralal and Satyendranath,” *Literature Compass*, vol. 16, issue 7 (July 2019). DOI:10.1111/lic3.12539

“An Early Twentieth-Century Sonnet in English by a Bengali Poet on the Novelist Marie Corelli,” *ANQ: A Quarterly Journal of Short Articles, Notes and Reviews* (May 2019). <https://doi.org/10.1080/0895769X.2019.16>

### Dr. Doyeeta Majumder

‘Machiavelli and Tyranny’ in *Machiavelli in his Times and Ours*. ed. Prasanta Chakravarty, Cambridge University Press (forthcoming)

### Sri Ishan Chakraborty

Contributed an article titled “To ‘the Other Senses’: A Dialogue between Visual Arts and Visual Disability” in the *International Research Journal, Persons with Special Needs and Rehabilitation Management*, Volume IV

“Fashionable Disability: Unveiling Ableism in the Culture of Clothing.” *Jadavpur University Essays and Studies*, vol. 32, edited by Nilanjana Deb, pp. 59-70

## 5. Collaborative Programmes:

### Prof. Nilanjana Gupta

Youth Reporters, funded by UNICEF Rs 24 lacs per year, ongoing

‘Digital Interventions’ School of Media Communication & Culture

### Prof. Abhijit Gupta

Co-investigator, ‘Two Centuries of Indian Print’, with the British Library UK, funded by the AHRC and the Newton Fund, 2016-19 [Funding in India: Rs 18 lacs approx.]

Co-Investigator, ‘Famine Tales from India and Britain’, with University of Exeter, November 2019–October 2020

### Prof. Manojit Mandal

Principal Investigator/Supervisor for All Projects on disability under the Special Education Programme of UGC UPEII & Jadavpur University by Centre for Studies & Rehabilitation of Differently Abled Persons, Jadavpur University since August, 2014



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Principal Investigator of the Project titled 'Education & Awareness among Persons with Disability in the North 24 Pgs: A Survey of Selected Blocks' funded by Jadavpur University (July 2017 – ongoing [Funding: Rs. 52,000.00]

Co-Principal Investigator of the Project titled "My India, Accessible India" to be undertaken by the Centre for Disability Studies' funded by RUSA II, Jadavpur University (February 2019 commenced) [Funding: Rs. 4100000]

Principal Investigator of the Project titled "*Rabijiboni* ('Life of Rabindranath') in English: Translation, Transnationalism and Global South", to be undertaken by the Centre for Disability Studies' funded by RUSA II, Jadavpur University (February 2019 commenced) [Funding: Rs. 2500000]

### **Dr. Nilanjana Deb**

Principal co-investigator with Kaustav Bakshi, 'Bodies of Difference', Rs. 12 lac project under RUSA 2.0 for designing workshops and development of resources for high school teachers and students on sensitisation to cultural and other forms of difference within the classroom (Commenced February 2019)

### **Dr. Saswati Halder**

Principal Investigator of Project titled 'Literary Ecology in Nineteenth Century Bengal' under RUSA 2.0 (February 2019 – March 2020)

Co-Investigator of Project titled 'Narratives of Faith: Devotional Songs and Poetry of the Eastern Regions of India' under RUSA 2.0 (February 2019 – March 2020)

### **Dr. Rafat Ali**

Project Coordinator, "Narratives of Faith: Devotional Songs and Poetry in the Diverse Traditions of Eastern Regions of India" under RUSA 2.0, UGC (February 2019 – March 2020)

### **Dr. Sutanuka Ghosh**

Initiated an MOU between Jadavpur University and the University of Haifa, along with Dr Ayelet Ben-Yishai, Chair, Department of English, University of Haifa. As part of the MOU, 15 students from the University of Haifa will be visiting Jadavpur University in February, 2020

### **Dr. Doyeeta Majumder**

February 2019–present: Co-coordinator, 'Shabda Kalpa: A Historical Dictionary of the Bengali Language', School of Cultural Texts and Records, Jadavpur University. Project funded by RUSA

## **6. Major Achievements:**

### **Emerita Prof. Supriya Chaudhuri**

Fellow, Kolleg-Forschungsgruppe, Max-Weber-Kolleg, Universität Erfurt, April-August, 2019

### **Prof. Paromita Chakravarti**

Academic Visitorship to La Sapienza University, Rome, Italy for the period 8–30 May, 2019 by invitation from Dr. Mario Prayer, Department of Oriental Studies, Sapienza University, Rome for the purpose of research, faculty interaction and discussion with students as part of the joint research project "Trans-cultural Readings: The Bengal-Italy Encounter in the 20th Century". The project has Dr. Prayer as Scientific Director, and has been funded by Sapienza University of Rome through the Bando Accordi Internazionali 2017, Prot. AI2617TRPJ in the context of the present cooperation agreement between Jadavpur University of Kolkata and Sapienza University of Rome

### **Prof. Santanu Biswas**

Honorary member, Lacan Circle of Australia (affiliated to the World Association of Psychoanalysis)  
Editorial Board Member, *Hurly-Burly: The International Lacanian Journal of Psychoanalysis*, The New Lacanian School, Paris and London



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Advisory Editorial Board Member, *The Lacanian Review*, New Lacanian School and the World Association of Psychoanalysis, Paris, London & New York

Editorial Board Member, *Objek•elje*, Slovenian School of Psychoanalysis, Slovenia

### **Prof. Rimi Barnali Chatterjee**

Joint-Director of the Jadavpur University Press

### **Prof. Manojit Mandal**

RUSA 2.0 Visiting Professorship to NEHU, Shillong, to be completed by March, 2020

RUSA 2.0 Visiting Professorship to NIT, GOA, to be completed by March, 2020

### **Dr. Saswati Halder**

Coordinator of a six-month certificate course entitled 'Functional and Communicative English,' at School of Languages, Faculty of Arts, Jadavpur University

Editor-in-Chief of the Centre for Victorian Studies' international and interdisciplinary online Journal 'The Confidential Clerk'

Coordinator, Centre for Victorian Studies, Jadavpur University

Coordinator, Jadavpur University Society for American Studies

### **Dr. Sutanuka Ghosh**

Editor-in-Chief of the 'Centre for Victorian Studies' international and interdisciplinary online Journal 'The Confidential Clerk'

### **Dr. Kaustav Bakshi**

Invited to teach at the Department of English, Delhi University as a Visiting Fellow from 16 February 2020 to 1 March, 2020

Member of the editorial advisory board and a regular reviewer of articles of the international journal *Queer Studies in Media and Popular Culture* (Intellect Bks: Bristol; ISSN:20555695/ONLINE: 20555709 [Abstracting and Indexing: Modern Language Association (MLA)])

Member of European Association for South Asian Studies (EASAS), Büro EG Adolfstr.39,53111 Bonn, Germany

### **Sri Ishan Chakraborty**

Received State Award for Empowerment of Persons with Disabilities – 2019 in the category of "Role Model" from the Department of Women and Child Development and Social Welfare, Government of West Bengal on 03.12.2019

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### FILM STUDIES

Phone: 033-24572467

Media Lab: 033-2457-2636

H.O.D: Dr. Madhuja Mukherjee

Anindya Sengupta(since 2.1.2020)

E-mail: hod.filmstudy@jadavpuruniversity.in

#### 1. A. Courses Offered :

Name of the Course	Duration	No of Students Enrolled
Undergraduate General Elective Courses (2 courses)	2 semesters	45 students per course
MA in Film Studies	2 Years	45
PhD	5 years	02

#### 1. B. Number of Faculty Members : 8 (6 permanent, 2 contractual)

#### 2. A. Area of Research Activities : (Broad Areas)

**Moinak Biswas:** Indian Cinema, Film Theory, Cultural Theory

**Abhijit Roy:** Television Studies, New Media, Media Theory, Popular Culture

**Madhuja Mukherjee:** Film Studios, Film Industry, Sound Cultures, Feminist Historiography, Trans/Regional Cinemas, Bollywood, Labour, and New Media

**Anindya Sengupta:** Classical Hollywood Cinema, Cinema of Satyajit Ray and Ritwik Ghatak, French New Wave and Film Theory

**Subhajit Chatterjee:** Film History, Cult and Exploitation Cinemas , Popular Culture

**Shradhanjali Tamang:** Filmmaking practices in North Bengal and Sikkim, Nepali Cinema; National and Transnational, Adaptations, Translation, Ethnographic Films on Eastern Himalayas

**Manas Ghosh:** Asian Cinema, Non-Fiction Film, Latin American Cinema, Alternative Cinema in India

**Arijeet Mandal:** Film Theory, Film and Philosophy

#### 2. B. Major Research Project : (Departmental/Individual, Name of the Project/Funding Agency)

**Abhijit Roy** Co-Principal Investigator, 'Digital Interventions: The Changing Contours of Media, Communication and Culture in India', RUSA 2.0 project (Departmental support towards upgradation in research), School of Media, Communication and Culture, Jadavpur University

**Madhuja Mukherjee**, Major Research Project, '*The Shadow and the Arc-Light: An anthology project of the Indian film industry and women as workers*' under the category 'Research Support to Faculty Members', Jadavpur University-RUSA 2.0, 2019-2021. (Grant amount: 6, 57, 400/-)

**Madhuja Mukherjee:** Co-Principal Investigator, '*Cinema in Bengal (1920-2000)*' received as Departmental support towards upgradation in research, Jadavpur University-RUSA 2.0, 2019-2021. (Grant amount: 24, 55, 200/-)

**Anindya Sengupta:** Co-Principal Investigator, '*Cinema in Bengal (1920-2000)*' received as Departmental support towards upgradation in research, Jadavpur University-RUSA 2.0, 2019-2021. (Grant amount: 24, 55, 200/-)

**Subhajit Chatterjee:** Co-Principal Investigator, '*Cinema in Bengal (1920-2000)*' received as Departmental support towards upgradation in research, Jadavpur University-RUSA 2.0, 2019-2021. (Grant amount: 24, 55, 200/-)

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**Subhajit Chatterjee:** Principal Investigator, 'A Documentation and Analysis of the Low Budget Sector in Contemporary Bengali Cinema (2010-2018)' received as JU-RUSA 2.0 Minor Research Support for Faculty, 2019-20 (Grant amount: 200, 000/-)

**Shradhanjali Tamang:** Principal Investigator, 'Filmmaking Practices in the Eastern Himalayas' received as JU-RUSA 2.0 Minor Research Support for Faculty, 2019-20 (Grant amount: 200,000/-)

**Shradhanjali Tamang:** Co-Principal Investigator, '*Cinema in Bengal (1920-2000)*' received as Departmental support towards upgradation in research, Jadavpur University-RUSA 2.0, 2019-2020. (Grant amount: 24, 55, 200/-)

**Shradhanjali Tamang:** Co-Investigator, Redefining 'Indian' Literature: Archiving and Translating Indigenous and marginalised Traditions' JU RUSA 2.0, 2019-2020 received as Major Research Support for faculty, 2019-2020 (Grant amount 7,81,600/-), Principal Investigator- Dr Sayantan Dasgupta

**Manas Ghosh:** Joint Investigator, *The Trans-cultural in the Global South: Korean Wave (K-Wave or Hallyu) in Northeastern India*, 2019-20, RUSA Major Research Project, affiliated to the School of Media, Communication and Culture. (Grant Amount: Rs 8,38,000/-)

**Manas Ghosh:** Co-Principal Investigator, '*Cinema in Bengal (1920-2000)*' received as Departmental support towards upgradation in research, Jadavpur University-RUSA 2.0, 2019-2020. (Grant amount: 24, 55, 200/-)

**Arijeet Mandal:** Co-Principal Investigator, '*Cinema in Bengal (1920-2000)*' received as Departmental support towards upgradation in research, Jadavpur University-RUSA 2.0, 2019-2020. (Grant amount: 24, 55, 200/-)

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

#### Abhijit Roy

1. Lecture on 'Women and Media' as part of the course 'Cultural Constructions of Gender', M.Phil. programme, School of Women's Studies, Jadavpur University, 3 April, 2019
2. 'Radio, Television and Digital Media: The Politics of Access', lecture at the UGC-recognised 6-month certificate course on 'Radio Production', School of Media, Communication and Culture, Jadavpur University, 26 April, 2019
3. Lecture on 'Early Cinema', Maya Art Space, Kolkata, 10 May, 2019
4. Two lectures on Television Studies at the MA programme in Journalism and Mass Communication, Department of Adult, Continuing Education and Extension, Jadavpur University, 15 May, 2019
5. 'Indian Media and Human Rights', two lectures at the One-Year (Evening) PG Diploma Course in Human Rights and Duties Education, Department of International Relations, Jadavpur University, 17 June and 19 June, 2019
6. Presentation at a panel discussion on 'Korean Wave in North East India' under the RUSA 2.0 Major Research Project 'The Trans-cultural in the Global South: Korean Wave in Northeastern India', organised by School of Media, Communication and Culture, Jadavpur University, 3 August, 2019
7. Chaired a session at the international seminar titled 'The Indian New Wave: Revisiting Fifty Years on' organised by the Department of Film Studies with support from the RUSA 2.0 scheme of Jadavpur University. 9 August, 2019
8. 'Basic Concepts in Film Studies', lecture for the postgraduate course on 'Management through Films', Indian Institute of Management, Calcutta. 9 December, 2019
9. Three lectures: 'Media, Democracy and The State', 'Locating India/ South Asia in Television Studies' and 'What Is "Public" about Public Broadcasting? An Indian Perspective', Department of Communication Arts, Fu Jen Catholic University, New Taipei, Taiwan, 16-18 December, 2019

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10. 'Mobs and Mobiles: Towards a Critique of *Affective Publics*', talk at the Institute of Social Research and Cultural Studies, National Chiao Tung University, Hsinchu, Taiwan, 16 December, 2019
11. Chaired the session titled 'On the Threshold of the Future' at the 'International Forum on Megacities: Conviviality and its Limits' organized jointly by the Centre for Latin American Literature and Culture, Department of Film Studies, Department of English, Department of Architecture, School of Environmental Studies, School of Oceanographic Studies and School of Water Resource Engineering, Jadavpur University 28 February, 2020
12. Lecture on 'Women and Media' as part of the course 'Cultural Constructions of Gender', M.Phil. programme, School of Women's Studies, Jadavpur University, 6 March, 2020

### Moinak Biswas

- Lecture on 'The Fragile Image in Cinema', organized by the Department of English, Ramakrishna Mission Residential College, Narendrapur, Kolkata, April, 2019
- Lecture on 'On a Certain Tendency in Contemporary Indian Cinema', at Film Appreciation Course organized by Chalachitra Satabarsha Bhavan, Kolkata, July, 2019
- Lecture on 'Punctuation: Form and History in the Films of Ritwik Ghatak', organized by Film and Media Arts, Temple University and Film and Media Studies, University of Pennsylvania, USA, at Slought, February, 2020
- Lecture 'Dancing Desire in Bollywood Films', Department of Dance and Music, Swarthmore College, Pennsylvania, February, 2020
- Lecture on 'Form and History in Ritwik Ghatak's *Subarnarekha*', organized by Unit for Criticism and Interpretive Theory, University of Illinois, Urbana-Champaign, March, 2020

### Anindya Sengupta

- Resource Person, Faculty Enrichment Program, Department of English, Midnapore College, (Autonomous), Midnapore. 13 November, 2019
- Speaker on panel discussion titled 'Indian New Wave: Before, After, In-between', , *International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 7-9 August, 2019
- Chair, Panel on "Mrinal Sen and the Politics of Impurity in Indian Cinema", *International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 7-9 August, 2019

### Madhuja Mukherjee

- Public Lecture, "The Art of *Kanchenjunga*", *Remembering Ray Programme*, organized by Cinematheque Kolkata, Nandan, Kolkata, 2 May, 2019
- Lecture, "History of Indian Cinema", *Film Appreciation Course 2019*, organized by the West Bengal Film Archive (Chalachchitra Satabarsha Bhaban) & Information & Cultural Affairs Department, Govt. of West Bengal, Kolkata, 5 July, 2019
- Lecture, "Bengali Cinema Studio Era", *Film Appreciation Course 2019*, organized by the West Bengal Film Archive (Chalachchitra Satabarsha Bhaban) & Information & Cultural Affairs Department, Govt. of West Bengal, Kolkata, 7 July, 2019
- Chair, Session "Analogue to Digital Cinema - A Discontinuous Experiment", *International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 7-9 August, 2019
- Lecture, "Towards a New Kind of Cinema: Medium, Form, Practice", *Creative and Performing Arts*, organized by Chemical Engineering Department, Jadavpur University, 26 August, 2019

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Lecture, “Experiments through Cinema”, *FFSI FILM APPRECIATION COURSE 2019*, organized by Federation of Film Societies of India (Eastern Region), 10 December, 2019

### Subhajit Chatterjee

Chair, Panel on “The Legacy of Indian New Wave”, *International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 7- 9 August, 2019

Chair, Session on “Aravindan’s *Esthappan* and the Question of ‘Realism’” *International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 7- 9 August, 2019

Invited lecture (as resource person) on “Melodrama and Indian Popular Cinema” at Film Appreciation Course 2019 organized by Maya Art Space, Kolkata on 14 May, 2019

Invited lecture on ‘Douglas Sirk and Hollywood Melodrama’ at Department of Film Studies, St. Xavier’s College, Kolkata, 5 April, 2019

### Manas Ghosh

‘Latin American Cinema’, Film Appreciation Course organized by Nandan & Department of Culture, Govt. of West Bengal, 1 July, 2019

‘Contemporary Asian Cinema’, Film Appreciation Course organized by Nandan & Department of Culture, Govt. of West Bengal, 3 July, 2019

Lectures at the Department of Communication Arts, Fu Jen Catholic University, New Taipei, Taiwan, 16-18 December, 2019

- a) ‘Reading ‘Slow Cinema’ with Tsai Ming-liang and Bela Tarr’,
- b) ‘City & Cinema: Calcutta through the lens of Satyajit Ray’ and
- c) ‘Film Songs as Popular Culture in India’

‘Global Shanghai through Transnational Film & Literature’ at International Institute for Cultural Studies, National Chiao Tang University (NCTU), Taiwan, Hsinchu, 16 December, 2019

‘Role of Radio in the Era of Digital Communication’, All India Radio, Shimla, 22 October, 2019

### Arijeet Mandal

Chaired Session called “Fragile Teleology: Auteur and the Historian” at *International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 7- 9 August, 2019

Invited Lecture on “The Feeling of Disgust: History, Philosophy, and Literature”, Department of English, Gurudas College, 10 August, 2020

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

#### Abhijit Roy

1. ‘Live Publics between Television and Social Media: Conjectures from India’ paper presented at the 11th International Convention of Asia Scholars, organized by the International Institute for Asian Studies, Lieden, University of Lieden and French Asie. Leiden, the Netherlands, 16 July, 2020
2. Presentation at the roundtable on ‘Disentangling Futures? Academic Freedom and Research Conditions in South Asia and Europe’ at the 11th International Convention of Asia Scholars, organized by the International Institute for Asian Studies, Lieden, University of Lieden and French Asie. Leiden, the Netherlands, 17 July, 2020



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3. Presentation at the workshop on 'Communication across Borders: Issues and Challenges' organized by School of Media, Communication and Culture, Jadavpur University in collaboration with Wake Forest University, USA at Jadavpur University on 1 August, 2019
4. Presentation at the plenary session on 'Social Media and Digital Democracy: Challenges Ahead', third National Media Conclave organized by Institute of Media Studies, Utkal University, Bhubaneswar on 21 November, 2019
5. 'Telenovela Travels: *Ugly Betty* and Consumer Culture in India', paper presented at the international conference on Cross-Cultural Studies organised by the Graduate Institute of Cross-Cultural Studies, Fu Jen Catholic University, New Taipei, Taiwan, 14 December, 2019
6. 'Research, Online Databases and Multimedia Storytelling', lecture at the One-week Short- Term Course on 'MOOCs, E-content Development and Open Educational Resources' organised by the School of Media, Communication and Culture and Centre for Microprocessor Applications for Training, Education and Research, Jadavpur University, supported by UGC-Human Resource Development Centre, Jadavpur University on 12 February, 2020

### Moinak Biswas

Panelist speaker on the Publication, *After the Revolution, Essays in Memory of Anjan Ghosh*, Ninth Anjan Ghosh Memorial Seminar organized by Centre for Studies in Social Sciences Calcutta, July, 2019, Jadunath Bhavan, Kolkata

Paper on 'Filmmaker as Critic', at international seminar on 'The Indian New Wave: Revisiting Fifty Years On', organized by the Department of Film Studies, Jadavpur University, Vivekananda Hall, August, 2019

Paper on 'Radical Theatre to Theatrical Cinema: Ritwik Ghatak's Experiment in Autobiography', Faculty Seminar in the 'Sites of Cinema' series, Columbia University, New York, October, 2019

Paper on 'Theater, Music, Autobiography: Komal Gandhar and Jukti Takko ar Gappo', at seminar on 'Global Ritwik Ghatak?', organized by Film and Media Studies, Global Cultural Studies, Center for Comparative Media and School of the Arts, Columbia University, November, 2019

Panelist speaker at Modern Language Association Convention 2020, Seattle, USA. Panel on 'The Human Caught in the Spinning of the Global', January, 2020

### Madhuja Mukherjee

Speaker, Panel on "The Legacy of Indian New Wave", *International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee) 7-9 August, 2019

Speaker, "Doing Material History of Cinema: Transmutations of Materials, Methods, Models", *Conceptual Paradigms in South Asian Film & Media Studies*, Annual Conference on South Asia - UW Madison - Symposium, Madison, USA, 17-20 October, 2019

Speaker, "Lubdhak The Dog Star, Speaking Through Graphic Narratives", *Confluence of Forms, Past Forward, Celebrating Critical Practices*, National Festival, organized by India Foundation for the Arts, Bangalore, and Bangalore International Centre, 30 October -1 November, 2019

Speaker, "At the edge of the film industry: Structures of production, gender and the precarity of independent cinema", *The New Work Order International Conference*, organized by Christ University, Bangalore, 13 - 14 December, 2019

Speaker, "Cinema, Work, Women and Resilience", *National Conference on Women's Issues and Everyday Life: Power, Resistance and Representation*, organized by the Women's Study Centre, St. Xavier's College (Autonomous), Kolkata, 10 - 11 January, 2020

Speaker, "Arrivals and Departures: A Cinematic Map of the Political and the Personal", *International Forum on Megacities: Conviviality & Its Limits*, organized by Faculty of Arts (F.A.), Faculty of Engineering (F.E.), Faculty of Inter-Disciplinary Studies, Law & Management (ISLM), Jadavpur University (supported by RUSA 2.0 Grants Committee), Kolkata, 26-28 February, 2020



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Speaker, “Cinematic Transactions: Transformative Scenes and Local Screens”, *National Workshop, Contemporary Indian Cinemas, Heterogeneities and Possibilities*, Department of Humanities and Social Sciences, IISER BHOPAL, 28-29 February, 2020

*International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 7- 9 August, 2019

### **Shradhanjali Tamang**

Speaker “Discussing the Oral Nature of Tamba Tradition” in a three day national level seminar titled *Centenary Commemoration Seminar On The Establishment of the Department of Modern Indian Languages at the University of Calcutta* organised by the Department of Comparative Indian Language and Literature in collaboration with Central Institute of Indian Languages, 6-8 March, 2019, University of Calcutta

Resource person, in workshop titled *Translating Bodo Short Stories: A Seminar-Workshop organised* by “Redefining ‘Indian’ Literature: Archiving and Translating Indigenous and Marginalised Traditions” (2019-2020) UGC RUSA 2.0 project, JU in collaboration with The Asiatic Society, Kolkata and University of East Anglia, 21-25 October, 2019

### **Manas Ghosh**

‘Projection of Human Body in Mrinal Sen’s Radical films: Influences of the Alternative Visual Culture of 1940s’, in Transnational Radical Film Cultures Conference, University of Nottingham, UK, 3-5 June, 2019

‘Women, Modernity and New Iranian Cinema’, a national workshop organized by the RCWS, SNDT University, Mumbai, 1-3 March, 2019

‘Cultural Influence of Korean Wave (K-Wave) in Northeastern India’, International Conference on Cross-Cultural Studies, Fu Jen Catholic University, Taiwan, 14 December, 2019

‘Mrinal Sen and the Politics of Impurity’, International Seminar *The Indian New Wave: Revisiting Fifty Years*, organized by the Department of Film Studies, Jadavpur University 7- 9 August, 2019

‘Looking at the Body of Gandhi with Reference to the films of Anand Patwardhan,’ at Indian Institute of Advance Study, Shimla, India, 30 October, 2019

‘Dalit Questions in Indian Cinema’, Keynote Speech delivered at the National Conference on *Cinema in the Margins*, organized by Satyajit Ray Film & Television Institute (SRFTI), Kolkata, 27 September, 2019

### **Arijeet Mandal**

Speaker, presented paper “A Brief History of Spitting, and an Indian interpretation” on a three day long National Seminar organised by Department of History, University of Delhi, Research Scholars’ Workshop 2020, MICRO-HISTORY AND THE THINGS WE DON’T KNOW ABOUT IT, 11-13 February, 2020

### **3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)**

#### **Abhijit Roy**

Organised a UGC-HRDC One-Week Short Term Course, one week-long international workshop, two colloquia, one panel discussion, one masterclass, three talks and a film screening-and-discussion as the Director of School of Media, Communication and Culture. For details, please see the Annual Report of the School

#### **Moinak Biswas**

Co-organizer of ‘Poetry and Partition: Films of Ritwik Ghatak’, a retrospective organized by the Lincoln Center, New York, 1–6 November, 2019

**Madhuja Mukherjee**

Coordinator, *First Narendra Dev Memorial Lecture on Cinema by Adoor Gopalakrishnan*, organized by Department of Film Studies, Jadavpur University, Kolkata, 27 September, 2019

Organizer, *International Forum on Megacities: Conviviality & Its Limits*, organized by Faculty of Arts (F.A.), Faculty of Engineering (F.E.), Faculty of Inter-Disciplinary Studies, Law & Management (ISLM), Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 26-28 February, 2020

**Subhajit Chatterjee**

Co- Coordinator (with Anindya Sengupta), *International Seminar on The Indian New Wave: Revisiting Fifty Years On*, organized by Department of Film Studies, Jadavpur University, Kolkata (supported by RUSA 2.0 Grants Committee), 7- 9 August, 2019

**4. A. Books/Monographs etc. Published : (Name of the Teacher, Name of the Book, Name of the Publisher)**

Madhuja Mukherjee (and Kaustav Bakshi), Editor, *Popular Cinema in Bengal: Genres, Stars and Public Cultures*, London/ New York: Routledge (January 2020)

**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**

**Abhijit Roy**

“Culture in Transition: The Emerging Digital Culture” in *Communication 4.0: Communication in the Digital Age*, ed. Upendra Padhi (Bhubaneswar: Institute of Media Studies, Utkal University, 2019), 136-142

**Moinak Biswas**

“Partha Chatterjee and Political Thought: Community, Culture and the Present”, in *Oxford Research Encyclopedia of Communication*. Online publication January, 2020

“Limits of the Trace” (Review article), in *Cultural Critique*, Volume 107, Spring, 2020

**Madhuja Mukherjee**

Madhuja Mukherjee, “View of a City: An immersive history of Kolkata via camera-eye”, *South Asian History and Culture*, 10. 4 (2019): 443-469

Madhuja Mukherjee, “Little Cinema Culture: Networks of digital files and festival on the fringes”, *South Asian Film and Media*, 10. 1 (2019): 23–40

Madhuja Mukherjee, “Text, Speech, Idiom: Landscape, Language and the Meandering Flow of River Films”, *Working Paper 3 (‘Forms of Sovereignty: Art, Cinema, and Popular Culture’) LSE/UC Berkeley Bangladesh Summit*, February 2019 (published in April 2019). (LINK:<http://www.lse.ac.uk/south-asia-centre/countries/bangladesh/bangladesh-summit-2>)

Madhuja Mukherjee, “The Long Shadow of German Classic Films” in the *Kolkata International Film Festival Publication*, 25<sup>th</sup> KIFF (2019): 86-87

Madhuja Mukherjee, “War Cry of the Beggars: An exploration into city, cinema and graphic narratives” in *Graphic Novels and Visual Culture in South Asia*, ed. E. D. Varughese and Rijinder Dudrah, London/ NY: Routledge (January 2020): 71-85

Madhuja Mukherjee, “Manbhum videos and their many contours: Contexts, contents, and the comic mode as a subversive form” in *Media, Indigeneity and Nation in South Asia*, ed. Markus Schleiter & Erik de Maaker, London/ NY: Routledge (2019): 46 -65. Subhajit Chatterjee,

“A Rendezvous with the Ghosh Brothers: A Sneak Peek into Bengal’s Homegrown Exploitation Cinema”, *South Asian History and Culture*, Volume 10, No. 4, (June 2019) : 397-421

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“A Rendezvous with the Ghosh Brothers: A Sneak Peek into Bengal’s Homegrown Exploitation Cinema” in Madhuja Mukherjee and Kaustav Bakshi (eds). *Popular Cinema in Bengal: Genres, Stars and Public Cultures*, London/ New York: Routledge (January 2020)

### **Manas Ghosh**

Ghosh, Manas (2019) ‘The Portrait of ‘alienated artist’ and the Revisionist Historiography in East Asian *auteur* Cinema since 1980s’, *East Asia* 36:2, 151-65

## **5. Collaborative Programmes:**

### **Abhijit Roy**

Drafted syllabi of four media-related papers for the BA (Hons.) programme in English in The Neotia University, West Bengal. April, 2019

## **6. Major Achievements:**

### **Moinak Biswas**

Fulbright-Nehru Academic and Professional Excellence fellow at Institute of Comparative Literature and Society, Columbia University, New York, September 2019 to March 2020

### **Madhuja Mukherjee**

Madhuja Mukherjee received a grant (of 1, 20, 000 INR) towards realization of her art/ science interface project and media-installation titled “Moon Walk” under the *FIVE MILLION INCIDENTS* programme to commemorate 60 years of Goethe-Institut/ Max-Mueller in India (2019-2020)

## **HISTORY**

Phone: 033-2414-6962

: 033-2457-2281

H.O.D.: Prof. Rupkumar Barman

E-mail: hod.history@jadavpuruniversity.in

### **1. A. Courses Taught:**

Undergraduate (BA), Postgraduate (MA), M.Phil and PhD

### **1. B. Number of Faculty Members:** Fifteen

The Faculty of the Department of History regrets the loss of their esteemed colleague Professor Subhasis Biswas.

### **2. A. Area of Research Activities:**

**General areas:** Ancient Indian history, Medieval Indian history, Modern Indian History.

**Specializations:** Environmental history, Intellectual and Literary histories, History of Bengal, History of Science and Medicine, Histories of Consumption, Gender and Marginal Communities, Military history

**2. B. Major Research Projects:**

- UGC DSA-I SAP (III): History of Environmental Concerns in South Asia: Policies, Practices and Implementation
- RUSA Departmental Project

**3. Conferences/Special lectures Organized:**

**A. Conferences:**

Three-day International Seminar on 'Living in Cities: Historical Perspectives on Urban Environment, Experiences and Cultures', organized by the UGC DSA – 1 SAP, and RUSA 2.0 Department of History, Jadavpur University 6-8 February, 2020

[coordinators: Professor Nupur Dasgupta, Dr. Sudeshna Banerjee, Dr. Maroona Murmu, Dr. Tilottama Mukherjee and Dr. Debajit Dutta]

Three-day International Seminar on 'Warfare in South Asia: from Ancient to Modern Times' organized by the Department of History, Jadavpur University 7<sup>th</sup> and 8<sup>th</sup> January 2020 [coordinators: Prof. Rupkumar Barman and Prof. Kaushik Roy]

**3. B. Special Lectures:**

- Organized by RUSA 2.0, Department of History, Jadavpur University

**Professor Hari Shankar Vasudevan** (Former Professor, Department of History, University of Calcutta) 'Tribulations of the Transnational Traveller in the Cities and States of Pre-Modern South Asia: The Experience of Afanasii Nikitin', 5 March, 2020

- Organized by UGC DSA-I SAP, Department of History, Jadavpur University (under Visiting Fellows Program)

**Prof. Sudipta Sen**, Professor of History, Director, Middle East/South Asia Studies Program, UC Davis, California delivered public lectures on the following themes:

1. River Ganga as political icon and the contested terrains of Indian history
2. Thoughts on history and the deep ecology of the Ganges delta
3. Perspectives on Environmental History

**Prof. Suchandra Ghosh**, Professor in AIHC, University of Calcutta delivered public lectures on the following themes:

1. Changing Landscape from Bactria to Mathura: Environment and Quotidian Culture in Early Historic India
2. Cultural Ecology and history in the Ganga – Padma – Brahmaputra deltas in early medieval times.
3. Perspectives on Environmental History and Cross-cultural links across the Bay of Bengal in the early historic times

**Prof. Chandi Prasad Nanda**, Professor in History, Ravenshaw University, Cuttack delivered public lectures on the following themes:

1. Cholera in the colonial Orissa
2. Public Health and Government Policies in Colonial India
3. Environmental History in Modern Times
4. Historiography – major issues in environmental history

**Prof. Himanshu Prabha Ray**, Honorary Professor, Ludwig Maximilian University, Munich & Routledge Series Editor, Archaeology and Religion in South Asia delivered public lectures on the following themes:

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1. Cultural Landscape of the Asokan Inscriptions
2. Archaeology of the Chalukyan Temples in the Malaprabha Valley
3. Landscape archaeology in reading regional historical contexts

**Prof. Arun Bandopadhyay**, Former Nurul Hasan Chair Professor of History, University of Calcutta & Historical and Archaeological Secretary, The Asiatic Society, Kolkata delivered a series of public lectures on the following theme:

Environment and Development in Postcolonial Bengal

#### 4. Faculty Profiles:

**Prof. Mahua Sarkar**

**Publications (Books/ Edited Books/Articles in Edited Volumes & Journals/ Reviews/ Others):**

**Books :** Articles Published in Edited Volumes And Learned Journals:

1. "The Idea of Justice in Colonial Bengal" in Sabyasachi Bhattacharya ed, *A Comprehensive History of Bengal*, Primus, New Delhi, 2019
2. "History of Vernacular Press in Bengal" in Pallab Sengupta ed. *Vernacular Journalism: a Journey of the Centuries*, Kolkata Society of Asian Studies, Kolkata, 2019
3. "Diseases and Rivers in Early Colonial Bengal: A Saga of Environmental History" in Mahua Sarkar, Subhasis Biswas, *Glimpses of Environmental History*, Alphabet Books, Kolkata, 2018.

**Papers Presented in Seminars/ Conferences/ Workshops/ Invited Lectures:**International: April 2019- Invited to present a paper on *The United States and India: Seeking a partnership on Environment* Fulbright Conference Meet in Florence, Italy, Europe.

Keynote speaker on *Relocating Vidyasagar in the 21<sup>st</sup> century* in the International Seminar in the Department of Sanskrit, J.U. 21 January, 2020

**State-Level :** Keynote on Vidyasagar in Bhowanipur Education College May 2019, *Environmental Issues and the Margins* in the Centre for Environmental Studies, Vidyasagar University, *State Intervention and Environmental Pollution* in the International Seminar in the Department of History on 7 February, 2020

**Sessions Chaired:**

**International:**

Chair in a session in the International Seminar on Military History in the Department of History, JU, January 2020

**National:**

State-Level: Chair in a seminar on Vidyasagar in Heramba Chandra College March 2020

**Research Supervision:8**

Ongoing Research Supervision (April 2018 – March 2019):8

**Papers Taught:** Medieval India, Life and Thought in Bengal, Social History of Modern India, Science Society and Culture in colonial and post-colonial Bengal, Historiography

**Prof. Anuradha Roy**

**Edited book**

*Kolkata in Space, Time and Imagination*, Vols. 1 (with Melitta Waligora), Primus Books, Delhi, September, 2019

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### Articles in Edited Volumes and Learned Journals

1. 'Bharatiya Ganatantrer Mugur o Kashmir'(The cudgel of Indian democracy and Kashmir) in *Arek Rakam*, 16 August, 2019
2. 'Vidyasagarer Aynay Bangali'(Bengalis as reflected in Vidyasagar's mirror), *Arek Rakam*, 1 December, 2019
3. 'Marxiya Nandantattwa o Ekti Tritiya Bikalper Sambhabana'(Marxian Aesthetics and the possibility of a third alternative) in *Marx 200: Ekusher Bhabna*, (edited by Sobhanlal Datta Gupta), Ananda Publishers, January, 2020
3. 'The Gendered Nation: To be Recoded or Rejected?' in Panchali Ray edited *Women Speak Nation: Gender, Culture and Politics*, South Asian History and Culture series, Routledge, Taylor and Francis Group. London and New York, 2020

### Invited Lectures

Paper titled 'Towards disambiguating the conceptual categories used for knowing and analyzing Indian Society' at an international conference organized by Nehru Memorial Museum and Library on 'Forms of Knowledge and Intellectual Traditions in South Asia', at NMML, 10-11 July, 2019  
Lecture at a refresher course organized by the Dept. of History, University of Calcutta, on 'Politics of Culture, Culture of Politics'. Theme of lecture: 'Politics of Laughter: A study of the nationalist literature of nineteenth century Bengal'. Date: 21 November, 2019

### Prof. Nupur Dasgupta

#### Articles Published in Edited Volumes and Learned Journals:

"Tracing the Word of Authority: From Asoka's Dhamma to the Buddhist Roots of Social Regulation", in Osmund Bopearachchi and Suchandra Ghosh, eds., *Early Indian History and Beyond, Essays in Honour of B.D. Chattopadhyaya*, Delhi, Primus Books, 2019, pp. 423 – 466, ISBN:978-93-5290-597-3 (hardback)

#### Forthcoming:

'Sacred frames: Knowledge, culture and ritual agency in ancient *tâlukas* of Karnataka (late 10th-12th centuries', in Henry Albery, Jens- Uwe Hartmann, Himanshu Prabha Ray, eds., *Power, Presence and Space: South Asian Rituals in Archaeological Contexts*, Oxon, Routledge

#### Papers Presented in Seminars/ Conferences/ Workshops/ Invited Lectures:

##### National:

Delivered a review lecture on "Adi Madhyayugiyo Bharate Samantatantra", at the Workshop on Banglay Itihas Karmashala, organized by IDSK, Kolkata and Ashoka University, 17– 18 January, 2020

Presented a paper on "Prachin Bharate Prantik Matri Puja o Sasthya Raksha Songkranto Chinta", seminar organized jointly by Kolkata Art Lovers' Organisation and Ramkrishna Mission Institute of Culture, Kolkata on 6 March, 2020

##### State Level Invited Lectures:

Delivered an invited lecture on "Indology: Perspectives and Definition", for the Course on Indology organized by Ramkrishna Mission Institute of Culture, Kolkata on 6 September, 2019

Delivered an invited lecture on "Pre Harappan and Mature Harappan Civilization: Surveying Evidence for Fertility Cult and concern for Child Rearing", organized by the Department of History, Bidhan Nagar College, Kolkata on 13 September, 2019



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Delivered an invited lecture on “Pre-Harappan and Harappan Art”, for the Art Appreciation Course, organized by the Ramkrishna Mission Institute of Culture, Kolkata on 24 September, 2019

### **Participation / Organize/ Resource Person in Seminars:**

#### **International:**

Organised the International Seminar on Living in Cities: Historical Perspectives on Urban Environment, Experiences & Culture, jointly held by UGC DSA – I SAP, & RUSA 2.0, Department of History, Jadavpur University on 6– 8 February, 2020

#### **Sessions Chaired:**

#### **International:**

Chaired a session at the international seminar on “Recent Researches on South and Southeast Asia”, organised under the UGC-UPE II programme of the Department of Ancient Indian History and Culture, University of Calcutta, held on 23 December, 2019

Chaired a session at the International Seminar on “Warfare in South Asia: from Ancient to Modern Times”, held by the Department of History, Jadavpur University on 7–8 January, 2020

Chaired a session at the International Seminar on Living in Cities: Historical Perspectives on Urban Environment, Experiences & Culture, jointly held by UGC DSA – I SAP, & RUSA 2.0, Department of History, Jadavpur University on 6–8 February, 2020

#### **National:**

Chaired a session at the National Seminar: Studies in the History and Philosophy of Science, jointly organized by the Indian National Science Academy, New Delhi & the Department of Philosophy, Jadavpur University, Kolkata, held on 18 July, 2019

### **Research Supervision:**

#### **M.Phil supervision (April 2019 – March 2020):**

M.Phil supervision (submitted) – 1

M.Phil supervision (ongoing) - 2

#### **Phd Awarded (April 2019 – March 2020): 1**

Ph.D supervision ongoing - 6

### **Papers Taught:**

Early History of India up to the Thirteenth Century (UG)

Transitions in Early Medieval to Medieval Indian History (UG)

Material and Intellectual Milieu in Early Indian History (PG)

### **Dr. Kaushik Roy**

### **Publications (Books/ Edited Books/Articles in Edited Volumes & Journals/ Reviews/ Others):**

#### **Books:**

*The Battle for Malaya: Indian Army in Defeat* (Illinois: Indiana University Press, 2020)

*Fighting Rommel: The British Imperial Army in North Africa* (London: Routledge, 2019)

*India's Historic Battles: From Alexander the Great to Kargil* (Reprint and expanded edition, New Delhi: Primus Books, 2020)

#### **Articles Published In Edited Volumes And Learned Journals:**

“Military Power and Warfare in the Era of European Ascendancy in Bengal, 1700-1815”, in *A Comprehensive History of Modern Bengal, 1700-1950*, ed. Sabyasachi Bhattacharya (New Delhi: Primus Books, 2020)

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### **Forthcoming:**

*Theories of Warfare in Asia* (Routledge)

*A Global History of Warfare: Till Circa 1500 CE, Before the Rise of the West* (Routledge)

“India-China Relationship with Special Focus on the Look-East Policy”, *International Area Studies Review*

“Armour in the Indian Army During Second World War”, *War in History*

Kaushik Roy and Dennis Showalter eds., *Oxford Companion to Military History of Asia*

Kaushik Roy and Michael Charney eds., *Routledge Handbook of History of Global Warfare*

Kaushik Roy ed., *Cultural History of Warfare in the Age of Renaissance* (Bloomsbury)

### **Seminar Organised:**

#### **International:**

Warfare in South Asia: from Ancient to Modern Times, 7- 8 January, 2020

#### **International Seminars & Visits Abroad:**

Seminar on British Imperial Armies at Royal Military College of Canada, Kingston, Ontario

#### **Research Projects:** Artificial Intelligence and Warfare, PRIO, Norway

#### **Other Professional Activities: -**

Member of the editorial board of *International Area Studies Review* published from Sage.

Editor in Chief of *Oxford Military History Bibliography Project*, Oxford New York.

#### **Research Supervision:**

Ongoing Research Supervision (April 2018 – March 2019): - Ms. Moumita Chowdhury

Mr. Arka Chowdhury Ms. Priyanjana Gupta

#### **Papers Taught:**

History of Modern China (PG)

Ancient Greece and Rome (UG)

War and State in Europe (UG)

### **Prof. Rup Kumar Barman**

#### **Awards/Fellowships/Scholarships/Grant/Research Support:**

‘Migration, State Policies and Contested Citizenship in South Asia: A Study on India, Bangladesh and Bhutan in the context of Global South, RUSA 2.0 Project (Jadavpur University, February 2019 onwards)

Historical Legacy and Regionalism in India: A Study on the Regionalism of postcolonial North Bengal, Vide Letter no File No. 02/134/SC/2019-2020/MJ/RP Dated 13 December, 2019, ICSSR-Sponsored Project (23 December, 2019)

UGC-SAP (DSA-1)-Sponsored Project titled “A River Called *Raidak*: An Environmental Perspective” (Duration of the Project 1 April 2019 to 31 March, 2020)

#### **Publications (Books/ Edited Books/Articles in Edited Volumes & Journals/ Reviews/ Others):**

##### **Books:**

*Jatpat, JatiRajniti O Dalit Pratarka* (Kolkata, Alfabeta Books, 2019)

*The Origin and Evolution of the Enclaves of India and Bangladesh: A Historical Study*(New Delhi, Abhijeet Publications, 2019)

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*Nature, Communities and State: An Environmental History of Bengal and Assam*(New Delhi, Abhijeet Publications, 2019)

*Practice of Folk Medicine in Sub-Himalayan Bengal: A Study on the Folk Medicinal Practices of the Rajbanshis in Historical Perspective* (New Delhi, Abhijeet Publications, 2019)

### Articles Published In Edited Volumes And Learned Journals:

Casteism and Caste Intolerance in India: A Study on Casteism of Contemporary West Bengal, Contemporary Voice of Dalit, Article first published online: 17 February, 2020

Struggle at the Assam-Bengal River Basins: Fictional Illustrations in Historical Perspective, The Mirror, Vol 6 (2019)

**Forthcoming:** *Forced Migration, State Policies and Contested Citizenship* (Forthcoming)

### Papers Presented in Seminars/Conferences/Workshops/Invited Lectures:

#### International:

Paper titled *Environment-induced Forced Migration: Indian realities in the Global Context*, presented to the International Seminar on 'Understanding South Asia and South East Asia: A Historical Perspective Department of History, North Bengal University, 16-17 May, 2019

Paper titled '*Dissemination of Buddhism in Postcolonial West Bengal* presented to the Ven. Prof. WalpolaRahula Thera Memorial International Conference on 'Dissemination of Buddhism in the Globalized World', Buddhist and Pali University of Sri Lanka, Sri Lanka, 7 August, 2019

Presented a paper titled From 'Chiefdom to National Elements: Transitions of the indigenous communities' to the International Seminar on Tribe, State and Performance, Department of Sanskrit, Jadavpur University, Kolkata, 21 December, 2019

Paper titled 'Caste Consciousness and Assertions in Contemporary Urban and Suburban West Bengal: A Study on the Scheduled Castes' presented to the International Seminar organized by Department of History, Jadavpur University, Kolkata 700032; 6-8 February, 2020

#### National:

Delivered a Special Lecture in Satyajit Ray Film and Television Institute on the occasion of Constitution Day, 26 November, 2019

#### State-Level:

Delivered the 24<sup>th</sup> Chuni Kotal Memorial Lecture, Organized by the Bangla Dalit Sahitya Sanstha, Kolkata, 17 August, 2019

### Participation/Organize/Resource Person in Seminars:

#### International:

'Warfare in South Asia: From Ancient to Modern Times' organised as Joint Coordinator under the Department of History, Jadavpur University from 7-8 January, 2020

#### Sessions Chaired:

#### International:

Chaired a session in the International Conference on 'Warfare in South Asia: From Ancient to Modern Times' organised as Joint Coordinator under the Department of History, Jadavpur University from 7-8 January, 2020

### Seminar Organised:

#### International:

'Warfare in South Asia: From Ancient to Modern Times' organised as Joint Coordinator under the Department of History, Jadavpur University from 7-8 January, 2020

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**International Seminars & Visits Abroad:** Visited Bangladesh, Sri Lanka and Bhutan

### Research Projects:

Migration, State Policies and Contested Citizenship in South Asia: A Study on India, Bangladesh and Bhutan in the context of Global South, RUSA 2.0 Project (Jadavpur University, February 2019 onwards)

Historical Legacy and Regionalism in India: A Study on the Regionalism of postcolonial North Bengal, Vide Letter no File No. 02/134/SC/2019-2020/MJ/RP Dated 13 December 2019), ICSSR-Sponsored Project (23 December, 2019)

UGC-SAP (DSA-1)-Sponsored Project titled “A River Called *Raidak*: An Environmental Perspective” (Duration of the Project– 1 April 2019 to 31 March, 2020)

**Other Professional Activities:**Coordinator, Centre for Ambedkar Studies, Jadavpur University

### Research Supervision:

M.Phil supervision (April 2019 – March 2020): 03

Phd Awarded (April 2019 – March 2020): 04

Phd Submitted (April 2019 – March 2020): 01

Ongoing Research Supervision (April 2019 – March 2020): M.Phil: 03, Ph.D :08

**Papers Taught:**Taught UG, PG and M.Phil Course

### Prof. Subhasis Biswas

Completed Three Years tenure as the Dean Faculty of Arts, Jadavpur University

### Suchetana Chattopadhyay

**Publications (Books/ Edited Books/Articles in Edited Volumes & Journals/ Reviews/ Others)**

#### Articles Published in Edited Volumes and Learned Journals:

#### Edited volumes

‘Impression of Ships: Calcutta during the 1910s’, Anuradha Roy and MelittaWaligora (eds.), Kolkata in Space, Time and Imagination, Vol.1 (Delhi, Primus 2019), pp.161-184 ISSN 978-93-5290-786-1

‘The Last Stretch of the Journey: The Komagata Maru, Wartime Political Radicalism, and Migrant Workers from Punjab in Calcutta’, Rita Kaur Dhamoon, Davina Bhandar, RenisaMawani and Satwinder Kaur (eds.),Unmooring the Komagata Maru:Charting Colonial Trajectories (Vancouver, University of British Columbia Press 2019), pp.56-75 ISSN 978-0-7748-6066-6

#### Learned Journal

‘Towards Communism: 1917 and the Muhajirs from India adrift in Central Asia’, Social Scientist, Volume 47, Numbers 7-8, July-August 2019, pp.3-30 ISSN 0970-0293

#### Reviews:

‘The Colonial Question’. Review of John Riddell, Vijay Prashad and NazeefMollah (eds.), Liberate the colonies! (Delhi, LeftWord 2019)

Frontline 28 February, 2020 (Print Edition) ISSN 0970-171

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### Papers Presented in Seminars/Conferences/Workshops/Invited Lectures:

#### International:

Invited lecture entitled 'Voices of Komagata Maru', 9 September 2019. Organised by Department of History, Simon Fraser University, Vancouver, Canada with support from Association of Canadian Cultural Studies

Paper presented on 'In a city of ruins: Pan-Islamists, Calcutta and Colonial Surveillance during the First World War', International Seminar on 'Living in Cities: Historical Perspectives on Urban Environment, Experiences and Cultures', 7 February, 2020. Organised by UCC DSA-1 SAP and RUSA 2.0, Department of History, Jadavpur University, 6-8 February, 2020

#### Sessions Chaired:

#### International:

'People narrating city', International Seminar on 'Living in Cities: Historical Perspectives on Urban Environment, Experiences and Cultures', 8 February, 2020. Organised by UCC DSA-1 SAP and RUSA 2.0, Department of History, Jadavpur University, 6-8 February, 2020

#### Seminar Organised:

#### International:

Seminar lecture by Vijay Prashad, 'Iran and American Hybrid War', Centre for Marxian Studies, JU, PG Building 9 January, 2020

**International Seminars & Visits Abroad:** Visiting Fellow, City Institute, York University, Toronto, Canada, 1 August to 30 September, 2019

#### Research Supervision:

#### M.Phil Supervision (April 2019 – March 2020):

Umi Lepcha, Forgery and other crimes in late 18<sup>th</sup> century Calcutta

Tusar Hasda, A study of three Catholic Missions in colonial India

#### Phd Awarded (April 2019 – March 2020):

Manabendra Naskar, Chabbish Pargana Jelay Unobingsho Sataker Punorjagaran (Degree awarded December 2019)

#### Ongoing PhD Research Supervision (April 2019 – March 2020):

Atrayee Lahiri, Everyday life in Kolkata 1900-1912

Aritra Mukhopadhyay, Lives under the shadow of Second World War in Bengal

Insan Ali, Insanity in Bengal Society in the colonial era

Azharul Midda, Lascars and union formation 1920-1947

#### Papers Taught:

MPhil - The city in History

MA - Life and Thought in Bengal in the 19<sup>th</sup> and 20<sup>th</sup> centuries; Twentieth Century World: Age of Extremes

BA - Modern Europe 1871-1918

### Dr. Maroona Murmu

#### Books:

*Words of Her Own: Women Authors in Nineteenth Century Bengal*, New Delhi: Oxford University Press, January, 2020

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### Others:

‘Thik Saontalder Mato’, Op-ed, *Anandabazar Patrika*, 30 June, 2019

Jaati Barna Baishamyar Paschimbanga, *Neer*, 20, (August 2019): 32-41

‘Sangbidhaner Sottor O Jaatbaishamyar’, Op-ed, *Anandabazar Patrika*, 29 January, 2020

Structural Violence of Casteism: A Personal Narrative by an Adivasi University Teacher, *The India Forum*, 4 October, 2019

### Papers Presented in Seminars/ Conferences/ Workshops/ Invited Lectures:

#### International:

Presented a paper titled ‘Lived Experiences of Adivasis in West Bengal’ in the Kolkata Group Workshop, Children and State organized by Pratichi (India) Trust, Harvard University and UNICEF India, 28-30 August, 2019

Delivered Conference Lecture III titled “Casteless West Bengal: The Myth” in the international seminar ‘Contemporary Caste, Gender and Minority Questions in West Bengal and Bangladesh: Some Explorations’ organized by Victoria University of Wellington, New Zealand, Ambedkar University, Delhi, Nagarik Udyog, Dhaka, Observer Research Foundation, Kolkata and St. Xavier’s College, Kolkata, 31 October to 2 November, 2019

Presented a paper titled ‘Myth of Casteless West Bengal’ in the international seminar Tribe, State and Performance: Perspectives from Anthropology and Allied Disciplines, organized by Dr. Pashupati Prasad Mahato Memorial Committee and Department of Sanskrit, Jadavpur University, 21 December, 2019

Presented a paper titled ‘Inefficacious Affirmative Action and Social Exclusions in Higher Education’ in the international Colloquium ‘Transformation for Sustainability? Gender and its Intersectionality within Participation in Higher Education’ organized by School of Women’s Studies, Jadavpur University, 10-11 February, 2020

#### National:

Invited panelist for the Bengal Club 9<sup>th</sup> Annual Panel Discussion organized in association with The Telegraph, 13 March, 2020

Invited speaker for national seminar on Women Empowerment and Gender Sensitization in Present Day India: Socio-cultural. Political and Cultural and Economic Perspectives at Syamaprasad College scheduled to be held at 28 March, 2020

#### State-Level

Invited speaker on the occasion of 128 Birth Anniversary of Bharat Ratna Babasaheb Dr. B. R. Ambedkar at Reserve Bank of India, Kolkata, 22 August, 2019

Invited Speaker in a panel discussion on Gender Sensitization organized by St. Xavier’s College, Raghabpur Campus, 14 September, 2019

Invited speaker on the occasion of release of Santali translation of Rabindranath Tagore’s *Vidyasagar Charit*, organized by The Asiatic Society, 2 February, 2020

Invited speaker for celebration of International Women’s Day organized by Department of Political Science and Department of Sanskrit, Acharya Prafulla Chandra College, New Barrackpore, 6 March, 2020



**Participation /Organize/Resource Person in Seminars**

**Resource Person**

**State-Level**

Evaluator of Seminar Presentations, 73 Orientation Programme, UGC-Human Resource Development Centre, Jadavpur University, 25 July, 2019

**Sessions Chaired:**

**International:**

Chaired the session titled 'Caste in Literature'; Language, Ethnicity, Narratives, and 'Tribe, Women, Marginality' in the International Seminar titled 'Contemporary Caste, Gender and Minority Questions in West Bengal and Bangladesh: Some Explorations' organized by Victoria University of Wellington, New Zealand, Ambedkar University, Delhi, Nagarik Udyog, Dhaka, Observer Research Foundation, Kolkata and St. Xavier's College, Kolkata, 31 October to 2 November, 2019

Chaired the session titled 'Language, Ethnicity, Narratives' in the International Seminar titled 'Contemporary Caste, Gender and Minority Questions in West Bengal and Bangladesh: Some Explorations' organized by Victoria University of Wellington, New Zealand, Ambedkar University, Delhi, Nagarik Udyog, Dhaka, Observer Research Foundation, Kolkata and St. Xavier's College, Kolkata, 31 October to 2 November, 2019

Chaired the session titled 'Tribe, Women, Marginality' in the International Seminar titled 'Contemporary Caste, Gender and Minority Questions in West Bengal and Bangladesh: Some Explorations' organized by Victoria University of Wellington, New Zealand, Ambedkar University, Delhi, Nagarik Udyog, Dhaka, Observer Research Foundation, Kolkata and St. Xavier's College, Kolkata, 31 October to 2 November, 2019

Chaired the panel titled 'Walking the Paths of Displacement and Segregation: Snippets from our Video Coverage international seminar on 'Living in Cities: Historical Perspectives on Urban Environment, Experiences and Cultures' organized by UGC DSA – 1 SAP and RUSA 2.0, Department of History, Jadavpur University, 6-8 February, 2020

**National:**

Chaired the session titled 'Childhoods of Different Social Classes' in the RUSA 2.0 sponsored national seminar Articulating Multiple Childhoods: Demystifying the Normative' organized by Department of Sociology, Jadavpur University, 8-9 August, 2019

**State-Level:**

Chaired the Student's Panel in seminar titled 'Letters and Archives: Traditions, Historical Experiences and The Archivist' organized by the RUSA 2.0 Research Project, "Lettering the Self and the Time: An Endangered Epistolary Archive, Jadavpur University, 17 February, 2020

Chaired the panel titled 'Desexualizing Women in Power' in the Women's Conclave 2020 organized by Ashoka University, Indian Association for Women's Studies and Department of International Relations, Jadavpur University, 4 March, 2020

Chaired 20 Sukhalata Rao Memorial Lecture organized by School of Women's Studies, Jadavpur University, 12 March, 2020

**Seminar Organised:**

**International :** Co-Coordinator of the international seminar on 'Living in Cities: Historical Perspectives on Urban Environment, Experiences and Cultures' organised by UGC DSA-1 SAP and RUSA 2.0, Department of History, Jadavpur University, 6-8 February, 2020

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**Other Professional Activities:** Member of the Research Team of the Report titled 'Living World of Adivasis in West Bengal', Pratiche India and The Asiatic Society, 19 February, 2020

**Minor Research Project:**

Education amongst Adivasis in Hingalgañj Block, Sunderban, North 24 Parganas, West Bengal under RUSA 2.0 Minor Research Project

**Research Supervision:**

**Ongoing M.Phil Research Supervision:**

Md Aktaul Hossain, Maldah-r Stree Siksha: Unish Shatak

**Phd Awarded:** Suman Sarkar, Ouponibeshik Banglar Bohumatrik Linga Ebang Jounatar Itihas (1860-1950)

**Ongoing PhD Research Supervision:**

Shilpa Mondal

Malini Ghosh

Sanghamitra Das

**Papers Taught:**

History of India (1857-1951)

Reading Texts in Historical Perspectives

Gender in Indian History

History of Political Ideas in Modern India I

Women in Colonial India

**Dr. Tilottama Mukherjee**

**Publications:**

**Co-edited Book:**

(co-edited with Raziuddin Aquil, with a foreword by P.J. Marshall) *An Earthly Paradise. Trade, Politics and Culture in Early Modern Bengal* (New Delhi: Manohar, 2020 [ISBN: 978-93-88540-91-9] pp. 595; Co-published Routledge, UK, 2020 [ISBN: 9780367497880] pp. 596)

**Article in a Book:**

'Trails of Travellers: Descriptions of an Early Modern Region in some European Accounts', in Raziuddin Aquil & Tilottama Mukherjee, eds, *An Earthly Paradise. Trade, Politics and Culture in Early Modern Bengal*, Delhi: Manohar, 2020, [ISBN: 978-93-88540-91-9] pp. 595; Co-published Routledge, UK, 2020 [ISBN: 9780367497880] pp. 35-82

**Participation /Organize/Resource Person in Seminars:**

**Seminar Organised:**

**International:** Co-ordinator (with Professor Nupur Dasgupta, Dr Sudeshna Banerjee, Dr Maroona Murmu and Dr Debajit Dutta) of Three-day International Seminar on 'Living in Cities: Historical Perspectives on Urban Environment, Experiences and Cultures', organised by the UGC DSA – 1 SAP, and RUSA 2.0 Department of History, Jadavpur University 6–8 February, 2020

**Papers presented:**

- 'Material Culture in urban centres of eighteenth-century Bengal' on 7 February 2020, paper presented at the International Seminar on 'Living in Cities: Historical Perspectives on Urban Environment, Experiences and Cultures', organised by the UGC DSA – 1 SAP, and RUSA 2.0 Department of History, Jadavpur University 6–8 February 2020

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- ‘Merchants and Commercial Enterprise in Early Modern Bengal: Some Observations in Contemporary European Travel Literature’ on 14 December, 2019, paper presented at the International Conference jointly organised by S K Somaiya Degree College, London School of Economics and Georgia State University on ‘Merchants of Early Modern and Colonial India: Enterprise, Community, and Politics’, Indira Gandhi Institute for Development Research, Mumbai, 14-15 December, 2019

### Other Professional Activities:

- Examined PhD and MPhil dissertations of other Universities-
- Examined 1 dissertation for the Degree of Master of Philosophy (Jawaharlal Nehru University).
- Examined 3 thesis for the Degree of Doctor of Philosophy (Jawaharlal Nehru University).  
*Refereed articles* - 1 each in *The Economic History Review*, *Medieval History Journal*

### Research Supervision:

M. Phil supervision (April 2019 – March 2020): ongoing 1

PhD Awarded (April 2019 – March 2020): 1 awarded

PhD Submitted (April 2019 – March 2020): 1 submitted

Ongoing Research Supervision (April 2019 – March 2020): 3 PhD ongoing

### Papers Taught:

July semester 2019 – UG: Medieval India (CE 1206-1526); Transitions in Indian History (CE 600-1600) [half course]; PG: Medieval Indian History, 1300-1800: Political Culture.

January semester 2020 – PG: Medieval Indian History, 1300-1800: Economy and Culture; PG: Medieval India: Political Practices; MPhil: Course 3 (2.1.B): Political and Economic History of Medieval India (13<sup>th</sup> – 18<sup>th</sup> centuries); Course 4 (2.2.B): Social and Cultural History of Medieval India (13<sup>th</sup> – 18<sup>th</sup> centuries)

## Dr. Chandrani Banerjee Mukherjee

### Publications (Books/ Edited Books/Articles in Edited Volumes & Journals/Reviews/Others):

#### Articles Published in Edited Volumes And Learned Journals:

“History, Nature and Culture: Epigraphic Records of the Gahadavalas” in *Utkal Historical Research Journal* (Platinum Jubilee Publication, Series- V), Vol. XXXI, 2018, Post Graduate Department of History, Bhubaneswar, pp.36-54. This Journal is Peer reviewed and UGC listed.

“Navigating the Contours of Nature: A Survey of the Compositions of Kalidasa and Varahamihira” in *Manaviki: An International Journal of Humanities & Social Science*, A Refereed Journal of the Society for Education and Social Welfare, Varanasi, Vol. XI, No. 1, January-June, 2019. This Journal is Peer reviewed and UGC listed.

### Papers Presented in Seminars/ Conferences/ Workshops/ Invited Lectures:

#### International:

Presented a paper entitled “Nalanda and Vikramshila :Analysing the Contours of Urbanity in Ancient India” in the three day international seminar on ‘Living in Cities : Historical Perspectives on Urban Environment, Experiences and Culture’ Organised by the UGC DSA-SAP 1, and RUSA 2.0, Department of History, Jadavpur University, Kolkata on 6-8 February, 2020

#### State-Level:

Delivered a special invited lecture titled ‘Changing Norms for Women: From the Pre-Historical to the Early Historical Societies’ in Asansol Girls College, organized by the Department of History on 23 September, 2019

## Annual Report 2019-20

Delivered a special invited lecture entitled 'Deification vis a vis Objectification: Women in Early Historical Societies' in Ramkrishna Mission Vidyamandir, Belur, organized by the Department of History on 10 February, 2020

### **Sessions Chaired:**

**International:** Chaired the panel discussion titled "Insurgency and Counter insurgency in North East India" in an international conference on 'Warfare in South Asia', Organised by the Department of History, Jadavpur University on 8 January, 2020

### **Orientation Courses/ Refresher Courses:**

Attended a week long UGC- HRDC Sponsored Short term course entitled "Gender Sensitisation", organized by the School of Womens Studies, Jadavpur University, 12-18 March, 2020

**Research Projects:** Undertaken a project sponsored by RUSA 2.0

### **Research Supervision:**

Ongoing Research Supervision (April 2018 – March 2019): Two

### **Papers Taught:**

History of Early India (1500 BCE.to 2<sup>nd</sup> century CE)  
History of Indian Culture till 12<sup>th</sup> century CE  
Early Indian History upto the 13<sup>th</sup> century: Themes, Debates and Historiography  
Visual and Material culture in History  
Gender in Indian History

### **Samarpita Mitra**

**Research Supervision (April 2019-March 2020):**

**Ongoing PhD Supervision:** Four

Ayan Ghosh  
Kinshuk Dasgupta  
Sampriti Chakraborty  
Tanmoy Roy

### **Papers Taught:**

UG: History of Europe 1300-1600; History of Europe 1770-1870  
PG: History and Historiography (Module I); History of Western Social and Political Philosophy (Module II)

### **Dr. Utsa Ray**

**Publications (Books/Edited Books/Articles in Edited Volumes & Journals/ Reviews/ Others):**

**Articles Published in Edited Volumes and Learned Journals:**

"Cosmopolitan Consumption: Domesticity, Cooking and the Middle Class in Colonial India", in Christ of Dejung, David Motadel & Jurgen Osterhammel eds. *The Global Bourgeoisie: The Rise of the Middle Classes in the Age of Empire* (Princeton & Oxford: Princeton University Press, 2019)

### **Refresher Courses:**

Refresher Course in History, 19 November–2 December, 2019, University of Calcutta

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### Research Supervision:

M.Phil Supervision (April 2019 – March 2020): Deborshi Chakraborty (submitted)  
Suman Sengupta and Ratul Biswas (ongoing)

### Ongoing PhD Supervision (April 2019 – March 2020):

Sumitkanti Ghosh  
Farheen Tabassum  
Bimales Manna

### Papers Taught:

UG: Comparative Colonialisms: Latin America and Africa; History of India 1707-1857  
PG: History & Historiography (Module II); History of Modern Western Social and Political Philosophy (Module II); Social History of Modern India  
M.Phil: City in History

### Dr. Debajit Dutta

#### Papers Presented in Seminars/Conferences/ Workshops/ Invited Lectures:

##### National:

Presented and presented a paper on '*Archaeological Heritage of Koch Bihar: Focus on Numismatic Sources*' in a National Seminar on Archeological Heritage of Bengal (With Special Reference to Intangible Heritage) and History in the Making, organized by Department of History Kurseong College, 26-27 August, 2019

##### Sessions Chaired:

##### National:

Chaired a technical session in a National Seminar on Archeological Heritage of Bengal (With Special Reference to Intangible Heritage) and History in the Making, organized by Department of History Kurseong College, 26-27 August, 2019  
Chaired a technical session in 'Living in Cities: Historical Perspectives on Urban Environment, Experiences and Cultures' Organised by UGC DSA – 1 SAP and RUSA 2.0 Department of History, Jadavpur University 6-8 February, 2020

##### Orientation Courses/Refresher Courses:

Attended Refresher Course in History organized by CPDHE (UGC-HRDC) University of Delhi from 31 October–14 November, 2019

**Research Projects:** Research project ongoing on '*Numismatography of Pre-Modern North-East Indian Princely State: A Study in Historical Perspective*' funded by ICHR

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### INTERNATIONAL RELATIONS

Phone: 033-2414-6344

033-2457 2059

HOD: Prof. Om Prakash Mishra

E-mail: hod.ir@jadavpuruniversity.in

#### Courses Offered:

The Department offers Political Science (Hons.) course at the B.A. level. There are six semesters; and eighteen courses are offered at this level. In addition students have to take up extra-departmental courses (now re-designated as Generic Elective Courses). Following the introduction of CBCS from July 2017, students would also study ability Enhancement courses. At the M.A. level the Department offers degree course on Political Science with International Relations. There are four semesters with fourteen core courses and four optional courses to be chosen from twenty-four optional courses offered

The Department has a two-year M. Phil Programme in International Relations. The M. Phil. Course has been semesterised from 2010 with course work during the first two semesters including one course on Research Methodology. M. Phil students have to write their dissertations in the third and fourth semesters. Ph.D Course work, a one-semester and two-course programme, has been introduced in 2010

Curriculum was last revised in 2016. The CBCS model as per UGC recommendations was adopted at the UG level (and implemented from July 2017). Accordingly, optional courses ('Discipline Specific Elective Courses' of 400 marks) were introduced for the first time for Honours students which included several newly framed courses such as 'Democracy, Citizenship, Nationalism', 'Governance : Dimensions, Issues and Challenges', 'Women, Power and Politics', and 'Politics of Globalization'. A few new courses (such as 'Public Policy and Perspectives of Public Administration' and 'Foreign Policy of India') were also added to the Honours (Core) syllabi. In addition, Generic Elective Courses and Ability Enhancement Courses were also incorporated as per UGC stipulations. Further, a thorough revision and updating of the MA, M.Phil and Ph.D Course Work courses is under way

A one-year P.G. Diploma (Evening) Course Work course on Human Rights and Duties Education had been introduced in 2009-10. It as started with UGC-funding and after five years it was turned into a self-financed course. There are four Theory Papers; students also have to undertake field visits and write dissertations

#### Number of Faculty Members:

Positions available 25 : (Working: 18, Vacant: 7)  
Professor : 6  
Associate Professor : 6  
Assistant Professor : 6

#### Academic Activities of the Department of International Relations (2019-2020)

The research objectives outlined in the CAS II programme of the Department include :

- (a) describing and defining variables/factors that would shape India's foreign and security policy responses to the changing global scenario
- (b) pinpointing the trends and directions for reformulating and reinventing India's foreign policy under the new conditions of an increasingly interdependent but fragmented, integrated but diversified and networked global society
- (c) identifying the possibilities that might confront India's foreign policy processes in the near future. Thus, the aim of the project is to look into the dynamics of India's foreign policy in terms of immediate necessities as well as long term trends in the backdrop of multidimensional structural transformation of the world. However, in addition, the teachers in the Department continue to work and publish on other broad areas of the



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discipline suitable to their preferences and specializations. Teachers are also involved in a project on Global South under RUSA 2.0

### Invited Lectures Delivered/Sessions Chaired:

#### Prof. Partha Pratim Basu

Three lectures on Human Rights, Department of IR, JU, 2, 3 and 5 April, 2019

A lecture on Indo-Pak Relations, Department of Political Science, New Alipore College, 26 April, 2019

A lecture on Caste in Indian Politics, Department of Political Science, Ashutosh College, 30 April, 2019

Two lectures on Foreign Policies of United States and China, Department of Political Science, Ramakrishna Mission Vidyamandira, Belur, 12 May, 2019

Panelist in Book Discussion Programme (R. Chatterji and P. P. Basu eds. *West Bengal under the Left: 1977-2011*), Department of Political Science, Presidency University, 20 November, 2019

A lecture on India's Foreign Policy, Department of Political Science, Gurudas College, 27 November, 2019

#### Session Chaired:

A lecture by Sameek Bandyopadhyay on Gramsci, organized by Historical Materialists, Jadavpur University, 4 April, 2019

A lecture by Amb. Bhaswati Mukherjee on BREXIT, organized by Jadavpur Association of International Relations at Ramakrishna Mission Institute of Culture, Kolkata, 6 July, 2019

A lecture on 'Afghanistan' in Certificate Course on International Human Understanding, Ramakrishna Mission Institute of Culture, Kolkata, 20 December, 2019

An academic session titled 'Colonialism, Nationalism and Warfare' in International Conference on Warfare in South Asia: From Ancient to Modern Times, 8 January, 2020

An academic session in a seminar titled 'Interrogating Non/Violence in Politics', Department of Political Science, University of Calcutta, 18 February, 2020

A lecture session by Tapan Chattopadhyay in a seminar titled 'Revisiting Gandhi in Our Times', Department of Political Science, Ramakrishna Mission Vidyamandira, Belur, 4 March, 2020

#### Prof. Anindya Jyoti Majumdar

Panelist in International Relations Scholastic Conclave on Unconventional Security Issues, IR JU, 12 April, 2019

Lecture on Relevance of Geopolitics in International Business, International Management Institute Kolkata, 12 July, 2019

12<sup>th</sup> JAIR Foundation Day Lecture, "The Elephant in the Dragon's Shadow: India, China and Contingent Realism", 20 July, 2019

Panelist in "International Conflicts in Indian Perspective", da Frame Kolkata, 23 August, 2019

12<sup>th</sup> Belarani De Memorial Lecture, "South Asia: Trends in Conflict and Cooperation", Shri Shikshyatan College, Kolkata, 6 September, 2019

"Armed Peace and Arms Control", Ramakrishna Mission Institute of Culture, Gol Park, Kolkata, 17 December, 2019

"Security and Foreign policy", Department of Political Science, Kalyani University, 9 January, 2020

Special Lecture, "Fifty Years of India-Bangladesh Relations: Regionalism, Connectivity and the Northeast", JAIR and ICSSR-NERC, Shillong, 14 February, 2020

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### Sessions Chaired

Lecture Session on Maritime Scenario in the Indo-Pacific, IAAPS / Department of South and Southeast Asian Studies, University of Calcutta, 7 May, 2019

A session in the international seminar on 100 Years of International Relations, Bengal Institute of Political Studies / SIRSS, Jadavpur University, 7 September, 2019

Valedictory Session in the International Conference on India-Nepal Relations: Rejuvenation of Bilateral Ties in the 21<sup>st</sup> Century, Kolkata Society for Asian Studies / ICCR, 24 September, 2019

A session in the National Seminar on Citizenship and Diaspora, Institute of Development Studies, Kolkata, 20 November, 2019

A session in the India-Bangladesh Round Table, CENERS-K, 23 January, 2020

A session in the National Seminar on Contiguity, Connectivity and Access: the Importance of the Bay of Bengal Region in India's Foreign Policy, Netaji Institute of Asian Studies / Asia in Global Affairs, Kolkata, 5 February, 2020

A session in the National Conference on Fifty Years of India-Bangladesh Relations: Regionalism, Connectivity and the Northeast JAIR and ICSSR-NERC, Shillong, 15 February, 2020

### Prof. Shibashis Chatterjee

Served as Resident Scholar at the Post-graduate Department of International Studies at Stella Maris College, Chennai, between February 4 and 7, 2020, and delivered a series of lectures on International Relations theory and Indian foreign policy.

Delivered a special lecture on "Kant and the idea of world peace" at the first Ananta Kumar Sarker and Snehalata Sarker Memorial one-day Seminar on International Relations and World Peace at Scottish Church College, Kolkata, on February 18, 2020

Presented a lecture on "Recent trends in the study of IR" at a National Workshop on 'Recent Trends in Political Science' conducted during 28-29 February, 2020 under the aegis of the MHRD sponsored Teaching Learning Centre of S. P. Pune University

### Dr. Kakoli Sengupta

Delivered an Invited Lecture on 'Lok Sabha Elections 2019: Role of Election Commission and Political Parties' organized by the Department of Political Science, The Bhawanipur Education Society College, Kolkata on 30 April, 2019

Delivered Invited Lecture on 'Gender Matters' at the Gender Sensitization Programme organized by the Internal Complaints Committee and the Department of Political Science, The Bhawanipur Education Society College, Kolkata on 11 May, 2019

Delivered Invited Lecture on 'Break Up of the Soviet Union and Its Impact' on 16 September, 2019 organized by the Modern High School for Girls, Kolkata

Delivered Invited Lecture on 'The Persistence of Terrorist Violence in Northern Ireland: Counter Terrorism Responses' at a Symposium on Conflict Management, Peace Economics and Peace Science, organized by the Department of Economics, Jadavpur University on 11 February, 2020

Delivered Invited Lecture on 'Women in Climate Action: The Future and Its Scope' organized by South Asian Women in Media (SAWM) in partnership with Adamas University and with the support of the British Deputy High Commission, Kolkata on 2 March, 2020

### Dr. Iman Kalyan Lahiri

Lecture Delivered at Sasra Seema Bal, Ministry of Home Affairs, Government of India on June 22, 2019 on Developments in Nepal and Bhutan and its impact with India

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Two Lectures Delivered at Sasastra Seema Bal, Government of India on Demographic Changes, Radicalization and misuse of religious Institutions in border, June 26, July 1, 2019

Lecture Delivered at Sasastra Seema Bal, Government of India on Terrorism and Counter Terrorism challenges before Security Forces and Terrorist Financing, July 11, 2019

### **Dr. H.N. Toppo**

Three lectures delivered on Civil Society and Human Rights, Human Rights in Latin America and Eurasia in the PG Diploma Course in Human Rights and Duties Education, Department of International Relations, Jadavpur University on 2, 16 & 18 August, 2019

### **Session Chaired:**

Lead Speaker and Chairperson in the technical Session IV in a State Sponsored National Seminar on "Education and Culture" organized by Vivekananda College for Women Barisha, Kolkata, 4-5 April, 2019

Participated as Chair and Discussant panel entitled "Rethinking India's Act East Approach: Culture, Border and Connectivity" in the AAs-in Asia 2019 Conference Thammasat University, Bangkok, Thailand, 1 July, 2019

### **Abdul Matin**

Delivered invited lecture on 'The Sachar Committee Report and the Idea of Social Justice: Rethinking Minority Question in West Bengal' at BRAC University, Dhaka, Bangladesh 31 July, 2019

Delivered a lecture on 'Human Rights and Islam: A Theoretical analysis' Human Rights Course, IR, JU, 2019

### **Sessions Chaired:**

Chaired a session at the NAAC sponsored National seminar on Quality Enhancement of Teaching and Learning in Rural Higher Educational Institutions: Issues and Challenges, at Saheed Nurul Islam College, North 24 Parganas, 21-22 January, 2020

### **Paper Presentation in Seminars /Conferences:**

#### **Prof. Partha Pratim Basu**

'Politics of Farmland Acquisition in Global South: Re-reading the Message of Singur', in an international seminar titled 'Security Challenges in the Global South: Traditional and Nontraditional Dimensions' organized by Dept. of IR, JU under the RUSA Programme, 8 August, 2019

Delivered the Keynote Address in a national seminar titled 'Gandhi: A Reinterpretation on Sesquicentennial Birth Anniversary', P. R. Thakur Govt. College, Thakurnagar, West Bengal, 4 March, 2020

#### **Prof. Anindya Jyoti Majumdar**

'The Bay as a Strategic Theatre: Evolving Trends' in the National Seminar on Contiguity, Connectivity and Access: the Importance of the Bay of Bengal Region in India's Foreign Policy, Netaji Institute of Asian Studies / Asia in Global Affairs, Kolkata, 4 February, 2020

'India and China on Regional Platforms' in the National Conference on India-PR China Relationship: the Way Ahead, CENERS-K, 13 March, 2020

#### **Prof. Shibashis Chatterjee**

Presented a paper on "Indian foreign policy and new multilateralism" at an international conference at Brussels on the 'Which future for Multilateralism? Perspectives from the EU and Major Powers', on Friday 29 November, 2019, jointly organized by the Royal Institute for International Relations and the GLOBUS project on Reconsidering European Contributions to Global Justice

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Presented a paper on Post-colonialism and Western/Non-Western IR: Situating the Divergences at a International Conference on Revisiting International Relations: Critical Reflections on 100 Years (1919-2019), organized by the Department of International Relations, University of Dhaka, Bangladesh, on 19 January, 2020

### **Dr. Kakoli Sengupta**

Presented paper on 'India-Japan Strategic Cooperation: Looking beyond China' at Seminar on Historical Links and Contemporary Convergences of India-Japan Relations organized by The Asiatic Society, Kolkata on 13 March, 2020

### **Dr. Imankalyan Lahiri**

Paper Presented at the National Conference on '50 years of India- Bangladesh Relations. Regionalism, Connectivity and North East on India and Bangladesh' supported by Ministry of External Affairs, Government of India, NEHU, Shillong, 14 February, 2020

### **Dr. Kamaran M K Mondal**

Presented paper on "An Analysis of India's Up-gradation from Look East to Act East Policy: Challenges and Prospects" in the Conference on Fifty Years of India-Bangladesh Relations: Regionalism, Connectivity and North East, Supp. By MEA, Org. by JAIR, ICSSR-NERC, Coll. With NEHU, Shillong, 14-15 February, 2020

### **Abdul Matin**

'Huzur' and the Modern State: Political patronage, bargaining and co-option of Muslims in contemporary West Bengal, India, International seminar on Seeing Politic through Intermediation and Intermediaries at EHESS-Centre for South Asian Studies (CEIAS) Paris, France on 13 December, 2019

'Social Justice and Higher Education in West Bengal', National seminar on Quality Enhancement of Teaching and Learning in Rural Higher Educational Institutions: Issues and Challenges, at Saheed Nurul Islam College, North 24 Parganas, 21-22 January, 2020

## **Publications: Books**

### **Prof. Partha Pratim Basu**

*Revisiting Qualitative Methods in Social Science Research* (Co-edited with Bonita Aleaz), Hyderabad: Orient Blackswan, 2019

*Re-reading Rammohun Roy: A 21<sup>st</sup> Century Perspective*, (ed.), Kolkata: Seriban, 2020

### **Prof. Anindya Jyoti Majumdar**

*Conflicting Identities: Travails of Regionalism in Asia*, (co-edited with Rabindra Sen and Bhagaban Behera), New Delhi, Manohar, 2019

### **Dr. Imankalyan Lahiri**

*India's Foreign Policy in the 21<sup>st</sup> Century: Governance and Foreign Policy Imperatives*(Co-edited with Sachin Pardhe), New Delhi: Bharti Publications, 2020

*Sustenance and Development in the Tea Gardens of Assam and North Bengal* (Co-edited with Anuja Saha) New Delhi: Bharti Publications, 2020

### **Dr. H.N. Toppo**

*Russia and North Atlantic Treaty Organisation Relations: Changing Perception of Russia towards North Atlantic Treaty Organisation in Emerging World Politics*, 2019

### **Dr. Bhagaban Behera**

*Conflicting Identities: Travails of Regionalism in Asia*, (co-edited with Rabindra Sen and Anindya Jyoti Majumdar), New Delhi, Manohar, 2019

**Book Chapters/Articles in Journals:**

**Prof. Partha Pratim Basu**

‘SAARC in India’s Foreign Policy Calculus’, in Rabindra Sen, Anindya Jyoti Majumdar and Bhagaban Behera (eds.), *Travails of Regionalism in Asia*, New Delhi: Manohar, 2019

‘Discourse Analysis’ in Bonita Aleaz and Partha Pratim Basu (eds.), *Revisiting Qualitative Methods in Social Science Research*, Hyderabad: Orient Blackswan, 2019

‘Rammohun Roy: A Path-breaking Inquiry into the Colonial Economy’, in Partha Pratim Basu (ed.), *Re-reading Rammohun Roy: A 21<sup>st</sup> Century Perspective*, Kolkata: Seriban, 2020

‘Rammohun Roy and the Unitarians: An Enduring Connect’ (with Imankalyan Lahiri), in Partha Pratim Basu (ed.), *Re-reading Rammohun Roy: A 21<sup>st</sup> Century Perspective*, Kolkata: Seriban, 2020

**Prof. Anindya Jyoti Majumdar**

‘Regionalism and Security: Bridges over Fault-lines’ in R. Sen, A.J. Majumdar, B. Behera (eds.), *Conflicting Identities: Travails of Regionalism in Asia*, New Delhi: Manohar, 2019

‘SAARC and Indian Geopolitical Narrative of Regionalism in South Asia’ in AdhuriSubramanyamRaju (ed.), *Rethinking Regionalism in South Asia*, New Delhi: Studera Press, 2019

‘India in South Asia: the Evolving Trends’ in Prosenjit Pal (ed.), *India in South Asia: Challenges and Opportunities*, New Delhi: Kunal Books, 2019

**Prof. Shibashis Chatterjee**

‘International Relations: Epistemology, Ontology and Methods’ in Bonita Aleaz and Partha Pratim Basu (eds.), *Revisiting Qualitative Methods in Social Science Research*, Hyderabad: Orient Blackswan, 2019

‘South Asia in future: Democratization and the politics of transformation’, in Raju, A. (ed.), *New Futures for South Asia*. London: Routledge India, 2020

‘The Left Front and the Politics of Regionalism in West Bengal’ in RakhahariChatterji and ParthaPratimBasu (eds.), *West Bengal under the Left (1977-2011)*, London: Routledge, 2020

**Dr. Imankalyan Lahiri**

‘Raja Rammohun Roy and the Unitarians’ (With Partha Pratim Basu) in Partha Pratim Basu (ed.) *Re-Reading Rammohun Roy: A 21<sup>st</sup> Century Perspective*, Kolkata: Seriban, 2020

‘Empire or Democracy: Contrasting India’s Foreign Policy in Asia’ in Imankalyan Lahiri and Sachin Pardhe (eds.) *India’s Foreign Policy in the 21<sup>st</sup> Century: Governance and Foreign Policy Imperatives*, Bharti Publications, New Delhi, 2020

‘Methodology of the Study of the Basic Problems of the Tea Gardens of North Bengal and Assam, in Imankalyan Lahiri (co-ed.), *Sustenance and Development in the Tea Gardens of Assam and North Bengal*, Bharti Publications, New Delhi, 2020

‘Tea Gardens of North Bengal: Case Study of Select Tea Gardens of Jalpaiguri and Alipurduar District with Special Reference to Primary Education’ in Imankalyan Lahiri (co-ed.), *Sustenance and Development in the Tea Gardens of Assam and North Bengal*, Bharti Publications, New Delhi, 2020

‘Tea Gardens in the North East India: A Case Study of Assam with Special Reference to Golaghat District’ in Imankalyan Lahiri (co-ed.), *Sustenance and Development in the Tea Gardens of Assam and North Bengal*, Bharti Publications, New Delhi, 2020

**Dr. Kamaran MK Mondal**

‘India-Canada Relations: From British Commonwealth Links to Twenty-First Century Fraternity and Faultlines’ *The Calcutta Journal of Global Affairs*, Volume 3, Number 2, May 2019

**Abdul Matin**

Identity, religion and development: the changing nature of political mobilizations of Muslims in post-Sachar West Bengal’, Narender Kumar (ed.), New Delhi: Routledge, 2020



## Annual Report 2019-20

### LIBRARY AND INFORMATION SCIENCE

Phone No : 003 2414-6145

H.O.D: Prof. Subarna Kumar Das

E-mail: skd\_ju2002@yahoo.co.in

#### Course Offered:

Name of the Course	Duration
BLISC (Day)	1 year
MLISC (Day)	1 year
MLISC (Digital Library)-Evening	2 years
M. Phill- Day	2 years
PhD	5 years

#### Udayan Bhattacharya

##### Paper Published:

1. Bhattacharya, Udayan & Porel, Pronobi (2020). Mode of Identification of Rare Documents for their Management in Different Libraries in India: An analytical Study. *Librarian* (ISSN: 09723978) Special Seminar Volume: 26, Issue 1 & 2, January, 2020, pp.64-71
2. Bhattacharya, Udayan & Pal, A, Sarkar, A. (2019). Webometric Analysis of Open Universities in India, *Library Philosophy And Practice* (e-Journal), Summer, 2019
3. Bhattacharya, Udayan Sarkar. A. (2019). Social cataloguing sites : Features and Comparison in relation to ISBD. *SRELS Journals of Information Management*.56(5). 257-260
4. Bhattacharya. Udayan & Sarkar. A. (2019) Controlled vocabularies versus Social tags: A brief literature review. *Library Phiosophy and Practice* (e-Journal)
5. Bhattacharya. Udayan & Das. A.(2019). Research landscape/performance of India during 2010-2018 : An exploration through scopus.SRELS Journal of Information Management. 56 (3).122-128. (ISSN- (Print)) : 0972-2467 : (Online): 0976-2477) DOI:10.17821/srels/2019/V5613/144173
6. Bhattacharya. Udayan & Sanyal. Ankira. 2020. Exporing problems related to documents on Gender spectrum : A case study with the latest five editions of DDC. *LIBRARIAN* (ISSN:09723978) Special Seminar volume : 26. Issue 1 & 2

##### Book Chapters :

1. Bhattacharya.U., Sarkar. A. and Das. (2020). Big data in LIS and social media mining. in Rath.P. and Kumar. A. (ed.) *Social Media and Librarianship: Connecting the Communities* (pp.119-129). New Delhi: Today and Tomorrow's Printers and Publishers
2. Bhattacharya. U., Sarkar. A. and Das. A. (2019) Digital Reference Sources: As a supplementary of traditional reference tools and its significance. In Bhattacharya. U. (ed.). *Librarianship in the New Paradigm* (pp.127-135)). Kolkata. WB: Director. Human Resource Development Centre, Jadavpur University
3. Bhattachahaya. U. & Sarkar. A. (2020) hashtag: A Special feature to organize and classify unstructured information in social media. In Das. S. K. (ed.) *Proceeding of 7<sup>th</sup> Indian Social Science Congress*

##### Resource Person :

1. Acted as a resource person on 20 November in UGC-HRDC sponsored Refresher Course, held during 11-25 November, 2019, organized by Department of Libraty & Information Science, University of Cacutta and UGC-HRDC, University of Calcutta

##### Ph.D Awarded:

1. Avik Roy: "Everyday Life Information Seeking In The Context of The Theory of Way of Life"
2. Pronobi Porel: "Rare collection in Libraries: Developing guidelines for identification of rare documents"



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### Project :

#### Principal Investigator

1. RDA preparedness in West Bengal : A Feasibility Study, a RUSA sanctioned Project

#### Session Chaired/Webinar Director :

1. Session chaired in 7<sup>th</sup> Indian Social Science Congress during 7-8 September, 2019, organized jointly by DLIS, JU and Indian Social Science Congress
2. Session chaired in National Seminar on “Sustainable Library” (NSSL -2020), 24-25 January, 2020, organized by Department of Library & Information Science, Jadavpur University, at K. P. Basu Memorial Hall, Jadavpur University
3. Session chaired in National Seminar on Social Media and Librarianship connecting the communities (26-28 February, 2020), organized by Department of Library & Information Science, Mizoram University

### Prof. Subarna Kumar Das

#### Paper Published:

1. Das, Subarna Kumar & Tudu, Monoj. “Analysis of Common Service Centre (CSC) for effective communication to rural community through National e-Governance Plan: A Study”, International Journal of Future Generation Communication and Networking vol.13, No. 4 (2020) (UGC care listed)
2. Das, Subarna Kumar & Halder, Avijit. A proposed model for ideal library services to disable users. (LIBRARIAN. volume 26.Issue 1 & 2 January, 2020)
3. Das, Subarna, Mondal Soumen & Bhuniga, DITU. LIFI enabled smart library system: A Futuristic Approach. LIBRARIAN volume. 26 Issue 1 & 2 January, 2020

#### Paper Presentation:

1. Das, Subarna Kumar & Halder, Avijit. A proposed model for ideal library services to disable users at NSSL – 2020 organized by DLIS. JU. RUSA 2.0 & UGC
2. Das, Subarna, Mondal Soumen & Bhungia, DITU. lifi enabled smart library system : A Futuristic Approach at NSSL – 2020, organized by DLIS. JU. RUSA 2.0 & UGC

#### Invited Lectures/Resource Person/Session Chair:

1. Acted as a resource person in the Semianr of Coochbehar & Alipurduar District Book Fair during 27 December 2019 – 7 January, 2020, organized by Director of Library Service, Govt. of West Bengal and local Library Authority

#### Seminar/Webinar/Collaborative Programme Organised:

1. Acted as an organizing Secretary of NSSL-20 organised by Department of Library and Information Science sponsored by RUSA 2.0 during 24-25 January, 2020
2. Acted as a Local Collaborator of Collaboration of National and International Academic Networking during August 2019 to March 2020 under RUSA 2.0

#### Recognition :

1. Awarded “SIKHARATNA” (outstanding University Teachers Award) by the Department of Higher Education, Govt. of West Bengal
2. Elected as Eastern Regional Secretary of Indian Association of Library and Information Science Teachers (IATLIS) from December 2020 to December 2022
3. Appointed as School Board Member of Department of Library and Information Science, Assam University for three years
4. Appointed as Post-Graduate Board of Studies Member of Department of Library & Information Science, Mizoram University for three years
5. Appointed as External Expert Member of Doctorate Committee of Department of Library and Information Science, University of Burdwan for three years

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### PHILOSOPHY

Phone : 033 -2414- 6044

: 2457-2358

H.O.D. : Prof. Proyash Sarkar

Email : hod.philosophy@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration	No. of Students Enrolled
B.A (Honours)	3 years; 6 semesters	222
M.A.	2 years; 4 semesters	139
MPhil	2 years; 4 semesters	20
PhD	5 years	08(Awarded) 03 (Submitted), 79 (ongoing)

**B. A. in Philosophy** has introduced the Choice Based Credit system from the academic session 2017-18. Under CBCS our department offers the following Courses:

- 14 Core Courses, 6 credits each, Theory-5, Tutorial-1
- 02 Skill Enhancement Courses (SEC) 4 credits each
- 1 SEC course to be taken in semester 3 (from two options) and 1 SEC course to be taken in semester 4 (This course has various options)
- 02 Ability Enhancement Compulsory Courses (AECC), i.e. Environmental Studies (EVS) 4 credits
- Communicative English/Hindi/Modern Indian Language 4 credits  
These two courses are offered centrally by the faculty
- 04 Discipline-Specific Electives (DSE) 6 credits each, Theory-5 Tutorial-1
- 02 DSE courses are in Semester 5 (both courses have options) and 2 DSE courses are in Semester 6 (both courses have options)
- 04 Generic Elective (GE) courses 6 credit each

#### 1. B. Number of Faculty Members: 21

#### 2. A. Area of Research Activities:

**(Mind, Reality and Morals: Exploring Alternative Perspectives)**

Name of the Project-Departmental/ Individual-Funding Agency

Feminism and Philosophy-Group-CAS

Mind and Embodiment-Group-CAS

Situating Contemporary Indian Thinkers in the Context of Man, World and Morality-Group-CAS

Ethics and Culture-Group-CAS

Development of Buddhist Logic and its application to Metaphysics and-Epistemology

Prof.Madhumita Chattopadhyay-CAS

The Contribution of Âryadeva in the development of Mâdhyamika Thought-Prof. Madhumita Chattopadhyay-CAS

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*Prâmânyavâdasamikâ* -Prof.Rupa Bandyopadhyay-CAS

*Nil Akasher Niche*-Prof. Gangadhar Kar-CAS

Philosophy and the Body-Prof. Atasheer Chatterjee Sinha-CAS

Moral responsibility: Some Relevant Issues-Prof. Aparajita Mukhopadhyay-CAS

Understanding Being and the Phenomenon of Being-Prof. Samar Kumar Mondal-CAS

Exploring the Philosophical Thought of Ramendrasundar Trivedi-Prof. Dipayan Pattanayak-CAS

Empirical Methods in the Philosophy of Mind: A Metaphilosophical Study-Prof Maushumi Guha-CAS

Time, Temporal Passage and their Cognitive Impenetrability-Dr. Maitreyee Datta-CAS

Tradition, Culture and Gender Relations-Dr. Gargi Goswami-CAS

Contextualism in the Epistemic Tradition-Dr. Gopinath Mondal-CAS

Reflexivity of Consciousness and Subjectivity-Prof. Madhumita Chattopadhyay & Prof. Madhucchanda Sen-CAS

Revisiting Stoic Logic from the perspective of Contemporary Logic-Prof. Lopamudra Chowdhury and Dr. Sanjukta Basu-CAS

*Pracina Bhârater Dandanîti* (Ed.)-Prof.Proyash Sarkar & Dr. Preetam Ghosal-CAS

*Advaitasiddhi* with *Vâlabodhini*-Prof.Rupa Bandyopadhyay & Dr. Preetam Ghoshal-CAS

*Bhârâtîya Darœanasâstrer Vicârarîti*-Prof.Rupa Bandyopadhyay & Dr. Preetam Ghoshal-CAS

### 2. B. Major Research Project:

**Prof. Madhumita Chattopadhyay** is working as the Principal Investigator in a Major Research Project on “The Development of *vâda* in Buddhist Logic” sanctioned by Jadavpur University under the RUSA 2.0 scheme

### 3. A. Invited Lectures Delivered/Sessions Chaired:

#### **Prof. Proyash Sarkar**

1. Delivered two lectures at a seven-day workshop on “Buddhist Logic” was organized by the ICPR Centre for Buddhist Studies, J.U. on 7 and 14 May, 2019
2. Delivered a lecture on “The Externalists’ Worry and A Way Out of the Problem of Incompatibility: An Indian Perspective” at a two-day International Seminar on ”Self, Knowledge and World: Perspectives from East and West” to be held on 11th September 2019, organized by the Department of Philosophy, Presidency University
3. Delivered one lecture at a seven-day workshop on “Reading Mâdhyamika Buddhist Texts” organized by the ICPR Centre for Buddhist Studies, J.U., on 26 November 2019
4. Chaired a session at a state level seminar on ‘the Philosophy of Kalikrishna Banerjee’ organized by Department of Philosophy, Jadavpur University on 21.12.2019
5. Presented a talk entitled ‘The Gandhi-Ambedkar Controversy: The Dalit Issue’, at a seminar on “Gandhi: The Person and His Philosophy”, organized by The Indian Psychoanalytical Society, on 1 March 2019
6. Delivered a lecture on “The Nyâya/Vaiœœika Controversy over the Admittance of Inference” at a seminar on “Epistemology: Indian and Western” organized by the Department of Philosophy, Vidyasagar University on 24 February, 2019
7. Presented a paper entitled “Bankimchandra on Liberty and Independence” on 6 March 2020, at an International Seminar on “Contemporary Bengali Thinkers” to be organized by Surendra Nath College for Women, Kolkata

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### Prof. Rupa Bandyopadhyay

1. Presented a paper “Are the Advaita Vedantins Anti-realists?” in a Seminar organized by the Department of Philosophy, North Bengal University to celebrate the Indian Philosopher’s Day on 15.05.2019
2. Presented a paper “The Ethics of Detachment: An Analysis of the Ethics of the Ārimadbhagavadgita from the Perspective of Virtue Ethics” in an International Seminar on “Traditional Hindu/Indian Virtue Ethics in Today’s Perspective: Shared Ideas between East and West” organized by the Indian Institute of Advanced Studies, Shimla during 2-3 March, 2019
3. Presented a paper in a National Conference on “Mind and Reality: The Sceptic’s Challenge” organized by the Department of Philosophy, JU on 3 March, 2020
4. Delivered a lecture on “Vedanta” in a course on “Some Fundamental Concepts of Indian Philosophy” organized by the Ramakrishna Mission Institute of Culture, Golpark on 3 July, 2019
5. Delivered a lecture on the Samkhya Philosophy at the Ramakrishna Sarada Mission Vivekananda Vidyabhavan on 24 September, 2019
6. Chaired an Academic Session in the Seminar on “Systems of Logic: Indian and Western” organized by the Bimal Krishna Matilal Centre for Logic during 28-29 November, 2019

### Prof. Madhumita Chattopadhyay

1. Presented a paper entitled “Logic of Asanga explored” in the International Hetuvidyâ conference organized by Zhejiang Buddhist Academy, Zhejiang, China on July, 2019
2. Presented a paper on “Language, Word and Meaning: Some Thoughts on Suvarccalâ- Ūvetaketu Dialogue of the Mahâbhârata” in an International Seminar on Mahâbhârata organized by Sanskrit University, Kolkata on 6 August, 2019
3. Presented a paper on “Transition from the *vâda* tradition to the *pramâna* tradition in Buddhist Logic: Role of AsaGga explored” in a State Level Workshop on “Logic: Indian and Western” organized by the B.K. Matilal Center for Logic, Department of Philosophy, Jadavpur University on 27 November, 2019
4. Presented a paper on “Model for Successful Communication: A Proposal from Buddhist Point of View” at an International Seminar on “Relevance of Indian Philosophy to Contemporary Western Philosophy” organized by the Ramakrishna Mission Institute of Culture, Golpark on 7 January, 2020
5. Presented a paper on “Concept of Subtlety, Elementary Particles and Human Cognition” at a National Seminar on “Quantum Physics, Brain Function in Modern Science and Buddhist Philosophy” organized by Indian Tibet House, CKSL, Bengaluru on 18 January, 2020
6. Presented a paper on “Development of the notion of *pratîtyasamutpâda* following the Commentary of Candrakîrti” at a National Seminar organized by the Department of Philosophy, Savitri Bai Phule University, Pune from 11-13 February, 2020

### Prof. Soumitra Basu

1. Delivered B.K. Majumdar Memorial lecture at National Council of Education, Bengal on ‘Manasiksamasya: Protirodh-o- Protikar’ on 7 May, 2019
2. Acted as resource person in an workshop on “Couple Counselling” organized by School of Counseling and Well-being, NCEB, on 21 April, 2019
3. Acted as resource person in Workshop on “Stress Management” Organized by Midnapore College on 21 August, 2019
4. Delivered a lecture on “Helping students in Stress” in Stress Management workshop organized by CCSSU JU & HRDC JU on 13 September, 2019

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5. Acted as a resource person in the workshop on “Growing in a Group” Organized by Kazi Nazrul University, Asansol on 20 September, 2019
6. Delivered 4 lectures on the various aspects of Sri Aurobindo’s metaphysical thoughts in the workshop on “Life and Philosophical Thoughts of Sri Aurobindo”, Organized by the Centre for Sri Aurobindo Studies, Department of Philosophy, Jadavpur University
7. Delivered a lecture on “Social aspects of Mental Health” in a seminar on Psycho-Social aspects of Mental health organized by Antara Psychiatric Centre, 24 pgs. (south)
8. Acted as resource person in a two-day workshop on “Memory and Psychoanalysis” at Midnapore College on 10-11 February, 2020
9. Presented a paper entitled “Understanding Social Development” in the Seminar on “Revisiting some Social Ideas of Sri Aurobindo” 26 February 2020, organized by Centre for Sri Aurobindo Studies, Jadavpur University
10. Presented a paper in the two-day seminar on “Ideology, Art and Science in Social Sciences” Organized by the Department of Sociology, North Bengal University during 6-7 March, 2020
11. Presented a paper in the International Seminar on “Contemporary Indian philosophy” Organized by Belur Mahavidyalaya on 17 March, 2020

### Prof. Gangadhar Kar

1. Chief Speaker of the seminar on ‘Relevance of Study of Vedic Astrology in Human Psychological Wellness’ in 21<sup>st</sup> Century’ on 12 August, 2019 at Ichhapuran Community Hall, Kolkata
2. Chaired a Session in the publication ceremony of Gitakalp o Koumodi (2<sup>nd</sup> ed.) on 10 October, 2019 at Bharatiya Bhasha Parishad, Kolkata
3. Delivered a lecture in UGC-HRDC Short Term Course on 22 February, 2020 at the Department of School of Language and Linguistics, Jadavpur University
4. Delivered a lecture on ‘Metaphysics’ in the National Seminar held at Surendra Nath College on 29 November, 2019
5. Delivered a lecture entitled ‘Life and Philosophy of Vidyasagar’ in one day ICSSR sponsored national Seminar on “Iswar Chandra Vidyasagar: a great Reformer and Crusader of Women’s Empowerment” on 27 September, 2019
6. Guest of Honour and delivered a lecture entitled ‘Spiritual Teachings of Sri Sri Ramakrishna Paramhansa Deb’ in “Sri Sri Ramakrishna Sharanam, 2020” presented by Janamon- Janamot TV in association with Tribhubaner Kalachakra (a monthly magazine on Spirituality and Astrology) on 15 March, 2020

### Prof. Atashee Chatterjee Sinha

1. Presented two lectures on Michel Foucault on 20- 21 March, 2020 at a seven-day workshop on “Postmodern thought and its antecedents: some Continental Reflections” under RUSA 2.0 organized by the Department of Philosophy, Jadavpur University
2. Presented a paper on “Styles of love” on 22 March, 2020 in a workshop organized by an NGO (Mental Health Organization) ECHO at Bhowanipore, Kolkata
3. Acted as an evaluator for presentation of papers of participants in Seven Day Workshop on “Life and Philosophical Thoughts of Sri Aurobindo”, organized by The Centre for Sri Aurobindo Studies, Department of Philosophy, Jadavpur University from 19–26 September, 2019
4. Acted as an evaluator for presentation of papers of participants in a Seven Day Workshop on “Reading Buddhist Madhyamika Text” organized by ICPR Centre for Buddhist Studies, Department of Philosophy, Jadavpur University
5. Acted as a Chairperson in a session in the Departmental State-level seminar on “Ontological Reflections” held on 8 February, 2020 organized by Department of Philosophy, Jadavpur University



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### **Jhuma Chakraborty**

1. Presented a paper entitled 'Philosophy in Practice' in a seminar on "The Practical Implications of Philosophy", organized by the Department of Philosophy, Narsimha Dutta College on 4 December, 2019
2. Presented a paper entitled on 'Gandhi's Civil Society' in a State level seminar on "The Socio- Political and Ethical Thoughts of Mahatma Gandhi : A Critical Evaluation" organized by the Department of Philosophy, Diamond Harbour Women's University on 23 December, 2019
3. Presented a paper on "Vidyasagar as an Educationist", in a seminar on "Vidyasagar Ekush Shataker Drishtite" organized by the Radhakrishnan Study Centre of Rabindra Bharati University, on 3 February, 2020
4. Acted as a Chair person in a seminar on "The Socio- Political and Ethical Thoughts of Mahatma Gandhi : A Critical Evaluation", organized by the Department of Philosophy, Diamond Harbour Women's University on 23 December, 2019
5. Presented a paper on 'The journey from modern to post-modern epistemology' in a seminar on "Ideology Art and Science in Social Science" organized by the Department of Sociology, North Bengal University on 6-7 of March, 2020

### **Sashinungla**

Chaired a session at the National Seminar on "State, Community, Citizenship: Rewriting Histories of Gender" from 16-18 March, 2020, School of Women's Studies, Jadavpur University

### **Aparajita Mukhopadhyay**

1. Chaired a session in a National seminar on 'Swami Vivekananda as the torch bearer for the youth at the present day crisis of human values' organized by Madhyamgram Vivekananda College in collaboration with Ramkrishna Mission Vivekananda University, Belur Math, held on 12-13 April, 2019
2. Presented a paper in a Workshop on 'Life and Philosophical Thought of Sri Aurobindo, organized by the Centre for Sri Aurobindo Studies, Department of Philosophy, Jadavpur University, held on 19-26 September, 2019
3. Presented paper in a Departmental seminar on 'Environmental Thoughts as Reflected in Ancient Indian Scriptures' organized by New Alipore College, Kolkata, held on 5 December, 2019
4. Chaired a Lecture Session on "The Influence of Indian Philosophical Thoughts on Mircea Eliade's Philosophy" by Prof. Mihaela Gligor, Director of Cluj Centre for Indian Studies, Romania organized by New Alipore College, Kolkata, held on 29 February, 2020

### **Madhucchanda Sen**

1. Presented a paper on 'Thought and Representation' at JNU in an international Conference on "Thinking" during November, 2019
2. Gave a Talk on 'The name I Call Myself' at Department of Philosophy, Delhi University during January, 2020

### **Dipayan Pattanayak**

1. Delivered two lectures in a seven day workshop on 'Reading Madhyamika Buddhist Texts', organized by ICPR Centre for Buddhist Studies, Department of Philosophy, in November, 2019
2. Acted as Speaker and Chairperson in a seminar at Nagar College, Murshidabad on 2 December, 2019
3. Acted as Chairperson in Indian Social Sciences & Humanities Congress 2019, International Seminar, 7 September, at Jadavpur University
4. Acted as speaker & chairperson, the National Seminar Organized by Manbazar Government College on 24 February, 2020
5. Acted as speaker and chairperson in the National Seminar organized by Bankura University on 25 February, 2020
6. Acted as speaker and Chairperson in the National Seminar organized by Aghore Kamini Prakash Chandra Mahavidyalaya, on 26 February, 2020



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7. Acted as speaker and chairperson in the National Seminar organized by Lalbaba College on 28 February, 2020
8. Delivered a lecture on 18 March, 2020 at the Department of Philosophy, Bamanpukur Humayun Kabir Mahavidyalaya, North 24paraganas

### **Samar Kumar Mondal**

1. Delivered a lecture on ‘Origin of Stress: An Analysis from Buddhism and Modern Psychology’, WRMIC, 2019: International Conference, Buddhist and Pali University, Sri Lanka, August, 2019
2. Delivered a lecture on ‘Concept of Stress and its Effects’, 7 days STC on Stress Management, UGC-HRDC, J.U.12 September, 2019
3. Delivered a lecture on ‘How to Manage our Stress’, Two-day Workshop on Stress Management, Derozio Memorial College, Rajarhat, 26 September, 2019
4. Delivered a lecture on ‘Responsibility of Guardians to overcome Examination Stress’, One day workshop for Guardians, Hardayal Nag Adarsha Vidyalaya 30 November, 2019
5. Delivered a lecture on ‘Issues on Examination related Stress’, One day workshop on ‘Examination related Stress and its Management for forthcoming H.S. Examination’, Hardayal Nag Adarsha Vidyalaya, 14 December, 2020
6. Delivered a lecture on ‘Stress Management’, One day workshop, RKSMVV, 24 January, 2020
7. Delivered a lecture on ‘Genesis of Stress: Buddhism and Modern Psychology’, Applied Buddhism & World Peace International Conference, Siddharth United Social Welfare Mission, Kolkata, 26 January, 2020
8. Delivered a lecture on ‘Memory & Psychoanalysis’, Two-day workshop on Memory & Psychoanalysis, Midnapur College, 10-11 February, 2020

### **Maushumi Guha**

1. Presented a paper at the UGC-CAS National Seminar on ‘Mind and Reality: The Sceptic’s Challenge’ on 2–3 March, 2020
2. Chaired and moderated a session at the RUSA 2.0 sponsored Two-Day Young Scholars’ National Meet organized by the Department of Philosophy, Jadavpur University, Kolkata on 14–15 February, 2020
3. Delivered the keynote address at the RUSA 2.0 sponsored Two-Day Young Scholars’ National Meet organized by the Department of Philosophy, Jadavpur University, Kolkata on 14–15 February, 2020
4. Chaired three sessions at the ICPR sponsored National Seminar on ‘Science, Technology and Philosophy’ organized by the Department of Philosophy, Presidency University on 4–5 February, 2020
5. Presented a paper titled, ‘Philosophical Naturalism in the 21st C’ at an ICPR sponsored National Seminar on ‘Science, Technology and Philosophy’ organized by the Department of Philosophy, Presidency University on 4–5 February, 2020

### **Maitreyee Datta**

1. Presented a paper titled “Revisiting the Logic used in ‘‘Gatâgataparîkâ’ of Nâgârjuna”, at the 15<sup>th</sup> *Hetuvidya conference* at Zheziang Buddhist Academy, Ningbo, China, 20-21 July, 2019
2. Have taken seven classes in the workshop on ‘Buddhist Epistemology’ organized by ICPR Centre for Buddhist Studies, Department of Philosophy, Jadavpur University during 7-14 May, 2019
3. Have taken four classes in the workshop on ‘Buddhist Logic’ organized by Zhezhiang Buddhist Academy, China during 22-26 July, 2019
4. Have taken three classes in the workshop on ‘Reading *Mâdhyamika Buddhist* Texts’ organized by ICPR Centre for Buddhist Studies, Department of Philosophy, Jadavpur University during 20-27 November, 2019

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5. Presented a paper titled 'Language, Meaning and Being: A Philosophical Conversation' in the state level seminar on 'The Philosophy of Kalikrishna Banerjee' organized by Department of Philosophy, Jadavpur University on 21 December, 2019
6. Presented a paper on 'Buddhist Logic' in a state level seminar on 'Logic: Indian and Western' organized by Department of Philosophy, Calcutta University, on 12 February, 2020
7. Chaired an academic session of one day state level seminar to commemorate World Philosophy Day, organized by Department of Philosophy, Jadavpur University on 8 February, 2020

### Preetam Ghoshal

1. Chaired a session in the International Workshop on 'Myriad Sparkles of Vedanta: A kaleidoscopic View of the Holistic', Wisdom, January, 2020
2. Chaired a session in the National level young Scholars' Meet, on 'Communication and Cognition', 15 February, 2020

### Rubai Saha

1. Presented a paper entitled "Relevance of Swami Vivekananda's Teaching and the all-round uplift of women in the 21<sup>st</sup> century" on 12th April, 2019 in a Two Day National Seminar on 'Swami Vivekananda as the Torch Bearer for the Youth at the present day crisis of Human Values' organized by Internal Quality Assurance Cell (IQAC), Vivekananda College, Madhyamgram in collaboration with Ramakrishna Mission Vivekananda University, Belur Math
2. Presented a paper entitled "Concern for Environment: Reflections from Indian Philosophical Traditions" on 7 September, 2019 in Indian Social Sciences and Humanities Congress 2019 (5<sup>th</sup> Annual International Conference) organized by Paschimbanga Anchalik Itihas O Loksanskriti Charcha Kendra in collaboration with Department of Library and Information Science, Jadavpur University
3. Presented a paper entitled "True Maternity from a Spiritual Perspective" on 19 October, 2019 in an International Conference on 'Spiritual Perspectives on Creating a Conscious Humanity' organized by Sri Aurobindo Foundation for Indian Culture, Pondicherry and Birthing The New Humanity, France
4. Presented a paper on : "Niskâma Karma of the Bhagavadgîtâ: Its Implications" on 17 December, 2019 at a 3 Day International Conference on Human Development and Indian Knowledge Traditions organized by Chinmaya Vishwavidyapeeth, Ernakulam, Kerala
5. Presented a paper entitled "Brahma-Vihâra Bhâvanâ" on 11 January, 2020 at the 50<sup>th</sup> session of All India Oriental Conference held at Kavikulaguru Kalidas Sanskrit University, Ramtek, Nagpur

### Gargi Goswami

1. Delivered a lecture on 'Hume's moral philosophy' on 9 April, 2019 at Bethune College
2. Presented a paper on 'The Notion of Social Development : Understanding through the lens of Sri Aurobindo' in a two day State Level Seminar on "Revisiting Some Social Ideas of Sri Aurobindo" organized by Centre for Sri Aurobindo Studies on 25 –26 February, 2020
3. Presented a paper on 'An Exploration of Foucault's Methodology in Social Sciences' in a Two day National Seminar organized by Department of Sociology, North Bengal University, on 6–7 March, 2020
4. Chaired a session in the seven day workshop in 'Life and Philosophical Thought of Sri Aurobindo' during, 19-20 September, 2019

### Gopinath Mondal

Delivered a lecture in a seminar organized by the Department of Philosophy, Brahmananda Keshab Chandra College on 5 April, 2019

### Tamoghna Sarkar

1. Chaired a session in the state level seminar on 'Philosophical Explorations', organized by the Department of Philosophy, Jadavpur University on 10 May, 2019

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2. Chaired a session in the Two-Day Young Scholars' National Meet on 'Communication and Cognition', organized by the Department of Philosophy, Jadavpur University, Kolkata on 14–15 February, 2020

### 3. B. Seminar/Workshop/Conference/Symposium Attended:

#### Sri Arun Mahato

1. Attended Seven Day Workshop on 'Life and Philosophical Thought of Sri Aurobindo', organized by The Centre for Sri Aurobindo Studies, Department of Philosophy, Jadavpur University from 19–26 September, 2019
2. Attended Seven Day Workshop on 'Reading Madhyamika Buddhist Texts', organized by ICPR Centre for Buddhist Studies, Department of Philosophy, Jadavpur University
3. Attended Two day Young Scholars National Meet on 'Communication and Cognition', organized by Department of Philosophy, Jadavpur University from 14-15 February, 2020

#### Ms. Rubai Saha

1. Attended a Seven Day Workshop on Buddhist Logic organized by the ICPR Centre for Buddhist Studies, Department of Philosophy, Jadavpur University from 7-14 May, 2019
2. Attended a Ten-Day FDP cum Textual Workshop on Shankara Vedanta (Level-1) at the School of Philosophy and Culture, Shri Mata Vaishno Devi University, Katra, organized by Indira Gandhi National Centre for the Arts from 20–30 May, 2019
3. Attended a Seven Day Workshop on Life and Philosophical Thought of Sri Aurobindo organized by The Centre for Sri Aurobindo Studies, Department of Philosophy, Jadavpur University from 19–26 September, 2019
4. Participated in a 9-Day International Workshop on *Navyanyāya* Language and Methodology (Level-1) from 23–31 December, 2019, conducted by the Rishi Rina Trust, Pune and Amrita Darshanam (International Centre for Spiritual Studies), Amrita Vishwa Vidyapeetham, Coimbatore

#### Dr. Gargi Goswami

Attended Seven Day workshop on 'Buddhist Logic' organized by ICPR Center for Buddhist Studies, Department of Philosophy, Jadavpur University during 7-14 May, 2019

#### Dr. Gopinath Mondal

Attended a seven-day workshop on 'Life and Philosophical thoughts of Sri Aurobindo', organized by the centre for Sri Aurobindo Studies, Department of Philosophy, JU, during 19-26 September, 2019

#### Dr. Tamoghna Sarkar

1. Attended ICPR sponsored and ISJS, New Delhi organized Seven-Day National Workshop on 'Essence of *Samayasāra*', 4-10 June, 2019
2. Attended ICPR center for Buddhist Studies, Jadavpur University organized Seven-Day workshop on 'Reading *Mādhyamika* Buddhist Texts', 20-27 November, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organized:

#### Prof. Proyash Sarkar

1. Jointly organized the seminar titled, 'Studies in the History and Philosophy of Science' jointly with the Indian National Science Association, New Delhi in July 2019 as the chief liaising person and joint coordinator (along with Professor Maushumi Guha and Dr. Tamoghna Sarkar) under RUSA 2.0
2. Jointly organized a UGC-CAS National Seminar on 'Mind and Reality: The Sceptics' Challenge' on 2 – 3 March, 2020

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### **Prof. Rupa Bandyopadhyay**

Organized a two-day State-level Seminar on “Systems of Logic: Indian and Western” on behalf of the Bimal Krishna Matilal Centre for Logic, Department of Philosophy, Jadavpur University during 28-29 November, 2019

### **Prof. Madhumita Chattopadhyay**

1. Young Scholars’ Meet at the National Level on “Communication and Cognition” organized jointly with Dr. Gargi Goswami on 14–15 February, 2020
2. A seven-day workshop for College and University Teachers on “Buddhist Logic” was organized jointly with Dr. Gargi Goswami from 7–14 May, 2019
3. A seven-day workshop for Young Scholars and Teachers on “Reading Mādhyamika Buddhist Texts” was organized jointly with Dr. Gargi Goswami from 20–26 November, 2019 under RUSA 2.0 scheme. This workshop was attended by young scholars and Faculty members not only from other parts of India but from Iran, Italy and Sri Lanka
4. Organized a seven day Workshop on behalf of ICPR Center for Buddhist Studies, Department of Philosophy, Jadavpur University, in collaboration with Ningbo Buddhist Academy, Ningbo, China from 18–25 July, 2019 to teach Buddhist Logic to the Buddhist Nuns of the Ningbo Center

### **Prof. Atashee Chatterjee Sinha**

Jointly organized a state level two day seminar on “Revisiting some Social Ideas of Sri Aurobindo” from the Centre for Sri Aurobindo Studies, Department of Philosophy, Jadavpur University held on 25 –26 February, 2020

### **Prof. Jhuma Chakraborty**

Acted as a joint co-coordinator of a one-day Seminar on “Ontological Reflections”, organized by the Department of Philosophy, Jadavpur University on 8 February, 2020

### **Prof. Aparajita Mukhopadhyay**

1. Jointly organized a seven days Workshop on ‘Life and Philosophical Thought of Sri Aurobindo’ from 19 – 26 September, 2019
2. Jointly organized a two day state level Seminar on ‘The Philosophy of Kali Krishna Banerjee’ on 20–21 December, 2019
3. Jointly organized a two day state level Seminar on ‘Revisiting Some Social Ideas of Sri Aurobindo’ on 25 – 26 February, 2020
4. Organized Sri Aurobindo Memorial lecture in August, 2019

### **Prof. Samar Kumar Mondal**

1. Organized a workshop on Stress of Caregivers in Mental Health, CCSSS, J.U., 24 March, 2019
2. Organized a seven day STC on Stress Management, CCSSS, J.U., 12 September, 2019
3. Organized a three day workshop on Children in Conflict with Law (CICL): Balancing justice-based and Care-based Approach, CCSSS, J.U. 11–13 March, 2020

### **Prof. Maushumi Guha**

1. Organized the seminar titled, ‘Studies in the History and Philosophy of Science’ jointly with the Indian National Science Association, New Delhi in July 2019, as the chief liaising person and joint coordinator (along with Dr. Tamoghna Sarkar) under RUSA 2.0
2. Organized one day State Level Seminar on ‘Philosophical Explorations’ on 10 May, 2019 (jointly with Dr. Gargi Goswami)

### **Dr. Gargi Goswami**

1. Organized a one-day State level Seminar on ‘Philosophical Explorations’ along with Prof. Maushumi Guha on 10 May, 2019

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2. Organized the seminar titled, 'Studies in the History and Philosophy of Science' jointly with the Indian National Science Association, New Delhi in July 2019, as a part of the organizing team, under RUSA 2.0
3. Organized a seven day workshop on 'Reading Madhyamika Buddhist Text' along with Prof. Madhumita Chattopadhyay by ICPR Center for Buddhist Studies, Department of Philosophy, Jadavpur University during 20-27 November, 2019
4. Organized a two day Young Scholar National Meet along with Prof. Madhumita Chattopadhyay on 14 and 15 February, 2020 under Department of Philosophy, Jadavpur University

### Dr. Gopinath Mondal

1. Jointly organized two-day seminar on 'Systems of Logic: Indian and Western', 28-29 November, 2019.
2. Jointly organized two-day seminar on 'Mind and Reality: The Sceptics' challenge', 02-03 March, 2020

### Dr. Tamoghna Sarkar

1. Joint Coordinator of the JU-INSA Seminar on 'Studies in the History and Philosophy of Science', 18 July, 2019
2. Joint Coordinator of P.K Sen Memorial Prize Distribution Ceremony and a state level seminar on 'Ontological Reflections', 8 February, 2020

### 3. D. Orientation Courses/ Refresher Courses Attended:

Dr. Tamoghna Sarkar attended the 'Online Refresher Course in Philosophy' under Annual Refresher Programme in Teaching through SWAYAM platform, organized by B.P.S Mahila Vishwavidyalaya, Sonapat, with NTA conducted proctored online examination on 16.02.2020

### 4. A. Books/Monographs etc. Published:

#### Prof. Proyash Sarkar:

*Jñân Samāyavâd O juktisiddhi Prasaṅge* (On Knowledge, Scepticism and Justification—in Bengali, enlarged edition), Mahabodhi Book Agency, Kolkata (in Press).

#### Prof. Rupa Bandyopadhyay

*Indian Theories of Illusion*, Kolkata: Mahabohi Book Agency, 2020

#### Prof. Madhumita Chattopadhyay

*Bauddha-Tarkabhâsâ*, edited and translated into Bengali from the original Sanskrit Text, West Bengal State Book Board, Book fair 2020

#### Prof. Gangadhar Kar

"*Nil Akasher Niche*" published under CAS Programme in Philosophy Phase V in collaboration with Mahabodhi Book Agency

"*Nastika Darshne Jñânatattva*" (forthcoming)

#### Prof. Aparajita Mukhopadhyay and Dr. Gargi Goswami

Jointly edited (With an introduction) an anthology *Ethics and Culture: Some Contemporary Indian Reflections* Vol. 3, published by Suryodaya Books, New Delhi in collaboration with Jadavpur University, ISBN: 978-81-936-0762-6

#### Prof. Madhucchanda Sen

Co-edited *Mind and Cognition- An Interdisciplinary Reading- essays in Honour of Amita Chatterjee*, D.K Printworld, New Delhi, 2019



#### 4. B. Articles Published in Journals:

##### Prof. Proyash Sarkar

1. ‘A case for Indirect Doxastic Voluntarism: The Nyâya Perspective’, CAS in Philosophy, Rajasthan University (Forthcoming)
2. “Ambedkar on the Emancipation of the Untouchables” in an anthology on *Caste, Marginalization and Emancipation: A Socio-Philosophical Perspective* to be published by Santhigiri Institute of Culture & Human Development, Thiruvananthapuram (Forthcoming)

##### Prof. Rupa Bandyopadhyay

“Theories of Sentence-meaning: Some Common Concerns” is to be published in the forthcoming issue of the Jadavpur Journal of Philosophy

##### Prof. Madhumita Chattopadhyay

1. “Asanga’s Analysis of *vâda*: Few Observations” accepted for publication in *Anvesanâ*: Journal of the Postgraduate Institute of Pâli and Buddhist Studies, University of Kelaniya, Sri Lanka, volume 10, Part 2, Year 2019, pp. 20—31
2. “Nâvisaye nana munir nana mat” (Different opinions regarding the meaning of negative particle) (in Bengali) published in the Spring Issue of the journal *Anustup*, January 2020
3. “Knowledge of Knowledge from the Grammarian’s point of view” published in *Mind and Cognition: An Interdisciplinary Sharing* Vol 2, eds. Kuntala Bhattacharya, Madhucchanda Sen, Smita Sirker, D.K. Printworld, India, 2019
4. “Motion interpreted: a bridge between Science and spirituality”, published in *New Perspectives in Indian Science and Civilization* ed. Makarand R. Paranjape, Routledge Taylor & Francis Group, London and New York, 2020
5. “Rahul Sankrityayan’s contribution to the Study of *Pramânavârttika*” (forthcoming)

##### Prof. Soumitra Basu

“Religious intolerance and the Prospect of inter-religious Dialogue” to be published in an anthology entitled *Language, Religion and Culture*, to be published by the Department of Philosophy, Gour Banga University, West Bengal

##### Prof. Atashee Chatterjee Sinha

1. Co-edited a special volume of *Alochona Chakra* (Bengali journal), ‘Naribader Darshan’ Volume 46, 2019 (ISSN 2231-3990)
2. “Narivadi Adhividya: kichubhavna, kichuprasna” in *Alochona Chakra* (Bengali journal), Naribader Darshan, Volume 46, 2019 (ISSN 2231-3990)
3. Distance-learning: Written a module in Bengali on “A Critical account of Martha Nussbaum’s Liberal Feminism” for The Department of Political Science, Rabindra Bharati University

##### Prof. Lopamudra Choudhury

‘Vennio<sub>1</sub>: a diagram system for universe without boundary’, (with ReetuBhattacharjee and M.K. Chakraborty), *Logica Universalis*, 2019, 3 (3), pp. 289-346

##### Prof. Sashinungla

1. “Towards a Feminist Ethics of Shame”, in *Shame, Gender Violence and Ethics: Terrors of Injustice*, ed. L. Skof and S. Hawke, Lanham: Lexington Books, (Forthcoming in 2020)
2. Sashinungla and P. Biswas, “India’s Foreign Policy and Domestic Compulsions: Theorizing the Margins of Exclusion”, in *The Interface of Domestic and International Factors in India’s Foreign Policy*, eds., J. D. Schmidt and S. Chakrabarti, Sage Publications, (Forthcoming in 2020)



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3. Sashinungla and P. Biswas, "Thinking, Looking and Acting: Beyond East and Southeast to the 'Other Asia'", in *The Interface of Domestic and International Factors in India's Foreign Policy*, eds., J. D. Schmidt and S. Chakrabarti, Sage Publications, (Forthcoming in 2020)
4. "Feminist Theory, Politics of Sovereignty and Epistemic Injustice", *JICPR*. (Forthcoming)

### Prof. Samar Kumar Mondal

1. 'Unish Shotoke Bânglar Jiban Jijñâsâ', *Antorjatik Pathsala*, Vol. – VIII 2019, issue-2 & 3
2. 'Swami Vivekanander Chintay Prayogik Bedanta', *Darsan Biksa*, 2018-2019, Vol-28, no.2
3. 'Origin of Stress and its Management: An Analysis from the Perspective of Buddhism and Modern Psychology', *Journal of the Department of Pali*, 2019, Vol-XXII

### Prof. Maushumi Guha

'Simulation and Meditation' in *Mind and Cognition: An Interdisciplinary Sharing/ Essays in Honour of Amita Chatterjee*, ed. by Madhucchanda Sen, Kuntala Bhattacharya and Smita Sirker, N. Delhi: D. K. Printworld.

### Dr. Maitreyee Datta

1. 'Classical Indian Dialectics: Refuting the Reality of Temporal Passage in *Mûlamadhyamakakârikâ* and *Khandanakhandakhâdya*, in *Asian Philosophical Texts: Exploring the Hidden Sources*, edited by Takeshi Morisato and Roman Pa'ca, Milan, Mimesis International, 2020, pp. 157-172
2. 'A Development of an Experiential Self', *Social Trends*, Vol. 7, March 2020
3. 'Is three time argument of Nagarjuna an adequate one?', Proceedings of 14<sup>th</sup> *Hetuvidya* conference, July, 2019, China
4. 'Is Tense Real: A Nyâya Buddhist Controversy' *Mind and Cognition: An Interdisciplinary Sharing*, A Festschrift Volume on Amita Chatterjee, eds. Kuntala Bhattacharya, Madhucchanda Sen and Smita Sirker, by D. K. Printworld, New Delhi, 2019

### Dr. Preetam Ghoshal

*Kâlalaîsanavimarîa: Khandanaûaili-r ekti Anudhyâna*, DarûanaVîsâ, 2018-2019

### Ms. Rubai Saha

"Values in Sri Ramakrishna's Message to the World" is going to be published under the Value Group Project 'Ethics and Culture' Volume 3 published by Decent Books, New Delhi in collaboration with Department of Philosophy, Jadavpur University

### Dr. Gargi Goswami

1. 'Culture, Religion and Gender Rights: Is there a meeting point?' to be published in an anthology entitled "Language, Religion and Culture", to be published by the Department of Philosophy, Gour Banga University, West Bengal
2. 'Formation and Care of Self: A Foucauldian Analysis' in *Social Trends*, Vol.7, University of North Bengal, March 2020
3. 'Gender Issue and Virtue in Buddhism: A Study from Jâtaka Tales' in *International Journal of Integrated Research and Development*, December 2019
4. 'Maintaining Ecology: Role of Buddhist Women' in *Mahila Pratishtha Journal*, January-March 2020

### Dr. Tamoghna Sarkar

'The Concept of Identity in *Advaita Vedânta*' in *Vedânta, Science and Technology*, G.N Jha, B.R Singh, S. Sengupta (Eds.), D.K Printworld, 2020, pp. 56-74. (ISBN 978-81-246-0947-7)

**5. Collaborative Programmes:**

ICPR Center for Buddhist Studies, Department of Philosophy, Jadavpur University Organized a Seven Day Workshop in collaboration with Ningbo Buddhist Academy, Ningbo, China from 18– 25 July, 2019 to teach Buddhist Logic to the Buddhist Nuns of the Ningbo Center

**6. Major Achievements:**

1. Centre for History and Philosophy of Science and Technology has been set up at the Department of Philosophy. The Coordinator of the Centre is Prof. Proyash Sarkar
2. Matilal Centre for Logic was established in the department with initial financial grant from the family members of Late Professor Bimal Krishna Matilal. Prof. Rupa Bandyopadhyay and Dr. Gopinath Mondal organized a two day State Level Seminar on “Systems of Logic: Indian and Western” under the auspices of the Bimal Krishna Matilal Centre for Logic during 28-29 November, 2019
3. In 2013 ICPR Centre for Buddhist Studies was established in this department. The Centre regularly organizes different academic programs. This year Centre has conducted two Workshops on Buddhist philosophy
4. Centre for Sri Aurobindo Studies, a Centre of the Department, started its journey from 2005 under the UGC scheme of Epoch Making Social Thinkers of India. Its aim is to focus upon various aspects of Sri Aurobindo’s thoughts and their relevance to contemporary Indian Society and Culture. Distinguished scholars from different parts of India and abroad visit the Centre on a regular basis to discuss different aspects of Sri Aurobindo’s philosophy. In September 2019 Centre has organized a seven-day workshop on Sri Aurobindo’s philosophy. It has also organized in February, 2020 a two day seminar on the social thought of Sri Aurobindo. Like every year in August 2019 Centre has conducted a Sri Aurobindo Annual Memorial lecture to celebrate his birth ceremony. Furthermore Centre runs a weekly Study Group for reading the texts of Sri Aurobindo through discussion and interaction
5. Some members of the department are associated with the Centre for Counselling Services and Studies in Self Development is housed in the Department. Centre conducts several academic programs throughout the year. Centre has organized seminars and workshop in this period also
6. Some of the teachers of the Department have developed a special expertise in Feminist Philosophy and are helping neighboring institutions to develop their course material in this area. Ph. D and M. Phil. dissertations are done on this area addressing emerging issues in gender epistemology, metaphysics, logic, language and ethics. There is a study group at the department where several teachers and scholars from various disciplines, from inside and outside the university come for attending a class which is conducted by Prof. Shefali Moitra (Retired Professor of Philosophy)
7. Emerging/Hi-tech/Priority area generated:
  - The Department gives special priority to emerging and interdisciplinary areas of research and research with a practical orientation. Areas like Contemporary Indian Philosophy, Philosophy of Science and Feminist Studies continue to be areas of priority
  - In recent time, some new areas of research have emerged that are receiving great importance in our regular activities like, modern Indian thinkers and their philosophies, Nāstika traditions of Classical Indian philosophy like Mahāyāna Buddhism and tribal thought and philosophy thereof
  - New and emerging areas of philosophy worldwide like the Experimental Philosophy movement and research in Meta-philosophy are also receiving critical attention
  - A new special paper has been introduced at the post graduate level on Philosophy of Science where students are made familiar with the philosophical thoughts on scientific issues both from Indian and Western perspectives
  - A study group has been formed for interested people on Philosophy of Kant. In this group students, teachers, research scholars of our University as well as from other neighboring institutes regularly participat

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- Remedial Coaching classes have been held for meritorious and needy students of our department
- 8. Teaching: We use highly evolved teaching methods that include use of ICT as well as one-to-one personal interactions during and after class hours
- 9. Curriculum Last Revised & Significant Changes:  
New Syllabus for the UG and PG levels has been introduced in the year 2016. Hence no alteration in the existing syllabus is mentioned here:
  - The syllabi for the UG and PG level under the semester system, which has been revised rigorously, has been implemented from the academic session 2016-2017. The basic objective of the revision was to make the syllabi updated and comprehensive, so that the students can start with a broad outline and then proceed on to a detailed study on the topic
  - In the syllabus for M. Phil and Ph. D coursework, special emphasis is given on research methodology: Indian and Western. Teachers, while offering optional courses, focus on contemporary research areas, such as Reflection on Searle's Rediscovery of mind, Noam Chomsky, Bimal Krishna Matilal, Ontology of P.F. Strawson, Philosophy of Arindam Chakraborty, Feminist perspectives on power, sceptical tradition of India, Moral Responsibility, Metaphysics of Sri Ramakrishna's Philosophy and so on, at both the M.Phil and PhD levels. At all levels emphasis is given on learning and research rather than forced teaching and enabling students to learn how to write research articles

### PHYSICAL EDUCATION

Phone : 033-2457-2486

033-2457-2477

H.O.D: Prof. Sanjib Mridha

E-mail: hod.ph.ed@jadavpuruniversity.in

#### 1. A. Courses Offered :

Name of the Course	Duration	No of Students Enrolled
Post Graduate Diploma in Yoga (PGDY)	1 year	20 (25)

#### 1. B. Number of Faculty Members : 8 (11)

#### 2. A. Area of Research Activities : (Broad Areas)

- Exercise and Sports Physiology
- Exercise and Sports Psychology
- Exercise and Sports Biomechanics
- Exercise and Sports Sociology
- Sports Management
- Sports Training
- Yoga
- Health-Fitness and
- Olympic Studies

**2. A. Major Research Project : (Name of the project-Project title-Project Amount-Duration)**

**Departmental Project**

UGC RUSA – 2.0 sponsored project for Departmental support towards upgradation in research-Exercise, Population Health and Sustainable Development Goals: An Experimental Study of Psychophysiological Aspects of Health-Rs. 25 lakhs-2019-21

UGC RUSA – II sponsored project for Departmental support towards upgradation in research-An Analytical study of Posture, Movement and Performance of adult human in the greater community-Rs.14,18,000/-2019-20

**Prof. Sanjib Mridha**

1. UGC RUSA – II sponsored major project for faculty members-An Olympic Dream of Billion People. No. R-11/505/19Dt. 31.05.2019-Rs. 6,89,200/= - 2019-21

**Dr. Asish Paul**

1. Research Support to Faculty members, RUSA 2.0-Influence of Sports Culture for the development of certain Health Related Fitness factors of Tribal Women-4,63,000/- - 2019-21

**Dr. Sridip Chatterjee**

1. UGC RUSA – 2.0 sponsored major project for faculty members-A Study on the Effectiveness of Exercise as Translational Medicine for the Assessment of Prevalence and Prevention of Metabolic Syndrome-Rs. 5 lakhs-2019-21
2. UGC RUSA – 2.0 sponsored minor project for faculty members-Influence of Exercise on the Mental Health of School Going Children: A Neuroendocrinal Perspective-Rs. 2 lakhs-2019-21

**Dr. Atanu Ghosh**

UGC RUSA-2.0Sponsored Minor Research Project for faculty members-An Analysis of Different Neuro-Psychological Aspects And Socio- Economic Congenital Factor With Obesity Speculation Among Differently Abled Students-Rs.2.15lakhs -2019-21

**Ms. Puneet Bhattacharya**

1. UGC RUSA-2.0Sponsored Minor Research Project for faculty members-Influence of Exercise on the Mental Health of School Going Children: A Neuroendocrinal Perspective-Rs. 2 lakhs-2019-21

**3. A. Invited Lectures Delivered/Sessions Chaired: (Type of Participants-Name of the Seminar/Conference-Place-Duration)**

**Prof. Sudip Sundar Das**

1. Co-Chaired a session: Exercise Prescription, Physical Fitness and Doping-International Conference on Physical Education and Sports Science (ICPESS20)-Department of Arts (Physical Education) Manipal University, Jaipur, 09-11 January, 2020
2. Chaired the Session-WEI International Academic Conference on Humanities and Social Sciences (WEI-HSS-Barcelona 2020)-West East Institute Barcelona, Spain, 11-13 February, 2020
3. Chaired the Technical Session : Holistic development for Excellence in Sports Performance, Health & Well Being Scientific International Conference on Physical Education and Allied Sciences-S.S.Dempo College of Commerce & Economics, Goa, 27-29 February, 2020

**Prof. Sanjib Mridha**

1. Invited Lecture-Yoga for Physical Fitness and Mental Health-Muenster University, Germany, 14.11.2019
2. Invited Lecture-Physical Education in the Indian Context-Muenster University, Germany, 14.11.2019
3. Lead Speaker Psycho-social Perspective of Wellness and Human Performance-National Seminar on Holistic Education: Harmonising the Body, Mind & Spirit-Visva-Bharati University, Shantiniketan, 17-18 February, 2020

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### Dr. Sridip Chatterjee

1. Invited Lecture in the Scientific Session-International Science Festival (IISF) – 2019, Wellness Conclave & Expo-Jadavpur campus, Kolkata, November 6-7, 2019
2. Invited Lecture-Comprehensive Impact of Yoga, Meditation and Wellness on Social Wellbeing in 21st - Century-Union Christian Training College, Berhampore, Murshidabad, West Bengal, 21-22 November, 2019
3. Session Chaired-Comprehensive Impact of Yoga, Meditation and Wellness on Social Wellbeing in 21st Century-Union Christian Training College, Berhampore, Murshidabad, West Bengal, 21-22 November, 2019
4. Invited lecture-Different Asian Schools of Raja Yoga: For Human Excellence-Department of Sanskrit Jadavpur University, Kolkata, 3-5 January, 2020
5. Session Chaired-Different Asian Schools of Raja Yoga: For Human Excellence-Department of Sanskrit Jadavpur University, Kolkata, 3-5 January, 2020

### Dr. Asish Paul

1. Lead speaker-International conference on Physical Education, Yoga and Sports Science in 2020s Era-State Institute of Physical Education for Women, Alipur, 15 January, 2020

### Dr. Papan Mondal

1. Invited Lecture-NET/SET/Remedial Coaching Classes-Burdwan University and Three Class-(26.11.2019)
2. Session Chaired-“Comprehensive Impact of Yoga, Meditation and Wellness on Social Wellbeing in 21st Century”-Union Christian Training College, Berhampore, West Bengal, 21-22 November, 2019
3. Session Chaired-Asia-Singapore Conference on Sport Science-2019-Grand Copthorne Waterfront, Singapore, 169663, 18-19 July, 2019

### Dr. Atanu Ghosh

- 1 Paper presented Sport for All Through Tradition and Innovation-The 26th TAFISA World Congress-Tokyo, Japan, 13– 17 November, 2019
- 2 Paper Presented Effect of Menstruation phases on skill ability of Inter University Kho- Kho Players-International conference on Physical Education, Yoga and Sports Science in 2020s Era-Alipur, Kolkata, India, 15 January, 2020

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Paper-Name of the Seminar-Place-Duration)

#### Prof. Sudip Sundar Das

1. Paper presented on-Influence of a specific training programme on athletic abilities with reference to their psycho-Social status-International Conference on Physical Education and Sports Science (ICPESS20)-Department of Arts (Physical Education) Manipal University, Jaipur, 09-11 January, 2020
2. Paper presented on- Influence of weight training on Body composition and performance of young cricketers.-International Conference on Physical Education and Sports Science (ICPESS20)-Department of Arts (Physical Education) Manipal University, Jaipur, 09-11 January, 2020
3. Impact of Physical Fitness Programme with Nutraceuticals Supplementation on Pre- Adolescent Regional Athletes in India.-WEI International Academic Conference on Humanities and Social Sciences (WEI-HSS-Barcelona 2020)-West East Institute Barcelona, Spain, 11-13 February, 2020
4. Paper presented on- Influence of a specific training programme on athletic abilities with reference to their psycho-Social status-International Conference on Physical Education and Sports Science (ICPESS20)Department of Arts (Physical Education) Manipal University, Jaipur, 09-11 January, 2020



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### **Prof. Ashoke Kumar Biswas**

1. Comparison of Training Effect on Reaction Time between Male and Female-International Conference on Physical Education and Sport Science-Manipal University, Jaipur, 9 –11 January, 2020
2. Effect of Physical Training on Reaction Time for Female Subjects-International Academic Conference on Humanities and Social Sciences-Barcelona, Spain, 11 –13 February, 2020

### **Prof. Sanjib Mridha**

1. JU Representative-National Conference on Yoga Accreditation for Higher Education Programmes-S-VYASA University Bangalore, 6 March, 2019
2. Paper Presented India and the Olympic Legacy: The Realities and the Potentials-Legacy of Olympic and Paralympic Games-Paris East University, Paris, 17-18 June, 2019
3. JU Representative-International Conference on Journey of Teacher Education : Local to Global-NCTENew Delhi, 17 – 18 August, 2019
4. Paper Presented Development of Sports Technology and its Effect on Sports Ethics-International Conference on Holistic Development for Excellence in Sports Performance, Health and Wellbeing-SS Dempo College, Panaji, Goa, 27 – 29 February, 2020

### **Dr. Asish Paul**

1. Attended-National workshop on “research methodology and statistical analysis for physical education”- Department of Physical education, Kalyani University, 19- 25 June, 2019
2. Sport for All Through Tradition and Innovation-The 26th TAFISA World Congress-Tokyo, Japan, 13 – 17 November, 2019
3. Sports Brand Awareness and importance of stakeholder-Expediency of Physical Education Sport Wellness Fitness and positive health in modern mechanized world-Government Physical Education College for Women, Hooghly, West Bengal, 13 January, 2020

### **Dr. Sridip Chatterjee**

1. Effect of Yogic Training on Neurocognitive Function in Middle Aged Group-6<sup>th</sup> Movement, Health and Exercise Conference and 12<sup>th</sup> International Sports Science Conference-Sarawak, Malaysia, 30 September –2 October, 2019
2. Attended-International Conference on Physical Education and Sports Sciences-Department of Arts (Physical Education), School of Humanities, Manipal University, Jaipur, India, 9-11 January, 2020
3. Effect of Regular Yogic Training on Growth Hormone and Dehydroepiandrosterone Sulfate as an Endocrine Marker of Aging-Expediency of Physical Education, Sport, Wellness, Fitness and Positive Health in Modern Mechanized World-Govt. Physical Education College for Women, Chinsurah, Hooghly, West Bengal, 13 January, 2020

### **Dr. Papan Mondal**

1. Measurement of Lower Extremity Kinematics during Suryanamskar-“Comprehensive Impact of Yoga, Meditation and Wellness on Social Wellbeing in 21<sup>st</sup> Century”-Union Christian Training College, Berhampore, West Bengal, 21-22 November, 2019
2. Biomechanical Comparison of Volleyball Spike and Volleyball Jump Serve for National Male Volleyball Players -Asia-Singapore Conference on Sport Science-2019-Grand Copthorne Waterfront, Singapore, 16-18-19 July, 2019
3. The Coefficient of Restitution-A Review-National Seminar on Holistic Education: Harmonizing the Body, Mind and Spirit-Visva-Bharati University, 17-18 February, 2020
4. Kinesthetic Perception and Basketball Shooting Performance-National Seminar on Expediency of Physical Education Sport Wellness Fitness and positive Health in Modern Mechanised World-GPECW, Hooghly, West Bengal, 13 January, 2020



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5. Kinematic Release Parameters of Three Different Types of Scoring Shot in Basketball-International Conference on Physical Education and Sports Science (ICPESS 20)-Manipal University, Jaipur, 9-11 January, 2020

### **Ms. Puneet Bhattacharya**

1. The Immediate effect of Karate Exercise on Heart Rate-6th Movement and Exercise Sports Science Conference-Kuching Sarwak, Malaysia, 30 September–2 October, 2019
2. Significance of Neurotrophic Mechanism in Transcendental Meditation through Relaxation Response-National Seminar on Comprehensive Impact of Yoga, Meditation and Wellness in 21<sup>st</sup> Century-Union Christian Training College, Behrampore, Murshidabad, West Bengal, November 2019
3. A Comparative Study of Aerobic Ability on three different ball game players-International Conference on Physical Education and Sports Science-Manipal University, Jaipur, 9 –11 January, 2020
4. A Comparative Study of Muscular Strength between Karate practitioners and Active Controls-National Seminar on the Expediency of Physical Education, Sport Wellness Fitness and Positive Health in Modern Merchandised World-Govt. Physical Education College for Women, Chinsurah, Hooghly, West Bengal, 13 January, 2020
5. Sport for All Through Tradition and Innovation-The 26th TAFISA World Congress -Tokyo, Japan, 13– 17 November, 2019
6. Effect of Menstruation phases on skill ability of Inter University Kho- Kho Players-International conference on Physical Education, Yoga and Sports Science in 2020s Era-Alipur, Kolkata, India, 15 January, 2020

### **4. B. Articles Published in Journals: (Including National/International & Peer- reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**

#### **Prof. Dr. Sanjib Mridha**

1. Development of Sports Technology and its Effect on Sports Ethics-Studies in Indian Place Names (UGC Care Journal)-March 2020-Volume - 40 (62):181 – 190. ISSN: 2394-3114
2. A Study on Indian Badminton: An Upsurge with reference to Different Awards-International Journal of Health, Physical Education & Computer Science in Sports - A Peer Reviewed (Referred) International Research Journal-July 2019 - September 2019-Volume - 35(1): 129– 137. ISSN: 2231-3265

#### **Dr. Asish Paul**

1. Epidemiology of low back pain: A literature review-International Journal of Physical Education, Sports and Health-2019-6(3):233-237
2. A study on People's Perception of Golf in India-International Journal of Physical Education, Sports and Health-2019-6(3):227-232
3. Influence of Yogic Practices on Psychological Variables in Youths With reference To Low Back Pain: A Pilot Study-Studies in Indian place names-2020-vol 40, no.62

#### **Dr. Sridip Chatterjee**

1. Significance of Neurotrophic Mechanism in Transcendental Meditation through Relaxation Response-Seminar proceedings; Comprehensive Impact of Yoga, Meditation and Wellness on Social Wellbeing in 21<sup>st</sup> Century -November, 2019-Vol I;ISBN: 978-93-5391-909-2
2. Immediate effect of kapalbhati kriya on selected cardiorespiratory variables-Seminar proceedings; Comprehensive Impact of Yoga, Meditation and Wellness on Social Wellbeing in 21<sup>st</sup> Century-November, 2019-Vol I;ISBN: 978-93-5391-909-2
3. Immediate effect of suryanamaskar on heart rate-Seminar proceedings; Comprehensive Impact of Yoga, Meditation and Wellness on Social Wellbeing in 21<sup>st</sup> Century-November, 2019-Vol I;ISBN: 978-93-5391-909-2

## Annual Report 2019-20

4. Immediate effect of Asana on Blood Pressure: A self as Control Study-Conference Proceedings- ICPESS 20-January, 2020-Volume 2, Pages6-13
5. A Comparative Study of Aerobic Ability on Three Different Ball Game Players-Conference Proceedings- ICPESS 20-January, 2020-Volume 2, Pages 46-56
6. Prevalence of Common Sports Injuries in Physical Education Teacher Trainees-Conference Proceedings- ICPESS 20-January, 2020-Volume 2, Pages 81-90
7. Immediate effect of suryanamaskar on blood lactate-Conference Proceedings- ICPESS 20-January, 2020 -Volume 1, Pages 480-484

### **Dr. Papan Mondal**

1. Kinematic Comparison of Jump Shot between National and University Level Handball Players-Conference Proceedings 2019: Asia-Singapore Conference on Sport Science-2019-18-19 July, 2019
2. A biomechanical analysis of different types of scoring shot in basketball-Conference Proceedings- ICPESS 20-Manipal University, Jaipur, 9-11 January, 2020

### **Dr. Atanu Ghosh**

1. Influence of circadian rhythm on selected motor fitness and heart rate of jumper-International Journal of Physiology, Nutrition and Physical Education-August, 2019-ISSN: 2456-0057
2. A Study on Relationship Between Cardiac Sympatho- Vagal Modulation With Kinesthetic Perception and Vo2 Max of Under 14 Years Male Football Players-Studies in Indian Place Names-March, 2020-ISSN: 2394-3114

### **Ms. Puneet Bhattacharya**

1. Significance of Neurotrophic Mechanism in Transcendental Meditation through Relaxation Response-Seminar proceedings; Comprehensive Impact of Yoga, Meditation and Wellness on Social Wellbeing in 21st Century-November, 2019-Vol I, No.1; ISBN: 978-93-5391-909-2
2. A Comparative Study of Aerobic Ability on Three Different Ball Game Players-Conference Proceedings- ICPESS 20-January, 2020-Volume 2, Pages 46-56
3. Prevalence of Common Sports Injuries in Physical Education Teacher Trainees-Conference Proceedings- ICPESS 20-January, 2020-Volume 2, Pages 81-90

## **6. Major Achievements:**

### **Prof. Sanjib Mridha**

1. Visited Paris East University during 17 –18 June, 2019
2. Visited six Olympic Study Centres in Europe during 11–28 November, 2019 for international academic and research collaboration
3. Visited International Olympic Committee HQ at Lausanne, Switzerland for library work
4. Visited Olympic Venue at Athens, Greece to observe Olympic in the the historical context

### **Dr. Sridip Chatterjee**

- i. Foreign visit as an invited Guest Speaker in the celebration of the “5<sup>th</sup> International Day of Yoga” at Chengdu, China. Jointly organised by the Consulate General of India in Guangzhou and India Corner Chengdu, China on 22 June, 2019
- ii. Academic recognition includes foreign visit as an invited speaker in the 6<sup>th</sup> Movement, Health and Exercise Conference and 12<sup>th</sup> International Sports Science Conference at Kuching, Sarawak, Malaysia from 30– September to 2 October, 2019

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### Ms. Puneet Bhattacharya

- i. Represented India at the 2nd JKA Asia Oceania Karate Championship as a coach of a four member India Squad from 17-18 August, 2019
- ii. Academic recognition includes foreign visit as paper presenter in the 6th Movement, Health and Exercise Conference and 12th International Sports Science Conference at Kuching, Sarawak, Malaysia from 30–September to 2 October, 2019

### SANSKRIT

Phone : 033-2414-6115

: 2457-2086/2254

H.O.D. : Dr. Ashok Kumar Mahata

E-mail :hod.sanskrit@jadavpuruniversity.in

hod@sanskrit.jdvu.ac.in

#### 1. A. Courses Offered:

Name of the Course	Duration	No of Students Enrolled
B.A (Honours)	3 years; 6 semesters	200
B.A. Extra-Departmental	2-years	50
M.A.(Day)	2 years; 4 semesters	160
M.A.(Evening)	2 years; 4 semesters	140
MPhil	2 years; 4 semesters	19
PhD	5 years	25

- PG-II Group: Day course comprises six Groups or Special Papers, namely *Kāvya*, *Veda*, *Vedānta*, *Dharmaśāstra*, *Nyāya Vaiśeṣika* and Epigraphy. For Evening course, the special papers are *Veda*, *Nyāya Vaiśeṣika* and Epigraphy.
  - CBCS method has been implemented for UG course
  - Certificate Course: 1 year, Language Studies, intake 20 (the course not conducted for this year)
  - Diploma Course: 1 year, Language Studies, intake 20 (the course not conducted for this year)
  - Advanced Diploma Course: 2 years, intake 10 (the course not conducted for this year)
- (Note: the number of students at present in the last three courses is not known since these Courses fall under the Language Studies Centre)

#### 1. B. Number of Faculty Members (2019 –2020):

9 whole-time teachers and 6 guest faculty members and part-time lecturers (day and evening sections)

**2. A. Broad Areas of Research Activities:**

- I. Vedic Studies
- II. Grammar and Indian Linguistics
- III. Indian Philosophical Systems
- IV. Literature, Literary Criticism, Drama and Dramaturgy
- V. Smriti Literature
- VI. Epigraphy and Manuscriptology

**Ongoing Joint Research Projects:**

Translation work of *ChinnaCbhamma's Tarkabhâsâprakâûikâ* (Commentary on *Tarkabhâsâ* of *Keûavamiûra*) under the project of Departmental support towards Upgradation in Research of RUSA 2.0 grant (Research Thrust Area: Translational Research), Jadavpur University

Translation work of *Pandit Sri Sudarûanâcârya's Prasannapadâvyâkhyâ* (Commentary on *Vâtsyâyananyâyabhâsyam*) under the project of Departmental support towards Upgradation in Research of RUSA 2.0 grant (Research Thrust Area: Translational Research), Jadavpur University

**Ongoing Individual Research Projects:**

**Debarchana Sarkar**

Coordinator and one of the Investigators a Project under RUSA 2.0 (JU) on Translational Researches, Departmental Support, Department of Sanskrit, Jadavpur University

**Ashok Kumar Mahata**

Ongoing Translation work under RUSA 2.0 grant (Research Thrust Area: Translational Research), Jadavpur University

Minor Research Project on "Comparative Study of Mythology, Ritual and Culture in the Adivasi Traditions and Sanskrit Scriptures" under RUSA 2.0 (Research Thrust Area: Studies in the Global South), Jadavpur University

**Kakali Ghosh**

Ongoing RUSA 2.0 sponsored Major Research Project on "REFLECTIONS ON *VEDÂNTA*: UNEARTHING THE CONCEPTS OF PHYSICS TO PEER INTO THE CORE OF CONSCIOUSNESS" since 12/03/2019

**Shiuli Basu**

Ongoing Translation work of *Candrâloka* under RUSA 2.0 grant (Research Thrust Area: Translational Research), Jadavpur University

**Debdas Mandal**

Ongoing Translation work of *Canakyanîtidarpanam* under RUSA 2.0 grant (Research Thrust Area: Translational Research), Jadavpur University

**Chinmay Mandal**

Translation work of *Varttika's of Siddhântakaumudî* upto *kârakânta-prakaraGa* under RUSA 2.0 grant (Research Thrust Area: Translational Research), Jadavpur University

**3. A. Invited Lectures Delivered/ Papers Presented in Refresher or Orientation or Summer Courses/ Seminars/ Workshops/ Conferences/ Symposia/ Colloquia & c.:**

**Debarchana Sarkar**

Delivered lecture on "Copy Editing of Sanskritic Inscriptions" at 3-day Workshop on Copy Editing, Referencing and Reference-Bibliography organized by Sanskrit Sahitya Parishad on 27.05.2019

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Delivered lecture on “Cardinal Theories and Thinkers of ancient India” at day-long workshop on Indian Institutions and Polity organized by Scottish Church College on 26.06.2019

Delivered lecture on “A Study of *Nītivākyāmṛta* of Somadeva *Sūri* in the Light of *Arthauśāstra*” at 7-day National Workshop on Terminology of *Nītiśāstra*: In the Light of *Dharmaśāstra* and *Arthauśāstra* organized by Department of Sanskrit, JU under RUSA 2.0 on 29.07.2019

Delivered lecture on Basics of Manuscriptology at Refresher Course organized by Department of Bengali, JU on 28.11.2019

Evaluated papers at Orientation Programme organized by Jadavpur University on 11.12.2019

Delivered a presentation on Cosmology and Cosmogony of the *Puranas* at Symposium on The Grand Unification: Science Meets Vedanta within the ambit of International Workshop on Myriad Sparkles of Vedanta: A Kaleidoscopic View of the Holistic Wisdom organized by RUSA 2.0, Department of Sanskrit, JU on 09.01.2020

Delivered lectures jointly with Sulagna Pradhan at Special Lecture on Indian Epigraphy organized by Howrah Sanskrita Sahitya Samaj on 15.02.2020 and 16.02.2020

Delivered lecture as sole speaker at Special Lecture on Indian Epigraphy organized by Vivekananda College Thakurpukur on 28.02.2020

### **Tapan Sankar Bhattacharyya**

Delivered a lecture as a Resource Person on *Rāmāyane pariveśabhāvanā* in the International Seminar on “Environment & Literature: Depicting the Struggle for the Co-existence of Civilization and Sustainability”, organized by the Department of Sanskrit & English, Galsi Mahavidyalaya, Purba Bardwan held on 6 December, 2019

Delivered a lecture as a Resource Person on *Anumāna in Nyāya Philosophy* in the six-day National Workshop (13 January –18 January, 2020) on “Inferential Cognition as Means of Obtaining Knowledge”, organized by the Department of Sanskrit, Jadavpur University with financial assistance of RUSA 2.0 on 18 January, 2020

Delivered a lecture as a Resource Person on *Samskr̥tavyākaranacarcāyām Vidyāsāgarasya avadānam* in the National Seminar on “Pandit Iswarchandra Vidyasagar: in the Vision of 21<sup>st</sup> Century”, organized by Sri Sri Sitaramdas Omkarnath Samskrita Siksha Samsad on 13 March, 2020

Delivered a lecture as a Resource Person on *Samagravyākaranakoumudī-Vaiyākaranasiddhāntakoumudyoh Tulanātmakamālocanam* in the two Day National Seminar (21–22 January, 2020) on “Relocating Vidyasagar in the 21<sup>st</sup> Century” organized by the Department of Sanskrit, Jadavpur University held on 22 January, 2020

### **Ashok Kumar Mahata**

Delivered a lecture on “Role of the Prātiśākhya in Recitation of the Vedic Verses” in the National Workshop on Vedic Recitation: Theory and Practice, organized by the Department of Sanskrit, Jadavpur University on August 30, 2019

Delivered a lecture on “The Sabara Tribe in Sanskrit Literature” in the International Seminar entitled “Tribe, State and Performance: Perspective from Anthropology and Allied Disciplines”, organized by Dr. Pashupati Prasad Mahato Memorial Committee in collaboration with the Department of Sanskrit, Jadavpur University on 21 December, 2019

Delivered a lecture on “Vidyasagar in Association with his Tribal Friends” in the National Seminar entitled “Relocating Vidyasagar in the 21<sup>st</sup> Century”, organized by the Department of Sanskrit, Jadavpur University on 22 January, 2020



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### Kakali Ghosh

Invited speech titled “Yoga Concept in Indian Wisdom” on 3<sup>rd</sup> January 2020 in the International Workshop and Seminar on “Different Asian Schools of Rajayoga for Human Excellence”, organized by Ritambhara Prajna with joint collaboration of the Department of Sanskrit of Jadavpur University, Ramakrishna Vedanta Math, Kaivalyadhama, Lonavla, Pune under the auspices of Maulana Abul Kalam Azad Institute of Asian Studies Govt. of India and held at Jadavpur University on 3–5 January, 2020

Convener and Speaker in the International Symposium on “THE GRAND UNIFICATION: SCIENCE MEETS *VEDĀNTA*” within the ambit of JU-RUSA 2.0 sponsored International Workshop on “MYRIAD SPARKLES OF *VEDĀNTA*: A KALEIDOSCOPIIC VIEW OF THE HOLISTIC WISDOM” organized by the Department of Sanskrit, Jadavpur University from 6–11 January, 2020

Plenary Speaker in the National Seminar on “Holistic Education: Harmonizing the Body, Mind and Spirit”, jointly organized by the Department of Education, Department of Physical Education & Sport Science Department of Yogic Art & Science, Vinaya Bhavana, Visva-Bharati, Santiniketan on 17–18 February, 2020

### Shiuli Basu

Delivered Invited speech titled “Rajayoga In Mahabharata” on 3 January, 2020 in the International Workshop and Seminar on “Different Asian Schools of Rajayoga for Human Excellence”, organized by Ritambhara Prajna with joint collaboration of the Department of Sanskrit of Jadavpur University, Ramakrishna Vedanta Math, Kaivalyadhama, Lonavla, Pune under the auspices of Maulana Abul Kalam Azad Institute of Asian Studies Govt. of India and held at Jadavpur University on 3 – 5 January, 2020

Presented a paper entitled “Vidyasagar: in the vision of 21<sup>st</sup> Century” on 13 March, 2020 in the National Seminar on “Pandit Iswarchandra Vidyasagar : in the vision of 21<sup>st</sup> Century”, organized by Sri Sri Sitaramdas Omkarnath Samskrita Siksha Samsad, Kolkata under the auspices of Government of West Bengal, Department of Higher Education

### Debdas Mandal

Delivered invited lecture on *Terminology of Nītisāstra: In the light of Nīti Literature* in a seven Day (23 –30 July) National Workshop (Under RUSA 2.0) on Terminology of *Nītisāstra: In the Light of Dharmāśāstra* and *Arthāśāstra* organized by Department of Sanskrit, Jadavpur University, held on 30 July, 2019

Delivered invited lecture on *Purusārthalābhāya Samskrta-sāhityasyopayogha* in the Seminar on Sanskrit Studies in India organized by Vaidika Sanskrit Vidyapitham (Affiliated to Vangio Sanskrit Siksā Parisad, Govt. of West Bengal) Vaidika Sanatan Varnashram Math, Bahirkhand, Hooghly, held on 15 August, 2019

Delivered invited lecture on *Socio-Political Life of Tribes in the focus of Dharmāśāstra and Arthāśāstra* in an International Seminar on Tribe, State and Performance: Perspective from Anthropology and Allied Disciplines organized by Dr. Pashupati Prasad Mahato Memorial Committee in Collaboration with Department of Sanskrit, Jadavpur University, Kolkata held on 12. 21. 2019

Presented paper titled *Samskrta Sāhitye Mānavadhikār(a) Bhābanā* in 4<sup>th</sup> International Conference on Sanskrit & Eastern Studies (ICSES) organized by Department of Sanskrit & Eastern Studies, Faculty of Humanities at University of Kelania, Sri Lanka held on 23 December, 2019

Delivered invited lecture on *Sītār(a)vanabāsa o Uttarakāmarita: Ekti Tulanatmaka Samīksā* in the two day National Level Seminar on Relocating Vidyāsāgar in the 21<sup>st</sup> Century organized by Department of Sanskrit, Jadavpur University, held on 21-22 January, 2020

Presented paper titled *Sisupālabadhmiti Mahākāvye Nītiśāstrītanvesnam* in 50<sup>th</sup> Session of All India Oriental Conference, organized by B.O.R.I (Bhandarkar Oriental Research Institute) at Kavikuloguru Sanskrit University, Nagpur, Nasika held on 11–13 January, 2020

### Chinmay Mandal

6<sup>th</sup> March, 2020: Invited lecture on *Ūnavimūa ūatābdite ūksā o vijñanacetanāy(a) Īsvaracandra Vidyāsāgarer(a) avadān(a)* in the International Seminar on 200<sup>th</sup> Birth Anniversary of Ishwar Chandra



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Vidyasagar: A Holistic Evaluation, organized by the Department of History in Collaboration with Internal Quality Assurance Cell, Birbhum

18 January, 2020: Delivered lecture on *Anumāna in Nyāya-Philosophy* in the six day National Workshop on Inferential cognition as Means of Obtaining Knowledge organized by the Department of Sanskrit, Jadavpur University with financial assistance of RUSA 2.0

5 January, 2020: Invited lecture on *Swami Vivekanandasya Rajayoga Carca* in the International Seminar on Different Asian Schools of Rajayoga for Human Excellence, jointly organized by Ritambhara Prajna & Department of Sanskrit, Jadavpur University

6 December, 2019: Invited lecture on *The Environment as reflected in Kālidāsa's dramas* in the International Seminar on Environment & Literature: Depicting the Struggle for the Co-existence of Civilization and Sustainability organized by the Department of Sanskrit & English, Galsi Mahavidyalaya, Purba Bardwan

### 3. B. Sessions Chaired in Seminars/ Workshops/ Conferences/ Symposia/ Colloquia/ Refresher Courses:

#### Debarchana Sarkar

Chaired a session of the International Workshop and Seminar on different Asian Schools of Rajayoga for Human Excellence organized by Ritambhara Prajna, Dept. of Sanskrit, JU, Ramakrishna Vedanta Math, Belur and Kaivalyadhama, Lonavla, Pune under Maulana Abul Kalam Azad Institute of Asian Studies, Govt of India on 03 January, 2020

#### Kakali Ghosh

Resource person in the programme of Sanskrit Day held on 17 August, 2019 in Ramsaday College, Amta

#### Shiuli Basu

Chaired a Session in *Akhil Bharatiya Shashtriya Alochana* and Selection organized by Sri Sitaram Vaidic Adarsha Sanskrit Mahavidyalaya (Affiliated to Rashtriya Sanskrit Sansthan, New Delhi, Government of India) on 27/11/2019 and 28/11/2019

### 3. C. Seminars/ Workshops/ Conferences/ Symposia/ Colloquia & c. Arranged/ Coordinated/ Conducted/ Convened:

#### Tapan Sankar Bhattacharyya

Coordinator in the “Six day National Workshop on Inferential Cognition as Means of Obtaining Knowledge”, organized by the Department of Sanskrit, Jadavpur University with financial assistance of RUSA 2.0 held on 13–18 January, 2020

#### Ashok Kumar Mahata:

Acted as the Coordinator of RUSA 2.0 sponsored National Workshop entitled “Vedic Recitation: Theory and Practice”, organized by the Department of Sanskrit, Jadavpur University from 27 August–2 September, 2019

#### Kakali Ghosh

Convener of the JU-RUSA 2.0 sponsored International Workshop on “MYRIAD SPARKLES OF VEDĀNTA: A KALEIDOSCOPIIC VIEW OF THE HOLISTIC WISDOM”, organized by the Department of Sanskrit, Jadavpur University from 6 –11 January, 2020

#### Shiuli Basu

Coordination and arrangement of classes on *Rasagangādhara* for PG2 students by resource person Prof. Suryamani Rath, H.O.D, Rashtriya Sanskrit Sansthan (D.U.), Puri from 3–11 April, 2019 and on *Gita Govinda* for PG2 students by resource person Prof. Arun Ranjan Mishra, H.O.D, Department of Sanskrit, Visva Bharati University from 15-25 April, 2019 under J.U. – RUSA 2.0 “International and National Academic Networking and Collaboration” - Research Thrust Area: Studies in the Global South

## Annual Report 2019-20

### Debdas Mandal

Jointly Coordinated Two-Day National Level Seminar on *Relocating Vidyāsāgar in the 21<sup>st</sup> Century*, organized by Department of Sanskrit, J.U. held on 21 & 22 January, 2020

Coordinated a National Level Workshop on *Terminology of Nitisāstra in the focus of Dharmāśāstra and Arthāśāstra*, organized by Department of Sanskrit, J.U. held on 23 –30 July, 2019

### Chinmay Mandal

13-18 January, 2020: Successfully coordinated the Six-day National Workshop on *Inferential cognition as Means of Obtaining Knowledge* organized by the Department of Sanskrit, Jadavpur University with financial assistance of RUSA 2.0

22 January, 2020: Coordinated a public lecture on *Importance of Indian Philosophy on present Society and Culture*, organized by the Department of Sanskrit, Jadavpur University with financial assistance to RUSA 2.0

### 3. D. Orientation or Refresher or Summer Courses/ Seminars/ Workshops/ Colloquia Attended as Observer & Hearer:

#### Shiuli Basu

Participated in a special lecture on “Modern Sanskrit Literature: A Panoramic View”, organized by Department of Sanskrit, in collaboration with IQAC, Basanti Devi College, Kolkata on 26 February, 2020

#### Debdas Mandal

Participated in a Workshop on ‘*Sāhityatattva*’ Organized by Howrah Sanskrit Sahitya Samaj, Howrah, held on 5–7 July, 2019

Participated in a two days TOT Programme on Drug Abuse Prevention & Counselling Programme for NSS Programme officers’ Organized by Regional Directorate of NSS held on 25 January, 2020

Participated in a Special Class on ‘*Sāhityatattva*’, Organized by Howrah Sanskrit Sahitya Samaj, Howrah, held on 19 January, 2020

Participated in a Special Class on ‘*Kāvyaaprakāśa*’ Organized by Howrah Sanskrit Sahitya Samaj, Howrah, held on 21 February, 2020

Participated in a Special Class on ‘*Dhunika Sanskrita Sāhitya*’ Organized by Howrah Sanskrit Shitya Samaj, Howrah held on 14 March, 2020

### 4. A. Books, Monographs, Reports etc., Published/ Forthcoming/ Submitted/ Completed:

#### Debarchana Sarkar

*Prākṛta Vaibhava* (প্রাকৃত বৈভব) jointly authored with Arpan Guha and Shubhajyoti Das. Published by Pashchimbanga Rajya Pustak Parshad. 2019 [ISBN 978-81-247-0794-4]

#### Tapan Sankar Bhattacharyya

Published a book entitled *Samāsaprakaranam* of Vaiyākaranasiddhantakaumudī, Vol. II, Published by Trailokyanātha Catuspāthī, Kolkata on 28 September, 2019

Published a book entitled *Mugdhabodham Vyākaranam* Vol. I, Published by Centre for Indology, Department of Sanskrit, Jadavpur University on March, 2020

#### Shiuli Basu

Published a book entitled *Gītaya atmasanchalana o mahabharat: ekti nibir path*, jointly authored with Loknath Chakrabarti. Published by Paschim Banga Rajya Pustak Parshat, Kolkata on July, 2019 [ISBN-978-81-247-0785-2]

**4. B. Articles Published in Journals, etc.:**

**Debarchana Sarkar**

“Sanskrit Metres in Indian Epigraphy: A Brief Survey of Select Documents” in *Anviksā* Research Journal of the Department of Sanskrit (Vol.XLI, Part I) JU (ISSN 0587-1646)

**Tapan Sankar Bhattacharyya**

Published a paper entitled *Sarvadarsanasamgraha-saddarśanasamuccayadisā nyāyasiddhāntasamīksā* in *Anviksā* (Vol. XLI) with ISSN no: 0587-1646, Refereed Journal of the Department of Sanskrit, Jadavpur University on January, 2020

**Ashok Kumar Mahata**

Research article entitled “Position of *Nisāda* in the Group of Five People in Vedic Tradition”, published in *Anviksā*, Vol. XLI, Part I, the research journal of the Department of Sanskrit, Jadavpur University in January, 2020

Research article entitled “Music of the Tribal and Indigenous People in the Light of Sanskrit Texts of Musicology” published in *Anviksā*, Vol. XLI, Part III, the research journal of the Department of Sanskrit, Jadavpur University in March, 2020

**Kakali Ghosh**

“*Vrata and Ālpanā* of Bengal: Demystifying Symbolic Art” in *Anviksā*, Research Journal of the Department of Sanskrit, Vol. XLI, Part I. Gen. Ed. Ashok Kumar Mahata. Kolkata: Jadavpur University, January 2020 (ISSN: 0587-1646). Pp. 120-133

**Shiuli Basu**

“Universal Consciousness of Buddhist Thought: A Study” – in *Anviksā*, Research Journal of the Department of Sanskrit, J.U., Vol. XLI, Part-I, January 2020. ISSN: 0587-1646

“*Prācīna-bhāratīyanātyatattve aucityaprasangah - eka samīksā*” –published in *Sodhanidhi*, Peer-Reviewed Annual Research Journal of the Department of Sanskrit, University of Gour Banga, Vol. 3, 2019. ISBN: 978-93-84721-34-3

**Debdas Mandal**

*Satyasya Svarūpānusandhānam:Ekā Samīksā* in *Anviksā*, Research Journal (ISSN: 0587-1646) of the Department of Sanskrit, Vol. XLI, Part –I, January, 2020

*Nītikathāyām Bhāratīya Samskrtemūlanusandhānam* in *Anviksā*, Research Journal (ISSN: 0587-1646) of the Department of Sanskrit, Vol. XLI, Part III, March, 2020

**Chinmay Mandal**

*Sāmkhyānaye prakrteh svarūpam mahattvañca* in *Anviksā*, Refereed Research Journal of the Department of Sanskrit, J.U. Vol. XLI, Part: I, January, 2020 (ISSN: 0587-1646). Pp. 29-34

**Bikash Sardar**

‘বাংলায় রচিত সংস্কৃত গ্রন্থগুলির অনুবাদ ও বিশ্লেষণের পরম্পরা’ – Ph. D thesis completed on 28/02/2020

**5. Research Guidance:**

**Debarchana Sarkar**

Candidates awarded Ph.D. – 2

Candidates awarded M.Phil. – 2

**Piyali Praharaj:**

Candidates awarded M.Phil. – 2

**Tapan Sankar Bhattacharyya:**

Candidates awarded Ph.D. – 1

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Candidates awarded M.Phil.	–	3
<b>Ashok Kumar Mahata:</b>		
Candidates awarded M.Phil.	–	2
<b>Kakali Ghosh:</b>		
Candidates awarded Ph.D.	–	5
Candidates awarded M.Phil.	–	2
<b>Shiuli Basu:</b>		
Candidates awarded M.Phil.	–	1
<b>Debdas Mandal:</b>		
Candidates awarded M.Phil.	–	1
<b>Chinmay Mandal:</b>		
Candidates awarded M.Phil.	–	1

## 6. Major Achievements:

### Leaderships in Academic Bodies:-

#### Tapan Sankar Bhattacharyya:

- Member of Board of Studies in the P.G. level in the Department of Sanskrit, Vidyasagar University
- Member of Board of Studies in the P.G. level in the Department of Sanskrit, Midnapore College (Autonomous)
- Member of Board of Studies in the P.G. level in the Department of Sanskrit, Ramakrishna Mission Vivekananda University
- Member of Board of Studies in the P.G. level in the Department of Sanskrit, Ramakrishna Mission Vidyamandira, Belur Math
- Member of Board of Studies in the P.G. level in the Department of Sanskrit, Diamond Harbour Women's University
- Member of Board of Studies in the U.G. level in the Department of Sanskrit, West Bengal State University
- Member of the Doctoral Research Committee (DRC) in the Department of Sanskrit, University of Calcutta
- Member of the Doctoral Research Committee (DRC) in the Department of Sanskrit, Ramakrishna Mission Vivekananda University
- Member of the Doctoral Research Committee (DRC) in the Department of Sanskrit, Ramakrishna Mission Vidyamandira, Belur Math
- Member of the Doctoral Research Committee (DRC) in the Department of Sanskrit, The University of Burdwan
- Guest Lecturer in the P.G. level in the Department of Sanskrit, Ramakrishna Mission Vidyamandira, Belur Math, from July 2019 to December 2019
- Guest Lecturer in the P.G. level in the Department of Sanskrit, The Sanskrit College & University, from January 2020 to June 2020
- Life Member, The Asiatic Society, Kolkata
- Programme Officer of NSS, Jadavpur University Unit
- Co-ordinator, Center for Indology, Department of Sanskrit, Jadavpur University
- Deputy Co-ordinator, Center for Advance Study (CAS), Department of Sanskrit, Jadavpur University

#### Ashok Kumar Mahata

- Member of UG Board of Studies in West Bengal State University

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Member of the Tol Committee of Sri Sri Sitaramdas Omkaranath Samskrita Siksha Samsad, Kolkata

Life member of Sanskrit Sahitya Parishat, Kolkata

Life Member of Pashchimbanga Itihas Samsad

Editorship of Journal: General Editor of Anviksâ, Vol. XLI, Part I, II & III, the Research Journal of the Department of Sanskrit, Jadavpur University in 2020

### Shiuli Basu

Member of the Executive Committee and Academic Sub-Committee, Sanskrit Sahitya Parishad

### Debdas Mandal

Departmental Coordinator of the P.G Evening Courses in the Department of Sanskrit, J.U., 2019-2020.

Programme Officer, National Service Scheme (NSS), Jadavpur University, 2019-2020.

### Chinmay Mandal

Member of BOS, Department of Sanskrit, Jadavpur University

Member of Examination Committee, Department of Sanskrit, Jadavpur University

## 7. Highlights:

### Departmental:-

Two day National Level Seminar on *Relocating Vidyâsâgar in the 21<sup>st</sup> Century*, organized by Department of Sanskrit, J.U. held on 21–22 January, 2020

A public lecture on *Importance of Indian Philosophy on present Society and Culture*, organized by the Department of Sanskrit, Jadavpur University with financial assistance to RUSA 2.0 held on 22 January, 2020

Six day National Workshop on “Inferential Cognition as Means of Obtaining Knowledge”, organized by the Department of Sanskrit, Jadavpur University with financial assistance of RUSA 2.0 held on 13–18 January, 2020

JU-RUSA 2.0 sponsored International Workshop on “MYRIAD SPARKLES OF *VEDĀNTA*: A KALEIDOSCOPIIC VIEW OF THE HOLISTIC WISDOM”, organized by the Department of Sanskrit, Jadavpur University from 6 –11 January, 2020

RUSA 2.0 sponsored National Workshop entitled “Vedic Recitation: Theory and Practice”, organized by the Department of Sanskrit, Jadavpur University from 27 August to 02 September, 2019

National Level Workshop on *Terminology of Nitiûâstra in the focus of Dharmâûâstra and Arthâûâstra* organized by Department of Sanskrit, J.U. held on 23–30 July, 2019

Arrangement of classes on *Rasagangâdhara* for PG II students by resource person Prof. Suryamani Rath, H-o-D, Rashtriya Sanskrit Sansthan (D.U.), Puri from 3 –11 April, 2019 and on *Gita Govinda* for PG2 students by resource person Prof. Arun Ranjan Mishra, H.O.D, Department of Sanskrit, Visva Bharati University from 15– 25 April, 2019 under J.U. – RUSA 2.0 “International and National Academic Networking and Collaboration” - Research Thrust Area: Studies in the Global South

Departmental Re-union has been organized for this year also

Departmental Student Aid Fund is created to provide books for needy students

RUSA 2.0 grant (Research Thrust Area: Translational Research), received under the project of Departmental support

### Centre for Indology:

#### Reprint of book

A book entitled *Mugdhabodham Vyâkaranam* Vol. I was published by Centre for Indology, Department of Sanskrit, Jadavpur University in March, 2020

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### SOCIOLOGY

Phone : 033-2457-2555

033-2414-6058

H.O.D: Prof. Piyali Sur

E-mail: hod.sociology@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration	No of Students Enrolled
B.A (Honours)	3 years; 6 semesters	52
M.A.	2 years; 4 semesters	43
MPhil	2 years; 4 semesters	19
PhD	5 years	

- **2 GE courses at UG level** (under CBCS scheme)

No. of Students Enrolled- 40

- **A Compulsory Sociology Course at UG level** for all Departments under Faculty of Engineering and Technology
- **One-year PG Diploma Course** in ‘Society, Religion and Social Work’, under Centre for the Study of Religion and Society: Intake 40

#### 1. B Number of Faculty Members: 5

Guest Faculty: 16

#### 2. A. Area of Research Activities: Childhood Studies, Gender Studies, Sociology of Crime and Deviance

#### 2. B. Major Research Project:

1. 2019-March 2020: Principal Investigator (PI) JU- RUSA 2.0 Major Research Support Grants entitled ‘Parents reflecting on risk to body and sexuality of adolescent girls: Growing up in a neoliberal consumer culture of global south.’
2. 2019-March 2020: Coinvestigator, Departmental Project, Project title: *Cultures of Consumption: A Study in a Metropolis*, RUSA 2.0.Jadavpur University

#### 3. A. Invited Lectures Delivered/Sessions Chaired:

January 2020: Resource Person in a ten day FDP on Research Methodology focusing primarily on Qualitative Aspects of Research on “Grounded Theory and its implications in Qualitative Research”, Department of Management & Business Administration, Aliah University, Kolkata, West Bengal

2019: Chaired the technical session of RC 24 (Sociology of Childhood and Youth) titled ‘Abused Childhoods’ at 45th All India Sociological Conference held at University of Kerala, Kariavattom Campus, 27-29 December, 2019

2019: Chaired a session in the National Seminar “Sociology and the Everyday: Possibilities and Perspectives” organised by the Department of Sociology, Jadavpur University on 20 September, 2019

2019: Chaired Technical Session -I in Sociology and Social Work on 7 September, 2019 at the 5<sup>th</sup> Annual International Conference of Indian Social Sciences and Humanities Congress (SAMAGAM), 2019



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### 3. B. Seminar/Workshop/Conference/Symposium Attended:

2019: Kids and global consumer culture: A study of Kolkata's urban children at 45th All India Sociological Conference held at University of Kerala, Kariavattom Campus, 27-29 December, 2019

2019: "Parenting Adolescent Girls on Sexuality in India: Recent Trends" at a National Conference on Multiple Childhoods: Demystifying the Normative organised by Department of Sociology, Jadavpur University on 8-9 August, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organized:

2019: Organised the Youth Convention for the Rights of the Child 2019 on 25 September, 2019 with Department of Sociology, Jadavpur University and Teach for India at Jadavpur University, Kolkata

2019: Organised RUSA 2.0 sponsored two day National Seminar on "Articulating Multiple Childhoods: Demystifying the Normative" on 8-9 August, 2019 at Jadavpur University

### 4. A. Books/Monographs etc. Published : (Name of the Teacher, Name of the Book, Name of the Publisher)

Sur, Piyali. (2020). Avoid or Take Risk: Women Reflecting on Trust, Personal Safety and Fear. LAP Lambert Academic Publishing, Germany

### Chapters in the edited Volumes

Piyali Sur published the following chapter in edited volume:

Sur, 2020. "Sex and Gender" in Elias Olukorede Wahab and Amit Bhowmick eds, Ingredients of Sociology. New Delhi, Serial Publications

### 2. B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)

#### Dr. Amites Mukhopadhyay

Major Research projects carried out at the departmental level under RUSA 2.0 funded. The name of the project was Cultures of Consumption

This project was jointly held and carried out by the departmental faculty members. Professor Amites Mukhopadhyay as one of the principal investigators carried out research on one particular dimension 'Cultures of consumption: the new aesthetic' under the broad theme Cultures of Consumption

The funding agency was Government of India, funded by RUSA 2.0

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar/Conference etc. Place, Duration)

#### Dr. Amites Mukhopadhyay

1. Delivered an invited lecture on 20 February, 2020 titled The Heritage Site and Its History: Remembering and Forgetting Marichjhanpi in the Indian Sundarbans at the Department of Sociology at University of Hyderabad, India

Participants: students and Teaching faculty

2. Delivered an invited lecture on 04 March, 2020 titled Remembering Gandhi When Forgetting is the Order of the Day at a national seminar on Mohandas Karamchand Gandhi : A Reinterpretation on Sesquicentennial Birth Anniversary at the P.R Thakur Government College in West Bengal

Participants: students and Teaching faculty

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### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

Amites Mukhopadhyay presented a paper titled “The Heritage Site and Its History” as part of a panel on Forgotten Pasts, Imagined Futures at the 48<sup>th</sup> Annual International Conference on South Asia organized by the University of Wisconsin at Madison, USA on 17-20 October, 2019

Amites Mukhopadhyay presented a paper titled “The Cultural Turn and the Everyday: Flagging up the Methodological Stakes” at the 45<sup>th</sup> All India Sociological Conference on Environment, Culture and Development on 27-29 December, 2019 at the University of Kerala, India

### 3. C. Seminar/Workshop/Conference/Symposium Organized:(Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

Amites Mukhopadhyay Co-organized a national seminar on *Sociology and the Everyday: The Challenges and Possibilities* on 19-20 September, 2019 at the Department of Sociology, Jadavpur University, Kolkata India

### 3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teachers, Title of the Course, Duration, Place)

Amites Mukhopadhyay attended as Resource person and delivered a lecture on “Research Methods in Social Sciences” on 8 July 2019 at the 73<sup>rd</sup> Orientation Programme (08 -27 July 2019) organized by HRDC of Jadavpur University, Kolkata India

The lecture duration was from 2:15-5:15 PM

### 4. A. Books/Monographs etc.Published : (Name of the Teacher,Name of the Book, Name of the Publisher)

Chapters in the edited Volumes

Amites Mukhopadhyay published the following chapters in edited volumes:

Mukhopadhyay. 2020. “Ethnographic Fieldwork: The Predicament and Possibilities in Rajat Acharyya and Nandan Bhattacharya eds. *Research Methodology in Social Sciences*. New Delhi: Routledge

Mukhopadhyay. 2020. “Socio Cultural Negotiations in a Fractured Landscape” in Aditya Ghosh ed. *The Tides of Life*. New Delhi: Government of India

## Dalia Chakrabarti

### Area of Research Activities:

Cities, Markets and Visuals

### Major Research Project:

1. Principal Investigator, Project title: *Block Bazaars of New Town: An Ethnographic Exploration*, RUSA 2.0.Jadavpur University
2. Coinvestigator, Departmental Project, Project title: *Cultures of Consumption: A Study in a Metropolis*, RUSA 2.0.Jadavpur University

### Invited Lectures Delivered/Sessions Chaired:

1. Lecture Title: *Gender, Power and Resistance*, Bhawanipore Education Society College, Kolkata, 30.07.19
2. Lecture Title: *Visual Methods in Sociology: Application and Modalities*, PhD course work (Paper: *Research Methodology*), West Bengal State University, Barasat, North 24 Parganas, 20.08.19

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### **Seminar/Workshop/Conference/Symposium Attended:**

*Paper title: Initiating a New Everyday: The Narratives of Vendors of New Town Block Bazaar*, National Seminar (RUSA funded) on ‘Sociology and the Everyday: Possibilities and Perspectives’, Department of Sociology, Jadavpur University, 19.09.19

*Paper title: Visual Methods in Qualitative Research*, Five-Day Workshop on Qualitative Social Research, Institute of Development Studies, Kolkata, 05.02.20

*Paper title: The Inedible: Visuals and Food Anxiety (participation in absentia due to COVID 19 pandemic)*, International Conference on Social Science and Humanities, 03-04.03.2020, Victoria University, Melbourne, Australia

### **Seminar/Workshop/Conference/Symposium Organized:**

Co-convenor, two day National Seminar (RUSA funded) on *Sociology and the Everyday: Possibilities and Perspectives*, Department of Sociology, Jadavpur University, 19 - 20 September, 2019

### **Dr. Nabanita Das**

Name of the paper presented: Religious beliefs and folkways of the forest – workers residing in Sundarbans.

Name of the Seminar : International Conference on “Harmony in Society and Environment”, organized by School of Social Sciences, Adamas University, Kolkata in collaboration with Institute of Cross Cultural Studies and Academic Exchange, NC, USA & Centre for the Study of Religion and Jadavpur University, Kolkata. Date: 9 January, 2020

### **Nutan Marian Tigga**

#### **Area of Research Activities:**

Tribal studies, Work sports

#### **Major Research Project : (Departmental/Individual, Name of the Project/Funding Agency)**

Departmental project under RUSA 2.0 “Cultures of Consumption: A Study in a Metropolis”

RUSA Research Thrust Area: Studies in the Global South

Funded by RUSA 2.0

#### **Seminar/Workshop/Conference/Symposium Organized:**

One of the Organisers and Convenors of a National seminar “Sociology and the Everyday: Possibilities and Perspectives”, 19–20 September, 2019 under RUSA 2.0

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**SECTION B**  
**[ACADEMIC REPORT (01.04.2019 –31.03.2020) ]**

**FACULTY COUNCIL OF ENGINEERING & TECHNOLOGY**  
**D E P A R T M E N T S**

## Annual Report 2019-20

### ARCHITECTURE

Phone: 033-2457-2209

033-2414-6667

H.O.D: Prof. Sanjib Nag

Dr. Debashish Das (since 10.06.2019)

E-mail: hodarchitecture@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
Bachelor of Architecture	5 Years	40
Master of Architecture (Urban Design)	2 Years	8

#### 1. B. Number of Faculty Members: 12

#### 2. A. Area of Research Activities:

- i. **Prof. Dr. Shubhrajit Das:** Architecture Theory, Criticism and Pedagogy
- ii. **Prof. Tapas Kumar Bhattacharya:** Biomorphich architecture, Building construction & Building services.
- iii. **Prof. Dr. Jayita Guha Niyogi:** Town and Regional Planning, Transportation Planning Integrated Land use and Traffic System.
- iv. **Prof. Dr. Shivashish Bose:** Theory of Architecture & Urban Design; Architectural Design for Thermal Comfort & Energy Efficiency; Architectural and Urban Conservation; Urban Hydrology, Environmental Planning; Sustainable Development.
- v. **Prof. Dr. Madhumita Roy:** Energy Efficient Architecture.
- vi. **Prof. Dr. Suchandra Bardhan:** Buildings and climate change & sustainability; Historic, regional & cultural landscapes.
- vii. **Prof. Dr. Sanjib Nag:** Architecture, Urban Housing, Urban Design and Related Urban Transformations, Urban Developments.
- viii. **Dr. Debashish Das:** Urban Building Microclimate, Urban Climate Mapping, Urban Human-Biometeorology, Outdoor Thermal comfort, Building Science and Smart City planning.
- ix. **Dr. Mainak Ghosh:** Urban Studies, Environmental Perception and behavior, Culture and Community.
- x. **Mrs. Sanghamitra Sarkar:** Urban Design and related Developments.
- xi. **Ms. Dechen Donka Bhutia:** Urban conservation, Building construction, etc.
- xii. **Mr. Tanmoy Datta :** Architecture, Urban Design and Related Urban Transformations & Urban Developments.

#### 2. B. Major Research Project:(Departmental/Individual–Name of the Project–Funding Agency)

**Prof. Dr. Suchandra Bardhan**–“Geoinformatics led Inquiries into Tourism Development in the Indian Sundarban...”–WB DSTBT

**Dr. Sanjib Nag (Co PI)** –Exploring Transformation Of Commercial Centers And Process Of Urban Development In A City–JU – RUSA 2.0

**Dr. Sanjib Nag (Co PI)** –Studying Evolution Of Human Settlements In And Around Sacred Precincts – JU – RUSA 2.0

**Dr. Debashish Das**–“Urban Heat Island Mitigation Strategies for existing Building Codes, Regulations, and Urban Planning guidelines for Tropical Climates-Case study of Kolkata”–RUSA 2.0

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**Dr. Mainak Ghosh**–Co-PI, Adaptive Built Environment solutions... harvesting of renewable resources.–RUSA 2.0

**Dr. Mainak Ghosh**–Mainak Ghosh, PI, Framework for documentation... creative economic settlements in case of Global south–RUSA 2.0

**Mr. Tanmoy Datta**–Studying Evolution of Human Settlement In and Around Sacred Precinct –RUSA 2.0 (Ongoing)

### 3. A. Invited Lectures delivered/(Session Chaired):

**(Name of the Teacher–Type of Participants–Name of the Seminar/Conference–Place–Duration)**

**Prof. Dr. Suchandra Bardhan**–Inter-faculty students, scholars and teachers –International Seminar on ‘Megacities: Conviviality and its limits’ organized by different Faculties of JU under RUSA 2.0–Dr. Triguna Sen Auditorium, Jadavpur University–26-28 February, 2020

**Dr. Mainak Ghosh**–invited symposium chair, students & faculty–Built environment and creative economy, Udayana University–Bali, Indonesia

**Dr. Mainak Ghosh**–invited session chair, academia–International conference on civil and architectural engineering–Shanghai, China–14-15 November, 2019

**Dr. Mainak Ghosh**–foundation program for all students ‘Introduction & Methods on Spatial Mapping Techniques’–NIFT, Kolkata,–27 August, 2019

### 3. B. Seminar/Workshop/Conference/Symposium Attended:(Name of the Teacher–Name of the Paper presented–Name of the Seminar/Conference–Place–Duration)

**Prof. Dr. Shubhrajit Das**–Reworking the essence of Indian Traditional Architecture–4th International Research-Educational program of Historical Environmental design–Kyushu University, Japan–9–22 February, 2020

**Prof. Dr. Jayita Guha Niyogi**–Addressing Informal Public Transport Vehicle Problem in Kolkata–Third National Conference on Recent advances in traffic Engineering, Rate 2018 –SVNIT, Surat, Gujarat–11-12 August 2018

**Prof. Dr. Suchandra Bardhan**–‘Envisioning an Eco-Cultural Urban Landscape – A Case Study of the Ghats of the River Bhagirathi-Hooghly’–International Symposium on Historic Cultural Landscapes: Succession, Sustenance and Sustainability’ organized by the Asian Cultural Landscape Association (ACLA)–International Federation of Landscape Architects (IFLA) – Cultural Landscape Working Group & Seoul National University–Asia Centre, Seoul National University (SNU), Seoul, South Korea. –18-20 November, 2019

**Dr. Sanjib Nag (Co Author)**–Assessing Neighbourhood Vitality In Colonial Towns of Little Europe : Establishing Parametric Relationship–All India Young Scientist Conference, IISF - 2019–Biswa Bangla Convention Centre, Kolkata–05 & 07.11.2019

**Dr. Sanjib Nag (Co Author)**–Evolution Of Commercial Centers And Urban Development In India: Identification of Related Parameters–All India Young Scientist Conference, IISF - 2019–Biswa Bangla Convention Centre, Kolkata–05 & 07.11.2019

**Dr. Sanjib Nag (Co Author)**–Transport Systems And Urban Developments : Study of Kolkata A 1 1 India Young Scientist Conference, IISF - 2019 Biswa Bangla Convention Centre, Kolkata–05 & 07.11.2019

**Dr. Sanjib Nag (Co Author)**–Establishing Transformation of Commercial Centers And Process Of Urban Development : Establishing Parametric Relationship–Annual Research on Cities Summit–Xavier University, Bhubaneswar–07 & 08.02.2020

**Dr. Sanjib Nag (Co Author)**–Heritage Commercial Centers And Urban Development In India–International Research And Education Program–Kyushu, Japan–13.02.2020

**Dr Debashish Das**–Role of Outdoor Thermal Comfort Analysis in Urban Landscapes-Case study of Kumartuli-the occupation based Neighbourhood with its Artistic Heritage–International Symposium on



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‘Historic Cultural Landscapes: Succession, Sustenance and Sustainability’ organized by the Asian Cultural Landscape Association (ACLA)-International Federation of Landscape Architects (IFLA)- Cultural Landscape Working Group & Seoul National University-Asia Centre, Seoul National University (SNU), Seoul, South Korea.-18-20 November, 2019

**Dr Debashish Das (Co Author)**-Spatial modelling for analysis of urban growth in Siliguri City, West Bengal, India-2 days International Seminar on “Sustainable Development & Inclusive Growth- Methods to Methodology”-PG Department of Geography & Department of Statistics, Lady Brabourne College, & School of Oceanographic Studies, Jadavpur University-3-4 March, 2020

**Dr Debashish Das (Co Author)**-The effect of urban surface Albedo on Urban Heat island for Sustainable Urban Planning in Kolkata-2 days International Seminar on “Sustainable Development & Inclusive Growth- Methods to Methodology”-PG Department of Geography & Dept. of Statistics, Lady Brabourne College, & School of Oceanographic Studies, Jadavpur University-3-4 March, 2020

**Dr Debashish Das (Co Author)**-Attended-4-Days Training Programme on “Mainstreaming Thermal Comfort in affordable Housing “Organized by Centre for Science & Environment, New Delhi-26-29 November, 2019

**Dr Debashish Das (Co Author, but did not attend)**-Investing Real Time Ambient Air “Quality Status and Land Surface Temperature during Kalipuja/Diwali Festival in different landuse Types-Case Study Kolkata”-International Conference on Civil & Architectural Engineering”-International Academy of Science. Technology, Engineering and Management-14-15 November, 2019

**Dr Debashish Das**-Air pollution & City Planning-Need for Urban Planning to Mitigate Air Pollution-Rotary Sadan, Kolkata-13 July, 2019

**Dr. Mainak Ghosh**-Environmental perception study of retrofitted buildings for energy efficiency in context to a smart city neighborhood.-International conference on civil and architectural engineering,-Shanghai, China-14-15 November, 2019

**Dr. Mainak Ghosh**-Visual perception based design and analysis of materials.-International conference of African materials research society,-Arusha, Tanzania-10-13 December, 2019

**Mrs. Sanghamitra Sarkar**-Experiential Learning, Community Engagements and Rural Immersion-UGC-HRDC Jadavpur University-6-7 August, 2019

**Mrs. Sanghamitra Sarkar**-Evolution of Commercial Centres and Urban Development in India: Identification of related parameters-Young Scientist Conference, India International Science Festival, 2019-Biswa Bangla Convention Centre, Kolkata-5-7 November, 2019

**Mrs. Sanghamitra Sarkar**-Exploring transformation of Commercial Centres and process of Urban Development in a city: Establishing Parametric relationship-ARCS 4.0- Fourth Annual Research on Cities Summit International Conference on Cities for People – Plans, Programs and Policies-Xaviers School of Human Settlements, Bhubaneswar-7-8 February, 2020

**Mrs. Sanghamitra Sarkar**-Workshop on “Writing Quality Research Articles for Publication”-Jadavpur University-13-14 January, 2020

**Mrs. Sanghamitra Sarkar**-4th International Research-Educational program of Historical Environmental design-Kyushu University, Japan-9-22 February, 2020

**Ms. Dechen Donka Bhutia**-Architecture, Space and History: Emergence of temples in Badami-Aihole-Pattadakal, India-4<sup>th</sup> International Research – Educational Program of Historical Environmental Design Japan-Asia Youth Exchange Program in Science / SAKURA SCIENCE-Kyushu University, Faculty of Design, Department of Environmental Design-9-22 February, 2020

**Mr. Tanmoy Datta**-Seminar Attended Seminar on Climate Change & Water Crisis-IIEST, Shibpur, West Bengal 21.06.2019

**Mr. Tanmoy Datta**-Workshop Attended-National Workshop on “Hands on Training and Exercise on the Tool for Planning of Sustainable Development: ArcGIS”-TEQIP Building, JU, Kolkata-06-07 September, 2019

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**Mr. Tanmoy Datta**–Workshop Attended–Application of Qualitative & Quantitative Techniques in Sustainable Urban Planning–Jadavpur University, Kolkata–20–26 September, 2019

**Mr. Tanmoy Datta**–Workshop Attended–Workshop on Student Induction Programme for Teachers–Loreto College, Kolkata–6–7 November, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organized:(Name of the Teacher–Name of the Paper presented–Name of the Seminar/ Conference/Workshop–Place–Duration)

**Prof. Jayita Guha Niyogi (Joint Coordinator)**–RUSA sponsored One-week National Workshop on ‘Application of Qualitative & Quantitative Techniques in Sustainable Urban Planning’–Department of Architecture, JU, 20-26 September, 2019

**Prof. Dr. Suchandra Bardhan(Joint Coordinator)**–One-week National Workshop on ‘Application of Qualitative and Quantitative Techniques for Sustainable Urban Planning’ –Department of Architecture, JU 20-26 September, 2019

**Dr Debashish Das**–Joint Coordinator–Zonal championship Shaastra–IIT Madras event 12-13 September, 2019

**Dr Debashish Das**–Joint Coordinator–International Seminar on ‘Megacities: Conviviality and its limits’ organized by different Faculties of JU under RUSA 2.0–Dr. Triguna Sen Auditorium, Jadavpur University–26-28 February, 2020

**Dr Debashish Das**–Coordinator–One Day Awareness & Training programme on “Energy Conservation Building Code”–Department of Architecture, Jadavpur University–April, 2019

**Dr Debashish Das**–Convenor –One Day Seminar on Products & Technologies from Market leading brands. Funded by – “LOCATOR”–Department of Architecture, JU, Kolkata–16.09.2019

**Dr. Mainak Ghosh(mentor)**–Design thinking and environmental perception in housing or human settlements –Workshop–Department of Architecture, Chittagong University of Engineering & Technology, Bangladesh,–11-13 April, 2019.

**Mainak Ghosh, (coordinator)**–Industry academic collaborative event–Aludecor, Kolkata–27 August 2019

**Mainak Ghosh, (coordinator)** –Joint Coordinator–Zonal championship Shaastra–IIT Madras event–12-13 September, 2019

**Ms. Dechen Donka Bhutia**–convener –RUSA 2.0 – CHSP One week National workshop on ‘Application of Qualitative and Quantitative Techniques in Sustainable Urban Planning’–Department of Architecture, Jadavpur University, Kolkata–20–26 September, 2019

**Mr. Tanmoy Datta**–Coordinator–One Day Seminar on Products & Technologies from Market leading brands. Funded by – “LOCATOR”–Department of Architecture, JU, Kolkata–16.09.2019

### 3. D. Orientation Courses/Refresher Courses Attended: (Name of the Teacher–Title of the Course–Duration–Place)

**Prof. Dr. Suchandra Bardhan**–PG Certificate Course on ‘Urban Disaster Risk Mitigation & Climate Resilient Development’ by M. Urban Planning Department, SPA, N.D. –Completed in May 2019–Online by SWAYAM-MOOC

**Prof. Dr. Suchandra Bardhan** –‘Sustainable Cities’ by SDG Academy and Indian Institute of Human Settlements–11-week - October to December 2019–Online by EdX MOOC

**Mrs. Sanghamitra Sarkar**–74th Orientation Programme–16-26 August, 2019–UGC-HRDC, Jadavpur University, Kolkata

### 4. A. Books/Monographs etc. Published: (Name of the teacher–Name of the Book/ Monograph etc.–Name of the Publisher)

**Mainak Ghosh (ed.)**,–Perception, Design and Ecology of the Built Environment: A Focus on the Global South–ISBN 978-3-030-25879-5, Springer, Switzerland

4. B. Articles Published in Journals, Proceedings and Magazines: (Name of the Teacher–Name of the Articles–Name of the Journal–Date of Publication–Volume)

**Prof. Dr. Jayita Guha Niyogi (Co-author)**–Addressing Informal Public Transport Vehicle Problem in Kolkata –Recent Advances in Traffic Engineering, RATE 2018–[https://doi.org/10.1007/978-981-15-3742-4\\_19](https://doi.org/10.1007/978-981-15-3742-4_19)

**Prof. Dr. Shivashish Bose**–Study on appropriateness between new development and conservation for Bow Barracks housing in Kolkata.–*Journal of Cultural Heritage Management and Sustainable Development*, (Q1: Conservation),–March 2020. DOI 10.1108/JCHMSD-12-2017-0091. Emerald Publishing Ltd, UK.–ISSN: 2044-1266, Vol. 10 No. 3, 2020, pp. 293-315

**Prof. Dr. Suchandra Bardhan (Co-author)**–An Assessment Of Direct And Indirect Emission Reduction Potential Of Natural Wetland Systems Of Kolkata, India *International Journal of Applied Engineering Research (IJAER)*, Research India Publication, ISSN print: 0973 4562–June 2019–Vol. 14, No. 8 (2019), pp. 1923-1930.

**Prof. Dr. Suchandra Bardhan (Co-author)**–Indicator Based Assessment Of Vulnerabilities And Capacities Of Wetland Based Communities In Indian Cities–*Urban India*, ISSN no. 0970-9045 –January-June 2019 –Vol. 39 (I), pp. 73-95

**Prof. Dr. Suchandra Bardhan (Co-author)**–Ecotourism Studies: Lessons from Literature Review–*International Journal of Innovative Knowledge Concepts*, ISSN No. 2454-2415,–July 2019 –7 (7), pp. 61-73

**Prof. Dr. Suchandra Bardhan (Sole author)**–Traditional Indian Landscape Thinking: Protection of Nature through Cultural Practices–Proceedings of Intl. Conference on *Perception and Aesthetics of Cultural Landscapes in Asia* organized by ACLA & Universiti Teknologi, Malaysia (UTM), Johor Bahru, Malaysia–October, 2019–pp. 83-84

**Prof. Dr. Suchandra Bardhan (Co-author)**–Urban Greening Strategy Recommendations for the dense compact city of Kolkata, India –Proceedings of Intl. Conference on *Green Urbanism (GU)* - 3rd Edition, University of Rome Tor Vergata, Italy 2019. ISBN: 978/977 - 85525-4-6–11-13 December 2019 –IEREK Press, Serial Number 27, pp. 63-64.

**Prof. Dr. Suchandra Bardhan (First author)**–Developing A Virtual Tool For K-A-M-P.ing Plant Resources In Multi-scale Urban Areas–*International Journal of Engineering Research and Technology*, ISSN No 2278-0181–December 2019–Vol.8, Issue 12, pp. 582-586

**Dr. Sanjib Nag (Co Author)**–Parameters For Design of Spaces: Case Study Of Kolkata And Its Fringes–*Journal Of Regional Planning*–May 2019–Vol. 04, Issue 03, Pages 05 - 09

**Dr. Sanjib Nag (Co Author)**–Livable Spaces : Study Of Harish Mukherjee Road Kolkata –*Journal of Architecture & Drawings*–September 2019–Vol. 04, Issue 02, Pages 15 - 24

**Dr. Sanjib Nag (Co Author)**–MRTS Related Urban Development of Existing Core Areas In A City : Establishing Relevance of Research Work–*Journal of Research In Infrastructure Design*–November 2019–Vol. 02, Issue 02, Pages 01 - 05

**Dr. Sanjib Nag (Co Author)**–MRTS Related Urban Development of Existing Core Areas : Case Study of Kolkata–*Journal of Recent Activities in Architecture & Sciences*–March 2020–Vol. 04, Issue 02, Pages 21 - 27

**Dr. Sanjib Nag (Co Author)**–Chapter published titled “Transformation Of Residential Settlements In Colonial Towns : Case Study of Little Europe”–in the book titled “Perception, Design & Ecology of Built Environment : Focus on Global South”–January 2020–ISBN 978-3-030-25879-5, Springer, Switzerland

**Dr. Debashish Das (Co Author)**–Investigating PM10 Level with Respect to Urban Landuse Classification and its Effect on Land Surface Temperature–Case Study Kolkata, –*Indian Journal of Regional Science*, –June 2019–Vol. L1, No. 1, ISSN No. 0046-9017

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**Dr. Debashish Das (Co Author)**–Investigating Real Time Ambient Air Quality Status And Air Temperature During Kalipuja/Diwali Festival In Different Landuse Types –Case Study Kolkata –International Journal of Advances in Mechanical and Civil Engineering, –February-2020–ISSN: 2394-2827 Volume-7, Issue-1

**Dr. Debashish Das (Co Author)**–A review of urban microclimate concepts and Thermal indices in the analysis of outdoor Thermal comfort in tropical humid climate -case study on kolkata–Indian Journal of Landscape Systems and Ecological Studies–December, 2019–Volume : 42, No.2

**Dr. Debashish Das (Co Author)**–Chapter titled “Sustainable Planning interventions in Tropical Climate for Urban Heat Island Mitigation – Case study of Kolkata” –in the Book titled “Perception, Design and Ecology of the Built Environment: A Focus on the Global South”–January 2020–ISBN 978-3-030-25879-5, Springer, Switzerland.

**Dr. Mainak Ghosh**–Traditional Folk Art Community and Urban Transformation: The Case of the Artists’ Village at Kalighat, India,– Journal of Architectural and Planning Research, –2019, –vol. 36(1), pp. 70-89

**Dr. Mainak Ghosh**–Sustainable transformation of a vernacular habitat through the revival of crafts: Naya village in West Bengal, India, ISVS,–ISVS–Oct 2019,–vol. 6 (4), pp. 1-16

**Dr. Mainak Ghosh** –Storytelling and Built Environment: Mapping the Literal with the Metaphorical, Protibesh –Journal of Department of Architecture – Bangladesh University of Engineering & Technology, –2019–vol. 17 (1), pp. 45-60

**Dr. Mainak Ghosh**–Roadside Commercial Activities and Environmental Perception Affecting Behaviour: Study from Global South,–International Journal of Town Planning and Management–2019–vol. 5(2), pp. 36-46

**Dr. Mainak Ghosh**–Sustainability in Architecture and Planning: Consumption and Behavior,–International Journal of Architecture and Infrastructure Planning, –2019–vol. 5(1), pp. 1-9

**Dr. Mainak Ghosh**–Sustainability in Traditional Concepts of Architecture and Planning, –Journal of Emerging Technologies and Innovative Research,–2019–vol. 6(5), pp. 89-93

**Dr. Mainak Ghosh**–Urban System Analysis through Behavioural Perception: Case of a City in Global –2019–vol. 23(2), pp. 53-74

**Mrs. Sanghamitra Sarkar**–Chapter titled “Transformation of Commercial Centres and Urban Development Process in Global South”, Sarkar, S., Ghosh, M. & Nag, S. –In Book titled “Perception, Design and Ecology of the Built Environment: A Focus on the Global South”, Springer Geography, Springer Nature Switzerland –January 2020–ISBN 978-3-030-25879-5, Springer, Switzerland

### 5. Collaborative Programmes:

**Mainak Ghosh**, Coordinator for MoU between Ardhi University, Tanzania and Jadavpur University, India

**Mainak Ghosh**, Involvement in workshop on ‘Green buildings’ under Twinning Plan of World Bank assisted TEQIP-III Program, Rajasthan Technical Institute, Kota, 4 March, 2019

### 6. Major Achievements:

**Prof. Dr. Jayita Guha Niyogi**

1. Acted as external member of the Doctoral Scrutiny Committee for pre-Registration and Pre submission of PhD thesis viva-voce of Research Scholars at Department of Architecture, NIT, Patna
2. Acted as Paper-setter for a number of examinations for different Architectural Institutes and Institute of Engineers, India.
3. Acted as external member of the Doctoral Scrutiny Committee for PhD thesis of Research Scholar at Dept of Architecture, T & R P, IEST, Shibpur
4. Acted as Joint Coordinator of One-week National Workshop on RUSA sponsored One-week National Workshop on ‘Application of Qualitative & Quantitative Techniques in Sustainable Urban Planning’ organized by Centre for Human Settlement Planning, Department of Architecture, Jadavpur University, 20–26 September, 2019



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### **Prof. Dr. Shivashish Bose**

1. Member of Expert Committee of the West Bengal Fire & Emergency Services during 2018-2021
2. Member of Group of Experts in Conservation for Restoration of the Exhibits and the Building of the Indian Museum in Kolkata (since August 2018)

### **Prof. Dr. Suchandra Bardhan**

1. Jury member, ISOLA National Students' Landscape Design Awards organized by Indian Society of Landscape Architects (ISOLA), January 2020
2. External Reviewer for the Honours Degree of Bachelor of Landscape Architecture Degree Programme of Faculty of Architecture, University of Moratuwa, Sri Lanka, 5–9 February, 2020

### **Prof. Dr. Sanjib Nag**

1. A Member, Doctoral Committee, Dept. of Arch. T&RP, IEST, Shibpur, since 2013
2. A Member, Inspection Committee, Council of Architecture, India, since 2015
3. A Member, Doctoral Committee, School Of Ecology, Infrastructure & Human Settlement Management, IEST, Shibpur, since 2017
4. A Member, Selection Committee, Public Service Commission, Govt. of W. Bengal, since 2017
5. A Member, Technical Expert Committee, Department of Fire & Emergency Services, Govt. of W. Bengal, since 2017
6. A Jury, National Student Award Competition, INSDAG, Kolkata, since 2017
7. A Member, Board of Studies, School of Architecture, Techno India University, Salt Lake City, since 2018
8. Served as an External Examiner, Department of Architecture T & R P, IEST, Shibpur, in May & December 2018
9. Served as an External Examiner, School of Arch., Techno India University, Salt Lake City, in June & December 2018

### **Dr. Debashish Das**

1. Convener of the Workshop Sub Committee of Institute of Town Planners, India, West Bengal Chapter, 2019-20
2. Visiting Faculty for M.Tech in Illumination Technology & Design (Evening) Course in the School of Illumination Science Engg. & Design, 2019-20

### **Dr. Mainak Ghosh**

1. Participated as expert, on invitation in live television program entitled Pradhan Matri Awas Yojana, of Prasar Bharati, Doordarshan (2019 – 20)
2. Published newspaper article on Times of India, as co-author, 'How covid-19 is reshaping our physical space' on 25 March, 2019
3. Published interview on invitation for knowledge dissemination on Smart Cities, on Avrions, Italy
4. Invited as external examiner, for sessional examination of Architectural design IV at School of Architecture, Techno India University on 5 December, 2019
5. Awardee of researcher Innovation award (June 2019), in the National symposium on applications of engineering & technology towards sustainable growth, under TEQIP III twining program, for UG thesis based work by Swaraj Bose, under supervision of Dr. Mainak Ghosh

### **Mrs. Sanghamitra Sarkar**

1. Acted as Reporting Centre Official for West Bengal Joint Entrance Counselling 2019-20

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### CHEMICAL ENGINEERING

Phone: 033-2457-2246/2437

H.O.D: Prof. Debashis Roy

E-mail: hodchemical@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of the Course	No of Students Enrolled
Bachelors degree in Chemical Engineering	4 yrs.	120 (approx)
Masters degree in Chemical Engineering	2 yrs.	19 (approx)
Masters degree in Bioprocess Engineering	2 yrs.	10 (approx)

#### 1. B. Number of Faculty Members: 17

#### 2. A. Area of Research Activities:

Wastewater treatment  
Nanomaterial preparation and application  
Catalysis and Reaction Engineering  
Biofuel  
Waste Valorization  
Hydrogen Energy  
CO<sub>2</sub> Utilization  
Environmental pollution monitoring based on biomonitoring  
Microwave based Accelerated solvent extraction

#### 2. B. Major Research Project : (Departmental/Individual, Name of the Project/Funding Agency)

1. Project title: Development of novel electroflotation/ electrocoagulation enhanced membrane module for oily wastewater treatment, Funding agency: DST - TSDP, India, Principal Investigator: **Prof. Chiranjib Bhattacharjee**
2. Project title: Heavy metals (Pb,Cr, Co and As) removal from ground water using novel reactive mixed matrix membrane, Funding agency: RUSA 2.0 JU, India, Principal Investigator: **Prof. Chiranjib Bhattacharjee**
3. Project title: Center for Technological Excellence in Water Purification (CTEWP), Funding agency: DST, India, Principal Investigator: **Prof. Chiranjib Bhattacharjee**
4. Project Title: Role of carbonaceous materials and cellulose nano-fibres polymeric composite for treatment of multiple pollutants present in waste-water., Funding Agency: Dalmia Holdings group limited (2017 -20)., Principal Investigator(s): **Prof. C Bhattacharjee, Prof. A. Bhowal, Prof. P Das**
5. Project Title: INNO-INDIGO Project titled CONVER-B (“Development of Efficient Biomass Conversion Routes for Biofuel Production and Utilization”) in collaboration with University of Eastern Finland and UFZ, Germany, Indian Funding Agency: DST, India, Value: Rs. 73, 91,752, Principal Investigator: **Prof. Ranjana Chowdhury**
6. Project Title: Solar Energy driven Green Hydrogen Generation from Water using Reduced Graphene Oxide based Photo-catalyst and Co-catalyst, Duration: 15-09-2018 - 14-09-2021, Funding Agency: DST-SERB, Principal Investigator: **Prof. Kajari Kargupta**, Chemical Engineering Department, Jadavpur University, Co-PI: Prof. Dipali Banerjee, Department of Physics, IEST, Shibpur, Howrah, West Bengal, Sanctioned amount: Rs. 36 lakhs, Status: ongoing



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7. Project Title “Engineering of hybrid organic-inorganic perovskite materials for highly efficient photoelectrochemical cells”, Funding Agency : DST, India, Principal Investigator Dr. Subhasis Roy, Chemical Engineering Department, University of Calcutta, Co-PI **Prof. Kajari Kargupta**, Chemical Engineering Department, Jadavpur University Sanctioned on 15-11-2019, Rs 52.72lakhs / (DST/TMD/(EWO)/IC5/2018/06(G) Status: ongoing
8. Project Title: Development of high performance low cost integrated hydrogen generation-fuel cell system for remote application., Funding Agency: RUSA2.0, Principal Investigator: **Prof. Kajari Kargupta**
9. Project Title: Sustainable development of value added products from Food waste Materials and its Application, Funding Agency: RUSA 2, Principal Investigator: **Prof. R Chowdhury (PI), Prof. A Bhowal (Project Coordinator), Prof. K Kargupta (PI), Prof. P Das (PI)**
10. Project Title: EcoLodge - Efficient production of Butyl-Butyrate from Lignocellulose derived Sugars, Funding Agency: DST (India)-RCN (Norway); Duration: 2015-2019, Principal Investigator: **Prof. Ujjaini Sarkar**
11. Project Title: Phase II: Environmental Observatory: Modelling the Photochemistry of Surface Ozone and its Unusual Precursors with a Regional Model, Funding Agency: ISRO-GBP/AT-CTM; Duration: 2009-ongoing, Principal Investigator: **Prof. Ujjaini Sarkar**
12. Project Title: Sustainable production of 1, 4-butanediol in a hybrid biorefinery using novel catalytic routes, Funding Agency: RUSA 2.0, Principal Investigator: **Prof. Ujjaini Sarkar**
13. Project Title: NanoLodge-Nano-selective, bio-mimetic membranes for integrated biotechnological production of biofuels from lignocellulosic biomass., Funding Agency: DST (India)-RCN (Norway); Duration: 2019-2022, Principal Investigator: **Prof. Ujjaini Sarkar**
14. Project Title :Applied industrial research for the Thermolytic Recovery of Sludge Wastes for the Circular Economy and Biogeochemical Cycle, Funding Agency: Indo-Hungarian Project; DST (International Cooperation Division), India, PI: Prof. Sadhan Kumar Ghosh (Mechanical Engineering), Co-PI: **Prof. Rajat Chakraborty**
15. Project Title: Sustainable production of platform chemicals and fuel additives from lignocellulosic agro-industry wastes., Funding Agency: Government of West Bengal; Higher Education, Department of Science & Technology and Biotechnology., PI: **Prof. Rajat Chakraborty**; Co-PI: **Dr. S. Roy**
16. Project Title : Development of Novel Multi-functional Hybrid Materials for Applications in Sustainable Catalytic Conversions and Energy Storage Devices, Funding Agency: RUSA 2.0 (“Departmental Support Towards Upgradation in Research”), Investigators: **Prof. U.Sarkar; Prof. R. Chakraborty (Coordinator); Dr. C. Mondal, Dr. S.Bose, Dr. S.Roy**
17. Project Title : Sustainable Production of Drop-in Bio-Fuels through Energy-efficient Conversion of Agro-wastes, Funding Agency: RUSA 2.0, PI: **Prof. Rajat Chakraborty**
18. Project Title: Green synthesis of iron nanoparticles from manglicolous fungi of Indian Sunderban and their application in sequestration of heavy metals from contaminated water., Funding Agency: DBT sponsored project (in collaboration with University of Calcutta and National Institute of Technology – Rourkella). (2016 -19)., Principal Investigator: **Prof. P. Das**
19. Project Title: Removal of pharmaceutical derivatives present in waste water by advanced oxidation integrating with microstructure and rotating packed bed of graphene, Funding Agency: DST (in collaboration with IIT–Guwahati).(G)/Graphene oxide (GO)/GO-metal nanocomposites. (2017-2020), Principal Investigator: **Prof. P. Das**
20. Project Title: Synthesis of reduced Graphene oxide using gamma irradiation and Detoxification of wastewater using reduced Graphene oxide based nano- coated composite in presence of Gamma/UV/photolytic radiation/ irradiation technique, Funding Agency: UGC-DAE Consortium., Principal Investigator: **Prof. P. Das**, Co-Investigator: **Prof A.Bhowal**
21. Project Title: Synthesis of Graphene oxide coated natural waste materials and its application for simultaneous treatment of wastewater containing fluoride and chromium: Reactor performance in batch, fluidized bed and membrane reactor, Funding Agency: SERB DST, Principal Investigator: **Prof. P Das**

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22. Project Title: Zeolite-based Low-cost Hybrid Membrane Photo-Bioreactor System for Treating and Recycling of High Strength Industrial Wastewater, Funding Agency: IMPRINT II ( PI: Sujit Sen, NIT-Rourkela, CO-Investigator: Prof B K Dutta, IITKGP), Prof A B Pandit (ICT-Mumbai), Co-Investigator: **Prof. P Das**
23. Project Title: Sustainable development of value added products from Food waste Materials and its Application, Funding Agency: RUSA 2 [Faculty Project], Principal Investigator: **Prof. P Das**
24. Project Title: Environmentally benign amine functionalized solid sorbent for fast and reversible CO<sub>2</sub> capture from air: Kinetics of temperature-vacuum swing adsorption/desorption system., Duration: 2017-2020, Funding Agency: DST –SERB, EEQ, Principal Investigator: **Dr. S. Saha**
25. Project Title: Process intensification approach for isolation of Polynuclear aromatic hydrocarbons (PAHs) from bioindicators (like lichens and others) to determine air pollution., Funding Agency: RUSA 2.0, Principal Investigator: **Dr. R Dutta**
26. “Metal Nanoparticle Tailored Activated Carbon prepared from waste towards heavy metal removal”, Funding Agency: RUSA 2.0, Jadavpur University, Principle Investigator: **Dr. Saswata Bose**

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

#### Invited Lectures Delivered:

##### Prof. Ranjana Chowdhury

1. “Generation of Biofuels and Biochemicals from Indian Agro-wastes: Prospects, Challenges and Relevance to Circular Economy” jointly with Prof. Sadhan Kumar Ghosh in “International Seminar on Sustainable 2-G Biorefinery Platforms” on 10 December, 2019
2. “Combination of Biochemical and Thermochemical Processes for Sustainability of second Generation Biorefineries” at Indo-US SPARC workshop on “Sustainable Biorefinery for Waste Valorization” at IIT, Kharagpur on 3 January, 2020
3. Delivered an Invited Lecture titled “Energy from Lignocellulosic wastes— An Overview of Processes” in the Refresher Course “Non- conventional Energy-A paradigm shift towards sustainability” for College and University teachers of Science and Engineering disciplines on 9 January, 2020 at Power Engineering Department, Jadavpur University

#### Sessions Chaired:

##### Prof. Ranjana Chowdhury

1. Chaired a Technical Session in an International Seminar on “Sustainable Development Goals - The Indian Pathway” on December 2, 2019, at Dr. Triguna Sen Auditorium, Jadavpur University
2. Chaired a Technical Session in “International Workshop on Hybrid Technologies for Conversion of Lignocellulosic Biomass to Biofuel” on December 11, 2019 at Jadavpur University
3. Chaired a Technical Session in “International Seminar “International Seminar on Sustainable 2-G Biorefinery Platforms” on December 12, 2019 at Jadavpur University

##### Prof. Rajat Chakraborty

1. Chaired Technical Session I in UGC-SAP sponsored National Seminar on “Advances in Nanoscience and Nanotechnology Applications” on 10 January, 2020; at Jadavpur University
2. Chaired two sessions: Lecture Session-III and Technical Session-III in “International Seminar on Sustainable 2-G Biorefinery Platforms” 10–12 December, 2019; Jadavpur University
3. Chaired a technical session on Sustainable Energy (SE) in 2<sup>nd</sup> International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET-2020); 21 January 2020; at Heritage Institute of Technology, Kolkata

**Dr. Saswata Bose**

1. Chaired a technical session on “The Young Scientist Award on Nanomaterial and Nanotechnology (YSA:NN)” in 2<sup>nd</sup> International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET-2020); 22 January 2020; Heritage Institute of Technology, Kolkata
- 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)**
- S. Bhattacharya, P. Chakraborty, D. Sen, **Chiranjib Bhattacharjee**, “Polyethylene Glycol Based Drug Delivery Applications”, “International conference on Emerging Trends for Sustainable Development, 2019 (ICETSD), organized by Government College of Engineering and Leather Technology (Post-Graduate), 5-6 March 2019, Kolkata
- S. Bhattacharya, P. Chakraborty, D. Sen, **Chiranjib Bhattacharjee**, “Inhibition kinetics analysis of Bacillus subtilis and Escherichia coli using natural thiosulfinate drug”, “6th Convention: Society for Ethnopharmacology (SFE - INDIA) and National seminar on Translational Research of Traditionally used Indian medicinal plants with special reference to (Tinospora Cordifolia)”, Organized by School of Natural Product Studies, Jadavpur University, 07-08 September, 2019, Kolkata
- S. Bhattacharya, D. Sen, **Chiranjib Bhattacharjee**, “Modern drug carrier system for enhanced stability and sustained delivery of phytopharmaceuticals”, “Young Scientists’ Conference, India International Science Festival (IISF-2019)”, 5–7 November, Biswa Bangla Convention Centre, Kolkata
- S. Bhattacharya, D. Sen, **Chiranjib Bhattacharjee**, “Molecular docking studies and shelf life enhancement of bioactive thiosulfinate drug extracted from Allium sativum using micelle carrier system”, “International Conference on Functional Materials and Chemical Engineering (ICFMCE 2019)”, 15–17 December, 2019 Chulalongkorn University, Bangkok, Thailand
- S. Bhattacharya, D. Gupta, D. Sen, **Chiranjib Bhattacharjee**, “Development of micellized antimicrobial thiosulfinate: A contemporary way of drug stability enhancement”, “2nd International Conference on Advances in Bioprocess Engineering and Technology (ICABET-2020)”, 20-22 January, 2020, Heritage Institute of Technology, Kolkata
- A. Mazumder, Z. Chowdhury, D. Sen and **Chiranjib Bhattacharjee**, “Study on formation of novel o/w microemulsion solvent extractant system for Polycyclic Aromatic Hydrocarbons from aqueous waste stream”. ICETSD’19, 5–6 March, 2019, Kolkata
- A. Mazumder, Z. Chowdhury, D. Sen and **Chiranjib Bhattacharjee**, “Destabilization and de-emulsification of emulsified oily wastewater using electrocoagulation”. National symposium on application of engineering and technology towards sustainable growth, 4 June, 2019, Kolkata
- A. Mazumder, D. Sen and **Chiranjib Bhattacharjee**, “De-emulsification and separation of oil from emulsified oily wastewater using hybrid electrocoagulation enabled membrane process”, Young Scientist Conference, 5-8 November, 2019, Kolkata
- A. Mazumder, Z. Chowdhury, D. Sen and **Chiranjib Bhattacharjee**, “Study on application of novel synthesized silver metallosurfactant for membrane cleaning”, ICABET 2020, Heritage Institute of Technology, Kolkata, India, 20-22 January, 2020
- Shubhanwita Saha, Debashis Roy, **Chiranjib Bhattacharjee**, ‘Graphene and its Composites: Promising and Sustainable Nanomaterial for Bioenergy Production’ Proceedings in National Symposium on “Applications of Engineering & Technology towards Sustainable Growth” on 4 June 2019 with TEQIP III Twinning Program of Faculty of Engineering & Technology, Jadavpur University, P-30
- Shubhanwita Saha, Debashis Roy, **Chiranjib Bhattacharjee**, ‘2D sheet supported nanomaterials: Promising antimicrobial agents in waste water treatment’ in Young Scientists’ conference (YSC) organized by India International Science Festival 2019, on 5 -7 November, 2019 at Biswa-Bangla Convention Centre, Kolkata

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Shubhanwita Saha, Debashis Roy, **Chiranjib Bhattacharjee**, 'Reduced Graphene Oxide (RGO) based nanocatalyst for inhibition of pathogenic bacteria towards enhancement of water purification', in 2nd International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET 2020), on 20-22 January, 2020, at Heritage Institute of Technology, Kolkata, India

Shubhanwita Saha, Debashis Roy, **Chiranjib Bhattacharjee**, 'Graphene supported nanomaterial : An efficient photocatalyst for enhanced waste water remediation', in the National Conference On "Issues & Challenges in Water Treatment and allied research for Sustainable environment" on 23-25 January, 2020 at IIT Guwahati

Shubhanwita Saha, Debashis Roy, **Chiranjib Bhattacharjee**, "Synthesis and Characterization of Reduced Graphene Oxide (RGO) supported nanocatalyst for the construction of membrane based photocatalytic reactor in wastewater purification" in the International Conference on Sustainable Water Resources Management under Changed Climate during 13-15 March, 2020 at Jadavpur University

Manjusha Chakraborty, Ranjana Das, **Chiranjib Bhattacharjee**, "Removal Of Arsenic Toxicity Using Layered Double Hydroxide Derived Adsorbents" in the National Conference On "Issues & Challenges in Water Treatment and allied research for Sustainable environment" on 23-25 January, 2020 at IIT Guwahati

Manjusha Chakraborty, Ranjana Das, **Chiranjib Bhattacharjee**, "Development Of Layered Double Hydroxide Derived Adsorbents for Removal of Arsenic Toxicity" in the 'International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE)-2020' held on 5-7 March, 2020 at National Institute of Technology, Rourkela

Manjusha Chakraborty, Ranjana Das, **Chiranjib Bhattacharjee**, "Removal Of Arsenic Toxicity Using Novel Layered Double Hydroxide Derived Adsorbents" in the International Conference on Sustainable Water Resources Management under Changed Climate during 13-15 March, 2020 at Jadavpur University

Paramita Das, **Chiranjib Bhattacharjee**, 'Removal of Hazardous Dyes from Wastewater using Natural Adsorbent-A green and cost effective step towards "Swachh Bharat"' in Young Scientists' conference (YSC) organized by India International Science Festival 2019, held on 5-7 November, 2019, at Biswa-Bangla Convention Centre, Kolkata, India

Paramita Das, Pallavi Chakraborty, **Chiranjib Bhattacharjee**, 'Synthesis and application of high performance metal oxide/polymer mixed matrix membrane for removal of toxic heavy metal ions from waste water' in CHEMCON-2019, held on 16-19 December, 2019, at Indian Institute of Technology, Delhi, India

Paramita Das, **Chiranjib Bhattacharjee**, 'Natural Adsorbent Incorporated Polymeric Mixed Matrix Membrane- A Cost Effective Solution for the Removal of Hazardous Dyes from Waste Water' in the 2nd International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET 2020), held on 20-22 January, 2020, at Heritage Institute of Technology, Kolkata, India

Paramita Das, **Chiranjib Bhattacharjee**, 'Removal of Hazardous Dyes from WasteWater in a Green and Cost effective Way' in the International Conference on Sustainable Water Resources Management under Changed Climate, held on 13-15 March, 2020, at Jadavpur University, Kolkata, India

Pallavi Chakraborty<sup>1</sup>, Paramita Das, Ranjana Das, **Chiranjib Bhattacharjee**, 'Fabrication and Characterization of a Novel Mixed Matrix Membrane For Removal of Heavy Metal from Waste Water' in the 2nd International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET 2020), held on 20-22 January, 2020, at Heritage Institute of Technology, Kolkata, India

S. Banerjee, Ranjana Das, **Chiranjib Bhattacharjee**, "Removal of Arsenic from Groundwater by a Novel Mixed Matrix Membrane", in the National Conference on "Issues & Challenges in Water Treatment and allied research for Sustainable environment" on 23-25 January, 2020 at IIT Guwahati

Dr. S.Basu, S. Banerjee, S. Saha, **Chiranjib Bhattacharjee**, "Water and Media: A Multi-disciplinary Approach in Developing Guidelines for Media In the Age of Climate Change" in the International Conference on Sustainable Water Resources Management under Changed Climate during 13-15 March, 2020 at Jadavpur University



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S. Banerjee, Ranjana Das **Chiranjib Bhattacharjee**, “Novel Porous Ternary Mg-Al-Ti Oxide Composite Nano-Adsorbents with Extremely High Arsenic Removal Capacity”, in 2020 AICHE Virtual Annual Meeting, Scheduled to be held on 16-20 November

Ranjana Das and **Chiranjib Bhattacharjee**, Detoxification of Nonconventional Oil Seed Protein and Synthesis of Protein Based Hydrogel, In International Conference on Emerging Trends for Sustainable Development (ICETSD '19), 5–6 March, 2019, Government College of Engineering and Leather Technology, Kolkata, India. 978-81-8211-146-2 ©2019 GCELT

Ranjana Das and **Chiranjib Bhattacharjee**, Application of nanotechnology for pharma industry Effluent treatment - a sustainable process development, The 9th International Conference on Sustainable Waste Management towards Circular Economy, 27–30 November, 2019, KIIT University, Bhubaneswar, India

Ranjana Das and **Chiranjib Bhattacharjee**, Membrane Reactor: A Sustainable Approach to Get Value from Waste, in Young Scientists' conference (YSC) organized by India International Science Festival 2019, on 5-7 November, 2019 at Biswa-Bangla Convention Centre, Kolkata, India

Aishwarya Das, Ranjana Das, **Chiranjib Bhattacharjee**, Isolation and Characterization of Arsenic Tolerant Bacteria from Industrial Soil and Analyzing its Metal Removal Potency, In International Conference on Advances in Bioprocess Engineering and Technology (ICABET-2020), 20-22 January, 2020 at Heritage Institute of Technology, Kolkata, India pp 24

Ranjana Das, **Chiranjib Bhattacharjee**, Antihypertensive Properties of Peptide: A Novel Drug Alternative, In 6th Convention: SFE-India, 7-8 September, 2019, Kolkata, India

Ranjana Das, **Chiranjib Bhattacharjee**, Studies on Application of Photos Membrane Reactor for Treatment of Persistent Organic Chemicals in Pharmaceutical Effluent, National Conference on Issues and Challenges in water treatment and allied research for Sustainable Environment 23 -25 January, 2020, IIT Guwahati, India. pp 17

Soumitra Pati, Sudipta De, S, **Ranjana Chowdhury**. Process modeling of gasification and co-gasification of Indian lignocellulosic waste - optimization of energy efficiency. Presented at the 11th International Exergy, Energy and Environment Symposium (IEEES11-2019) held at the Department of Automobile Engineering, SRM Institute of Science & Technology, Chennai, India from 14 –18 July, 2019

Shiladitya Ghosh, Asmita Mishra, **Ranjana Chowdhury**. Correlation of sugar release and increase of crystallinity index (CrI) during mild acid-catalyzed hydrothermal pretreatment of Indian rice straw. Presented at the 11th International Exergy, Energy and Environment Symposium (IEEES11-2019) held at the Department of Automobile Engineering, SRM Institute of Science & Technology, Chennai, India from 14 –18 July, 2019

Flávio C. F. Baleeiro, Sabine Kleinstueber, Heike Sträuber, **Ranjana Chowdhury**. A thermodynamic model to predict carbon fixation potential in syngas-aided anaerobic fermentation. Presented at International Workshop on Hybrid Technologies for Conversion of Lignocellulosic Biomass to Biofuel held at the Chemical Engineering Department, Jadavpur University, Kolkata, India from 11–13 December, 2019

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Jigisha Panda, **Ranjana Chowdhury**. Growth kinetic study of electrochemically active bacterium *Shewanellaputrefaciens* MTCC 8104 on acidic, Jute-stick pyro-effluent. Presented at International Workshop on Hybrid Technologies for Conversion of Lignocellulosic Biomass to Biofuel held at the Chemical Engineering Department, Jadavpur University, Kolkata, India from 11–13 December, 2019

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Sayantanu Mandal, Sourodip Ghoshdastidar, Priyanka Ghosh, Shuvayan Mukherjee, **Kajari Kargupta** ‘Fuel cell-thermoelectric hybrid device based on waste heat utilisation for portable power application’, International conference of functional materials and chemical engineering (IFMCE-2019) organised by IASED China, Venue -Chulalongkorn University, Bangkok, Thailand, 14–17 December, 2019

Arundhati Sarkar, Sourav Chaule, Suparna Saha, Dipali Banerjee, Saibal Ganguly, **Kajari Kargupta**; “rGO-CdS-Sodium Alginate hybrid visible light active Photo-catalyst for enhanced generation of hydrogen by splitting of water”; 2<sup>nd</sup> International Conference on Current Trends In Materials Science & Engineering (CTMSE)2019, S.N Bose National Centre for Basic Sciences, Kolkata, India, 18–20 July, 2019, published in conference proceeding page no. 64 (abstract i.d 53)

Priyanka Ghosh, Sayantanu Mandal, **Kajari Kargupta** “Modified polybenzimidazole membranes for better performance in high temperature polymer electrolyte membrane fuel cell”, 72<sup>nd</sup> Chemical Engineering Congress India 2019, Chemcon 2019, at IIT Delhi, Delhi, India, 15–19 December, 2019

Arundhati Sarkar, Milan Kumar Mandal, Suparna Saha, Dipali Banerjee, **Kajari Kargupta** “Reduced graphene oxide /transition metal based Nano -hybrid : solid state Z-scheme photo catalytic system for enhanced hydrogen by water splitting”; International Conference on Advances in Bioprocess Engineering and Technology (ICABET)-2020, Heritage Institute of Technology, Kolkata, India, 20–22 January, 2020 published in conference proceeding page no. 99 (abstract i.d. O-72)

Suparna Saha, **K. Kargupta** “Electrocatalytic reduction of CO<sub>2</sub> using graphene supported PANI-Co<sub>3</sub>O<sub>4</sub>: Study of rGo/Co<sub>3</sub>O<sub>4</sub> ratio on selectivity of product”, 2<sup>nd</sup> International Conference on Advances in Bioprocess Engineering and Technology (ICABET 2020), Heritage Institute of Technology, Kolkata, India, 20-22 January, 2020

Suparna Saha, **Kajari Kargupta** Mitigation of Greenhouse effect: Selective and Economic Conversion of CO<sub>2</sub> to fuels and key building block chemical, Young Scientist Conference (YSC 2019), Biswa Bangla Convention Centre, Kolkata, India, 5-7 November, 2019



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Arundhati Sarkar, Milan Kumar Mandal, Suparna Saha, **Kajari Kargupta** “Rapid generation of hydrogen from water and sunlight: Development of efficient visible light active solid state nano-hybrid photo-catalytic system”; Young Scientists Conference (YSC)-2019, Biswa Bangla Convention Centre, Kolkata, India, 5–7 November, 2019

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Suparna Saha, **K. Kargupta** ‘Porphyrin functionalized graphene-Cds nanocomposite for photocatalytic reduction of CO<sub>2</sub> to produce value added chemicals’, International Nanoscience Student Conference (INASCON 2020), Lund University, Sweden

Preetha Ganguly, Ashish Khan, **Papita Das, Avijit Bhowal**, “Synthesis of cellulose and its use for bioethanol production and wastewater treatment”, International Seminar on Sustainable 2-G Biorefinery Platform (Sponsor: RUSA-2.0) by Jadavpur University, West Bengal, during 11-13 December, 2019, Page-24-25

Rwiddhi Sarkhel, Preetha Ganguly, **Papita Das, Avijit Bhowal**, Synthesis and application of iron nanoparticles in wastewater treatment, India International Science Festival, Young Scientists Conference, Kolkata, 5- 8 November, 2019

Lopamudra Das, **Papita Das, Avijit Bhowal**: Extracted Cellulose/Graphene Oxide nano-composite preparation and application for fluorideremoval, International conference on Nanotechnology (ICNT-2019), 28-29 December, 2019 by Institute of Fire and Safety Engineering, Haldia, WB, India, Proceedings:-978-93-5361-912-1, page-69

Pabitra Kumar Baidya, Suvra Sadhukhan, Annesha Bhattacharjee, **Ujjaini Sarkar**, Solvent extraction and degumming of *Crotalaria juncea* seeds: *Physicochemical and Rheological characterization of a Natural Gum*, 15th International Hydrocolloids Conference, 2 - 5 March, 2020, Melbourne, Australia

Sibashish Baksi, **Ujjaini Sarkar**, Enzyme based hydrolysis of a fibrous and a woody biomass: A novel protocol, The 4th International Conference on Alternative Fuels, Energy and Environment (ICAFEE): Future and Challenges on 18-21 October, 2019 at Feng Chia University, Taichung, Taiwan

Pabitra Kumar Baidya, Niwesh Ojha, **Ujjaini Sarkar**. Selective Hydrogenation of Succinic Acid to 1,4-Butanediol using Palladium-Alumina Bimetallic Catalyst: Effects of calcination temperature, pressure and reaction time, The 4th International Conference on Alternative Fuels, Energy and Environment (ICAFEE): Future and Challenges on 18-21 October, 2019 at Feng Chia University, Taichung, Taiwan

Chandrima Ghosh, Somnath Sinhamahapatra, **Ujjaini Sarkar**, Himansu Sekhar Tripathi. Studies on Salem magnesite in terms of phase modification and beneficiation, National Seminar in “Propelling Innovations in Glass and Ceramics for Atmanirbhar Bharat”, held in CSIR-Central Glass & Ceramic Research Institute, 10 - 12 December, 2020

Oindrila Roy and **Rajat Chakraborty**. Accelerated conversion of waste tea leaves to total reducing sugar through sustainable energy-efficient process. International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2020), NIT Rourkela ; 5–7 March, 2020

Sohini Roy Choudhury and **Rajat Chakraborty**. Optimization of wheat husk conversion employing energy-efficient hybrid electromagnetic radiations for sustainable production of fermentable sugar. International Conference on Bioprocess for Sustainable Environment and Energy (ICBSEE-INDIA-2020), NIT Rourkela; 5–7 March, 2020

Swapnendu Chatterjee, Sayan Kumar Bhattacharjee, Rajdip Roy, **Rajat Chakraborty**. Energy-proficient Infrared Radiated Rapid Hydrolysis of Pineapple Skin to Reducing Sugar: Optimization, Heterogeneous Kinetics. 2<sup>nd</sup> International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET-2020); 21st January 2020; at Heritage Institute of Technology, Kolkata

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Ritika Samanta and **Rajat Chakraborty**. Intensification of drop-in biofuel synthesis from rice husk employing energy-efficient visible irradiation. International Workshop on “Hybrid Technologies for Conversion of Lignocellulosic Biomass to Biofuel”, Jadavpur University, 11-13 December, 2019

Sourav Barman and **Rajat Chakraborty**. Intensified glucose production through starch hydrolysis in hybrid electromagnetic radiations assisted catalytic packed bed reactor. International Seminar on Sustainable 2-G Biorefinery Platforms; 10-12 December, 2019; Chemical Engineering Department, Jadavpur University

Monosij Maitra, Swapnendu Chatterjee, Punam Mukhopadhyay, **Rajat Chakraborty**. Accelerated biodiesel production from de-oiled mustard and sunflower cakes under low-energy irradiation. International Seminar on Sustainable 2-G Biorefinery Platforms; Chemical Engineering Department, Jadavpur University; 10-12 December, 2019

Piasy Pradhan, Poulami Karan, **Rajat Chakraborty**. Optimization of Biodiesel Production from Used Rice Bran Oil Employing Waste Derived-hydroxyapatite Supported Vanadium Catalyst. International Conference on Water, Energy, and Environmental Sustainability (WEES2020); NIT Durgapur; 13-15 January, 2020

Vijoyeta Chakraborty, **Papita Das**, Pankaj Kumar Roy, Removal of Hexavalent Chromium using Agricultural waste based nanocomposite 9th International Conference on Sustainable Waste Management towards Circular Economy, KIIT, Orissa, E-ISBN 978-93-5391-784-5, Page No. 692

Vijoyeta Chakraborty, **Papita Das**, Pankaj Kumar Roy, Removal of Hexavalent Chromium by Carbonaceous material derived from sawdust, International Conference On Sustainable Water Resources Management under Changed Climate, Jadavpur University, Page No.: 29

U. Pathak, D.D Mandal, **P. Das**, T. Kumar, T. Mandal. Bioattenuation of poly-aromatic compounds by an isolated bacterial strain: Process optimisation and toxicity analysis. 9th ICONSWM, Bhubaneswar, November 27-30, 2019

Uttarini. Pathak, A. Jhunjhunwala, P. Mogalapalli, D. Dasgupta Mandal, **P. Das**, T. Kumar, T. Mandal. Intensive insight into the bio attenuation of phenol and cyanide using co-culture microbial strain- Kinetic and Toxicity analysis. HÅRAKLION 2019 “7th International Conference on Sustainable Solid Waste Management” 26-29 June, 2019, Heraklion, Greece

**Parama Ghoshal** and Silvana S. S. Cardoso, Mechanism of reactive convective- dissolution in the geological storage of carbon dioxide, presented at the *Eighth International Symposium on Bifurcations and Instabilities in Fluid Dynamics (BIFD) 2019* held at University of Limerick, Limerick, Ireland, 16-19 July, 2019

**Parama Ghoshal** and Silvana S. S. Cardoso, Reactive convective-dissolution in a Hele-Shaw cell, presented at the 14th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics held at the Powerscourt Hotel Resort & Spa, Wicklow, Ireland, 21 - 25 July, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

#### Prof. Ranjana Chowdhury

1. “International Seminar on Sustainable 2-G Biorefinery Platforms” during 10-12 December, 2019 at Jadavpur University, Kolkata (Sponsor: RUSA-2, Jadavpur University)
2. “International Workshop on Hybrid Technologies for Conversion of Lignocellulosic Biomass to Biofuel” during 11-13 December, 2019 at Jadavpur University, Kolkata (Sponsor: INNO-INDIGO project CONVER-B)

#### Dr. Mehabub Rahaman

National Seminar on Advances in Nanoscience and Nanotechnology Applications on 10 January 2020 at Jadavpur University, Kolkata sponsored by UGC-SAP

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### Dr. Saswata Bose

National Seminar on Advances in Nanoscience and Nanotechnology Applications on 10 January 2020 at Jadavpur University, Kolkata sponsored by UGC-SAP

### 3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teachers, Title of the Course, Duration, Place)

#### Ujjaini Sarkar

AICTE Sponsored Six Day Online Short Term Training Program-III On Sustainable Design of Chemical Process Plants by Using Aspen Plus and Aspen HYSYS Simulation Tools from 21–26 September, 2020

### Dr. Saswata Bose

National Seminar on Advances in Nanoscience and Nanotechnology Applications on 10 January, 2020 at Jadavpur University, Kolkata sponsored by UGC-SAP

### 4. A. Books/Monographs etc. Published : (Name of the Teacher, Name of the Book, Name of the Publisher)

#### Book Chapters:

1. S. Sarkar, S. Sarkar, **C. Bhattacharjee** (2019). “Green Synthesis of Novel Photocatalysts.” In Nano Photocatalyst and Environmental Applications, pp. 241-261. Springer, Cham. [https://doi.org/10.1007/978-3-030-10609-6\\_9](https://doi.org/10.1007/978-3-030-10609-6_9)
2. S. Sarkar, S. Sarkar, **C. Bhattacharjee**, S. Sarkar (2019). “Novelty in Designing of Photocatalysts for Water Splitting and CO<sub>2</sub> Reduction.” In Nanophotocatalysis and Environmental Applications, pp. 41-65. Springer, Cham. [https://doi.org/10.1007/978-3-030-04949-2\\_3](https://doi.org/10.1007/978-3-030-04949-2_3)
3. A. Mazumder, S. Bhattacharya, **C. Bhattacharjee** (2019). Role of nano-photocatalysis in heavy metal detoxification, Nanophotocatalysis and Environmental Applications: Detoxification and Disinfection, Series volume 30, Chapter 1, eBook ISBN: 978-3-030-12619-3, DOI: 10.1007/978-3-030-12619-3, Publisher: Springer International Publishing, 2020, pp. 1-33
4. S. Bhattacharya, D. Gupta, D. Sen, **C. Bhattacharjee** (2021). Development of micellized antimicrobial thiosulfinate: A contemporary way of drug stability enhancement, in book D. Ramkrishna et al. (eds.), “Advances in Bioprocess Engineering and Technology”, Lecture Notes in Bioengineering, chapter 8, Springer, Singapore Publishing. [https://doi.org/10.1007/978-981-15-7409-2\\_8](https://doi.org/10.1007/978-981-15-7409-2_8)
5. S. Bhattacharya, A. Mazumder, D. Sen, **C. Bhattacharjee**, “Bioaugmentation technology to remove oil from oily wastewater using isolated Actinobacteria”, in book Advances in Environmental Research, Volume 79, chapter 3, ISBN: 978-1-53618-879-0, Nova Publishers. (*In Press*)
6. A. Mazumder, D. Sen, **C. Bhattacharjee** (2019). Mass transport through composite asymmetric membranes. In Book: Diffusion Foundations, Trans Tech Publications Ltd, Switzerland, vol. 23, pp 151–172. ISSN: 2296-3642. DOI:10.4028/www.scientific.net/DF.23.151
7. A. Mazumder, D. Sen, **C. Bhattacharjee** (2020). Optimization of oily wastewater treatment processes using neurofuzzy adaptive models. In Book: “Computational Intelligence. Theoretical Advances and Advanced Applications”, Walter De Gruyter, Germany. DOI: 10.1515/9783110671353-011
8. A. Mazumder, Z. Chowdhury, D. Sen, **C. Bhattacharjee** (2021). Study on Application of Novel Synthesized Silver Metallo Surfactants for Membrane Cleaning. In Book: Advances in Bioprocess Engineering and Technology, Springer, Singapore Publishing. DOI: 10.1007/978-981-15-7409-2\_30
9. Shubhanwita Saha, **Debashis Roy, Chiranjib Bhattacharjee**, “Reduced Graphene Oxide (RGO) based nanocatalyst for inhibition of pathogenic bacteria towards enhancement of water purification”, in book “Advances in Bioprocess Engineering and Technology” by Springer Nature, 2020, Chapter 47, pages 469-474, DOI: 10.1007/978-981-15-7409-2\_47

10. S. Banerjee, R. Das, **C. Bhattacharjee**, “Biofuel cells for water desalination” in the book titled, “Biofuel Cells: Materials and Challenges”, Wiley-Scrivener, ISBN 1119724694, 9781119724698
11. R. Das, S. Das, **C. Bhattacharjee**, *CO<sub>2</sub> sequestration using Algal biomass and its application as bio-energy*, (Chapter 32), In ‘Encyclopedia in Renewable & Sustainable Materials’, Vol. 9, Ed: Dr. Gautam Majumdar, Elsevier-UK. (<https://doi.org/10.1016/B978-0-12-803581-8.11030-6>) ISBN: 978-0-12-812780-3
12. R. Das, B. Samanta, **C. Bhattacharjee**, *Traditional Biomass: a replacement for Petro-fuels*, (Chapter 41), In ‘Encyclopedia in Renewable & Sustainable Materials’, Vol. 9, Ed: Dr. Gautam Majumdar, Elsevier-UK. (<https://doi.org/10.1016/B978-0-12-803581-8.11039-2>) ISBN: 978-0-12-812780-3
13. Das R., **Bhattacharjee C.** (2020) Development of Glass Ceramics from Agricultural Wastes. In: Kharissova O.V., Martínez L.M.T., Kharisov B.I. (eds) Handbook of Nanomaterials and Nanocomposites for Energy and Environmental Applications. Springer, Cham. [https://doi.org/10.1007/978-3-030-11155-7\\_134-1](https://doi.org/10.1007/978-3-030-11155-7_134-1)
14. R. Das, **C. Bhattacharjee**, Detoxification of Nonconventional Oil Seed Protein and Synthesis of Protein Based Hydrogel In International Conference on Emerging Technologies for Sustainable Development (ICETSD’19) Pp- E6-E9, ISBN: 978-81-8211-146-2 ©2019 GCELT
15. R. Das, **C. Bhattacharjee**, Green Composites - A next generation sustainable composite materials, specific features and applications, In “Green Composites: Materials and Applications” edited by Dr. Inamuddin, Springer, 2019 (In press)
16. R. Das, **C. Bhattacharjee** Development of Glass-Ceramics from Agricultural Wastes, In Handbook of Nanomaterials and Nanocomposites for Energy and Environmental Applications, edited by Oxana Vasilievna Kharissova, Leticia Myriam Torres-Martínez and B. I. Kharisov, Springer Nature 31 May, 2020 (Accepted)
17. Swapnendu Chatterjee, Sayan Kumar Bhattacharjee, Rajdip Roy, **Rajat Chakraborty**, “Optimization of Energy-Proficient Infrared Radiated Rapid Hydrolysis of Pineapple Skin to Reducing Sugar”Advances in Bioprocess Engineering and Technology. Springer, Singapore. [https://doi.org/10.1007/978-981-15-7409-2\\_26](https://doi.org/10.1007/978-981-15-7409-2_26); pp 257-264(2021)
18. Bose D., Barman S., **Chakraborty R.** “Recent Trends in Valorization of Non-metallic Ingredients of Waste Printed Circuit Board: A Review”.In: Ghosh S., Bhattacharya C., Satyanarayana S., Varadarajan S. (eds) Emerging Technologies for Waste Valorization and Environmental Protection. Springer, Singapore. ISBN 978-981-15-5736-1 (eBook) <https://doi.org/10.1007/978-981-15-5736-1>
19. **Chakraborty R.**, R.Samanta. “Renewable Jet Fuel(RJF):Mitigation of Aviation-Related GHG Emissions”.Reference Module in Materials Science and Materials Engineering,(ELSEVIER) . <https://doi.org/10.1016/B978-0-12-803581-8.11049-5>. Volume 3, 2020, Pages 736-742
20. **Chakraborty R.** Mukhopadhyay P., “Use of Green Fuel Blends: A Pollution Reduction Approach”. Reference Module in Materials Science and Materials Engineering (ELSEVIER)[ <https://doi.org/10.1016/B978-0-12-803581-8.11019-7>.Volume 3, 2020, Pages 487-500
21. S. Chowdhury, S. Pan, R. Balasubramanian and **P. Das**, 2019. Three-Dimensional Graphene-Based Macroscopic Assemblies as Super-Absorbents for Oils and Organic Solvents. In: A New Generation Material Graphene: Applications in Water Technology, Naushad, M. (Ed.). Springer, Switzerland, ISBN: 978-3-319-75483-3, pp: 43-68
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26. P. Ganguly., S Sengupta, **P Das**, A Bhowal (2020) Synthesis of Cellulose from Peanut Shell Waste and Its Use in Bioethanol Production. In: Ghosh S., Sen R., Chanakya H., Pariatamby A. (eds) Bioresource Utilization and Bioprocess. Springer, Singapore, pg 81-91 [DOI: 10.1007/978-981-15-1607-8\_10]. ISBN: 978-981-15-1607-8
27. P. Ganguly, R Sarkhel, **P Das** (2020). The second and third generation biofuel technology: comparative perspectives. In: Sustainable Fuel Technologies Handbook [Accepted]
28. Sarkhel R., Sengupta S., **Das P.**, Bhowal A. (2020) Biodegradation of Plastic Waste Using Marine Microorganisms. In: Ghosh S. (eds) Urban Mining and Sustainable Waste Management. Springer, Singapore, pg 195-201 [DOI:10.1007/978-981-15-0532-4\_20]. ISBN: 978-981-15-0532-4
29. Ganguly P., Sengupta S., **Das P.**, Bhowal A. (2020) Synthesis of Cellulose from Peanut Shell Waste and Its Use in Bioethanol Production. In: Ghosh S., Sen R., Chanakya H., Pariatamby A. (eds) Bioresource Utilization and Bioprocess. Springer, Singapore, pg 81-91 [DOI: 10.1007/978-981-15-1607-8\_10]. ISBN: 978-981-15-1607-8
30. S R Barman, A Mukhopadhyay, **P Das**, 2019, Green Synthesis of Carbonaceous Adsorbents and Their Application for Removal of Polyaromatic Hydrocarbons (PAHs) from Water , Bioremediation A Sustainable Approach to Preserving Earth's Water. Editor S.K. Sharma. CRC press Taylor and Francis group, Pp:229 -258 ISBN: 978-1-138-59307-7
31. S.R. Barman, U.Roy, **P. Das** and A. Mukhopadhyay 2020. Membrane Processes for Removal of Polyaromatic Hydrocarbons (PAHs) from WasteWater. In: "Green Chemistry and Water Remediation: Research and applications" Ed. S.K Sharma. Elsevier. (*Accepted*)
32. S. Manna S, Roy U, Biswas A, Sengupta S, Basak P, **Das P** (2020). Review on Trends in the Removal of Pharmaceuticals and Personal Care Products (PPCPs) from Water and Wastewater, In 'Contaminants in Drinking and Wastewater Sources', Springer Transactions in Civil and Environmental Engineering, (Ed) M. Kumar et al. [Springer][https://doi.org/10.1007/978-981-15-4599-3\\_10](https://doi.org/10.1007/978-981-15-4599-3_10), 225-250
33. Biswas A, Manna S, **Das P.**(2020) Application of Nano materials in CO<sub>2</sub> sequestration, In 'Chemo-enzymatic systems for CO<sub>2</sub> utilization', (Eds) Nanda AK, et al. [CRC Press, Taylor and Francis] ,<https://doi.org/10.1201/9780429317187>
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38. **Ratna Dutta**, "Use of Clean, Renewable and Alternative Energies in Mitigation of Greenhouse Gases" Encyclopedia of Renewable and Sustainable Materials, Elsevier, Volume 3, 2020, Pages 821-834
39. **Ratna Dutta**, "Green Mining of Rare Earth Elements (REE) to Diminish Greenhouse Gas (GHG) Footprint", Encyclopedia of Renewable and Sustainable Materials, Elsevier, Volume 3, 2020, Pages 513-525

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#### 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

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3. S. Bhattacharya, D. Sen, **C. Bhattacharjee**, In vitro antibacterial effect analysis of stabilized PEGylated allicin-containing extract from *Allium sativum* in conjugation with other antibiotics, Process biochemistry, Elsevier, 87, pp.221-231(2019). DOI: 10.1016/j.procbio.2019.09.025
4. A. Mazumder, Z. Chowdhury, D. Sen, **C. Bhattacharjee** (2020), Electric field assisted membrane separation for oily wastewater with a novel and cost-effective electrocoagulation and electroflotation enhanced membrane module (ECEFM), Chemical Engineering and Processing-Process Intensification, 151, 107918. DOI: 10.1016/j.cep.2020.107918
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11. Das, S., Nath, K., & **Chowdhury, R.** (2020). Comparative studies on biomass productivity and lipid content of a novel blue-green algae during autotrophic and heterotrophic growth. **Environmental Science and Pollution Research**. Springer. (In Press) (doi: 10.1007/s11356-020-09577-4) (IF: 3.056)
12. Das, S., Calay, R. K., **Chowdhury, R.** Parametric Sensitivity of CSTBRs for *Lactobacillus casei*: Normalized Sensitivity Analysis. **ChemEngineering** 2020, 4, 41; (doi:10.3390/chemengineering4020041) (IF: 2.69).
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39. Shritama Mukhopadhyay, **Ratna Dutta, Papita Das**, A critical review on plant biomonitors for determination of polycyclic aromatic hydrocarbons (PAHs) in air through solvent extraction techniques, *Chemosphere*, 251(2020)(126441).
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### 5. Collaborative Programmes:

Research collaboration with **University of Eastern Finland and UFZ, Germany** through INNO-INDIGO Project titled CONVER-B (“Development of Efficient Biomass Conversion Routes for Biofuel Production and Utilization”) and further

### 6. Major Achievements:

1. **Prof. Chiranjib Bhattacharjee**, Best Professor in Chemical Engineering Studies, 27th Business School affaire and Dewang Mehta National Education Awards, 11 November, 2019
2. Received Best paper/presentation award for the paper “Molecular docking studies and shelf life enhancement of bioactive thiosulfinate drug extracted from *Allium sativum* using micelle carrier system” authored by S. Bhattacharya, D. Sen, **Chiranjib Bhattacharjee** in International Conference on Functional Materials and Chemical Engineering (ICFMCE 2019) held at Chulalongkorn University, Bangkok, Thailand
3. Received 2nd Best paper award for Shubhanwita Saha, Debashis Roy, **Chiranjib Bhattacharjee**, ‘Graphene supported nanomaterial: An efficient photocatalyst for enhanced waste water remediation’, in the National Conference on “Issues & Challenges in Water Treatment and allied research for Sustainable environment” on 23-25 January, 2020 at IIT Guwahati
4. Received Research Innovation Award (1st Prize), Ranjana Das, **Chiranjib Bhattacharjee**, A Sustainable Approach for Environmental Pollution Control with Photos Membrane Reactor In ‘National Symposium on Applications of Engineering and Technology towards Sustainable Growth’ Organised by TEQIP III Twinning Programme, FET, JU and Vivekananda Institute of Environment and Management, 4th June 2019, Jadavpur University, Kolkata
5. Received NSSWM Excellent Paper Award-2019 for Ranjana. Das, **Chiranjib Bhattacharjee**, Application of Nanotechnology for Pharma Industry Effluent Treatment - A Sustainable Process Development, In National Symposium on Sustainable Waste Management (NSW-2019), 20 April, 2109, Institute of Engineering and Management, Kolkata

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### CIVIL ENGINEERING

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#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
B.E. in Civil Engg.	4 Years	141
B.E. (Evening) in Civil Engg.	5 Years	47
M.E. in Civil Engg.	2 Years	28

#### 1. B. Number of Faculty Members: 21

#### 2. A. Area of Research Activities: (Broad Areas)

- Structural Engineering
- Composite Structures
- Acoustics
- Advanced Concrete Technology
- Soil Mechanics and Foundation Engineering
- Geotechnical Earthquake Engineering
- Geo-environmental Engineering
- Ground Improvement
- Underground Construction
- River Mechanics and Engineering
- Ocean Dynamics and Engineering
- Climate Change and Disaster Risk Reduction (DRR)
- Geohazards, Disaster Management and Resilience
- Traffic and Transportation Engineering
- Highway Engineering
- Geohazards and Disaster Management
- Remote Sensing, GIS and Geostatistics
- Seepage Flow and Hydraulic Structure
- Environmental Engineering
- Solid Waste Management
- Air Pollution and Control

#### 3. A. Invited Lectures:

##### Invited Lecture Details:

1. Prof. Anupam Debsarkar delivered invited Keynote lecture on “Cleaning the Air: Combating Air Pollution”, as a part of observance of World Environment Day-2019, at The Institution of Engineers (India), R.N. Mukherjee Hall on 5 June, 2019
2. Prof. Anupam Debsarkar delivered lecture on “Urban Air Quality & Its Management: From Indian Perspective” in the National workshop on ‘Need of Urban Planning to Mitigate Air Pollution’, organized



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jointly by the Institute of Town Planners, India, West Bengal Regional Chapter and the Indian Institute of Technology, Kharagpur on 13 July, 2019 (Saturday) at The Rotary Sadan, Kolkata

3. Prof. Anupam Debsarkar delivered invited lecture on “Careers in Civil Engineering” in the 3 week long Induction Programme for B. Tech first year CE students on 30.07.2019 (Tuesday) from 10:00am to 11:45 am at the Department of Civil Engineering of Meghnad Saha Institute of Technology
4. Prof. Anupam Debsarkar delivered five invited lectures on the topic “Rural Solid & Liquid Waste Management” over the months August-September, 2019 under the purview of “Value Added Training Programme for Nirman Sahayaks of Government of West Bengal” organized by Department of Civil Engineering, Meghnad Saha Institute of Technology
5. Prof. Anupam Debsarkar delivered invited lecture on “Water Scarcity Issues and Plastic Waste Management” at Naba Barracpore Prafulla Chandra Mahavidyalaya on 1 October, 2019 at 12:30 PM
6. Prof. S.P. Mukherjee delivered invited lecture on “Acted as Chairman in the Technical Session of “Soil stabilization and Ground Improvement” at Indian geotechnical conference, SVNIT Surat in December 2019
7. Prof. S.P. Mukherjee delivered invited lecture on “Pullout behaviour of anchors in geotextile reinforced soft clay: A sustainable ground improvement technique” in a Symposium on Recent Advances in Sustainable Geotechnics during 17-20 October, 2019

### 3. B. Refresher Courses/ Orientation Courses/Short Term Courses/ Workshop Attended:

#### Details of the Course:

1. Prof. Anupam Debsarkar chaired the Technical Session-I on “Air Pollution Solid & Hazardous Waste Management” of the “National Conference on Sustainable Advanced Technologies for Environmental Management” held on 18 December (18-20), 2019 at the Department of Civil Engineering, Indian Institute of Engineering Science and Technology (IEST), Shibpur
2. Prof. Anupam Debsarkar delivered two lectures in the short term course organized by Department of Metallurgical and Materials Engineering of NIT-Durgapur on “Waste to Wealth - The Current Scenario and Sustainable Technology - WTW - 2020” during 20-24 January, 2020, under TEQIP-III on “Hazardous Waste Management” and “Air and Noise Pollution” respectively
3. Prof. Anupam Debsarkar delivered lecture in the two-week long UGC-Sponsored refresher course on “Disaster Management” undertaken by Centre for Disaster Preparedness & Management, Jadavpur University, held at the Department of Civil Engineering, Jadavpur University on the topic “Environmental Impact Assessment in India-An Appraisal” on 11 February, 2020
4. Prof. Anupam Debsarkar delivered lecture in the Certificate Course on “Water Pollution Monitoring” under Green Skill Development Programme (GSDP) sponsored by Ministry of Environment, Forest and Climate Change (MoEF& CC) Government of India on “Elements of Water Pollution” on 25.02.2020 at Department of Zoology, University of Kalyani
5. Prof. Anupam Debsarkar delivered lecture on “Integrated Arsenic Remediation from Contaminated Groundwater: Field Trials in Dhapdhapi, South 24 Parganas”, at the National Workshop on “Arsenic Pollution – Problem, Effects and Remedial Measures”, organized by Department of Environmental Studies, Rabindra Bharati University on 28 February, 2020 at RBU-Jorasanko Campus, Kolkata

### 4. A. Books/ Monographs/ Book Chapters etc. Published:

#### (Title of Books/ Monographs/ Book Chapters etc.–Authors–Book Title–Year and Publisher)

1. Effect of Position and Thickness of Trapped Soft Layer on 1D Ground Response Analysis,–Roy, N. and Mukherjee, S.–Second ASCE India Conference on “Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies”–2-4 March, 2020

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2. Seismic effect of underground box structure for metro and subways with varying soil parameters–Sarkar, C., Mukherjee, S. P. and Roy N.–7th International Conference on Recent Advances in Geotechnical Earthquake Engineering (ICRAGEE 2020)–2020
  3. Seepage study of a low height dam with sheet pile cutoff under static and seismic conditions–S Tung, S Mukherjee and G. Bhandari–7th International Conference on Recent Advances in Geotechnical Earthquake Engineering (ICRAGEE 2020)–2020
  4. Effectiveness of clay core in an embankment under seismic condition–S Tung, S. P.Mukherjee and G. Bhandari–ICAMAG 2019–2019
  5. Interior acoustic analysis of rectangular shaped rigid cavity with opening–Subhankar Pramanik, Sreyashi Das, A. Guha Niyogi–7th International Congress on Computational Mechanics and Simulation, (ICCMS 2019)–2019
  6. Addressing Informal Public Transport Vehicle Problem in Kolkata–Ankita Bakshi, Jayita Guha Niyogi, and Arup Guha Niyogi–Recent Advances in Traffic Engineering, RATE 2018[https://doi.org/10.1007/978-981-15-3742-4\\_19](https://doi.org/10.1007/978-981-15-3742-4_19)–2019
  7. Development of Porous Concrete with Recycled Aggregate–Saroj Mandal, Bibekananda Mandal–International Congress and Exhibition” Sustainable Civil Infrastructures GeoMEast 2019 pp 22-29 (springer) –Cairo, Egypt, 2019
  8. Use of Hot Spring Bacteria for Remediation of Cracks in Concrete–Saroj Mandal, BD Chattopadhyay –International Congress and Exhibition” Sustainable Civil Infrastructures GeoMEast 2019, pp 55-64 (springer) –Cairo, Egypt, 2019
  9. Experimental and finite element failure investigation of carbon fiber reinforced composites–D. Chatterjee, N. Modak, D. Chakravorty–64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM) –Indian Institute of Technology, Bhubaneswar, 9-12 December, 2019
  10. First ply failure analysis of laminated composite skew plates using ANSYS–D. Chatterjee, A. Ghosh, D. Chakravorty–64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)–Indian Institute of Technology, Bhubaneswar, 9-12 December, 2019
  11. Investigating Real Time Ambient Air Quality Status and Land Surface Temperature during Kalipuja/Diwali Festival in different Land Use types –Case study Kolkata–Sohini Sen, Debashish Das, Anupam Debsarkar and Raja Ghosh–International conference (IASTEM) –14-15 November at Shanghai, China
  12. Socio-Economic Assessment of Arsenic and Iron Contamination Of Groundwater And Feasibility of Rain Water Harvesting (RWH): A Case Study of Amdanga Block, North 24 Parganas, West Bengal, India–Satabdi Biswas and Anupam Debsarkar–International Conference on Sustainable Water Resources Management- Under Changed Climate–13 March (13-15), 2020 School of Water Resources Engineering, Jadavpur University
- 4. B. Articles Published in Journals (Including National, International & Peer-reviewed Journals): (Title–Journal Name–Authors–Year, Volume (No.), Pages)**
1. Effect of Ground Water Level and Seismic Intensity on Failure of a Slope,–Advances in Computer Methods and Geomechanics–Dutta S, Dubey R. K., Mukherjee S. P. and Roy N.–2020(accepted)
  2. Response of Single Pile to Lateral Load with Constant Uplift–Advances in Computer Methods and Geomechanics. Lecture Notes in Civil Engineering, Springer, Singapore,–Ghosh P., Mukherjee S. P., Roy N., Banerjee S.–Vol-56,2020,pp-283-298
  3. Influence of Trapped Soft/ Stiff Soil Layer in Seismic Site Response Analysis–Journal of Earth System and Science–Roy N, Mukherjee S. P., Sahu R. B.–2019 (accepted)
  4. Response of square anchor plates embedded in reinforced soft clay subjected to cyclic loading, –Geomechanics and Engineering –Biradar J., Banerjee E. S., Shankar R., Ghosh, P., Mukherjee, S. P., and Fatahi B.–Vol. 17(2),2019, pp-165-173
  5. Strength and Durability Performance of Fly Ash–B–Vol-31 no 9 June, 2019 pp- 04019174-1 04019174-8

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6. An alkaliphilic bacterium BKH 4 of Bakreshwar hot spring pertinent to bioconcrete technology–Journal of applied microbiology (2.683)–A Sarkar, A Chatterjee, S Mandal, B Chattopadhyay–Vol-126 (6), pp1742-17508, September, 2019
7. Bacterium amended 100% fly ash geopolymer–AIP(AIP publishing LLC)–A Chatterjee, B Chattopadhyay, S Mandal–Vol 2158 no 1st September, 2019
8. Bacterium-incorporated fly ash geopolymer: a high-performance, thermo-stable cement alternative for future construction material–Clean Technologies and Environmental Policy , Springer (2.599)–A Chatterjee, A Sarkar, S Ghosh, S Mandal, B Chattopadhyay–2019 Vol-21 (9), pp1779-1789,
9. Free Vibration Analysis of Epoxy-based Cross Ply Laminated Composite Folded Plates Subjected to Hygro-thermal Loading–Journal of The Institution of Engineers (India): Series C–Sreyashi Das, A. Guha Niyogi–DOI: 10.1007/s40032-020-00573-8
10. Performances of Composite Hypar Shells in Progressive Failure Applying FEM–Strength of Materials –A.Ghosh D.Chakravorty–2 (2019) in press
11. First Ply Failure Study of Laminated Composite Conoidal Shells using Geometrically Nonlinear Formulation –Recent Advances in Theoretical, Applied, Computational and Experimental Mechanics: Proceedings of ICTACEM 2017-Springer–K. Bakshi, D. Chakravorty–2019
12. On projected hydrological scenarios under the influence of bias-corrected climatic variables and LULC–Ecological Indicators, Elsevier Publication-Satiprasad Sahoo, Saumava Dey, Anirban Dhar, Anupam Debsankar and Biswajeet Pradhan–Vol-106, May-2019,105440
13. Lead Removal from Landfill Leachate by Electrocoagulation process using Iron Electrodes: Influence of pH and Direct Current–Research Journal of Chemistry and Environment–Maiti Sanjib Kumar Hazra Tumpa and Debsankar Anupam–Vol. 23(6), pp-62-69, June-2019
14. Identification of water-stressed area based on the interrelationship of soil moisture and seasonal rice cultivation –Paddy & Water Environment, Springer Publication–Satiprasad Sahoo; Anirban Dhar; Anupam Debsarkar; Amlanjyoti Kar; Narayan Kayet–August, 2019
15. Isolation of Chromium Resistant Bacteria from Contaminated Soil and Its Performance Evaluation for Hexavalent Chromium Removal –International Journal of Engineering and Advanced Technology –Piku Sen, Anupam Debsarkar and Debasish Pal–Vol-9, Issue-1, October 2019, pp-6539-6546
16. Efficacy of Rainwater Harvesting (RWH) in Overcoming Water Scarcity Problem of Amdanga Block, North 24 Parganas, West Bengal – A Statistical Approach–Indian Journal of Regional Science–Satabdi Biswas, Anupam Debsarkar and Gupinath Bhandari–Vol-LI, No.-2, December, 2019, pp-8-15. (ISSN: 0046-9017)
17. A quantitative precipitation forecast model using convective-cloud tracking in satellite thermal infrared images and adaptive regression: a case study along East Coast of India–Modelling Earth Systems and Environment–Barnali Goswami, Gupinath Bhandari & Sanjay Goswami–DOI 10.1007/s40808-020-00968-7
18. Effect of Changing Vegetation Coverage And Temperature on the Monsoon Pattern of Indian Sundarban Region–Journal of Global Resources ISSN: 2395-3160 (Print), 2455-2445 (Online)–Papia Guha1, Pritam Aitch and Gupinath Bhandari–2020-Vol 6 (01)Page 38-42-2020
19. Effect of Changing Vegetation Coverage and Meteorological Parameters on the Hazard Characteristics of Indian Sundarban Region and Its Impact There On–An Interdisciplinary Approach for Disaster Resilience and Sustainability, Disaster Risk Reduction–Papia Guha, Pritam Aitch and Gupinath Bhandari–10.1007%2F978-981-32-9527-8\_25PP: 451-475
20. The Study of the Impact of Wastewater from Outfall in River Ganga, West Bengal on the Growth and Morphological Parameters of *Spinaciaoleracea L*–Interdisciplinary Approach for Disaster Resilience and Sustainability. Springer Nature Singapore–Sayanti Kar, Gupinath Bhandari, Indrajit Ghosh, Pritam Aitch–2020
21. Changing Health Conditions of Working Women in the Light of Gender Inequality: An emerging Problem faced by the Women of Kolkata –International Journal of Multidisciplinary Educational Research–Alolika Mangal & Gupinath Bhandari–Vol 92020

**4. C. Publications in Seminars/ Conferences: (Title–Authors Seminar–Conference Details–Place, Year)**

- 1 Effect of Position and Thickness of Trapped Soft Layer on 1D Ground Response Analysis,–Roy, N. and Mukherjee, S.–Second ASCE India Conference on “Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies”–2- 4 March, 2020
- 2 Seismic effect of underground box structure for metro and subways with varying soil parameters–Sarkar, C., Mukherjee, S. P. and Roy N.–7<sup>th</sup> International Conference on Recent Advances in Geotechnical Earthquake Engineering (ICRAGEE 2020)–2020
- 3 Seepage study of a low height dam with sheet pile cutoff under static and seismic conditions–S Tung, S Mukherjee and G. Bhandari–7th International Conference on Recent Advances in Geotechnical Earthquake Engineering (ICRAGEE 2020)–2020
- 4 Effectiveness of clay core in an embankment under seismic condition–S Tung, S. P. Mukherjee and G. Bhandari–ICAMAG 2019–2019
- 5 Interior acoustic analysis of rectangular shaped rigid cavity with opening–Subhankar Pramanik, Sreyashi Das, A. Guha Niyogi–7th International Congress on Computational Mechanics and Simulation, (ICCMS 2019) 2019
6. Addressing Informal Public Transport Vehicle Problem in Kolkata–Ankita Bakshi, Jayita Guha Niyogi, and Arup Guha Niyogi–Recent Advances in Traffic Engineering, RATE 2018[https://doi.org/10.1007/978-981-15-3742-4\\_19](https://doi.org/10.1007/978-981-15-3742-4_19) 2019
7. Development of Porous Concrete with Recycled Aggregate–Saroj Mandal, Bibekananda Mandal International Congress and Exhibition, Sustainable Civil Infrastructures GeoMEast 2019 pp 22-29 (springer) –Cairo, Egypt, 2019
8. Use of Hot Spring Bacteria for Remediation of Cracks in Concrete–SarojMandal, BD Chattopadhyay –International Congress and Exhibition, Sustainable Civil Infrastructures GeoMEast 2019 ,pp 55-64 (springer) –Cairo, Egypt, 2019
9. Experimental and finite element failure investigation of carbon fiber reinforced composites–D. Chatterjee, N. Modak, D. Chakravorty–64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM) –Indian Institute of Technology, Bhubaneswar 9-12 December, 2019
10. First ply failure analysis of laminated composite skew plates using ANSYS–D. Chatterjee, A. Ghosh, D. Chakravorty–64th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)–Indian Institute of Technology, Bhubaneswar 09-12 December, 2019
11. Investigating Real Time Ambient Air Quality Status and Land Surface Temperature during Kalipuja/Diwali Festival in different Land Use types –Case study Kolkata–SohiniSen, Debashish Das, Anupam Debsarkar and Raja Ghosh–International conference (IASTEM)–14-15 November at Shanghai, China
12. Socio-Economic Assessment of Arsenic and Iron Contamination Of Groundwater And Feasibility of Rain Water Harvesting (RWH): A Case Study of Amdanga Block, North 24 Parganas, West Bengal, India–Satabdi Biswas and Anupam Debsarkar–International Conference on Sustainable Water Resources Management- Under Changed Climate–March 13 (13-15), 2020 School of Water Resources Engineering, Jadavpur University

**5. Ph.D. Thesis Completed: (Title–Year–Candidate–Status)**

1. Impact of Climate Change and Anthropogenic Interventions on Hydro-Environmental Regime of Dwarakeswar-Gandheswari River Basin–2019–Satiprasad Sahoo–Awarded
2. Microbial Remediation of Hexavalent Chromium – A Mechanistic and Batch Kinetic Approach–2019–Piku Sen–Awarded
3. Study of seepage through earthen dam and foundation by numerical and centrifuge modeling–2019 –Smita Tung–Awarded

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4. Water harvesting techniques to increase agricultural productivity using remote sensing and gis in purulia district of West Bengal–2019–Madhurima Das–Awarded
5. A Socio-Economic Appraisal in the context of Embankment Failure due to Natural Hazards in selected parts of Indian Sundarban–2019–Senjuti Saha–Awarded
6. Studies on ground improvement by prefabricated vertical drains in soft clay based on physical model 2020–Amitava Chakraborti–Submitted
7. A study ok dlistributon of pollutants due to seasonal and tidal variation in river ganga and its impact on selected plants–2020–Sayanti Kar–Submitted

### 6. Technical Expert Committees:

#### Details

- 1 Prof. S. P. Mukherjee appointed as Member, Committee of Technical Experts (CTE) for damages to I & WD Sunderban Embankments due to the extremely severe supercyclonic cyclonic storm AMPHAN in 2020
- 2 Prof. S. P. Mukherjee appointed as Chairman of Technical Expert Committee formed by Irrigation & Waterways Department, Govt, of West Bengal for tilting of sluice structure over Garan Bose Khal at Basanti, South 24 Pgs, West Bengal during 2017-2019

## COMPUTER SCIENCE AND ENGINEERING

Phone: 033-2457-2574/2214

H.O.D: Prof. Mahantapas Kundu

E-mail: hodcse@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the Course	Duration of the Course	No. of Students Enrolled
BCSE	4 years	86
MCA	3 years	48
MCSE	2 years	38
MTCT	3 years	39

### 1. B. Number of Faculty Members: Professor – 18 (Associate Professor - 5, Assistant Professor - 5)

2. A. Area of Research Activities (Broad Areas): Machine Learning, Artificial Intelligence, Pattern Recognition, Computational Intelligence, Bioinformatics, Video and Image Processing, Face Recognition, Medical Image Analysis, Parallel Algorithms, Cloud Computing, Internet of Things, Soft computing, Data Mining, Wireless and Mobile Computing, Wireless Sensor Networks, Quantum Computing, Natural Language and Speech Processing, Emotion and Sentiment Analysis, Security, Distributed Computing, Social Network Analysis, Big Data Storage and Management



**2. B. Major Research Project:(Departmental/Individual, Name of the Project/Funding Agency)**

**Ujjwal Maulik**, Principal Investigator of project titled “Computational Social Science for Crisis and Disaster Management”, Funding agency: Science and Engineering Research Board, Department of Science and Technology, Govt. of India, 2020-2023

**Sarmistha Neogy**, Principal Investigator, “Development of High Speed MANET for Intelligent Collaboration”, DRDO, Govt. of India, (March) 2019 – 2021. (Co-Investigators: **Prof. Nandini Mukherjee**, Prof. Samiran Chattopadhyay)

**Ram Sarkar**, Multi-lingual Text Analytics for Camera-based Handheld Devices (**Principal Investigator**), SERB, Govt. of India, 2017-2020, Rs. 25,96,440/- (CO-PI: **Prof. Subhadip Basu**)

**Sarbani Roy**, Participatory and real time pollution monitoring system for smart city (**Principal Investigator**), Funded by Dept. of Science and Technology and Biotechnology, Government. of West Bengal, 2018-2021, Rs. 13,20,800/- (CO-PI: **Dr. Chandreyee Chowdhury**)

**Nibaran Das**, Automatic Generation of Cytological Images to Augment Data for Diagnosis of Ductal Carcinoma Using Deep Learning, (**Principal Investigator**), SERB, Govt. of India, 2019-2022, Rs. 26,93,500/-

**Kamal Sarkar**, Indian Social Media Sensor: an Indian Social Media Text Mining System for Topic Detection, Topic Sentiment Analysis and Opinion Summarization (**Principal Investigator**). SERB under DST(Govt. of India), 2018 to 2021, 23,96,000/-

**Susmita Ghosh**, “Distributed Cognitive System for Healthcare” under Consortium Project on “Development of Application Oriented AI Systems” (Co-PI), MeitY, Govt. of India, 2020-2023, Rs. 24,52,000/

**Debotosh Bhattacharjee**, Development of object detection techniques from degraded complex video sequences due to dynamic variations of scenes by different atmospheric conditions for security and surveillance, Principal Investigator, DRDO, Govt. of India, 2018-2020, Rs. 64,77,000.00

**Debotosh Bhattacharjee**, Prediction of diseases through computer assisted diagnosis system using images captured by minimally-invasive and non-invasive modalities, Co- Principal Investigator, MHRD, Govt. of India, 2019-2021, Rs. 47,68,775.00

**Debotosh Bhattacharjee**, Development of a computer-assisted diagnosis system for segmenting and detecting abnormalities and disease diagnosis, Principal Investigator, DST, Govt. of India, 2019-2021, Rs. 8,83,000.00 and Euro 13,500.00

**Subhadip Basu**, Development of some analytical tools for analysis of large-scale protein-protein interaction networks, (Principal Investigator), DBT, Govt. of India, 2017-2021, Rs.48,22,125/-, **Co PI, Prof. Mita Nasipuri**

**Jamuna Kanta Sing**, Principal Investigator of the project “3D MRI brain image segmentation and visualization for therapy planning and monitoring” sponsored by SERB. Govt. of India, 2017-2021, Rs. 21,34,000/-

**Dipankar Das**, “Sevak – An Intelligent Indian Language Chatbot”, 17.827 Lakh, sponsored by SERB under IMPRINT II, Govt. of India, Partners: IIT Patna, IIIT Hyderabad, & Wipro, 2019-2021

**3. A. Invited Lectures Delivered/Sessions Chaired:(Name of the Teacher, Type of Participants, Name of the Seminar/Conference etc. Place, Duration)**

**Ujjwal Maulik** Keynote, “Machine Learning for Knowledge Discovery”, 18th International Conference on Information Technology, 19-21 December, 2019, Bhubaneswar, India

“Unsupervised Pattern Classification in Single and Multi-objective Framework”, 18th International Conference on Artificial Intelligence and Soft Computing, Zakopane, Poland, 17 June, 2019

Session Chaired, in IEEE CALCON 2020, at Hotel Senses, Kolkata on 28-29 February, 2020

**Sanjoy Kumar Saha** Invited Lecture, “Cognitive analysis using physiological sensing”, 8th International Conference on Pattern Recognition and Machine Intelligence (PREMI), December, 2019, Tezpur, India



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**Ram Sarkar**, Session Chaired, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India

**Ram Sarkar** delivered a lecture for the Awareness Training on Cyberphysical systems used in ‘Industry 4.0’ on AI & Pattern Recognition, on 03-07-2019

**Sarbani Roy** delivered two lectures on IoT in TEQIP-III sponsored 2-week Faculty Development Program on Machine Learning and Internet of Things, Tripura Institute of Technology, Agartala, 03-15 June, 2019

**Sarbani Roy** delivered a tutorial on Participatory Sensing and IoT-Cloud based Smart City Applications: Opportunities, Challenges and Case studies, IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS 2019), 16-19 December, 2019, Goa, India

**Nibaran Das**, Session Chaired, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India

**Nibaran Das** delivered a lecture for the Awareness Training on Cyberphysical systems used in ‘Industry 4.0’ on AI & Pattern Recognition, on 04-07-2019

**Kamal Sarkar** delivered two lectures on Support Vector Machines in TEQIP-III sponsored 2-week Faculty Development Program on Machine Learning and Internet of Things, Tripura Institute of Technology, Agartala, 03-15 June, 2019

**Kamal Sarkar** delivered lectures on “Introduction to Machine Learning” in the TEQIP sponsored 1-week Short Term Course on Applications of Computational Intelligence in Text, Image and Sensor Data Processing, 3-8 February, 2020, at Jadavpur University, Kolkata, India

**Debotosh Bhattacharjee**, Session Chaired, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India

**Debotosh Bhattacharjee**, Session Chaired, in IEEE CALCON 2020, at Hotel Senses, Kolkata on 28-29 February, 2020

### Sudip Kumar Naskar

1. “Natural Language Processing for Data Science” in the “Five Day Workshop on Application of Python in Big Data, Natural Language Processing and Social Network Analysis”, sponsored by IEEE Computational Intelligence Society, Kolkata Chapter, 12–16 February, 2020, Department of Computer and System Sciences, Institute of Science, Visva-Bharati University, Santiniketan -731235, West Bengal, India
2. “Natural Language Processing” in the TEQIP sponsored Short Term Course on “AI and Machine Learning” 12-16 February, 2020, at CSE Department, National Institute of Technology, Patna, Bihar, India
3. “Statistical Machine Translation” in the TEQIP sponsored 1-week Short Term Course on Applications of Computational Intelligence in Text, Image and Sensor Data Processing, 3-8 February, 2020, at Jadavpur University, Kolkata, India
4. “Intelligent Information Retrieval” in the TEQIP sponsored 1-week Short Term Course on Applications of Computational Intelligence in Text, Image and Sensor Data Processing, 3-8 February, 2020, at Jadavpur University, Kolkata, India
5. “Machine Translation: The Fundamentals and the State of the Art” in AICTE sponsored 2 Weeks’ Faculty Development Programme on “Natural Language Processing for Digital Humanities”, 3–13 December, 2019, at National Institute of Science & Technology (NIST), Institute Park, Pallur Hills, Berhampur, Odisha 761008, India
6. “Natural Language Processing: A Broad Overview” in AICTE sponsored 2 Weeks’ Faculty Development Programme on “Natural Language Processing for Digital Humanities”, 3–13 December, 2019, at National Institute of Science & Technology (NIST), Institute Park, Pallur Hills, Berhampur Odisha 761008, India

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### Mita Nasipuri

1. Served as a judge for both oral and poster presentations in the subject discipline of Engineering (Computer Science & Engineering, Information Technology, Electronics Engineering) On 23<sup>rd</sup> December, 2019 in 4th Regional Science & Technology Congress (Southern Region), 2019 held at Maulana Abul Kalam Azad University of Technology, West Bengal (MAKAUT-WB) Main Campus, Haringhata, Nadia. 23-24 December, 2019
2. Served as Session Chair for a keynote address on Compact System-level Models for Design and Synthesis of Smart Sensing Systems in ICDCN 2020, 4 January, 2020, Kolkata, India
3. Acted as Session Chair of a keynote address on 14 January, 2020 in COMSYS 2020, 13-15 January, 2020, Jalpaiguri Government Engineering College, Jalpaiguri, India
4. Acted as a Track Chair for Computer Science and Engineering track of CALCON 2020, 28-29 February, 2020, Kolkata, India.
5. Acted as Session Chair of a keynote address on 28 February, 2020 in CALCON 2020, 28-29 February, 2020, Kolkata, India
6. Chaired a technical session in ACSS 2020 on 29 February, 2020, Kolkata, India
7. Delivered a talk in the ICMR-NICED celebration of International Women's Day, 2020 held on 13 March, 2020 at NICED-II Auditorium, Kolkata, India

### Nandini Mukherjee

1. Delivered lectures in the TEQIP-III Sponsored Faculty Development programme (FDP) (under twining arrangement) on "Machine Learning and Internet of Things" at Tripura Institute of Technology, Tripura from 3–15 June, 2019
2. Delivered lectures in the TEQIP-III sponsored two weeks FDP on 'Internet of Things and Sensor Networks' organized by the Department of Computer Science and Engineering, Tripura Institute of Technology, Agartala from 3–16 January, 2020
3. Delivered a lecture in the National Seminar on "Role of Women Scientists in Developing Science and Society in India" jointly organised by Asiatic Society and All India People's Science Network at Vidyasagar Hall of the Asiatic Society on 13–14 January, 2020

### Diganta Saha

Session Chaired, in IEEE CALCON 2020, at Hotel Senses, Kolkata on February 28-29, 2020

### Susmita Ghosh

1. Invited talk on "Cognitive Computing" at the School of Information Technology, King Mongkut's University of Technology, Thonburi, Thailand, May, 2019
2. Delivered lecture on "Big Data Analysis using Fuzzy Logic", at Four-day Training/Workshop under RUSA 2.0 on "Big Data Analysis", jointly organized by Department of Economics and Department of Computer Science and Engineering, Jadavpur University, 24 January, 2020
3. Delivered lecture on "Evolutionary Algorithms: What, How and Where" at the International Conference on "Biologically Inspired Techniques in Many Criteria Decision Making (BITMDM 2019)", Fakir Mohan University, Balasore, 19-20 December, 2019
4. Delivered lectures on "Cluster Analysis" and "Classification", at two weeks AICTE Sponsored Faculty Development Program on Natural Language Processing for the Digital Humanities (NLPDH 2019), National Institute of Science and Technology, Bhubaneswar, Orissa, 02-03 December, 2019
5. Delivered lecture on "Machine Learning - What, Why, When and How?" at the Pre Conference Workshop of the International Conference on Intelligent Computing and Remote Sensing, C V Raman College of Engineering, Bhubaneswar, 18 July, 2019
6. Delivered lectures on "Data Clustering Methods" and "Cognitive Computation" at "Two Weeks FDP on Data Science and Big Data Analytics", Easwari Engineering College, Chennai, 14-15 June, 2019

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7. Delivered lectures on “Introduction to Machine Learning”, “Supervised Learning” and “Artificial Neural Networks” at Two Weeks Faculty Development Program (under Twinning arrangement) on Machine Learning and Internet of Things, Tripura Institute of Technology, 03-04 June, 2019

### **Subhadip Basu**

1. Session Chaired, IEEE CALCON 2020, at Hotel Senses, Kolkata on February 28-29, 2020
2. Session Chaired, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India
3. Invited Talk at the Ichapur Gun Shell Factory at the 02 days Awareness Training on ‘Industry 4.0’ on 4 July, 2019
4. Panel Discussion on “Is Data science and AI the Future of Statistics?” at St. Xavier’s College, Kolkata, on 14 March, 2020

### **Chintan Kumar Mandal**

1. Special Lecture in Latex for PhD Course Work for Department of Chemical Technology, University of Calcutta
2. Gave a lecture in the One-week Short Term Course on Applications of Computational Intelligence in Text, Image and Sensor Data Processing, organized by the Department of Computer Science & Engineering, Jadavpur University, Kolkata, India, 3-8 February, 2020

### **Anasua Sarkar**

1. Delivered a lecture on the sub-topic “Importance of e-Learning Resources and HEIs” on 29/08/2020 in the FDP on Professional Development of Faculty, Organized by Department of Zoology, Paliwal P.G. College, Shikohabad Firozabad (UP)

### **Dipankar Das**

1. Delivered two lectures on Machine Learning and Natural Language Processing in TEQIP-III sponsored 2-week Faculty Development Program on Machine Learning and Internet of Things, Tripura Institute of Technology, Agartala, 3-15 June, 2019
2. Delivered two lectures on Machine Learning to Deep Learning in 3-Day Workshop in Deep Learning at NIT Silchar “Basics and Applications of Deep Learning”, 9-10 April, 2019

### **3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Seminar/Conference/Workshop/Symposium, Date, Place, Duration)**

**Sarbani Roy** attended and presented two papers on IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS 2019), 16-19 December, 2019, Goa, India

1. An approach to detect travel patterns using smartphone sensing (authors: Devroop Kar, Asif Iqbal Middya and Sarbani Roy)
2. Smartphone-based drowsiness detection system for drivers in real-time (authors: Iman Chatterjee and Sarbani Roy)

**Nibaran Das** attended and presented a paper on seventh National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG) will be held at Hubballi, Karnataka from 22-24 December, 2019

1. SynCGAN: Using learnable class specific priors to generate synthetic data for improving classifier performance on cytological images (authors: Soumyajyoti Dey, Soham Das, Swarnendu Ghosh, Shyamali Mitra, Sukanta Chakrabarty, Nibaran Das)

**Kamal Sarkar** presented a paper on Sentiment Analysis of Bengali Tweets Using Deep Learning, 3RD INTERNATIONAL CONFERENCE ON COMPUTATIONAL INTELLIGENCE IN DATA SCIENCE (ICCIDS), 2020, TAMIL NADU, INDIA

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**Susmita Ghosh** attended and presented a paper titled “A Combined Framework for Dimensionality Reduction of Hyperspectral Images using Feature Selection and Feature Extraction”, In 2019 IEEE Recent Advances in Geoscience and Remote Sensing : Technologies, Standards and Applications (TENGARSS), Kochi, India, 19 October, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

**Ujjwal Maulik**, Tutorial Chair, 5th Asian Conference on Pattern Recognition (ACPR 2019), Auckland, New Zealand, 26-29 November, 2019

**Chandreyee Chowdhury and Sarbani Roy**, Demo Chairs, ICDCN 2020, Kolkata, India, 4-7 January 2020

**Ram Sarkar, Nibaran Das, and Chintan Kumar Mandal**, Local Arrangements Chairs, ICDCN 2020, Kolkata, India, 4-7 January, 2020

**Kamal Sarkar, Sarbani Roy, Chandreyee Chowdhury, Sudip Kumar Naskar, Chintan Mandal**, organized and delivered lectures, One-week Short Term Course on Applications of Computational Intelligence in Text, Image and Sensor Data Processing, organized by the Department of Computer Science & Engineering, Jadavpur University, Kolkata, India, 3-8 February, 2020

**Nandini Mukherjee** served as Co-General Chair, 21st International Conference on Distributed Computing and Networking (ICDCN 2020) jointly organised by Jadavpur University at Kolkata, India from 4–7 January, 2020

**Nandini Mukherjee and Anasua Sarkar** organised a four-day Workshop on “Big Data Analysis” jointly with the Department of Economics, Jadavpur University, Kolkata, under RUSA 2.0 during 20–24 January, 2020

**Susmita Ghosh** served as a Joint Coordinator, two-week Faculty Development Program held at Tripura Institute of Technology in June 2019 (under Twinning Activity of TEQIP III Project)

**Debotosh Bhattacharjee** served as joint Program Chair, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India

**Subhadip Basu** served as Co-General Chair at International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India

**Subhadip Basu** served as Co-Finance Chair, 21st International Conference on Distributed Computing and Networking (ICDCN 2020) jointly organised by Jadavpur University at Kolkata, India from 4–7 January, 2020

### 3. D. Orientation Courses/ Refresher Courses Attended:(Name of the Teachers, Title of the Course, Duration, Place)

**Anasua Sarkar**

1. Orientation Programme on “Perspectives on Learning”, organized by faculty of Medicine Centre for Teaching and Learning, Lund University, May, 2019

**Dipankar Das**

1. 126<sup>th</sup> Orientation Programme organized by Calcutta University, Three weeks from 20–30 August, 2019
2. Refresher Course on Disaster Management (IDC) by Jadavpur University, two weeks from 3–15 February, 2020

### 3. E. Orientation Courses/Refresher Courses Organized: (Name of the Teachers, Title of the Course, if any, Duration, Place)

**Subhadip Basu: Joint Coordinator**, UGC Human Resource Development Centre, Jadavpur University sponsored One-week Short Term Course on “MOOCs, E-content Development and Open Educational

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Resources”, jointly organized by School of Media, Communication and Culture & Centre for Microprocessor Applications for Training, Education & Research, at Department of Computer Science and Engineering, Jadavpur University, 11-17 February, 2020

#### 4. A. Books/Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)

**Ujjwal Maulik** Book: S. Dey, S. Bhattacharyya and U. Maulik Quantum Inspired Meta-heuristic for Image Analysis, Wiley, UK, 2019

#### 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals)(Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

1. Dey, S. Sen and U. Maulik, “Unveiling SARS-COV-2 associated Organ Specific Cell Types and Cell Specific Pathway Cascade”, Briefings in Bioinformatics (accepted)
2. T. Bhadra and U. Maulik, “Unsupervised Feature Selection using Iterative Shrinking and Expansion Algorithm”, IEEE Transactions on Emerging Topics in Computational Intelligence (accepted)
3. Dey, S. Sen, V. N. Uversky, and U. Maulik, “Structural Facets of POU2F1 in Light of the Functional Annotations and Sequence-Structure Patterns”, Journal of Biomolecular Structure and Dynamics, pp.1-13, 2020
4. R. Das, S. Sen and U. Maulik, “A Survey on Fuzzy Deep Neural Networks”, ACM Computing Survey, 53(3), 54:1-54:25, 2020
5. J. Sarkar, I. Saha, S. Chakraborty and U. Maulik, “Machine Learning Integrated Credibilistic Semi Supervised Clustering for Categorical Data”, Applied Soft Computing, 86 (article number 105871), 2020
6. R. K. Barman, A. Mukhopadhyay, U. Maulik and S. Das, “Identification of infectious disease-associated host genes using machine learning techniques”, BMC bioinformatics, 20(1), pp.736, 2020
7. K. K. Ghosh, S. Ghosh, S. Sen, R. Sarkar and U. Maulik, “A two-stage approach towards protein secondary structure classification”, Medical & Biological Engineering & Computing, 58(8), pp. 1723-1737, 2020
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9. S. Chowdhury, S. Sen, A. Banerjee, V. N. Uversky, U. Maulik, and K. Chattopadhyay, “Network mapping of the conformational heterogeneity of SOD1 by deploying statistical cluster analysis of FTIR spectra”, Cellular and Molecular Life Sciences, PP.1-10, 2019
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11. Saha, J. P Sarkar, and U. Maulik, “Integrated Rough Fuzzy Clustering for categorical data analysis”, Fuzzy Sets and Systems, 361(15), pp. 1-32, 2019
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14. Sharma, A. Biswas, H. Liu, S. Sen, A. Paruchuri, P. Katsonis, O. Lichtarge, T. C. Dakal, U. Maulik, M. M. Gromiha, S. Bandyopadhyay, M. Ludwig, F. G. Holz, K. U. Loeffler<sup>1</sup> and M. C. Herwig-Carl, “Mutational landscape of the BAP1 locus reveals an intrinsic control to regulate the miRNA network and the binding of protein complexes in Uveal Melanoma”, Cancers, 11(10), p.1600, 2019



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15. Basu, A. Sarkar, U. Maulik, and P. Basak, "Three dimensional structure prediction and ligand-protein interaction study of expansin protein ATEXPA23 from Arabidopsis thaliana L.", *Indian Journal of Biochemistry and Biophysics*, 56, pp. 20-27, 2019
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98. IN. Mahata and **J. K. Sing**, “A novel fuzzy clustering algorithm by minimizing global and spatially constrained likelihood-based local entropies for noisy 3D brain MR image segmentation”, *Applied Soft Computing* (Elsevier), vol. 90, pp. 106171, 2020, DOI: <https://doi.org/10.1016/j.asoc.2020.106171>
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100. Anamika Basu, Anasua Sarkar\*, Ujjwal Maulik, Piyali Basak, Three dimensional (3D) structure prediction and ligand-protein interaction study of expansin protein ATEXPA23 from *Arabidopsis thaliana*, *Indian Journal of Biochemistry & Biophysics (IJBB)*, Volume-56, Issue-1, pages-20-27, 2019. IF: 0.385 (JCR 2017), SJR: 0.37 (SCOPUS) ISSN: 0975-0959 (Online); 0301-1208 (Print)
101. Kalyan Mahata\*, Anasua Sarkar, Rajib Das, Subhasish Das, Remote Sensing Approach on Watershed Land Cover/Land Use Mapping Analysis of Ajoy River, *Journal of Intelligent Systems (JISYS)*, De Gruyter, Volume 30: Issue 1, pp. 273–286 [SCOPUS, SJR: 0.188, SNIP: 0.533], DOI: <https://doi.org/10.1515/jisys-2019-0155>, Published online: 2020
102. Anasua Sarkar, Yang Yang, Mauno Vihinen, Variation benchmark datasets: update, criteria, quality and applications, *Database Journal*, Oxford Academic Press, [IF:3.683] Database, Volume 2020, 2020, baz117, <https://doi.org/10.1093/database/baz117>, Published: 2020 (Pre-Print available)
103. Anamika Basu, Anasua Sarkar\*, Ujjwal Maulik, Molecular docking study of potential phytochemicals and their effects on the complex of SARS-COV2 spike protein and human ACE2, *Nature Research Scientific Reports*, Volume 10, Article number: 17699, 2020, DOI: <https://doi.org/10.1038/s41598-020-74715-4> [IF: 3.998], (Pre-Print available)
104. Desarkar, A., Sanyal, S., Baidya, A., Das, A., & **Chaudhuri, C.** (2019). Innovative Outlier Removal Techniques to Enhance Signature Authentication Accuracy for Smart Society. *International Journal of Distributed Systems and Technologies (IJDST)*, 10(2), 64-83. doi:10.4018/IJDST.2019040104
105. S. Dutta, **D. Das**, T. Chakraborty. 2019. Changing Views: Persuasion Modeling and Argument Extraction from Online Discussions, *Information Processing and Management*, vol 57(2), 102085
106. S. K. Mahata, **D. Das**, S. Bandyopadhyay. 2019. MTIL2017: Machine Translation Using Recurrent Neural Network on Statistical Machine Translation. *J. Intell. Syst.* 28(3): 447-453

**5. Collaborative Programmes:**

**Ujjwal Maulik**

Harvard University, USA

Thomas Jefferson University, USA

Indian Institute of Chemical Biology (IICB), Kolkata,

India Indian Statistical Institute (ISI), Kolkata, India

Indian Institute of Technology (IIT), Kharagpore, India

University of Bonn, Germany

International Center for Theoretical Physics (ICTP), Trieste, Italy

**Sudip Kumar Naskar**

1. Universitat Politècnica de València, Valencia, Spain
2. Saarland University, Saarbrücken, Germany
3. DFKI, Germany
4. University of Minnesota Duluth, MN, USA
5. University of Wolverhampton, UK
6. National Polytechnic Institute (IPN), Mexico
7. University of Texas Health Science Center, Houston, TX, USA
8. Microsoft Research, Bangalore, India
9. Indian Statistical Institute, Kolkata, India
10. Indian Institute of Technology, Patna, India
11. NIT Agartala, India
12. IIIT Sriharikota, India
13. West Bengal State University, Kolkata, India
14. Jalpaiguri Govt. Engineering College, India

**Susmita Ghosh**

Harvard University, USA

University of Massachusetts Dartmouth, USA

Rochester Institute of Technology, USA

King Mongkut's University of Technology Thonburi, Thailand

Indian Statistical Institute, Kolkata

**Debotosh Bhattacharjee**

1. Medical University, Vienna, Austria
2. Northumbria University, UK
3. University of Sassari, Italy
4. Edge Hill University, UK
5. IIITDM Jabalpur, India
6. Tripura University, India

**Subhadip Basu**

- Honorary **Research Scientist** at the Department of Electrical and Computer Engineering, University of Iowa, USA
- Nencki Institute of Experimental Biology, Warsaw, Poland
- Hannover Medical School, Hannover, Germany



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### **Anasua Sarkar**

- Lund University, Sweden

### **6. Major Achievements:**

#### **Ujjwal Maulik**

Elected Fellow, Institute of Electrical and Electronics Engineers (IEEE), 2020

#### **Ram Sarkar**

Winner: ICDAR 2019 Competition on Document Image Binarization -DIBCO 2019, Sydney, Australia.

Winner: ICDAR 2019 Competition on Recognition of Early Indian Printed Documents- REID 2019, Sydney, Australia

#### **Sudip Kumar Naskar:**

1. Availing “**Young Faculty Research Fellowship**” award under “Visvesvaraya PhD Scheme for Electronics & IT”, by Digital India Corporation (formerly Media Lab Asia), Ministry of Electronics and Information Technology, Govt. of India. Duration: 2016-2021
2. Erasmus+ grant for a research visit to the Natural Language Engineering Lab, Pattern Recognition and Human Language Technologies (PRHLT) Research Center, Universitat Politècnica de València (UPV), Valencia, Spain, in June, 2019
3. Joined the Editorial Board (as an Associate Editor) of **Sadhana – Academy Proceedings in Engineering Sciences**, Indian Academy of Sciences, Publisher: Springer. (SCIE journal)

#### **Susmita Ghosh**

Associate Editor, CAAI Transactions on Intelligence Technology (from IET)

#### **Debotosh Bhattacharjee**

Fellow, West Bengal Academy of Science and Technology(WAST)

#### **Anasua Sarkar**

Completed Post-Doctoral research from September, 2018 on Epigenetics in Experimental Medical Science Department, BMC, Lund University, Sweden (for one year till 4 September, 2019)

#### **Dipankar Das**

Erasmus+ grant for a research visit to the Natural Language Engineering Lab, Pattern Recognition and Human Language Technologies (PRHLT) Research Center, Universitat Politècnica de València (UPV), Valencia, Spain, in May, 2019

“Young Faculty Research Fellowship” award under “Visvesvaraya PhD Scheme for Electronics & IT”, by Digital India Corporation (formerly Media Lab Asia), Ministry of Electronics and Information Technology, Govt. of India

## CONSTRUCTION ENGINEERING

[Salt Lake Campus]

Phone: 033-2340-5211/ 6122

H.O.D: Prof. Debasish Bandyopadhyay

Dr. Gokul Chandra Mondal (since 27.12.2019)

E-mail: hodconstruction@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
Bachelor of Construction Engineering	4 Years	47
Structural Repair & Retrofit Engineering	6 Semester, Evening	23

### 1. B. Number of Faculty Members: 09 (Professor-5, Associate Professor-1, Assistant Professor-3)

### 2. A. Area of Research Activities:

- Structural Engineering, Highway Engineering, Geotechnical Engineering, Repair and retrofit of Engineering structures
- Structural Health Monitoring of Bridge with Static & Dynamic Response
- Repair and Retrofit of Corroded RCC Structures with Cathodic protection
- Earthquake Engineering and Disaster Mitigation of Tilted Structures
- Experimental Investigation of Fatigue Behavior of RCC Flexural Members

### 2. B. Major Research Project:(Departmental/Individual, Name of the Project/Funding Agency)

- Biswas P.P., Sahis M.K “Characterization of subgrade resilient modulus with variable moisture and index properties of soil in the state of West Bengal to access the pavement failure”
- Saraswati S.S “Studies on Environmental Threats Due to Coastal Erosion and Possible Mitigation in Area under Digha-Sankarpur Development Authority, West Bengal”
- **Structural Health Monitoring** of Buildings & Bridges from field test data of various NDT, Static and Dynamic Responses. RUSA-II
- Development of a **Low-Cost Minimal Invasive Corrosion Repair Technique** in Reinforced Concrete Structures with **Cathodic protection**
- **Fatigue Behavior** of RCC Flexural Members, COE, TEQIP-III (Partially)

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar/Conference etc. Place, Duration)

1. Delivered invited lecture on ‘Quality Control and Adherence to Standards’ in a conclave organized by the Calcutta Chamber of Commerce on 13 March, 2020 at Hotel Hindustan International, Kolkata on the theme ‘World Class Infrastructure & Modern Housing’
2. Chaired a session “Recent trends in pavement design” in Second ASCE India Conference on “Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies (CRSIDE 2020)” during 02-04 March, 2020 at Novotel Kolkata Hotel
3. Delivered invited lecture in ‘Foundation training for newly Recruited Junior Engineers (Civil) on the theme ‘Disaster Management’ on 3 March, 2020 at Regional Training Institute, CPWD, CGO Complex. Kolkata
4. Chaired a technical session at the 16 Asian Regional Conference (ARC) on Soil Mechanics and Geotechnical Engineering held in Taipei, Taiwan in 2019

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5. Delivered a Keynote presentation at the ATC7 technical session of the 16th Asian Regional Conference (ARC) on Soil Mechanics and Geotechnical Engineering held in Taipei, Taiwan in 2019
  6. Chaired two technical sessions at the TC 102 Workshop on Geotechnical Site Characterisation & In-situ Testing held at IISc, Bangalore, India in 2019
  7. Chaired a technical session at the 2nd EGRWSE held in Chicago, USA in 2019
  8. Presented paper at the 2nd EGRWSE held in Chicago, USA in 2019
  9. Organized a workshop in collaboration with IISc, Bangalore held at IISc, Bangalore, India in 2019
  10. **Prof. D. Bandyopadhyay** was an Invited Speaker on “Advances in Concrete Technology” at the Annual Meet of Architects & Technocrats of Bihar, 17.06.19 at Hotel Mourya, Patna, organized by Dalmia Cement
  11. **Prof. D. Bandyopadhyay** was an Invited Speaker on “Performance Enhancement of Concrete by Chemical Admixtures and Additives” National Seminar On “Role of Construction Chemicals/Additives to Enhance Strength and Durability of Construction and Rehabilitation Works”, organised by Indian Building Congress on 6 July, 2019 at R N Mukherjee Hall, IE(I), Kolkata
  12. **Prof. D. Bandyopadhyay** was an Invited Speaker on “Advancement of Fly Ash Utilization in Concrete” at ASH MEET, Mejia Thermal Power Station, DVC, Bankura on 7 July, 2019
  13. **Prof. D. Bandyopadhyay** was an Invited Speaker on “Experimental Study on Pre-fabricated Concrete Sandwich Panel Building System” in the National Seminar on “CONCRETE 2019: Pre-cast Concrete For Sustainable Construction” on 19 September, 2019, organized by Indian Concrete Institute at New Delhi Centre
  14. **Prof. D. Bandyopadhyay** was an Invited Speaker on “Structural Health Monitoring of Bridges” and also participated in a Talk Show on “Recent Challenges in Concrete Construction”, held on 27 September, 2019 at J W Marriot, Kolkata, organized by ACC Cement & Indian Concrete Institute, Kolkata
  15. **Prof. D. Bandyopadhyay** delivered an Invited lecture on “Low Cost Building technique for Affordable Housing”, organised by ICI and Ultratech Cements on 22 November, 2019 at Hotel WESTIN, Kolkata
  16. **Prof. D. Bandyopadhyay** attended and addressed on “Safety of Tall Steel Structures - Special Reference to Biswa Bangla Gate”, on 28 February, 2020, organised by HIDCO, Kolkata
- 3. B. Seminar/Workshop/Conference/Symposium Attended:(Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)**
1. Biswas P.P., Sahis M.K., Sengupta A. (2020) Determination of Compacted Dense Sand Layer Thickness on Loose Sand Using Odemark’s Method for Design of Shallow Foundation. In: Latha Gali M., Raghuvver Rao P. (eds.) Construction in Geotechnical Engineering. Lecture Notes in Civil Engineering, vol 84. Springer, Singapore. [https://doi.org/10.1007/978-981-15-6090-3\\_44](https://doi.org/10.1007/978-981-15-6090-3_44)
  2. Sahis M.K (2019) Pre- Conference Workshop of Indian Geotechnical Conference, IGC 2019
  3. 3<sup>rd</sup> Indo-Korea Joint Geotechnical Engineering workshop on Geotechnical Issues for Urbanisation on 18 December, 2019, Surat, India
  4. Partha Pratim Biswas, Manoj Kumar Sahis, Agnimitra Sengupta, and Gokul Mondal “Prediction of remaining life of pavement by Surface Deflection using Odemark’s approach” ASCE Conference on International Airfield and Highway Pavement Conference at Chicago, Illinois, USA (21-24 July 2019)
  5. P. Ghosh, K Ghosh, B. Paul- Use of Stone Dust as an Alternative Fine Aggregate Material in Concrete. Proceedings of 2nd International Conference on Frontiers In Engineering, Applied Sciences and Technology, 27-28 April, 2019, NIT, Tiruchirappalli
  6. **Prof. D. Bandyopadhyay** has participated in the 7<sup>th</sup> International Conference on ‘Experimental Vibration Analysis for Civil Engineering Structure’, EVACES 2019, 5-8 September, 2019 at China

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7. **Prof. D. Bandyopadhyay** attended and participated the international Conference on “Concrete 2019: Precast Concrete for Sustainable Construction” at New Delhi on 19 September, 2019
  8. **Prof. D. Bandyopadhyay** attended as the Guest-of- Honour for the valdectory session of the ASCE India Conference 2020 on “Challenges of Resilient and sustainable Infrastructure Development in Emerging Economies” (CRSIDE 2020), at hotel Novotel, 04 March, 2020
  9. **Prof. D. Bandyopadhyay** of Jadavpur University in association with TATA Steel have organized 14 Weekends Training Program on “Seismic Design & Construction of Residential RCC Buildings” for the Field Engineers of Tata Tison during May-August, 2019
  10. **Prof. S. Saraswati & Prof. D. Bandyopadhyay** of Jadavpur University have organized Training Programs for Engineers of Technip FMC on “Maintaining Quality of Concrete Construction” during July & September, 2019 in collaboration with Indian Concrete Institute, Kolkata Centre
- 3. C. Seminar/Workshop/Conference/Symposium Organized:(Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)**
1. **Prof. D. Bandyopadhyay** and Department of Construction Engineering, Jadavpur University had organized a Masons Skill Building Workshop on 31.08.2019 on “Good Construction Practice of Residential Buildings” in association with Ultratech Cement and Indian Concrete Institute
  2. **Prof. D. Bandyopadhyay** and Department of Construction Engineering, Jadavpur University had organized a Workshop under Twinning Plan of World Bank Assisted TEQIP-III Program of Govt. of India on the topic “Design, Construction and Maintenance of Bridge” during 22-23 November, 2019
  3. **Prof. D. Bandyopadhyay** and Department of Construction Engineering, Jadavpur University had organized a Workshop under Twinning Plan of World Bank Assisted TEQIP-III Program of Govt. of India on the topic “Structural Health Audit: Modeling to Monitoring and Civil Information Management System” during 28- 29 February, 2020
- 4. A. Books/Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)**
1. Alkali Activated Fly Ash: Blast Furnace Slag Composites, Taylor & Francis Limited, 15-December-2020 - 246 pages
  2. Story of Steel Bridge, 2019-October. (ISBN: 978-81-930760-5-7)[Books Heaven Publications]
- 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**
1. Sujata Purakayastha, Partha Pratim Biswas, Manoj Kumar Sahis “Determination of bituminous overlay thickness of flexible pavement by mechanistic-empirical approach based on concentration factor” ISSN: 1997-1400 DOI: <https://doi.org/10.1007/s42947-020-0166-1>, Received 1 July 2019; received in revised form 29 December 2019; accepted 3 January 2020; Available online 16 January, 2020
  2. Partha Pratim Biswas, Manoj Kumar Sahis, Bibhas Ghosh “A study on variation of design parameters of Hot Bituminous Mix with Crushed Glass waste by Ultrasonic Pulse Velocity”The Institution of Engineers (India). Annual Technical Volume, 3, 2018 pp-20-25
  3. Kushal Ghosh, and Partha Ghosh. “Effect of Variation of Sodium Silicate content on Microstructural and Mechanical Properties of Thermally Cured Fly ash-slag based Geopolymer Composites”, *Research Journal of Chemistry and Environment.*, 23(3), (2019) (SCOPUS Indexed), SNIP/Impact factor-0.103
  4. Bikram Paul, Kushal Ghosh, Partha Ghosh. “Mechanical Properties and Microstructural Features Using Stone Dust as a Partial Replacement of Sand.”, *International Journal of Engineering and Advanced Technology*, 8(6), (2019)(Scopus Indexed). Cite score/Impact Factor-0.14

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5. Bikram Paul, Khokon Karmakar, Kushal Ghosh, Partha Ghosh. "Effect of Stone Dust On the Mechanical and Microstructural Properties of Opc Based Concrete Subjected to Acid Exposure", International Journal of Recent Technology and Engineering, 8(6) (2019)(Scopus Indexed). Cite score/Impact Factor-0.16
6. Arnab Mondal, Kushal Ghosh, Partha Ghosh. "Mechanical and Microstructural Characteristics of Ternary Blended Mortars Incorporating GGBS and Alccofine Subjected to Acid and Sulphate Exposure", 9(1), International Journal of Engineering and Advanced Technology,(2019)(Scopus Indexed). Cite score/Impact Factor-0.14
7. P.Ghosh and others, Use of Brick Klin Dust as a supplementary material for fine aggregate in concrete. COAST-2019-May, NIT SILCHOR
8. P.Ghosh and others, A Brief Review of the Effect of Mineral admixtures on the Properties of Alkali Activated Composites. COAST-2019-May, NIT SILCHOR
9. P.Ghosh and others, Replacement of Sand with Stone Dust as a Fine Aggregate in Concrete. COAST-2019-May, NIT SILCHOR
10. P. Roy Chowdury and Dr. P.Ghosh, "*Innovative Experimentation on hollow cylindrical shells of Reinforced Concrete under axial compressive load*", International Journal of Recent Technology and Engineering, Blue Eyes Intelligence Engineering and Sciences, Bhopal India, Vol-8, Issue-3, September-2019. (The journal was indexed in Scopus database 2018-2019, when the paper was published, and was part of UGC Care list of Journals, impact factor 1.0)
11. P. Roy Chowdury and Dr. P.Ghosh, "*Critical on Design and Constructional features of Environmental Hazard Resilient Elevated water tanks, to ensure safe drinking water in post disaster Scenario*", for oral presentation at the International Conference on water, energy and biodiversity for sustainable development of BIMSTEC countries, 12-14 December, 2019, Agartala, Tripura, organised by the Institution of Engineers (India) in association with NIT Agartala, Mizoram, Arunachal Pradesh, Silchar, Nagaland, Manipur and Goa. (The presented paper at the conference was awarded best paper award in water sector)
12. P. Roy Chowdury, Dripta Bandopadhyay and Dr. P Ghosh, "*Implementation of Earthquake Disaster Resistant Ductile Detailing of Reinforced concrete Shaft supported Elevated water tank*", proceedings of the International conference on disaster mitigation and management in global context, Bhubaneswar, 7-8 March 2020, organized by the Institution of Engineers (India) in association with Odisha society of Americas, College of Engineering and Technology Bhubaneswar & Siksha ó' Anusandhan, Deemed University
13. Abdullah Ahmed Laskar and Dr. Partha Ghosh "Importance of Si to Ca ratio of cementitious material on durability of concrete facing to acidic environment". Journal Tathapi, Volume-19, Issue-23 June-2020, pp 180-192. [UGG-Care journal]
14. Abdullah Ahmed Laskar and Dr. Partha Ghosh "Significance of SiO<sub>2</sub>/CaO ratio in composition of cementitious substantial on Relative dynamic modulus of concrete subjected to cyclic F/T exposure to concrete" Journal Tathapi , [UGG-Care journal], The paper accepted for publication for Volume-31, Issue-23 May-2020
15. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** "Significance of SiO<sub>2</sub>/CaO proportion of cementitious materials on durability of performance of concrete against Sulfate exposure". TEST Engineering and Management, May-June 2020, ISSN: 0193-4120, Page No. 22894-22911 (Scopus indexed journal) SJIR / Impact factor= 0.101 of 2019 Scopus Source ID -12997
16. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** "Importance of Al<sub>2</sub>O<sub>3</sub>/CaO ratio of cementitious materials on mitigation of Chloride permeability of concrete". Paper accepted in journal TEST Engineering and Management, May-June 2020, ISSN: 0193-4120, Page No. 22912-22924 (Scopus indexed journal) SJIR / Impact factor= 0.101 of 2019 Scopus Source ID -12997
17. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** "Influence on Durability of Concrete with different types of Cement, Pozzolonic materials & Epoxy coating on concrete exposed to different types of Acid



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- exposure”. International Journal of Engineering and Advanced Technology (IJEAT), Volume-9, Issue-I, October-19, pp.7173-7180 [SCOPUS Indexed] SJIR/Impact factor = 0.104 at 2019 Scopus Source ID - 21100899502
18. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Durability Assessment of Concrete by using Electrical Resistivity & Rapid Chloride Permeability Technique”. International Journal of Engineering and Advanced Technology (IJEAT), Volume-9, Issue-I, October-19, pp.5175-5179. [SCOPUS Indexed] SJIR/Impact factor = 0.104 at 2019 Scopus Source ID - 21100899502
  19. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Effect of Hydration age on Durability of concrete by using Electrical Resistivity technique”. International Journal for Research in Engineering Application & Management (IJREAM) ,Vol-05 ,Issue -05 , Aug 2019, pp.197-201 [UGC Approved] Impact Factor = 6.466 of Year 2019,( UGC List Journal No. 64077)
  20. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Influence of different types of Cement & Supplementary Cementitious materials Fly ash & GGBS in concrete Carbonation”. International Journal for Research in Engineering Application and Management (IJREAM), Vol-05, Issue-02,May 2019, pp.420-425. [UGC Approved], Impact Factor = 6.466 of Year 2019. ( UGC List Journal No. 64077)
  21. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Influence of Alkali content of Cement in Alkali Silica Reaction of concrete”. International Journal for Research in Engineering Application & Management (IJREAM), Vol-05, Issue -06, September 2019, pp. 64-67. [UGC Approved] Impact Factor = 6.466 of Year 2019 Vol-05 ( UGC List Journal No. 64077)
  22. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Effect of different types of Cement in Concrete Chloride Permeability”. International Journal for Research in Applied Science and Engineering Technology (IJRASET), Vol-7 Issue-5, May 2019, pp.3293-3298. [UGC Approved] Scientific Journal Impact Factor = 7.325 of year 2019
  23. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Sulphuric Acid Durability Studies of Concrete with Portland cement (CEM-I), Portland Composite Cement of Different Types (CEM-II/A-M & CEM-II/B-M) & Partial Replacement of Portland Cement with Different Types of Pozzolonic Materials”. International Research Journal of Engineering and Technology (IRJET), Vol-6, Issue 4, April 2019, pp.4894-4909. [UGC Approved] Scientific Journal Impact Factor = 7.34 of Year 2019
  24. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Influence of Coal Tar Epoxy paint on Concrete Exposed to Sulfate Exposure”. International Research Journal of Engineering and Technology (IRJET) ,Vol-6, Issue 9 , Sep 2019, pp.2084-2095[UGC Approved] Scientific Journal Impact Factor = 7.34 of Year 2019 Vol-6
  25. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Response of Different types of Cement & Partial Replacement of Portland cement with Fly & GGBS in concrete against Phosphoric Acid Attack”. International Journal of Emerging Technology and Advance Engineering, Vol- 9, Issue 5, May 2019, pp.71-82. [U K Index] Impact Factor = 7.127 up to Year 2019
  26. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Influence of Different Types of Cement & Pozzolonic Materials on Chloride Penetrability to Concrete”. Journal of Emerging Technologies and Innovative Research (JETIR), Vol-6, Issue 5,May 2019, pp.233-241. [Research Gate, Mandelley] h Index Impact Factor = 5.87 up to Year 2018 Vol-6 Issue-5
  27. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Influence of Different types of Cement & mitigating effect of Pozzolonic materials & Lithium based salt in ASR of Concrete”. American Journal of Engineering Research (AJER) , Vol-8 ,Issue -9, Sep-2019, pp.98-103. [Index by DOAJ, Copernicus, Google scholar] Impact Factor = 2.501 Vol-8 Issue-9
  28. **Abdullah Ahmed Laskar and Dr. Partha Ghosh** “Comparative Durability Studies of Concrete by using Electrical Resistivity technique & Rapid Chloride Permeability technique”. Journal of Engineering Research and Application (IJERA), Vol. 9, Issue-9 (series-I) September 2019, pp.44-49. [Index by DOAJ, Copernicus, Pro Quest] Impact factor = 6.185 year of 2019



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29. **Abdullah Ahmed Laskar** and **Dr. Partha Ghosh** “Influence of different form of Lithium salt and Barium Sulfate in mitigation of ASR expansion in Concrete”. IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE), Vol-16, Issue -5 Ser .I (September–October 2019), pp 18-23. [Index by ANED, Cabell, J gate, EBSCO]AQ CJ Impact Factor = 3.781 year of 2019
  30. **Abdullah Ahmed Laskar** and **Dr. Partha Ghosh** “An Experimental Study on RCC Chimney shell Surface damage problem on Slip-form concrete & its Preventive Measures”. International Journal of Emerging Technology and Advance Engineering, Vol- 9, Issue 7, July-2019, pp.53-62. [U K Index] Impact Factor = 7.127 up to Year 2019
  31. P. Ghosh & Arnab Mondal & Kushal Ghosh “Mechanical and Micro structural Characteristics of Ternary Blended Mortars Incorporating GGBS and Alcofine subjected to acid and Sulphate Exposure”. International Journal of Engineering and Advanced Technology (IJEAT), Vol.09, Issue 01, October -2019
  32. J S Ali and **D Bandyopadhyay** “Condition Monitoring of Structures using Limited Noisy Data of Modal Slope and Curvature of Mode Shapes”. International Journal of Structural Integrity, August, 2019, ISSN: 1757-9864, DOI- IJSI-02-2019-0014
  33. J S Ali and **D Bandyopadhyay**, “Experimental Validation of the Proposed Technique for Condition Monitoring of structure with Limited Noisy Modal Data” in an International Journal of Structural Integrity (2019), August, 2019, ISSN: 1757-9864, DOI- IJSI-02-2019-0013
  34. Jafar Sadak Ali and **Debasish Bandyopadhyay** “Numerical and Experimental Validation of the Proposed SHM Technique form Limited Static Responses Adopting Equation Error Approach”, Journal of Emerging Technologies and Innovative Research (JETIR), 2019, ISSN: 2349 5162
  35. Jafar Sadak Ali and **Debasish Bandyopadhyay** “Experimental Validation of the Proposed SHM Technique form Limited Extracted Dynamic Responses of a Steel Beam Adopting inverse Dynamic Approach”, International Journal of Technical Innovation in Modern Engineering & Science (IJTIMES), 2019, e-ISSN: 2455-2585
  36. **Debasish Bandyopadhyay** & Jafar Sadak Ali “Validation of Proposed SHM Model based on Inverse Dynamic Approach with Limited Noisy Dynamic Responses by Experimental Study”, 8<sup>th</sup> International Conference on ‘Experimental Vibration Analysis for Civil Engineering Structure, EVACES 2019, 5-8 September, 2019 at Nanjing, China
  37. **Debasish Bandyopadhyay** “Experimental Study on Alternative Pre-fabricated Sandwiched Panel Concrete Building System for Sustianable Construction”, ICI Conference on ‘**Prest Concrete for Sustainable Construction**’, 19 September, 2019, New Delhi
  38. Devjit Acharjee, Sayantan Bosu Choudhury, Swarnabha Acharyya and Debasish Bandyopadhyay. “**Parametric Study of Tilt on the Stability of RCC Building**”, 7th International Congress on Computational Mechanics and Simulation (ICCMS 2019), 11-13 December, 2019 at IIT Mandi
  39. Swarnabha Acharyya, Amalendu Maji and Debasish Bandyopadhyay “**Structural Health Monitoring of Bridge Deck by Signal Processing of Measured Pulse Echo Test Data**”, 7th International Congress on Computational Mechanics and Simulation (ICCMS 2019), 11-13 December, 2019 at IIT Mandi
  40. Anuja Roy, Atanu Sahu and Debasish Bandyopadhyay “**A Novel Sloshing Damper for Vibration Control of Short Period Structures**”, 7th International Congress on Computational Mechanics and Simulation (ICCMS 2019), IIT Mandi, 11-13 December, 2019 at IIT Mandi
  41. Partha Pratim Biswas “Lessons from Kolkata’s East–West Metro Disaster” Economic and Political Weekly, Vol. 54, Issue No. 42, 19 October, 2019
4. **Collaborative Programmes:**
- **Prof. D. Bandyopadhyay** of Jadavpur University in association with TATA Steel have organized 14 Weekends Training Program on “**Seismic Design & Construction of Residential RCC Buildings**”, for the Field Engineers of Tata Tiscon during May-August, 2019

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- **Prof. S. Saraswati & Prof. D. Bandyopadhyay** of Jadavpur University have organized Training Programs for Engineers of **Technip FMC** on “**Maintaining Quality of Concrete Construction**”, during July & September, 2019 in collaboration with Indian Concrete Institute, Kolkata Centre

### 6. Major Achievements:

Gokul Chandra Mandal Rendering Consultancy services for Refurbishment of Century old Elevated Steel tank (Tallah Tank) at Tallah, Kolkata for Kolkata Municipal Corporation

## ELECTRICAL ENGINEERING

Phone: 033-2457-2539/2296

033-2414-6163

H.O.D: Prof. Keshab Bhattacharya

E-mail: hodelectrical@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the course	Duration of the course
B.E.E.	4 Yrs.
B. E. E. (Evening)	5 Yrs.
M. E. E.	2 Yrs.
M. C. S. E.	2 Yrs.
M.E. Illumination Engineering	2 Yrs.
Ph.D.	

## CONTROL SYSTEM SECTION

### 1. B. Number of Faculty Members: 04

### 2. B. Major Research Project: (Project, Funding Agency, Sanction Amt.(INR in Lakhs), Principal/Co-Principal Investigator, Status)

1. Robustness Analysis of AFADEC Control Laws Covering Redundancy Management, Gas Turbine Research Establishment, (DRDO, Ministry of Defense), Bengaluru, Rs. 24.78 lakhs, Prof. Smita Sadhu (PI), **Ongoing**
2. Development and Validation of Algorithm for Estimation and Tracking of High Velocity Manoeuvring Targets, Program AD, (DRDO, Ministry of Defense), Hyderabad, Rs. 21.53 lakhs, Prof. Smita Sadhu (PI), Ongoing

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of Seminar/ Conference, Place and Duration)

Dr. Ranjit Kumar Barai, Session Chair of Track “Robotics & Mechatronics”, IEEE TENSYP 2019 (IEEE Region 10 Symposium), 7-9 June 2019, at Kolkata, India

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Dr. Ranjit Kumar Barai, Invited Talk, “Advancements in Robotics: Recent Trends in Design, Development, Control and Applications,”, Electrical Engineering Department, Institute Of Engineering & Management, Kolkata, on 24 February, 2020.

#### 4. B. Articles Published/Accepted in Journals (April, 2019 – March, 2020): (Name of the Teacher –Name of the Articles–Name of the Journal –Date of Publication–Volume)

Subhajit Kar, Kaushik Das Sharma, **Madhubanti Maitra**–Adaptive weighted aggregation in group improvised harmony search for lung nodule classification”,–Journal of Experimental and Theoretical Artificial Intelligence–2020–pp. 219-242

Subhajit Kar, Kaushik Das Sharma, **Madhubanti Maitra**–“Optimized feature selection for identification of carcinogenic leukocytes using weighted aggregation based transposition PSO”,–IETE Journal of Research, Taylor & Francis–2019.–Pp 1-14,

D. Roy, A. Chowdhury, **M. Maitra** and S. Bhattacharya–“Virtual Region based Multi-robot Path Planning in an Unknown Occluded Environment,”–IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROs)–2019.

Nilanjan Patra, **Smita Sadhu**, Tapan Kumar Ghoshal–“Adaptive state estimation for tracking of civilian aircraft,”–IET Science, Measurement & Technology–2018–Volume: 12, Issue: 6, pp. 777 - 784, DOI: 10.1049/iet-smt.2017.0529

Sudeshna Dasgupta, **Smita Sadhu**, and Tapan Kumar Ghoshal–“Disturbance Observers for Nonlinear MIMO Systems-An Alternative Design Approach.”–IEEE 53rd Annual Conference on Information Sciences and Systems (CISS)–2019–pp. 1-6

Sudeshna Dasgupta, **Smita Sadhu**, T. K. Ghoshal–A Modified Active Anti-Disturbance Control for a Nonlinear CSTR Model–ASME Dynamic Systems and Control Conference (DSCC-2018)–September 30 – October 3, 2018

#### 5. Collaborative Programmes:

1. Prof Smita Sadhu acted as External Examiner for evaluation of M.E. thesis at the Department of Electrical Engineering, IEST, Howrah in April, 2019
2. Prof Smita Sadhu acted as External Examiner for evaluation of M.E. thesis at the Department of Electrical Engineering, IEST, Howrah in April, 2020
3. Prof Smita Sadhu is an External Expert for the Ph.D. Committee of two candidates enrolled at the Department of Electrical Engineering, IEST, Howrah
4. Prof. Smita Sadhu acted as reviewer for IEEE Transactions on Aerospace and Electronic Systems, IEEE Transactions on Control Systems Technology, Elsevier Aerospace Science and Technology and many IEEE conferences

#### 6. Major Achievements:

1. One doctoral student has been awarded Ph.D degree in 2019
2. Three Post Graduate theses have been awarded degree

**HIGH VOLTAGE SECTION**

**1. B. Number of Faculty Members: 06**

**2. A. Area of Research Activities:**

- a) Condition Monitoring of Insulation in High Voltage
- b) Condition Monitoring of High Voltage Line Insulators
- c) Condition Monitoring of Lightning Arresters
- d) Partial Discharge Detection and Localization in High Voltage Equipment
- e) Power quality event detection and Smart metering

**2. B. Major Research Project: (Project–Funding Agency–Sanction Amt. (INR in Lakhs)–Principal/ Co-Principal Investigator–Status)**

**Sivaji Chakravorti**

1. An Early Warning System for Electrical Power System Utility using Ultra-High Frequency Sensors–DST-SERB–36.00–Co-Principal Investigator–Ongoing
2. Development of a Non-invasive Insulation Diagnostic System for Large Power Equipment employing Cellulose Impregnated with Alternate Dielectric Liquid as its Primary Insulation taking into consideration the Influence of Trapped Charge present in the System–DST-SERB–40.00–Co-Principal Investigator –Ongoing

**Sovan Dalai**

1. Modeling of Space Charge and Partial Discharge in Polymeric Dielectrics for Application in High Voltage Systems–RUSA 2.0, Jadavpur University–5.29–Principal Investigator–Ongoing
2. Local Lightning Prediction and Warning System–Science & Technology and Biotechnology Department, Government of West Bengal–12.30–Co-Principal Investigator–Ongoing
3. Condition Assessment of High Voltage Insulation in Dry Type Equipment using Modified Dielectric Response Analysis–DST-SERB–38.61–Co-Principal Investigator–Ongoing

**Biswendu Chatterjee**

1. Condition Assessment of High Voltage Insulation in Dry Type Equipment using Modified Dielectric Response Analysis–DST-SERB–38.61–Principal Investigator–Ongoing

**Arpan Kumar Pradhan**

1. Development of an Advanced Online Technique for Condition Monitoring of Overhead Transmission Line Insulator based on Signature of Very High Frequency Signal–RUSA 2.0, Jadavpur University–4.20–Principal Investigator–Ongoing

**3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher–Type of Participants– Name of Seminar/ Conference–Place and Duration)**

**Sivaji Chakravorti**

- Key Note address–All Kerala Industry Application Society Student Conclave 2019–NSS College of Engineering, Palakkad, Duration 3 Days
- Key Note address–International Conference on “Electrical, Electronics, Computer Science & Civil Engineering”- ICEECC, 2019–Institute, Pailan College of Management and Technology, Kolkata - Duration 2 Days

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- Chief Guest address–Samavarthanam 2019–Rajagiri School of Engineering & Technology (RSET), Kochi - Duration 1 Day
- Chief Guest address–Graduation Day 2019–Vimal Jyothi Engineering College, Kannur - Duration 1 Day
- Key Note address–International Conference on Innovations in Power, Energy and Intelligent Control Systems (IPEICS-2019)–Vignan’s Foundation for Science, Technology & Research University, Guntur - Duration 3 Days
- Tutorial Lecture–IEEE TENSYP 2019–Biswa Bangla Convention Center - Duration 3 Days
- Plenary Lecture–FDP on “Modern research Strategies in condition monitoring of power equipment”–Saintgits College of Engineering, Kottayam - Duration 5 Days
- Chief Guest address–Graduation Ceremony 2019–Vidya Academy of Science and Technology, Thrissur - Duration 1 Day
- Invited Lecture–Students’ Motivational Event–IIIT-Allahabad - Duration 1 Day
- Invited Lecture–Faculty Development Program–KL (Deemed to be University) Green Fields, Vaddeswaram – Duration 1 Day
- Invited Lecture–IEEE Workshop–IEEE DEIS Kolkata – Duration 3 Days
- Invited Lecture–Faculty Development Program–NIT Mizoram - Duration 3 Days
- Invited Lecture–WBSEBEA Technical Seminar–Vidyut Bhavan, Kolkata - Duration 1 Day
- Key Note address–International Conference on Computing, Communication and Energy systems – MEA Engineering College, Perinthalmanna, Malappuram - Duration 2 Days
- Key Note address–International Conference on Renewable Energy Integration into Smart Grids–C.V. Raman College of Engineering, Bhubaneswar - Duration 2 Days
- Chief Guest address–Annual Day Celebration–Nttf Technical Training Centre, Tellicherry - Duration 1 Day

### Sovan Dalai

- Invited Lecture–one week workshop on “Synchrophasor Measurement Technology for Smart Grid - Present Scenario and Implementation in Indian Power System–Electrical Engineering Department, National Institute of Technology, Silchar, Assam, 19–23 January, 2019

### 4. B. Articles Published/Accepted in Journals (April, 2019 – March, 2020): (Name of the Teacher –Name of the Articles –Name of the Journal –Date of Publication– Volume)

S. Bag, A. K. Pradhan, S. Das, S. Dalai B. Chatterjee–S-Transform Aided Random Forest Based PD Location Detection Employing Signature of Optical Sensor–IEEE Transactions on Power Delivery–2019–Vol. 34, No. 4, pp. 1261 – 1268

D.Mishra S.Dutta A.Baral N.HaqueS.Chakravorti–Use of Interfacial Charge for Diagnosis and Activation Energy Prediction of Oil-Paper Insulation used in Power Transformer–IEEE Trans. on Power Delivery–2019–Vol. 34, No. 4, pp 1332-1340

S.Chatterjee S.Dalai S.Chakravorti B.Chatterjee–Accelerating Moisture Content Sensing of Oil impregnated paper Insulation Using Frequency Modulated Square Wave Excitations–IEEE Sensors Letters–2019–Vol. 3, No. 7, pp 1-4

S.Chatterjee A.K.Pradhan S.Dalai S.Chakravorti B.Chatterjee–A Non-linear Model for Sensing Moisture Content in Transformers at Reduced Time–IEEE Sensors Journal–2019–Vol. 19, No. 12, pp 4639-4646

D.Mishra N.Haque A.Baral S.Chakravorti–Estimation of Paper Conductivity from Short Duration Polarization Depolarization Current for Diagnosis of Power Transformer–IET Science, Measurement & Technology–2019–Vol. 13, No.8, pp 1178-1185

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S.Dutta D.Mishra N.Haque A.K.Pradhan A.Baral S.Chakravorti–Influence of Temperature on Interfacial Charge of Power Transformer Insulation–IET Science, Measurement & Technology–2019–Vol. 13, No. 7, pp 1059-1067

C.M.Banerjee S.Dutta A.Baral S.Chakravorti–Influence of Charging Voltage Magnitude on Time Domain Dielectric Response of Oil-paper Insulation–IET Science, Measurement & Technology–2019–Vol. 13, No. 6, pp 874-882

N.Haque S.Dalai B.Chatterjee S.Chakravorti–Studies on the Effects of Moisture and Aging on Charge De-trapping Properties of Oil Impregnated Pressboard based on Isothermal Relaxation Current Measurement–High Voltage, IET–2019–Vol. 4, No. 2, pp 151-157

S.Dutta C.M.Banerjee A.Baral B.Chatterjee S.Dalai S.Chakravorti–Neural Network based methodology to study Effects of Oil Properties on Induction Period Evaluated from Response of Oil-Paper Insulation Employing mineral oil, ester and mixture –IET Science, Measurement & Technology–2019–Vol.13, No.4, pp 606-613

C.M.Banerjee S.Dutta A.Baral S.Chakravorti–Time Varying Model for Effective Diagnosis of Oil-Paper Insulation used in Power Transformers–IET Generation, Transmission & Distribution–2019–Vo.13, No.9, pp 1527-1534

S. Maur, S. Dalai, B. Chatterjee–Sensing the Polarization and Depolarization Current of Solid Dielectrics Used in High-Voltage Applications –IEEE Sensors Letters–2019–Vol. 3, No. 9, pp. 01 – 04

### 5. Collaborative Program:

#### Arpan Kumar Pradhan

Collaborative Research work with Prof. Stefan Tenbohlen, University of Stuttgart, Germany under Alexander von Humboldt Fellowship

### 6. Major Achievements:

#### Sivaji Chakravorti

1. Life Time Achievement (Section) Award by IEEE India Council in 2019
2. Best Researcher Award by IEEE Kerala Section in 2019
3. Member of the Governing Council of Indian National Academy of Engineering – 2019-2020
4. Technical University Munich Scientific Board Member for TUM University Foundation Fellowship – 2019
5. Member of Program Advisory Committee on Electrical, Electronics and Computer Engineering, DST, GOI – 2019-2020
6. Member of Subject Expert Committee on Engineering Sciences for Fund for Infrastructure in Science & Technology (FIST) program of Department of Science & Technology (DST), Govt. of India - 2019-2020
7. Member of the Board of Governors of the APJ Abdul Kalam Technical University, Thiruvananthapuram, Kerala –2019-2020

## *ILLUMINATION ENGINEERING SECTION*

### 1. B. No. of Faculty Members: 04

#### 2. A. Area of Research Activities:

Optical Communication, Color Mixing of LEDs, Environmental effects on solid state light sources, Road Lighting, Human Centric Lighting, Electroencephalography (EEG) based study of human performance under different Lighting Conditions, Optimization of Road Lighting Design, Outdoor Lighting, Mesopic Photometry, Optical Radiation & Health, Lighting Control Systems, Lighting Design Optimization



**2. B. Major Research Projects: (Deptntal/Individual–Name of the Project–Funding agency)**

Prof.Saswati Mazumdar as Principal Investigator–Advanced Vision System for Foggy environment–RUSA2.0

Prof. Saswati Mazumdar as Principal Investigator and Dr. Suddhasatwa Chakraborty as Co-Principal Investigator.–‘Experimental studies of free space laser communication link for data and voice transmission in different atmospheric condition’.–DRDO

Prof. Biswanath Roy as Principal Investigator–“Design & Development of energy efficient, wireless light controller for daylight integrated artificial lighting system”–RUSA2.0

Dr. Suddhasatwa Chakraborty as Principal Investigator–Visual Performance Analysis of the Drivers in a Motorized Road under Lighting System.–RUSA2.0

Sangita Sahana as Principal Investigator–Energy Efficient Outdoor Lighting Design using Mesopic Photometry.–RUSA2.0

**3. A. Invited Lectures Delivered/ Session Chaired:(Name of the Teacher–Type of Participants–Name of seminar/conference–Place and Duration)**

Suddhasatwa Chakraborty–Invited talk–76<sup>th</sup> Orientation Course Orientation Programme at UGC-HRD, Salt Lake Campus, Jadavpur University, 06 February 2020–UGC-HRD, Salt Lake Campus, Jadavpur University

**Suddhasatwa Chakraborty**

Invited Talk–“Road-Lighting Chapter in National Lighting Code”at the Workshop meeting on Review of National Lighting Code organized by National Lighting Code Committee, Bureau of Indian Standard (BIS).– On 26 September 2019 at Electrical Engineering Department Seminar Room, JU

Suddhasatwa Chakraborty–Invited talk–72<sup>nd</sup> Orientation Course Orientation Programme at UGC-HRD, Salt Lake Campus, Jadavpur University, 23 February, 2019 – UGC-HRD, Salt Lake Campus, Jadavpur University

Suddhasatwa Chakraborty–Invited talk–Seminar on “Human Centric Lighting.” by Indian Society of Light Engineers (ISLE) Calcutta State Center and CPWD 1 November 2019– 1 November 2019 Nizam Palace, CPWD, Kolkata

Suddhasatwa Chakraborty–Whole Day invited talk in a Training Program–“Latest Trends in Illumination Engineering”, organized CESC Limited, HRD Dept SWRO–2 December 2019, CESC Limited, HRD Department SWRO, Taratala

**3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher–Name of the Paper Presented–Name of seminar/conference–Place and Duration)**

Sangita Sahana–“Experimental Assessment of WLED Lamp Performance for Area Lighting Application under Mesopic Photometry System”–International Conference on Electrical, Electronics, Computer Science & Civil Engineering (ICEECC) 2019 by IEEE & IET–Kolkata, 26-27 April, 2019

**3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher–Name of the Paper Presented–Name of Seminar/Conference–Place and Duration)**

Suddhasatwa Chakraborty–“Daylight Harvesting : A Photovoltaic based approach.” Smart Lighting.”- “Recent Research Trends in Illumination Engineering” organized by Illumination Engineering Laboratory, Electrical Engineering Department in association with SISED-, Jadavpur University –Friday, 30 August, 2019 at K.C.Roy Hall, Electrical Engineering Department, Jadavpur University, Kolkata

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### 3. D. Orientation Courses/Refresher Courses Attended: (Name of the Teacher–Title of the Course–Place and Duration)

Sangita Sahana–Performance Evaluation Tools for Sustainable Buildings–12-14 March, 2020 at TERI, Bangalore

### 4. B. Articles Published in the Journals (including National / International/ Peer reviewed Journal): (Name of the Teacher –Name of the Paper–Name of the Journal–Date of Publication–Volume)

Saswati Mazumdar (R. Malik, K. K. Ray, and S. Mazumdar)–A Maximum Power Point Tracking VRLA Battery Charger Based on Modified Perturb and Observe Technique–IEEE Region Ten Symposium (TENSYP) 2019– 9 – 10 June, 2019

Saswati Mazumdar(B. Das., S. Mukherjee, S. Mazumdar)–Bidirectional Audio Transmission in Optical Wireless Communication Using PWM and Class D Amplifier–Nanoelectronics, Circuits and Communication Systems 2019– 9-10 November, 2019

B. Das, T. S. Sarkar, S. Mukherjee, B. Sinha S. Mazumdar–Development of full duplex Laser based data and voice communication system bridging two IoT networks–International Conference on Distributed Computing and Networking 2020– 4 – 7 January, 2020

Saswati Mazumdar(S. Bhattacharjee, A. De, A. Saha, S. Mazumdar)–Advanced Vision System For Drivers In Foggy Roads–Proceedings of International Conference on Energy and Sustainable Development 2020 –February 2020

Saswati Mazumdar (T. S. Sarkar, B. Sinha, S. Mukherjee, I. Joardar, S.Mazumdar.)–Development of an FPGA based Indoor Free Space Optical (FSO) Communication system using 808nm Infrared (IR) LASER Source–IEEE Calcutta Conference (CALCON) 2020– 28– 29 February, 2020

Saswati Mazumdar (B. Das, T. Maity and S. Mazumdar) Indoor Optical Intercom System: Application of Visible Light Communication system for audio transmission using PDM IEEE Calcutta Conference (CALCON) 2020–28 – 29 February, 2020

Sangita Sahana (S Sahana, A Paul, B Roy)–“Development And Performance Analysis Of A Cost-Effective Integrated Light Controller”–“Light & Engineering”–20.12.2019–Vol.27, No. 6, pp 73-81

Sangita Sahana (S Sahana, B Roy)–“Adaptation luminance variation under lamps of different spectral compositions with variable surrounding luminance effects”–“Journal of Optics”–27.9.2019–Vol.48, pp 527-538

Sangita Sahana (S Das, S Sahana, B Roy)–“Experimental Assessment of WLED Lamp Performance for Area Lighting Application under Mesopic Photometry System”– “International Journal of Computer Sciences and Engineering”, Published from the proceedings of International Conference on Electrical, Electronics, Computer Science & Civil Engineering -2019 by IEEE & IET–25.5.2019–Vol.7, No. 18, pp 213-218

### 5. Collaborative Program:

Research Collaboration on the topic “Visibility: Contrast threshold with marking light in road lighting.” with Technical University of Berlin, Germany

### 6. Major Achievements:

- a) Dr. Suddhasatwa Chakraborty has been nominated as Division Associate in Division-4, International Commission on Illumination (CIE) from India
- b) Dr. Suddhasatwa Chakraborty was selected as Visiting Scientist in Chair of Lighting Technology, Department of Energy & Automation Technology, Technical University of Berlin (TUB), Germany in a collaborative research project entitled “Visual performance analysis of drivers in a motorized road under influence of peripheral object under different spectrum lighting system”

## Annual Report 2019-20

- c) Dr. Suddhasatwa Chakraborty was nominated as Alternative Institutional Member of the Electro-Technical Committee, ETD-23, and Bureau of Indian Standard (BIS)
- d) Dr. Suddhasatwa Chakraborty was nominated as Member of the Electro-Technical Committee, ETD-49, Bureau of Indian Standard (BIS)
- f) Dr. Suddhasatwa Chakraborty is engaged for drafting of the revision of the National Lighting Code 2019: Road Lighting section

### ***MEASUREMENT AND INSTRUMENTATION SECTION***

#### **1. B. Number of Faculty Members: 07**

#### **2. A. Area of Research Activities:**

Instrumentation, Sensors, Signal and Image Processing, Intelligent systems

#### **2. B. Major Research Project:(Project–Funding Agency–Sanction Amt.(INR in Lakhs) Principal/ Co-Principal Investigator–Status)**

- 1 Local Lightning Prediction and Warning System–WBDST-BT–12.3–Dr. Debangshu Dey/ Dr. Sovan Dalai–Ongoing
- 2. Development of an Integrated Health Monitoring System for the Identification of Sleep Disorders –UGC–6.10–Sugata Munshi–Completed

#### **3. A. Invited Lectures Delivered/Sessions Chaired:(Name of the Teacher–Type of Participants– Name of Seminar/ Conference–Place and Duration)**

Amitava Chatterjee–Masters Students, PhD Scholars, and Faculty Members–Invited Lecture delivered on the topic “Kalman Filter: Theory and Practices” organized by IEEE Joint CSS-IMS Kolkata Chapter in collaboration with Department of Applied Physics, University of Calcutta, India–Place: Department of Applied Physics, University of Calcutta, Kolkata, India Date: 15 November, 2019 Duration: Two Hours

Amitava Chatterjee–Masters Students, PhD Scholars, and Faculty Members–Invited Lecture delivered on the topic “Learning Strategies For Human-Robot Collaboration” at 2nd International Conference on Computational Intelligence in Pattern Recognition (CIPR), 2020–Venue: Institute of Engineering & Management, Salt Lake, Kolkata, India Date: 05 January, 2020 Duration: One Hour

Amitava Chatterjee–Faculty Members–Invited Lecture delivered on the topic “Recent Advances in Fuzzy based Classification Algorithms” during One Week Short term Course on “Computational Intelligence and Applications”–Venue: Department of Electrical Engineering, National Institute of Technology Durgapur, India, Date: 10 January, 2020 Duration: Three Hours

Amitava Chatterjee–Masters Students, PhD Scholars, and Faculty Members–Invited Lecture delivered on the topic “Sparse Representation and Dictionary Learning for Signal and Image Processing Problems” during the Workshop on “Recent trends in Learning and Optimization for Communication, Control, and Signal Processing”, Organized by –Venue: Department of Electronics and Communication Engineering, Indian Institute of Information Technology, Guwahati Date: 18 January, 2020 Duration: Three Hours

Amitava Chatterjee–Masters Students, PhD Scholars, and Faculty Members–Keynote Lecture delivered on the topic “Learning Strategies For Human-Robot Collaboration” at First NIT Meghalaya Research Conclave, 2020–Venue: National Institute of Technology Meghalaya, India Date: 28 February, 2020 Duration: One Hour

Amitava Chatterjee–Masters Students, PhD Scholars, and Faculty Members–Chaired a Session in International Conference on Energy and Sustainable Development 2020 (ICESD – 2020)–Venue: Department of Mechanical Engineering, Jadavpur University, India Date: 14 February, 2020 Duration: One and a Half Hours

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Sugata Munshi–Invited Lecture on “State-of-the-Art Current Sensors” **Current Sensors**–‘Faculty Development Programme’ organized by the Electrical Engineering Department, IEM, Kolkata, –IEM, Kolkata, 23 July, 2019

Sugata Munshi–Invited Lecture on “Sensors for Embedded Applications: A Cursory View”, **Embedded Applications: A Cursory View**–Invited Lecture organized by IEEE Control System Society, Student Chapter, NIT, Calicut–Electrical Engineering Department, NIT, Calicut, 24 January, 2020

Sugata Munshi–Chaired a Session–IEEE International conference, Tensymp-2019 Organized IEEE Kolkata Section–Biswa Bangla Convention Centre, 7-9 June, 2019

Sugata Munshi–Chaired a Session–International Conference on Energy and Sustainable Development ICESD - 2020–Mechanical Engineering Department, JU, 14-15 February, 2020

Palash Kumar Kundu–Session chaired–Impact of Changing Energy Mix in the Power Sector–The Institution of Engineers (India), West Bengal State Centre (Kolkata). 23-24 November, 2019

#### 4. B. Articles Published/Accepted in Journals (April, 2019 – March, 2020): (Name of the Teacher–Name of the Articles–Name of the Journal–Date of Publication–Volume)

Sandip Joardar and **Amitava Chatterjee**–“Palm dorsa vein pattern based biometric verification system using anisotropic generalized procrustes analysis on weighted training dictionary–Applied Soft Computing (Impact Factor: 5.472), Elsevier publishers.–December 2019–vol. 85, pp. 340-351, 105562

Pritam Paral, **Amitava Chatterjee**, and Anjan Rakshit, – “Vision sensor based shoe detection for human tracking in a human-robot coexisting environment: A photometric invariant approach using DBSCAN algorithm”.–IEEE Sensors Journal (Impact Factor: 3.073).–15 June, 2019–vol. 19, issue 12, pp. 4549-4559

Pritam Paral, **Amitava Chatterjee**, and Anjan Rakshit –“OPTICS-based template matching for vision sensor-based shoe detection in human-robot coexisting environments”.–IEEE Transactions on Instrumentation and Measurement (Impact Factor: 3.658).–November 2019–vol. 68, no. 11, pp. 4276-4284

Nabanita Chatterjee, Biswajit Bhattacharyya, **Debangshu Dey and Sugata Munshi**–Two-Stage Linearizer Involving Astable Multivibrator and Microcontroller for Thermistor Based Temperature Measurement over Internet–IEEE Sensors Journal (Impact Factor: 3.073).–May 2019–Vol. 19, Issue 9,

Saptarshi Chatterjee, **Debangshu Dey, Sugata Munshi** and Surajit Ghorai–Extraction of Features from Cross Correlation In Space and Frequency Domains for Classification of Skin Lesions–Biomedical Signal Processing and Control, Elsevier Publishers (**Impact Factor 3.13**), –August 2019–Volume 53

Saptarshi Chatterjee, **Debangshu Dey and Sugata Munshi**–Integration of Morphological Preprocessing and Fractal Based Feature Extraction with Recursive Feature Elimination for Skin Lesion Types Classification–Computer Methods and Programs in Biomedicine, Elsevier Publishers (**Impact factor: 3.632**) –September 2019–Volume 178

Aloke Mukherjee, **Palash Kumar Kundu**–Power system fault identification and localization using multiple linear regression of principal component distance indices–International Journal of Applied Power Engineering (IJAPE)–Accepted 3 March, 2020–Vol. 9, No. 2, August 2020, pp. 113~126

Deep Mukherjee, **Palash Kumar Kundu** and Apurba Ghosh–Modified Augmented Fractional Order Control Schemes for Cart Inverted Pendulum Using Constrained Luus-Jaakola Optimization–International Journal of Modelling, Identification and Control, Inderscience–November 2020

Arunabha Kabiraj Thakur, **Palash Kumar Kundu**–Development of Generalized Model of 3-Phase Induction Motor for Performance Study During Different Distorted and Unbalance Voltage–International Journal of Computer Sciences and Engineering–February, 2020–Vol-8, Issue-2

Sandip Sadhukhan, Goutam Kumar Ghorai, Debprasad Sinha, Souvik Maiti, **Gautam Sarkar** and Ashis Kumar Dhara–Segmentation of optic disc in retinal images using fully convolutional network” –Journal of Current Indian Eye Research –December 2019,–Vol. 6, Issue 2, pp. 40-47

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Santanu Chattopadhyay, **Gautam Sarkar** and Arabinda Das– “Wavelet Based Classification of Myocardial Ischemia Arrhythmia Congestive Heart Failure and Sleep Apnea”, –International Journal of Medical and Health Science –2020–Vol. 14 No: 2, pp. 49-52

Debprasad Sinha, Goutam Kumar Ghorai, **Gautam Sarkar** and Ashis Kumar Dhara, –“Attention Based Fully Convolutional Neural Network for Simultaneous Detection and Segmentation of Optic Disc in Retinal Fundus Images”–International Journal of Medical and Health Science –2020–Vol. 14 No: 8, pp. 200-204,

Sourav Tola, Jayanta K. Chanda and **Gautam Sarkar**–“Improved detection of woven fabric defect by optimized and adoptive cylindrical band reject filtering” –The Journal of Textile Institute, Taylor Francis–pp. 1-12, 2020-

### 6. Major Achievements:

Dr Debangshu Dey was awarded “**Young Faculty Research Fellowship**” under Visvesvaraya PhD Scheme, Ministry of Electronics & Information Technology, GoI in **2019**

## *MACHINE AND ELECTRIC DRIVE SECTION*

### 1. B. Number of Faculty Members: 09

### 2. B. Major Research Project: (Project–Funding Agency–Sanction Amt.(INR in Lakhs)–Principal/Co-Principal Investigator–Status)

1. ‘Development of soft tools for design improvement of LSPMSM and sensor less temperature monitoring scheme for Induction Motors’–RUSA 2.0–5.50–S. Kar Chowdhury–ongoing
2. A wind-solar hybrid micro-generation scheme suitable for wide speed range and grid-isolated remote applications–MNRE–15,58,300/- Debashis Chatterjee–27.03.2017 - 27.03.2020–completed

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher–Type of Participants–Name of Seminar/ Conference–Place and Duration)

Debashis Chatterjee–Invited Talk –Recent Trends in Renewable Energy Generation and Control–Narula Institute of Technology, WB, February 2020, one day

Debashis Chatterjee–Invited Talk –Modern control techniques of PV based Converters –Gargi Memorial Institute of Technology, WB, September 2020, one day

S. Kar Chowdhury–Invited Talk –Seminar on “Industrial Applications of Electrical Machines”–Electrical Engineering Department of Dr. Sudhir Chandra Sur Degree Engineering College, Dum Dum, Kolkata on 26 April, 2019 from 10:30a.m to 1:00 p.m.

S. Kar Chowdhury–Invited Talk–Seminar on “Role of IEEE for young Engineers and Researchers”–Department of Electrical Engineering, Dr. B. C. Roy Engineering College, Durgapur, West Bengal

### 3. B. Seminar/Workshop/Conference/Symposium Attended:(Name of the Teacher–Name of the Paper Presented–Name of Seminar/ Conference–Place and Duration)

S. Kar Chowdhury–“Performance and Temperature Estimation of Induction Motor from Transient Measurement,”–2020 IEEE International Conference on Power Electronics, Drives and Energy System (PEDES 2020),–Jaipur, Rajasthan, India, 116–19 December, 2020. (Yet to be published on IEEE Xplore)



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S. Kar Chowdhury–“Performance Estimation of an Inverter Fed Three Phase Induction Motor at Reduced Flux Condition,”–2020 IEEE International Conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE2020),–Cochin, India, 2020, pp. 1-6, doi: 10.1109/PESGRE45664.2020.9070513.

S. Kar Chowdhury–“Sensorless Prediction of Equivalent Circuit Parameters and Losses of a Squirrel Cage Induction Motor using PSO,”–2019 IEEE Region 10 Symposium (TENSYP), Kolkata, India, 2019, pp. 553-558–Kolkata, India, 2019, pp. 553-558, doi: 10.1109/TENSYP46218.2019.8971027

### 3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher–Name of the Paper Presented–Name of Seminar/ Conference–Place and Duration)

S. Kar Chowdhury–2019 IEEE Region 10 Symposium (TENSYP),–Kolkata, India, June 2019, pp. 553-558, doi: 10.1109/TENSYP46218.2019.8971027

S. Kar Chowdhury–CALCON2020–Hotel Senses, Kolkata India, 28–29 February 2020

### 3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teacher –Title of the Course–Place and Duration)

Mihir Hembram –74<sup>th</sup> Orientation Program–HRDC, JU: 26 August-16 September, 2019

### 4. B. Articles Published/Accepted in Journals (April, 2019 – March, 2020): (Name of the Teacher–Name of the Articles–Name of the Journal–Date of Publication–Volume)

S Kundu, **D Chatterjee**, K Chakrabarty–Control of chaotic advection for mixing system using universal motors–IET Electric Power Applications–2020, March–Vol.14

K Sarker, **D Chatterjee**, SK Goswami–A modified PV-wind-PEMFCs-based hybrid UPQC system with combined DVR/STATCOM operation by harmonic compensation –International Journal of Modelling and Simulation–2020, February–Vol.10

A. Parida, **D. Chatterjee**–Remote area power supply through suitable solar PV augmented micro hydro generation: A case study –**International Transactions on Electrical Energy Systems**–2019, December

R. Dhua, **D. Chatterjee**, S. K. Goswami–Harmonic filter-based improved islanding detection technique for microgrid–**IET Renewable Power Generation**–2019, December–13(13)

A. Parida, **D. Chatterjee**–Remote area power supply through suitable solar PV augmented micro hydro generation: A case study–**International Transactions on Electrical Energy Systems**–2019, September–14

R. Dhua, **D. Chatterjee**, S. K. Goswami–Harmonic filter-based improved islanding detection technique for microgrid–**IET Renewable Power Generation**–December 2019–13

## POWER SYSTEM SECTION

### 1. B. Number of Faculty Members: 05

### 2. A. Area of Research Activities:

Distribution planning, Analysis and Automation, Optimum operation and planning of Power System, AI applications, Deregulation, Development of OPF based power system simulator, Reactive power control and voltage stability in distribution system, Renewable energy and FACTS, Fault detection in transmission and distribution systems, Smart grid, Microgrid, Power quality



**2. B. Major Research Project:**

**(Project–Funding Agency–Sanction Amt.(INR in Lakhs)–Principal/Co-Principal Investigator–Status)**

1. Design and Development of Laboratory scale Microgrid test bed for educational and research purpose using OPAL RT simulator–RUSA 2.0–8.00 LAKHS-1. Principal Investigator-. Ayan Kumar Tudu 2. Co-Principal Investigator Dr. Arindam Kumar Sil–Ongoing

**3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher–Type of Participants–Name of Seminar/ Conference–Place and Duration)**

Swapan Kumar Goswami–Resource person–Outcome based Educatopn–RCCIIT Campus, Beliaghata, Sunita Halder nee Dey–Resource person–Faculty Development Program 25 July 2019–RCCIIT Campus, Beliaghata, duration: 2.5 hrs

Ayan Kumar Tudu–Resource person–Invited Classes for 5 & 7 Semester of Tripura Institute of Technology under TEQIP–Tripura, Duration: 5-7 September, 2019

**3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teacher–Title of the Course–Place and Duration)**

Madhumita Mandal–Refreshers course on ‘Disaster Management’–Kolkata 2 weeks (3 February-15 February, 2020)

**4. B. Articles Published/Accepted in Journals (April, 2019 – March, 2020): (Name of the Teacher–Name of the Articles–Name of the Journal–Date of Publication–Volume)**

Swapan Kumar Goswami–Optimum placement of distributed generation considering economics as well as operational issues–International Transactions on Electrical Energy Systems–March 2020–Volume 30, Issue 3

Sunita Halder nee Dey –Differential voltage based fault detection during power swing–IET Generation, Transmission & Distribution–January 2020 –Volume 14, Issue 1, pp. 157-165

Sudipta Debnath–Optimal switching strategy of an SVC to improve the power quality in a distribution network IET Science, Measurement and Technology,–4 July 2019–Vol. 13, Issue 4, pp. 640-649

Sudipta Debnath–Sequence component based approach for fault discrimination and fault location estimation in UPFC compensated transmission line–Electric Power System Research, Elsevier–March 2020–Volume 180, 106155

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### ELECTRONICS & TELECOMMUNICATION ENGINEERING

Phone: 033-2457-2404

033-2414-6002

H.O.D: Prof. Sheli Sinha Chaudhuri

E-mail: hodetce@jadavpuruniversity.in

#### 1. A. Courses Offered :

Name of the Course	Duration of Course	No. of Students Enrolled
<b>B.E. Tel.E.</b>	4 years	(82 x 2 + 86x2 + 3+6+6 (for lateral entry) = 351)
<b>M.E. Tel.E.</b>	2 years	(30 (including 5 Q.I.P) x 2 = 60)
<b>Evening M.Tech.</b>		
VLSI and Microelectronics,	3 years	(18 x 3 = 54)
Intelligent Automation and Robotics.	3 years	(18 x 3 = 54)

#### 1. B. Number of Faculty Members:15 + 2(On Lien) + 1(DST Inspire Faculty)

#### 2. A. Area of Research Activities: (Broad Areas)

1. 2D materials
2. 5G Small Cells Deployment Issues
3. Antennas for 5G systems
4. Antenna Analysis and Synthesis
5. Antenna Optimization
6. Artificial Intelligence
7. Biomedical Image/Signal Processing
8. Brain-Computer Interfaces
9. Cognitive Cybernetics
10. Cognitive radio
11. Computer Vision
12. Cooperative Spectrum Sensing
13. Cryptography, Watermarking
14. Digital Design
15. Digital Signal Processing
16. Digital Watermarking and Data security
17. Dielectric resonator Antennas (DRA)
18. Electron Devices and Circuits
19. Embedded Systems
20. Error Correcting Coding Techniques
21. Evolutionary and Swarm Optimization
22. Fractal Filter
23. Heart Sound Anomaly Detection System

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24. Intelligent Transport System
25. Machine Learning
26. Matematerials
27. MEMs, NEMs and Gas sensors
28. Microstrip Antennas and Filters
29. Microstrip wearable antennas
30. Microwave and Millimeter Wave Antennas
31. Microwave Passive Device
32. Millimeter wave antenna
33. MIMO Beam Forming
34. Mobile Ad-hoc Networks (MANET)
35. Multimedia Analysis
36. Nanodevices and Low power VLSI circuits
37. Network Densification
38. Optics and Optical Network
39. Pattern Recognition
40. Real time video communication over cognitive radio
41. Resource Management
42. RF Energy Harvesting
43. RF MEMS
44. RF VLSI
45. RFID and its Applications
46. Robotics
47. Security and Cryptography
48. Signal Processing
49. Slotted array antenna
50. Smart Antenna Beamshaping in indoor environment
51. Substrate Integrated Waveguide
52. Video Communication Over Cognitive Radio Platform
53. VLSI Design
54. Wireless Body Area Networks
55. Wireless Communication
56. Wireless Sensor Networks

### **2. B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)**

#### **Prof. Amit Konar**

1. Project Title: A Smart Mind-Controlled Type-Writer for the People with Vocal Cord Disorder, Individual Project, Total Grant: Rs. 7.64 lakhs, Funding Agency: RUSA-2.0 (MHRD)

#### **Prof. Ananda Shankar Chowdhury**

2. Summarization and Action Recognition in First Person Videos, RUSA 2.0, Jadavpur University, Amount: Rs. 6.32 lakhs. (June 2019 – March 2020)

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3. Development of a Software Architecture for Live Aerial Video Based Surveillance, Elmax Systems and Solutions, Amount: Rs. 2.83 lakhs. (December 2019 – May 2020)

### **Prof. Bhaskar Gupta**

4. Principal Investigator of Project “Investigation on Electromagnetic energy absorption in plants and fruits along-with consequent effects”, 2019-2020 (Ongoing), Sponsored by JU-RUSA 2.0 Departmental support towards up-gradation in research, 4,99,600 Lakhs
5. Principal Investigator of Project “Propagation channel characterization for 5G applications”, 2019-2020 (Ongoing), JU-RUSA 2.0 Departmental support towards up-gradation in research, 22,41,000/- Lakhs
6. Principal Investigator of Project “A COVID-19 META SCREEN”, 2019-2020 (Ongoing), IEEE SIGHT, with a sanctioned amount of US \$4,585.00
7. Principal Investigator of Project ‘Miniatura Antenna Development for Communication between Airborne Drones in Swarm’ under DST India-Czech Joint Research Projects 2019 recommended for three years’ support. Disbursal of funds awaited

### **Prof. Iti Saha Misra**

8. Individual Project, PI, An Engineering Approach for the design of Heart Sound Diagnosis and Anomaly Detection: An IOT based Platform- RUSA 2.0, Jadavpur University, JU-RUSA 2.0, Amount 5.96 Lakhs, June 2019 – March 2020

### **Prof. P. Venkateswaran**

9. Drone Embedded Microphone array based Search and Rescue operation using Sound Source Localization, We Robotics (USA), Total Grant: USD15,000, October 29, 2019 - February 2020, Project Mentor (Annesya Banerjee, P.I., Achal Nilhani, CoPI, BE ETCE Third Year Students)
10. Study on Cognitive Radio based Industrial Internet of Things, DST – Women Scientist Scheme A (WoS-A), GoI, Total Grant (including Equipment Grant of Rs.6,98,250) = Rs.28,03,518/-, 16 January, 2020 - January 2023, Project Mentor (P.I. Mrs. Dola Gupta)

### **Prof. Sheli Sinha Chaudhuri**

11. Neuro–Fuzzy Synergism based POLSAR Image Classification, Government of India, Department of Space, ISRO, No.DS-2B-13012(2)/36/2019-Sec.II, Sanctioned amount, Rs 21.03 Lakh, Duration November, 2019- November 2021
12. Mind-Controlled Artificial Robotic Limb Design for Rehabilitative Applications, JU RUSA 2.0, Ref. No.:R-11/630/19, Sanctioned amount Rs. 20.08 Lakh, June 2019
13. Development of an Intelligent Olfaction Technology on Early Diagnosis of Disease from Body Odour and Breath for Primary Health Centres, JU RUSA 2.0, Ref. No.:R-11/601/19, Rs. 4.90 Lakh, June 2019

### **Prof. Subir Kumar Sarkar**

14. Title of the project: Development of efficient solar cell structures with the exploration of suitable material in software domain and characterization of such solar cells, Role: Principal Investigator, Funding Agency: RUSA, Amount (Rs.):4.496 lakhs+1 scholar, Status: Project completed, Duration: (2019-2020)
15. Title of the project: Cost Effective and Manpower Efficient Real-Time Implementation of RFID Based Surveillance System for Poultry Based Industry in Rural/ Urban Region to Solve the Avian Influenza/Bird Flu Problem, Role: Principal Investigator, Funding Agency:DST-WB, Amount (Rs.):15.908 lakhs+1 scholar, Status: Ongoing, Duration: (2018-2020)
16. Title of the project: Analytical Modeling and simulation based verification for low dimensional devices suitable for Low Power Application, Role: Principal Investigator, Funding Agency: UGC UPE Phase-II, Amount (Rs.): 7.32 lakhs + 1 scholar, Status: Project completed, Duration:(2016-2019)
17. Title of the project: Low Power ASIC-VLSI Implementation of Secure and Authentication Algorithms for Defense Application, Role: Principal Investigator, Funding Agency: UGC UPE Phase-II, Amount (Rs.): 7.82 lakhs +1 scholar, Status: Project completed, Duration:(2016-2019)

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### **Prof. Sudipta Chattopadhyay**

18. Title of the Project: Development of Enhanced Security Models for LTE/LTE-A and IOT Networks, Funding Agency: JU RUSA 2.0, Ref. No.:R-11/715/19, Amount: Rs. 8.30928 Lakh, Duration: June 2019 - March 2020, Status: Completed

### **Dr. Jaydeb Bhaumik**

19. Project Title: Design of Fast and Power Efficient Error Correcting Codes for IoT-based Wireless Sensor Networks, JU RUSA 2.0, Ref. No.:R-11/748/19, Amount: Rs. 5.284 lakhs. (June 2019 – March 2020)

### **Dr. Sayan Chatterjee**

20. Co-Chief investigator of the project “Vision guided Auto-Lander for Planetary mission” 2019-2021 (ongoing) sponsored by Indian Space Research Organization (ISRO) under RESPOND scheme, 26.32 Lakhs.
21. Chief Investigator of Project “Design and Development of X band Dual Polarized Waveguide Slotted Array Antenna” 2017-2019; extended to 2020, sponsored by Indian Space Research Organization (ISRO) under RESPOND scheme, 20.46 Lakhs
22. Chief Investigator of Project “Design and Development of Adaptive Phased Array Antenna System for Dynamic Air Traffic RADAR used in Disaster Management”, 2019-2020 (ongoing) under Major research project, RUSA 7.10Lakhs
23. Coordinator of project “Versatile Data Acquisition & signal processing platform for Seismic Application: Design of RF subsystem”, Sponsored by SMDP-C2SD, MeITy, India 2015-2020; extended to 2021 (ongoing), 136 Lakhs

### **Dr. Chandrima Mondal**

24. “Design of Frequency synthesizer, LNA and mixer at 2.45 GHz for seismic signal detection frontend”. In collaboration with IIT Kharagpur, MEITY, 136 Lacs, 2015-2020, Co-PI
25. “Advanced Gate, Channel and Source/Drain Materials for Future Nanoelectronic Devices”, RUSA 2.0, 8 Lacs, 2019-2020, PI

### **Dr. Divya Somvanshi**

26. Graphene and Two-Dimensional (2D) Transition Metal Dichalcogenides (TMDCs) Materials based Hybrid Photodetectors, DST, 35 Lakhs INR, 11 October, 2017 - 10 October 2022

### **3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)**

#### **Prof. Ananda Shankar Chowdhury**

1. “Some Mathematical Models for Computer Vision Problems”, TIFR Center for Applicable Mathematics, May 2019. (invited colloquium)
2. “A journey of computer vision using graphs, games, level sets and deep learning”, Mathematiques Image Applications (MIA) Laboratory, University of La Rochelle, France, June 2019, (invited talk)
3. “Computer Vision Pattern Recognition with Graphs, Level Sets and Deep Learning”, TEQIP-III Sponsored Short Term Course on Recent Trends in Machine Learning for Computer Vision and Image Analysis, NIT Durgapur, India, August 2019. (invited tutorial)
4. “Deep Learning Enhanced Computer Vision”, International Conference on Frontiers in Computing and Systems (COMSYS), Jalpaiguri, India, January 2020, (invited tutorial)
5. “Machine Learning for Computer Vision”, TEQIP-III Sponsored Short Term Course on Applications of Computational Intelligence in Text, Image and Sensor Data Processing, Jadavpur University, India, January 2020, (invited tutorial)
6. “Solving Problems in Computer Vision with Machine Learning and Level Sets”, Faculty Development Program, IEM Kolkata, India, February, 2020 (invited talk)

**Prof. Bhaskar Gupta**

7. One-day online Invited Lecture Talk programme organized by The IEEE EDS Kalyani Govt. Engg. College SB Chapter in association with Dept. of ECE, Kalyani Government Engineering College
8. Invited Talk on Analytical Modeling of Microstrip Traveling Wave Antennas at International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW- 2019), NIT Trichy, 23/05/2019
9. Invited talk on Analytical Modeling of Microstrip Traveling Wave Antennas at Fukuoka Institute of technology, Fukuoka, Japan on 20/02/2020
10. Invited talk on Electromagnetic Radiation Absorption in Indian Flora and Related Consequences: A Critical Issue for Sustainable Growth at Kumamoto University, Kumamoto, Japan on 21/02/2020
11. Invited talk on Electromagnetic radiation absorption in Indian flora and related consequences: a critical issue for sustainable growth , IEEE RADIO 2019, September 2019, Reunion island
12. Chaired a session in Seminar on Full-wave analysis and design of Dielectric Resonator Antennas, Date: March 13, 2020, Prof. Bratin Ghosh, IIT KGP, Seminar Room, Dept. of ETCE, Jadavpur University
13. Chaired a session in Seminar Talk delivered by Debdeep Sarkar, Post-doctoral Research Fellow, RMC Canada, Seminar Room, Dept. of ETCE, Jadavpur University
14. Chaired a session in Seminar on Method of Moments in Electromagnetics: Concepts and Practical Real-World Applications, January 14, 2020 Dr. Arkaprov Das, Co-founder at Simyog Technology Private Limited Seminar Room, Department of ETCE, Jadavpur University
15. Chaired a session in One Day Seminar On “Harmonising Engineering Education With Nature”, Date: 18 December 2019, Time: 7:30 AM to 8:30 PM, Demonstrator: Dr. Nemai Chandra Karmakar, Monash University, Australia
16. Chaired a session in IEEE MMT-S Mediterranean Microwave Symposium (MMS)2019 in Hammamet, Tunisia, on 1st November, 2019
17. Chaired a session in One Day Workshop on EM Educational Software – Introduction to TARANG, Date: 22 October 2019, Time: 01:00 PM to 5:00 PM, Demonstrator: Mr. Swapnil Gaul, NUMEREGION
18. Chaired a session in Doctoral Scholars’ Colloquium, Date: 14 September 2019, Time: 10:30 AM to 04:30 PM, No. of Technical Presentations on Ph. D. Works: 6, Judges: Prof. (Dr.) A K Mullick (Retd. IIT Kharagpur), Mr. Arijit Majumder (SAMEER, Kolkata)
19. Chaired a session in One Day Seminar on Microwave System Design, Date: 03 September 2019, Time: 03:00 PM to 05:00 PM, Speaker, Mr. Arijit Majumder (SAMEER, Kolkata), Technical lecture on “Design of Highly Sensitive Wide Dynamic Range Microwave Receiver: An Engineer’s Perspective”
20. Chaired a session in Young Professionals Colloquium Date: 18 April 2019, Time: 02:00 PM to 04:00 PM, Prof. (Dr.) Debasis Mitra (Department of ETCE, IEST Shibpur, Kolkata), Technical lecture on Electromagnetic Metamaterials and its application towards Antenna and Radar Engineering

**Prof. Iti Saha Misra**

21. Delivered WIE Invited talk at, InCAP2019 jointly organized by IEEE AP/MTT Societies and SAC-ISRO, held at Hotel Narayani Heights, Ahmedabad during 19-22 December, 2019. The Women-in-Engineering session is scheduled on the third day ie 21st afternoon from 14.00-16.00 hrs
22. Delivered an invited Keynote Speech in the International Symposium on 5G & Beyond for Rural-Upliftment, jointly with BIT SINDRI, IIT DHANBAD, IEEE 5G SUMMIT & 35th GISFI STANDARDIZATION SERIES MEETING (GSSM), on 8 February, 2020 at ISM Dhanbad, Conference Hall on the topic “Is 5G Ready for India? Some Application Perspective.”
23. Delivered an Invited Lecture on IoT based Heart Sound Detection and Analysis for awareness generation, IEEE sponsored National Conference on Emerging Trends on Sustainable Technology and Engineering Applications (NCETSTE 20) on 7 February, 2020 at Dr. B.C.Roy Engineering College, Durgapur



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24. Prof. Iti Saha Misra acted as the Session for WIE Special Lecture Session on 28 February 2020 at IEEE Conference CALCON -2020 held at Hotel Senses, Saltlake, Kolkata, India

### Prof. Mrinal Kanti Naskar

25. Conducted special classes on “Digital Signal Processing” under the “Twinning Activity” of TEQIP-III Project at T. I. T. Tripura during 25 - 27 April, 2019

### Prof. Sheli Sinha Chaudhuri

26. Delivered an invited lecture on “Image Thresholding and Robotic Vision” in the FDP Pedagogy of Electrical & Electronics Engg- Prevailing Problems & Prospective Solutions, organized by IEM, Kolkata, 24 February – 6 March, 2020
27. Acted as a session chair in the conference IEMENTech 2019, August 29-31, 2019. IEM, Kolkata
28. Acted as a session chair in the poster session of the conference IEMENTech 2019, sponsored by WIE, IEEE Kolkata section, 29-31 August, 2019

### Prof. Subir Kumar Sarkar

29. Delivered an IEEE Distinguished Lecture on “BiCMOS: A Current Trend in VLSI Design” in 10th IEEE EDS Mini-Colloquium on 28 February, 2020, organized by IEEE ED-NIST Student Branch Chapter, in association with Department of Electronics and Communication Engineering, NIST Berhampur
30. Delivered an IEEE Distinguished Lecture on “OFET based Devices and their Applications” on 9 September, 2019, organized by IEEE Student Branch Chapter of Kalyani Government Engineering College, in association with Department of Electronics and Communication Engineering, Kalyani Government Engineering College
31. Delivered an IEEE Distinguished Lecture on “Importance of Trust: When and Where”, on 12 April, 2019, organized by IEM IEEE COMSOC Student Chapter in association with the Department of Computer Science and Engineering, Institute of Engineering & Management, Gurukul Campus, Saltlake, Kolkata
32. Delivered an Invited talk on “Devices and VLSI Design : Issues and Challenges”, in two days seminar on Recent Trends and Challenges in Silicon and GaN Devices and Circuits during 27- 28 February 2020, organized by Department of ETC, P MEC, Berhampur, India
33. Delivered an Invited talk on “Trust Management in Wireless Self Organizing Networks” in 7th International Conference on Computers and Devices for Communications (CODEC-19) 19-20 December, 2019 organised by Institute of Radio Physics and Electronics, University of Calcutta, Kolkata, India
34. Delivered an Invited talk on “Transient Electronics: a Brief Study of the Materials and Devices” on 5 November 2019, organized at Heritage Institute of Technology, Kolkata, West Bengal, India
35. Delivered a keynote speech on “Good Practices and its Documentation for Improved Teaching-Learning in Winter School 2020” in three days program jointly organized by Department of Computer Science and Engineering (CSE) and Department of Electrical and Electronic Engineering (EEE) of University of Science and Technology Chittagong (USTC), Bangladesh during 26–28 January, 2020
36. Chaired the technical session in 7th International Conference on “Computers and Devices for Communications (CODEC-19)” on 19-20 December, 2019 organized by Institute of Radio Physics and Electronics, University of Calcutta in Hotel Taj Gateway, Kolkata, India

### Prof. Sudhabindu Ray

37. Delivered an invited lecture on “Mobile Communication and its Effects on Human body and Environment” on 24 April, 2019, organized at Elite Institute of Engineering & Management, Kolkata, West Bengal, India
38. Delivered an invited lecture on “Android Administration” on 3 April, 2019, organized at Budge Budge Institute of Technology, Kolkata, West Bengal, India
39. Delivered an invited lecture on “Effects of Wireless Communications and Green Tips for better future” on 28 June 2019, at the seminar “Earth Challenge: celebrating world environment day” jointly organized by Jadavpur University and FREED at ICCR, Kolkata, West Bengal, India

## Annual Report 2019-20

### Prof. Sudipta Chattopadhyay

40. Delivered a lecture on “Design Strategies of Hardware Efficient Multiplier-less FIR Filter” in 3-days Workshop on “Digital Image Processing and its Applications”, held in Tripura Institute of Technology (TIT), Agartala, during 26-28 October, 2019
41. Delivered a lecture on “Women Power in Engineering” as Chairperson of IEEE Women in Engineering, (WIE) Kolkata Section, in the one-day program on “Working Women Scaling New Peaks Overcoming Hurdles” held in Brainware Group of Institutions, on 4 April, 2019

### Dr. Sayan Chatterjee

42. “Advancement of transmission line for modern communication system”, delivered in FDP on “Microwave Techniques in Wireless Application” held in NIT Mizoram during 23-27 April, 2019
43. Chaired a session “Technical Session 2: Security Track” on 14 January in International Conference on Frontiers in Computing and Systems (COMSYS-2020), held during 13-15 January, 2020, at Jalpaiguri Government Engineering College, West Bengal
44. Chaired a session “Antenna and propagation -1” on 1 November, 2019 in IEEE MMT-S Mediterranean Microwave Symposium (MMS)2019 in Hammamet, Tunisia

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

#### Prof. Amit Konar

1. Attended “A Dynamical Phase Synchronization Based Approach to Study the Effects of Long-Term Alcoholism on Functional Connectivity Dynamics,” In International Conference on Pattern Recognition and Machine Intelligence, pp. 218-226, Springer, Cham, Tezpur, India, 17 December, 2019
2. Attended “Quantitative Analysis of Cognitive Load Test While Driving in a VR vs Non-VR Environment,” In International Conference on Pattern Recognition and Machine Intelligence, pp. 481-489. Springer, Cham, Tezpur, India, 17 December, 2019
3. Attended “Phase-Sensitive Common Spatial Pattern for EEG Classification,” In 2019 IEEE International Conference on Systems, Man and Cybernetics (SMC), pp. 3654-3659, Bari, Italy, 6 October, 2019
4. Attended “Relationship between Nash Equilibria and Pareto Optimal Solutions for Games of Pure Coordination,” In 2019 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), Organized by IIT Kanpur, Kanpur, pp. 1-7, 6 July, 2019
5. Attended “EEG-Induced Adaptation of Controller Parameter for Closed-Loop Position Control of the End-Effector in a Robot Arm,” In 2019 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), Organized by IIT Kanpur, Kanpur, pp. 8-15. IEEE, 6 July, 2019
6. Attended “Fuzzy Vector Quantization for Classification of Olfactory Stimuli from the Acquired Brain Signals,” In 2019 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), Organized by IIT Kanpur, Kanpur, pp. 16-23. IEEE, 6 July, 2019
7. Attended “Design of a Computationally Economical Image Classifier using Generic Features,” In 2019 IEEE Congress on Evolutionary Computation (CEC), pp. 2402-2409, New Zealand, 10 June, 2019
8. Attended “A Ranking Based Technique to Predict Protein Complexes,” in 2019 IEEE Congress on Evolutionary Computation (CEC), pp. 2529-2536, New Zealand, 10 June, 2019
9. Attended “Modified Selection and Search in Learning Automata Based Artificial Bee Colony in Noisy Environment,” in 2019 IEEE Congress on Evolutionary Computation (CEC), pp. 3173-3180, New Zealand, 10 June, 2019

#### Prof. Ananda Shankar Chowdhury

10. Attended Twelfth IAPR International Workshop on Graph-based Representations in Pattern Recognition (GbRPR), La Rochelle, France, June 2019

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### Prof. Chayanika Bose

11. Attended “Hybrid FSO/RF-FSO Systems over Generalized Malaga Distributed Channels with Pointing Errors”, IEEE 27th European Signal Processing Conference (EU-SIPCO), Coruna, Spain, September, 2019, [DOI:10.23919/EUSIPCO.2019.8902762]
12. Attended “Performance analysis of IG-FinFET and its application in Cascode Amplifier”, 7th International Conference on Computers and Devices for Communications (CODEC-19), Kolkata, December, 2019
13. Attended “One pot synthesis of MoS<sub>2</sub> nanoflakes decorated CuPc rod and its electrocatalytic activity towards oxygen reduction reaction”, ICNAN, VIT, Vellore, 29 November – 1 December, 2019
14. Attended “A comparative study of textile dye removal by advanced oxidation process under the presence of RGO enveloped CuPc nanotube”, IWPSD, Kolkata, 17-20 December, 2019
15. Attended “Simulation of efficient and stable Lead free Cesium perovskite solar cell”, IWPSD, Kolkata, 17-20 December, 2019
16. Attended “Link Quality of a RF-assisted Relayed FSO System under Turbulence, Pointing Error and Fading”, IEEE 4th International Conference on Computer, Electrical & Communication, Kolkata, January, 2020

### Prof. Iti Saha Misra

17. Attended the IEEE R10 Conference for Leadership Program at GOA, during 18-19 August, 2019
18. Attended the IEEE International Flagship Conference TenSymp 2019, 8-10 June, 2019 at Biswabanga Convention Centre, Kolkata
19. Attended IEEE Conference on Emerging Trends on Sustainable Technology and Engineering Applications (NCETSTEAM 20) on 7 February, 2020 at Dr. B.C.Roy Engineering College, Durgapur
20. Attended International Symposium on 5G & Beyond for Rural-Upliftment, at IIT-ISM Dhanbad. 8 February, 2020
21. Attended the IEEE Conference CALCON -2020, during 28-29 February, 2020, Hotel Senses, Kolkata

### Prof. P. Venkateswaran

22. Attended Keysight Technologies Academia Symposium, Hotel Gateway, Kolkata, 15 July, 2019
23. Attended “Emergence of Artificial Intelligence and Machine Learning”, Hotel The Park, Kolkata, 14 March, 2020

### Prof. Sheli Sinha Chaudhuri

24. Participated and Presented the Research paper, “Adaptive Fluorescence Pixels Control in Visibility Refinement through CSA,” IEEE Image Processing Tools and Applications, Istanbul, 5–8 November, 2019

### Prof. Subir Kumar Sarkar

1. Attended as invited speaker to deliver an invited talk on “Devices and VLSI Design : Issues and Challenges” in two days seminar on Recent Trends and Challenges in Silicon and GaN Devices and Circuits during 27-28 February, 2020 organized by Department of ETC, PMEC, Berhampur, India
2. Attended as keynote speaker to deliver a keynote speech on “Good Practices and its Documentation for Improved Teaching-Learning in Winter School 2020” in three days program during 26–28 January, 2020 jointly organized by Department of Computer Science and Engineering (CSE) and Department of Electrical and Electronic Engineering (EEE) of University of Science and Technology Chittagong (USTC), Bangladesh
3. Attended as Invited speaker to deliver an invited talk on “Trust Management in Wireless Self Organizing Networks” and Chairperson of the technical session in 7th International Conference on Computers and Devices for Communications (CODEC-19) 19-20 December, 2019 organized by Institute of Radio Physics and Electronics, University of Calcutta, Kolkata, India
4. Attended a seminar as Invited speaker to deliver an invited talk on “Transient Electronics: a Brief Study of the Materials and Devices” on 5 November, 2019, organized by Heritage Institute of Technology, Kolkata, West Bengal, India

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### Prof. Sudipta Chattopadhyay

5. Participated in IEEE WIE International Leadership Summit as Chairperson, IEEE WIE Kolkata Section, held in Bangalore during 30-31 August, 2019
6. Participated and Presented the research paper entitled “Enhancement of Secrecy Throughput Performance in a Cooperative Network with Interference-assisted Energy Harvesting”, authored by Chandrima Thakur and Sudipta Chattopadhyay, in IEEE 2019 International Symposium on Advanced Electrical and Communication Technologies (ISAECT), held in University of Rome, Tor Vergata, during 27-29 November, 2019, Rome, ITALY

### Dr. Jaydeb Bhaumik

7. Presented a paper on “Fast and Power Efficient SEC-DED and SEC-DED-DAEC Codes in IoT based Wireless Sensor Networks,” IEEE Region 10 Conference (TENCON 2019), Hotel Grand Hyatt, Kochi, India, 17-20 October, 2019

### Dr. Sayan Chatterjee

8. Participated in Startup Bridge to Germany an event of GINSEP- Neotech Hub on 8 January 2020 at Neotech Hub
9. Invited as delegates in SAKURA SCIENCE Exchange Program from 26 January –1 February, 2020 in Tokyo, Japan, organized as Japan Science and Technology Agency (JST)
10. Participated in RESPOND workshop at SAC, ISRO, Ahmedabad from 26–28 November, 2019
11. Participated in Product Design and Conceptualization Workshop at Campus - Intellectual Property rights and Product development in collaboration with TEQIP-III, JU and PHD Chamber of Commerce and Industry on 15 November, 2019 at K.P.Basu memorial hall, Jadavpur University
12. Participated in “Simultaneous Control of Side Lobe Level and Beamwidth in Planar Array Antenna using Restricted Search Evolutionary Algorithms”, IEEE Asia-Pacific Microwave Conference (APMC), Singapore, 10 - 13 December, 2019
13. Participated in “Dielectric Rectangular Slab Antennas featuring Dual Frequency and Better Impedance Matching” IEEE Asia-Pacific Microwave Conference (APMC), Singapore, 10-13 December, 2019
14. Participated in “Compact Hairpin-Line Bandpass Filter with Harmonic Suppression by Periodic Grooves”, 19th Mediterranean Microwave Symposium (MMS 2019), 31 October–2 November 2019, Hammamet, Tunisia

### Dr. Chandrima Mondal

15. Attended “Reduction of Harmonic Distortion of 14-nm InAs quantum well nMOSFET for high DC to AC conversion and high voltage gain,” 4th IEEE Electron Devices Technology and Manufacturing (EDTM) Conference Proceedings of Technical Papers, Malaysia, pp. 28-31, March, 2020
16. Attended “Analysis of Buried Oxide Variability in GeOI<sub>p</sub>MOSFETs for Digital Performance,” in Proceedings of 6th International Conference on Microelectronics, Circuits and Systems (MICRO 2019), Amity University Kolkata, pp. 111-115, July 2019
17. Attended “Effect of temperature on digital and analog performance of InAs Quantum Well nMOSFETs,” in Proc. 6th International Conference on Microelectronics, Circuits and Systems (MICRO 2019), Kolkata, pp. 72-77, July 2019

### Dr. Divya Somvanshi

18. Attended “Access doping of 2D MoS<sub>2</sub> monolayers: Early fabrication process steps”, Micro Nano Annual User Meeting 2019 @ Israel’s Micro Nano Fabrication & Printing, Haifa, Israel, 13 June 2019
19. Attended “Optical characterization of n-MoS<sub>2</sub> thin film coated on p-Si substrates for multifunctional heterojunction device applications (SCAN-31)”, SCAN (Synthesis, Characterization and Application of Nanomaterials), November 1- 2, 2019 at Hotel Novotel, Kolkata

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20. Attended “Electrical characteristics of n-MoS<sub>2</sub>/p-Si heterojunction diode”, IWPSD (XXth International Workshop on Physics of Semiconductor Devices) 2019, 17-20 December, 2019 at Novotel Hotel and Residences, Kolkata, India

### 3. C. Seminar/Workshop/Conference/Symposium Organized:(Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

#### Prof. Iti Saha Misra

1. Organized the IEEE Calcutta Conference under Kolkata Section, CALCON-2020 as the Conference Chair, during 28-29 February, 2020. Hotel Senses, Saltlake, Kolkata
2. Organized one day IEEE technical lecture session at the Department of ETCE, JU on February 21, 2020, Room No. T-3-7, Time 12.00- 2.00 pm. The Technical Lecture Delivered by Prof. Neelesh Mehta of IISC Bangalore. Prof. Mehta also visited the Broadband Wireless Communication Lab at Annexe Building

#### Prof. Sheli Sinha Chaudhuri

3. Organized a TEQIP III sponsored 3-day FDP on “Digital Image Processing and its Applications”, in TIT, Agartala, 26-28 October, 2019

#### Prof. Subir Kumar Sarkar

4. Organized IEEE sponsored International seminar cum Research Colloquium on “MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019)” during 27-28 December, 2019 in Jadavpur University as General chair

#### Prof. Sudipta Chattopadhyay

5. Organized a Panel Discussion under Women in Engineering (WIE) Track on “Are women still suffering from visibility problem in workplace?” on 07 June, 2019, under IEEE Region 10 Symposium (TENSYP 2019) held at Kolkata during 05-07 June, 2019 as Chairperson of IEEE Women in Engineering, (WIE) Kolkata Section

#### Dr. Jaydeb Bhaumik

6. Acted as a Technical Program Committee Member, ICMC 2020, Department of Computer Applications, Sikkim University, Gangtok, Sikkim, India, 23-25 September, 2020

#### Dr. Sayan Chatterjee

7. Organized Startup & MSME working in Embedded Systems in West Bengal in collaboration with TEQIP-III, JU and Nexgenetics Pvt Ltd on 6 February, 2020 at K.P.Basu memorial hall, Jadavpur University
8. Acted as organizing coordinator for the programme titled “Entrepreneurship Summit 2020” (28 February–1 March, 2020) under Graduate employability of TEQIP in Jadavpur University where students are the primary stakeholders of the event
9. Acted as organizing coordinator of Internal Hackathon of Smart India Hackathon and HPOC of Smart India Hackathon 2020 on 6 January, 2020 in Jadavpur University
10. Acted as organizing coordinator for the programme titled “Hackathon Hacknpitch 2020” on 29 February, 2020 in Jadavpur University under Graduate employability of TEQIP. UG students are involved to submit their solution after continuous 30 hours of hackathon
11. Acted as organizing coordinator for the programme titled “Bootcamp 2020” on 20 February in Jadavpur University, under Graduate employability of TEQIP where students are the primary stakeholders of the event
12. Acted as organizing coordinator of the programme ‘Launch X’ on 5-6 February, organized in Jadavpur University by JU Ecell for the event E-summit 2020
13. Acted as organizing coordinator for the programme titled “Eweekend 3.0” in September 2019 in Jadavpur University under Graduate employability of TEQIP



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14. Acted as organizing coordinator for the programme titled “Green business idea competition” jointly sponsored by TEQIP and Climate Launchpad in 10 August, 2019 in Jadavpur University
15. Acted as Programme committee Track Chair of VLSI/ system/ IOT track of the conference entitled “International Conference on Frontiers in Computing and System (COMSYS 2020) from 13 -15 January, 2020 at Jalpaiguri Govt. Engineering College
16. Acted as Technical Programme Committee Co-Chair of IEEE R-10 annual conference TENSYP-2019 7 -9 June, 2019 at Kolkata

### 4. A. Books/Monographs etc. Published:(Name of the Teacher, Name of the Book, Name of the Publisher)

#### Books:

##### Prof. Amit Konar

1. Pratyusha Rakshit and **Amit Konar** “Principles in Noisy Optimization” Springer, April 2019

#### Book Chapters:

##### Prof. Mrinal Kanti Naskar

1. Saha M., **Naskar M.K.**, Chatterji B.N., Advanced Wavelet Transform for Image Processing—A Survey. In: Mandal J., Bhattacharya K., Majumdar I., Mandal S. (eds), Information, Photonics and Communication. Lecture Notes in Networks and Systems, vol 79. Springer, Singapore, pp. 185-194, October 2019
2. Biswas, R. N., Mitra, S. K. & **Naskar M. K.**, Energy Efficient and Secure Localization in Wireless Sensor Networks: An Approach Through Anchor Mobility Control. In Shandilya, S., Shandilya, S. K., Thakur, T. & Nagar, A. K. (Eds.), Novel Advancements in Electrical Power Planning and Performance. Hershey, PA: Information Science Reference, an imprint of IGI Global, pp. 250-282, November 2019

##### Prof. P. Venkateswaran

3. S. Dhabal, R. Chakrabarti, and **P. Venkateswaran**, “Design of Higher Order Quadrature Mirror Filter Bank Using Simulated Annealing-Based Multi-swarm Cooperative Particle Swarm Optimization”, Advances in Intelligent Systems and Computing, Springer, Vol. 727, pp. 1-10, 2019
4. A. Banerjee, A. Nilhani, S. Dhabal, and **P. Venkateswaran**, “A Novel Sound Source Localization Method using a Global-best Guided Cuckoo Search Algorithm for Drone-based Search and Rescue Operations”, Chapter No.15, Unmanned Aerial Systems: Theoretical Foundation and Applications, Book Series: Advances in Nonlinear Dynamics & Chaos, Elsevier, February 2020. (Accepted)

##### Prof. Subir Kumar Sarkar

5. Bijoy Goswami, Suttanni Bhowmick, Arindam Haldar, Goutika Paul, Debodipta Basak and **Subir Kumar Sarkar**, “Implementation of L shaped dielectric double metal dual gate TFET towards improved performance characterized and reduced ambipolarity” 2nd National Conference IPC 2019 at B.P. Poddar Institute of Management and Technology Kolkata West Bengal, 1-3 February, 2019. Published as book chapter in Networks and systems, in Information, Photonics and Communication in Lecture Notes , pp-21-29, Vol.79, 978-981-32-9453-0, January, 2020

##### Dr. Divya Somvanshi

6. **Divya Somvanshi** and S. Jit, Transition metal dichalcogenides based 2D nano-heterostructures for Optoelectronic Applications, Two-dimensional nano-scale heterostructures materials: Synthesis, Properties, and Applications, Elsevier (December 2019)



**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals)**  
(Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

**Journals:**

**Prof. Amit Konar**

1. Mousumi Laha, **Amit Konar**, Pratyusha Rakshit, and Atulya. K. Nagar, "Exploration of Subjective Color Perceptual-Ability by EEG-Induced Type-2 Fuzzy Classifiers", *IEEE Transactions on Cognitive and Developmental Systems*, vol. 12, no. 3, pp. 618-635, 12 December, 2019
2. Sriparna Saha, Monalisa Pal, and **Amit Konar**, "Triangular membership function based real-time gesture monitoring system for physical disorder detection," *Computing and Visualization in Science*, vol. 22, no. 1-4, pp. 1-14, 1 December 2019
3. Biswadeep Chakraborty, Lidia Ghosh, and **Amit Konar**, "Designing Phase-Sensitive Common Spatial Pattern Filter to Improve Brain-Computer Interfacing," *IEEE Transactions on Biomedical Engineering*, vol. 67, no. 7, pp. 2064-2072, 19 November, 2019
4. Lidia Ghosh, Pratyusha Rakshit, and **Amit Konar**, "Working memory modeling using inverse fuzzy relational approach", *Applied Soft Computing*, vol. 83, p. 105591, 1 October, 2019
5. Lidia Ghosh, **Amit Konar**, Pratyusha Rakshit, and Atulya K. Nagar, "Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network", *IEEE Transactions on Emerging Topics in Computational Intelligence*, vol. 4, no. 4, pp. 571-588, 25 September, 2019
6. Reshma Kar, Pratyusha Rakshit, **Amit Konar**, and Aruna Chakraborty, "Uncertainty Management by Feature Space Tuning for Single-Trial P300 Detection", *International Journal of Fuzzy Systems*, vol. 21, no. 3, pp. 916-929, 4 Apr. 2019

**Prof. Ananda Shankar Chowdhury**

7. R. Roy, T. Chakraborti, **A.S. Chowdhury**: A Deep Learning-Shape Driven Level Set Synergism for Pulmonary Nodule Segmentation, *Pattern Recognition Letters* 123 (2019), 31 - 38. (IF: 3.255)
8. J. E. Vargas-Munoz, **A. S. Chowdhury**, E. B. Alexandre, F. L. Galvao, P. A. V. Miranda, A. X. Falcao: An Iterative Spanning Forest Framework for Superpixel Segmentation, *IEEE Transactions on Image Processing* 28(7) (2019), 3477 - 3489. (IF: 9.34)
9. A. Mukherjee, J. Sil, A. Sahu, **A.S. Chowdhury**: A Bag of Constrained Informative Deep Visual Words for Image Retrieval, *Pattern Recognition Letters* 129 (2020), 158 - 165. (IF: 3.255)
10. A. Sikdar, **A. S. Chowdhury**: Scale-Invariant Batch-Adaptive Residual Learning for Person Re-identification, *Pattern Recognition Letters* 129 (2020), 279 - 286. (IF: 3.255)
11. A. Sahu, **A. S. Chowdhury**: Multiscale Summarization and Action Ranking in Egocentric Videos, *Pattern Recognition Letters* 133 (2020), 256 - 263. (IF: 3.255)
12. A. Sahu, **A.S. Chowdhury**: Summarizing Egocentric Videos using Deep Features and Optimal Clustering, *Neurocomputing* 398 (2020), 209 - 221. (IF: 4.438)

**Prof. Bhaskar Gupta**

13. Pal J, Patra K, **Gupta B.**, A TM03 mode reduced side lobe high-gain printed antenna array in K band for UDN and IoT applications in 5G." *Int J RF Microw Comput Aided Eng.*, vol. 30. No.11 (<https://doi.org/10.1002/mmce>)
14. R. Ghosal, Sudipta Maity, **Bhaskar Gupta** and Arijit Majumder, "Analytical Prediction of Resonant Frequencies of Annular Stacked Dielectric Resonator Antennas", accepted for publication to *International Journal of RF and Microwave Computer-Aided Engineering* (Taylor & Francis) on March 12, 2020 (<https://doi.org/10.1002/mmce.22237>)

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15. Sudipta Maity and **Bhaskar Gupta**, “Analytic Evaluation of Input Impedance of an Equilateral Triangular Dielectric Resonator Antenna”, accepted for publication to IETE Journal of Research (Taylor & Francis) on October, 28, 2019 (<https://doi.org/10.1080/03772063.2019.1684846>)
16. Sudipta Maity, Malay Gangopadhyaya and **Bhaskar Gupta**, “Theory and Experiment on Horizontally Inhomogeneous Rectangular Microstrip Antenna”, IET Microwaves, Antennas & Propagation, vol. 13, no. 3, pp. 352 – 359, February 2019 (<https://doi.org/10.1049/iet-map.2018.5116>)
17. Suman Pradhan, **Bhaskar Gupta** “Multiport Network Model of Double-stub Loaded Microstrip Ring Antenna for Tri-band Operation”, published in Radio-engineering Journal, Vol. 28, No. 3, September, 2019.

### Prof. Chayanika Bose

18. A. Das, B. Bag, **C. Bose** and A. Chandra “Free space optical links over Málaga turbulence channels with transmit and receive diversity”, Optics Communications (Elsevier), Vol.456, pp.124591, February, 2020 [<https://doi.org/10.1016/j.optcom.2019.124591>, September 2019]
19. M. Samanta, M. Mukherjee, U. K. Ghorai, **C. Bose** and K. K. Chattopadhyay, “Room temperature processed copper phthalocyanine nanorods: A potential sonophotocatalyst for textile dye removal” Materials Research Bulletin, Vol.123, pp. 110725, December, 2020
20. A. Chattopadhyay, A. Kundu, C. K. Sarkar, **C. Bose**, “Two-dimensional modeling of the underlap graded-channel FinFET”, Journal of Computational Electronics, vol 19, no. 2, pp.688 - 699, February, 2020, [doi: <https://doi.org/10.1007/s10825-020-01458-w>]
21. A. Chattopadhyay, **C. Bose** and C. K. Sarkar, “Compact Modeling of Graded N-Channel Independent Gate FET with Underlaps, Spacer and S/D Straggle for Low Power Application” Silicon, March 2020. [doi: <https://doi.org/10.1007/s12633-020-00424-2>]

### Prof. Iti Saha Misra

22. Tamal Chakraborty, **Iti Saha Misra**, “A novel three-phase target channel allocation scheme for multi-user Cognitive Radio Networks”, Computer Communications Elsevier, Volume 154, February 2020, pp. 18-39, ISSN 0140-3664, <https://doi.org/10.1016/j.comcom.2020.02.026> (SCI Journal)
23. Duppala, Venkata R., **Iti Saha Misra**, and Salil K. Sanyal. “Design of digital signal processor based adaptive beamformer using hybrid residual least mean square algorithm for improved performance.” *International Journal of RF and Microwave Computer Aided Engineering*, vol. 30, issue 3, p.e22073, March 2020. (SCI Journal)
24. Sudipta Dey, and **Iti Saha Misra**. “CATECAS: a content-aware transmission efficiency based channel allocation scheme for cognitive radio users with improved QoE.” *Telecommunication Systems*, Springer, January 2020, pp. 1-15.(SCI Journal)
25. Tanumay Manna, and **Iti Saha Misra**, “Design, implementation and analysis of cognitive radio enabled intelligent WBAN gateway for cost-efficient remote health monitoring,” August, 2019, *Physical Communication, Elsevier*, vol. 35 (100713), <https://doi.org/10.1016/j.phycom.2019.100713> (SCI Journal)

### Prof. Manotosh Biswas

26. **M. Biswas**, and M. Sen, “Fast and accurate model for a coax-fed rectangular patch antenna with varying aspect ratio, feed location and substrate electrical parameters,” *Journal of Electromagnetic Waves and Applications*, vol. 33, 2019, pp. 428-453

### Prof. Mrinal Kanti Naskar

27. Hasanujjaman, U Biswas, **M.K Naskar**, “Controlled hardware architecture for fractal image compression”, *International Journal of Nano and Biomaterials* 9 (1-2), pp. 50-63, January, 2020
28. R.B Roy, A. Roy, A. Mukherjee, **M.K Naskar**, “Smart healthcare model with fog-cloud network architecture”, *International Journal of Hybrid Intelligence* 1 (2-3), pp. 99-117, November, 2019

**Prof. P. Venkateswaran**

29. S. Dhabal and **P. Venkateswaran**, “An improved global-best-driven flower pollination algorithm for optimal design of two-dimensional FIR filter”, *Soft Computing (Springer)*, Vol. 23, No. 18, 2019, pp. 8855-8872. <https://doi.org/10.1007/s00500-018-3484-3>. (IF: 3.050)
30. S. Dhabal and **P. Venkateswaran**, “An Improved Global-Best-Guided Cuckoo Search Algorithm for Multiplierless Design of Two-Dimensional IIR Filters”, *Circuits, Systems, and Signal Processing (Springer)*, Vol. 38, No. 2, 2019, pp. 805-826 (IF: 1.681) (citation: 1)
31. R. Nandi, K. Mathur and **P. Venkateswaran**, “Electronically tunable immittances with applications to LP, BP, HP filter and VCO implementation”, *International J. of Electronics Letters (UK)*, pp. 1-11, September, 2019. DOI: 10.1080/21681724.2019.1672800
32. K. Mathur, **P. Venkateswaran** and R. Nandi, “Voltage-variable inductor based linear voltage controlled quadrature oscillator implementation,” *IEICE Electronics Express (Japan)*, vol. 17(5), pp.1-4, January, 2020. DOI: 10.1587/elex.17.20190738
33. S. Dhabal, R. Chakrabarti, N. S. Mishra, and **P. Venkateswaran**, “An Improved Image Denoising Technique using Differential Evolution based Salp Swarm Algorithm”, *Soft Computing (Springer)*, 2020. (Accepted) (IF: 3.050)

**Prof. Sheli Sinha Chaudhuri**

34. Sangita Roy, **Sheli Sinha Chaudhuri**, WLMS-based Transmission Refined Self-Adjusted No Reference Weather Independent Image Visibility Improvement, *IETE Journal of Research*, September 2019, “doi.org/10.1080/03772063.2019.1662335
35. Sriparna Banerjee and **Sheli Sinha Chaudhuri**, “Novel Total Contribution Score and Fuzzy Entropy based two-stage selection of FC, ReLU and Inverse ReLU features of multiple Convolution Neural Networks for erythrocytes detection”, *IET Computer Vision*, volume 13 (7) November 2019, pp 640-650, doi: 10.1049/iet-cvi.2018.5545.

**Prof. Subir Kumar Sarkar**

36. Priyanka Saha, Pritha Banerjee, Dinesh Kumar Dash and **Subir Kumar Sarkar**, “Interface Trap Charge Induced Threshold Voltage Modeling of WFE High-K SOI MOSFET”, *Silicon, Springer*, doi.org/10.1007/s12633-020-00386-5, January, 2020, pp.2893-2900
37. Rounak Dutta and **Subir Kumar Sarkar**, “Analytical Modeling and Simulation based Optimization of Broken Gate TFET Structure for Low Power Applications” in the *IEEE Transactions on Electron Devices*, *IEEE Transactions ON Electron Devices*, Vol. 66, No. 8, pp.3513-3520, August, 2019
38. Dinesh Kumar Dash, Priyanka Saha and **Subir Kumar Sarkar**, “3-D Analytical Modeling of Triple Metal Tri-Gate Graded Channel High-k SON TFET for Improved Performance” *Silicon, Springer* vol. 12, pp-2041-2052, DOI: 10.1007/s12633-019-00268-5, December 2019
39. Subhpratim Nath, Anup Dey, Prithviraj Pachal, Saikat Ray, Jamuna Kanta Sing and **Subir Kumar Sarkar**, “Perforanace analysis of Gas Sensing Device and corresponding IoT Framework in Mines” *Microsystem Technologies, Springer*, doi.org/10.1007/s00542-019-04621-x, pp.-not included in any vol. and issue till date, September, 2019
40. Priyanka Saha, Dinesh Kumar Dash and **Subir Kumar Sarkar**, “Nanowire Reconfigurable FET as Biosensor: Based on Dielectric Modulation Approach”, *Solid State Electronics, Elsevier*, doi. 10.1016/j.sse.2019.107637, pp.107637(1)- (9), August 2019
41. Bikram Biswas, Anup Dey, Sutanni Bhowmick, Mandira Biswas, Subhashis Roy and **Subir Kumar Sarkar**, “Capacitive Multilayered Bio-Sensor Based on Dielectric Modulation towards Sensing of Biomolecules” *Sensor Letters*, Vol. 17, no. 9, pp. 701-703, September 2019
42. Dinesh Kumar Dash, Priyanka Saha and **Subir Kumar Sarkar**, “Analytical Modeling of Dielectric Engineered Strained DMDG-TFET”, *IET Circuits, Devices & Systems*, DOI: 10.1049/iet-cds.2018.5293, pp.1039-1048, June 2019

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43. Bikram Biswas, Anup Dey, Subhashis Roy and **Subir Kumar Sarkar**, “Fabrication of a  $WO_3$  Conductometric Activated Thin Film Sensor for Resistance-to-frequency Conversion Based Sensing Application”, *IETE Journal of Research*, Taylor & Francis, DOI: 10.1080/03772063.2019.1615387, pp.-not included in any vol. and issue till date-, May 2019
44. Debadipta Basak, Koelgeet Kaur and **Subir Kumar Sarkar**, “Active biquad tunable filter design”, *Analog Integrated Circuits and Signal Processing*, Springer, DOI: 10.1007/s10470-019-01457-3, pp.269-277, May 2019
45. Disha Bhattacharjee, Bijoy Goswami, Dinesh Kumar Dash, Ayan Bhattacharya and **Subir Kumar Sarkar**, “Analytical Modelling and Simulation of Drain Doping Engineered Splitted Drain Structured TFET and its Improved Performance in Subduing Ambipolar Effect”, *IET Circuits, Devices & Systems*, DOI: 10.1049/iet-cds.2018.5261, pp.888-895, May 2019
46. Priyanka Saha and **Subir Kumar Sarkar**, “Drain current modeling of proposed Dual Material Elliptical Gate-All-Around Heterojunction TFET for enhanced device performance”, in *Superlattices and Microstructures*, Elsevier, DOI: 10.1016/j.spmi.2019.04.022, pp.194-207, April 2019

### Prof. Sudhabindu Ray

47. S. B. Belamgi, and **Sudhabindu Ray**, Broadband Rectenna with Full-wave Rectification, *IUP Journal of Electrical and Electronics Engineering*, ISSN: 0974-1704, Vol. XIII, Issue 1-7-18, January, 2020
48. S. B. Belamgi, and **Sudhabindu Ray**, Broadband and Efficient Full Wave Rectenna for Wireless Energy, *International Journal of Recent Technology and Engineering*, November, 2019, Vol. 8, Issue 4-395-399

### Prof. Sudipta Chattopadhyay

49. Prabhat Kumar Panda, **Sudipta Chattopadhyay**, “A Secure Mutual Authentication Protocol for IOT Environment”, *Journal of Reliable Intelligent Environments*, Springer, (Impact Factor: 1.610) DOI: 10.1007/s40860-020-00098-y, vol. 6, issue 2, pp. 79-94, January 2020
50. Subhabrata Banerjee and **Sudipta Chattopadhyay**, “Superposition modulation–based new structure of four-dimensional turbo code (4D-TC) using modified interleaver and its application in WiMAX & LTE systems”, *Personal and Ubiquitous Computing*, Springer, (Impact Factor: 2.212) DOI: 10.1007/s00779-019-01295-0, vol. 23, issue 5-6, pp. 943-959, November 2019
51. Subhabrata Banerjee and **Sudipta Chattopadhyay**, “Performance Analysis of Four Dimensional Code (4D-TC) using Moment Based Simplified Augmented State Diagram (MSASD) Approach: Extension to LTE System”, *Wireless Personal Communications*, Springer, (Impact Factor: 1.019) DOI: 10.1007/s11277-019-06510-y, vol. 108, issue 4, pp. 2077-2102, October 2019

### Dr. Jaydeb Bhaumik

52. T. Sinha and **J. Bhaumik**, “Design of Computationally Efficient Sharp FIR Filter Utilizing Modified Multistage FRM Technique for Wireless Communication Systems,” *Journal of Electronic Science and Technology*, vol. 17, no. 2, pp. 185-192, June 2019
53. T. Hassan, J. Samanta and **J. Bhaumik**, “FPGA and ASIC Implementation of Different Finite Field Multipliers for Forney Block,” *Journal of Active and Passive Electronic Devices*, Old City Publishing, vol. 14, no. 2-3, pp. 157-171, September 2019
54. P. Pal, B. Jana and **J. Bhaumik** “Robust Watermarking Scheme for Tamper Detection and Authentication Exploiting CA”, *IET Image Processing*, vol. 13, no. 12, pp. 2116–2129, October 2019

### Dr. Sayan Chatterjee

55. Tarun Kumar Das, **Sayan Chatterjee**, “Spurious harmonic suppression in compact coupled-line bandpass filter with asymmetric perturbations”, *International Journal of Electronics*, pp. 576-595, Volume 107, 2020
56. Souma Guha Mallick, Arun kumar Gande, Bijit Biswas, **Sayan Chatterjee**, D.R.Poddar, “A planar eight-way compact substrate integrated waveguide based radial power divider with broadband performance”, *Microwave Opt. Technology Lett*, 2019, pp. 1-7



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57. Amit Mondal, Sikha Bandyopadhyay, Ashok Kumar Mondal, **Sayan Chatterjee**, “Evaluation of New Acid Composition for Low Optical Reflectance Texturization of Multicrystalline Silicon Wafer for Solar Cell”, *IEEE Journal of Photovoltaics*, Vol 9, No. 4, pp.951-956, July 2019
58. Sourav Das Chowdhury, Bhaswar Dutta Gupta, **Sayan Chatterjee**, Ranjan Sen, Mrinmay Pal, “Rogue waves in a linear cavity Yb-fiber laser through spectral filtering induced pulse instability”, *Optics letters*, Volume 44, Issue 9, pp. 2161-2164, 2019

### Dr. Chandrima Mondal

59. J. Paul, **C. Mondal** and Abhijit Biswas, “Suppression of Buried Oxide Induced Variability on Digital Performance of GeOIpMOSFETs using Substrate Bias Scheme,” *Microsystem Technologies*, pp.1605-1611, November 2019
60. S. Dasgupta, **C. Mondal** and A. Biswas, “Role of grooving angle of 14-nm InAs quantum well for improvement of analog/RF and linearity performance,” *IET circuits Devices and Systems*, pp.1-7, October, 2019
61. S. Dasgupta, **C. Mondal** and A. Biswas, “Effect of temperature and channel thickness on digital and analog performance of InAs Quantum Well nMOSFETs,” *Microsystems Technologies*, pp.1-7, October, 2019.

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85. Moumita Das, Swarup Dandapat, Shrabanti Das, **Sayan Chatterjee**, “Design of a Novel High-Q Active Inductor at 2.5 GHz in CMOS 180nm Technology”, 7th international conference on computers and device for communication.(CODEC), Kolkata, India, 19 December, 2019
86. **S. Chatterjee**, and T. K. Das, “Compact Hairpin-Line Bandpass Filter with Harmonic Suppression by Periodic Grooves”, Proceedings of 19th Mediterranean Microwave Symposium (MMS 2019), November, 2019, Hammamet, Tunisia
87. Moumita Das, Posiba Mostafa and **Sayan Chatterjee**, “A comparison study of on-chip and optimized gate inductor of an LNA”, 2nd International conference on Innovations in Electronics, Signal processing and Communication (IESC- 2019), pp.66-71, pp 80-84, March, 2019
88. Sohini Banerjee, Malay Gangopadhyay, Shreyasi Ghosh, Somnath Roy, Tuhin Majumder, Manoj Ghosh, Rajatava Mukherjee, Pracheta Chatterjee, Amartya Banerjee, **Sayan Chatterjee**, “Theoretical Investigations on Input Characteristics of a CPW-Fed Yagi-Inspired Strip Monopole Antenna”, IEEE International Electromagnetics and Antenna Conference (IEMANTENNA), 2019

### Dr. Chandrima Mondal

89. S. Dasgupta, **C. Mondal** and A.Biswas, “Reduction of Harmonic Distortion of 14-nm InAs quantum well nMOSFET for high DC to AC conversion and high voltage gain,” 4<sup>th</sup> IEEE Electron Devices Technology and Manufacturing (EDTM) Conference Proceedings of Technical Papers, Malaysia, pp. 28-31, March, 2020
90. J. Paul, **C. Mondal** and Abhijit Biswas, “Analysis of Buried Oxide Variability in GeOI<sub>p</sub>MOSFETs for Digital Performance,” in Proceedings of 6th International Conference on Microelectronics, Circuits and Systems (MICRO 2019), Amity University Kolkata, pp. 111-115, July, 2019
91. S. Dasgupta, **C. Mondal** and A. Biswas, “Effect of temperature on digital and analog performance of InAs Quantum Well nMOSFETs”, in Proc. 6th International Conference on Microelectronics, Circuits and Systems (MICRO 2019), Kolkata, pp. 72-77, July, 2019

### Dr. Divya Somvanshi

92. Emanuel Ber, **D. Somvanshi**, E. Yalon, Access doping of 2D MoS<sub>2</sub> monolayers: Early fabrication process steps, Micro Nano Annual User Meeting 2019 @ Israel’s Micro Nano Fabrication & Printing, Haifa, Israel, 13 June, 2019
93. Sayantika Chowdhury, P. Venkateswaran and **D. Somvanshi**, Optical characterization of n-MoS<sub>2</sub> thin film coated on p-Si substrates for multifunctional heterojunction device applications (SCAN-31), SCAN (Synthesis, Characterization and Application of Nanomaterials), 1- 2 November, 2019 at Hotel Novotel, Kolkata
94. Sayantika Chowdhury, P. Venkateswaran and **D. Somvanshi**, Electrical characteristics of n-MoS<sub>2</sub>/p-Si heterojunction diode, IWPSD (XX<sup>th</sup> International Workshop on Physics of Semiconductor Devices) 2019, December, 17-20, 2019 at Novotel Hotel and Residences, Kolkata, India

### Prof. Bhaskar Gupta and Dr. Sayan Chatterjee

95. Samik Chakraborty, Ayona Chakraborty, **Bhaskar Gupta**, **Sayan Chatterjee**, “Dielectric Rectangular Slab Antennas featuring Dual Frequency and Better Impedance Matching”, Asia Pacific Microwave Conference(APMC), Singapore, 10-13 December, 2019



## 5. Collaborative Programmes:

### Prof. Amit Konar

1. **Prof. Amit Konar** had academic/research collaborations with Prof. Atulya K. Nagar, Pro-Vice-Chancellor of Liverpool Hope University, Liverpool, UK during 1 April, 2019–31 March, 2020
2. **Prof. Amit Konar** had academic/research collaborations with Prof. Anca Ralescu, Dept. of Electrical Engg. and Computer Science, University of Cincinnati, USA during 1 April, 2019–31 March, 2020

### Prof. Ananda Shankar Chowdhury

3. Hosted Prof. Sudeep Sarkar from University of South Florida, USA for an invited talk, November, 2019
4. Hosted Prof. Kannappan Palaniappan from University of Missouri, USA for an invited talk, January, 2020
5. Hosted Prof. Dilip Prasad and Prof. Krishna Agarwal from The Arctic University of Norway for invited talks, January, 2020
6. Continued research collaboration with Dr. Enrico Grisanand Dr. Natascia Tiso from University of Padova, Italy in the area of Zebrafish Imaging
7. Initiated research collaboration with Dr. Venky Krishnan from Center for Applicable Mathematics, TIFR in the area of Image/Video Deblurring
8. Initiated research collaboration with Dr. Mona Tewari, Institute of Neuroscience, Kolkata in the area of Computational Brain Imaging

### Prof. Bhaskar Gupta

9. National Symposium/ Workshop on **Applications of Engineering and Technology towards Sustainable Growth** (The Event is a curtain-raiser of World Environment Day Programme) in collaboration with Vivekananda Institute of Environment & Management held on 4 June, 2019
10. Research collaboration with Czech technical University, Prague, Czech Republic culminating in joint execution of a research project as mentioned earlier

### Prof. Iti Saha Misra

11. Collaborative participation of GISFI meeting, Seminar and research being the member of The Global ICT Standardization Forum for India (GISFI)

### Prof. Subir Kumar Sarkar

12. **Prof. Subir Kumar Sarkar** has collaborative research activities in the field of Spintronics with Prof. Supriyo Bandyopadhyay of Virginia Commonwealth University, USA
13. **Prof. Subir Kumar Sarkar** is presently continuing collaborative research activities in nanodevices with Dr. Partha Bhattacharya of **Indian Institute of Engineering Science and Technology, Shibpur (former BESU)**
14. **Prof. Subir Kumar Sarkar** is presently continuing collaborative research work with:
  - Dr. Pranab Kishore Dutta and Mr. Swanirbhar Majumder of **North Eastern Regional Institute of Science and Technology (NERIST)**
  - Dr. Ashish Kumar De and Prof. B. Maji of **National Institute of Technology, Durgapur**
  - Dr. N. B. Singh of **Manipur Institute of Technology**
  - Mr. Sudipta Ghosh and Mr. Subhrapratim Nath of **Meghnad Saha Institute of Technology, Kolkata**
  - Dr. Bijoy Kantha and Dr. Saheli Sarkhel of **Netaji Subhash Engineering College, Garia, Kolkata**
  - Mr. Dinesh Kumar Dash of **Parala Maharaja Engineering College, Berhampur, Odisha**
  - Mr. Bijoy Goswami of **Assam Engineering College, Guwahati, Assam**

### Dr. Jaydeb Bhaumik

15. Supervised Ph.D. Thesis of Pabitra Pal under Vidyasagar University with co-supervisor Dr. Biswapati Jana, Department of Computer Science, Vidyasagar University, Midnapore, West Bengal, India

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16. Supervising Ph.D.Thesis of Supriyo De under Maulana Abul Kalam Azad University of Technology with co-supervisor Dr. Debasis Giri, Department of Information Technology, Maulana Abul Kalam Azad University of Technology, Kolkata, West Bengal, India
17. Supervising Ph.D.Thesis of Partha Mitra under Maulana Abul Kalam Azad University of Technology with co-supervisor Prof. Angsuman Sarkar, Department of ECE, Kalyani Govt. Engineering College, Kalyani, West Bengal, India

### Dr. Sayan Chatterjee

18. As delegation team member from 25–31 August, 2019 under the **RUSA incubation programme, Jadavpur University to Mentor Institute MUMA College of Business, University of South Florida** for setting up entrepreneurship ecosystem and incubation center in Jadavpur University

## 6. Major Achievements:

### Prof. Amit Konar

1. **Prof. Amit Konar** has served as the Editor-in-Chief of a Springer Book series on Cognitive Intelligence and Robotics for the period: 1 April, 2019–31 March, 2020. Six books have been published during this period
2. **Prof. Amit Konar** has served as the Associate Editor of IEEE Transactions on Fuzzy Systems for the period: 1 April, 2019–31 March, 2020
3. **Prof. Amit Konar** has served as the Associate Editor of IEEE Transactions on Emerging Topics in Computational Intelligence for the period: 1 April, 2019–31 March, 2020

### Prof. Ananda Shankar Chowdhury

1. Became an **Area Editor** of *Pattern Recognition Letters* in January 2020
2. Continued as an **Associate Editor** for *IEEE Signal Processing Letters*
3. Continued as an **Associate Editor** for *Springer Nature Computer Science*

### Prof. Bhaskar Gupta

1. Student Prizes:
  - Best Paper Award at international IEEE conference ICE-3 2020 International Conference on Electrical and Electronics Engineering (ICE3-2020), MMMUT Gorakhpur (UP), India ICE3-2020, 14-15 February 2020, ‘A THz Metasurface Coated SoC for SPR Excited Carcinoma Sensing’, travel grant awarded by TEQUIP III, Jadavpur University, received by Abhirupa Saha
  - Best Paper Award in biomedical engineering track, international IEEE conference UPCON 2019, ‘A THz Meta-sensor for Malignancy’. National travel grant awarded by TEQUIP III, Jadavpur University, received by Abhirupa Saha
2. Advisor at IEEE MTTs Student Branch Chapter, Jadavpur University
3. International Steering Committee member at MMS 2019 - IEEE 19th Mediterranean Microwave Symposium, Hôtel Laico Hammamet, Tunisia, 31 October- 2 November, 2019
4. Yarman-Carlin student paper award committee member at MMS 2019 - IEEE 19th Mediterranean Microwave Symposium, Hôtel Laico Hammamet, Tunisia, 31 October- 2 November, 2019
5. Track Chair, IEEE CALCON 2020, Kolkata, 28-29/02/2020
6. Academic Audit:
  - NIT Patna Academic Audit, June 2019
  - NIT Durgapur Academic Audit, July 2019

### Prof. Iti Saha Misra

1. Acted as **Vice Chair of IEEE Kolkata** Section
2. Acted as **Conference Chair for organizing CALCON -2020**

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3. Acted as **Expert Selection Committee Member** in a reputed National University, March 2020
4. Evaluated PhD Thesis from NIT (ECE Dept, Shilchar) and Calcutta University (IT)
5. Obtained Best paper Award for the research paper Prototype Design of An IoT Enabled Cost-Efficient Portable Heart-Health Data Acquisition System in CALCON 2020 Student paper Contest on **selected papers** under the research work of RUSA 2.0 project, presented by ArnabMaity, the Research Fellow under RUSA Project in front of judges of experts
6. Nominated as the expert of BOS member, ECE Department by the **Academic Council** of Heritage Institute of Technology
7. Nominated as the BOS member by the **Academic Council** of BIT MESRA, ECE Department

### Prof. P. Venkateswaran

#### Achievements of the JU B.E. (ETCE) Third Year Students:

1. My students Annesya Banerjee and Achal Nilhani, B.E. Third Year Students from the Department of Electronics and Telecommunication Engineering, Jadavpur University, with Prof. P Venkateswaran, as the Project Mentor participated in the ‘**Unusual Solutions Competition**’, a global-level competition focussed on innovative applications of Drone Technology organised by **WeRobotics, USA**. The competition was organized in two Phases between October 2019 and February 2020. In the first Phase, the team members submitted a written proposal on the theme of “**Drone Embedded Microphone Array Based Search And Rescue Operation Using Sound Source Localization**” which was selected and subsequently shortlisted for phase 2. Out of nearly 250 submissions in Phase 1, only 9 submissions were selected from across the globe for Phase 2 and each of the selected team were awarded with a Project Grant of USD 15,000 to convert their idea into Prototype. The team from the B.E. Third Year ETCE – JU was one of the 9 Finalist teams to receive the grant. The BoS of the ETCE Dept. in its meeting held on 31/10/2019 has approved the administrative committee for this Project including Dr. Supriya Dhabal, Asst. Prof., Dept. of ECE, and NSEC as the Joint Project Mentor & Consultant for the Project. In the next few months, the team completed the development of the prototype of the Drone, and presented the work at the “Final Pitch Event” of the competition held on February 25, 2020 at Nairobi, Kenya. The team has received an overwhelming response from the organizers and judges regarding the Project work, and were declared as the First Runner-up of the competition
2. During March 24 & 25, 2020, my students Annesya & Achal participated in the **COVID-19 Online Hackathon** organised by the **Center for Emerging & Neglected Diseases (CEND), University of California, Berkeley, USA**. Both of them were the part of the **Team COVENTILATOR** with four other participants based in USA. This team has proposed the design of **low-cost, easy to deploy ventilators** to meet the growing demand for ventilators at the hospitals during the COVID-19 pandemic. At the end of the two-day competition, the team’s proposal was chosen as the Winner of this COVID-19Hackathon. Annesya & Achal took the lead in the main system design and technical aspects of this proposal, whereas the other members worked on the future opportunities and implementation of the proposal (and also the preparation for the presentation). The winning team has also received an amount of USD 1000 as a token prize

### Prof. Subir Kumar Sarkar

1. **Prof. Subir Kumar Sarkar** has been selected as **IEEE Electron Device Society Distinguished Lecturer (Region 10)**
2. **Prof. Subir Kumar Sarkar** has guided **56 PhD scholars** and PG thesis of 92 M.E/M.Tech students. Presently, 6 more scholars have been registered for PhD
3. **Prof. Subir Kumar Sarkar** has been invited several times as one of the expert members in various National Level Accreditation Board
4. **Prof. Subir Kumar Sarkar** has been invited as the Technical Committee Member of IEEE Region 10 Symposium (IEEE TENSYP 2019) in Biswa Bangla Convention Centre, Kolkata, India during 7–9 June, 2019

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5. **Prof. Subir Kumar Sarkar** has been invited as the Organizing Committee Member in International Graphene and Carbon Nanotubes Conference (OLCGCNC-2019), at Dubai, UAE during 14-15 October, 2019
6. **Prof. Subir Kumar Sarkar** has **foreign trip** being invited by:
  - Department of Computer Science and Engineering (CSE) and Department of Electrical and Electronic Engineering (EEE) of University of Science and Technology Chittagong (USTC), Bangladesh
7. **Awards :**
  - Honoured with the prestigious **IETE – Brig M L Anand Award-2019** for notable expertise in **Network domain** as evident from his 183 research papers, 20 P.G and 18 PhD thesis guidance and publication of two books (CRC Press and Arctech House) whose review came in IEEE communication magazine and has been cited 500 times
  - Received **Prof. S K Mitra Memorial Award-2019** for one of his research papers entitled “**Analytical Surface Potential Modelling-Based Small Signal Analysis and RF Performance Characterization of DMG SOI MOSFET for Better RFIC Application**” published in IETE Technical Review Vol. 35 No. 3, May-June 2018 in the best research oriented paper category
8. **Post Doctoral Guidance:**

Dr. K. Senthil Kumar of Department of Electronics and Communication, Dr. M.G.R Educational and Research Institute, is currently pursuing Post Doctoral research under the guidance of **Prof. Subir Kumar Sarkar**

### **Prof. Sudhabindu Ray**

1. Acted as member of Academic Coordination Committee Common First Year UG Engineering Programme, FET of Jadavpur University
2. Acted as member of Core Committee, TEQIP-III Programme, FET of Jadavpur University
3. Worked as academic committee member and acted as Joint Director of School of Nuclear Studies and Application, Jadavpur University
4. Acted as member of PG Admissions Sub-committee, FET, Jadavpur University

### **Prof. Sudipta Chattopadhyay**

1. Holding the position of Chairperson, IEEE WIE Kolkata Section till December 2019
2. Nominated as a member of Academic Council, Siksha ‘O’ Anusandhan Deemed to be University, Bhubaneswar
3. Nominated as a National Advisory Committee member for IEEE WIE International Leadership Summit held in Bangalore, during 30-31 August, 2019
4. Nominated as Academic Advisor for Techno India Group of Institutes

### **Dr. Sayan Chatterjee**

#### **Award/Recognition:**

1. Elected as SAKURA SCIENCE Alumni as Indian representative under JST
2. Outstanding Volunteer award of IEEE Kolkata section in 2019-20
3. Convener, Institute Innovation Council in Jadavpur University in 2019
4. Member of the interview board for the 60th Batch of Jagadish Bose National Talent Search Senior Scholar (UG -I) selection process on 21–22 September (9 AM to 5.30PM), 2019 at JBNSTS, Kolkata.
5. Acted as Co-coordinator of IC design and Fabrication Center of ETCE Department, JU
6. Invited as mentor for the event “Tailoring a Research proposal” sponsored by DAAD at Consulate General of Germany in Kolkata on 20 November, 2019. Execom member, IEEE Kolkata section.
7. Acted as NBA coordination committee member, FET of Jadavpur University from 24 July, 2019 till date

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### 8. Consultancy Project :

Title of project	Sponsoring agency	Period
a. Implementation of AI & Industry 4.0 in Ship Building industry	Garden Reach Shipbuilders & Engineers Ltd.	One year

### Dr. Divya Somvanshi

1. **Dr. Divya Somvanshi, DST-INSPIRE faculty, Department of ETCE, JU**, got a prestigious Post-Doctorate Fellowship at the Department of Electrical Engineering, Technion-Israel Institute of Technology, Haifa, Israel for the duration of March 2019 to February 2020. She has successfully completed her post-doctoral work and subsequently re-joined the Department of ETCE, JU, in March 2020

### Consultancy Project :

Title of project	Sponsoring agency	Period
1 All purpose identification of imported 12mm pixel LED	N N Chakrabarty Customs consultant	One month (July 2019)
2 Identification of imported Multi Media Speaker bearing model no. JIL 3949, JIL 3938 JIL 3968 and JIL 3969	Jupiter international limited	One month (March 2019)
3 Consultation for setting up communication system ( except VHF)	Neora Hydro	One month (from December, 2019)
4 Identification of imported Multimedia speaker bearing no 3300C, 3300D, 3300F, 3300G, SP1792, 4400B, 4400C, 3300, 5500D, SP5500, SP904, SP6600	N N Chakrabarty Customs consultant	Two months (from December,2019)
5 Investigation of electronic good from seized consignment and whether these could be used for any terrorist activity	Office of the Commissioner of Customs ( Airport)	Two months



## FOOD TECHNOLOGY & BIO-CHEMICAL ENGINEERING

Phone: 033-2457-2686/2241

H.O.D: Dr. Dipankar Halder

E-mail: hodftbe@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
B.E	4 Years	40
M.Tech	2 Years	10
Ph.D	5 Years	40 (Total strength)

### 1. B. Number of Faculty Members : 07 (Sanctioned post - 15)

### 2. A. Area of Research Activities:

Food fortification, drying; Solid state fermentation, enzymes, antioxidants, Green Technologies of Extraction, Nutraceuticals and functional food, Biomedicines for Oxidative Stress Disorders, Edible Oils and Frying Applications, Electronic Nose Applications in Agro Commodities, Micro and nano-encapsulation, Environment benign synthesis of metal nanoparticles and their application in waste water treatment, food safety and food packaging, food adulteration, cold plasma technology, nanoparticle in agriculture, Bioremediation, fermented food, enzyme technology

### 2. B. Major Research Project:

- Individual R&D project entitled, 'Studies on prevention of Diabetes Mellitus, Hypercholesterolemia and Alzheimer's disease using nanoencapsulated supercritical carbon dioxide extracts of small cardamom' from Product Development & Research, from Spices Board, Cochin, Ministry of Commerce and Industry, Govt. of India
- Individual R & D Project on 'Traditional fermented foods of Ladakh region: Standardization of process parameters.' Funded by DST, Govt of India
- Individual R & D Project on "Isolation and Identification of a Phytase Producing Probiotic Bacteria from Jalebi Batter and its Application to Soy Milk Fermentation", UGC
- Individual R & D Project on 'Fortification of Bread using green banana Peel Flour and Cumin Seeds' Funded by RUSA 2.0.
- R & D project entitled 'Valorization of tomatoes employing gamma-irradiation: Ultrasonic-assisted green extraction of serotonin-melatonin from gamma-irradiated tomatoes for development of a nutraceutical food product and a nanoliposomal food supplement', from the Department of Science & Technology and Biotechnology, Govt. of West Bengal, February 2020
- Departmental R & D Project on 'Development of Fruit- Vegetable based Nutraceutical Products. Part (a) Development of a vegetable based bakery product ; Part (b) a Nanoliposomal Natural Food Antioxidant from a vegetable Source; Part (c) Plasma sterilised fruit- vegetable products'. Funded by RUSA 2.0.
- Individual R & D Project on 'Sustainable green technology for development of a food supplement based on antioxidant synergy of serotonin, melatonin and L-tryptophan from supercritical carbon dioxide extract of gamma irradiated tomatoes', funded by RUSA 2.0
- Individual R & D Project on 'Studies on  $\gamma$ -irradiation of lutein and serotonin-melatonin rich agro-commodities for extension of shelf lives of the produces and design of novel therapeutic/food supplements using the irradiated produces', funded by Department of Food Processing Industries and Horticulture, Govt. of West Bengal
- Individual R & D Project for Irradiation Unit assisting (i) Food Processing Industries (ii) R & D in new areas of Irradiated Food (iii) Training Centre for Food Irradiation especially for Eastern & North Eastern

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Region, from Ministry of Food Processing Industries, Govt. of India, New-Delhi and Department of Food Processing Industries & Horticulture, Govt. of West Bengal

- Individual R & D Project on ‘Ultra high temperature processing . . . electrical energy heating’, sponsored by Ministry of Food Processing Industries, Govt. of India, New-Delhi and Department of Food Processing Industries & Horticulture, Govt. of West Bengal
- Individual R & D Project on “Sustainable synthesis of Ag and Au nanoparticles . . . (microorganism, antibiotic and protein) present in food”, sponsored by RUSA 2.0
- Departmental R & D Project on “Environment benign synthesis..contaminated with dyes and pesticides”, sponsored by RUSA 2.0
- Individual R & D Project on ‘Strategic assessment of traditional Bandel Cheese and its production for economic development of local people.’, DST-Govt of West Bengal,
- Individual R & D Project on “Performance Modeling of a Combined System of Phycoremediation with a Fixed Film Bioreactor for the Treatment of Dairy Industry”, from Science and Engineering Research Board (SERB)
- Individual R & D Project on “Fermentative production of microbial Asparaginase enzyme and its application to high temperature Processed Foods for Acrylamide mitigation”, from DHESTBE, Govt. of West Bengal
- Individual R & D Project on “Bioremediation of Phenolic compounds from Waste Water using Isolated Microbial Strains”, funded by RUSA 2.0
- Application of organic antioxidant nano-particle for enhancement of shelf-life of oils, RUSA 2.0

### 3. A. Invited lectures Delivered/Sessions Chaired:

#### Dr. Dipankar Halder:

- National seminar “MCCCON 2019” on “Academia-Industry Meets . . . Industrial Process” at MIDNAPORE CITY COLLEGE, Paschim Medinipur-721129, W.B.

#### Dr. Prasanta Kumar Biswas

- National seminar on “Effects of pesticides and Food Adulteration on human Health” H L Ray Building, Jadavpur University Campus, Kolkata, on 25 May 2019
- 1<sup>st</sup> Agrochemicals Congress: Country’s Status on Various Fronts of Agrochemicals during November 13-16, 2019 at ICAR-IARI, New Delhi

#### Dr. Paramita Bhattacharjee:

- Chaired a session on oral technical presentations in *2<sup>nd</sup> International Conference on Advances in Bioprocess Engineering & Technology (ICABET 2020)*, organized by Heritage Institute of Technology, Kolkata, 20 January, 2020
- Chaired a session on ‘Original Work Presentation- 2’ on Day 1 of *NEUROCON 2019- Disorders of Brain: Molecules, Models and Clinical Practice*, organized by Maharishi Markandeshwar Institute of Medical Sciences and Research, Maharishi Markandeshwar University (Deemed to be), Ambala, Haryana, 15-18 November, 2019
- Chaired a Plenary Lecture session on Day 2 of *NEUROCON 2019- Disorders of Brain: Molecules, Models and Clinical Practice*, organized by Maharishi Markandeshwar Institute of Medical Sciences and Research, Maharishi Markandeshwar University (Deemed to be), Ambala, Haryana, 15-18 November, 2019
- Participated as a panelist in Rapid Fire Session of Review Session- 4 on Day 2 of *NEUROCON 2019- Disorders of Brain: Molecules, Models and Clinical Practice*, organized by Maharishi Markandeshwar Institute of Medical Sciences and Research, Maharishi Markandeshwar University (Deemed to be), Ambala, Haryana, 15-18 November, 2019

**Dr. Debabrata Bera:**

- National seminar on 'Functional components in marine sources', Vidyasagar University, 2019

**Dr. Sunita Adhikary ( Nee Pramanik )**

- Invited Lecture on "Pesticides and Food Adulterations-Effect on Human Health" organized by Development Research Communication & Services Centre Joint Collaboration with AFSTI Kolkata Chapter on 25 May, 2019

**3. B. Seminar/Workshop/Conference/Symposium Attended:**

**Prof. Runu Chakraborty**

- Green Ultrasound assisted extraction (UAE) of flavonoids from corn silk (CS) with deep eutectic solvent; Suman Kumar Saha, Runu Chakraborty, ICESD 2020 Held at Jadavpur University, Kolkata from 14-15 February, 2020
- Effect of freeze drying on anti-oxidant properties of bael fruit (Agle marmelos); Tanmay Sarkar, Molla Salauddin, Sudipta Kumar Hazra, Anirban Roy, Runu Chakraborty, BIOSPECTRUM 2019 Held at University of Engineering & Management, Kolkata, India
- Preparation and characterization of sweetened pineapple cheese ball (rasgulla); Tanmay Sarkar, Pritha Nayak; , Molla Salauddin, Sudipta Kumar Hazra, Runu Chakraborty; BIOSPECTRUM 2019 held at University of Engineering & Management, Kolkata, India

**Prof. Uma Ghosh**

- Paper titled 'Nanotechnology : Approach to combat biofilm especially in food and medical sector'; Sarkar S, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled 'Synthesis of silver nanoparticle ..... in combination with antibiotic' Ghosh M, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled 'Yeast extract mediated synthesis ..... in contaminated water samples Chakraborty S, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Catalytic degradation of azo dyes by titanium dioxide supported silver nanoparticles synthesized using *Andrographis paniculata* extract; ICONSAT 2020; S Jha, D Halder, U Ghosh, D Bera, S Adhikari Nee Pramanik, A Mitra, 2020

**Dr. Dipankar Halder**

- Paper titled 'Removal of textile dye .....biomass of *Aspergillus niger*'; Bag S, Mitra A, Halder D, Bera D, NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled 'Nanotechnology : Approach to combat biofilm especially in food and medical sector'; Sarkar S, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled 'Synthesis of silver nanoparticle ..... in combination with antibiotic' Ghosh M, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
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- Catalytic degradation of azo dyes by titanium dioxide supported silver nanoparticles synthesized using *Andrographis paniculata* extract; ICONSAT 2020; S Jha, D Halder, U Ghosh, D Bera, S Adhikari Nee Pramanik, A Mitra, 2020

**Dr. Paramita Bhattacharjee**

- Efficacy of nanoencapsulated supercritical carbon dioxide extract of small cardamom seeds in combating hypercholesterolemia: *In vitro* characterization and *in vivo* rat model study, Kaninika Paul\*, Priyanka Mallick, Paramita Bhattacharjee, Saikat Chakrabarti and Tapan Kumar Pal, Oral presentation in 2<sup>nd</sup> Inter-

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*national Conference on Advances in Bioprocess Engineering & Technology (ICABET 2020)*, under the section ‘Young Scientist Award on Nanomaterials and Nanotechnology’, organized by Heritage Institute of Technology, Kolkata, 20-22 January, 2020

- 1,8-cineole rich supercritical CO<sub>2</sub> extract of small cardamom seeds - A potent multi-functional biotherapeutic in combating onset of Alzheimer’s disease, Kaninika Paul, Upasana Ganguly, Sasanka Chakrabarti and Paramita Bhattacharjee\*, Oral presentation in *NEUROCON 2019: Disorders of Brain: Molecules, Models and Clinical Practice*, organized by Maharishi Markandeshwar Institute of Medical Sciences and Research, Maharishi Markandeshwar University (Deemed to be), Ambala, Haryana, 15–18 November, 2019
- Paramita Bhattacharjee, Oral presentation in *Applications of Nuclear Science in Biochemical Engineering, Agricultural Productivity & Food Safety (ANS 2019)*, organized by School of Chemical Engineering, Biotechnology & Food Technology, Haldia Institute of Technology (HIT), Haldia, 30–31 August, 2019
- Use of Biomarkers of Irradiation for Food Safety, Paramita Bhattacharjee, Oral presentation in *Applications of Nuclear Science in Biochemical Engineering, Agricultural Productivity & Food Safety (ANS 2019)*, organized by School of Chemical Engineering, Biotechnology & Food Technology, Haldia Institute of Technology (HIT), Haldia, 30–31 August, 2019
- Enhancement of serotonin-melatonin content of green plantains by gamma irradiation technology and development of a serotonin-melatonin rich nutraceutical confectionary, Pooja Roy, Dipshikha Tamili and Paramita Bhattacharjee\*, Poster presentation in *NEUROCON 2019- Disorders of Brain: Molecules, Models and Clinical Practice*, organized by Maharishi Markandeshwar Institute of Medical Sciences and Research, Maharishi Markandeshwar University (Deemed to be), Ambala, Haryana, 15–18 November, 2019
- Extension of shelf life and enhancement of serotonin-melatonin content of green plantains employing ‘-irradiation technology’, Poulami Sarkar\*, Pooja Roy\* and Paramita Bhattacharjee, Poster presentation in *National Seminar on Advancement in Plant Sciences: An Insight*, organized by Botanical Society of Bengal in collaboration with CAS Department of Botany, University of Calcutta, Kolkata, 30 September, 2019
- Microencapsulation of lutein-rich supercritical carbon dioxide extract of gamma-irradiated African Marigold flowers: Process optimization and stability studies’, Sayani Pal\* and Paramita Bhattacharjee, Poster presentation in *National Seminar on Advancement in Plant Sciences: An Insight*, organized by Botanical Society of Bengal in collaboration with CAS Department of Botany, University of Calcutta, Kolkata, 30 September, 2019
- Multi-functional roles of 1,8 cineole rich SC-CO<sub>2</sub> extract of small cardamom seeds in preventing Alzheimer’s disease, Kaninika Paul\*, Upasana Ganguly, Paramita Bhattacharjee and Sasanka Chakrabarti, Poster presentation at *National Symposium on Advances in Neuroscience Research and Management*, organized by Central Calcutta Society for Advancement of Human Development & Research on the occasion of its 26<sup>th</sup> Foundation Day in collaboration with INSA, Calcutta Chapter, at Bose Institute, Centenary Campus, Kolkata, 22 July, 2019

### Dr. Debabrata Bera

- Rupkatha Mukherjee, Dr. Debabrata Bera, Optimization Of Nutritional Parameters For L-Asperginase Production By Isolated Bacterial Strain., UEM Kolkata. International Conference. 8 -10 August, 2019
- Paper titled ‘Removal of textile dye .....biomass of *Aspergillus niger*’; Bag S, Mitra A, Halder D, Bera D, NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled ‘Nanotechnology : Approach to combat biofilm especially in food and medical sector’; Sarkar S, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled ‘Synthesis of silver nanoparticle ..... in combination with antibiotic’ Ghosh M, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled ‘Yeast extract mediated synthesis ..... in contaminated water samples’ Chakraborty S, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019

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- Catalytic degradation of azo dyes by titanium dioxide supported silver nanoparticles synthesized using *Andrographis paniculata* extract; ICONSAT 2020; S Jha, D Halder, U Ghosh, D Bera, S Adhikari Nee Pramanik, A Mitra, 2020

### Dr. Sunita Adhikary (Nee Pramanik)

- Debapriya Maity, Pradyut Kundu, Sunita Adhikari (Nee Pramanik), “Isolation of a most potent bacterial strain from soil for bioremediation of Phenol”. Oral presentation of the paper at ICABET – 2020, 2<sup>nd</sup> International Conference on Advances in Bioprocess Engineering and Technology organized by Heritage Institute of Technology, W.B. during 20 December – 22 January, 2020
- Susmit Maitra, Debapriya Maity, Pradyut Kundu, Sunita Adhikari (Nee Pramanik), “Isolation and identification of a bacterial strain from soil for bioremediation of phenol for pollution control”. Oral presentation of the paper at 2<sup>nd</sup> National Conference on Sustainable Advanced Technologies for Environmental Management (SATEM-2019) 18 – 20 December, 2019 organized by Department of Civil Engineering, IEST, Shibpur
- Soocheta Jha, Sunita Adhikari (Nee Pramanik). “Optimization of Process Parameter for Bioremediation of Fluoride by Selected Fungal Strains”. Oral presentation at International Conference on Energy and Sustainable Development. Jointly organized by Jadavpur University and The Institution of Engineers, India 14-15 February, 2020
- Abhishek Das, Pradyut Kundu, Sunita Adhikari (Nee Pramanik), “Characteristics and Treatment of Dairy Industry Wastewater in a Suspended Growth Batch Reactor”. Oral presentation of the paper at ATIPC – Paper titled ‘Nanotechnology : Approach to combat biofilm especially in food and medical sector’; Sarkar S, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled ‘Synthesis of silver nanoparticle ..... in combination with antibiotic’ Ghosh M, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Paper titled ‘Yeast extract mediated synthesis ..... in contaminated water samples Chakraborty S, Mitra A, Halder D; NATCOSEB 2019, Amity University, Rajarhat, 18-20 October, 2019
- Catalytic degradation of azo dyes by titanium dioxide supported silver nanoparticles synthesized using *Andrographis paniculata* extract; ICONSAT 2020; S Jha, D Halder, U Ghosh, D Bera, S Adhikari Nee Pramanik, A Mitra, 2020

### 3. C. Seminar/ Workshop/Conference/Symposium Organized:

- National Conference on “Innovations & Employability: Industry-Institute Interaction and Melangeuring-fusion of moments” on 22 February, 2020

### Dr. Prasanta Kumar Biswas

- National seminar on “Effects of pesticides and Food Adulteration on human Health” H L Ray Building, Jadavpur University Campus, Kolkata, 25 May, 2019

### 4. A. Books/Monographs etc. Published:

#### Dr. Paramita Bhattacharjee

- Paramita Bhattacharjee and Soumi Chakraborty, *Neurotransmitters in Edible Plants. Implications in Human Health*, In: Neurotransmitters in plants: Perspectives and Applications, A Ramakrishna and VV Roshchina (Eds.), Chapter 22, pp. 387-407, CRC Press, BocaRaton, 2019
- Paramita Bhattacharjee and Sayantani Dutta, *Assessment of Quality of Confectionery Products using Electronic Nose Technology*, In: Bioprocessing Technology in Dairy and Food, D.K Verma and P.P. Srivastav (Eds.), Apple Academic Press, USA, in Press, 2019
- Paramita Bhattacharjee, Kaninika Paul and Sayantani Dutta, *Supercritical Carbon dioxide Extraction of Piperine: A Green Extraction Method for Biomolecule of Therapeutic Importance*, In: Emerging Thermal and Non-thermal Technology in Food Process Engineering, D.K Verma and P.P. Srivastav (Eds.), Apple Academic Press, USA, in Press, 2019



**Dr. Debabrata Bera**

1. Chandan Kumar Ghosh, Debabrata Bera, Lakshmishri Roy, Role of Nanomaterials In Food Preservation: Microbial Nanobionics, Springer, 181-211, 2019
2. Lakshmishri Roy, Debabrata Bera, Vijay Garlapati, Mathematical and statistical application in Food Engineering : evolutionary optimization technique as effective tools for process modeling in food processing Routledge, Taylor and Francis Group. 2020
3. Debabrata Bera, Lakshmishri Roy, Tanmoy Bhattacharya, Mathematical and Statistical Application in Food Engineering: Application of Principal Component Analysis (P.C.A) For Fruit Juice Recovery and Quality Analysis, Routledge, Taylor and Francis Group, 2020
4. Lakshmishri Roy, Shrimoyee Chakraborty, Debabrata Bera, Sunita Adak, Genetic And Metabolic Engineering For improved Biofuel Production From Lignocellulosic Biomass: Application Of Metabolic Engineering Engineering For Elimination Of Undesirable Fermentation Products During Biofuel Production From Lignocellulosic, Elsevier, 63-80, 2020
5. Debabrata Bera, Lakshmishri Roy, Innovation in Food Processing Technologies: Exploitation of sundarban algae an alternative resource and untouched potential in food product, 2019

**Dr. Sunita Adhikary (Nee Paramanik)**

- Maity D., Kundu P., (Nee Paramanik) S.A. Isolation of a Most Potent Bacterial Strain from Soil for Bioremediation of Phenol. In: Ramkrishna D., Sengupta S., Dey Bandyopadhyay S., Ghosh A. (eds) Advances in Bioprocess Engineering and Technology. Lecture Notes in Bioengineering. Springer, Singapore. [https://doi.org/10.1007/978-981-15-7409-2\\_29](https://doi.org/10.1007/978-981-15-7409-2_29)

**Dr. Dipankar Halder**

- Shreyashi Sarkar, Soocheta Jha, Santosh Kumar, Atanu Mitra, , Dipankar Halder; Book Chapter ‘Advanced food analysis Tools’ in the book titled ‘Food Chemistry: Role of Additives, Preservatives & Adulteration’, to be published by Wiley-Scrivener, Scrivener Publishing 2021
- Shreya Chakraborty, Shruti Mondal, Santosh Kumar, Atanu Mitra, Dipankar Halder; Book chapter ‘Nanoscience application in food technology’ in the book titled ‘Food Chemistry: Role of Additives, Preservatives & Adulteration’, to be published by Wiley-Scrivener, Scrivener Publishing 2021
- Santosh Kumar, Avik Mukherjee, Atanu Mitra, Dipankar Halder as Editor for the book “Emerging Technologies in Food Preservations” (ISBN: 978-03-6767-5158), to be published by CRC Press, Taylor & Francis Group in 2021

**4. B. Articles published in Journals:**

**Prof. Runu Chakraborty**

- Suman Kumar Saha, Suhrita Dey and Runu Chakraborty “Effect of microwave power on drying kinetics, structure, colour and antioxidant activities of Corn cob” accepted for publication in Journal of Food Process Engineering, publisher Wiley Blackwell Science, UK 17 January, 2019
- Suman Kumar Saha, Suhrita Dey, Runu Chakraborty, Effect of choline chloride-oxalic acid based deep eutectic solvent on the ultrasonic assisted extraction of polyphenols from Aegle marmelos; Journal of Molecular liquids; 287, 110956; 2019
- Runni Mukherjee, Abhishek Dutta and Runu Chakraborty; Comparison of optimization approaches (RSM and ANN-GA) for a novel mixed culture approach in soybean meal fermentation; Journal of Food Process Engineering; 11, 2019
- Anirban Roy, Satyabrata Ghosh and Runu Chakraborty; Comparative Research on Anti-inflammatory effects of Different Dietary Antioxidants on Alcohol- induced Damage in Gastric Cells; Free Radicals and Antioxidants; 9(1), 16-21; 2019

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- Abhijit Das, Anamika Kalita, Utpal Raychaudhuri and Runu Chakraborty; Synergistic effect of herbal plant extract (*Hibiscus sabdariffa*) in maintain the antioxidant activity of decaffeinated green tea from various parts of Assam; *Journal of Food Science and Technology*; 56, 5009–5016; 2019
- Abhishek Dutta, Aakash S. Subramanian, Runu Chakraborty, Ferruh Erdogdu; Numerical Modelling of water uptake in white rice (*Oryzasativa L.*) using variable diffusivity approach; *Biosystems Engineering*; 191, 116-128, 2020

### Prof. Uma Ghosh

- Polley T, Ghosh U. Optimization of Process Parameters for Production of Alkaline Protease by OVAT Method Using Isolated Strain *Alternaria alternata* TUSGF1, *Asian Food Science Journal*, Vol. 9 (4):1-8, 2019

### Dipankar Halder

- Therapeutic applications of mushrooms and its compositional analysis by high throughput screening techniques; Chatterjee D, Das S, Halder D; *IJPSR*, 10(8) (2019): 1000-11
- Phytosynthesis of silver nanoparticles using *Zingiber officinale* extract: evaluation of their catalytic and antibacterial activities; Dinda, G., Mitra, A., Pal, N., Chatteraj D K; *J of disper. Sc. Tech.* <https://doi.org/10.1080/01932691.2019.1653194>
- Fruit extract capped colloidal silver nanoparticles and their application in reduction of methylene blue dye; Mwkthang Swargiary, Atanu Mitra, Dipankar Halder, Santosh Kumar; *Biocatalysis and Biotransformation*; 37, 3, 183-89, 2019

### Dr. Prasanta Kumar Biswas

- Complementary feeding may pose a risk of simultaneous exposures to aflatoxin M1 and deoxynivalenol in Indian infants and toddlers: Lessons from a mini-survey of food samples obtained from Kolkata, India; *Food and Chemical Toxicology*, 123 (2019) 9-15
- Name of article: Zinc sulphide nanoparticle (nZnS): A novel nano-modulator for plant growth; *Plant Physiology and Biochemistry*, 142 (2019) 73-83

### Dr. Paramita Bhattacharjee

- Soumi Chakraborty and Paramita Bhattacharjee, Ultrasonication-assisted extraction of a melatonin-rich erucic acid-lean nutraceutical supplement from mustard seeds: An antioxidant synergy in the extract by reductionism, *Journal of Food Science and Technology*, 57 (4), 1278-1289, 2020
- Kaninika Paul, Sasanka Chakrabarti and Paramita Bhattacharjee, *In vitro* studies on therapeutic potential of 1,8-cineole-rich extract of small cardamom in preventing Alzheimer's disease, *Neuromolecular Medicine*, DOI: 10.1007/s12017-019-08574-2, 2019
- Soumi Chakraborty, Kaninika Paul, Priyanka Mallick, Dipan Chatterjee, Shrabani Pradhan, Koushik Das, Saikat Chakrabarti, Dilip Kumar Nandi and Paramita Bhattacharjee, Consortia of bioactives in supercritical carbon dioxide extracts of mustard and small cardamom seeds lower serum cholesterol levels in rats: New leads for hypocholesterolemic supplements from spices, *Journal of Nutritional Science*, DOI: <http://dx.doi.org/10.1017/jns.2019.28>, 2019
- Sayani Pal and Paramita Bhattacharjee, Lutien-fortified potato soup and freeze-dried lutein powder designed with supercritical carbon dioxide extract of yellow corn kernels are promising nutraceutical foods, *Journal of Food Processing and Preservation*, DOI: 10.1111/jfpp.14005, 2019
- Kaninika Paul, Paramita Bhattacharjee, Nilendra Chatterjee and Tapan Kumar Pal, Nanoliposomes of supercritical carbon dioxide extract of small cardamom seeds redresses Type 2 diabetes and hypercholesterolemia, *Recent Patents on Biotechnology*, 13: 1-20, DOI: 10.2174/1872208313666190404101336, 2019

**Dr. Debabrata Bera**

- Papan K. Hor, Mousumi Ray, Shilpee Pal, Kuntal Ghosh, Jyoti P. Soren, Smarajit Maiti, Debabrata Bera, Somnath Singh, Sanjay Dwivedi, Miklós Takó, Pradeep K. Das Mohapatra and Keshab C. Mondal. Some Functional Properties of *khambir*, an Ethnic Fermented Cereal-Based Food of Western Himalayas, *Frontier in Microbiology*, 2019

**Dr. Sunita Adhikary (Nee Pramanik)**

- Susmit Maitra, Debapriya Maity, Pradyut Kundu, Sunita Adhikari (Nee Pramanik), “Isolation and identification of a bacterial strain from soil for bioremediation of phenol for pollution control”. *Journal of Indian Chemical Society*, Vol 97, pp. 607-612

**6. Collaborative Programmes:**

- Research collaboration with Peerless Hospital and B K Roy Research Centre, Kolkata
- Environmental Health Sciences, Arnold School of Public Health, University of South Carolina, Columbia, SC, 29208, USA
- Research collaboration with C-DAC, Kolkata
- Research collaboration with Department of Biochemistry, M M Institute of Medical Sciences & Research, M M (Deemed to be) University, Haryana
- Research collaboration with Department of Nutrition, Vidyasagar University
- Research collaboration with Structural Biology and Bioinformatics Division, CSIR-IICB, Kolkata

**7. Major Achievements:**

- Certificate awarded to Dr. P Bhattacharjee in recognition of appointment as *Editorial Board Member of Recent Patents on Biotechnology*, Bentham Science, January 2020
- First prize in poster presentation for the research paper entitled ‘Enhancement of serotonin-melatonin content of green plantains by gamma-irradiation technology and development of serotonin-melatonin rich nutraceutical product from the irradiated produce’, by Dipshikha Tamili\*, Poulami Sarkar and Paramita Bhattacharjee, at the *9th International Science Conference*, organized by World Science Congress and Department of Chemistry, Jadavpur University, Kolkata, 28-29 February, 2020
- Best poster presentation award for the research paper entitled ‘Development of a serotonin-melatonin rich nutraceutical food product using gamma-irradiated green plantains’, by Poulami Sarkar\* and Paramita Bhattacharjee, at *National Conference on Environmental Radiation: Impact on Society and Its Implications (ERISI-2019)*, organized by School of Studies in Environmental Radiation and Archaeological Sciences in collaboration with Nuclear and Particle Physics Research Centre, Department of Physics, at Jadavpur University, Kolkata, 15-16 November, 2019
- Best poster presentation award for the research paper entitled ‘Microencapsulation of lutein-rich supercritical carbon dioxide extract of gamma-irradiated African Marigold flowers: Process optimization and stability studies’ by Sayani Pal\* and Paramita Bhattacharjee, in *National Seminar on Advancement in Plant Sciences: An Insight*, organized by Botanical Society of Bengal in collaboration with CAS-Department of Botany, University of Calcutta, Kolkata, 30 September, 2019
- Third position in poster presentation for the research paper entitled ‘Design of a serotonin and melatonin rich nutraceuticals food product from gamma irradiated green plantains’, by Pooja Roy\*, Poulami Sarkar\*, Soumi Chakraborty and Paramita Bhattacharjee, at *National Symposium on Advances in Neuroscience Research and Management*, organized by Central Calcutta Society for Advancement of Human Development & Research on the occasion of its 26<sup>th</sup> Foundation Day in collaboration with INSA, Calcutta Chapter, at Bose Institute, Centenary Campus, Kolkata, 22 July, 2019

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### INFORMATION TECHNOLOGY

[Salt Lake Campus]

Phone : 033-2340-6128/6129

033-2335-8321

H.O.D: Dr. Bhaskar Sardar

Dr. Uttam Kumar Roy (since 16.10.2019)

E-mail: hodit@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of the Course	No. of Students Enrolled
B.E.(Information Technology)	4 years	86
M.E (Software Engineering)	2 years	25
6-Semester M.E. (Software Engineering) for TCS sponsored students	3 years (Evening)	20

#### 1. B. Number of Faculty Members:

- Professor: 02 (Sanctioned: 01)
- Associate Professor: 03 (Sanctioned: 01)
- Assistant Professor: 02 (Sanctioned 05)
- Assistant Professor (Contractual): 09

#### 2. A. Area of Research Activities: (Broad Area):

All teachers are actively engaged in research activities. The thrust areas of the department may be classified as follows.

- Image processing, Video Compression, Pattern Recognition
- Distributed Object Computing, Middleware
- Middleware in Mobile Computing, Mobile Ad hoc Networks
- Artificial Intelligence, Machine Learning
- Network Architecture, Routing Protocols
- Parallel Processing, Cryptography and Network Security, Distributed Computing
- Data Mining and Knowledge Discovery, Cloud Computing, Biodiversity
- Bioinformatics, Audio processing, RFID, Sensor Networks
- Distributed Algorithms & Swarm Robotics.
- Mobile Computing, Vehicular Networks

#### 2. B. Major Research Project/Consultancy:

**(Departmental / Individual–Name of the project–Investigator/Coordinator–Funded Agency)**

Departmental–Faster and Secured Communications in 5G–Dr. Bibhas Chandra Dhara–RUSA 2.0

Individual–Partial image encryption to design a faster image encryption–Dr. Bibhas Chandra Dhara–RUSA 2.0

Individual–A Fairness Based Market Linkage Framework for Woman Self Help Group to Assuage the

Rural- Urban Information Asymmetry Using ICT–Dr. Parama Bhaumik–RUSA 2.0

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Individual–QR code-based Multi-Factor Authentication Using Mobile OTP and Multi-dimensional Infinite Hash Chains–Dr.Uttam Kumar Roy–RUSA 2.0

Departmental–Integrated Health Analytics and Services–Dr. Bhaskar Sardar–RUSA 2.0

Individual–Integration of Data Mining in Biodiversity Application to Forest Diversity–Dr. Kartick Chandra Mondal [MENTOR]–DST, WOS-A, 2018 - 2021

Individual–Development of High speed MANET for intelligent collaboration–Prof. Samiran Chattopadhyay [Co-Investigator]–DRDO2019 -2021

Individual–National Digital Library–Prof. Samiran Chattopadhyay(Consultant)–MHRD (IIT Kharagpur)2018 - 2020

Individual–Cosmic Quest–Prof. Samiran Chattopadhyay [Co-PI] –VigyanPrasar (DST, GoI)

Individual–A model of abstractive sentence summarization–Ms. Tohida Rehman–RUSA 2.0

Individual–Algorithms to ensure the privacy and security in online social networking sites. –Munmun Bhattacharya–RUSA 2.0

### 3. A. Invited Lectures Delivered/Session Chaired:(Name of the Teachers, Type of the Participants, Name of the Seminar/ Conference etc., Place, Duration)

#### Samiran Chattopadhyay

- Chaired the Sessions ‘Invited Talk: Dr. Nabarun Bhattacharyya, CDAC, Kolkata, India’ and Artificial Intelligence’ in Global AI Congress 2019 organized by Institute of Engineering & Management, Kolkata on 13 September, 2019
- Delivered a lecture on “Ways to organize Data for OBE” on 9-10 July, 2019 at TEQIP III sponsored FDP organized by University of Calcutta
- General Chair, 3-day workshop on Evolving Technologies in Network and Communication Systems (ENCoS) organized by BITS Pilani, Hyderabad campus from 29-31 August, 2019
- Delivered a lecture on “Wireless Body Area Network: A Bird’s Eye View” on 13 June, 2019 at TEQIP-III Sponsored Faculty Development programme (FDP) on Machine Learning and Internet of Things” at Tripura Institute of Technology, Narsingarh, conducted during 3 –15 June, 2019

#### Parama Bhaumik

- Chaired the Session on 22 August 2019 from 2 PM – 5 PM in eHaCON 2019 International Ethical Hacking Conference during 22-25 August 2019 at University of Engineering & Management, Newtown, Kolkata, West Bengal 700156
- Delivered a Lecture on “Concepts of Artificial General Intelligence”, at BITS Pilani, Hyderabad Campus on 25 October, 2019

#### Uttam Kumar Roy

- Delivered an invited lecture in “One Week Workshop under RUSA 2.0 on Computer Vision and Multimedia Computing 2020”, organized by Department of Information Technology, Jadavpur University from 10-17 February, 2020
- Acted as Session Chair in the Future of Information and Communications Conference (FICC) 2020 to held from 5-6 March, 2020 in San Francisco
- Acted as Session Chair in the Seventh International Symposium on Security in Computing and Communications (SSCC’19) held on 18-21 December, 2019, Trivandrum, India

#### Kartick Chandra Mondal

- Delivered a Keynote talk on Information Processing in Paradigm of Computational Biology at Department of Computer Science, Ramakrishna Mission Vidyamandir, Belur Math on 18 February, 2020



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- Delivered an invited talk and hands-on session on Scientific Writing at Department of Computer Science & Engineering, University of Kalyani on 22-26 April, 2019

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teachers, Name of the paper presented, Name of the Seminar/ Conference etc., Place, Duration)

#### Munmun Bhattacharya

- Attended “International Workshop on Machine Learning and its Applications to Pattern Recognition”, organized by ISI Kolkata & University of Technology Sydney, Australia from 14-15 November, 2019 as a participant.
- Attended “One Week Workshop under RUSA 2.0 on Computer Vision and Multimedia Computing 2020”, organized by Department of Information Technology, Jadavpur University from 10-17 February, 2020 as a participant
- In 8th International Doctoral Symposium on Applied Computation and Security Systems (ACSS-2021), on 28-29 February, 2020 at Calcutta University, Kolkata, India as a paper presenter

#### Manoj Kumar Rana

- Attended “2019 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)”, held at BITS Pilani (K K Birla Goa Campus) in India from 16-19 December, 2019, as a paper presenter

#### Palash Kundu

- Attended “2019 IEEE Conference On Communication & Information Technology (CICT)”, held at Indian Institute of Information Technology Allahabad, India from 6-8 December, 2019, as a paper presenter
- Attended Short Term Course (STC) on “A pragmatic approach towards Machine Learning” from 3–9 January, 2020, organized by Department of Information Technology, Jadavpur University as a participant

#### Pawan Kumar Singh

- Attended a Two-Week AICTE Sponsored National Level Faculty Development Program on “Quantum Computational Intelligence (QCI-2019)” organized by Department of Computer Science and Engineering, RCC Institute of Information Technology held during 2-14 November, 2019
- Attended a 2-Day International Workshop on “Machine Learning and its Application to Pattern Recognition (IWMLAPR-2019)” jointly organized by Computer Vision and Pattern Recognition (CVPR) unit, ISI Kolkata and University of Technology Sydney, Australia held during 14-15 November, 2019

#### Sujit Kumar Das

- Attended Short Term Course (STC) on “A pragmatic approach towards Machine Learning” from 3–9 January, 2020, organized by Department of Information Technology, Jadavpur University as a participant

#### Parama Bhaumik

- Presented a paper titled , “Design and Development of an Interactive Community-Driven Information System for Rural Artisans: CISRA Framework”, in International Conference Information Technology and Systems (ICITS 2020), in Bogota Colombia, 5-7 February 2020
- Attended 21st International Conference on Distributed Computing and Networking ICDCN 2020, January 2020
- Attended “One Week Workshop under RUSA 2.0 on Computer Vision and Multimedia Computing 2020”, organized by Department of Information Technology, Jadavpur University from 10-17 February, 2020 as a participant

#### Uttam Kumar Roy

- Presented a paper titled “Two-Factor Authentication Using Mobile OTP and Multi-dimensional Infinite Hash Chains” in the Future of Information and Communications Conference (FICC) 2020 held on 5-6 March, 2020, San Francisco, USA

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- Presented a paper titled “Secure Authentication Using One Time Contextual QR Code”, Seventh International Symposium on Security in Computing and Communications (SSCC’19) held on 18-21 December, 2019, Trivandrum, India

### **Kartick Chandra Mondal**

- Attended “International Workshop on Machine Learning and its Applications to Pattern Recognition”, organized by ISI Kolkata & University of Technology Sydney, Australia from 14-15 November, 2019 as a participant
- Attended “One Week Workshop under RUSA 2.0 on Computer Vision and Multimedia Computing 2020”, organized by Department of Information Technology, Jadavpur University from 10-17 February, 2020 as a participant
- Presented a paper in 21st ICDCN titled “Role of Machine Learning in ETL Automation”, organized by Jadavpur University, Kolkata, during 4-7 January, 2020
- Attended Short Term Course (STC) on “A pragmatic approach towards Machine Learning” from 3-9 January, 2020 organized by Department of Information Technology, Jadavpur University as a participant

### **Rohini Basak**

- Attended “One Week Workshop under RUSA 2.0 on Computer Vision and Multimedia Computing 2020”, organized by Department of Information Technology, Jadavpur University from 10-17 February, 2020 as a participant

### **Tohida Rehman**

- Attended “International Workshop on Machine Learning and its Applications to Pattern Recognition”, organized by ISI Kolkata & University of Technology Sydney, Australia from 14-15 November, 2019 as a participant
- Attended “One Week Workshop under RUSA 2.0 on Computer Vision and Multimedia Computing 2020”, organized by Department of Information Technology, Jadavpur University from 10-17 February, 2020 as a participant

### **3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)**

1. Dr. Parama Bhaumik, Tohida Rehman, Munmun Bhattacharya, Prof. Samiran Chattopadhyay, Short Term Course (STC) on “A pragmatic approach towards Machine Learning” from 3-9 January 2020
2. Manoj Kumar Rana, Pawan Kumar Singh, Somenath Dhibar, Sujit Kumar Das, Palash Kundu, Prof. Bibhas Chandra Dhara and Dr. Bhaskar Sardar, One Week Workshop under RUSA 2.0 on “Computer Vision and Multimedia Computing”, Department of Information Technology, Jadavpur University (Saltlake Campus), 10-17 February, 2020

### **3. D. Orientation Courses/Refresher Courses Attended: (Name of the Teachers, Title of the Course, Duration, Place)**

#### **Kartick Chandra Mondal**

- Attended a Refresher course at HRDC-UGC, Jadavpur University, Kolkata, from 7-30 January, 2019

#### **Tohida Rehman**

- Attended a Refresher course at HRDC-UGC, Jadavpur University, Kolkata, from 9-21 December, 2019

### **4. A. Books/Monographs/Book Chapters Published: (Name of the Teachers, Name of the Book, Name of the publisher)**

#### **Samiran Chattopadhyay**

- Nandini Mukherjee, Sarmistha Neogy, Samiran Chattopadhyay, Big Data in e-healthcare: Challenges and Perspectives, Chapman and Hall/CRC, 2019

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- Sarkar, Kshitij Pant and Samiran Chattopadhyay, DRSQ - A Dynamic Resource Service Quality Based Load Balancing Algorithm, CCIS, Volume 1031, Springer, Online: June, 2019
- Hindol Bhattacharya, Arnab Bhattacharya, Samiran Chattopadhyay and Matangini Chattopadhyay, LDA Topic Modeling based Dataset Dependency Matrix Prediction, Communications in Computer and Information Science book series, Volume 1031, Springer, Online: June, 2019
- Nilkantha Garain, Samiran Chattopadhyay, Gautam Mahapatra, Santanu Chatterjee and Kartick Chandra Mondal, Design and implementation of an improved data warehouse on clinical data, Communications in Computer and Information Science book series, Volume 1031, Springer, Online: June, 2019
- Pragma Kar, Soumya Banerjee, Kartick Chandra Mondal, Gautam Mahapatra, Samiran Chattopadhyay, A Hybrid Intrusion Detection System For Hierarchical Filtration of Anomalies, Information and Communication Technology for Intelligent Systems, Smart Innovation, Systems and Technologies book series (SIST, volume 106), 417 – 426, 2019

### Munmun Bhattacharya

- Munmun Bhattacharya, Sandip Roy, Soumya Banerjee, Samiran Chattopadhyay “Cryptanalysis of a Centralized Location-Sharing Scheme for Mobile Online Social Networks”, Book Chapter in Advanced Computing and Systems for Security, book series(AISC, volume 1178), 2020

### Rohini Basak

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### Kartick Chandra Mondal

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- Moumita Ghosh, Anirban Roy, Kartick Chandra Mondal, Analysis of Indian estuarine data of flora & fauna, in: Proceedings of CSI Annual Convention, Springer, 2020, pp. 1–12
- Kartick Chandra Mondal, Neepa Biswas, and Swati Saha. 2020. Role of Machine Learning in ETL Automation. In 21st International Conference on Distributed Computing and Networking (ICDCN 2020), 4–7 January, 2020, Kolkata, India. ACM, New York, NY, USA, 6 pages. <https://doi.org/10.1145/3369740.3372778>

## 4. B. Articles published in Journals/Conferences: (National/International/Peer-reviewed)

### Samiran Chatopadhyay

- Soumya Banerjee, Vanga Odelu, Ashok Kumar Das, Samiran Chattopadhyay and Youngho Park, An Efficient, Anonymous and Robust Authentication Scheme for Smart Home Environments, Sensors, MDPI, 20(4):1215, January, 2020 (IF: 3.031)
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- Sandip Chakraborty, Debarshi Kumar Sanyal, Samiran Chatopadhyay, Performance of Random Access Games over an IEEE 802.11ac Testbed, published in the proceedings of IEEE International Conference on Advanced Networks and Telecommunications Systems to be held on 16-19 December, 2019 at Goa, India

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- Priyajit Biswas, S. Kandar and B. C. Dhara, “An image encryption scheme using sequence generated by interval bisection of polynomial function”, Multimedia Tools and Applications, 23:1-24
- S. Kandar and B. C. Dhara, “A verifiable secret sharing scheme with combiner verification and cheater identification”, Journal of information security and applications
- Umer, Saiyed and Sardar, Alamgir and Dhara, Bibhas Chandra and Raout, Ranjeet Kumar and Pandey, Hari Mohan, “Person identification using fusion of iris and periocular deep features”, Neural Networks, 2019
- S. Umer and B. C. Dhara and B. Chanda, “Face Recognition Using Fusion of Feature Learning techniques”, Measurement, 2019
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**Parama Bhaumik**

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- Swarna Kamal Paul, Parama Bhaumik, “A multivariate spatiotemporal model of COVID-19 epidemic using ensemble of ConvLSTM networks”, accepted for publication in Journal of The Institution of Engineers (India): Series B. 2020
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- Jayanta Basak, Pranay Nath, Parama Bhaumik, “A Mathematical Model to determine the Reliability Percentage of a Statement using the Bounded Confidence Model of Opinion Dynamics”, 4th International Conference on Inventive Systems and Control (ICISC), January 2020
- Jayanta Basak, Parama Bhaumik, Siuli Roy, Somprakash Bandyopadhyay, “A Crowdsourcing based Information System Framework for Coordinated Disaster Management and Building”, Proceedings of the 21st International Conference on Distributed Computing and Networking ICDCN 2020: January 2020 Article No.: 33 Pages 1–6 <https://doi.org/10.1145/3369740.3372730>
- Swarna Kamal Paul, Parama Bhaumik, “A Reinforcement Learning Agent based on Genetic Programming and Universal Search”, 4th IEEE International Conference on Intelligent Computing and Control Systems (ICICCS) 2020 DOI: 10.1109/ICICCS48265.2020.9121014, 2020
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- Uttam K. Roy, Divyans Mahansaria, “Two-Factor Authentication Using Mobile OTP and Multi-dimensional Infinite Hash Chains” Proc. of the Future of Information and Communications Conference (FICC) 2020, 5-6 March 2020, San Francisco, USA
- Uttam K. Roy, Divyans Mahansaria, “Secure Authentication Using One Time Contextual QR Code”, Seventh International Symposium on Security in Computing and Communications (SSCC’19), 18-21 December, 2019, Trivandrum, India
- Uttam K. Roy, Shivashis Ganguly, Arijit Ukil, “Non-Invasive Estimation of Random Blood Glucose from Smartphone-based PPG”, International Journal of Biomedical Engineering and Technology, In Press

**Munmun Bhattacharya**

- Munmun Bhattacharya, Sandip Roy, Soumya Banerjee, Samiran Chattopadhyay “Cryptanalysis of a Centralized Location-Sharing Scheme for Mobile Online Social Networks”, ACSS 2020, Kolkata, India



**Manoj Kumar Rana**

- Prasanta Mandal, Manoj Kumar Rana, Punyasha Chatterjee and Arpita Debnath, “ns-3 Implementation of Network Mobility Basic Support (NEMO-BS) Protocol for Intelligent Transportation Systems”, Data Management, Analytics and Innovation, Advances in Intelligent Systems and Computing, Springer, vol 1042, pp. 633-642, Singapore, 2020. [https://doi.org/10.1007/978-981-32-9949-8\\_44](https://doi.org/10.1007/978-981-32-9949-8_44)
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- Palash Kundu, Mohit Mahata, Manoj Kumar Rana, Bhaskar Sardar, “Improving Spectral Efficiency for Device-to-Device Data Offloading in Underlay Cellular Networks”, 2019 IEEE Conference on Information and Communication Technology, Allahabad, India, 2019, pp. 1-6, <https://doi: 10.1109/CICT48419.2019.9066179>

**Sruti Gan Chaudhuri**

- Moumita Mondal, **Sruti Gan Chaudhuri**. (2020) Uniform Circle Formation by Swarm Robots Under Limited Visibility. In: Hung D., D’Souza M. (eds) Distributed Computing and Internet Technology. ICDCIT 2020. Lecture Notes in Computer Science, vol 11969. Springer, Cham. [https://doi.org/10.1007/978-3-030-36987-3\\_28](https://doi.org/10.1007/978-3-030-36987-3_28)
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**Rohini Basak**

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- Swarnali Daw and Rohini Basak; “Machine learning Application using Waikato Environment for Knowledge Analysis”; 4<sup>th</sup> IEEE International Conference on Computing Methodologies and Communication (ICCMC), pp: 346-351, 2020. doi:10.1109/ICCMC48092.2020.ICCMC-00065
- Purnendu Kumar Rath and Rohini Basak; “Analysis of Deep Neural Networks for textual Entailment Recognition”, 4<sup>th</sup> IEEE International Conference on Inventive Systems and Control (ICISC), pp:89-95, 2020. doi:10.1109/ICISC47916.2020.9171075
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- Arjya Das, Mohammed Wasif Ansari and Rohini Basak; “Covid-19 Face Mask Detection Using TensorFlow, Keras and OpenCV”, 17<sup>th</sup> IEEE INDIA Council of International Conference (INDICON), 2020. [ACCEPTED]

### Palash Kundu

- Palash Kundu, Manoj Kumar Rana, Bhaskar Sardar, Debashis Saha, “Finding Practicable Nesting Level in Multi-level Nested Mobile Networks”, 2019 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), pp.1-6, GOA, India, 2019. [https://doi: 10.1109/ANTS47819.2019.9118010](https://doi.org/10.1109/ANTS47819.2019.9118010)
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### Utpal Kumar Ray

- Ryan Saptarshi Ray, Parama Bhaumik, Utpal Kumar Ray, “A Study and Analysis of Lock and STM Overheads”, published in International Journal of Computer Sciences and Engineering (IJCSE) E-ISSN:2347-2693 Volume- 7, Issue-5, May 2019, pp 548-556

### Pawan Kumar Singh

- Sukrit Bhattacharya, Vaibhav Shaw, **Pawan Kumar Singh**, Ram Sarkar, Debotosh Bhattacharjee: “*SV-NET: A Deep Learning Approach to Video Based Human Activity Recognition*”, In: Proc. of 11<sup>th</sup> International Conference on Soft Computing and Pattern Recognition (SoCPaR 2019), Advances in Intelligent Systems and Computing, Vol. 1182, pp. 10-20, Springer, Cham, 2019. [https://doi.org/10.1007/978-3-030-49345-5\\_2](https://doi.org/10.1007/978-3-030-49345-5_2)
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- Iman Chatterjee, Manosij Ghosh, **Pawan Kumar Singh**, Ram Sarkar, Mita Nasipuri: “*A Clustering-based Feature Selection framework for handwritten Indic script classification*”, In: Expert Systems, Wiley Publishers, Vol. 36, No. 6, 2019 (DOI: <https://doi.org/10.1111/exsy.12459>)
- Soumyadeep Kundu, Sayantan Paul, **Pawan Kumar Singh**, Ram Sarkar, Mita Nasipuri: “*Understanding NFC-Net: a deep learning approach to word-level handwritten Indic script recognition*”, In: Neural Computing and Applications (Special Issue: Hybrid Artificial Intelligence and Machine Learning Technologies), Vol. 32, Issue 12, pp. 7879-7895, 2020

### Kartick Chandra Mondal

- Debasmita Pal, Kartick Chandra Mondal, “Predicting Novel Interactions from HIV-1-Human PPI Data Integrated with Protein Signatures and GO Annotations”, International Journal of Bioinformatics Research and Applications (IJBRA)
- Kartick Chandra Mondal, Biswadeep Deb Nandy, Arunima Baidya, (2019) “Fact-based Expert System for Supplier Selection with ERP Data.”, Algorithms in Machine Learning Paradigms, Studies in Computational Intelligence, SI: CICBA2018, Chapter 3, DOI: [https://10.1007/978-981-15-1041-0\\_3](https://10.1007/978-981-15-1041-0_3), 2020
- Sudarsan Biswas, Neepa Biswas, Kartick Chandra Mondal, (2019) “PARALLEL AND DISTRIBUTED ASSOCIATION RULE MINING ALGORITHMS: A RECENT SURVEY”, Information Management and Computer Science (IMCS), Vol. 2(1), Pages: 15-24, 2019
- Arunava Sankar Nath, Aparajita Pal, Somnath Mukhopadhyay, Kartick Chandra Mondal, (2019) “A survey on cancer prediction and detection with data analysis.”, Innovations in Systems and Software Engineering (ISSE), Springer-Verlag London Ltd., part of Springer Nature 2019, Pages: 1-13, DOI: <https://doi.org/10.1007/s11334-019-00350-6>, Print ISSN: 1614-5046, Online ISSN: 1614-5054

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### INSTRUMENTATION AND ELECTRONICS ENGINEERING

[Salt Lake Campus]

Phone: 033-2335-2587

H.O.D: Dr. Runu Banerjee Roy

Dr. Sankar Narayan Patra (since 16.11.2019)

E-mail: hodiee@jadavpuruniversity.in

#### 1. A) Courses offered:

Name of the Course	Duration	No. of students Enrolled
Bachelor of Instrumentation & Electronics Engineering	4 Years	57
Bachelor of Technology in Instrumentation and Electronics Engineering	3 Years	18
Master of Technology in Instrumentation and Electronics Engineering	2 Years	08
Ph.D.	5 Years	34

#### 1. B) Number of Faculty Members: 15

Professor 10, Associate Professor 2, Assistant Professor 3

#### 2. A) Area of Research Activities:

- |                                 |   |
|---------------------------------|---|
| i) Signal Processing            | ii) Digital System Design                           |
| iii) Intelligent Control        | iv) Electronic Olfaction and Taste Characterization |
| v) Embedded Systems             | vi) Sensor Design                                   |
| vii) Control System             | viii) Filtering and estimation                      |
| ix) Bio-medical instrumentation | x) Spectroscopic Instrumentation                    |

#### 2. B) Major Research Projects:\_(Name of the Project–Investigators–Funding Agency–Amount (Rs. Lakhs)–Duration)

Development of near infrared spectroscopy (NIRS) based method for real-time estimation of the biochemical –quality parameters during tea processing–Prof. Rajib Bandyopadhyay–National Tea Research Foundation, Tea Board, Govt. of India–22.00–2016-2019

Development of sensor probes for quantification of active constituents in *Andrographispaniculata* and *Piper nigrum* using Near Infrared Spectroscopy (NIRS)–Prof. Rajib Bandyopadhyay Prof. Pulok Mukherjee–National Medicinal Plant Board, Ministry of Ayush–52.50–2018-2020

Design of low complexity sharp cut–Department of Science and Technology, Govt. of India–21.32–2017-2020

Qualitative assessment of Indian tea by developing specific electrodes of an electronic tongue–Prof. Runu Banerjee Roy–Department of Science and Technology, West Bengal–12.50–2018-2021

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Development of electrodes for electronic tongue using molecular imprinted techniques for detection of important chemicals in medicinal plants–Prof. Bipan Tudu–Department of Science and Technology, Govt. of India–23.11–2018-2021

Development of high performance cost effective sensing systems for a carcinogenic adulterant identification in fish sample–Prof. Runu Banerjee Roy and –Prof. Bipan Tudu–RUSA–25.0–2019-2020

To explore the possibility of using endosomatic bio potential for assessing mental state affecting behavior of an individual–Prof. Ratna Ghosh –TCS–14.09–From 01 October, 2019 till 30 September, 2020

High Efficient Solar Radiation Sensors And System Design For Solar Astronomical Signal Measurement And Processing –Dr Sankar Narayan Patra–RUSA–6.9–30.05.2019

### 3. A) Invited Lectures Delivered/ Session Chaired:

1. “Say NO to Plagiarism” by Abhijit Chandra in UGC-HRDC sponsored Refresher Course entitled ‘Instrumentation and Automation’ at Jadavpur University Salt Lake Campus, 17 December, 2019
2. “A Journey towards Next Generation Communication” by Abhijit Chandra in *UGC-HRDC sponsored Refresher Course entitled ‘Instrumentation and Automation’* at Jadavpur University Salt Lake Campus, 10 December, 2019
3. Prof. Rajib Bandyopadhyay was Invited for an Expert Talk at the C-DAC Tech-Conclave at Pune on the topic “New paradigms of sensing in Agriculture” on 5 April, 2019
4. Prof. Rajib Bandyopadhyay was Invited to ITMO University, Saint Petersburg, Russia, on 24 April, 2019 on the topic “Machine learning and artificial intelligence in chemometrics”
5. Prof. Rajib Bandyopadhyay was invited as Session Chair on May 28, 2019 in the Oral session on Sensors in the International Symposium on Olfaction and Electronic Nose (ISOEN), 2019, Fukuoka, Japan
6. Prof. Rajib Bandyopadhyay was invited to Tokyo, Japan in November, 2019 for a plenary talk in NIR Forum, 2019

### 3. B) Seminar/ Workshop/ Conference/Symposium Attended:

#### Paper Presented Ininternational Conferences :

1. D. Das, S. Nag, H. Naskar, R. B. Roy, B. Tudu, R. Bandyopadhyay, “Discrimination of various types of black tea clones using NIR spectroscopy”, ICEFEET 2020, NIT Patna, Bihar, India
2. S. Nag, D. Das, H. Naskar, R. Banerjee Roy, B. Tudu, R. Bandyopadhyay, “Estimation of theophylline content in black tea”, ICEFEET 2020, NIT Patna, Bihar, India
3. H. Naskar, D. Das, S. Nag, R. Banerjee Roy, B. Tudu, R. Bandyopadhyay, “Determination of curcumin in turmeric powder using MIP electrode”, ICEFEET, 2020, NIT Patna, Bihar, India
4. S. Dasgupta, B. Ghatak, S. Banerjee, Sk Babar Ali, J. Dei, B. K. Behera, R. Banerjee Roy and B. Tudu, “Development of Linseed Oil Based Quartz Crystal Microbalance Sensor for Detection of Trimethylamine”, ICEFEET, 2020, NIT Patna, Bihar, India
5. Hemanta Naskar, Sheikh Saharuk Ali, Debangana Das, Shreya Nag, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, “Adulteration detection of mustard oil using near infrared spectroscopy”, *The seventh Asian NIR Symposium (ANS2020)*, Khonkaen, Thailand, 12-15 February, 2020
6. Supriya, Sanjeev Kumar, Arunangshu Ghosh, Ajanto Kumar Hazarika, Santanu Sabhapandit, Bipan Tudu, Rajib Bandyopadhyay, “A wavelength selection method for NIR spectra to facilitate development of neural network based calibration models,” *The seventh Asian NIR Symposium (ANS2020)*, Khonkaen, Thailand, 12-15 February, 2020

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7. Dilip Sing, Ranajay Mallik, Shibu Narayan Jana, Bipan Tudu, Kalyan Majumdar, Rajib Bandyopadhyay, "Quantification of piperine in Piper Nigrum using a portable Raman spectrometer," *The seventh Asian NIR Symposium (ANS2020)*, Khonkaen, Thailand, 12-15 February, 2020
8. Kallol Bera, Dilip Sing, Bipan Tudu, Kalyan Majumdar, Rajib Bandyopadhyay, "Development of data acquisition circuitry for portable Raman spectrometer," *The seventh Asian NIR Symposium (ANS2020)*, Khonkaen, Thailand, February 12-15, 2020.5. Soumitra Kar, Nilava Debabhuti, Hemanta Naskar, Prolay Sharma, Bipan Tudu, Rajib Bandyopadhyay, "Classification of cardamom from different cultivars using near infrared spectroscopy," *The seventh Asian NIR Symposium (ANS2020)*, Khonkaen, Thailand, 12-15 February, 2020
9. Shreya Nag, Debangana Das, Hemanta Naskar, Ajanto Kumar Hazarika, Santanu Sabhapondit, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay "Estimation of a few important biomarkers in black tea using NIR spectroscopy and chemometrics," *The seventh Asian NIR Symposium (ANS2020)*, Khonkaen, Thailand, 12-15 February, 2020
10. Debangana Das, Shreya Nag, Hemanta Naskar, Ajanto Kumar Hazarika, Santanu Sabhapondit, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, "Discrimination of green tea samples on the basis of gallic acid content using near infrared spectroscopy," *The seventh Asian NIR Symposium (ANS2020)*, Khonkaen, Thailand, 12-15 February, 2020
11. Samhita Dasgupta, Jyotsna Dei, Shreya Nag, Bijay Kumar Behera, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, "Detection of formalin in fish samples using NIR spectroscopy," *The seventh Asian NIR Symposium (ANS2020)*, Khonkaen, Thailand, 12-15 February, 2020
12. Shreya Nag, Rajdip Chatterjee, Vishal Sharma, R. Banerjee Roy, Tudu, B., Bandyopadhyay, R. Electrochemical Detection of Formalin using Carbon Paste Electrode, MSSND 2019, Jadavpur University, Kolkata
13. D. Das, T. Sau, R. Ray, A. K. Hazarika, S. Sabhapondit, R. Banerjee Roy, B.Tudu, R. Bandyopadhyay, R., Discrimination of Tea Using a Theophylline Sensitive Molecular Imprinted Polymer Based Electrode, MSSND 2019, Jadavpur University
14. Soumitra Kar, Bipan Tudu, Rajib Bandyopadhyay, "Identification and classification of sudan dye I adulterants in turmeric powder by NIR spectroscopy and support vector machine," *18<sup>th</sup> International Symposium on Olfaction and Electronic Nose (ISOEN 2019)*, ACROS Fukuoka, Japan, 26-29 May, 2019
14. Nilava Debabhuti, Prolay Sharma, Sk Babar Ali, Bipan Tudu, Rajib Bandyopadhyay, Mousumi Poddar Sarkar, Nabarun Bhattacharyya, "Discrimination of the maturity stages of Indian mango using QCM based electronic nose", *18<sup>th</sup> International Symposium on Olfaction and Electronic Nose (ISOEN 2019)*, ACROS Fukuoka, Japan, 26-29 May, 2019
15. Debangana Das, Trisita Nandy Chatterjee, Ajanto Kumar Hazarika, Santanu Sabhapandit, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, "Development of a highly selective nickel cobalt oxide nanoparticles modified molecular imprinted polymer based sensor for detection of gallic acid in green tea", *18<sup>th</sup> International Symposium on Olfaction and Electronic Nose (ISOEN 2019)*, ACROS Fukuoka, Japan, 26-29 May, 2019
16. Hemanta Naskar, Barnali Ghatak, Sudip Biswas, Bipan Tudu, Rajib Bandyopadhyay, Panchanan Pramanik, "Electrochemical detection of capsaicin using yttrium oxide nanoparticles modified graphite Paste electrode (Y2O3/GPE)", *18<sup>th</sup> International Symposium on Olfaction and Electronic Nose (ISOEN 2019)*, ACROS Fukuoka, Japan, 26-29 May, 2019
17. Barnali Ghatak, Sk Babar Ali, Hemanta Naskar, Bipan Tudu, Panchanan Pramanik, Soumyo Mukherji, Rajib Bandyopadhyay, "Selective and sensitive detection of limonene in mango using molecularly imprinted polymer based quartz crystal microbalance sensor", *18<sup>th</sup> International Symposium on Olfaction and Electronic Nose (ISOEN 2019)*, ACROS Fukuoka, Japan, 26-29 May, 2019



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  19. Avirup Mandal, Pampa Sadhukhan, Firoj Gaji, and Prolay Sharma, Measuring Real-time Road Traffic Queue Length: A Reliable Approach using Ultrasonic Sensor, *Proceedings of the 2nd International Conference on Communication, Devices and Computing, LNEE 602*, Chapter: 38, Publisher: Springer Nature Singapore Pte Ltd, pp.391-398, DOI: 10.1007/978-981-15-0829-05\_38, 2019
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  26. N. Debabhuti, P. Sharma, B. Tudu, R. Bandyopadhyay and N. Bhattacharyya, "Development of microcontroller based Electronic Nose", 2019 The 13th Asian Conference on Chemical sensors (ACCS), Bali, Indonesia, 2019, pp. 169-170
  27. D. Biswas, P. Sharma, N.S. Power, Dielectric properties of  $\text{Na}_{1-x}\text{K}_x\text{NbO}_3$  (NKN) (0.160 d" x d" 0.200) ceramics synthesized by double sintered method, International conference on material science and applications (ICMSAA-19), Department of Physics, H. N. B. Garhwal University (A Central University), Srinagar, Garhwal, Uttarakhand, 25-27 November, 2019
- 3. C. Seminar/ Workshop/ Conference/Symposium Organized:**
1. One day students conference DISHA '19 on 2 November, 2019 with participation from the students of University of Calcutta, Netaji Subhas Engg. College, Jorhat Engg College, Assam, CIT, Kokrajhar, Assam, Haldia Institute was organized by the ISA Jadavpur University Student Section
  2. Tech Talk on 12 September, 2019 on "Importance & Application of Instrumentation & Automation in Process Industry & Role of Instrument Engineer in Industry" by Sri Soumitra Ranjan Mitra, Former Jt.General Manager (I&A) of MECON-Ranchi
  3. Tech Talk on "Measuring Environmental Pollution" on 13 August, 2019 by Sri Subhra Nag, President (2018) of ISA Kolkata Section and Sri Anjan Neogi, Dy. General Manager of Environnement SA India Ltd

**3. D. Orientation course/ Refreshers Course Attended:**

Dr. Prolay Sharma attended a refresher course “introduction to soft computing” (programme code cu113) commencing from 20-31 January, 2020 IN NITTTR, KOLKATA

**3. E. Orientation course/ Refreshers Course Organized:**

UGC-HRDC Sponsored Two Week Refresher Course on “Instrumentation and Automation”, organized by the Department of Instrumentation and Electronics Engineering, Jadavpur University from 09-21 December, 2019 at Jadavpur University Salt Lake campus, Coordinators: Prof. Kalyan Majumdar and Dr. Sankar Narayan Patra

**4. A. Books/Monographs Published:**

1. Electronic Tongue for Tea Quality Assessment: Advanced Signal Processing Techniques for Estimation of Thearubigin and Theaflavin – Book Chapter in Advancements in Instrumentation and Control in Applied System Applications, IGI Global, pp. 108-128, 2020 by Bipan Tudu, Rajib Bandyopadhyay
2. Application of Electronic Nose and Tongue for Beverage Quality Evaluation – Book Chapter in Engineering Tools in the Beverage Industry, Elsevier, pp. 229-254, 2019 by Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay
3. Abhijit Chandra, “Evolutionary Algorithms for the Efficient Design of Multiplier-less Image Filter”, Bio-Inspired Computing for Image and Video Processing (CRC press), Chapter 10, pp. 267-296, Edited by: D. P. Acharjya and V. Santhi, 2017, ISBN: 978-14987-65923

**4. B. Articles Published in Journals:**

**International:**

1. Subhabrata Roy and **Abhijit Chandra**, “On the Order Minimization of Interpolated Bandpass Method Based Narrow Transition Band FIR Filter Design”, *IEEE Transactions on Circuits and Systems-I: Regular Papers*, vol. 66, no. 11, pp. 4287-4295, November 2019. (Impact Factor 3.318)
2. Subhabrata Roy and **Abhijit Chandra**, “Design of Narrow Transition Band Digital Filter: An Analytical Approach”, *Integration, the VLSI Journal (Elsevier)*, vol. 68, pp. 38-49, September 2019. (Impact Factor 1.214)
3. Debangana Das, Trisita Nandy Chatterjee, Runu Banerjee Roy, Bipan Tudu, Ajanto Kr Hazarika, Santanu Sabhapondit, Rajib Bandyopadhyay, “Titanium oxide nanocubes embedded molecularly imprinted polymer based electrode for selective detection of caffeine in green tea”, *IEEE Sensors Journal*, 2020
4. Hemanta Naskar, Barnali Ghatak, Sudip Biswas, Prabal Pratap Singh, Bipan Tudu, Rajib Bandyopadhyay, “Electrochemical detection of eugenol (EU) using polyacrylonitrile molecular imprinted polymer embedded graphite (PAN-MIP/G) electrode,” *IEEE Sensors Journal*, vol. 20, no.1, pp. 39-46, 2020
5. Somdeb Chanda, Ajanto Kumar Hazarika, Navnil Choudhury, Sk. Anarul Islam, Rishabh Manna, Santanu Sabhapondit, Bipan Tudu, Rajib Bandyopadhyay “Support vector machine regression on selected wavelength regions for quantitative analysis of caffeine in tea leaves by near infrared spectroscopy”, *Journal of Chemometrics*, vol. 33, no.10, p
6. Abhishruti Bhuyan, Bipan Tudu, Rajib Bandyopadhyay, Arunangshu Ghosh, Sanjeev Kumar, “Extended Kalman filtering for estimation of parasitic artifacts in three electrode electrochemical sensors,” *IEEE Sensors Letters*, vol. 3, no.10, pp. 1-4, 2019
7. Hemanta Naskar, Sudip Biswas, Bipan Tudu, Rajib Bandyopadhyay, Panchanan Pramanik, “Voltammetric detection of thymol (THY) using polyacrylamide embedded graphite molecular imprinted polymer (PAM@G-MIP) electrode”, *IEEE Sensors Journal*, vol. 19, no.19, pp. 8583-8589, 2019
8. Pradip Saha, Santanu Ghorai, Bipan Tudu, Rajib Bandyopadhyay, Nabarun Bhattacharyya, “Tea quality prediction by sparse modeling of electronic tongue signals”, *IEEE Transaction on Instrumentation and Measurement*, vol. 68, no.9, pp. 3046-3053, 2019

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9. Abhishruti Bhuyan, Bipan Tudu, Rajib Bandyopadhyay, Arunangshu Ghosh, Sanjeev Kumar, "ARMAX modeling and impedance analysis of voltammetric e-tongue for evaluation of infused tea", *IEEE Sensors Journal*, vol. 19, no. 11, pp. 4098-4105, 2019
10. Saumita Kar, Bipan Tudu, Arun Jana, Rajib Bandyopadhyay, "FT-NIR spectroscopy coupled with multivariate analysis for detection of starch adulteration in turmeric powder", *Food additives and Contaminants: Part A*, vol. 36, no. 6, pp. 863-875, 2019
11. Sanjeev Kumar, Arunangshu Ghosh, Bipan Tudu, Rajib Bandyopadhyay, "A circuit model estimation of voltammetric taste measurement system for black tea", *Measurement*, vol. 140, pp. 609-621, 2019
12. Saptarshi Ghosh, Bipan Tudu, Nabarun Bhattacharyya, Rajib Bandyopadhyay, "A recurrent Elman network in conjunction with an electronic nose for fast prediction of optimum fermentation time of black tea", *Neural Computing and Applications*, vol. 31(Suppl 2), pp. 1165-1171, 2019
13. Sk. Babar Ali, Barnali Ghatak, Nilava Debabhuti, Satyaki Pal, Prolay Sharma, Bipan Tudu, Nabarun Bhattacharyya, Rajib Bandyopadhyay, "Determination of  $\alpha$ -myrcene Volatile in Mango by Quartz Crystal Microbalance Sensor," *IEEE Sensors Journal*, vol. 19, no. 3, pp. 893-900, 2019
14. Mahuya Bhattacharyya Banerjee, Susmita Pradhan, Runu Banerjee Roy, Bipan Tudu, Dipak Kumar Das, Rajib Bandyopadhyay, Panchanan Pramanik, "Detection of benzene and volatile aromatic compounds by molecularly imprinted polymer coated quartz crystal microbalance Sensor", *IEEE Sensors Journal*, vol. 19, no. 3, pp. 885-892, 2019
15. Barnali Ghatak, Sk. Babar Ali, Bipan Tudu, Panchanan Pramanik, Soumyo Mukherji, Rajib Bandyopadhyay, "Detecting Ocimene in mango using mustard oil based quartz crystal microbalance sensor", *Sensors and Actuators B*, vol. 284, pp. 514-524, 2019
16. Trisita Nandy Chatterjee, Debangana Das, Runu Banerjee Roy, Bipan Tudu, Ajanto Kr Hazarika, Santanu Sabhapondit, Pradip Tamuly, Rajib Bandyopadhyay, "Development of a nickel hydroxide nanopetal decorated molecular imprinted polymer based electrode for sensitive detection of epigallocatechin-3-gallate in green tea", *Sensors and Actuators B*, vol. 283, pp. 69-78, 2019
17. Mahuya Bhattacharyya Banerjee, Runu Banerjee Roy, Bipan Tudu, Rajib Bandyopadhyay, Nabarun Bhattacharyya, "Black tea classification employing feature fusion of E-nose and E-tongue responses", *Journal of Food Engineering*, vol. 244, pp. 55-63, 2019
18. Sk. Babar Ali, Barnali Ghatak, Nilava Debabhuti, Satyaki Pal, Prolay Sharma, Bipan Tudu, Rajib Bandyopadhyay, "Sensitive detection of  $\alpha$ -Myrcene in mango using ethyl cellulose modified quartz crystal microbalance sensor", *Materials Today: Proceedings*, vol. 18, pp. 1025-1032, 2019
19. Evgeny Legin, Olesya Zadorozhnaya, Maria Khaydukova, Dmitry Kirsanov, Vladimir Rybakin, Anatoly Zagrebina, Natalia Ignatyeva, Julia Ashina, Subrata Sarkar, Subhankar Mukherjee, Nabarun Bhattacharyya, Rajib Bandyopadhyay, Andrey Legin, "Rapid Evaluation Integral Quality and Safety of Surface and Waste Waters by a Multisensor System (Electronic Tongue)", *Sensors*, vol. 19, no. 9, 2019
20. Susmita Pradhan, Susmita Pramanik, Dipak K. Das, Radhaballabh Bhar, Rajib Bandyopadhyay, Paul Millnere, Panchanan Pramanik, "Nanosized iron telluride for simultaneous nanomolar voltammetric determination of dopamine, uric acid, guanine and adenine", *New Journal of Chemistry*, vol. 43, pp. 10590-10600, 2019
21. Rashmita Das, Rajib Bandyopadhyay, Panchanan Pramanik, "Stereo-regulated Schiff base siloxane polymer coated QCM sensor for amine vapor detection", *Materials Chemistry and Physics*, vol. 226, pp. 214-219, 2019
22. D. Biswas, P. Sharma, N.S. Power, Converse piezoelectric properties of lead free Ba<sub>1-x</sub>Ca<sub>x</sub>Zr<sub>0.1</sub>Ti<sub>0.9</sub>O<sub>3</sub> (x = 0.055) ceramics using double sintered method, *Science of sintering journal*, 2019
23. D. Biswas, P. Sharma, N.S. Power, The influence of Two-step Sintering approaches on lead free Ba<sub>1-x</sub>Ca<sub>x</sub>Zr<sub>0.1</sub>Ti<sub>0.9</sub>O<sub>3</sub> (x = 0.065) ceramics and their piezoelectric properties, *Science of sintering journal*, 2019
24. D. Biswas, P. Sharma, N.S. Power, Temperature dependent dielectric properties of (Na<sub>1-k</sub>, K<sub>x</sub>) NbO<sub>3</sub>, near x = 0.175 composition. *Journal of Physics and Chemistry of Solids*, 2019

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25. Yongtao Guan, Abhishek Dhar, Chetan Patel, Mehul Khimani, Swarnali Neogi, Prolay Sharma, Nadavala Siva Kumar and Rohit L. Vekariya, brief review on solid lipid nanoparticles: part and parcel of contemporary drug delivery systems, Royal Society of Chemistry, 3rd July 2020, DOI: 10.1039/d0ra03491f
26. Susmita Pradhan, Mahuya Bhattacharyya Banerjee, Sudip Biswas, Nor AliyaHamizi, Dipak K Das, Radhaballabh Bhar, Rajib Bandyopadhyay, Panchanan Pramanik, "An efficient simultaneous electrochemical detection of nanomolar epinephrine and uric acid using low temperature synthesized nanosized copper telluride", *Electroanalysis*, 2020
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28. Sudip Biswas, Hemanta Naskar, Susmita Pradhan, Yuling Chen, Yang Wang, Rajib Bandyopadhyay, Panchanan Pramanik, "Sm<sub>2</sub>O<sub>3</sub> Nanorod modified Graphite Paste Electrode for Trace Level Voltammetric Determination of Acetaminophen and Ciprofloxacin", *New Journal of Chemistry*, 44, pp. 1921-1930, 2020
29. Debangana Das, Don Biswas, Ajanto Kumar Hazarika, Santanu Sabhapondit, Runu Banerjee Roy, Bipan Tudu, and Rajib Bandyopadhyay, "CuO Nanoparticles Decorated MIP-based Electrode for Sensitive Determination of Gallic Acid in Green Tea", *IEEE Sensors Journal*, 2020
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31. Trisita Nandy Chatterjee, Debangana Das, Runu Banerjee Roy, Bipan Tudu, Ajanto Kr Hazarika, Santanu Sabha Pondit, Pradip Tamuly, Rajib Bandyopadhyay, "Development of a nickel hydroxide nanopetal decorated molecular imprinted polymer based electrode for sensitive detection of epigallocatechin-3-gallate in green tea", *Sensors and Actuators B: Chemical*, vol. 283, pp. 69-78, 2019
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33. Soumya Roy, Amrita Prasad, Koushik Ghosh, Subhash Chandra Panja and Sankar Narayan Patra, Investigation of the Hemispheric Asymmetry in Solar Flare Index during Solar Cycle 21–24 from the Kandilli Observatory, *Solar Physics* (2020)
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35. Soumya Roy, Amrita Prasad, Subhash Chandra Panja, Koushik Ghosh and Sankar Narayan Patra (2019) A Search of Periodicities in F10.7 Solar Radio Flux Data, *Solar System Research*, Vol. 53, pp. 224 – 232. JUNE 2019 DOI: 10.1134/S0038094619030031
36. Sanghamitra Poddar, Subhash Chandra Panja, Sankar Narayan Patra, Malay Gangopadhyaya, "Human factor analysis for railway coach and bogie maintenance using principal component analysis and factor analysis", *International Journal of Human Factors and Ergonomics* June 2019, 6 (1)
37. Soumya Roy, Amrita Prasad, Koushik Ghosh, Subhash Chandra Panja and Sankar Narayan Patra, Computation of Composite Mg II Core-to-Wing Ratio for Solar Cycle 22 and 23, *Geomagnetism and Aeronomy* (in press)
38. Soumya Roy, Amrita Prasad, Subhash Chandra Panja and Sankar Narayan Patra, Temporal Variation of Solar Flare Index during Solar Cycle 21–24, *Research in Astronomy and Astrophysics* (in press)



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39. S. Ghosh, A. Chandra, R. K. Mudi, *A novel fuzzy pixel intensity correlation based segmentation algorithm for early detection of Alzheimer's disease*, Multimedia Tools and Applications, Vol. 78, no. 9, pp. 12465-12489, 2019. DOI: 10.1007/s11042-018-6773-z
40. U. M. Nath, C. Dey, R. K. Mudi, *Fuzzy tuned model based control for level and temperature processes*, Microsystem Technologies, vol. 25, no. 3, pp. 819- 827, 2019. DOI: 10.1007/s00542-019-04300-x
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42. U. M. Nath, C. Dey, R. K. Mudi, *Designing of IMC-PID controller for higher-order process based on model reduction method and fractional coefficient filter with real-time verification*, Chemical Product and Process Modeling, DOI: 10.1515/cppm-2019-0089 (early view)
43. U. M. Nath, C. Dey, R. K. Mudi, *Fuzzy rule-based auto-tuned internal model controller for real-time experimentation on temperature and level processes*, International Journal of Automation and Control, Vol. 14, no. 2, pp. 239-256, 2020
44. U. M. Nath, C. Dey, R. K. Mudi, *A switching IMC-PID controller design for lag dominating processes with real-time implementation on a level control system*, Mechatronic Systems and Control, Vol. 48, no. 3, pp. 171-182, 2020

### 6. Major Achievements:

- Abhijit Chandra received Young Faculty Research Fellowship under Visvesvaraya PhD Scheme for Electronics & IT from Digital India Corporation, R&D Company of Ministry of Electronics & Information Technology, Govt. of India in 2019
- Patent awarded: Tea Quality Measuring Instrument Based On Taste - Patent No. 318789 dated 22.08.2019
- Patent published: An electrode for the determination of ammonium ion and a process for the preparation thereof - Patent application no. 201811020939 of 06.12.2019
- Ms Barnali Ghatak, PhD scholar, received the best poster award under “Women Scientist and Entrepreneurs Conclave” in Indian International Science Festival (IISF-2019) held in Kolkata in November, 2019
- National patent published on A SMART SYSTEM TO MEASURE THE SOLAR IRRADIANCE SIGNAL
- Inventor : 1)Mr. Soumya Roy, 2)Dr. Sankar Narayan Patra, 3)Dr. Subhash Chandra Panja
- IPO JOURNAL PUBLISHED, The Patent Office Journal No. 51/2019 Dated 20/12/20



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### MECHANICAL ENGINEERING

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#### 1. A. Courses Offered:

Name of the Courses	Course Duration	No. of Students Enrolled
Bachelor's Degree in Mechanical Engineering	4 Years	150
Bachelor's Degree in Mechanical Engineering (Evening Course)	5 Years	40
Master's Degree in Mechanical Engineering	2 Years	25
Master's Degree in Mechanical Engineering (Automobile Engineering)	2 years	18

#### 1. B. Number of Faculty Members: 62

- Professors: 33
- Associate Professors: 14
- Assistant Professors: 15

#### 2. A. Departmental Research Activities (Broad Areas):

- Hydraulic and Combustion control
- Experimental and Computational fluid dynamics and heat transfer including problems on multi-phase flow
- Mechatronics and Control
- Heat transfer analysis of various production process
- Combustion modeling and simulation
- Pollution and its control
- Alternative fuels
- I.C. Engine & Combustion
- Vibration analysis
- Vibration control in machine foundations
- Laser machining process
- Fracture Mechanics
- Dynamic instability of machine structures
- Synthesis and analysis of machine components
- Experimental stress and deformation analysis
- Composite structure
- Computer Aided Design & Manufacturing (CAD/CAM)
- Energy and Exergy analysis of advanced power and cogeneration systems. Clean coal technology. Combined cycles. Energy conservation. Fuel cell technology
- Mechatronics
- Biomechanics and Bioengineering
- Product Development: Product development performance using the Structural Equation Modeling (SEM) approach
- Sustainable Energy
- Microfluidics

**2. B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)**

**Dr. Abhijit Mukhopadhyay**

- Individual project, “Machining and tribological characterization of some contemporary advanced engineering materials.” Funded by RUSA 2.0

**Dr. Anirban Mitra**

- Co-investigator, “Evaluation of Fracture and Fatigue Crack Growth (FCG) behaviour of Alloy 617 Base and Welded Materials”. (National Mission on Advanced Ultra Super Critical Technology)
- Co-investigator, “Evaluation of Fracture and Fatigue Crack Growth (FCG) behaviour of Alloy 617 Forging Materials”. (National Mission on Advanced Ultra Super Critical Technology)

*[Continued from previous Academic Calendar]*

**Dr. Prokash Chandra Roy**

**Departmental:**

- Experimental and Numerical Analysis for the development of Renewable Energy Systems for Sustainable Power Application. Departmental upgradation project under RUSA 2.0 (GOI)-JU, Departmental Coordinator

**Individual :**

- Experimental Investigation of a Downdraft Biomass Gasifier using different Biomass Feedstocks, Funding Agency: SERB (DST), Principal Investigator (Sole)
- Performance Analysis of an Anaerobic Digester using Different Biomass Feedstocks and upgradation of biogas, Individual project grant under RUSA 2.0 (GOI)-JU, Principal Investigator (Sole)

**Dr. Pranibesh Mandal**

- Individual Project: “Design and Motion Control Analysis of a Real-Time Model of an Autonomous Underwater vehicle.” Funding Agency: RUSA 2.0, Jadavpur University

**Dr. Sadhan Kumar Ghosh**

**International Research Projects ongoing - Prof Sadhan K Ghosh as PI**

- SINTEF, Norway funded project (2020- October 2021): Ocean Plastic Turned into an Opportunity in Circular Economy (OPTOCE), Collaborative Research Project to Combat Marine Littering and Microplastics in Asia, (in India, Thailand, Vietnam, China and Norway), funded OPTOCE-project, SINTEF Energi AS, SINTEF Fiskeri og havbruk AS, SINTEF Petroleum AS and Norsk Marinteknisk Forskningsinstitutt AS (MARINTEK), Norway, Prof. Sadhan K Ghosh has been invited to Lead the project in India in March 2020
- UNCRD, Japan; ISWMAW, CRIC (Consortium of researchers in international collaboration), India supported Research Project, 3rd phase: International Collaborative Research Project on, “Global Status of implementation of Circular Economy” (2020-2022), participated by experts from 20 countries. Prof Sadhan K Ghosh is the Project Leader. Participating countries to be decided soon to develop the project, “Circular Economy: Policy, Innovation, Technology and Business”
- Royal Academy of Engineering, UK funded (2019-2021): Circular Economy adoption within small and medium sized enterprises in India and the UK. (40,000 GBP) (Contd.)
- Funded by Global Challenge Research Funding, UK (2019-2020): Social Wellbeing and Mental Health Challenges of Employees of Small and Medium Sized Enterprise (SMEs) in Emerging Economies (2019-2020):(10,000 GBP) (Contd.)
- Shota Rustaveli National Science Foundation (SRNSF), Georgia, funded (2019-2022): Development of an Integrated Methodology for Determination of the Likelihood of Emerging Illegal Dumpsites in High Mountain-

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ous Rural Regions on the Example of Georgia, (GEL 180 000). Partner: Institute of Hydrometeorology at Georgian Technical University, Georgia (Contd.)

- IGES Centre Collaborating with UNEP on Environmental Technologies (CCET), Japan and International Society of Waste Management, Air and Water (ISWMAW), India funded (2018-20): Developing Indore Case Study, the cleanest city in India (USD 5000)
- European Union funded: Horizon 2020 Research projects from European commission (July 2018 – June 2022) : PI from Jadavpur University, Project Entitled, “India H<sub>2</sub>O bio-mimetic and phyto-technologies designed for low-cost purification and recycling of water”. 20 participating organizations from 7 countries- India, UK, Denmark, Singapore, Spain, Netherlands and Israel. (INR 130 million) (Contd.)
- UNCRD, Japan; ISWMAW, CRIC (Consortium of researchers in international collaboration), India supported Research Project, 2nd Phase: International Collaborative Research Project on, “Global Status of implementation of Circular Economy” (2019-2021), participated by experts from 14 countries. Prof Sadhan K Ghosh is the Project Leader. Participating countries : Brazil, Denmark, Georgia, India, Mexico, Morocco, Philippines, Russian Federation, Slovenia, South Africa, Tanzania, Tunisia, Turkey and USA to develop the project, “Circular Economy: Recent Trends in Global Perspective” (Contd.)

### **National Research Projects (Funded) ongoing - Prof Sadhan K Ghosh as PI**

- ISI, Kolkata funded(2019-2021) : Pro-Environmental attitude survey (PES), Psychology Research Unit of the Indian Statistical Institute, Kolkata (INR 12,60,000) (Contd.)

### **Dr. Sandip Sarkar**

- Individual Project. “Ferrofluid actuated liquid dispenser for wearable microfluidic drug delivery system.” Funding Agency: SERB DST
- Individual Project. “Investigation of a bluff body stabilized reacting flow”. Funding Agency: RUSA 2.0 GOI

### **Dr. Sudipta De**

- Individual Project (Designation: Indian Coordinator), ‘Sustainable energy and environment solutions: technology and policy’ under UTFORSK Program between Norway and BRICS countries and Japan, Funding Agency: DIKU-Norway
- Individual Project (Designation: Co-PI), ‘Development of efficient biomass conversion routes for biofuel production and utilization’, under INNO-INDIGO program of EU, Funding Agency: DST and DBT-India and EU
- Institutional Project (Designation: Member): ‘Enhancing quality assurance management and benchmarking strategies in Indian universities (EQUAM-BI)’ Funding Agency: European Commission

### **3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)**

#### **Dr. Anirban Mitra**

- Invited Lecture on Nonlinearities in Vibration: Contact Analysis, Functionally Graded Materials and Structural Elements. Short-term course on Structural Dynamics, Vibration and Control (SDVC-2019), Mechanical Engineering Department, National Institute of Technology, Durgapur, 22–26 July, 2019

#### **Dr. Himadri Chattopadhyay**

##### **Invited Lecture Delivered**

- Lecture delivered as a key resource person in the FDP course on “Numerical methods in engineering applications” at JIST, Jorhat - Assam under TEQIP, Phase III, from 1-3 March, 2020
- Invited (Plenary) Lecture delivered in “International Conference on Innovations in Thermo-Fluid Engineering and Sciences (ICITFES-2020)” at NIT Rourkela, on 10 January, 2020

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- Lecture delivered as a key resource person in AICTE Sponsored two weeks FDP on “Advances in Robotics & Mechatronics – Multidisciplinary System Engineering” in the Department of Mechanical Engineering of College of Engineering & Management, Kolaghat, from 9-20 December, 2019

### Session Chaired

- Session Chaired for Technical Oral Presentation Session in “International Conference on Innovations in Thermo-Fluid Engineering and Sciences (ICITFES-2020)” at NIT Rourkela, on 10 January, 2020
- Session Chaired for Technical Oral Presentation Session in “International Conference on Advancements in Mechanical Engineering (ICAME 2020)” to be held at Aliah University, Newtown, Kolkata, on 16 January, 2020

### Dr. Sadhan Kumar Ghosh

#### Lectures delivered in foreign Countries and India by Prof. Sadhan K. Ghosh

- Germany, Berlin: Delivered keynote speech on, “Reduction of marine litter by a functioning circular economy” Invited by German Recycling Technologies and Waste Management Partnership e.V. in the RETech conference “Recycling management against marine litter” held at Berlin, Germany during on 21–22 November, 2019
- Bangladesh, on invitation from IGES, Japan & SACEP, Sri Lanka: Delivered Speech on “Waste separation at source at Indore” at the Second Sub-Regional workshop on Preparation of status Report and sub-regional Roadmap for Implementing the Global Waste Management Goals toward Addressing SDGS in South Asia to be held in Dhaka, Bangladesh 15-17 July, 2019 and coordinated the session on, “Holistic waste management/ integration of 3Rs”, at the Meghna Hall, Hotel Pan Pacific Sonargaon, Dhaka, Bangladesh
- Sri Lanka, on invitation from IGES, Japan & SACEP, Sri Lanka: Delivered Key Note speech on, “Importance of Roadmap moving from waste management towards circular economy incorporating Polluter Pay Principle and EPR” on 16 September and second keynote speech on 17 September on “Importance of national data management on waste and experience of the application of Swachh Bharat Mission in India in gathering data from cities (data types, procedure and management)”, at the Third Sub-Regional Workshop on preparation of status report and sub-regional roadmap for implementing the global waste management goals towards addressing SDGs in South Asia scheduled to be held from 16-17 September 2019, in Colombo, Sri Lanka. at the The Kingsbury Hotel Colombo, Sri Lanka
- USA : Delivered the Opening Plenary Speech in Annapolis, Maryland, Washington DC, on “Sustainable Waste Management in Ribboning & Retting of Jute : Alternative to Plastics”, in the 34th International Conference on Solid Waste Technology and Management, by Widener University, USA held during 31 March - 03 April, 2019
- India at India Habitat Centre : Delivered the address on, “Waste to Energy” in the International Seminar of Waste to Energy, on 31 January, 2020 invited by Steag Germany at India Habitat Centre, New Delhi
- India at India Habitat Centre : Panelist in the “Waste and Waste- Water Management in WSDS 2020 Corporate Conclave” on 30 January, 2020 in the Stein Auditorium, India Habitat Center, Lodhi Road, New Delhi invited by TERI at the World Sustainable Development Summit 2020
- India at Indore : Delivered speech on “how to improve the waste management at Indoor”, at Indore Municipal Corporation, by IGES, Japan and ISWMAW, June 2019
- India at IconSWM, KIIT, Odisha: Delivered the Keynote Speech at 9th IconSWM-CE 2019 (International Conference on Solid Waste Management, held at KIIT, Odisha, during 27-30 November, 2019
- ANU, Guntur: Keynote speech in the inaugural on national seminar on Eco friendly Technologies for sustainable waste management, AT ANU, Guntur, “Urban sustainability through Circular Economy towards sustainable waste management” during 7–8 February, 2020

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- NIT, Durgapur : Delivered keynote speech on “Circular Economy” at the national seminar on waste management and Circular Economy sponsored by TEQIP, NIT Durgapur
- CUSAT, Cochin: Delivered keynote speech on “Sustainable Waste Management” at the International Conference On Energy, Environment, Materials And Safety (ICEEMS’19), 25 –27 April, 2019, Venue: Seminar Complex, CUSAT, Cochin University of Science & Technology
- JU : Delivered several lectures on “Anti Plagiarism, benefits and software application” for the teachers and research scholars of Jadavpur University, on 1.10.2019 and several other dates covering nearly 1000 teachers and research scholars
- JU : Delivered lecture on “How to write quality research articles for publication” at the two day workshop at Jadavpur University attended by more than 400 teachers and research scholars, during 13-14 January, 2020
- CUSAT, Cochin: Delivered plenary lecture on “Marine Littering and Micro plastics-global status, actions and way forward”, at the Department of Civil Engineering, Cochin University of Science and Technology, Kochi, India in International workshop on Sustainable Technologies for “Waste to Energy & Waste to Wealth” – Challenges and Opportunities, STWEAW’19 on 16 December 2019
- IEM, Kolkata: Delivered keynote speech on “Resource Circulation in Circular Economy” at the Institute of Engineering & Management, Kolkata on 24 April, 2019 in the National Symposium on Resource Circulation and Waste Management
- UGC- HRDC, JU: Delivered speech on “Innovation” at the 74th Orientation programme for teachers and librarian of universities and colleges on 11 September, 2019 at the UGC-Human Resource Development Center, Jadavpur University
- CU: Delivered speech on “Innovation in waste plastics Recycling & Jute Ribboning” at the Orientation programme for teachers of universities and colleges at the Department of Chemical Engineering, Calcutta University, Rajabazar Campus

### Session Chaired (2019-20)

- Panel Discussion on How to Reduce marine littering and adopt Recycling”, held at Berlin, Germany during on 22 November, 2019
- Chaired the 9th International Conference on Solid Waste Management, 8th IconSWM held at KIIT, ODISHA, during 27-30 November, 2019
- Chaired the inaugural and valedictory programme of the 9th IconSWM 2019 (International Conference on Solid Waste Management) at KIIT, ODISHA
- Chaired the Technical Session in the 34th International Conference on Solid Waste Technology and Management, Philadelphia, Widener University, USA held in March- April, 2019 at Annapolis, Maryland, Washington DC, USA
- Third Sub-Regional Workshop on preparation of status report and sub-regional roadmap for implementing the global waste management goals towards addressing SDGs in South Asia, in Colombo, Sri Lanka from 16-17 September, 2019

### Dr. Sandip Sarkar

- Session Chair of Numerical Heat Transfer session of Indian Society of Heat and Mass Transfer Conference at IIT Roorkee, December, 2019
- Session Chair of CFD session of Indian Society of Heat and Mass Transfer Conference at IIT Roorkee, December, 2019

### Dr. Sudipta De

#### Lectures Delivered

- Keynote Talk in 1st International Conference on Clean and Renewable Energy (ICcare 2019) scheduled from 10-12 July, 2019 at NIT Durgapur, West Bengal, India



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- Invited talk in one-day international seminar Sustainable Development Goals–The Indian Pathway organized under the centenary celebration by the Jadavpur University Alumni Association on 2 December, 2019
- Invited thematic talk ‘Role of Renewables for Energy Transition’ in American Society of Mechanical Engineers (ASME) ASME GT India 2019 Conference at IIT Madras, Chennai, India during 5-6 December, 2019
- Invited talk ‘Distributed energy solution potential: a few case studies with agricultural wastes of India’ in two-day national workshop jointly organized by the Bureau of Indian Standards and CSIR-CIMFR, Dhanbad on ‘Need for Indian Standards for Solid Biofuels’, 27– 28 January, 2020, CSIR-CIMFR Digwadih Campus, Dhanbad

### Session chaired

- Chaired a Session in 1st International Conference on Clean and Renewable Energy (ICCARE 2019) scheduled from 10-12 July, 2019 at NIT Durgapur, West Bengal, India
- Chaired the session on Renewable Energy in American Society of Mechanical Engineers (ASME) ASME GT India 2019 Conference at IIT Madras, Chennai, India during 5-6 December, 2019

### Dr. Swarnendu Sen

- Multiphase modelling of thermal energy removal from heat-generating porous debris, Swarnendu Sen, International Workshop on Energy, Environment and Multiphase Flows (IWEPE-2020), IIT Kanpur, 24-26 February, 2020
- Effect of loop geometry on the flow dynamics of a single-phase natural circulation loop, Swarnendu Sen, International Conference on Thermofluids, KIIT Bhubaneswar, 23-24 January, 2020
- Colour Based Prediction of Lean Blowout (LBO) in Gas Turbine Combustors and Its Control, Swarnendu Sen, 4th International Conference on Sustainable Energy and Environmental Challenges, NEERI Nagpur, 27-29 November, 2019

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

#### Dr. Abhijit Mukhopadhyay

- Abhijit Mukhopadhyay et. al., “Tribological studies of aqueous poly quenched medium carbon steel.” ICMMM2019, VIT, Vellore, 29 - 31 March, 2019
- Abhijit Mukhopadhyay et. al., “Flow behavior of EPDM rubber in dry and lubricated conditions.” IConAMMA 2019, Amrita School of Engineering, Bengaluru; 29 - 31 October, 2019
- Abhijit Mukhopadhyay et. al., “Trends in tribological researches of different rubbers used in engineering” BALTRIB 2019, VMU, Kaunas, Lithuania, 14-16 November, 2019
- Abhijit Mukhopadhyay et. al., “Tribological studies of 3D printed ABS and PLA plastic parts.” AFTMME 2019, IIT Ropar, Rupnagar, Punjab, 5 - 7 December, 2019

#### Dr. Anirban Mitra

- Large Amplitude Static Deflection of Axially Functionally Graded Timoshenko Beams, IISES International Academic Conference – Vienna, Vienna University of Technology - TU Wien, Vienna, Austria, 17–20 September, 2019

#### Dr. Gautam Majumdar

- Sarkar S, Baranwal RK, Koley I, Mandal R, Mandal T, Majumdar G, Parametric Optimization of Corrosion Resistance of Electroless Ni–Co–P Coating. In Advances in Computational Methods in Manufacturing 2019 (pp. 685-692). Springer, Singapore

## Annual Report 2019-20

- Sarkar S, Baranwal RK, Sen RS, Oraon B, Mukherjee S, Majumdar G, Parametric Optimization of Electroless Ni-P coatings using Taguchi method. In IOP Conference Series: Materials Science and Engineering 2019 Nov (Vol. 653, No. 1, p. 012001). IOP Publishing

### **Dr. Hareram Lohar**

#### **Conference**

- Hareram Lohar, Free vibration of Axially Graded Timoshenko Beam under Centrifugal stiffening, 1st International Conference on Manufacturing, Material Science & Engineering, Hyderabad, 16-17 August, 2019

#### **Workshop**

- Hareram Lohar, Experimental Learning, Community Engagements and Rural Immersion, Kolkata, 6-7 September, 2019

### **Dr. Himadri Chattopadhyay**

- Attended and technical paper presented in 12th International Conference on Computational Heat, Mass and Momentum Transfer (ICCHMT 2019) from 3-6 September, 2019 at Roma Tre University, Rome, Italy
- Attended and technical paper presented in International Mechanical Engineering Congress & Exposition (IMECE 2019) organised by ASME, from 11-14 November, 2019 at Salt Lake City, Utah, USA

### **Dr. Nabendu Ghosh**

- “Dissimilar MIG Welding between 316L Austenitic Stainless Steel and 409 Ferritic Stainless Steel: Experiment, Analyses and Optimization”, 40th International MATADOR Conference on Advanced Manufacturing, at Hangzhou, China, from 8-10 July, 2019

### **Dr. Prokash Chandra Roy**

- Dr. Prokash Chandra Roy, Paper Title: Performance analysis of biomass based renewable energy system for sustainable development, presented in CEEPE 2019 held at University of California, Berkeley, USA during 25-28 June, 2019
- Dr. Prokash Chandra Roy, Paper Title: Augmentation & Validation of a Single Zone Biogas Engine Model, Presented in RTESD 2019 held at VGU Jaipur, during 17-19 October, 2019
- Dr. Prokash Chandra Roy, Paper Title: Repercussion of neem oil & palm oil biodiesel blends (b5 & b10) and Diethyl ether & 1-butanol with palm oil biodiesel blends on Performance of a unmodified diesel engine, Presented in the ICARRET 2019 held at VR Sidhartha Engineering. College, Vijayawada, during 23-24 October, 2019

### **Dr. Sadhan Kumar Ghosh**

#### **Conference Attended**

- 34th International Conference on Solid Waste Technology and Management, Philadelphia, Widener University, USA held during March, 2019, AT Annapolis, Maryland, Washington DC
- 9th International Conference on Solid Waste Management, 9th IconSWM 2019 at KIIT, Odisha India, by International Society of Waste Management, Air and Water (ISWMAW), CQMS, Jadavpur University, IISc Bangalore and KIIT, during 27-30 November, 2019

#### **Seminar Attended**

- National seminar on Eco friendly Technologies for sustainable waste management, AT ANU, Guntur, Urban sustainability through Circular Economy towards sustainable waste management” during 7-8 February, 2020

### **Dr. Sandip Sarkar**

#### **Seminar Attended**

- S. Sarkar “Streaming potential and thermal energy transfer in a microchannel using nanofluids.” (2019), CEEPE 2019 at University of California, Berkeley, USA, 25-28 June, 2019

**Conference Attended**

- S. Sarkar “Heat Transfer and Entropy Generation Analysis Past an Unconfined Blunt Headed Cylinder at Incidence.” 25th National & 3rd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2019) at IIT Roorkee, 28-31 December, 2019

**Workshop Attended**

- “Workshop on Multiscale modelling approach in Micro/Nano- fluidics” at IIT Kharagpur from 9-10 December 2019

**Dr. Nabendu Ghosh**

- “Dissimilar MIG Welding between 316L Austenitic Stainless Steel and 409 Ferritic Stainless Steel: Experiment, Analyses and Optimization”. 40th International MATADOR Conference on Advanced Manufacturing at Hangzhou, China, 8-10 July, 2019

**3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)**

**Dr. Himadri Chattopadhyay**

- Successfully organized “International Conference on Energy and Sustainable Development 2020 (ICESD 2020) as Conference secretary, jointly organized with The Institution of Engineers (India) and Tripura Institute of Technology, Tripura, India. ICESD 2020 includes several Invited Keynote Talks and an Industry – Academia Plenary Session by distinguished experts from both industry and academia from India as well as abroad with a number of parallel technical sessions contains more than 120 numbers of technical papers spread over two days, from 14th to 15th February 2020 at Mechanical Engineering Department, Jadavpur University

**Dr. Pranibesh Mandal**

- National Conference on the Emerging Trends in Automotive Engineering 2020, Jadavpur University, Kolkata [duration: 3 – 4 March, 2020]

**Dr. Prokash Chandra Roy**

- Dr. Prokash Chandra Roy, Treasurer, National Conference on The Emerging Trends in Automotive Engineering 2020 (NCETAE2020) 3-4 March, 2020, Jadavpur University, Kolkata, India

**Dr. Sadhan Kumar Ghosh**

**Conference Organized**

- 9th International Conference on Solid Waste Management, 9th IconSWM 2019 at KIIT, Odisha, India, by International Society of Waste Management, Air and Water (ISWMAW), CQMS, Jadavpur University, IISc Bangalore and KWSA, JSMCWM

**Workshop Organized**

- WED (World Environment Day) Celebration Workshop on 5 June, 2019 seminar at Jadavpur University
- Indo - Taiwan Workshop in August 2019 by CQMS, JU and Fu Jen Catholic University
- Research Review Meeting and Workshop, GCRF ESRC, UK seed corn funded research project, Social Wellbeing and Mental Health issues of employees in SMEs, 27-28 January, 2020 at Centre for Sustainable Development and Resource Efficiency Management, Jadavpur University, Kolkata, India
- Royal Academy of Engineering (RAE), UK funded research project, Circular Economy Adoption in SMEs in India and the UK, 27 January, 2020 at Centre for Sustainable Development and Resource Efficiency Management, Jadavpur University, Kolkata, India
- Two day workshop on “Writing quality research articles for publication” at Jadavpur University, attended by more than 400 teachers and research scholars, during 13-14 January, 2020

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### Dr. Sandip Sarkar

- Sandip Sarkar (Joint Organizing Secretary) organized NCETAE 2020 at Department of Mechanical Engineering, Jadavpur University from 3-4 March, 2020
- Sandip Sarkar (Organizing Committee Member) organized ICESD2020 at Department of Mechanical Engineering, Jadavpur University from 14-15 February, 2020

### Dr. Sudipta De

- Member of the organizing team of the 'International Conference on Energy and Sustainable Development 2020 (ICESD 2020)', jointly organized by the Mechanical Engineering Department- Jadavpur University, Institution of Engineers India (IEI) and Tripura Institute of Technology, Agartala

### 3. D. Orientation Courses/ Refresher Courses Attended:(Name of the Teachers, Title of the Course, Duration, Place)

#### Dr. Abhijit Mukhopadhyay

- Abhijit Mukhopadhyay, Short term course on "Recent developments in surface coatings and composites" (RDSCCM-2019), NIT Jamshedpur, Jamshedpur; 27May-01 June, 2019

#### Dr. Hareram Lohar

##### Orientation Course

- Hareram Lohar, 74 th UGC-Sponsored Orientation Programme, 26 August-16 September, 2019, Kolkata

### 3. E. Orientation Courses/Refresher Courses Organized: (Name of the Teachers, Title of the Course, if any, Duration, Place)

#### Dr. Sandip Sarkar

- Dr. Sandip Sarkar along with Dr. Himadri Chattopadhyay, Dr. Somnath Bhattacharya, Dr. Priyanka Dutta, Mr. Nabendu Ghosh, Mr. Suman Nihar have organized Induction Programme for 1st Year Students of 2019-20 Session from 24-29 August, 2019 at Department of Mechanical Engineering, Jadavpur University

### 4. A. Books/Monographs etc. Published : (Name of the Teacher, Name of the Book, Name of the Publisher)

#### Dr. Abhijit Mukhopadhyay

- Abhijit Mukhopadhyay, Book Chapter; Lecture Notes in Mechanical Engineering, Springer; 2019; pp. 737-745

#### Dr. Gautam Majumdar

- Baranwal RK, Biswas N, Oraon B, Majumdar G, Advances in Surface Engineering for Improved Energy Storage.. Encyclopedia of Renewable and Sustainable Materials, Elsevier(UK)
- Lamichaney S, Baranwal R, Maitra S, Majumdar G, Clean Energy Technologies: Hydrogen Power and Fuel Cells. Encyclopedia of Renewable and Sustainable Materials, Elsevier(UK)
- Lamichaney S, Baranwal R, Maity Sk, Majumdar G, Quality of Environment and Clean Manufacturing. Encyclopedia of Renewable and Sustainable Materials, Elsevier (UK)

#### Dr. Pranibesh Mandal

- Book Chapter: Gaurav Mondal, Sohag Sutar, Anindya Dutta and Pranibesh Mandal, "Electro-hydraulic Motion Tracking Control of a Hot MS Plate of a Laboratory-Scale Reciprocating ROT", Advances in Mechanical Engineering, Publisher: Springer, Singapore, 2020

**Dr. Sadhan Kumar Ghosh**

**Published in Book Chapters:**

- Baidya, R., Saha, I., Bhattacharya, T., & Ghosh, S. K. (2020). Sustainable Waste Transportation in Kolkata Using DBMS and Image Sensing. In Waste Management as Economic Industry Towards Circular Economy (pp. 129-136). Springer, Singapore
- Ghosh, S. K. (2020) Introduction to Circular economy and , Circular Economy : Global Perspective, 2020, Springer, Singapore
- Saha I., Kundu A., Ghosh S.K. (2019) A Study to Establish an Energy-Efficient Sustainable Business Model in Virtual ERP. In: Ghosh S. (eds) Waste Management and Resource Efficiency. Springer, pp: 1167-1174. DOI:10.1007/978-981-10-7290-1\_96.Link: [https://link.springer.com/chapter/10.1007%2F978-981-10-7290-1\\_96](https://link.springer.com/chapter/10.1007%2F978-981-10-7290-1_96)

**Books as Editor : Edited volume/Int. Journal as Chief Editor/Editor/Associate Editor:**

- Associate Editor, International Journal of Materials Cycle and Waste Management
- Editor: Circular Economy :Global Perspective, 2020, contribution from 21 countries on Circular Economy, published in November 2019, Springer Nature Publication
- Editor: Recent Trends in Waste Water Treatment and Water Resource Management with Springer Nature Singapore Pte Ltd., 2020
- Editor : Proceedings of 9th IconSWM 2019, in November 2019, ISWMAW
- Energy Recovery Processes from Wastes, Theme based book, ISBN 978-981-329-228-4, Springer Nature, © 2020
- Solid Waste Policies and Strategies: Issues, Challenges and Case Studies
- Emerging Technologies for waste valorisation and environmental protection : Published in 2020, Springer Nature. ISBN 978-981-15-5735-49

**Dr. Sandip Sarkar**

- Sandip Sarkar and S Ganguly, “Electromagnetohydrodynamic Control and Energy Conversion in Narrow Fluidic Devices: A Theoretical Perspective”, Pages: 347-381, 2020, Dynamics and Control of Energy Systems, Springer, Singapore, ISBN 978-981-15-0535-5

**Dr. Sudipta De**

- Jana, K. and De, S.\* (2020): ‘Overview of CCS: A Strategy of Meeting CO2 Emission Targets’, Encyclopedia of Renewable and Sustainable Materials (Elsevier), Volume 3, 2020, pp. 628-639. (DOI: 10.1016/B978-0-12-803581-8.11026-4)
- Ray, A and De, S.\* (2020): ‘Renewable Electricity Generation: Effect on GHG Emission’, Encyclopedia of Renewable and Sustainable Materials (Elsevier), Volume 3, 2020, pp. 728-735. (DOI: 10.1016/B978-0-12-803581-8.11015-X)
- Mondal, S. and De, S.\* (2020): ‘Power from low grade heat – novel technology to reduce carbon footprint’, Encyclopedia of Renewable and Sustainable Materials (Elsevier), Volume 3, 2020, pp. 667-677. (DOI: 10.1016/B978-0-12-803581-8.11037-9)
- Jana K and De, S.\* (2020): ‘Polygeneration as efficient and de-carbonized energy solution’, Encyclopedia of Renewable and Sustainable Materials (Elsevier), Volume 3, 2020, pp. 655-666. (DOI: 10.1016/B978-0-12-803581-8.11005-7)
- Ray A and De S.\* (2020): ‘Hybrid Renewable Multigeneration : Low Carbon Sustainable Solution with Optimum Resource Utilization’, Encyclopedia of Renewable and Sustainable Materials (Elsevier), Volume 3, 2020, pp. 526-533. (DOI: 10.1016/B978-0-12-803581-8.11036-7)



**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals)  
(Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**

**Dr. Abhijit Mukhopadhyay**

- Abhijit Mukhopadhyay et al., “Tribological studies of aqueous poly quenched medium carbon steel”. *Materials Today Proceedings*, Vol. 22 (4), 2019
- Abhijit Mukhopadhyay et al., “Trends in tribological researches of different rubbers used in engineering”. *Agricultural Engineering- Zemes ukio inžinerija*, Vol. 51, December 2019
- Abhijit Mukhopadhyay et al., “Flow behavior of EPDM rubber in dry and lubricated conditions”. *Materials Today Proceedings* (in press), MATPR18535
- Abhijit Mukhopadhyay et al., “Tribological studies of 3D printed ABS and PLA plastic parts”. *Materials Today Proceedings* (in press); MATPR18075

**Dr. Anindya Sundar Das**

- Tukes Soni, Jayanta Kumar Dutt, and A. S. Das, “Parametric Stability Analysis of Active Magnetic Bearing Supported Rotor System With a Novel Control Law Subject to Periodic Base Motion”, *IEEE Transactions on Industrial Electronics*, February 2020, Vol. 67, No. 2
- Tukes Soni, A. S. Das, J.K. Dutt, “Active vibration control of ship mounted flexible rotor-shaft-bearing system during seakeeping”, *Journal of Sound and Vibration*, February 2020, Vol. 467

**Dr. Anirban Mitra**

- Tamonash Jana, Anirban Mitra, Prasanta Sahoo, “Finite Element Based Contact Analysis of a Radially Functionally Graded Hemisphere and a Rigid Flat”, *International Journal of Surface Science and Engineering*, 2019, vol. 13(2/3), pp. 156-180. DOI: 10.1504/IJSURFSE.2019.102366 [SCI, Impact Factor (2018): 0.981]
- Puja B. Chowdhury, Anirban Mitra, and Sarmila Sahoo, “Higher Mode Vibration of Composite Stiffened Hypar Shell with Cut-Out for Varying Boundary Conditions and Ply Orientation”, *i-manager’s Journal on Structural Engineering*, 2019, vol. 8(2), pp. 37–51
- Tamonash Jana, Anirban Mitra, Prasanta Sahoo, “Unloading analysis of elastically and plastically graded hemispherical contact with rigid flat”, *Tribology International*, 2020, vol. 142, pp. 1-18. DOI: <https://doi.org/10.1016/j.triboint.2019.105973>. [SCI, Impact Factor (2018): 4.271]
- Tamonash Jana, Anirban Mitra, Prasanta Sahoo, “Investigation on contact behaviour of functionally graded fractal surface”, *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*. 2020, vol. 234(10), pp. 1355-1374. [SCIE; Impact Factor: 2.014]

**Dr. Gautam Majumdar**

- Baranwal RK, Hassan T, Agarwal G, Sarkar S, Majumdar G, Optimization of the stress discontinuity value at the interface of a cylindrical stainless steel substrate and electroless Ni-P coating. *Materials Research Express*. 2019 September 27;6(11):116421
- Sarkar S, Mukherjee A, Baranwal RK, De J, Biswas C, Majumdar G, Prediction and parametric optimization of surface roughness of electroless Ni-Co-P coating using Box-Behnken design. *Journal of the Mechanical Behavior of Materials*. 2019 December 24;28(1):153-61
- Sarkar S, Baranwal RK, Mukherjee A, Koley I, Biswas C, Haider J, Majumdar G, Optimisation & minimisation of corrosion rate of electroless Ni-Co-P coating. *Advances in Materials and Processing Technologies*. 2020 January 19:1-22
- Nibedita Saha, Jisnu Basu, Pintu Sen, Majumdar G, Electrochemical behaviour of martensitic stainless steel with blood, *Materials today proceedings*, Volume 26, Part 2, 2020, pages 677-680

**Dr. Hareram Lohar**

- Hareram Lohar, Anirban Mitra and Sarmila Sahoo, Nonlinear Response of Axially Functionally Graded Timoshenko Beams on Elastic Foundation under Harmonic Excitation, Curved and Layered Structures, 2019, 6, 90-104.

**Dr. Himadri Chattopadhyay**

- Pal, T. K., Chattopadhyay, H., & Mandal, D. K. (2019). Flow and Heat Transfer due to Impinging Annular Jet. *International Journal of Fluid Mechanics Research*, 46(3). 199-209
- Bhattacharyya, S., Benim, A. C., Chattopadhyay, H., & Banerjee, A. (2019). Experimental and numerical analysis of forced convection in a twisted tube. *Thermal Science*, 23(Suppl. 4), 1043-1052
- Dutta, A., Chattopadhyay, H., & Biswas, A. (2019). A Comparative Study On The Entropy Generation In The Human Respiratory Tract Based On Hess–Murray Law And Weibel Experimented Result. *Journal of Mechanics in Medicine and Biology*, 19(06), 1950046
- Bhattacharyya, S., Benim, A. C., Chattopadhyay, H., & Banerjee, A. (2019). Experimental investigation of heat transfer performance of corrugated tube with spring tape inserts. *Experimental Heat Transfer*, 32(5), 411-425
- Dutta, A., Chattopadhyay, H., Yasmin, H., & Rahimi-Gorji, M. (2019). Entropy generation in the human lung due to effect of psychrometric condition and friction in the respiratory tract. *Computer methods and programs in biomedicine*, 180, 105010
- Rahman, S. M., & Chattopadhyay, H. (2019). Statistical assessment of wind energy potential for power generation at Imphal, Manipur (India). *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 1-13
- Rahman, S. M., Chattopadhyay, H., & Laishram, R. (2020). Feasibility of Wind Energy as Power Generation Source at Shillong (Meghalaya). In: Biswal B., Sarkar B., Mahanta P. (eds) *Advances in Mechanical Engineering* (pp. 1303-1313). Springer, Singapore
- Dutta, A., & Chattopadhyay, H. (2020). Exergetic analysis of human respiratory system including effect of age and gender. *International Journal of Exergy*, 31(4), 370-385
- Bhattacharyya, S., Chattopadhyay, H., Biswas, R., Ewim, D. R., & Huan, Z. (2020). Influence of Inlet Turbulence Intensity on Transport Phenomenon of Modified Diamond Cylinder: A Numerical Study. *Arabian Journal for Science and Engineering*, 45(2), 1051-1058
- Bit, A., Alblawi, A., Chattopadhyay, H., Quais, Q. A., Benim, A. C., Rahimi-Gorji, M., & Do, H. T. (2020). Three dimensional numerical analysis of hemodynamic of stenosed artery considering realistic outlet boundary conditions. *Computer methods and programs in biomedicine*, 185, 105163
- Chak, V., Chattopadhyay, H., & Kumar, A. (2020). Synthesis, characterization and deformation of Al–4.5 Cu/SiCp composites. *Materials Today: Proceedings*. 26(2). 2833-2838

**Dr. Nirmal Kumar Manna**

- Nirmal Kumar Manna, Nirmalendu Biswas, Pallab Sinha Mahapatra, Convective heat transfer enhancement: effect of multi-frequency heating, *International Journal of Numerical Methods for Heat & Fluid Flow*, 24.06.2019, Vol. 29(10)
- Partha Goswami, Dipak Kumar Mandal, Nirmal Kumar Manna, Somnath Chakrabarti, Numerical investigations of various aspects of plaque deposition through constricted artery, *Journal of Mechanical Engineering and Sciences*, 26.09.2019, Vol. 13(3)
- Milan Kumar Mondal, Nirmalendu Biswas, Nirmal Kumar Manna, MHD convection in a partially driven cavity with corner heating, *SN Applied Sciences*, 01.12.2019, Vol. 1(12.)
- Aranyak Chakravarty, Nirmalendu Biswas, Koushik Ghosh, Nirmal Kumar Manna, Achintya Mukhopadhyay, Swarnendu Sen, Impact of side injection on heat removal from truncated conical heat-generating porous bed: thermal non-equilibrium approach, *Journal of Thermal Analysis and Calorimetry*, 20.01.2020
- Md Naim Hossain, Koushik Ghosh, Nirmal Kumar Manna, Two-phase thermo-hydraulic model of a 210 MW thermal power plant boiler for designing the riser-downcomer circuit, *Thermal Science and Engineering Progress*, 30.03.2020, Vol. 18

**Dr. Pranibesh Mandal**

- Pritam Ghosh and Pranibesh Mandal, “Numerical study of depth control of an innovative underwater vehicle having four ballast tanks”, *Journal of Emerging Technologies and Innovative Research (JETIR)*, 6(5), 2019
- Raghav Mundhra, Arpan Sow, Abhyuday Aditya and Pranibesh Mandal, “Experimental Study of Velocity Profile of Air along the Surface of a Vertical-Axis Wind Turbine Blade in Wind Tunnel”, *International Journal of Research in Advent Technology, Special Issue, ICIMCE 2019*
- Biswas Prabir, Mondal Md Safwan, Mookherjee Saikat and Pranibesh Mandal, “Modelling of Artificial Neural Network to control the cooling rate of a Laboratory Scale Run-Out Table”, *MATEC Web of Conference*, 306, 03004, 2020

**Dr. Prokash Chandra Roy**

- Abhishek Samanta and Prokash C Roy, An Empirical Investigation of Biodiesel Engine Fuelled with Palm Oil Methyl Ester Biodiesel Blends, 2020 *International Journal of Vehicle Structures and Systems*, 12(1), pp. 85-88

**Dr. Sadhan Kumar Ghosh**

**Published in Peer Reviewed Journal**

- Baidya, R., Debnath, B., Ghosh, S. K., & Rhee, S. W. (2020). Supply chain analysis of e-waste processing plants in developing countries. *Waste Management & Research*, 38(2), 173-183
- Swathy Sadala, Saikat Dutta, Radhika Raghava, TS Sasi Jyothsna, B Chakradhar and Sadhan Kumar Ghosh, Resource recovery as alternative fuel and raw material from hazardous waste. *Special Issue of 9th IconSWM 2019: WM&R, Vol 37, Issue 11, 2019; page(s): 1063-1076; https://doi.org/10.1177/0734242X19854124*

**Published in Conference Proceedings (2019-20)**

- Ghosh, A., Ghosh, S.K., Sarkar, J. P., & Das, B. (2019). Municipal solid waste management and waste-to-energy in the context of a circular economy and energy recycling in Asian Countries. 27-30 November, 2019, 9<sup>th</sup> International Conference on Sustainable Waste Management towards Circular Economy, Bhubaneswar, India
- Ghosh, A. & Ghosh, S.K. (2019). Study the Impact on Global Plastic Waste Trade: Challenges and Emerging Solutions to the China’s Plastic Ban. 27-30 November, 2019, 9<sup>th</sup> IconSWM-CE, International Conference on Sustainable Waste Management towards Circular Economy, Bhubaneswar, India
- Raktim Dasgupta. & Ghosh, S.K. (2019). Problems and Prospects of tea industry in india”, 27-30 November, 2019, 9<sup>th</sup> IconSWM-CE, International Conference on Sustainable Waste Management towards Circular Economy, Bhubaneswar, India
- Baidya, R., Ghosh, S.K., (2019), Assessing the Awareness of Citizen on Municipal Solid Waste Management in the City of Kolkata: A Case Study, 9<sup>th</sup> International Conference on Sustainable Waste Management towards Circular Economy -2019, Bhubaneswar, Odisha, India, 27 – 30 November, 2019
- Baidya, R., Ghosh, S.K., (2019), Co-processing of Purified Terephthalic Acid in Cement Kiln. 9<sup>th</sup> International Conference on Sustainable Waste Management towards Circular Economy -2019, Bhubaneswar, Odisha, India, 27 – 30 November, 2019
- Ipsita Saha , Amit Kundu and Ghosh, S.K., A Decision Support System for Environment Friendly Sustainable Model of IT Service Sector Industries, 9<sup>th</sup> International Conference on Sustainable Waste Management towards Circular Economy (Icon SWM) 2019 organized by KIIT (Kalinga Institute of Industrial Technology) (DU), Bhubaneswar, Odisha, India and International Society of Waste Management, Air and Water (ISWMAW) at KIIT, Bhubaneswar, Odisha, India 27-30 November, 2019
- Ipsita Saha, Amit Kundu and Ghosh, S.K., Waste Management Strategy of SME Sector towards Environmental Sustainability, 9<sup>th</sup> International Conference on Sustainable Waste Management towards Circular Economy (Icon SWM) at KIIT, Bhubaneswar, Odisha, India 27-30 November, 2019

**Dr. Sandip Sarkar**

- S Sarkar, S Ganguly, M Mishra, Single diffusive magnetohydrodynamic pressure driven miscible displacement flows in a channel, *Physics of Fluids*, 31 (8), 082102, (2019)
- J J Philip, J Mukherjee, S Sarkar, S K. Saha, Capillary Filling Dynamics of Electromagnetohydrodynamic Flow of Non-newtonian Fluids, *ASME Journal of Fluids Engineering*, 142(4), 041203, (2020)
- S Sarkar, S Ganguly, Consequences of substrate wettability on the hydro-electric energy conversion in electromagnetohydrodynamic flows through microchannel, *Physica A: Statistical Mechanics and its Applications*, 542, 123450, (2020)

**Dr. Swarnendu Sen**

- Use of flame color and chemiluminescence for early detection of lean blowout in gas turbine combustors at different levels of fuel–air premixing, S. De, A. Biswas, A. Bhattacharya, A. Mukhopadhyay, S. Sen, *Combustion Science and Technology*, V-192, 933-957, 2020
- Application of Recurrence Quantification Analysis for Early Detection of Lean Blowout in a Swirl-stabilized Combustor; S. De, A. Bhattacharya, S. Mondal, A Mukhopadhyay, S Sen; *Chaos*, V-30, 043115, 2020
- Investigation of flame behavior and dynamics prior to lean blowout in a combustor with varying mixedness of reactants for the early detection of lean blowout, S De, A Bhattacharya, S Mondal, A Mukhopadhyay, S Sen, *International Journal of Spray and Combustion Dynamics*, V- 11, 1756827718812519, 2019
- Numerical investigation of the effects of polydisperse water sprays on extinction conditions of counterflow methane non-premixed flames, S Sarkar, A Mukhopadhyay, S Sen, *Combustion Theory and Modelling*, V-23, 620-650, 2019
- Experimental investigation of spray formation in a hybrid atomizer using diesel, ethanol and ethanol blended diesel, A Garai, S Mondal, S Pal, S Chatterjee, S Sen, A Mukhopadhyay, *Experimental Thermal and Fluid Science*, V-100, 158-170, 2019

**Dr. Sudipta De**

- Ray, A and De, S. \*, ‘A small-scale distributed polygeneration with local renewable resources for a remote place of India: techno-economic optimisation’, *International Journal of Ambient Energy* (Taylor and Francis) (Impact Factor.: 1.74), <https://doi.org/10.1080/01430750.2019.1583129>
- Ray, A., De, S. \*, ‘Polygeneration Using Renewable Resources: Cost Optimization Using Linear Programming’ *Process Integration and Optimization for Sustainability* (Springer), 2019, 3(1), pp. 115-124
- Mondal, S., De, S. \*, ‘Waste heat recovery through organic flash cycle (OFC) using R245fa–R600 mixture as the working fluid’, *Clean Technologies and Environmental Policy* (Springer) (Impact Factor: 2.599), 2019, 21(8), pp. 1575-1586
- Mondal, S., Datta, S., De, S. \*, ‘Auxiliary power through marine waste heat recovery using a CO<sub>2</sub>-organic cascading cycle’, *Clean Technologies and Environmental Policy* (Springer) (Impact Factor: 2.599), 2020, 22(4), pp. 893-906
- Somehsaraei, H.N., Ghosh, S., Maity, S., De, S., Assadi, M., ‘Automated data filtering approach for ANN modeling of distributed energy systems: Exploring the application of machine learning’, *Energies* (MDPI) (Impact Factor: 2.702), 2020, 13(14), 3750
- Mondal, S., De, S. \*, ‘Performance assessment of a low-grade heat driven dual ejector vapour compression refrigeration cycle’, *Applied Thermal Engineering* (Elsevier) (Impact Factor: 4.725), 2020, 179, 115782
- Das, S., Ray, A., De, S. \*, ‘Optimum combination of renewable resources to meet local power demand in distributed generation: A case study for a remote place of India’, *Energy* (Elsevier) (Impact Factor: 6.082), 2020, 209, 118473

**6. Major Achievements:**

**Dr. Gautam Majumdar**

- Appointed as a Section Editor: Encyclopaedia of Materials- Plastics & Polymers, Elsevier(UK)

**Dr. Hareram Lohar**

- Awarded with Phd in Engineering on 21/05/2019 from Jadavpur University, Kolkata

**Dr. Prokash Chandra Roy**

- Dr. Prokash Chandra Roy Awarded for Best Oral Presentation in RTESD 2019 held at VGU Jaipur, during 17-19 October, 2019, Paper Title: Augmentation & Validation of a Single Zone Biogas Engine Model

**Dr. Sadhan Kumar Ghosh**

- Recognition as International Expert on Circular Economy by UNCRD, DESA : Invited to act as the expert in Preparation of a Report on Triangular Cooperation in promoting 3R and Circular Economy in the Asia Pacific” to be completed by December 2020
- Member in the TG- Sustainable Technologies, STIP 2020, GoI : Designated as member by the Office of Principal Scientific Adviser to the Government of India (Office of PSA) and the Department of Science and Technology (DST) for formulating India’s new Science, Technology, and Innovation Policy (STIP 2020). As part of the STIP 2020 policy drafting exercise, 21 thematic groups (TGs) to work from June 2020
- Recognition by SINTEF, Norway to work on Micro plastics and marine littering : Invited to work as expert and lead the activities in India in the Ocean Plastic Turned into an Opportunity in Circular Economy (OPTOCE), Collaborative Research Project to Combat Marine Littering and Micro-plastics in Asia, consisting of the team from India, Thailand, Vietnam, China and Norway), funded OPTOCE-project, SINTEF, Norway, to start in November, 2020
- Advocacy of Anti Plagiarism system : As the Chairman of the concerned committee, he lead the team in developing the “Anti Plagiarism Policy, 2019, Jadavpur University” and implemented from 1st December 2019 at the FET, Jadavpur University for all theses to be submitted for the partial fulfillment of the Phd, M. Phil and M. E degree
- Selected as the Chairman, 10th International Conference on Sustainable Waste Management, 9th IconSWM 2019 to be held at JU, Kolkata, India to be held during 2–4 December, 2020 on virtual platform

**Dr. Sandip Sarkar**

- Article in Physics of Fluids selected as editor’s pick: Single diffusive magnetohydrodynamic pressure driven miscible displacement flows in a channel, 31 (8), 082102, (2019), co-authors: S Ganguly, M Mishra
- DST SERB Early Career Research Grant (2019)

**Dr. Sudipta De**

- Awarded Indian National Science Academy (INSA) Teacher Award for 2019
- Included in the Editorial Board of the Springer International Journal ‘Clean Technology and Environmental Policy’ (Impact Factor: 2.599)
- Member, CII Eastern Region Startup & Innovation Taskforce 2019 – 2020
- Session Organizer (including conducting review of submitted papers for this session) of the Session on Renewable Energy in American Society of Mechanical Engineers (ASME) ASME GT India 2019 Conference at IIT Madras, Chennai, India during 5-6 December, 2019
- Reviewer of proposals under Global Initiative of Academic Network (GIAN) of the MHRD, Government of India
- Member, Mechanical Engineering Divisional Sub-Committee, The Institution of Engineers (India), West Bengal State Centre



## Annual Report 2019-20

### METALLURGICAL AND MATERIAL ENGINEERING

Phone : 033-2457-2325

H.O.D : Dr. Pravash Chandra Chakraborti (01.04.2019 - 12.05.2019)

Dr. Akshay Kumar Pramanick (13.5.2019-23.2.2020)

Dr. Amrita Kundu (since 24.2.2020)

E-mail: hodmetal@jadavpuruniversity.in

#### 1. (A) Courses Offered:

Name of the Courses	Course Duration	Intake capacity
Bachelor's Degree in Metallurgical Engineering	4 Years	42
Master's Degree in Industrial Metallurgy	2 years	12
M.Tech Degree in Material Engineering	2 years	22

#### 1. B. Number of Faculty Members: 08

#### 2. A. Area of Research Activities (Broad Areas):

Thermodynamics and Kinetics, Chemical/Extractive Metallurgy, Melting & Solidification, Materials Processing and Characterization, Phase transformation, Mechanical Behaviour of Materials, Deformation Fatigue & Fracture of Materials, Creep, Microstructure -Crystallographic Texture and Mechanical Property Correlation, Coating, Wear, Electrochemistry and Corrosion, Welding and Joining, Transport Phenomena, Archaeo Metallurgy, Waste Utilization. Composites, Mineral Processing, Nanostructured Materials, Ceramic Materials, Fuel Cell and Battery, Electrochemical Energy Synthesis

#### 2. B. Major Research Project:

**Title of Project/Facilities-Funding and Collaborated Agency-Period-Amount (Lakh)-Named by**

1. Evaluation of creep crack growth (CCG) behaviour for Alloy 617 Base and Weld materials- Indira Gandhi Centre for Atomic Research, Kalpakkam-2017-till date- Rs. 512.34 Lakh- Prof. Pravash Chandra Chakraborti
2. Evaluation of creep crack growth (CCG) behaviour for Alloy 617 Forgings- Indira Gandhi Centre for Atomic Research, Kalpakkam-2017-till date- Rs. 458.28Lakh- Prof. Pravash Chandra Chakraborti
3. Generation of Creep-Fatigue Interaction Properties of Alloy 625- Indira Gandhi Centre for Atomic Research, Kalpakkam-2017-till date- Rs. 469.82Lakh- Prof. Pravash Chandra Chakraborti
4. Cyclic Plastic Deformation Behaviour of 304LN Austenitic Stainless Steel at Room Temperature to 550 deg C-2016-2020-SERB (GOI)-Rs. 39,51,675.00-Dr. Amrita Kundu
5. Development of mixed microstructure by thermomechanical processing of steel and its influence on mechanical properties-2012-2020-DST (GOI)-Rs. 35,00,000.00-Dr. Amrita Kundu

#### 3. B. Seminar/Workshop/Conference/Symposium Attended:

##### Prof. Akshay Kumar Pramanick

- Sourav Debnath, Akshay Kumar Pramanick, "Fabrication of beta-tricalcium phosphate/ crystalline silicaaluminium metal matrix composites: physical, mechanical, and in vitro biological evaluations." BIOSPECTRUM, International Conference on Biotechnology and Biological Sciences, organized by University of Engineering & Management (UEM) in collaboration with The Institution of Engineers (India) from 8-10 August, 2019 at UEM, Kolkata

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- Sourav Debnath, Soumyajit Roy, **Akshay Kumar Pramanick**, An Exploratory Comparative Study of Fabricated Silica – Aluminium Metal Matrix Composites with Casted Aluminium-Silicon Alloys. National Conference on Frontiers in Modern Physics (NCFMP 2020), organized by Department of Physics, Adamas University in collaboration with IOP Science from 6 – 7 February, 2020 at Adamas University, Kolkata

### **Mrs. Shilabati Hembram**

- UGC Quality Initiatives Deeksharambh, Workshop on Student Induction Programme for Teachers, venue- Loreto College, Kolkata, Date- 6 – 8 November, 2019. Organized by University Grant Commission (Min. of HRD, Govt. of India)
- Workshop on Writing Quality Research Articles for Publication, for the teachers and Research scholars of Jadavpur University. Date: 13-14 January, 2020, Venue- Gandhi Bhavan, Jadavpur University, Kolkata- 32

### **4. A. Books/Monographs etc. Published:**

#### **Prof. Subir Paul**

Waste to Material and Waste to Energy, Amazon. Book Publisher 2020, ASIN: B08BS1F6V9, ISBN-13: 979-8656585125, ASIN: B08BTZ2HB8

### **4. B. Articles Published in Journals:**

#### **Prof. Subir Paul**

- **Subir Paul**, Tanuj Kumar, Development and characterization of Al–Ni and nanographite electrodes for energy storage, *Nanomaterials and Energy*, Volume 8, Issue 1, June 2019, pp. 64-72
- **Subir Paul**, Amit Paria, Development of NiO-Nanocarbon and MnO<sub>2</sub>-Nanocarbon Energetic Catalytic Electrode Materials to Synthesize Electrical Energy through Electrochemical Oxidation of Glucose *Journal of Materials Engineering and Performance*, 2019, volume 28, pages 4574–4581
- **Subir Paul**, Sulagna Sarkar, Sweet and Sour Corrosion of Mild Steel in Oilfield Environment by Polarization, Impedance, XRD and SEM Studies *Innovations in Corrosion and Materials Science*, 2019 Volume 8 in print
- **Subir Paul**, Ramesh Chandra Das and Tamal Das, Pollution Free and Sustainable Copper Production Using Greenhouse Gas CO<sub>2</sub>, *Journal of Sustainable Construction Materials and Technologies*, 2020, accepted for publication
- **Subir Paul**, Rohit Kumar, Abhisek Kukmar and Rajkrishna Paul, Electrochemical Conversion of Environmental Hazardous CO<sub>2</sub> to Renewable Energy in A Robotic Controlled Fuel Cell, *Current Alternative Energy*, 2020, accepted for publication
- **Subir Paul**, Prashant Kumar and Sarthak Harnathka, Sustainable Development of Iron Making by Recycling the Environment Hazard CO<sub>2</sub> Exhaust Gases for Continuous Reduction of Iron Ore Pellet, *Journal: Sustainable Materials and Technologies*, 2020 accepted for publication

#### **Prof. Pravash Chandra Chakraborti**

- S. Chandra, R. Sarkar, A. Bhowmick, P. De, **P. Chakraborti**, and S. Ray, “Evaluation of ductile tearing resistance of an interstitial free steel sheet using SENT specimens”, *Engineering Fracture Mechanics*, vol. 238, p. 107257, 2020
- P. Sarkar and **P. Chakraborti**, “Uniaxial Ratcheting Behavior of a Weather-Resistant Rail Steel: Effect of Mean Stress and Stress Amplitude”, *Journal Of Materials Engineering And Performance*, 2020
- S. Chandra, R. Sarkar, A. Bhowmick, P. De, **P. Chakraborti**, and S. Ray, “Crack tip opening angle (CTOA) and  $\delta_5$  measurements on SENT and DENT specimens of a thin interstitial-free steel sheet”, *Engineering Fracture Mechanics*, vol. 225, p. 106861, 2020
- S. Mukherjee, A. Kundu, P. S. De, J. K. Mahato, **P. Chakraborti**, M. Shome, and D. Bhattacharjee, “Insitu investigation of tensile deformation behaviour of cold-rolled interstitial-free high-strength steel in scanning electron microscope”, *Materials Science and Engineering: A*, vol. 776, p. 139029, 2020

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- J. K. Mahato, P. S. De, A. Kundu, and **P. C. Chakraborti**, “Role of Stacking Fault Energy on Symmetric and Asymmetric Cyclic Deformation Behavior of FCC Metals”, in *Structural Integrity Assessment*, ed: Springer, 2020, pp. 691-702
- S. Banerjee, P. C. Chakraborti, and S. K. Saha, “An automated methodology for grain segmentation and grain size measurement from optical micrographs”, *Measurement*, vol. 140, pp. 142-150, 2019
- R. Sarkar, S. K. Chandra, P. S. De, **P. Chakraborti**, and S. Ray, “Evaluation of ductile tearing resistance of dual-phase DP 780 grade automotive steel sheet from Essential Work of Fracture (EWF) tests”, *Theoretical and Applied Fracture Mechanics*, p. 102278, 201

### Prof. Akshay Kumar Pramanick

1. Sourav Debnath, **Akshay Kumar Pramanick**, “Fabrication of beta-tricalcium phosphate/ crystalline silica-aluminium metal matrix composites: physical, mechanical, and in vitro biological evaluations”. *Biotechnology and Biological Sciences*, CRC Press- Taylor & Francis, ISBN: 978-0-367-43161-7 (Hbk), ISBN: 978-1-003-00161-4 (eBook), Nov. 2019, pp. 48-56
2. Soumyajit Roy, Barun Kr. Das, **Akshay Kr. Pramanick**, and Prasanta Kr. Datta. “The Technology Inherent in Indian Traditional Craft Metal Casting Process”. *Indian Foundry Journal*, VOL 65, ISSUE 8, AUG 2019, pp-27-37
3. Sourav Debnath, Soumyajit Roy, **Akshay Kumar Pramanick**, “An Exploratory Comparative Study of Fabricated Silica- Aluminium Metal Matrix Composites with Casted Aluminium-Silicon Alloys.” *JPCS-IOP Publishing* (ISSN 1742 6588), 1579 (2020) 012014, pp. 1-6. (Scopus index) doi:10.1088/1742-6596/1579/1/012014

### Prof. Rajib Dey

1. Maharshi Ghosh Dastidar, Anrin Bhattacharyya, Bitan Kumar Sarkar, **Rajib Dey**, Manoj Kumar Mitra, Johannes Schenck, The effect of alkali on the reaction kinetics and strength of Blast Furnace coke, *Fuel*, 2020, Volume: 268

### Dr. Amrita Kundu

1. **A. Kundu**, D.P. Field and P. C. Chakraborti, Effect of strain and strain rate on the development of deformation heterogeneity during tensile deformation of a solution annealed 304 LN austenitic stainless steel: An EBSD study, *Materials Science and Engineering A*, 2020, Volume 773, <https://doi.org/10.1016/j.msea.2019.138854>
2. **A. Kundu**, D.P. Field and P. C. Chakraborti, Influence of strain amplitude on the development of dislocation structure during cyclic plastic deformation of 304 LN austenitic stainless steel, *Materials Science and Engineering A*, 2019, Volume 762, <https://doi.org/10.1016/j.msea.2019.138090>
3. S. Mukherjee, **A. Kundu**, P. S. De, J. K. Mahato, P.C. Chakraborti, M. Shome and D. Bhattacharjee, Insitu investigation of tensile deformation behaviour of cold-rolled interstitial-free high-strength steel in scanning electron microscope, *Materials Science and Engineering A*, 2020, Volume 776, <https://doi.org/10.1016/j.msea.2020.139029>
4. J. Kundu, T. Ray, **A. Kundu** and M. Shome, Fatigue behaviour of laser spot welds in dual phase 780 steel, *International Journal of Fatigue*, 2020, 132, <https://doi.org/10.1016/j.ijfatigue.2019.105374>.
5. J. K. Mahato, P. S. De, **A. Kundu**, and P. C. Chakraborti, Role of Stacking Fault Energy on Symmetric and Asymmetric Cyclic Deformation Behavior of FCC Metals, in *Structural Integrity Assessment*, ed: Springer, 2020, pp. 691-702

### Mrs. Shilabati Hembram

1. Avishek Roy, Arun Kumar Mukhopadhyay, Shilabati Hembram, Manojit Ghosh, Abhijit Majumdar, Conductive Glass Coating: Effect of Atmospheric Plasma Treatment, Cite as: *AIP Conference Proceedings* 2115, 030248 (2019); <https://doi.org/10.1063/1.5113087>

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2. Avishek Roy, Shilabati Hembram, Manojit Ghosh and Abhijit Majumdar, Carbon impact on surface morphology and electrical properties of Cu-TiC thin film, 2020, Materials Research Express, Volume 7, Number 3, Published by IOP Publishing Ltd.

### **Md. Basiruddin Sk.**

1. S Behera, R K Barik, **Md Basiruddin Sk**, R Mitra, D Chakrabarti, Recipe for improving the impact toughness of high-strength pearlitic steel by controlling the cleavage cracking mechanisms, Materials Science and Engineering: A, 09-09-2019, Volume – 764
2. K K Bhandari, A Mandal, **Md Basiruddin Sk**, A Deb, D Chakrabarti, Tailoring the crack-tip microstructure: a novel approach, Philosophical Magazine Letters, 21-05-2019, Volume – 99

### **5. Collaborative Programmes:**

Research programmes with TATA Steel Ltd, Jamshedpur, RDCIS, Ranchi, RINL, Vishakhapatnam, National metallurgical laboratory, Jamshedpur, Bhabha Atomic Research Centre, Mumbai, Titagarh Wagons Ltd., Salem Steel Plant

### **6. Major Achievements:**

#### **Prof. Subir Paul:-**

Development of Android Apps on Metallurgy and Material Science, available in Google Play store

1. SP-Thermodynamics [https://play.google.com/store/apps/details?id=com.sptech.sp\\_thermodynamics](https://play.google.com/store/apps/details?id=com.sptech.sp_thermodynamics)
2. SP Iron Steel Making <https://play.google.com/store/apps/details?id=com.sptech.spironsteelmaking>
3. SP Non Ferrous Metals [https://play.google.com/store/apps/details?id=com.sptech.sp\\_nonferrousmetals](https://play.google.com/store/apps/details?id=com.sptech.sp_nonferrousmetals)

## Annual Report 2019-20

### PHARMACEUTICAL TECHNOLOGY

Phone : 033-2457-2274/2484

H.O.D. : Prof. Pulok K Mukherjee

Prof. Kunal Roy (since 20. 01.2020 )

Email : hodpharmacy@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
Bachelor of Pharmacy	4 Years	70
Master of Pharmacy	2 Years	25
M. Pharm. (Clinical Pharmacy and Pharmacy Practice)	2 Years	06

#### 1. B. Number of Faculty Members: 14

#### 2. A. Area of Research Activities: (Broad Areas)

##### Name of the Teacher–Research Interest

##### Prof. B. Mukherjee

Pharmaceutics, Biopharmaceutics & Pharmacokinetics, Pharmaceutical Biotechnology, Hepatocarcinogenesis & chemoprevention, Antisense Technology, Diabetes and Cancer correlation, Nanotechnology, Transdermal drug delivery systems, Liposomal drug delivery system, Dental formulations., nanodrug delivery and drug targeting

##### Prof. S.C. Mondal

Indian Traditional Medicine and Drug Discovery

##### Prof. T.K. Maity

- Synthesis and characterization of new heterocyclic compounds for screening of antidiabetic, hepatoprotective, anticancer, antioxidant and antimicrobial activities.
- Extraction, Isolation and pharmacological screening of phytochemical constituents from Natural Products

##### Prof. T. Jha

Drug design and development

##### Prof. K Roy

Ecotoxicological Modeling, Predictive risk assessment, Drug Design, Molecular Modeling, Chemometrics

#### 2. B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)

##### (Title of the project–Duration (in months)–Sanctioned amount (INR in lakh)–Funding Agency)

Development and standardization of purified extract from Ficus species for the management of inflammation Rashtriya Uchchattar Shiksha Abhiyan (RUSA)

##### Prof. Amallesh Samanta

Fabrication and Characterization of Natural Polysaccharide Based Bioerodible Localized Spongy Scaffold A New Advanced Wound Care Tool–36–15.91–Defence Research and Development Organization Life Science Research Board (DRDO-LSRB)

##### Prof. Kunal Roy

Development of a novel workflow of Quantitative Read-Across QRA analysis for application as a non-testing method in regulatory toxicology–36–6.6–DST SERB



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### **Prof. Pallab K Haldar**

In vitro and in vivo screening of phytoconstituent against streptozotocine induced metabolic disorder–36–14.63–DST West Bengal

### **Prof. Sanmoy Karmakar**

Micro Organic decomposer in Biotoilet A sustainable development initiative in Indian Scenario–36 – 17–RUSA UGC

### **Prof. Tarun Jha**

Design and experimental validation of some derivatives and analogs of isoglutamine as dual inhibitors of matrix metalloproteinase MMP and histone deacetylase HDAC by synthesis and biological evaluation to get some useful anticancer agents–12–9.92–RUSA UGC New Delhi implemented by Jadavpur University Kolkata

### **Prof. Tapan Kumar Maity**

Design Microwave assisted synthesis Molecular Docking and Evaluation of Anticancer and Antibacterial Activity of Hybrid Thiadiazole Derivatives–12–2.5–JU RUSA

### **Prof. Biswajit Mukherjee**

Antibody conjugated polymeric nanoparticles containing an anticancer drug for prostate cancer therapy in vitro and in vivo study Individual Ashique Al Hoque–60–21.90–DST Inspire

Characterization and role in sperm egg interaction and fertilization of a sperm outer surface phosphoprotein MPS located at acrosomal tip Individual Dr Prasanta Ghosh–36 –21.58–CSIR RA

Bioflavonoids loaded PLGA nanoparticles a novel strategy to target lung metastasis Individual Ramkrishna Sen–36 –13.56–ICMR

Development of peptide and aptamer conjugated polymeric nanoparticles for targeted delivery of Garcinol against colon cancer in vitro and in vivo study Individual Brambhachari Paul–36 –14.70–NDF scheme AICTE

Development of apigenin loaded ligand conjugated nanoliposomes to target liver cancer cell Individual Moumita Pauzdar –24 –9.04–ICMR

Design and development of antibody conjugated biodegradable nanoparticle containing Paclitaxel for the treatment of cancer Individual Iman Ehsan–36 –13.56–ICMR

Site specific targeting of biodegradable polymeric nanoparticle for the treatment of lung cancer an in vitro and in vivo approach Individual Leena Kumari–36 –9.04 –CSIR

### **Prof. S.C. Mondal**

Development and standardization of purified extract from Ficus species for the management of inflammation–Rashtriya Uchchattar Shiksha Abhiyan (RUSA)

### **3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the teacher–Type of participation–Name of Seminar /Conference etc.–Place–Duration)**

**Dr. Saikat Dewanjee**–Invited Lectures –IAPST International Conference on Molecular mechanism of diseases and novel therapeutic approaches.–Assam University Silchar–19-20 January, 2020

**Professor Biswajit Mukherjee**–Resource person–e-Faculty Development Program–Assam Downtown University, Assam–7-13 June, 2020

**Professor Biswajit Mukherjee**–Resource person–e-Faculty Development Program–Guru Nanak Institute of –Pharmaceutical Science and Technology, Kolkata–11-15 August, 2020

**Professor Biswajit Mukherjee**–Resource person–e-Faculty Development Program on National Education Policy 2020 to strengthen the role of Pharmacy teachers, students and research scholars–College of

## Annual Report 2019-20

Pharmacy, Puri, Utkal University, Bhubaneswar, Dr. V Ravichandran Center for Advance Research in Pharmaceutical Sciences, Jadavpur University, Kolkata–22-25 September, 2020

**Professor Biswajit Mukherjee**–Chairperson of the Scientific committee, Eastern and Central zone–Disso India 2020 Conference–DISSO RESEARCH PRESENTATIONS INDIA 2020 - ONLINE Society for Pharmaceutical Dissolution Sciences (SPDS) in collaboration with the Association of Pharmaceutical Teachers of India (APTI)–4-7 June, 2020

**Professor Biswajit Mukherjee**–Resource person–International webinar on pharmaceutical scenario in post COVID era–College of Pharmacy, Puri–8-10 June, 2020

**Professor Biswajit Mukherjee**–Chair of the scientific session–on-line Demonstration workshop on USP-IV importance and application in Pharma industry and academia–organized by SORTAX and Dr. V Ravichandran Center for Advance Research in Pharmaceutical Sciences, Jadavpur University,–8<sup>th</sup> July, 2020

**Professor Biswajit Mukherjee**–Invited speaker–Way Forward to Tackle Challenges of COVID-19 in India–Webinar organized by Indian Association of Pharmaceutical Scientists and Technologists and International Pharmaceutical Federation (FIP); Manipal Academy of Higher Education–17th August, 2020

**Professor Biswajit Mukherjee**–Resource person–XXXIV -QIP Staff Development Program–DIPSAR, Delhi–7<sup>th</sup> October, 2020

**Prof. Tapan Kumar Maity**–Invited Lecture Delivered–Faculty Development Programme of Tripura University–Tripura University, Tripura–23rd February, 2020

**Prof. Tapan Kumar Maity**–Session Chaired and Invited Lecture Delivered–International Conference 2020 on New Horizon of Health Science–School of Pharmacy, Chouksey Engineering College, Chhattisgarh–4<sup>th</sup> -5<sup>th</sup> March, 2020

**Prof. Kunal Roy**–Session Chaired and Invited Lecture Delivered–Conferentia Chemometrica–Budapest, Hungary– 8-12 September, 2019

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Title of the paper–Name of the Workshops/ Seminars/ Conferences–Year–Date–Place)

**Prof. T. Jha**–A pentanoic acid derivative targeting matrix metalloproteinase-2 (MMP-2) blocks proliferation and invasion in cancer cells–3rd World Chemistry Conference and Exhibition (WCCE-2019)–2019–June 13-15,–Brussels

**Prof. T. Jha**–Belgium, Synthesis, anticancer activity and structure-activity relationship studies of some substituted pentanoic acids–World Cancer Congress–2019 November 20-21,–Mumbai, India

**Dr K Koutsou**–Surface Engineered Nanostructured Lipid Carrier composite for the oral delivery of an antimetabolites drug–International seminar on Clinical Oncology–2019–7th December–SINGAPORE

**Prof. Subhash C Mandal**–Drug discovery and traditional medicine learning it my way through ethnic society using holistic approach– The International Conference on Complementary and Integrative Medicine Current Controversies and Future Directions Integrative Medicine–2019–27-28th June –Hilton London Wembley

**Dr. Saikat Dewanjee**–Protocatechuic acid attenuates diabetic nephropathy via stimulating glucose metabolism ameliorating oxidative stress and inhibiting inflammation in type diabetic rats–IAPST International Conference on Molecular mechanism of diseases and novel therapeutic approaches– January 19-20 2019–Assam University Silchar

**Prof. Kunal Roy**–A new workflow for QSAR model development from small data sets Integration of data curation double cross validation and consensus prediction tools–Eighth joint Sheffield chemoinformatics conference–2019–17-19 June–Sheffield UK

QSAR model development from small data sets A new workflow with integration of data curation double cross validation and consensus prediction tools–Conferentia Chemometrica–2019–8-12 September –Budapest, Hungary

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**Prof. Biswajit Mukherjee**–International conference on Biotechnological Innovations in Food and health care–2019–27 and 28 January–BITS pilani Dubai

Participant–Disso America 2020 online–2020–10-11 September 2020–Society for Pharmaceutical Dissolution Science, US chapter and American Association of Pharmaceutical Scientists

### 3. C. Seminar/Workshop/Conference/Symposium Organized:(Name of the teacher–Type of participation–Name of Seminar /Conference etc.–Place–Duration)

**Professor Biswajit Mukherjee**–Organizer –IAPST live webinar–Pathway of Institutes to industries –Webinar organized by Indian Association of Pharmaceutical Scientists and Technologists and Technologists–3 October, 2020

**Professor Biswajit Mukherjee**–Organizer –Way Forward to Tackle Challenges of COVID-19 in India –Webinar organized by Indian Association of Pharmaceutical Scientists and Technologists and International Pharmaceutical Federation (FIP); Manipal academy of higher education–17 August, 2020

**Professor Biswajit Mukherjee**–Chair of the scientific session–on-line Demonstration workshop on USP-IV importance and application in Pharma industry and academia –organized by SORTAX and Dr. V Ravichandran Center for Advanced Research in Pharmaceutical Sciences, Jadavpur University,–8 July 2020

**Prof. S Karmakar**–Organizer–Present Scenario of Bioavailability and Bioequivalence Studies and its Regulatory Affairs–2020

### 3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teacher–Title of the Course–Duration–Place)

**Amallesh Samanta**–UGC-SAP Sponsored National Seminar on “Advances in Nanoscience and Nanotechnology Applications” organized by Chemical Engineering Department–1 day–Jadavpur University

### 4. A. Books/Monographs etc.Published: (Authors–Title of the Chapter–Book –Name of the Publisher)

**Samanta A, De A, Hasnain MS, Bera H, Nayak AK**–Book Chapter-14: Gum odina as pharmaceutical excipient. –Natural Polysaccharides in Drug Delivery and Biomedical Applications–Academic Press: An imprint of Elsevier

**Biswajit Mukherjee, Soma Sengupta, Soumyabrata Banerjee, Moumita Dhara, Ashique Al Hoque, Leena Kumari, Manisheetta Ray, Iman Ehsan, and Alankar Mukherjee**–Transdermal Nano medicines for Reduction of Dose and Site-Specific Drug Delivery –Nano Medicine and Nano Safety, M. K. Das, Y. V Pathak (eds.), **Accepted and in Press (2020)**–Springer Nature

**Biswajit Mukherjee, Debasmita Dutta, Prasanta Ghosh, Brahamacharry Paul, Ramkrishna Sen, and Samrat Chakraborty**–Recent Trends for Nano medicine Safety–Nano Medicine and Nano Safety, M. K. Das, Y. V Pathak (eds.), **Accepted and in Press(2020)**–Springer Nature.

**Biswajit Mukherjee, Moumita Dhara, Debasmita Dutta, Apala Chakraborty, Shreyasi Chakraborty, Soma Sengupta, Laboni Mondal, Lopamudra Dutta, Kushal Pal**–Basics on biopolymeric Nanomaterials (Chapter 1)–Biopolymer-Based Nanomaterials in Drug Delivery and Biomedical Applications **Accepted and in Press(2020)**–Elsevier

**Biswajit Mukherjee, Leena Kumari, Iman Ehsan, Prasanta Ghosh, Soumyabrata Banerjee, Samrat Chakraborty, Manisheetta Ray, Ashique Al Hoque, Ratan Sahoo**–Guar gum-based nanomaterials in drug delivery and biomedical applications (Chapter 6)–Biopolymer-Based Nanomaterials in Drug Delivery and Biomedical Applications **Accepted and in Press (2020)**–Elsevier

**Biswajit Mukherjee**, Samrat Chakraborty, Iman Ehsan, Apala Chakraborty, Leena Kumari, Alankar Mukherjee, Sounak Sarkhel.–Conventional and Nonconventional Approaches to Site-Specific Targeting of Nanotherapeutics in Some Infectious Diseases and Metabolic Disorders. (Chapter 6.)–Nanof ormulations in Human Health.2020 S. Talegaonkar, M. Rai (eds.),–Springer Nature Switzerland AG

**Biswajit Mukherjee**, Ashique Al Hoque, Shreyasi Chakraborty, Leena Kumari, Somdatta Roy, Paramita Paul.–Nanomedicine: Could It Be a Boon for Pulmonary Fungal Infections?–Nanomedicine for the Treatment of Disease: From Concept to Application.–Apple Academic Press. New York.(2019)Edited By Sarwar Beg, Mahfoozur Rahman, Md. Abul Barkat, Farhan Jalees Ahmad

**Biswajit Mukherjee**, Iman Ehsan, Debasmitta Dutta, Moumita Dhara, Lopamudra Dutta, Soma Sengupta.–Nanomedicinal Genetic Manipulation: Promising Strategy to Treat Some Genetic Diseases.–Nanomedicine for the Treatment of Disease: From Concept to Application.–Apple Academic Press. New York.(2019).Edited By Sarwar Beg, Mahfoozur Rahman, Md. Abul Barkat, Farhan Jalees Ahmad

**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Authors–Title–Journal–Volume: issue; page numbers–Impact Factor provided by JCR only–Year)**

**Prof. Amallesh Samanta**

De, A., Das, B., Mitra, D., Sen, A.K., **Samanta A**–Exploration of an arabinogalactan isolated from *odina wodier roxb.*: physicochemical, compositional characterisations and functional attributes–Polymers advanced technologies–31,1814-1826-2.578–2020

Choudhury, M., Mukherjee, K., De, A., **Samanta A.**, Roy, A.–Partial Purification and Characterization of Albain 1, a Triterpene with Antimicrobial Activity, from the Wood Extract of *Avicennia alba* Blume–Journal of Pharmaceutical Research International–32(2): 38-48–2020

Das, M., Das, B., **Samanta A.**–Antioxidant and anticancer activity of synthesized 4 amino 5 ((aryl substituted) 4h 1,2,4 triazole 3 yl)thio linked hydroxamic acid derivatives–Journal of Pharmacy and Pharmacology–71, 1400-1411–2.405–2019

Das, B., De, A., Das, P., Nanda, A., **Samanta A.**–Pharmacognostic studies on flowers of *dregea volubilis*: evaluation for authentication and standardization –Asian Journal of Pharmaceutical and Clinical Research –12 (5), 79-89–0.48–2019

Mandal, S., Das, M., Das, P., **Samanta A.**, Butcher, R.J., Saha, M., Alswaidan, I.A., Rhyman, L., Ramasami, P., Saha, N.C. –Synthesis, characterization, dft and antimicrobial studies of transition metal ion complexes of a new schiff base ligand, 5-methylpyrazole-3yl-n-(2i-hydroxyphenylamine) methyleneimine, (mpzoap) –Journal of Molecular Structure –1178, 100-111–2.011–2019

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Chakraborty S, Dlie ZY, Chakraborty S, Roy S, **Mukherjee B**, Besra SE, Dewanjee S, Mukherjee A, Ojha P K, Kumar V, Sen R. –Aptamer-Functionalized Drug Nanocarrier Improves Hepatocellular Carcinoma toward Normal by Targeting Neoplastic Hepatocytes.–Molecular Therapy- Nucleic Acids –5;20:34-49–7.032–2020

Chakraborty S, Dlie ZY, **Mukherjee B**, Besra SE, Sengupta S, Sen R, Mukherjee A.–A Comparative Investigation of the Ability of Various Aptamer-Functionalized Drug Nanocarriers to Induce Selective Apoptosis in Neoplastic Hepatocytes: In Vitro and In Vivo Outcome.–AAPS PharmSciTech– 21(3):89–2.608–2020

Apala Chakraborty, Soumyabrata Banerjee, **Biswajit Mukherjee**, Mrinal Kanti Poddar–Calorie restriction improves aging-induced impairment of cognitive function in relation to deregulation of corticosterone status and brain regional GABA system–Mechnaism of Ageing and Development.–1.Vol: 198 No: 111248–4.3–2020

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Dewanjee S, Chakraborty P, **Mukherjee B**, De Feo V.–Plant-Based Antidiabetic Nanoformulations: The Emerging Paradigm for Effective Therapy–International Journal of Molecular Sciences.–23;21(6).–4.189–2020

Soumyabrata Banerjee, **Biswajit Mukherjee**, Mrinal Kanti Poddar–Carnosine restores aging-induced elevation of corticosterone status and brain regional amyloid-beta in relation to down regulation of locomotor activity. –Journal of System and Integrative Neuroscience–1.DOI: 10.15761/JSIN.1000210–2.92–2019

Paul B, Gaonkar RH, Mukhopadhyay R, Ganguly S, Debnath MC, **Mukherjee B**–Garcinol-loaded novel cationic nanoliposomes: in vitro and in vivo study against B16F10 melanoma tumor model.–Nanomedicine (Lond). 2.–14(15):2045-2065–4.717–2019

Laboni Mondal, **Biswajit Mukherjee**, Kaushik Das, Sanchari Bhattacharya, Debasmita Dutta, Shreyasi Chakraborty, Murari Mohan Pal, Raghuvir H Gaonkar, Mita Chatterjee Debnath.–CD-340 functionalized doxorubicin-loaded nanoparticle induces apoptosis and reduces tumor volume along with drug-related cardiotoxicity in mice.–International Journal of Nanomedicine–3.–14;8073–8094 4.471–2019

Debasmita Dutta, Brahamacharry Paul, **Biswajit Mukherjee**, Laboni Mondal, Suparna Sen, Chinmay Chowdhury & Mita Chatterjee Debnath–Nanoencapsulatedbetulinic acid analogue distinctively improves colorectal carcinoma *in vitro* and *in vivo*.–Scientific Reports1.–9;11506–4.011–2019

Shreyasi Chakraborty, Iman Ehsan, **Biswajit Mukherjee**, Laboni Mondal, Saheli Roy, Krishna Das Saha, Brahamacharry Paul, Mita Chatterjee Debnath, Tanmoy Bera–Therapeutic potential of andrographolide-loaded nanoparticles on a murine asthma model.–Nanomedicine:NBM 2.–20:102006.–6.5–2019

Jnanranjan Panda, Bhabani Sankar Satapathy, Sumit Majumder, Ratan Sarkar, **Biswajit Mukherjee**, Bharati Tudu. Engineered polymeric iron oxide nanoparticles as potential drug carrier for targeted delivery of docetaxel to breast cancer cells.–Journal of Magnetism and Magnetic Materials.–1.–485:165-73–2.683–2019

Chakraborty T., Das M.K., Dutta L., **Mukherjee B.**, Das S., Sarma A.–Successful Delivery of Zidovudine-Loaded Docosanil Nanostructured Lipid Carriers (Docosanil NLCs) into Rat Brain.–In: Pathak Y. (eds.) Surface Modification of Nanoparticles for Targeted Drug Delivery. Springer, Cham–2.–245-276–2019

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Pallab Mandal, Shubhasis Dan, Soumya Chakraborty, Balaram Ghosh, Chiranjit Saha, Jasmina Khanam, and Tapan Kumar Pal–Simultaneous Determination and Quantitation of Diosmetin and Hesperetin in Human Plasma by Liquid Chromatographic Mass Spectrometry With an Application to Pharmacokinetic Studies–Journal of Chromatographic Science–1; 57(5),451-461–1.216–2019

Saswati Bhattacharya, Jasmina Khanam, Pradipta Sarkar and Tapan Kumar Pal–A chemotherapeutic approach targeting the acidic tumor microenvironment: combination of a proton pump inhibitor and paclitaxel for statistically optimized nanotherapeutics–RSC Adv–9, 240–254–3.119–2019

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Sweet Naskar, Suraj Sharma, Ketousetuo Kuotsu.–A smart gelatin nanoparticle for delivery of metoprolol succinate: A strategy for enhancing the therapeutic efficacy bioavailability.–JDDST–53:1-7–2019

Suraj Sharma, Sweet Naskar, Ketousetuo Kuotsu.–A review on carbon nanotubes: Influencing toxicity and emerging carrier for platinum based cytotoxic drug application.–JDDST–51:708-720.–2019

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Suraj Sharma, Sweet Naskar, Ketousetuo Kuotsu –Metronomic chemotherapy of carboplatin-loaded PEGylated MWCNTs:Synthesis, characterization and in-vitro toxicity in human breast cancer –Carbon Letters—1-14.–2019



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Saumen Karan, Souvik Debnath, Ketousetuo Kuotsu, Tapan Kumar Chatterjee.–In-vitro and in-vivo evaluation of polymericmicrosphere formulation for colon targeted delivery of 5-fluorouracil using biocompatible natural gum katira.–InternationalJournal of Biological Macromolecules.–158: 922-936.–2020

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Kar S., Sanderson H., Roy K., Benfenati E., Leszczynski J.–Ecotoxicological assessment of pharmaceuticals and personal care products using predictive toxicology approaches–Green Chemistry–22:1458–9.48–2020

Seth A., Ojha P.K., Roy K.–QSAR modeling with ETA indices for cytotoxicity and enzymatic activity of diverse chemicals–Journal of Hazardous Materials–394:122498–9.038–2020

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Pandey S.K., Ojha P.K., Roy K.–Exploring QSAR models for assessment of acute fish toxicity of environmental transformation products of pesticides (ETPPs)–Chemosphere–252: 126508–5.778–2020

Ghosh S., Ojha P.K., Carnesecchi E., Lombardo A., Roy K., Benfenati E.–Exploring QSAR modeling of toxicity of chemicals on earthworm–Ecotoxicology and Environmental Safety–190: 110067–4.872 –2020

Seth A., Roy K.–QSAR modeling of algal low level toxicity values of different phenol and aniline derivatives using 2D descriptors–228–228: 105627–4.344–2020

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De P., Bhayye S., Kumar V., Roy K.–In silico modeling for quick prediction of inhibitory activity against 3CLpro enzyme in SARS CoV diseases –3.31–2020

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Khan P.M., Lombardo A., Benfenati E., Roy K.–First report on chemometric modeling of hydrolysis half-lives of organic chemicals–Environmental Science and Pollution Research–3.056–2020

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Kumar V., Saha A., Roy K.–In silico modeling for dual inhibition of acetylcholinesterase (AChE) and butyrylcholinesterase (BuChE) enzymes in Alzheimer’s disease–Computational Biology and Chemistry–88:107355–1.85 –2020

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**Prof. S Karmakar**

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**Prof. T. Jha**

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S. Banerjee, S.A. Amin, S.K. Baidya, N. Adhikari and **T. Jha**–Exploring the structural aspects of ureido amino acid- based APN inhibitors: A validated comparative multi- QSAR modeling study–SAR and QSAR in Environmental Research–in press–2.053–2020



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- R. Sarkar, S. Banerjee, S.A. Amin, N. Adhikari, and **T. Jha**—Histone deacetylase 3 (HDAC3) inhibitors as anticancer agents: A review—*European Journal of Medicinal Chemistry*—192, 112171–5.572–2020
- A.T.K. Baidya, K. Ghosh, S.A. Amin, N. Adhikari, J. Nirmal, **T. Jha**, and S. Gayen—In silico modelling, identification of crucial molecular fingerprints, and prediction of new possible substrates of human organic cationic transporters 1 and 2—*New Journal of Chemistry*—44, 10, 4129–3.228–2020
- S.A. Amin, S. Banerjee, N. Adhikari and **T. Jha**—Discriminations of actives from inactives HDAC8 inhibitors Part II#: Bayesian classification study to find molecular fingerprints—SAR and QSAR in Environmental Research—31, 245–2.053–2020
- S. Banerjee, S.A. Amin, N. Adhikari and **T. Jha**—Essential Elements Regulating HDAC8 Inhibition: A Classification Based Structural Analysis and Enzyme- Inhibitor Interaction Study of Hydroxamate Based HDAC8 Inhibitors—*Journal of Biomolecular Structure and Dynamics*—in press—3.310–2020
- S.A. Amin, N. Adhikari and **T. Jha**—Exploration of Histone deacetylase 8 inhibitors through classification QSAR study: Part II#—*Journal of Molecular Structure*—1204, 127529–2.463–2020
- S. Banerjee, N. Adhikari, S.A. Amin and **T. Jha**—Structural exploration of tetrahydroisoquinoline derivatives as HDAC8 inhibitors through multi-QSAR modeling study—*Journal of Biomolecular Structure and Dynamics*—38, 5, 1551–3.310–2020
- S. Jain, S.A. Amin, N. Adhikari, **T. Jha** and S. Gayen—Good and bad molecular fingerprints for human rhinovirus 3C protease inhibition: identification, validation, and application in designing of new inhibitors through Monte Carlo-based QSAR study—*Journal of Biomolecular Structure and Dynamics*—38, 1, 66–3.310–2020
- P. Trivedia, N. Adhikari, S.A. Amin, Y. Bobde, R. Ganesh, **T. Jha**, and B. Ghosh—Design, synthesis, biological evaluation and molecular docking study of arylcarboxamido piperidine and piperazine-based hydroxamates as potential HDAC8 inhibitors with promising anticancer activity—*European Journal of Pharmaceutical Sciences*—138, 105046–3.532–2019
- S.A. Amin, N. Adhikari, S. Gayen and **T. Jha**—Reliable structural information for rational design of benzoxazole type potential cholesteryl ester transfer protein (CETP) inhibitors through multiple validated modeling techniques—*Journal of Biomolecular Structure and Dynamics*—37, 17, 4528–3.310–2019
- D. Sengupta, U. Timilsina, Z.H. Mazumder, A. Mukherjee, D. Ghimire, M. Markandey, K. Upadhyaya, D. Sharma, N. Mishra, **T. Jha**, S. Basu and R. Gaur—Dual activity of amphiphilic Zn(II) nitroporphyrin derivatives as HIV-1 entry inhibitors and in cancer photodynamic therapy—*European Journal of Medicinal Chemistry*—174, 665–572–2019
- B. Bhardwaj, A.T.K. Baidya, S.A. Amin, N. Adhikari, **T. Jha** and S. Gayen—Insight into structural features of phenyltetrazole derivatives as ABCG2 inhibitors for the treatment of multidrug resistance in cancer—SAR and QSAR in Environmental Research—30, 7, 457–2.053–2019
- S.K. Baidya, S.A. Amin, S. Banerjee, N. Adhikari and **T. Jha**—Structural exploration of arylsulfonamide-based ADAM17 inhibitors through validated comparative multi-QSAR modelling studies—*Journal of Molecular Structure*—1185, 128–2.463–2019
- S.A. Amin, N. Adhikari, **T. Jha** and B. Ghosh—Designing potential HDAC3 inhibitors to improve memory and learning—*Journal of Biomolecular Structure and Dynamics*—37, 8, 2133–3.310–2019
- S. Sanyal, S.A. Amin, N. Adhikari and **T. Jha**—QSAR modelling on a series of arylsulfonamide-based hydroxamates as potent MMP-2 inhibitors—SAR and QSAR in Environmental Research—30, 4, 247–2.053–2019
- S.A. Amin, N. Adhikari, S. Kotagiri, **T. Jha** and B. Ghosh—Histone deacetylase 3 inhibitors in learning and memory processes with special emphasis on benzamides—*European Journal of Medicinal Chemistry*—166, 369–5.572–2019
- S. Supakar, A. Banerjee and **T. Jha**—Intermolecular association of some selected melanin monomers and their optical absorption—*Computational and Theoretical Chemistry*—1151, 43–1.605–2019



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S. Banerjee, N. Adhikari, S.A. Amin and **T. Jha** –Histone deacetylase 8 (HDAC8) and its inhibitors with selectivity to other isoforms: An overview–European Journal of Medicinal Chemistry–164, 216–5.572–2019

S. A. Amin, N. Adhikari, S. K. Baidya, S. Gayen and **T. Jha**–Structural refinement and prediction of potential CCR2 antagonists through validated multi-QSAR modeling studies–Journal of Biomolecular Structure and Dynamics–37, 1, 75–3.310–2019

S.A. Amin, N. Adhikari and **T.Jha**–Development of decision trees to discriminate HDAC8 inhibitors and non-inhibitors using recursive partitioning–Journal of Biomolecular Structure and Dynamics–1–3.310–2019

S. Jain, B. Bhardwaj, S.A. Amin, N. Adhikari, **T. Jha** and S. Gayen–Exploration of good and bad structural fingerprints for inhibition of indoleamine-2,3-dioxygenase enzyme in cancer immunotherapy using Monte Carlo optimization and Bayesian classification QSAR modeling–Journal of Biomolecular Structure and Dynamics–38, 6, 1683–3.310–2019

J. Kaji, R. Mukhopadhyay, R. Sen, **T. Jha**, S. Ganguly and M.C. Debnath–Design of 5-fluorouracil (5-FU) loaded, folate conjugated peptide linked nanoparticles, a potential new drug carrier for selective targeting of tumor cells–Med Chem Comm–10, 4, 559–2.394–2019

S. Dutta, A.K. Halder, N. Adhikari, S.A. Amin, S. Das, A. Saha and **T.Jha** –Synthesis, anticancer activity, structure-activity relationship and binding mode of interaction studies of substituted pentanoic acids –Future Medicinal Chemistry–11, 14, 1679–3.607–2019

### Prof. T. Bera

Shreyasi Chakraborty, Iman Ehsan, Biswajit Mukherjee, Laboni Mondal, Saheli Roy, Krishna Das Saha, Brahamachary Paul, Mita Chatterjee Debnath, **Tanmoy Bera**.–Therapeutic potential of andrographolide-loaded nanoparticles on a murine asthma model.–Nanomedicine: Nanotechnology, Biology and Medicine.–20, 102006.–2019

### Prof. T. K. Maity

Arijit Mondal, **Tapan Kumar Maity**–Isolation of cytotoxic monomeric protein and morin derivatives from *Solena amplexicaulis* (Lam.) Gandhi–Natural Product Research–<https://doi.org/10.1080/147864110.10801478641.2019.1652287>–2.158–2019

Arijit Mondal, **Tapan Kumar Maity**, Anupam Bishayee–Analgesic and anti-inflammatory activities of quercetin-3-methoxy-4'-glucosyl-7-glucoside isolated from Indian medicinal plant *Melothria heterophylla*–Medicines–6(2), 59–2.133–2019

Birendra Nath Karan, **Tapan Kumar Maity**, Bikash Chandra Pal, Tanushree Singha & Snehasis Jana Betulinic Acid, the first lupane-type triterpenoid isolated via bioactivity-guided fractionation, and identified by spectroscopic analysis from leaves of *Nyctanthes arbor-tristis*: its potential biological activities in vitro assays Natural Product Research–33(22), 3287-3292–2.158–2019

## 5. Collaborative Programmes: (Name of collaborating organization–Nature of collaboration–Outcome of collaboration–Year)

### Prof. Kunal Roy

Jackson State University Prof J Leszczynski–Collaborative research–Publication–2017-2020

RCCS Istituto di Ricerche Farmacologiche Mario Negri Milano Italy Dr Emilio Benfenati Collaborative research–Publication–2017-2020

University of Gdansk Dr A Gajewicz–Collaborative research–Publication –2017-2020

University of Porto Dr MNDS Cordeiro –Collaborative research Publication–2017-2020

Aarhus University Dr H sanderson–Collaborative research–Publication–2017-2020

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### Prof. Tarun Jha

CSIR IICB–Dr K D Saha–Publication–2020  
CSIR IICB–Dr M C Debnath–Publication–2019-2020  
CSIR IICB–Dr K Choudhury–Publication–2020  
Assam University Silchar–Dr D Sengupta–Publication–2018-2020

### Prof. B. Mukherjee

Defence Research Development Organization DRDO LSRB–Collaborative research–Publication 2018-2021

### Prof. Tapan Kumar Maity

Two research projects have been submitted to DST and CSIR for collaboration with Assam University, Silchar and Dibrugarh University, Dibrugarh respectively, which are under process

## 6. Major Achievements:

Name of the Teacher	Achievements
Professor Biswajit Mukherjee	awarded DUO-Belgium/Wallonia-Brussels Fellowship 2019
Prof. Tapan Kumar Maity	PhD. Awarded- 03, PhD. Submitted-01
Prof. T. Jha	Published 24 research articles in this Academic season (1 April, 2019- 31 March, 2020)
Prof. Kunal Roy	Co-Editor-in-Chief, Molecular Diversity (Springer Nature)

## POWER ENGINEERING

[Salt Lake Campus]

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H.O.D: Prof. Amitava Datta

E-mail: hodpower@jadavpuruniversity.in

### 1. A. Courses Offered :

Name of the Course	Duration of Course	No. of Students Enrolled
Bachelor of Power Engineering	4 Years	175
Master of Power Engineering	2 Years	36
PhD. (Engg.)	5 Years	25

### 1. B. Number of Faculty Members :14 (Professor – 9; Assistant Professor – 5)

### 2. A. Area of Research Activities: (Broad Areas)

Energy, Nonconventional Generation and Environment, Microgrids, Power system optimization, Power Economics and Deregulation, Soft computing techniques, Condition monitoring of power system equipment, Combustion, Surface

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science and engineering, Water harvesting, Novel Materials, Computational and experimental fluid dynamics and heat transfer, Microfluidics, phase change heat transfer, biological fluid flow, heat transfer using nanofluid, experimental aerodynamics, hydro and wind power, application of nanofluids in power engineering, real-time & embedded systems, Wireless sensor networks, Applied superconductivity

### 2. B. Major Research Project: (Departmental / Individual along with the names of Co-ordinator(s)/ Investigator(s) –Name of the Project–Funding Agency)

- Prof. Amitava Datta (PI) Departmental Project –Development of a Renewable-based HYBRID energy system with Simulation Facilities –DST-FIST
- Prof. Amitava Gupta –Indigenously Developed Spectroscopic Radiation Portal Monitors for National Security –MHRD/DRDOIMPRINT PROGRAM (with IIT Kanpur)
- Prof. Ranjan Ganguly (PI) Prof. Amitava Datta (CI) –Study of condensation in presence of noncondensable gases: effects of surface wettability and flow parameters –Board of Research in Nuclear Sciences (BRNS) of the DAE, Govt. of India
- Prof. Ranjan Ganguly –PI Prof. Amitava Datta – Co-PI –Optimizing wettability-engineered metal mesh for cooling tower fog harvesting –DST SERB, GoI
- Prof. Amitava Gupta - PI –Vision guided AutoLander for Planetary missions –Indian Space Research Organization (ISRO)
- Prof. Amitava Gupta - PI –Development of discrete optimal controller for a load following pressurized water reactor (PWR) module –Board of Research in Nuclear Sciences (BRNS) of the DAE, Govt. of India
- Prof. Amitava Datta –PI Prof. Ranjan Ganguly – Co PI –Optimization of components of the domestic LPG stove through numerical simulation for increased thermal efficiency –LPG Equipment Research Corporation, Govt. of India, MoPNG
- Prof. Apurba Kumar Santra - PI –Preparation and characterization of nano-biofuels and study of their performance in IC Engines –JU RUSA-2.0
- Ms. Gargi Konar - PI –Modeling and Simulation of Battery-Ultracapacitor based Hybrid Energy Storage System –JU RUSA-2.
- Dr. Bhimsen Tudu - PI –Dynamic response analysis of Grid Connected and Stand-alone PV based Renewable Energy System –JU RUSA-2.0
- Prof. Ranjan Ganguly - PI –Developing wettability-engineered surfaces for high-performance solar thermal decontamination plants for potable water –JU RUSA 2.0
- Prof. Niladri Chakraborty- PI –Novel Energy Bidding Strategies for Rooftop Solar Based Low Demand Prosumers through Wireless Sensors in the Restructured Energy Market –JU-RUSA 2.0
- Dr. Subrata Mondal - PI –Experimental investigation and Process Optimization for Surface Quality Improvement in Laser Cladding –JU-RUSA 2.0

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher–Type of Participation (Invited Lecture/Session chaired/Panel expert/Keynote address)–Name of the Seminar/Conference–Place–Duration)

Bhimsen Tudu –Invited lecture on Renewables Based Energy Systems-Shift towards Sustainability? – Two-Days National Seminar on “Conventional to Renewables: Transition in Indian Power Sector” –Jadavpur University, Kolkata –7-8 February, 2020

Bhimsen Tudu –Invited lecture on Society, Sustainable Development and Energy-The Nexus –One-day National Level Seminar on “Sustainable Development: Its impact on marginalized” –Tamralipta Mahavidyalaya, West Bengal –27 January, 2020

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Amitava Datta –Invited Lecture on Mixture Preparation and Performance Optimization in Domestic LPG Cookstoves –IV International conference on “Sustainable Energy and Environmental Challenges” (IV SEEC) –CSIR—NEERI, Nagpur –27-29 November, 2019

Amitava Datta –Impact of Changing Energy Mix in Power Sector –International Conference on Impact of Changing Energy Mix in Power Sector, organized by Institute of Engineers, India –Lalit Great Eastern Hotel, Kolkata –23 November, 2019

Amitava Datta –The Growing Importance of Institutional Ranking –Elsevier Connect Forum –Vivanta by Taj, Kolkata –19 September, 2019

Amitava Datta –Quality in higher education: Research, Innovation and Extension –Awareness Workshop on NAAC Accreditation –Kalyani University –16-17 August, 2019

Amitava Datta –Combustion Characteristics of Biomass-based Fuels for Engine Applications –1st International Conference on Clean and Renewable Energy –National Institute of Technology, Durgapur –10 – 12 July, 2019

Amitava Datta –National Institutional Ranking Framework (NIRF) –State-Level Awareness-cum-Training Workshop organized by Department of Higher Education, Govt. of WB –Vigyan Chetana Bhavan, Kolkata–18-19 May, 2019

R. Ganguly –Invited lecture on “Action at a distance: Leveraging magnetic particles in microfluidic platform” –Indo-French workshop on Electrohydrodynamics (EHD) –IIT Kharagpur – 27 – 29 November, 2019

R. Ganguly –Invited Lecture titled “Capillary-driven transport for surface microfluidic platform – the future of low-cost healthcare” –CompFlu 2019 –IISER Bhopal –5—7 December, 2019

R. Ganguly –Invited lecture titled “Manipulating liquids on nano-engineered surfaces” –International Workshop on Multiscale Modeling Approach in Micro/Nano-fluidics –IIT Kharagpur –9 December, 2019

R. Ganguly –Invited lecture titled “Dealing energy-water nexus with a skin-deep approach” –International Workshop on Energy, Environment and Multi-phase Flows –IIT Kanpur – 24-27 February, 2020

Nirmalendu Biswas –Session Chair: for NHT topic –25th National and 3rd International ISHMT-ASTFE Heat and Mass Transfer Conference –IIT Roorkee, –28-31, December, 2019

Amitava Gupta –Tutorial Lecture : Fractional Order Systems –IEEE CCTA 2019 City University of Hong Kong–City University of Hong Kong –19-21 August, 2019

Amitava Gupta –Invited talk: Control using FO elements –STC titled Fractional Calculus: Applications in Science & Engineering –NIT Uttarakhand –16-20 December, 2019

Amitava Gupta –Invited talk: Fraction Order Systems In Control –FOSTA 2019 –NIT Silchar 16-17 August, 2019

Amitava Gupta –Invited talk: Threat Aware Control Systems Design for Nuclear Security –PDPU-WINS- Los Alamos Training Course on Nuclear Security –PDPU Gandhinagar –4-6 September, 2019

Amitava Gupta –Invited talk: From the Earth to the Moon –JBNSTS Science Orientation Workshop –JBNSTS Kolkata –29-31 May, 2019

### 3. B. Seminar/Workshop/Conference/Symposium Attended/Paper Presented: (Name of the Participants/Authors–Title of the Paper Presented–Name of the Seminar–Place–Duration)

A. Dutta, A. K. Santra and R. Ganguly –Numerical study of concentration of bio-analyte by temperature gradient focusing via Joule heating in a microfluidic channel –ICESD 2020. International Conference on Energy and Sustainable development –Jadavpur University, Kolkata –14-15 February, 2020

B. Tudu, A. Biswas, A. Maji, K. Sardar, K. K. Mandal –Performance Analysis of Grid Connected PV system under Varying Irradiance and Temperature –International conference on Industrial Electronics Mechatronics Electrical & Mechanical Power (IEMPOWER – 2019) –IEM, Kolkata –23-25 November, 2019

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- D. Palit, N. Chakraborty–Impact of preferred consideration for fuel cost, emission and bidders' profit on power bidding optimization–International Conference on Computing, Power and Communication Technologies –Galgotias University, Greater Noida–27-28 September, 2019
- C. Das, S. Halder, A. Datta, R. Ganguly –Effect of surface wettability on vapor condensation in presence of non-condensable gas with different free stream velocity–International Conference on Innovations in Thermo-Fluid Engineering and Sciences–NIT Rourkela–10-12 February, 2020
- I. Roy, C. Das, A. Datta, R. Ganguly–Quantitative Schlieren imaging in phase-change heat transfer with transient subcooling–International Conference on Innovations in Thermo-Fluid Engineering and Sciences–NIT Rourkela–10-12 February, 2020
- A. Datta, C. Das, R. Ganguly–Collection efficiency study by changing surface wettability of collector plate in a solar still test rig–25th National and 3rd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2019)–IIT Roorkee–28-31 December, 2019
- T. Roy, U. Sen, R. Ganguly, L.A. Angeloni, C.A. Schroeder, C.M. Megaridis–Explosive events in bicomponent droplet impact on superheated substrates–72nd Annual Meeting of the APS Division of Fluid Dynamics 2019–Seattle, WA, USA–23-26 November, 2019
- Meenakshi De, Gourab Das, K. K. Mandal–Efficient energy management in microgrids using power flow pollination algorithm–International conference on Computational Intelligence in Pattern Recognition–IIEST, Shibpur, Howrah–19-20 January, 2019
- B. Majumdar–Int. Workshop on Hydrokinetic Technology–IIT Roorkee–10-11, October, 2019
- Nirmalendu Biswas–AICTE Sponsored Short Term Course on “Advances in Thermofluidics of Multiphase Flows”–Department of Mechanical Engineering, IIT Madras–4 – 9 November, 2019
- Nirmalendu Biswas–TEQIP-III Sponsored Short-Term Course on “Multiscale Modelling and Simulation”–Department of Mechanical Engineerin IIT Delhi–9 – 13 December, 2019
- Nirmalendu Biswas–International Workshop on Nanoengineered Interfaces for Energy and Healthcare–IIT Madras –16-17 March, 2020
- N. Biswas, S. Sarkar, R. Samanta, A. Jha, A. Chakravarty, N. K. Manna –On set of MHD Thermo-Bioconvection in a Lid Driven Porous Cavity–25<sup>th</sup>National and 3<sup>rd</sup>International ISHMT-ASTFE Heat and Mass Transfer Conference–IIT Roorkee–28-31, December, 2019
- N. Biswas, S. Sarkar, R. Samanta, A. Jha, A. Chakravarty, N. K. Manna –On set of MHD Thermo-Bioconvection in a Lid Driven Porous Cavity–25<sup>th</sup>National and 3<sup>rd</sup>International ISHMT-ASTFE Heat and Mass Transfer Conference–IIT Roorkee–28-31 December, 2019
- S. Sarkar, R. Samanta, A. Jha, N. Biswas, N. K. Manna –MHD convection in cavity under sinusoidal heating –25<sup>th</sup>National and 3<sup>rd</sup>International ISHMT-ASTFE Heat and Mass Transfer Conference–IIT Roorkee–28-31 December, 2019
- R. Samanta, S. Sarkar, A. Jha, N. Biswas, N. K. Manna –Linear heating and non-newtonian flow in lid-driven cavity–25<sup>th</sup>National and 3<sup>rd</sup>International ISHMT-ASTFE Heat and Mass Transfer Conference–IIT Roorkee–28-31 December, 2019
- A. Jha, R. Samanta, S. Sarkar, P. Datta, N. Biswas, N. K. Manna–Triggering and propagation in a shock tube–25<sup>th</sup>National and 3<sup>rd</sup>International ISHMT-ASTFE Heat and Mass Transfer Conference–IIT Roorkee –28-31 December, 2019
- N. Biswas, N. K. Manna, A. Datta–Electro-thermal convection in a rectangular enclosure–International Conference on Innovations in Thermo-Fluid Engineering and Sciences, ICITFES-2020–NIT Rourkela –10-12 February, 2020
- A. Datta, N. Biswas, N. K. Manna–Thermal management of porous cavity utilized for solar heating system International –Conference on Energy and Sustainable Development 2020–Jadavpur University, Kolkata –14-15 February, 2020



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A. Roy, N. Kumar, S. Mondal, A. Bandyopadhyay—Analysis of Bead-on-Plate Welding of Inconel 625 Superalloy using Nd: YAG Laser—International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), IIT Indore—IIT Indore—12-14 December, 2019

Subrata Mondal, Soumyabrata Chakravarty, Asish Bandyopadhyay, Pradip Kumar Pal—Surface Property Improvement of Low Carbon Steel using CO<sub>2</sub> Laser—International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), IIT Indore—IIT Indore—12-14 December, 2019

Subrata Mondal, Mithun Das—Study of Biodiesel Properties Through Exponential Regression Analysis (ERA)—National Conference on the Emerging Trends in Automotive Engineering (NCETAE)—Jadavpur University, Kolkata—3-4 March, 2020

### 3. C. Seminar/Workshop/Conference/Symposium Organized:(Name of the Teacher—Name of the Seminar/Conf/Workshop—Place—Duration)

Gargi Konar & Bhimsen Tudu—Refresher Course on Non-Conventional Energy-A Paradigm Shift Towards Sustainability—Jadavpur University—6-18 January, 2020

Amitava Datta, Ranjan Ganguly and A.K. Santra—3<sup>rd</sup> PAC Meeting of MMME Section of DST SERB—Jadavpur University—30-31 August, 2019

Amitava Gupta—Earth Challenge: Celebrating the World Environment Day (School of Nucl. Studies & Applications, Force for Rural Empowerment & Economic Development (FREED), TEQIP-III)—ICCR Kolkata—20 June, 2019

Amitava Gupta—Workshop on IP Rights (Jointly with PHD Chambers Delhi)—Jadavpur University 13 November, 2019

### 3. D. Orientation Courses/ Refresher Courses Attended:(Name of the Teachers—Title of the Course—Place—Duration )

Debashis Palit—Refresher Course on Non-Conventional Energy-A Paradigm Shift Towards Sustainability—Jadavpur University—6-18 January, 2020

Subrata Mandal—Refresher Course on Non-Conventional Energy-A Paradigm Shift Towards Sustainability—Jadavpur University—6-18 January, 2020

### 4. A. Books/Monographs etc. Published:(Name of the Teacher—Title of the Chapter—Name of the Book—Name of the Publisher with ISBN No. if any)

#### Book Chapters Published:

Anirban Chowdhury, Ranjit Roy, Kamal Krishna Mandal, Soumyajit Bhattacharya, Priyanka Biswas, Sayani Nandy—Comparison of Improvement in Technical, Commercial and Environmental Benefits by Optimal Single-Point, Twin-Point and Triple-Point Deterministic PV-Based DG Injection by Jaya Algorithm—Computational Advancement in Communication Circuits and Systems—pp.25-36

Tanmay Das, Ranjit Roy, Kamal Krishna Mandal, Souren Mondal, Soumaymoy Mondal, Paresh Hait, Moloy Kumar Das—Optimal Reactive Power Dispatch Incorporating Solar Power Using Jaya Algorithm—Computational Advancement in Communication Circuits and Systems.—pp- 37-48

T.M. Thomas, P.S. Mahapatra, R. Vedarajan, R. Ganguly—Multiphase Flow its Application in Water Management and Harvesting in Fuel Cells—Two-Phase Flow for Automotive and Power Generation Sectors; Editors: Saha, K., Agarwal, A.K., Ghosh, K., Som, S.—Springer, ISBN 978-981-13-3256-2 , pp 249-285, 2019

A. Gupta, S. Midya, N. Biswas, N. K. Manna—Impact of magnetic field on thermal convection in a linearly heated porous cavity—Lecture Notes on Multidisciplinary Industrial Engineering, Advances in Materials, Mechanical and Industrial Engineering—Springer, eBook ISBN: 978-3-319-96968-8, 2019

S. Mukherjee, N. Biswas, N. K. Manna—MHD Convection with Heat Generation in a Porous Cavity—Industrial Engineering, Advances in Materials, Mechanical and Industrial Engineering—Springer, eBook ISBN: 978-3-319-96968-8, 2019

M.K. Mondal, N. Biswas—Impact of Central Plate sliding in an Internal Heated Square Porous Cavity on MHD Mixed Convection Heat transfer—Proc. in Int. Conf. on Energy & Sustainable Development Jointly organized by Mech. Engg. Department, Jadavpur University and The Institution of Engineers, India February 14-15, —ISBN: 978-93-83660-56-8, 2020, 126–129, ICESD2020\_040

A. Datta, N. Biswas, N. K. Manna—Thermal management of porous cavity utilized for solar heating system—Proc. in Int. Conf. on Energy & Sustainable Development Jointly organized by Mechanical Engineering Department, Jadavpur University and The Institution of Engineers, India February 14-15,—2020, 317–320, ISBN: 978-93-83660-56-8, ICESD2020\_097

Amitava Gupta Robust Control of Nuclear Reactors with Proportional—Integral-Derivative (PID) Controllers: The Fractional Order (FO) and Interval Approaches—Dynamics and Control of Energy Systems—ISBN978-981-15-0535-5

**4. B. Articles Published in Journals:(Name of the Authors, Title of the Article, Name of the Journal,Volume (Issue), Pages from-To, Year)**

1. N. Biswas, A. Datta, N. K. Manna, R.S.R. Gorla and D. K. Mandal, Thermo-bioconvection of oxytactic microorganisms in porous media in the presence of magnetic field, *Int. J. Numer. Meth. Heat Fluid Flow* (2020) 1 – 24. doi 10.1108/HFF-07-2020-0410.
2. N. Biswas, N.K. Manna, A. J. Chamkha, Magneto-thermal convection in typical thermal cavities with aspiration, *SN Applied Sciences*. 2:1911 (2020) 1 – 25. doi.org/10.1007/s42452-020-03634-w
3. N. Biswas, N. K. Manna, A. Datta, D. K. Mandal, A. C. Benim, Role of aspiration to enhance MHD convection in protruded heater cavity, **Prog. Comput. Fluid Dyn.** 20:6 (2020) 363–378.
4. N. Biswas, U. K. Sarkar, A. J. Chamkha, N.K. Manna, Magneto-hydrodynamic thermal convection of Cu–Al<sub>2</sub>O<sub>3</sub>/water hybrid nanofluid saturated porous media subjected to half-sinusoidal non-uniform heating, **J. Thermal Anal. Calorim.** (2020) 1– 27, doi.org/10.1007/s10973-020-10123-0.
5. N. Biswas, A. J. Chamkha, N.K. Manna, Effects of half-sinusoidal nonuniform heating during MHD thermal convection in Cu–Al<sub>2</sub>O<sub>3</sub>/water hybrid nanofluid saturated with porous media, **J. Thermal Anal. Calorim.** (2020) 1– 24, doi.org/10.1007/s10973-020-10109-y
6. C. Hazra, N. Biswas, N.K. Manna, Thermal magneto-hydrodynamics in a ventilated porous enclosure, *Sādhanā*. 45:224 (2020) 1 – 12. doi.org/10.1007/s12046-020-01459-2
7. C. Mondal, R. Sarkar, S. Sarkar, N. Biswas, N.K. Manna, Magneto-thermal convection in lid-driven cavity, *Sādhanā*. 45:227 (2020) 1 – 16. doi.org/10.1007/s12046-020-01463-6
8. A. Datta, D. Debbarma, N. Biswas, D. Sanyal, A. K. Das, The role of flow structures on the thermal performance of microchannels with wall features, **J. Thermal Sci. Eng. Appl.** 13(2) (2020) 001000-1–11.
9. A. Chakravarty, N. Biswas, K. Ghosh, N. K. Manna, A. Mukhopadhyay, S. Sen, Impact of side injection on heat removal from truncated conical heat-generating porous bed: thermal non-equilibrium approach, *Journal of Thermal Analysis and Calorimetry*, 1-20, 2020
10. P. Sikdar, A. Datta, N. Biswas, D. Sanyal, Identifying improved microchannel configuration with triangular cavities and different rib structures through evaluation of thermal performance and entropy generation number, *Physics of Fluids*, 32(3), 033601, 2020.
11. Kallol Roy, Kamal K Mandal, Atis C Mandal, “Application of ANFASO for optimal power flow management of MG connected system with energy storage,” *International Journal of Energy Research* 2020, 44(7), 5272-5286, 2020

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12. S. Dey, M. Das, R. Ganguly, A. Datta, M.M. Verma, A.K. Bera, Computational fluid dynamic analyses of flow and combustion in a domestic LPG cook stove burner: Part I – Design optimization of mixing tube-burner assembly, *ASME Journal of Thermal Science and Engineering Applications*, 12(3): 031010, June, 2020
13. M. Das, R. Ganguly, A. Datta, M.M. Verma, A.K. Bera, Computational fluid dynamic analyses of flow and combustion in a domestic LPG cook stove burner: Part II - Burning characteristics and overall performance, *ASME Journal of Thermal Science and Engineering Applications*, 12(3): 031011, June, 2020
14. Hazra, S. Das, A. Laddha, M. Basu, Economic Power Generation Strategy for Wind Integrated Large Power Network Using Heat Transfer Search Algorithm, *Journal of The Institution of Engineers (India): Series B*, article in press, 2020
15. K. Halder, S. Das, A. Gupta, Transformation of LQR Weights for Discretization Invariant Performance of PI/PID Dominant Pole Placement Controllers, *Robotica*, **38**(2), pp. 271-298, 2020
16. M. Basu, Optimal generation scheduling of hydrothermal system with demand side management considering uncertainty and outage of renewable energy sources, *Renewable Energy*, 146, 530-542, 2020
17. M. Basu, Dynamic economic dispatch incorporating renewable energy sources and pumped hydroenergy storage, *Soft Computing*, **24**, 4829–4840, 2020
18. P. Sikdar, A. Datta, N. Biswas, D. Sanyal, Identifying improved microchannel configuration with triangular cavities and different rib structures through evaluation of thermal performance and entropy generation number, *Physics of Fluids*, **32**(3), 033601, 2020
19. U. Sen, T. Roy, R. Ganguly, L.A. Angeloni, W.A. Schroeder, C.M. Megaridis, Explosive behavior during binary-droplet impact on superheated substrates, *International Journal of Heat and Mass Transfer*, 154, 119658, 2020
20. R. Ghosh, R.P. Sahu, R. Ganguly, I. Zhitomirsky, I.K. Puri, Photocatalytic activity of electrophoretically deposited TiO<sub>2</sub> and ZnO nanoparticles on fog harvesting meshes, *Ceramics International*, **46**(3), 3777-3785, 2020
21. R. Ghosh, R. Ganguly, Fog harvesting from cooling towers using metal mesh: Effects of aerodynamic, deposition, and drainage efficiencies, *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*, articles, **234**, pp. 994 – 1014, 2020
22. S. Kumar, K.K.Mandal, N. Chakraborty, A novel opposition-based tuned-chaotic differential evolution technique for techno-economic analysis by optimal placement of distributed generation, *Engineering Optimization*, **52**(2),303-324, 2020
23. S. Banerjee, D. Bose, A. Hazra, ..., K. Ghosh, A. Gupta, Controller design for operation of a 700/ MWe PHWR with limited voiding, *Nuclear Engineering and Design*, **357**,110370, 2020
24. S. Das, K. Halder, A. Gupta, Delay handling method in dominant pole placement based PID controller design, *IEEE Transactions on Industrial Informatics*, **16**(2),8720048, 980-991, 2020
25. S. Das, M. Basu, Day-ahead optimal bidding strategy of microgrid with demand response program considering uncertainties and outages of renewable energy resources, *Energy*, **190**, 116441, 2020
26. S. Das, K. Halder, A Gupta, Transformation of LQR weights for Discretization Invariant Performance of PI/PID Dominant Pole Placement Controllers, *Robotica*, 38(2), 271-298,2020
27. M. K. Mondal, N. Biswas, N.K. Manna, MHD convection in a partially-driven cavity with corner heating, *SN Applied Sciences*, 1:1689, 1-19, 2019
28. N.K. Manna, N. Biswas, P.S. Mahapatra, Convective heat transfer enhancement: effect of multi-frequency heating, *International Journal of Numerical Methods in Heat & Fluid Flow*, 29(10):3822-3856, 2019
29. A. Bhattacharya, A. Datta, Effects of blending 2,5-dimethylfuran on the laminar burning velocity and ignition delay time of isooctane/air mixture, *Combustion Theory and Modelling*, 23(1), 105-126, 2019
30. S. K. Ojha, P. Purkait, B. Chatterjee, S. Chakravorti, “Application of Cole-Cole Model to Transformer Oil-Paper Insulation Considering Distributed Dielectric Relaxation” - *IET, High Voltage Journal*, **4** (1), 72 – 79, 2019

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31. I.Bandyopadhyay, P. Purkait, C.Koley, "Performance of a Classifier Based on Time Domain Features for Incipient Fault Detection in Inverter Drives", *IEEE Transactions on Industrial Informatics*, **15** (1), 3-14, 2019
32. Arnab Ghosh, Niladri Chakraborty, A novel Residual Energy based Distributed Clustering and Routing Approach for Performance Study of Wireless Sensor Network, *International Journal of Communication Systems*, **32** (7), 1-26, 2019
33. Arnab Ghosh, Niladri Chakraborty, Cascaded Cuckoo Search Optimization of Router Placement in Signal Attenuation Minimization for Wireless Sensor Network in Indoor Environment, *Engineering Optimization*, **51**(1), 1-20, 2019
34. Roy, K., Mandal, K.K. & Mandal, A.C., "Energy management of the energy storage-based micro-grid connected system: an SOGSNN strategy," *Soft Comput* 2019, Springer, pp.1-14, 2019. <https://doi.org/10.1007/s00500-019-04412-6>
35. D. Palit, N. Chakraborty, Optimal bidding in emission constrained economic dispatch, *International Journal of Environmental Science and Technology*, **16**, 7953-7972, 2019
36. Gargi Konar, Niladri Chakraborty, Kamal Krishna Mandal, Hybrid renewable energy integrated Indian power system under availability based tariff, *International Transactions on Electrical Energy Systems*, **29**(9), e12162, 2019
37. K.Halder, D.Bose and A. Gupta, Stability and Performance Analysis of Networked Control Systems: A Lifted Sample-Time Approach with L2 Induced Norm, *ISA Transactions*, **86**, 62-72, 2019
38. Kallol Roy, Kamal Krishna Mandal, Atis Chandra Mandal, Ant-Lion Optimizer algorithm and recurrent neural network for energy management of micro grid connected system, *Energy*, **167**, 402-416, 2019
39. L. Ramesh, N. Chakraborty, Optimal Allocation of Transformer and Its Effects on Distribution System Loss Minimization, *Russian Electrical Engineering*, **90**(3), 285-293, 2019
40. M. Basu, Multi-region dynamic economic dispatch of solar-wind-hydro-thermal power system incorporating pumped hydro energy storage, *Engineering Applications of Artificial Intelligence*, **86**, 182-196, 2019
41. M. Basu, Combined heat and power dynamic economic dispatch with demand side management incorporating renewable energy sources and pumped hydro energy storage, *IET Generation, Transmission and Distribution*, **13**(17), 3771-3781, 2019
42. M. Basu, Dynamic economic dispatch with demand-side management incorporating renewable energy sources and pumped hydroelectric energy storage, *Electrical Engineering*, **101**(3), 877-893, 2019
43. M. Basu, Economic environmental dispatch of solar-wind-hydro-thermal power system, *Renewable Energy Focus*, **30**, 107-122, 2019
44. M. Basu, Squirrel search algorithm for multi-region combined heat and power economic dispatch incorporating renewable energy sources, *Energy*, **182**, 296-305, 2019
45. M. Basu, Multi-area dynamic economic emission dispatch of hydro-wind-thermal power system, *Renewable Energy Focus*, **28**, 11-35, 2019
46. Meenakshi De, G. Das, Kamal K. Mandal, B. Tudu, A Critical Assessment of Demand Response Programs Applied for Optimal Energy Management in Microgrids, *International Journal of Recent Technology and Engineering*, **8**(2S7), 344-349, 2019
47. R. Gupta, C. Das, A. Datta, R. Ganguly, Background Oriented Schlieren (BOS) imaging of condensation from humid air on wettability-engineered surfaces, *Experimental Thermal and Fluid Science*, **109**, 109859, 2019
48. S. Biswas, A.Roy, P.K. De, B. Majumdar, Flow field investigation on a double delta wing, *Tech. Note, J. of Aerospace Science & Technologies*, **71**(2), 2019
49. S. Biswas, A. Roy, P.K. De, B. Majumdar, Investigation of flow field over swept back wing, *Int. J. of Research & Analytical Reviews*, **6**(1), 2019



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50. S. Biswas, A. Roy, A. Roy, P.K. De, B. Majumdar, Experimental and numerical investigation of flow field structure over swept back wing, *Journal of Emerging Technologies and Innovative Research*, **6**(3), 2019
51. Sajjan Kumar, Kamal K. Mandal, Niladri Chakraborty, Optimal DG placement by multi-objective opposition based chaotic differential evolution for techno-economic analysis, *Applied Soft Computing Journal*, **78**, 70–83, 2019
52. Sajjan Kumar, Kamal K. Mandal & Niladri Chakraborty, A novel opposition-based tuned-chaotic differential evolution technique for techno- economic analysis by optimal placement of distributed generation, *Engineering Optimization*, 1-23, 2019
53. Syamasree Biswas (Raha), Kamal Krishna Mandal, Niladri Chakraborty, Hybrid SMES based Reactive Power Dispatch by Cuckoo Search Algorithm, *IEEE Transaction on Industry Applications*, **55**(1), 907-917, 2019
54. T. Bar, C. Basu, M. Das, A. K. Santra, S. Sen, Simulation of heat transfer and dissipation in targets used in nuclear astrophysics experiments, *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, 449, 105-116, 2019
55. U. Sen, T. Roy, S. Chatterjee, R. Ganguly, C.M. Megaridis, Post-impact behavior of a droplet impacting on a permeable metal mesh with a sharp wettability step, *Langmuir*, **35**, 12711 — 12721, 2019
56. Bidishna Bhattacharya, Niladri Chakraborty, Kamal K. Mandal, “A cost optimized power management strategy for combined wind thermal–pumped hydro generation considering wind power uncertainty,” *Int Trans Electr. Energ. Syst.* 2019, pp. 1-18, <https://doi.org/10.1002/2050-7038.12104>
57. D. Santra, A. Mukherjee, K. Sarker and S. Mondal, Dynamic Economic Dispatch Using Hybrid Metaheuristics, *Journal of Electrical Systems and Information Technology*, Vol. 7, No. 3, 2020, pp. 1-30. Published in Springer on 10<sup>th</sup> February, 2020, <https://doi.org/10.1186/s43067-020-0011-2>
58. S. Midya, A. Pal, A. Gupta, N. Biswas, N. K. Manna, Effect of corner flow on convective heat transfer in inclined cavity, *J. Association of Engineers, India* **89**(3 & 4) (2019) 26–34 (ISSN 0368-1106). doi: 10.22485/jaei2019/v89/i3-4/194811
59. A. Pal, S. Midya, A. Gupta, N. Biswas, N. K. Manna, Influence of corner flow on mixed convection in a cavity, *Reason – Tech. J.*, **XVIII** (2019) 53–63 (ISSN 2277-1654). doi: 10.21843/reas/2019/53-63/196167
60. S. Sarkar, A. Jha, R. Samanta, N. Biswas, N. K. Manna, MHD convection in a lid-driven cavity heated linearly at bottom, *Reason – Tech. J.*, **XVIII** (2019) 17–27 (ISSN 2277-1654). doi: 10.21843/reas/2019/17-27/196163
61. M. K. Mondal, N. Biswas, N.K. Manna, MHD convection in a partially-driven cavity with corner heating, *SN Applied Sciences*, 1:1689, 1-19, 2019
62. N.K. Manna, N. Biswas, P.S. Mahapatra, Convective heat transfer enhancement: effect of multi-frequency heating, *International Journal of Numerical Methods in Heat & Fluid Flow*, 29(10):3822-3856, 2019
63. Shohan Banerjee, Debayan Bose, Abhik Hazra, Sujit Chattopadhyay, Koushik Ghosh, Amitava Gupta, Controller design for operation of a 700 MWe PHWR with limited voiding, *Nuclear Engineering & Design*, Vol. 357, February 2020
64. S Das, K Halder, A Gupta, Delay Handling Method in Dominant Pole Placement based PID Controller Design, *IEEE Transactions on Industrial Informatics*, May 2019 (<https://doi.org/10.1109/TII.2019.2918252>)
65. S Das, K Halder, A Gupta, Transformation of LQR weights for Discretization Invariant Performance of PI/PID Dominant Pole Placement Controllers, *Robotica*, Cambridge University Press, 2019 (in Press, Digital version available)



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### 5. Collaborative Programmes: (Nature of Activity–Participant–Duration)

Research Collaboration with LPG Equipment Research Corporation, Bangalore–Prof. Amitava Datta and Prof. Ranjan Ganguly–Continuing since 2016

Research Collaboration with IIT Kanpur under MHRD/DRDO IMPRINT Program–Prof. Amitava Gupta–Since 2018

Research collaboration with Micro-nano Fluid Transport Lab of University of Illinois at Chicago–Prof. R. Ganguly–Continuing since 2014

Research collaboration with Multiphysics Research Group at McMaster University–Prof. R. Ganguly–Continuing since 2018

### 6. Major Achievements:

- Department invited Prof. Kaushik Sarkar of George Washington University to the department for two weeks (3–17 January, 2020) under the RUSA 2.0 program to have interaction and research exchange with the faculty members of the department to facilitate possible collaborative research plan. Dr. NN. Biswas, Prof. R. Ganguly and Prof. A.K.Santra coordinated the activity
- Prof. Amitava Gupta served as the Chairman, Digital Outreach Committee for the WBJEE 2020
- C. Das, S.Haldar, A.Datta and R.Ganguly received the Best Paper award at the International Conference on Innovations in Thermo-Fluid Engineering and Sciences [ICITFES – 2020] NIT Rourkela, India, 10-12 February, 2020
- Prof. Amitava Datta is serving as the External Member of BOAC of Mechanical Engineering Department of IEST, Shibpur
- Prof. Apurba Kumar Santra was the RC Coordinator of WBJEEB
- Prof. Amitava Datta acted as a Judge for UNMESH-2019 of CESC Ltd., Kolkata on 20 July, 2019
- Prof. Amitava Datta is Member, Solar and Renewable Energy Eastern Region Council, ASSOCHAM, 2019

### PhDs awarded in the year: [Name of the Candidate–Title of the Thesis–Name of the Supervisor(s)]

**Ritwick Ghosh**–Industrial fog water harvesting and in situ decontamination with photocatalytic nanomaterials–Prof. Ranjan Ganguly, Prof. Ishwar K. Puri (McMaster University)

**Arindam Samanta**–Magnetic Bead Based Immunomagnetic Separation for Lab-on-a-chip Devices–Prof. Nipu Modak (ME) Prof. Ranjan Ganguly,, Prof. Amitava Datta

**Arnab Ghosh**–Performance Analysis of Optimised Wireless Sensor Network in Indoor Environment–Prof. Niladri Chakraborty

**Pritam K. Das**–Synthesis and characterization of some nanofluids for direct absorption solar collectors–Prof. Apurba K. Santra, Prof. Ranjan Ganguly

### Patents granted/published/awarded in the year

(Title of the Patent–Name of the inventors–Status/National/International–Patent status/Granted/Published/Awarded–Patent Number–Date of Publication/ Granting)

Spill-tray and pan support for thermal efficiency enhancement of a domestic LPG stove–A.K.Bera, M.M.Verma, M. Das, A. Datta, R. Ganguly,–National–Granted–327999–30 January, 2019

Wettability patterned substrates for pumpless liquid transport and drainage–C.M. Megaridis, Ranjan Ganguly, A. Ghosh, T.M. Schutzius–International–Granted–US Patent No. 10,421,072 B2–24 September, 2019

A method and device for moving and distributing aqueous liquids at high rates on porous, nonwoven substrates–C.M. Megaridis, S. Chatterjee, P.S. Mahapatra, U. Sen, Ranjan Ganguly, L. Yu, R.N. Dodge–International Published–US Patent Application Publication No. US 2019 /0344266 A1–Nov 14, 2019

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### Consultancy (from Industry)

Name of Coordinating Faculty : Prof. Bireswar Majumdar

(Title of the Project–Funding Agency / Industry–Duration)

Khandaleru Power Company Limited, Nellore, AP (2x3MW), 2019–Usha Kiran Const. Co., Hyderabad –2019

Flow Model test of ESP For Firoz Gandhi Uchahar Thermal Power Station, Stage-II (2 x 210MW), NTPC Limited –SAS Engg. / NTPC–2019

Subuong SHP (2 x 1.5MW), Arunachal Pradesh–Power Department, Govt. of Arunachal Pradesh–2019  
Performance test and RLA Study of Rimchinton SHP, Darjeeling, WBSEDCL, (2x1MW), 2019–West Bengal State Electricity Distribution Company Ltd., Kolkata–2019

Performance test and RLA Study of Little Rangit SHP (Bijonbari), Darjeeling, WBSEDCL, (2x1.119MW), 2019–West Bengal State Electricity Distribution Company Ltd., Kolkata–2019

Performance test and RLA Study of Fazi SHP, Darjeeling, WBSEDCL, (2x1.285MW), 2019–West Bengal State Electricity Distribution Company Ltd., Kolkata–2019

Performance test and RLA Study of Sidrapong SHP, Darjeeling, WBSEDCL,(3x200kW), 2019–West Bengal State Electricity Distribution Company Ltd., Kolkata–2019

Castleton Tea Garden SHP,(1x100kW), 2019–Amgoriee India Ltd., Kolkata–2019

CALIBRATION OF VENTURIMETERGE Power India Ltd., Kolkata–Nobel Syndicate / GE Power (I) Ltd.–2019

Design and vetting of conveyor–ITX Technologies, Kolkata–2019

### Students Award:

**(Name of the Student/Name of the Team–Name of the Award–Name of International Institution/ Organisation from where the award has been received–Year of receiving award)**

1. Dipanwita Chowdhuri, Sayantan Dutta, Abhinav Anand –ZS Campus Beat Case Challenge 2019- Winner ZS Associates 2019

## Annual Report 2019-20

### PRINTING ENGINEERING

[Salt Lake Campus]

Phone: 033-2340-6186

H.O.D: Dr. Soumen Basak

E-mail: hodprinting@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
● BE (Printing)	4 Years	37+Lateral Entry in 2 <sup>nd</sup> year
● M E in Printing Engineering & Graphic Communication		
● Ph. D. (Engineering),	5Years	6

#### 1. B No. of Faculty Members: 08 full time, 02 visiting

#### 2. A. Area of Research Activities:

Surface Coating, Material Science, Digital Imaging, Colour Science, Security Printing, Digital image processing, Digital Halftoning, non-impact printing, Packaging, Ink Technology etc.

#### 2. B. Major Research Project:

- DST-PURSE programme co-ordinated by HOD (funded by GOI)
- Indo-French Collaborative Research Project "Pack-Mark", P.I.: Dr Swati Bandyopadhyay

#### 3. D. Orientation Courses/Refresher Courses Attended:

Dr. A. Chatterjee and Dr. S. Naskar attended 2 weeks STTP on Introduction to Soft Computing at NITTTR from 20-31 January, 2020

#### 4. B. Publications in International Journals and Conferences:

##### A. International Journals:

- A.Kar, A.K.Pal; An approach to risk-based maintenance strategy of a printing press, J.Print Media Technol Res., Vol.8, No.3, 2019,155-165
- S.Roy, A.K.Pal, S.Rawal; A review on straightening of bars and application of probabilistics approach on moment-curvature relationship, IOP Conference Series: Materials Science and Engineering, 810 (2020) 012080, doi:10.1088/1757-899X/810/1/012080

#### 6. Major Achievements:

- Research activities by the faculties of the department in the field of Coating technology, Paper technology, Ink technology, Material Sciences, Electronic Publishing, Colour Sciences, Rheology, Non-impact printing etc published several research papers in the field
- Research papers published by UG students at National Level Conference organized by Anna University.
- Dr. K.C.Paul is acting as a expert member of Technical Expert Committee of KMC, Govt. of West Bengal

## Annual Report 2019-20

### PRODUCTION ENGINEERING

Phone: 033-2457-2319/2859

H.O.D: Prof. Arunansu Sekhar Kuar

Mr. Biplab Ranjan Sarkar[w.e.f-28.05.2019]

E-mail: hodproduction@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
B. Prod. E.	4 Years	57
M. Prod. E.	2 Years	13

#### 1. B. Number of Faculty Members: 11

#### 2. A. Area of Research Activities:

Advanced manufacturing technology, Micromachining Processes, Metrology, Robotics, Flexible manufacturing systems (FMS), CAD, CAM, CIM, Robotics, Mechatronics, Artificial Intelligence, Concurrent Engineering, Reverse Engineering, Rapid Response Manufacturing, Total Quality Management, Ergonomics, Simulation, Production and Operations Management, Tribology and Terotechnology, MIS, ERP and Decision Support System (DSS)

#### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

1. Prof. Debamalya Banerjee has been invited as a Lead Speaker in the 17<sup>th</sup> International Conference on 'Humanising Work and Work Environment (HWWE-2019)' organized by Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab under the aegis of Indian Society of Ergonomics (ISE) & International Ergonomics Association (IEA) during 8 – 10 November, 2019
2. Prof. Biswanath Doloi chaired the session "Materials processing for precision engineering" in the 11<sup>th</sup> International Conference on Precision, Meso, Micro & Nano Engineering (COPEN -2019)" organised by IIT Indore, Indore during 12– 14 December, 2019
3. Prof. Biswanath Doloi delivered an expert lecture on "Recent Advances in Materials Processing and Materials Tribology" in QIPSTC2020 organised by Mechanical Engineering Department, IIT BHU, Varanasi during 6– 10 January, 2020
4. Prof. Biswanath Doloi delivered an expert lecture on "Sustainable Manufacturing and Advancement in Non-Traditional Machining Approaches" in "Five Days' Short Term Training Programme organised by Production Engineering Department, National Institute of Technology, Agartala, Tripura during 22– 26 January, 2020
5. Prof. Bijoy Bhattacharyya delivered a lecture on 'Non-Traditional micro-machining" in National Workshop on "Intelligent Micro Manufacturing & Business Analytics" under UGC CAS Ph-V programme organised by Production Engineering Department, Jadavpur University, Kolkata, during 6– 7 March, 2020
6. Prof. Biswanath Doloi delivered a lecture on 'Laser beam micro-machining' in National Workshop on "Intelligent Micro Manufacturing & Business Analytics" under UGC CAS Ph-V programme organised by Production Engineering Department, Jadavpur University, Kolkata, during 6 – 7 March, 2020

#### 3. B. Seminar/Workshop/Conference/Symposium Attended:

1. Prof. S. Mitra attended the XVII International Congress, Winter Session on "Machines, Technologies, Materials", organized by the Scientific Technical Union of Mechanical Engineering, Sofia, Bulgaria during 11 – 14 March, 2020

**3. C. Seminar/Workshop/Conference/Symposium Organized:**

1. One day workshop on “Graduate Employability” organized by Production Engineering Department, JU under TEQIP-III programme on 28 February, 2020
2. National workshop on “Intelligent Micro Manufacturing & Business Analytics” organised by Production Engineering Department, JU under CAS Ph-V programme during 6 –7 March, 2020

**4. A. Books/Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)**

1. B. Bhattacharyya and B. Doloi, “Modern Machining Technology”, Academic Press (Elsevier), 2019, ISBN: 978-012-81-2894-7
2. S. Jana, R. Parekh, B. Sarkar, “Automatic Classification of Fruits and Vegetables: A Texture-Based Approach”, Book chapter in “Algorithms in Machine Learning Paradigms” Editors: J. K. Mandal, S. Mukhopadhyay, P. Dutta, K. Dasgupta, 2020, Springer, Singapore, ISBN: 978-981-15-1040-3
3. **S. Das, G. Kibria, B. Doloi, B. Bhattacharyya**, “Advances in Abrasive Based Machining and Finishing Processes”, Springer International Publishing, 2020, ISBN: 978-3-030-43311-6
4. G. Kibra and B. Bhattacharyya, “Accuracy Enhancement Technology for Micro-Machining Processes”, Springer, Singapore, 2020, ISBN: 978-981-15-2116-4

**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals)**

1. Anasane, S.S., Bhattacharyya, B., “Parametric analysis of fabrication of through micro holes on titanium by maskless electrochemical micromachining”, International Journal of Advanced Manufacturing Technology, 2019, 105(11), 4585-4598
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3. Mishra, K., Dey, D., Sarkar, B.R., Bhattacharyya, B., “Generation of Stepped Profiles on Ti6Al4V by Electrochemical Milling”, Journal of The Institution of Engineers (India): Series C, 2019, 100(4), 665-673
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### 6. Major Achievements:

1. Prof. Bijan Sarkar officiated the post of Director at the Institute of Business Management under the National Council of Education, Bengal upto July, 2019
2. Prof. Bijan Sarkar was nominated as a member in the Equivalence committee by the Hon’ble Vice-Chancellor of Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal
3. Prof. Bijan Sarkar was invited as a resource person in FDP program on “Reliability Engineering and Application” at Tripura Institute of Technology (TIT), Agartala under TEQIP-III program during 21– 22 November, 2019
4. Prof. Bijan Sarkar was invited by MBE Coal & Mineral Technology India Pvt. Ltd. for technical discussion on development of Machine-Solid Bowl Centrifuge different models at their Kharagpur works on 21 January, 2020

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**Annual Report 2019-20**

**SECTION B**  
**[ACADEMIC REPORT (01.04.2019 –31.03.2020) ]**

**FACULTY COUNCIL OF SCIENCE**

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**D E P A R T M E N T S**

## Annual Report 2019-20

### CHEMISTRY

Phone : 033-2414-6223; 033-2457-2267

Phone : (Inorganic)-2147

(Organic)-2104

(Physical)-2458

(Analytical Chemistry)-2453

(Chem. Engg. Building)-2295/2547

HOD : Prof. Chittaranjan Sinha

E-mail : hod.chemistry@jadavpuruniversity.in

#### 1 A. Course Offered:

Name of the Course	Duration of the Course	No. of Students Enrolled
B. Sc. (H)	3 Years	72+68+66
M. Sc. (Day)	2 Years	45+44
M. Sc. (Evening)	3 Years	41 x 3
Ph. D. (Sc)	5 – 6 Years	208

#### 1 B. No. of Faculty Members:

Professor : 21

Associate Professor : 13

Asst. Professor : 08

#### 2 A. Area of Research Activities:

##### Current Research Activities

- Development of reagents and methodologies for regio-, chemo- and stereoselective synthesis and transformations of molecules of contemporary interest
- Design, synthesis and characterization of potentially bioactive organic/inorganic molecules, carbohydrate-derived organogelators and peptides amphiphiles targeted to organic nanomaterials
- Green Chemistry with special emphasis to solid-phase reactions, multicomponent reactions (MCRs) and organocatalysed reaction, surface mediated, on water reactions using various catalysts including supported metal nanocatalysts
- Development of metal mediated domino synthesis of heterocyclic molecules, soft materials with controllable physiochemical properties
- Synthesis of biomimetic organic compounds, heterocyclic compounds
- Design and synthesis of chiral catalysts, use of chiral pool for asymmetric synthesis
- Synthetic organometallic chemistry involving abnormal N-heterocyclic carbene and cyclic alkyl amino carbene for small molecule activation
- Design and synthesis of multidentate and multimodal ligands with various donor centers
- Synthesis of transition and nontransition metal complexes using the aforesaid ligands
- Synthesis of hetero- and homo-polynuclear complexes and metal clusters
- Synthesis of biochemically important metal complexes to react with the nucleic acids
- Synthesis of surface active compounds and interaction with polymers/biopolymers
- Electrochemical studies of materials (metal, metal-oxide, carbon based nanomaterials etc.) for development of power sources (batteries, fuel cells, photoelectrochemical solar cells etc.) and synthesis of molecules in search of bioactive materials, conducting polymers etc.



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- Studies on reaction dynamics and mechanistic aspects of mono and polynuclear complexes containing metal or non-metal centers and ligand substitution reactions of biochemical importance in homogeneous and micro-heterogeneous environment; catalytic oxidation in homogeneous and heterogeneous phases
- Light induced synthesis and transformation of natural and bio-molecules
- Steady-state and time-resolved fluorometric studies of metal complexes involving various chromophores in terms of photophysical photochemical processes (ESPT, ICT, electron transfer, charge transfer and energy transfer) in homogeneous and micro-heterogeneous environment
- Structure-function relationship of the association of biologically small molecules (e.g., alkaloids and flavonoids) with different polymorphic forms of nucleic acids, proteins and enzymes
- Theoretical studies of spectroscopic properties of molecules and electronic transport properties in nanotube systems
- Density functional calculations and magneto structural correlation of molecular magnetic materials
- Theoretical modeling and simulation of photophysical and photochemical observations
- Theoretical studies of neighbour distributions and molecular dynamics simulation to study the microscopic neighbourhood structures of multicomponent systems

### **Dr. Amit Saha**

Synthetic Organic Chemistry

### **Dr. Amrita Saha**

Coordination Chemistry

### **Dr. Arunabha Thakur**

Organometallic Synthesis, Molecular Recognition

### **Dr. Arup Gayen**

Synthesis and development of novel nanostructured oxide based materials for the production of hydrogen for fuel cell applications via reforming reactions including methanol steam reforming (MSR), dry and steam reforming of methane (DRM & SRM); Photocatalytic dye degradation; Catalytic transformations of small organic molecules; Heterogeneous catalysis for the abatement of environmental pollution

### **Dr. Asamanjoy Bhunia**

Development and application of “Functional inorganic and organic porous materials including metalorganic frameworks (MOFs) and porous organic polymers (POPs)”

### **Prof. Ambikesh Mahapatra**

Kinetic and mechanistic studies of ligand substitution reactions of platinum group metal complexes of anti-cancer property, reduction reactions of transition metal complexes by different reducing agents of biochemical importance in different micellar & reverse micellar environments. Kinetic and Spectroscopic investigations on effect of nanoparticle, polymer-surfactant interaction & mixed micelles on redox & hydrolytic reactions involving transition metal complexes

### **Dr. Bibhuti Bhushan Show**

Thin film semiconductors: Synthesis, Characterization and their applications in the field of Photoelectrochemical Cells (PEC) (Solid-Liquid junctions), Solar Cells (Solid-Solid junctions), Photochemical Catalysis, Electrocatalysis and Photo Switching device fabrication

### **Prof. Chandan Mondal**

Dynamical study of real and model quantum system

### **Prof. Chittaranjan Sinha**

Coordination Chemistry, Design of p-conjugated aromatics, Ion and molecular Sensor, Metal Organic Framework, Functionalisation of drug molecules, Photoluminescence, Electrochemistry, Computation

**Dr. Debajyoti Ghoshal**

Metal organic hybrids

**Prof. Gourhari Maiti**

Multi-component reactions for the synthesis of bioactive heterocyclic compounds. Development of reagents and methodologies towards the synthesis of heterocyclic molecules of biological importance. Lewis acid mediated various organic transformations. Synthesis of small heterocyclic molecules of biological importance by using organocatalyst

**Prof. Jnan Prakash Naskar**

Electrochemistry, Bioinorganic Chemistry and Coordination Chemistry

**Prof. Kajal Krishna Rajak**

The primary interest is the designing and synthesis of model complexes using different kinds of ligands. Characterization of new complexes using different analytical techniques and investigation of their structure, spectroscopic, redox properties, reactivity studies, magnetic measurements and theoretical calculations constitute the major areas of his research activities

**Prof. Kausikisankar Pramanik**

Aspects of non-innocent ligands in Coordination Chemistry

**Prof. Mahammad Ali (On lien)**

Inorganic Chemistry, Material Chemistry, Molecular Recognition, Sensors

**Dr. Manas Panda**

Inorganic Chemistry, Smart Material Chemistry

**Prof. Nitin Chattopadhyay**

Photochemistry, Biophysical chemistry, Surface chemistry, Steady-state and time-resolved fluorometric study of various photophysical and photochemical processes in homogeneous as well as microheterogeneous environments, Binding of drugs with relevant biological targets like proteins, DNA etc., Fluorescence sensing, Polymer photophysics, Theoretical modeling and simulations of photophysical and/or photochemical observations

**Dr. Partha Mahata**

Inorganic and Solid State Materials Chemistry

**Dr. Partha Roy**

Inorganic Chemistry

**Dr. Partha Pratim Parui**

Fluorosensing for detection of Biomolecule and biologically important anions and Biosystems analysis to detect interfacial physiochemical properties, such as pH, polarity etc.

**Dr. Pradip Kumar Mahapatra**

Biophysical Chemistry; Drug-protein interactions; Synthesis and modification of small peptides and their characterization; Photo-physical studies of N-heterocyclic carbene complexes

**Prof. Rina Ghosh**

Synthesis of bacteria related oligosaccharides, Studies on chemosensors, Studies on tailor-made surfactants

**Prof. Swapan Kumar Bhattacharya**

Synthesis and development of novel nanostructured materials for application as catalysts in fuel cells, supercapacitors, photocatalytic dye degradation, photo-assisted fuel cells, water splitting, etc.

**Prof. Samaresh Bhattacharya**

Coordination chemistry, Bio-inorganic Chemistry, Organometallic chemistry, Catalysis

**Dr. Samit Guha**

Organic and Biomolecular Chemistry; NIR Organic Dyes; Targeting and Imaging of Mitochondria, Solid Phase Peptide Synthesis; Transmembrane Peptide; Molecular Recognition and Sensing; Membrane Fusion; Synthetic Molecular/Supramolecular Machine

**Prof. Saurabh Das**

Bio-inorganic Chemistry, Chemical Biology

**Dr. Shouvik Chattopadhyay**

Inorganic Chemistry (Broad Areas)

**Prof. Soumen Ghosh**

Surface and Biophysical Chemistry

**Prof. Sujoy Baitalik**

Photophysics and Photochemistry of Coordination Compounds Recognition and Sensing of Selected Ions

**Prof. Subrata Mukhopadhyay**

Inorganic Reaction Mechanism, Supramolecular Chemistry, Environmental Chemistry

**Dr. Suman Das**

Biophysical Chemistry. Our focus of interest is the structural and functional aspects of different polymorphic forms of biomolecules on interaction with biologically active small molecules. The bio-macromolecular targets include nucleic acids, proteins and enzymes, while the small molecules include different pharmacologically active naturally occurring alkaloids and flavonoids

**Mr. Satyadeep Waiba**

Synthetic Organic Chemistry, Catalysis, Asymmetric reactions

**Dr. Tanurima Bhaumik**

Synthetic Organic Chemistry

**Dr. Tapan Kumar Mondal**

- i. Synthesis and characterization of new redox non-innocent azoimine and diimine functionalized heterocyclic ligands and their transition metal complexes
- ii. Coordination compound of transition metal ions with heterocyclic ligands and study their chemical reactivity through experiments and theoretical studies
- iii. Synthesis of cyclometalated complexes of Platinum Group Metals (PGM) by C-H and C-S bond activation and exploration of their potential catalytic applications
- iv. Development of new optical sensors for selective detection of metal ions, anions, reactive oxygen species and nerve agents

**Prof. Umesh Chandra Halder**

Bio-organic chemistry

- a. Physico-chemical modifications of globular proteins and studies on their effect on protein folding and studies on molecular interactions during amorphous or amyloid fibril formation. Our study will be helpful to develop the molecules useful for prevention of protein aggregation responsible for different neurodegenerative diseases like Parkinson and Alzheimer's diseases
- b. Studies on interactions of proteins with small molecules including different drugs, nucleic peptides and natural and synthetic antioxidants
- c. Purification, characterization and structure determination of novel serine proteases and their protein inhibitors for their commercial applications
- d. Developments of nanoparticles based system and their influence on structure, function and aggregation of proteins and also the targeted drug deliver

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- e. Purification and structure determination of a silica leaching protein “Bioremediase, a unique protein from a novel bacterium BhKI, ushering a new hope in concrete technology”

### Prof. Umasis Jana

- Iron-catalyzed intramolecular alkyne-carbonyl metathesis for the synthesis of structurally diverse organic molecules
- Metal catalyzed domino reaction for the synthesis of benzofused heterocycles
- Iron-catalyzed carbon-carbon bond formation via direct substitution of alcohols
- Iron-catalyzed synthesis of heterocycles *via* multicomponent coupling (MCRs) reaction for the synthesis of pharmaceutically important small molecules

## 2. B. Major Research Project:(Sponsors–Title of the project–Duration–Amount)

### Dr. Arunabha Thakur

DST-Inspire-Synthesis and characterization of carbene stabilized mixed binary pnictogens for small molecule activation-2015-2020-35 Lakhs

UGC-BSR start up-Stimuli-Responsive Boron-doped Conjugated Oligomers, Polymers, and Macrocycles and Their Applications-2018-2020-10 Lakhs

WB-DST-Conversion of Carbon dioxide to Most Promising Synthetic Fuels by Organocatalyst-2018-2021 -2.4 Lakhs

RUSA 2.0-Unusual Catalysts to Meet Energy Demand: Conversion of carbon dioxide to Most Promising Synthetic Fuels-2019-2020-7.86 Lakhs

### Dr. Arup Gayen

Individual centric DST SERB sponsored project “**Tailored nanostructure and nanocomposite oxide materials for steam and dry reforming of methane**” (File No. EMR/2016/001811 dated 26.12.2016)Rs. 61.25 L

### Dr. Asamanjoy Bhunia

DST-INSPIRE faculty fellowship (2018-2022)

### Dr. Bibhuti Bhushan Show

1. RUSA 2.0 sponsored R & D project entitled: **Photo-assisted electrochemical CO<sub>2</sub> reduction by the composite semiconductors to synthesized Methanol efficiently**, under thrust area: Advanced Materials Research, Ref. No.: R-11/612/19, Dated: 11.06.2019, as Principal Investigator, Department of Chemistry, Jadavpur University

### Prof. Chittaranjan Sinha

1. “Rhodamine inspired Sulfonamides : Structure, Chemosensor and exploration of their biomaterial activity” has been sanctioned by the CSIR, New Delhi vide reference No. 01(2894)/09/EMR-II, dated 03.05.2017 for the period 01/06/2017 to 31/05/2020
2. “Use of Coumarinyl Schiff bases as ‘turn-on’ sensor for ions and their applications” sanctioned from RUSA 2.0, Jadavpur University, Kolkata sanction No. R-11/100/19 dated 15(19)/02/2019

### Dr. Debajyoti Ghoshal

- (i) Individual centric DST SERB sponsored project “**Design of entangled dynamic metal organic frameworks for hydrogen storage property**” (Duration: 24.10.2018 to 23.10.2021)
- (ii) Individual centric RUSA-JU sponsored project “Fabrication of Surface-attached metal-organic framework in thin film multilayer using layer by layer approach for detection and storage of hydrogen” (Duration: 19.02.2019 to 31.03.2020)

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- (iii) Individual centric WBDST sponsored project “Synthetic strategies for the design of porous coordination polymers for preferred adsorption of different gases” (Duration:26.03.2018 to 25.03.2021)

### Prof. Jnan Prakash Naskar

A RUSA 2.0 supported MRP entitled “Synthesis, Characterization, Redox, Photophysical and Biological Perspectives of Some Novel Copper Compounds”. Total Budget: Rs. 4,90,000/- (Ref. No. R-11/98/19) dated 15/19.02.2019

From: 19/02/2019 to 31/03/2020

### Dr. Kausikisankar Pramanik

Exploration of Subtle Influence of p-acidity of Organic Molecules towards Electron transfer, Electronic Transition and Electronic Structure in Metal-Organic hybrids under RUSA 2.0 Program

### Prof. Mahammad Ali (On lien)

- i) CSIR-New Delhi supported project [Ref. No. 01(2896)/17/EMR-II, Dated:03-05-2017] entitled “Metal Ion Sensors: Synthesis, Recognition and Protein Binding Studies”
- ii) WB-DST supported project [Ref. No. 809 (SANC)/ST/P/S&T/4G-9/2014, Dated: 04-01-2016] entitled “Copper Complexes in Biomimetics and Oxidation Catalysis”

### Dr. Manas Panda

- UGC Startup research grant of Rs 10 lakhs for new faculty, (Approved in January 2020)

### Prof. Nitin Chattopadhyay (Departmental/Individual)

**Name of the Project:** Unusual fluorescence anisotropies of probes in protic solvents: A new horizon towards solvation

**Project no. :** EMR/2016/001087

**Funding Agency:** DST-SERB, Govt. of India

### Dr. Partha Mahata

1. Principal Investigator on “UGC-BSR Research Start-Up-Grant (No.F.30-471/2019(BSR)), Title: Investigation on Synthesis, Structure and Luminescence based Sensing Properties of Rare-Earth based Metal-Organic Frameworks Compounds” by UGC, New Delhi (Duration: 28 March 2019 to 27 March 2021, Total allotment Rs. 10 lakhs)
2. Principal Investigator on “DST INSPIRE Faculty Award grant (IFA12-CH-69), Title: Synthesis, Structure and Properties of New Porous Metal Organic Coordination Networks (MOCNs) based on Designed Organic Ligands” by DST, New Delhi (Duration: 18 July 2013 to 17 July 2019, Total allotment Rs. 35 Lakhs)
3. Co-Investigator on “SERB Project, Title: A concerted drive towards ambient pressure synthesis and physical characterization of multiferroic quadruple perovskites  $A^1A_3B_4O_{12}$  (Duration: 2 July 2016 to 1 July, 2019, Total allotment Rs. 37.5 Lakhs)

### Dr. Partha Roy

CSIR, New Delhi sponsored research project (2019-2022); Title: New Chemosensors for Small Ions

### Prof. Samaresh Bhattacharya

- i) CSIR Project: Sanction No. 01(2994)/19/EMR-II  
Title: Formation and utilization of ruthenium(0) species for radical generation, C-X (X = H or halogen) activation and catalytic application
- ii) RUSA 2.0 Project: Ref. No.: R-11/96/19  
Title: Synthesis of complexes of the platinum group of metals for catalytic application

### Dr. Samit Guha

- a) Poster presentation International Conference on Chemistry for Human Development (ICCHD-2020), Date 9–11 January 2020, Venue: Heritage Institute of Technology, Kolkata



## Annual Report 2019-20

- b) Poster presentation “Amyloid-b peptide fragment conjugated with near-infrared chromophore for selective targeting and imaging of mitochondria” Pranab Saha, Rabi Sankar Das, Ayan Mukherjee, Tapas Bera, Samit Guha\* National seminar on “*Emerging trends in Chemical Sciences*” under *Center for Advanced Studies II* Program UGC, 7 January 2020, Organized by Department of Chemistry, Jadavpur University, Kolkata
- c) Participated “AvH Kolleg 2020 Food, Livelihood, Opportunity and Wood (FLOW)” International conference, 3–5 January, 2020 at Raichak, Organized by AvH Fellows, Department of Geological Sciences, Jadavpur University; Supported by Alexander von Humboldt Stiftung/Foundation, Germany
- d) Participated “Celebration of the International Year of the Periodic Table” CIPT-2019, 13–14 August, 2019 under RUSA 2.0 Program, Organized by Department of Chemistry, Jadavpur University, Kolkata

### Prof. Soumen Ghosh

- i) National Seminar on “Celebration of the International Year of the Periodic Table (CIYPT)”, 13–14 August, 2019 under RUSA 2.0 Program organized by Department of Chemistry, Jadavpur University, Kolkata - 700032, W. B.
- ii) One day Seminar on “Trends in Surface Science and Related Areas (TSSRA-XVI)”, September 12 (Thursday), 2019 held in Dept. of Chemistry and Chemical Technology, Vidyasagar University, Midnapore – 721102, jointly organized with ISSST, Jadavpur University, Kolkata

### Dr. Tanurima Bhaumik

- i) Participated in the National conference on “Current Challenges & Opportunities in Chemical Sciences (CCOCS-2019)” held on 08 August, 2019 organized by the Department of Chemistry, Aliah University, New Town, Kolkata 700160
- ii) Participated in the National Seminar on “Celebration on the International Year of the Periodic Table (CIYPT-2019)” held on 13–14 August, 2019 under RUSA 2.0 Program organized by the Department of Chemistry, Jadavpur University, Kolkata 700032
- iii) Poster presented in the Congress (International) “Chemistry Meets Industry and Society (CIS 2019)” at Salerno, Italy held on 28–30 August, 2019 organized by the Società Chimica Italiana, Roma, Italy
- iv) Poster presented in the National Seminar on “Emerging Trends in Chemical Sciences” held on 7 January, 2020, under Centre for Advanced Studies II Program, UGC organized by the Department of Chemistry, Jadavpur University, Kolkata 700032
- v) Poster presented in the International conference on “Recent Trends in Catalysis 2020 (RTC 2020) held on 26–29 February, 2020, organized by the Department of Chemistry, National Institute of Technology Calicut, Kerala
- vi) Participated in the National Seminar on “Recent Trends in Inorganic Chemistry-2020” held on 6 March, 2020, organized by the Inorganic Chemistry Section, Department of Chemistry, Jadavpur University, Kolkata 700032

### Prof. Umesh Chandra Halder

- (i) Ramkrishna Dalui, Subrata Sardar and Umesh Chandra Halder, “*Silver nanoparticles modulates the aggregation of bovine  $\alpha$ -lactoglobulin and induces to form rod-like aggregates*” Participated and presented the poster in National Conference on “Recent Advances in Chemistry” (RAC) 2019 organized by Department of Chemistry, NIT Meghalaya, held in 14–15 October, 2019
- (ii) Shahnaz Begum, Sanhita Maity and Umesh Chandra Halder, “*Inhibition of amyloid fibril formation of  $\alpha$ -lactoglobulin by natural and synthetic curcuminoids*” Participated and presented the poster in National Conference on “Recent Advances in Chemistry” (RAC) 2019 organized by Department of Chemistry, NIT Meghalaya, held in 14-15 October, 2019

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### Prof. Umasis Jana

National Seminar on “Emerging trends in Chemical Sciences”, under center for advanced studies II program 7 January, 2020, Department of Chemistry, Jadavpur University

### 3. C. Seminar/Workshop/Conference/Symposium organized:

#### Dr. Arunabha Thakur

Organized a National seminar on “Celebration of the international year of the periodic table (CIYPT-2019)”, 13–14 August, 2019 at Jadavpur University, Kolkata as a Co-convener

#### Dr. Asamanjoy Bhunia

Asamanjoy Bhunia, Emerging Trends In Chemical Sciences, Department of Chemistry, Jadavpur University, 7 January, 2020. Treasurer

#### Prof. Chittaranjan Sinha

- (i) Convener of International Symposium on Recent Advances in Chemistry and Material Sciences (2019) and the Celebration of the International Year of the Periodic Table on 02-03, August, 2019 organized by Indian Chemical Society in collaboration with Saha Institute of Nuclear Physics, India to commemorate 158<sup>th</sup> birth anniversary of the founder President, Acharya P. C. Ray
- (ii) Convener & Secretary of the International Symposium on Recent Advances in Chemistry and Material Sciences (2019) and the Celebration of the International Year of the Periodic Table on 02-03, August, 2019, organized by Indian Chemical Society in collaboration with Saha Institute of Nuclear Physics, India to commemorate 158<sup>th</sup> birth anniversary of the founder President, Acharya P. C. Ray. (a) Title, “Use of fluorescent Zn(II)-coumarinyl scaffold for detection of Cu<sup>2+</sup> ion and live cell imaging”, by Sunanda Dey and Chittaranjan Sinha, Book of Abstract, Contributory Paper (Award Poster)-5, p-57. (b) “The structure, photoconductivity and biological activity of carboxylate bridging Zn(II) 3D-coordination polymer”, Angeera Chandra and Chittaranjan Sinha, Book of Abstract, Contributory Paper (Award Poster)-8, p-61. (c) “Coordination polymers of Ag(I) and (Hg)I ions : Synthesis, characterization and enhancement of conductivity doping by Cu(II) ion”, Suvendu Maity and Chittaranjan Sinha, Chittaranjan Sinha, Book of Abstract, Contributory Paper (Poster)-20, p114
- (iii) Advisor & Organiser of Two day International Seminar cum Lecture Workshop on “Interface of Chemical and Biological Science” on 29-30 November, 2019, organised by the Department of Chemistry, Coochbehar Panchanan Barma University, Coochbehar, West Bengal. Delivered a talk on “Electronic Spectroscopy Group Theoretical Discussion
- (iv) Joint Organiser of the International Seminar on 4-5 February, 2020 on “*Advancements in Chemical Sciences : Issues and Challenges*” in the Department of Chemistry, Bidhan Chandra College, Asansol, WB, India

#### Dr. Kausikisankar Pramanik

Name of the teacher-Name/position of Post-Name of the seminar/Conference-Place,-Duration

Kausikisankar Pramanik Convener-National Seminar on Celebration of the International Year of the Periodic Table-Dr. Triguna Sen Auditorium, Jadavpur University, 13–14 August, 2019

#### Dr. Manas Panda

- (i) Served as Co-convener in the one-day National Conference on “Recent Trends in Inorganic Chemistry”, held at Department of Chemistry, Jadavpur University, 6 March, 2020

#### Dr. Samit Guha

Co-Convener: National seminar on “*Emerging trends in Chemical Sciences*” under *Center for Advanced Studies II* Program on 7 January 2020, Organized by Department of Chemistry Jadavpur University, Kolkata

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### Prof. Sujoy Baitalik

Organized a National Seminar on Chemical Sciences: Today and Tomorrow (CSTT-2019) under Centre for Advanced Studies II Program at Triguna Sen Auditorium, Jadavpur University, Kolkata, on 14 March, 2019

### 3. D. Orientation Courses/Refreshers Courses Attended:(Name of the Teacher-Title of the Course-Duration-Place)

#### Dr. Samit Guha

Participated in Inter-disciplinary Refresher Course, Disaster Management (Course Code RCDISM 1920), 3–15 February, 2020 at UGC-HRDC Jadavpur University

### 4. B. Articles Published in Journals:(Name of the Articles-Name of the Journal-Date of Publication-Volume)

#### Dr. Amit Saha

Aryldithiocarbamates as thiol alternatives in Cu-catalyzed C(aryl)-S coupling reactions using aryldiazoniumtetrafluoroborate salts-*Org. Biomol. Chem.*-12 October, 2019-17

C-C Cross Coupling Reactions of Organo silanes with Terminal Alkenes and Allylic Acetates Using PdII Catalyst Supported on Starch Coated Magnetic Nanoparticles-*Eur. J. Org. Chem.* 08 January 2020-2020

Benign synthesis of thiophosphates, thiophosphinates and selenophosphates in neat condition using N-chalcogenoimides as the-source of electrophilic sulfur/selenium-*Tetrahedron Lett.*-20 July 2019-60

A solvent- and catalyst-free tandem reaction: synthesis, and photophysical and biological applications of isoindoloquinazolinones-*New J. Chem.*-27 February 2020-44

Structural elucidation and antimicrobial activity of a diketopiperazine isolated from a *Bacillus* sp. associated with the marine sponge *Spongia officinalis*-*Natural Product Research*-04 October 2019-DOI:-10.1080/14786419.2019.1672684

#### Amrita Saha

1. Cd(II) Based Coordination Polymer Series: Fascinating Structures, Efficient Semiconductors, and Promising Nitro Aromatic Sensing  
P. Ghorai, A. Dey, A. Hazra, B. Dutta, P. Brandão, P. P. Ray, P. Banerjee and A. Saha, *Crystal Growth & Design*, 2019, 19,6431-6447
2. Development of Rhodamine 6G-Based Fluorescent Chemosensors for Al<sup>3+</sup>-Ion Detection: Effect of Ring Strain and Substituent in Enhancing Its Sensing Performance  
J. Mandal, P. Ghorai, K. Pal, T. Bhaumik, P. Karmakar and A. Saha, *ACS Omega*, 2020, 5, 145–157.
3. A rare flattened tetrahedral Mn(II) salen type complex: Synthesis, crystal structure, biomimetic catalysis and DFT study - S. Banerjee, P. Ghorai, P. Sarkar, A. Panja and A. Saha, *Inorganica Chimica Acta*, 2020, 499, 119176
4. The development of two fluorescent chemosensors for the selective detection of Zn<sup>2+</sup> and Al<sup>3+</sup> ions in a quinoline platform by tuning the substituents in the receptor part: elucidation of the structures of the metal-bound chemosensors and biological studies P. Ghorai, K. Pal, P. Karmakar and A. Saha, *Dalton Transactions*, 2020, 49, 4758-4773

#### Dr. Arunabha Thakur

1. Oxidation Induced Differentially Selective Turn-On Fluorescence via PET Based on Ferrocene Appended Coumarin-Quinoline Platform: Application in Cascaded Molecular Logic. Manisha Karmakar, Sushil Ranjan Bhatta, Santanba Giri, Arunabha Thakur\* *Inorg. Chem.* 2020, 59, 4493-4507

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2. Microwave Assisted Neat Synthesis of a Ferrocene Appended Phenolphthalein Di-yne: A Designed Synthetic Scaffold for Hg<sup>2+</sup> Ion. Adwitiya Pal, Krishna Mohan Das, Bappaditya Goswami, Arunabha Thakur\* *Inorg. Chem.* 2020, 59, 10099"10112
3. Ferrocene Appended Fluorescein-Based Ratiometric Fluorescence and Electrochemical Chemosensor for Fe<sup>3+</sup> and Hg<sup>2+</sup> Ions in Aqueous Media: Application in Real Samples Analysis. Sushil Ranjan Bhatta, Adwitiya Pal, Ujwal K. Sarangi, Arunabha Thakur\* *Inorganica Chimica Acta*, 2019, 498, 119097-119107

### Dr. Arup Gayen

1. S. Roy Chowdhury\*, T. Maiyalagan\*, S. K. Bhattacharya, A. Gayen, Influence of phosphorus on the electrocatalytic activity of palladium nickel nanoalloy supported on N-doped reduced graphene oxide for ethanol oxidation reaction, *Electrochimica Acta*, 342 (2020) Art. No. 136028
2. K. Pal, A. Dey, R. Jana, P. P. Ray, P. Bera, L. Kumar, T. K. Mandal, P. Mohanty, Md. M. Seikh\*, A. Gayen\*, Citrate combustion synthesized Al-doped CaCu<sub>3</sub>Ti<sub>4</sub>O<sub>12</sub> quadruple perovskite: Synthesis, characterization and multifunctional properties, *Phys. Chem. Chem. Phys.*, 22, 3499-3511 (2020)
3. A. Haque, A. Shukla, U. Dutta, D. Ghosh, A. Gayen, P. Mahata, M. Vasundhara, A. K. Kundu, Md. M. Seikh\*, Incompatible magnetic and dielectric properties of BiCu<sub>3-x</sub>Mn<sub>x</sub>Ti<sub>4-y</sub>M<sub>y</sub>O<sub>12</sub> (x = 0 & 0.5; y = 1 & 1.5 and M = Fe & Mn), *Ceramics International*, 46, 5907-5912 (2020).
4. A. Haque, D. Ghosh, U. Dutta, A. Shukla, A. Gayen, P. Mahata, A. K. Kundu, Md. M. Seikh\*, Change in magnetic properties of La<sub>2</sub>MnCoO<sub>6</sub> in composite with CaCu<sub>3</sub>Ti<sub>4</sub>O<sub>12</sub>, *J. Magn. Mater.*, 494 (2020) Art. No. 165847.
5. D. Ghosh, A. Pal, S. Ghosh, A. Gayen, Md. M. Seikh\*, P. Mahata\*, Metal Ion Sensing and Electrochemical Behaviour of MOF Derived ZnCo<sub>2</sub>O<sub>4</sub>, *Eur. J. Inorg. Chem.* 3076-3083 (2019). Dr. Ambikesh Mahapatra Biman Kumar Patel, Nayim Sepay, and Ambikesh Mahapatra\*, *Curious Results in the Prospective Binding Interactions of the Food Additive Tartrazine with  $\alpha$ -Lactoglobulin*, *Langmuir*, 2019, 35, 11579"11589

### Dr. Bibhuti Bhushan Show

1. *Visible-light active electrochemically deposited tin selenide thin films: synthesis, characterization and photocatalytic activity*, P. Mandal, B. Show, Sk. T. Ahmed, D. Banerjee, A. Mondal, *J. Mater. Sci.-Mater. El.*, 2020, 31, 4708–4718
2. *Modulation of Weak Interactions in Structural Isomers: Positional Isomeric Effects on Crystal Packing and Physical Properties and Solid-State Thin-Film Fabrication*, Monika, A. Verma, M. K. Tiwari, B. Show, S. Saha, *ACS Omega*, 2020, 5, 1, 448-459
3. *Fluorescence enhancement via aggregation effect due to microenvironmental alterations in human hemoglobin protein in presence of carbon quantum dots (CQD): Comparative spectroscopic approach*, M. Chakraborty, I. Mitra, K. Sarkar, M. Bardhan, S. Paul, S. Basu, A. Goswami, A. Saha, B. Show, T. Ganguly, *Spectrochim. Acta A*, 2019, 215, 313-326

### Prof. Chandan K Mondal

Rectify the effect of measurement in survival probability of the ground vibrational state in diatomic molecule Bikram Nath, Sariful Rahaman and Chandan Kumar Mondal; *International journal of Modern Physics B* **33**, 1950177 (2019)

### Prof. Chittaranjan Sinha

- (1) B. Dutta, A. Hazra, A. Dey, C. Sinha, P.P. Ray, P. Banerjee, M.H. Mir, Construction of a Succinate-Bridged Cd (II)-Based Two-Dimensional Coordination Polymer for Efficient Optoelectronic Device Fabrication and Explosive Sensing Application, *Crystal Growth & Design*, 2020, 20, 765-776 [Published on : 13/01/2020]
- (2) S. Dey, C. Sen and C. Sinha, Chromogenic hydrazide Schiff base reagent: Spectrophotometric determination of CN<sup>-</sup> ion, *Spectrochimica Acta Part A*, 2020, 225, 117471. [Published on : 15/01/2020]

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- (3) S. Kumari, P. Sharma, S. Yadav, J. Kumar, A. Vij, P. Rawat, S. Kumar, **C. Sinha**, A Novel Synthesis of the Graphene Oxide-Silver (GO-Ag) Nanocomposite for Unique Physicochemical Applications, *ACS omega*, 2020, **5**, 5041-5047. [Published on : 17/03/2020]
- (4) S. Pandey, T. Chattopadhyay, S. Dev, Y. Patil, C.L. Carpenter-Warren, **C. Sinha**, Influence of cations on optical properties of iodobismuthates, *Polyhedron*, 2020, **179**, 114335. [Published on : 15/03/2020]
- (5) B. Chowdhury, D. Mallick, K.K. Sarkar, C. Sen, **C. Sinha**, Photochromic behaviour of Copper (I) and Silver (I) complexes of 1-alkyl-2-(aryloxy) imidazoles in micellar media, *Indian J. Chem. A*, 2020, **59**, 189-199. [Published on : February, 2020]
- (6) B. Dutta, D. Das, J. Datta, A. Chandra, S. Jana, **C. Sinha**, P. P. Ray and M. H. Mir, Synthesis of a Zn (II)-based 1D zigzag coordination polymer for the fabrication of optoelectronic device with remarkably high photosensitivity, *Inorganic Chemistry Frontiers*, 2019, **6**, 1245-1252 [Published on : 26/03/2020]
- (7) K. Kajiwarra, S. Yamane, T. Haraguchi, S. Pradhan, **C. Sinha**, R. Parida, S. Giri, G. Roymahapatra, D. Moon, and T. Akitsu, Computational Design of Azo-anthraquinone Schiff Base Mn Complexes as Mediators for-Biofuel Cell Cathode, *International Journal of Chemistry and Chemical Engineering*, 2019, **13**, 23-33 [Published on : 29/12/2019]
- (8) R. Purkait and **C. Sinha**, Solvent tuned discriminant sensing of  $\text{Al}^{3+}$ ,  $\text{Mg}^{2+}$  and  $\text{HF}_2^-$  by vaniliny-picolinyl hydrazide Schiff base, *New Journal of Chemistry*, 2019, **43**, 9815-9823 [Published on : 10/07/2019]
- (9) B. Dutta, A. Dey, **C. Sinha**, P.P. Ray, M.H. Mir, Tuning of the para-position of pyridyl ligands impacts the electrical properties of a series of Cd (II) ladder polymers, *Dalton Transactions*, 2019, **48**, 11259-11267 [Published on : 20/06/2019]
- (10) C. Sen, S. Dey, C. Patra, D. Mallick, **C. Sinha**, Use of the fluorogenic  $\text{Al}^{3+}$ -quinolinyl-azo-naphtholato complex for the determination of  $\text{F}^-$  in aqueous medium by visible light excitation and application in ground water, *Analytical Methods*, 2019, **11**, 4440-4449 [Published on : 07/08/2019]
- (11) B. Dutta, **C. Sinha**, M.H. Mir, The sunlight-driven photosensitized effect of a 1D coordination polymer and the release of an elusive cyclobutane derivative, *Chemical Communications*, 2019, **55**, 11049-11051 [Published on : 14/08/2019]
- (12) S. Dey, S. Maity, K. Pal, K. Jana, **C. Sinha**, The oxidative dehydrogenation of a coumarinyl scaffold with copper ion and metal ion detection in human liver cancer cells (HepG2), *Dalton Transactions*, 2019, **48**, 17818-17830 [Published on : 14/08/2019]
- (13) B. Dutta, R. Purkait, S. Bhunia, S. Khan, **C. Sinha**, M.H. Mir, Selective detection of trinitrophenol by a Cd (II)-based coordination compound, *RSC Advances*, 2019, **9**, 38718-38723 [Published on : 18/11/2019]
- (14) K. Naskar, S. Sil, N. Sahu, B. Dutta, A. M. Z. Slawin, P. P. Ray and **C. Sinha**, Enhancement of Electrical Conductivity due to Structural Distortion from Linear to Nonlinear Dicarboxylato Bridged Zn(II) 1D-Coordination Polymers, *Crystal Growth & Design*, 2019, **19**, 2632-2641 [Published on : 12/04/2019]
- (15) B. Dutta, A. Dey, **C. Sinha**, P. P. Ray and M. H. Mir, Sunlight-Induced Topochemical Photodimerization and Switching of the Conductivity of a Metal-Organic Compound, *Inorganic Chemistry*, 2019, **58**, 5419-5422 [Published on : 12/04/2019]
- (16) S. Dey, S. Maity, A. Dasmahapatra, D. Chattopadhyay and **C. Sinha**, A Phenyl Thioether Based Probe:  $\text{Zn}^{2+}$  Ion Sensor, Structure Determination and Live Cell Imaging, *ChemistrySelect*, 2019, **4**, 4472-4477 [Published on : 17/04/2019]
- (17) C. Sinha, Azoimine Chelated Ruthenium (II)-and Osmium (II)-Carbonyl Complex Catalyzed Alcohol Oxidation Reaction, *Current Organocatalysis*, 2019, **6**, 139-157 [Published on : April, 2019]
- (18) S. Dey, R. Purkait, K. Pal, K. Jana, **C. Sinha**, Aggregation-Induced Emission-Active Hydrazide-Based Probe: Selective Sensing of  $\text{Al}^{3+}$ ,  $\text{HF}_2^-$ , and Nitro Explosives, *ACS omega*, 2019, **4**, 8451-8464 [Published on : 14/05/2019]



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- (19) W. Hossain, C. Sen, **C. Sinha** and U. K. Sarkar, Surface Enhanced Raman Scattering Study of 1-H-2 (tolylazo) Imidazole (TaiH) Induced by Uncoupled Plasmon of Silver Nano Particles, *Journal of nanoscience and nanotechnology*, 2019, **19**, 3583-3590 [Published on : 01/06/2019]
- (20) S. Dey, K. Pal, K. Jana, **C. Sinha**, Effect of OMe Substituent on Salicylaldehyde Schiff Base to Influence the Zn<sup>2+</sup> Sensitivity and the Cancer Cell Line Imaging, 2019, *ChemistrySelect*, **4**, 7932-7935 [Published on : 17/07/2019]
- (21) D. Mallick, C. Sen, M.K. Paira, B. Dutta, S. Kundu, **C. Sinha**, Synthesis, characterisation, photochromic study of cadmium (II) halide complexes of 1-alkyl-2-methyl-4-(p-nitro-phenylazo) imidazole and DFT computation, 2019, *Journal of the Indian Chemical Society*, 2019, **96**, 1037-1048 [Published on : 02/08/2019]
- (22) S. Jana, R. Jana, S. Sil, B. Dutta, H. Sato, P.P. Ray, A. Datta, T. Akitsu, **C. Sinha**, Influence of Axial Linkers on Polymerization in Paddle-Wheel Cu (II) Coordination Polymers for the Application of Optoelectronics Devices, *Crystal Growth & Design*, 2019, **19**, 6283-6290 [Published on : 12/09/2019].
- (23) B. Dutta, K. Pal, K. Jana, **C. Sinha**, M.H. Mir, Fabrication of a Zn (II) Based 2D Pillar Bilayer Metal Organic Framework for Antimicrobial Activity, *ChemistrySelect*, 2019, **4**, 9947-9951 [Published on : 10/09/2019]
- (24) D. Sardar, P. Datta, R. Saha, R. Pallepogu, **C. Sinha**, Rhodium (III) supported amination reaction of a pendant naphthyl group: Structure, electrochemistry and theoretical interpretation, *Polyhedron*, 2019, **171**, 542-550 [Published on : 01/10/2019]
- (25) S. Dey, P. Gayen, **C. Sinha**, An ortho-hydroxy-arylimine based probe: Fluorescence sensitivity towards Zn<sup>2+</sup> ion, *Journal of the Indian Chemical Society*, 2019, **96**, 1279-1285 [Published on : October, 2019]
- (26) A. Chandra, M. Das, K. Pal, S. Jana, B. Dutta, P.P. Ray, K. Jana, **C. Sinha**, Three-Dimensional-Coordination Polymer of Zn (II)-Carboxylate: Structural Elucidation, Photoelectrical conductivity, and Biological Activity, *ACS omega*, 2019, **4**, 17649-17661 [Published on : 17/10/2019]
- (27) A.K. Adak, B. Dutta, S.K. Manna, **C. Sinha**, Rhodamine-Appended Benzophenone Probe for Trace Quantity Detection of Pd<sup>2+</sup> in Living Cells, *ACS omega*, 2019, **4**, 18987-18995 [Published on : 08/11/2019]
- (28) S. Dey, S. Sil, B. Dutta, K. Naskar, S. Maity, P.P. Ray, **C. Sinha**, Designing of Pb (II)-Based Novel Coordination Polymers (CPs): Structural Elucidation and Optoelectronic Application, *ACS omega*, 2019, **4**, 19959-19968 [Published on : 13/11/2019]
- (29) S. Jana, A. Ray, A. Chandra, M.S. El Fallah, S. Das, **C. Sinha**, Studies on Magnetic and Dielectric Properties of Antiferromagnetically Coupled Dinuclear Cu (II) in a One-Dimensional Cu (II) Coordination Polymer, *ACS omega*, 2019, **5**, 274-280 [Published on : 23/12/2019]
- (30) B. Dutta, **C. Sinha**, M.H. Mir, Supramolecular assembly of Cu (II)-based 1D coordination polymer: Synthesis, characterization and correlation of band gap, *Journal of Molecular Structure*, 2019, **1197**, 430-435 [Published on : 05/12/2019]
- (31) S. Mondal, S. M. Mandal, D. Ojha, D. Chattopadhyay and **C. Sinha**, Water soluble sulfaguanidine based Schiff base as a "Turn-on" fluorescent probe for intracellular recognition of Zn<sup>2+</sup> in living cells and exploration for biological activities, *Polyhedron*, 2019, **172**, 28-38 [Published on : 01/11/2019]
- (32) S. Dey, R. Purkait, K. Pal, K. Jana and **C. Sinha**, Aggregation-Induced Emission-Active Hydrazone-Based Probe: Selective Sensing of Al<sup>3+</sup>, HF<sub>2</sub><sup>-</sup>, and Nitro Explosives, *ACS Omega*, 2019, **4**, 8451-8464 [Published on : 14/05/2019]
- (33) R. Purkait, A. Dey, S. Dey, P.P. Ray, **C. Sinha**, Design of a coumarinyl-picolinoyl hydrazone Schiff base for the fluorescence turn-on-off sequential sensing of Al<sup>3+</sup> and nitroaromatics, and electronic device fabrication, *New Journal of Chemistry*, 2019, **43**, 14979-14990 [Published on : 26/08/2019]

**Dr. Debajyoti Ghoshal**

- (i) Three mixed ligand coordination polymers: syntheses, characterization and detailed study of the structural transformations, R. Sen, A. Halder and D. Ghoshal\*, *Polyhedron* (2020), 114534
- (ii) Polarity Induced Excited State Intramolecular Proton Transfer (ESIPT) in a Pair of Supramolecular Isomeric Multifunctional Dynamic Metal–Organic Frameworks  
A. Halder, B. Bhattacharya F. Haque, S. Dinda and D. Ghoshal\*, *Chem. Eur. J.*, 25 (2019) 12196
- (iii) Proton Conductivity and Sorption Study in Three Sulfonic Group Functionalized Mixed Ligand Coordination Polymers and the Impact of Structural Dynamicity on Their Property, D. K. Maity, S. Ghosh, K. Otake, H. Kitagawa and D. Ghoshal\*, *Inorg.Chem.*, 58 (2019) 12943
- (iv) A reversible photochemical solid-state transformation in an interpenetrated 3D metal–organic framework with mechanical softness, G. Pahari, B. Bhattacharya, C. M. Reddy and D. Ghoshal\* , *Chem. Commun.* 55 (2019), 12515
- (v) Coligand-rigidity induced interpenetration in flexible bis-imidazolyl type linker based mixed ligand metal–organic frameworks, F. Haque, A. Halder, S. Ghosh, A. Maiti and D. Ghoshal\*, *Cryst.Growth & Des.* 19 (2019), 5152
- (vi) Five coordination polymers of Cd (II) and Co (II) using 3, 3'-azobispyridine and different dicarboxylates: Synthesis, structures and adsorption properties, F. Haque, A. Halder, S. Ghosh and D. Ghoshal\*, *Polyhedron* 161(2019), 289

**Prof. Gourhari Maiti**

An efficient one-pot four-component synthesis of 1*H*-pyrazolo[1,2-*b*] phthalazine-5,10-dione derivatives catalyzed by proline, D. Banerjee, G. Maiti, *Indian J. of Chemistry, Section B*, **2019**, 58B, 674-679

**Prof. Jnan Prakash Sankar**

1. B. Saha, P. Saha, A. Mandal, **J. P. Naskar**, D. Maiti and S. Chowdhury, Sequential detection of Cu<sup>2+</sup> and cysteine using an imidazole-based chemosensor in aqueous solution, **J Chin Chem Soc.** **66 (2019) 506-514**
2. S. Ghosh, D. Singharoy, **J. P. Naskar** and S. C. Bhattacharya Deciphering of Ligand-to-Metal Charge-Transfer Process: Synthesis, Spectroscopic and Theoretical Study **Chemistry Select** **4 (2019) 458-464**
3. S. Ghosh, D. Singharoy, **J. P. Naskar** and S. C. Bhattacharya Perceptive of block copolymers as potential delivering system of synthesized pyridine and pyrimidine derivatives: Spectroscopic and computational approach **Journal of Molecular Liquids** **291 (2019) 111103**
4. Naba Kr Mondal, B. Guhathakurta, P. Basu, Ankur B. Pradhan, Chandra S. Purohit, Shubhamoy Chowdhury and **J. P. Naskar** DNA and RNA binding studies on a novel bromo-bridged dimeric copper(II) complex stabilized from a Schiff base ligand **Journal of Coordination Chemistry** **72 (2019) 3625-3644**

**Dr. Kausikisankar Pramanik (Name of the teacher, Name of the Article, Name of the Journal)**

Kausikisankar Pramanik-Palladium(ii) and platinum(ii) complexes of glyoxalbis(N-aryl)osazone: molecular and electronic structures, anti-microbial activities and DNA-binding study *New Journal of Chemistry-New J. Chem.* 2019, 43, 9891

Kausikisankar Pramanik-Coligand driven diverse organometallation in benzothiazolyl-hydrazone derivatized pyrene: *ortho vs. peri* C–H activation *peri* C–H activation-*New J. Chem.*, 2020, 44, 1407

Kausikisankar Pramanik-Polyaromatic hydrocarbon derivatized azo-oximes of cobalt(iii) for the ligand-redox controlled electrocatalytic oxygen reduction reaction-*New J. Chem.*, 2020, 44, 3737

Kausikisankar Pramanik-Rhodium assisted *peri*-C–H activation in benzothiazolyl-hydrazone derivatized pyrene-*Polyhedron*, 2020, 179, 114352

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- vii) "An elaborate investigation on the transition of rod-like micelle of cetyltrimethylammonium p-toluenesulfonate in presence of different additives", Ankita Saha, Arpan Mal and **Soumen Ghosh**, *J. Molecular Liquids* 309 (2020) 113084 - 113094
- viii) "Relevance of  $\delta$ -stacking in tuning the neighboring structural pattern of soft nano-aggregates", Gulmi Chakraborty, Soumik Bardhan, **Soumen Ghosh** and Swapan K. Saha, *J. Molecular Liquids* 317 (2020) 114013 – 114021
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- xi) "Spectroscopic study on the interaction of curcumin with single chain and gemini surfactants", Satyajit Mondal and **Soumen Ghosh**, *Chemical Physics Letters* (online)

**Prof. Sanjay Bhar**

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**Prof. Sujoy Baitalik**

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### Prof. Subrata Mukhopadhyay

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- Colorimetric and “off-on” fluorescent Pd<sup>2+</sup> chemosensor based on rhodamine-ampyrone conjugate: synthesis, experimental and theoretical studies along with in vitro applications **Sanchita Mondal, Saikat Kumar Manna, Sudipta Pathak, Abdulla Al Masum and Subrata Mukhopadhyaya New J. Chem.**, **2019**, *43*, 3513 – 3519
- An organic compound with 4-(4-pyridinyl)-2-pyridone backbone and its salts: structures, photoresponse properties and DNA binding abilities Tripti Mandal, Arka Dey, Sudipta Pathak, Md. Maidul Islam, Saugata Konar, Joaquín Ortega-Castro, Saikat Kumar Seth, Partha Pratim Ray, Antonio Frontera and **Subrata Mukhopadhyay RSC Advances**, **2019**, *9*, 9663 – 9677
- Structures, Photoresponse Properties, and Biological Activity of Dicyano-Substituted 4 Aryl-2-pyridone Derivatives Tripti Mandal, Sudipta Pathak, Arka Dey, Md. Maidul Islam, Saikat Kumar Seth, Abdulla Al Masum, Joaquín Ortega-Castro, Partha Pratim Ray, Antonio Frontera, and **Subrata Mukhopadhyay ACS Omega** **2019**, *4*, 7200–7212
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- A “turn-on” fluorescent and colorimetric chemodosimeter for selective detection of Au<sup>3+</sup> ions in solution and in live cells via Au<sup>3+</sup>-induced hydrolysis of a rhodamine-derived Schiff base
- A colorimetric and “off–on” fluorescent Pd<sup>2+</sup> chemosensor based on a rhodamine-ampyrone conjugate: synthesis, experimental and theoretical studies along with in vitro applications Sanchita Mondal, Saikat Kumar Manna, Sudipta Pathak, Abdulla Al Masum and **Subrata Mukhopadhyaya** *New J. Chem.*, **2019**, **43**, 3513 – 3519
- Chromogenic and fluorogenic “off–on–off” chemosensor for selective and sensitive detection of aluminum (Al<sup>3+</sup>) and bifluoride (HF<sub>2</sub><sup>-</sup>) ions in solution and in living Hep G2 cells: synthesis, experimental and theoretical studies Samit Pramanik, Saikat Kumar Manna, Sudipta Pathak, Debasish Mandal, Kunal Pal and **Subrata Mukhopadhyay** *New J. Chem.*, **2020**, **44**, 13259 –13265
- Quantitative insights into the crystal structure of a mixed-ligand Co(III) complex: Experimental and theoretical studies Suparna Tripathi, Anowar Hossain, Saikat Kumar Seth and **Subrata Mukhopadhyay** *J. Mol. Str.*, **2020**, **1216**, accepted for publication
- Design and synthesis of a sulphur containing Schiff base drug: DNA binding studies and theoretical calculations Urmila Saha, Malay Dolai, Saugata Konar, Amit Das, Ray J. Butcher, Gopinatha Suresh Kumar and **Subrata Mukhopadhyay** *J. Biomol. Struct. Dyn.*, **2020**, accepted for publication
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### Dr. Suman Das

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### Mr. Satyadeep Waiba

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### Dr. Tanurima Bhaumik

1. Enantiodivergent syntheses of (+)- and (–)-1-(2,6-dimethylphenoxy)propan-2-ol: A
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### Dr. Tapan Kumar Mondal

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2. S. Jana, R. Naskar, C. K. Manna, T. K. Mondal, Synthesis, characterization, X-ray structure and DNA binding study of palladium(II) complex with new thioether containing ONS donor ligand, *J. Chem. Sci.*, **2020**, *132*, 64
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7. C. K. Manna, S. Gharami, K. Aich, L. Patra, T. K. Mondal, Simple fabrication of a carbaldehyde based fluorescent “turn-on” probe for the selective and sole detection of Pd<sup>2+</sup>: application as test strips, *New J. Chem.*, **2019**, *43*, 16915-16920
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9. S. Gharami, K. Aich, S. Das, L. Patra, T. K. Mondal, Facile detection of organophosphorus nerveagent mimic (DCP) through a new quinoline-based ratiometric switch, *New J. Chem.*, **2019**, *43*, 8627-8633

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11. S. Gharami, K. Aich, D. Sarkar, P. Ghosh, N. Murmu, T. K. Mondal, An ESIPT based chromogenic and fluorescent ratiometric probe for  $Zn^{2+}$  with imaging in live cells and tissues, *New J. Chem.*, 2019, 43, 1857-1863
12. P. Roy, C. K. Manna, R. Naskar, T. K. Mondal, Synthesis of a rhodium(III) triphenylphosphine complex via C-S bond cleavage of an azo-thioether ligand: X-ray structure, electrochemistry and catalysis towards transfer hydrogenation of ketones, *Polyhedron*, 2019, 158, 208-214
13. P. Roy, D. Sarkar, P. Ghosh, R. Naskar, N. Murmu, T. K. Mondal, Luminescent rhenium(I) carbonyl complex with redox noninnocent ONS donor azo-phenol ligand: Synthesis, X-ray structure, photophysical properties and live cell imaging, *Polyhedron*, 2019, 161, 154-160

### Prof. Umesh Chandra Halder

1. Sampa Pal, Sanhita Maity, Subrata Sardar, Shahnaz Begum, Ramkrishna Dalui, Hasan Parvej, Kaushik Bera, Anirban Pradhan, Nayim Sepay, Swarnali Paul & Umesh Chandra Halder, “*Antioxidant ferulic acid prevents the aggregation of bovine  $\alpha$ -lactoglobulin in vitro*”. *J Chem Sci.* 2020, **132**, 103-115. <https://doi.org/10.1007/s12039-020-01796-z>
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3. Nayim Sepay, Aishwarya Sekar, Umesh C Halder, Abdullah Alarifi, Mohd Afzal, “*Anti-COVID-19 terpenoid from marine sources: A docking, admet and molecular dynamics study*”, *Journal of Molecular Structure*, 2020, <https://doi.org/10.1016/j.molstruc.2020.129433>

### Prof. Umasis Jana

- i. Rupsa Chanda, Baitan Chakraborty, Gopal Rana, and Umasish Jana, “Iron Catalyzed Functionalization of 3 Benzylideneindoline Through Tandem  $Csp^2-Csp^3$  Bond Formation/Isomerization with  $\delta$  Activated Alcohols”, *Eur. J. Org. Chem* **2020**, 61-65
- ii. Aniruddha Das, Soumen Sarkar, Baitan Chakraborty, Abhishek Kar, Umasish Jana, “Catalytic Alkyne/Alkene-Carbonyl Metathesis: Towards the Development of Green Organic Synthesis”, *Current Green Chemistry* **2020**, 7, 5-39

## 5. Collaborative Programs:

### Amrita Saha

Dr. Priyabrata Banerjee

*Academy of Scientific and Innovative Research, CSIR-CMERI Campus, Durgapur 713209, India*

Dr. Partha Pratim Ray

*Department of Physics, Jadavpur University, Kolkata- 700032, India*

Dr. Parimal Karmakar

*Department of Life Science and Biotechnology, Jadavpur University, Kolkata-700032, India*

### Dr. Bibhuti Bhushan Show

- (a) Department of Chemistry, IEST, Shibpur, Howrah, West Bengal, India
- (b) Department of Civil and Environmental Engineering, Birla Institute of Technology, Mesra, Ranchi, Jharkhand 835215, India
- (c) Department of Chemistry, Banaras Hindu University, Uttar Pradesh, Varanasi 221005, India

**Prof. Chittaranjan Sinha**

- (a) Prof. Elena Lopez Torres, Departamento de Química Inorgánica, c) Francisco Tomás y Valiente, 7, Universidad Autónoma de Madrid, Cantoblanco, 28049-Madrid, Spain
- (b) Prof. Dr. Takashiro Akitsu Department of Chemistry, Faculty of Science, Tokyo University of Science 1-3 Kagurazaka, Shinjuku-ku, Tokyo 162-8601, Japan
- (c) Dr. M. H. Mir, Department of Chemistry, Aliah University, Rajarhat, Kolkata, India
- (d) Dr. Sudip Majumder, Amity School of Applied Sciences, Amity University, Haryana
- (e) Dr. Partha Pratim Ray, Department of Physics, Jadavpur University, Kolkata- 700032, India
- (f) Dr. Kuladip Jana, Bose Institute, Kolkata
- (g) Prof. Debprasad Chattopadhyay, NICED, Kolkata

**Prof. Nitin Chattopadhyay**

Collaborations were made with Department of Chemistry, Assam University, Silchar and Department of Chemical, Biological & Macromolecular Sciences, S. N. Bose National Centre for Basic Sciences, Kolkata

**Dr. Partha Mahata**

1. With Dr. Sudip Kumar Mondal of Visva-Bharati University, Santiniketan for the detailed understanding of photophysical behavior of the compounds
2. With Prof. Ayan Datta of IACS, Kolkata for theoretical understanding of the luminescence behavior of the compounds

**Prof. Samaresh Bhattacharya**

Have been doing collaborative research with Prof. Saurabh Das (Dept. of Chemistry, JU); Prof. Parimal Karmakar (Dept. of Life Science and Biotechnology, JU); and Prof. Michael G. Richmond of University of North Texas, USA

**Prof. Sujoy Baitalik**

Some collaborative research is going on the optical properties of nanomaterials (particularly on Perovskites) with Prof. Narayan Pradhan, School of Materials Sciences, Indian Association for the Cultivation of Science, Jadavpur, Kolkata 700032

**6. Major Achievements:**

**Prof. Chittaranjan Sinha**

- (a) Publications of about 43 articles in high impact journal
- (b) Three Research Scholars (Dr. Nilima Sahu, Dr. Rakesh Purkait, Dr. Bharati Chowdhuri) awarded Ph. D. (Sc) degree during this period
- (c) Honorary Secretary, Indian Chemical Society, 2019-2022

**Professor Nitin Chattopadhyay**

- Siksha Ratna Award from Government of West Bengal
- Professor S C Ameta Award from Indian Chemical Society

**Prof. Rina Ghosh**

One (Professor A. S. R. Anjaneyulu 60<sup>th</sup> Birthday Commemoration Award for the year 2018 by Indian Chemical Society in the 56<sup>th</sup> Annual Convention of Chemists held during November 14-16, 2019)

**Prof. Samaresh Bhattacharya**

Received the “Acharya P. C. Ray Memorial Award for the year 2019” from the Indian Chemical Society

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### Prof. Soumen Ghosh

Award of Bronze Medal from Chemical Research Society of India (CRSI) in 2020 (received a letter regarding this)

**“Indian Society for Surface Science and Technology” is associated with Department of Chemistry Report of the Society (2019-2020)**

### Conference:

- a) One day seminar ‘Trends in Surface Science and Related Areas (TSSRA) was held at the Dept. of Chemistry of Vidyasagar University, Midnapur, West Bengal on 12th September, 2019. More than 100 participants (faculties and students) from the host Institute as well as from different nearby colleges attended the Seminar. In the inaugural session, Prof. Ranjan Chakraborti, Vice Chancellor of Vidyasagar University, thanked ISSST for its co-operation in organizing TSSRA–2019 in his University

There were two technical sessions in the seminar where six speakers from different academic Institutions presented their research works. Each lecture was followed by a short interactive session. The chairpersons for the two technical sessions were Prof. K. P. Das and Prof. Braja Gopal Bag

The seminar concluded with a valedictory session where students, researchers and other delegates actively interacted with the speakers and the senior scientists on the dais. The organizer expressed the view that the seminar was successful to encourage the young minds for research in the areas of Surface Science and Technology

- b) The 19th biennial conference of the Society, ‘19th National Conference on Surfactants, Emulsions and Bio-colloids (NATCOSEB-XIX) was held at the Dept. of Chemistry, Amity University, New Town, Kolkata, during 18-20 October, 2019, with Dr. Pradip Kr. Sukul and Dr. Susmita Das of the Dept. of Chemistry of the host Institute as the Convener and Co-Convener respectively. Funding agencies were CSIR (Govt. of India), CSIR-CGCRI, CSIR-CLRI, ASE Instruments, Lab India, Akash Enterprise, AISHTMA

Organizing committee comprised of Patron (Prof. Dhrubajyoti Chattopadhyay, VC, AUK), Convener (Dr. Pradip Kumar Sukul, Faculty, Department of Chemistry, AUK), Co-Convener (Dr. Susmita Das, Faculty, Department of Chemistry, AUK). Other important committees comprised of the faculty members and students of the Department. The advisory committee comprised of Mr. Vipin Sharma (Vice President, AUK), Prof. (Dr.) Ankita Chakravarty Bhattacharyya (Pro-VC, AUK), Prof. S. P. Moulik (JU), Prof. A. B. Mandal (President, ISSST, Kolkata) and Prof. K. P. Das (Vice President, ISSST, Kolkata)

This 3 day conference was divided into 11 sessions including 9 technical sessions, inaugural and valedictory session

The inaugural session commenced at 9.30 am on 18 October, 2019 where esteemed dignitaries from renowned research institutes and universities of the country were present. Prof. Sourav Pal, Director, IISER, Kolkata and Prof. Santanu Bhattacharya, Director, IACS, Kolkata were our Guests of Honor. Prof. Satya Priya Moulik, INSA Emeritus Professor and Ex-President, ISSST, Prof. A. B. Mandal, Ex-Director, CSIR-CLRI and President, ISSST and Dr. R. Debnath, Secretary, ISSST also graced the inaugural session of this event. A welcome address was delivered by our Honourable Vice Chancellor, Prof. Dhrubajyoti Chattopadhyay and Prof. S. P. Moulik on behalf of Amity University, Kolkata and ISSST respectively. In this session, Prof. Sourav Pal and Prof. Santanu Bhattacharya also delivered their inaugural address. This was followed by Prof. an address from Dr. A. B. Mandal and Dr. R. Debnath. The keynote lecture by Prof. Santanu Bhattacharya was also delivered in the same session

In the 9 technical sessions along these 3 days there were in total 21 Invited Lectures, one Plenary Lecture and two award Lectures, viz., B. N. Ghosh memorial award and JSST Best Paper Award

The entire poster session was divided into two groups. There were in total 37 posters presented by Research Associates, Ph. D. scholars, Postgraduate and Undergraduate students from around 30 universities and research institutes across the country including Amity University, Kolkata

The concluding of the event took place around 2.00 pm on 20 October, 2019 which was graced by the Honourable Vice Chancellor, West Bengal State University, Prof. Basab Chaudhuri. The valedictory address



## Annual Report 2019-20

was delivered by Prof. Dhrubajyoti Chattopadhyay, Honourable Vice-Chancellor, AUK and the session was then concluded by Dr. Soumik Roy by summarizing the conference. The vote of thanks was given by Dr. Pradip Kr. Sukul, Convenor, NATCOSEB-XIX

A cultural program was organized in the evening of Day 1 of the 19th NATCOSEB and a special dinner was organized at Biswa Bangla Gate as a part of hospitality of the conference

- c) A seminar was organized by the Department of Chemistry, Jadavpur University in collaboration with Indian Society for Surface Science and Technology on 22 January, 2020 at 3.00 pm in Analytical Chemistry building where a lecture was delivered by Dr. Arabinda Chaudhuri, Raja Ramanna Fellow, Department of Chemical Sciences, Indian Institute of Science Education and Research, Kolkata on the topic of Fighting Cancer with Liposomes

The total number of life members of the Society as of now stands at 645

The Society is publishing the Journal of Surface Science and Technology (JSST) two issues per year. Also a News Letter is publishing by the Society

### Elected Members from the Head Quarter

1. Sourav Das (Jadavpur University), 2. Atanu Mitra (Shri Chaitanya College), 3. Bijan Das (Presidency University), 4. Soumen Ghosh (Jadavpur University), 5. Rina Ghosh (Jadavpur University), 6. Kalipada Das (Bose Institute), 7. Alokmay Dutta (CGCRI)

### Elected members from East zone:

8. Amiya Kumar Panda (Vidyasagar University, Midnapur), 9. Manu Vasistha (Ambedkar Institute of Technology, Port Blair)

### Elected members from West zone:

10. Ketan Kuprekar (Sardar Vallabhbhai Natl. Institute of Technology, Surat), 11. Sunil Bhagwat (ICT, Mumbai)

### Elected members from North zone:

12. Surendra Khurana (Orbit Research Associate, New Delhi), 13. Aijaz Ahmad Dar (University of Kashmir, Srinagar)

### Elected members from South zone:

14. Parag V. Naik (A/203 Nitesh Garden Enclave, Bangaluru), 15. Md. Sayem Alam (CSIR-CLRI, Chennai).

In the meeting of Executive Committee dated 25.01.2020, port-folios have been distributed among the members of the new EC as follows:

**Patron:** S. Das, V.C., J.U., Kolkata

**Advisors :** M. K. Basu, Kolkata, D. K. Chattoraj, Kolkata, D. C. Mukherjee, Kolkata, B. K. Mishra Sambalpur University, S. P. Moulik, Kolkata

### Executive Committee:

**President:** A. B. Mandal, Kolkata,

**Vice Presidents:** R. Debnath, Kolkata; H. Naorem, Imphal

**Secretary:** S. Ghosh, Kolkata

**Jt. Secretaries:** B. Das, Kolkata; A. Mitra, Kolkata

**Treasurer:** S. Das, Kolkata

### Members:

S. Alam, Chennai; S. S. Bhagwat, Mumbai; S. C. Bhattacharya, Kolkata; A. A. Dar, Srinagar; A. R. Das, Kolkata; D. Das, Guwahati; K. P. Das, Kolkata; S. Das, Kolkata; A. Datta, Kolkata; R. Ghosh, Kolkata; S. Khurana, Delhi; K. Kuprekar, Su Accountrat; A. Mishra, Midnapore; P. V. Naik, Bangalore; B. Naskar, Kolkata; A. K. Panda, Midnapore; A. K. Rakshit, Kolkata; P. Sukul, Kolkata; M. Vashishtha, Andaman

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### GEOGRAPHY

Phone: 033-257-3003

H.O.D: Prof. Lakshmi Sivaramakrishnan

E-mail: hod.geography@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the course	Duration of the Course	No. of Students Enrolled
1. B.Sc. in Geography	3 Years	20 (each year)
2. M.Sc. in Geography	2 Years	20 (each year)
3. PhD in Geography	5 Years	16

#### 1. B. Number of Faculty Members:

Professor-	01
Assistant Professor-	02

#### 2. A. Area of Research Activities:(Broad Areas)

**Prof. Lakshmi Sivaramakrishnan:** Urban and Regional Planning, Rural Development, Environmental Assessments, Gender Issues, Urbanization and Related Aspects

**Dr. Debajit Datta:** Wetland and Forest Management, Landscape Ecology, Biomass and Soil Carbon Assessment, Sustainable Tourism

**Dr. Arijit Majumder:** Hydrology, Geomorphology

#### 2. B. Major Research Project:

##### Prof. Lakshmi Sivaramakrishnan

1. Research project titled '*Development of Integrated Database for Sustainable Land Resource Management at Village Level in Selected Blocks of Darjeeling District, West Bengal*' amounting INR 24,93,400/- funded by JU RUSA 2.0 since February, 2019 as Joint Coordinator

##### Dr. Debajit Datta

1. Research project titled '*Spatially Explicit Estimation of Wetland Carbon Stocks in the Contai-Baleshwar Coastal Stretch, India by Integrating Elemental Analysis and Geospatial Technologies*' as Principal Investigator amounting Rs. 3,033,800/- funded by Science and Engineering Research Board, Department of Science and Technology, GoI as Early Career Research Award since December, 2018
2. Research project titled '*Development of Integrated Database for Sustainable Land Resource Management at Village Level in Selected Blocks of Darjeeling District, West Bengal*' amounting INR 2,493,400/- funded by JU RUSA 2.0 since February, 2019 as Joint Coordinator
3. Research project titled '*Assessment of Above Ground Biomass Dynamics of Vegetation Communities for Sustainable Environmental Management along Digha-Sankarpur Coastal Stretch, India using SAR Data*' amounting INR 566,800/- funded by JU RUSA 2.0 since February, 2019

#### 3. A. Invited Lectures Delivered/Sessions Chaired:

##### Prof. Lakshmi Sivaramakrishnan

1. Delivered a special Lecture at the National seminar on Development and Disparity held at Prabhu Jagatbandu College, Andul on 12 September, 2019 on "Rural Urban Disparities in India"
2. Delivered a special Lecture at Faculty Development Programme sponsored by ICSSR at Bhattar College, Datan on writing a research Paper on 8 November, 2019
3. Delivered two special lectures at The ICSSR sponsored Capacity Building Programme for Social Sciences at The University of Kalyani on Ethics in Research and Publication and Field work and data collection on 11 December, 2019

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### Dr. Debajit Datta

1. Delivered an invited lecture on 'Resilience in Mangrove Management: Experiences from Indian Sundarbans' at the Global Change Program, JU on 17 June, 2019

### Dr. Arijit Majumder:

1. Co-Chairperson in Technical Session of the XIV International Geographical Union – India International Conference held during 6- 8 March, 2020 at the University of Burdwan

### 3. B. Seminar/Workshop/Conference/Symposium Attended:(Name of the Paper Presented–Name of Seminar/ Conference–Place–Duration)

#### Dr. Debajit Datta

Assessing Ecological Sustainability of Urban and Peri-urban Agroecosystems of Kolkata Metropolitan Area–Third National Seminar on 'Natural Resource Management for Sustainable Development'–Mizoram University, Aizawl–7-8 November, 2019

Landscape modification, livelihood losses, and socio-political conflicts: a geospatial analysis of coastal aquaculture practices in West Bengal, India–Tenth IALE World Congress on 'Nature and society facing the Anthropocene challenges and perspectives–University of Milano- Bicocca, Italy–1-5 July, 2019

Co-existence of co-operation and conflict: reconstructing identities in the Koch-Rajbanshi sovereignty politics of India(As a co-author with C. Sengupta)–Third Ireland India Institute Conference on South Asia, 2019 organized by the Ireland India Institute–Dublin City University, Ireland–24-26 April, 2019

#### Dr. Arijit Majumder

Assessing crop water productivity scenario in Purba Bardhaman district, West Bengal – A major driver towards sustainable management of invisible water resource–XIV International Geographical Union – India International Conference on 'Agriculture, Food, Water, Biodiversity and Health in Changing Climate'–The University of Burdwan–6- 8 March, 2020

### 4. A. Books/Monographs etc.Published:(Name of the Teacher,Name of the Book, Name of the Publisher)

#### Prof. Lakshmi Sivaramakrishnan

1. Majumdar S and Sivaramakrishnan L (2019) 'Mapping of Urban Growth Dynamics in Kolkata Metropolitan Area: A Geospatial Approach'. In: Bandopadhyay S, Pathak CR and Dentino .T (Eds.) *Urbanization and Regional Sustainability in South Asia*, Springer, ISBN 978-3-030-23795-0, Online ISBN 978-3-030-23796-7, pp 9-24

#### Dr. Debajit Datta

1. Roy AK, Naskar M, Chakraborty T, Neogy S and Datta D (2020) Assessing the impact of aquafarming on landscape dynamics of coastal West Bengal, India using remotely sensed data and spatial metrics. In: Rani M *et al.* (Eds.) *Remote Sensing of Ocean and Coastal Environments*. Elsevier, New York. ISBN: 978-012-8-19604-5
2. Chakraborty S, Saha S, Majumdar D and Datta D (2020) Long-term dynamics of mangrove forest in Andaman, India. In: Ghosh JK and da Silva I (Eds.) *Applications of Geomatics in Civil Engineering*. Springer, Singapore. ISBN: 978-981-13-7066-3
3. Majumdar D, Chakraborty S, Saha S and Datta D (2019) A geospatial analysis of anthropogenic and seismological impacts on the coastal ecosystems of Andaman Islands during 2000-2017. In: Mukherjee S (Ed.) *Importance and Utilities of GIS*. Avenel Press, Burdwan. ISBN: 978-81-939776-6-8

#### Dr. Arijit Majumder

1. Sen A, Saha UD, Majumder A, Biswas N (2020) Facets of Anthropogenic Encroachment within the Paleo-Fluvial Regime of Kana-Ghia-Kunti System, Damodar Fan Region. In: Islam A *et al.* (Eds.) *Antropogeomorphology of Bhagirathi-Hooghly River System in India*. CRC Press, UK. ISBN: 9780367861025

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### 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

#### Prof. Lakshmi Sivaramakrishnan

1. Urban Infrastructure and Service Delivery in India, Indian Geographical Journal, Vol 94 No.1, June 2019, ISSN: 00194824
2. Working Paper 17 – New or Renewed Town: Sustainable Urbanization in Kolkata, South Asian Democratic Forum 28 April, 2020 - ISSN: 2506-8202, co-authors: Sumana Bandyopadhyay, Sanghamitra Sarkar & Tomaz Ponce Dentinho

#### Dr. Debajit Datta

1. Gayen J, Ghosh PK and **Datta D** (2020) Avifauna habitability of wetlands in an intensive cultural landscape: insights from the Ichhamati floodplains, India. *Environmental Monitoring and Assessment* 192(6):1-16 (Springer, Impact Factor: 1.959)
2. Majumdar D, Chakraborty S, Saha S, **Datta D** (2019) Geospatial analysis of the effects of tsunami on coral and mangrove ecosystems of Mayabunder in Andaman Islands, India. *Brazilian Journal of Oceanography* 67:1-10
3. Sengupta C and **Datta D** (2019) Quest for identity: linking ethnicity, electoral politics and violence in Koch-Rajbanshi sovereignty movement of India. *Human Geographies- Journal of Studies and Research in Human Geography* 13(1):1-18

### 6. Major Achievements:

1. Mr. Asit Kumar Roy, UGC-SRF of the Department, was a Recipient of 'Foreign Scholar Travel Award, 2019' valued at •700 from International Association for Landscape Ecology (IALE)
2. Ms. Sohini Neogy, DST-SERB JRF of the Department, was a Recipient of 'Foreign Scholar Travel Award, 2019' valued at •700 from International Association for Landscape Ecology (IALE)

## GEOLOGICAL SCIENCES

Phone: 033- 2457 – 2268 / 2719

033-2414-6214

H.O.D.: Prof. Sanjoy Sanyal

E-mail: hod.geology@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the Course	Duration of Course	No of Students Enrolled
1. B.Sc. in Geological Sciences	3 Years	145
2. M.Sc. in Applied Geology	2 Years	68
3. Ph.D.	5 Years	44

### 1. B. Number of Faculty Members :17

Professor :10, Assistant Professor : 7

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### 2. A. Major Ongoing Research Programmes in the Department are:

#### Research Programme Sanctioned Grant (in Lakhs of Rupees)

DST FIST	240
CAS (Phase VI)	131
RUSA 2.0	50

### 2. B. Major Research Project (Stared / Ongoing): (Title of the Project-Sponsoring Agency-Project worth (in Rs.)-Faculty members and their role)

Petromineralogical, Sedimentological and Geochemical studies of Quartz Pebble Conglomerate and associated rocks in parts of Birtola-Bagiyabahal area, Sundergarh District, Orissa, eastern India-DAE-BRNS(18.05.2018 - ongoing)-30,42,250.00-Dipak C Pal (PI); Soumik Mukhopadhyay (Co-PI)

Physical behavior of Natural Silicates and oxides, and its implication in environmental studies: a computational approach-DAE-BRNS(1-06-2016(06-07-2020)-39,85,200.00-Nibir Mandal (PI), Ashok Arya (Co-PI)

Study of emplacement and evolution of granitic rocks in transpressional ductile shear zone from parts of the western margin of Delhi Fold Belt, Rajasthan-DST (SERB)(12-02-2016 to 11-02-2020)-26,00,000.00-Sadhana M. Chatterjee (PI), Sudipta Sengupta (Co-PI)

Structural and petrological evolution across South Delhi Fold Belt: the geodynamic evolution of the Precambrian terrane of northwestern India-CSIR(01-09-2019 to 31-08-2022)-17,00,000.00-Sadhana M. Chatterjee (PI), Sudipta Sengupta (Co-PI), Upama Dutta (Co-PI)

Influence of micro-domain phase variation on kinematic and metamorphic reactions in assessing petrological evolution of rocks-DST (SERB) (19-02-2020 to 18-02-2023)-27,06,000.00-Sadhana M. Chatterjee (Co-PI), Upama Dutta (PI)

Physicochemical and deformational control of Rare Earth and Rare Metal (REE-RM) mineralization in parts of South and North Purulia Shear Zone (SPSZ and NPSZ), East Indian shield-DAE-BRNS(Oct 2014 to March 2020 with extension)-54,88,000.00-Sanjay Sanyal (PI); Pulak Sengupta (Co-PI)

Basin evolutionary history and microbial mat proliferation versus Uranium Mineralization in Badami Group, Karnataka-DAE-BRNS(03.04.2018-30.03.2021)-38,88,900.00-Subir Sarkar (PI); Soumik Mukhopadhyay (Co-PI)

Petrological, Geochemical and Microstructural Studies of the host rocks of the U-Cu-Fe Mineralized zones along the Rakha-Kulamara transect of the Singhbhum Shear Zone-DAE-BRNS(02-08-2019 -August 2022; tentative)-31,20,250.00-Subrata Karmakar (PI); Pulak Sengupta (Co-PI); Sanjay Sanyal (Co-PI)

Systematic study of molluscs and other benthic faunal diversity and their palaeoecological, palaeobiogeographical distribution during Jurassic-Cretaceous transition in Kutch, western India -DST-SERB(26.03.2019-25.03.2022)-28,58,360.00-Sunipa Mandal (Co-PI), Pinaki Roy (PI)

Fabric analysis and tectonic stress determination in the rocks of Chitradurga region (Dharwar craton, south India)-implications for upper crustal fluid flow-DST-SERB(02.02.2017-02.02.2020)-10,68000.00-Tridib Kumar Mondal (PI)No Co-PI

### 3. A. Invited Lectures Delivered/Sessions Chaired/Key note Speeches:

#### Anupam Ghosh

Delivered an invited talk titled "Distribution trends of foraminiferal assemblages from the world's largest mangrove ecoregion, the Sundarbans, West Bengal" in the "Deep Time Biodiversity of Bengal- An Outreach Programme" held in the Indian Statistical Institute, Kolkata during 27-28 January, 2020



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### Nibir Mandal

Delivered an invited lecture on “Upwelling dynamics in mid-ocean ridge system”, a one day workshop on “Evolution of Earth: Geochemical and Geodynamics Perspectives”, under the CEFIPRA/IFCPAR Project 6007-1 between Jadavpur University (India) and CNRS-CRPG (France) funded by the Indo-French Center for the promotion of Advanced Research held in Department of Geological Sciences, Jadavpur University, 3 December, 2019

### Pulak Sengupta

1. Delivered invited lecture in a Session organized by Local chapter of the Alexander von Humboldt Foundation at the IISER-Kolkata, 6 November, 2019
2. Delivered invited lecture in “International Conference on Sustainable Water Resources Management under Changed Climate 2020”, Jadavpur University, Kolkata

### Subir Sarkar

1. Delivered key Note address in the National Seminar on “Sedimentary Research: last five decades of advancement and prospects in future” organized by 35<sup>th</sup> Convention of Indian Association of Sedimentologists, held in Department of Applied Geology, Dr. H.S Gour Viswavidyalaya, Sagar, M.P.
2. Delivered key note address in the National Workshop on “Advances in stratigraphy and geochronology of Indian sedimentary basins and Road ahead”, 2019, held in Department of Geology, University of Delhi

### Soumik Mukhopadhyay

1. Delivered invited lectures on Primary Sedimentary Structures, Sedimentary Textures and Sedimentary Environments, in an approved training program of GSI, entitled Refresher Course on coastal sedimentology and ecosystem in parts of south Bengal, in the Regional Training Division (RTD), Geological Survey of India, Eastern Region, ‘Bhu-Bijnan Bhavan’, DK-6, Sector – II, Salt Lake, Kolkata-700 091 on 10.07.2019.

### 3. B. Seminar/Workshop/Conference/Symposium/Training Course Attended:

1. **Anupam Ghosh** presented a poster in the “XX INQUA Congress: Linking land and sea –multiple approaches to investigating human-environment interactions in the coastal zone” held at Dublin Convention Centre, Dublin, Ireland during 25– 31 July, 2019
2. **Anupam Ghosh** presented orally in the Seminar “Deep Time Biodiversity of Bengal- An Outreach Programme” held at Indian Statistical Institute, Kolkata during 27– 28 January, 2020
3. **Sadhana M Chatterjee** presented a poster in the Humboldt Kolleg 2020 on “Flow” held at Raichak, West Bengal during 3–5 January, 2020
4. **Sunipa Mandal** presented a poster in the Humboldt Kolleg 2020 on “Flow” held at Raichak, West Bengal during 3–5 January, 2020
5. **Susanta Chaudhuri** attended 34<sup>th</sup> IAS (International Association of Sedimentologists) Meeting of Sedimentology, an International Conference on “Sedimentology to face societal challenges on risk, resources and record of the past” held at Department of Earth Sciences, Sapienza University, Rome, Italy during 10– 13 September, 2019
6. **Susanta Chaudhuri** attended Hydro-19 International, 24<sup>th</sup> International Conference on “Hydraulics, Water Resources and River Engineering”, held at Osmania University, Hyderabad, India during 18– 20 December, 2019

### 3. C. Seminar/Workshop/Conference/Symposium/Training Course Organized:

1. **Pulak Sengupta** and **Sanjoy Sanyal** has organized (Coordinator) an International Seminar on “Food, Livelihood, Opportunity and Wood, FLOW” funded by the Alexander von Humboldt Foundation, Germany, at Raichak, South 24 Parganas, West Bengal, during 3–5 January, 2020

**3. D. Orientation Courses/ Refresher Courses Attended:**

1. **Anupam Ghosh** attended a Short-Term Course on “Research Week on Nature, Culture and Politics” held at Centre for Environmental Studies, Vidyasagar University, Midnapore during 10–16 February, 2020

**4. A. Books/Book chapters/Monographs/Special volumes etc. Published:**

1. **Mukhopadhyay, S.**, Choudhuri, A., Chakraborty, N., **Sarkar, S.**, 2019. Aseismic tectonism-induced soft-sediment deformation in a tranquil palaeogeography: Chikkshelikere Limestone Member, Proterozoic Kaladgi Basin, southern India. In: M.E.A. Mondal (Ed.), Geological Evolution of Precambrian Indian Shield; Society for Earth Scientists Series, Springer, 351-372
2. **Mukhopadhyay, S.**, Samanta, P., Bhattacharya, S., **Sarkar, S.**, 2019. Stratigraphic Evolution and Architecture of the Terrestrial succession at the base of the Neoproterozoic Badami Group, Karnataka, India. In: M.E.A. Mondal (Ed.), Geological Evolution of Precambrian Indian Shield; Society for Earth Scientists Series, Springer, 121-157
3. Samanta, P., **Mukhopadhyay, S.**, **Mandal, S.**, **Sarkar, S.**, 2019. Controls on cyclic sedimentation within the Neoproterozoic Sirbu Shale, Vindhyan Basin, central India. In: M.E.A. Mondal (Ed.), Geological Evolution of Precambrian Indian Shield; Society for Earth Scientists Series, Springer, 271-295
4. **Sarkar, S.**, **Banerjee, S.**, 2019. A Synthesis of Depositional Sequence of the Proterozoic Vindhyan Supergroup in Son Valley (A Field Guide) (ISBN 978-981-329-551-3), Springer p. 220
5. **Banerjee, S.**, **Sarkar, S.**, 2020. Advances in Mesozoic Stratigraphy: Multi-proxy approach, Springer, in press

**4. B. Articles Published in Refereed Journals:**

1. Acharyya, S.S., **Mondal, T.K.**, 2019. Stress enhanced tensile fractures in elliptical clast in conglomerate. *Journal of Structural Geology*. 122, 81-88
2. Baidya, A.S., **Pal, D.C.**, Upadhyay, D., 2019. Chemical weathering of garnet in Banded Iron Formation: implications for the mechanism and sequence of secondary mineral formation and mobility of elements. *Geochimica et Cosmochimica Acta*, 265, 198-220 DOI: <https://doi.org/10.1016/j.gca.2019.08.03>
3. Bhowmick, S., **Mondal, T.K.**, 2020. Control of pre-existing fabric in fracture formation, reactivation and vein emplacement under variable fluid pressure conditions: An example from Archean Greenstone belt, India. *Solid Earth* 11, 1227–1246
4. **Chatterjee, S.M.**, Sarkar, A.K., Roy, A., Manna, A., 2020. Mid-Neoproterozoic tectonics of Northwestern India: Evidence of Stitching pluton along 810 Ma Phulad Shear Zone. *Tectonics*, 39 (1), 1-23, e2019TC005902. [doi.org/10.1029/2019TC005902](https://doi.org/10.1029/2019TC005902)
5. Choudhuri, A., Banerjee, S., **Sarkar, S.**, 2020. A review of biotic signatures within the Precambrian Vindhyan Supergroup: Implications on evolution on microbial and metazoan life on Earth. *Journal of Mineralogical and Petrological Sciences*, 115, 162–174
6. Choudhuri, A., Schieber, J., **Sarkar, S.**, Bickford, M.E, Basu, A., 2020. The “Lower Kaimur Porcellanite” (Vindhyan Supergroup) is of Sedimentary Origin and not Tuff. *Journal Geological Society of India*, 95, 17-24
7. Chowdhury, S., **Pal, D.C.**, Papinue, D., Lentz, D.R., 2020. Major and trace element and multiple sulfur isotope composition of sulfides from the Paleoproterozoic Surda copper deposit, Singhbhum Shear Zone, India: implications for the mineralization process. *Ore Geology Review*, 120, 103396 DOI: <https://doi.org/10.1016/j.oregeorev.2020.103396>
8. Das, E., Karmakar, S., Chatterjee, S., **Karmakar, S.**, **Sengupta, P.**, 2020. First comprehensive characterization of osumilite from India (Eastern Ghats Province): Physicochemical characteristics, stability of the mineral and its breakdown products. *Lithos*, 352-353, 105315. <http://doi.org/10.1016/j.lithos.2019.105315>

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9. Das, I., **Ghosh, A.**, Buragohain, D., 2019. A study of microhabitat of intertidal foraminifera from Chandipur coast, Odisha. *Journal of the Palaeontological Society of India*, 64 (1), 49-60
10. Das, V.K., Roy, S., Burman, K., Debnath, K., **Chaudhuri, S.**, 2019. Study of clay–sand network structures and its effect on river bank erosion: an experimental approach. *Environmental Earth Science*, 78, 591-608
11. Das, V.K., Roy, S., Burman, K., Debnath, K., **Chaudhuri, S.**, Mazumder, B.S., 2019. Investigations on undercutting processes of cohesive river bank. *Engineering Geology*, 252, 110-124
12. Dasgupta, U., Barbieri, G., Vaiani, S.C., **Ghosh, A.**, 2020. Potential and limits of benthic foraminiferal ecological indices in paleoenvironmental reconstructions: a case from a Holocene succession of the Po Delta, Italy. *Micropaleontology*, 66(2), 103-126
13. Dey, A., Karmakar, S., Ibanez-Mejia, M., Mukherjee, S., **Sanyal, S., Sengupta, P.**, 2019. Petrology and geochronology of a suite of pelitic granulites from parts of the Chotanagpur Granite Gneiss Complex, eastern India: Evidence for Stenian Tonian reworking of a late Paleoproterozoic crust. *Geological Journal*, 55, 2851-2880. <http://doi.org/10.1002/gj.3552>
14. Dey, A., Karmakar, S., Mukherjee, S., **Sanyal, S.**, Dutta, U., **Sengupta, P.**, 2019. High pressure metamorphism of mafic granulites from the Chotanagpur Granite Gneiss Complex, India\_ Evidence for collisional tectonics during assembly of Rodinia. *Journal of Geodynamics*, 129, 24–43. <http://doi.org/10.1016/j.jog.2019.03.005>
15. Dey, A., Roy Choudhury, S., Mukherjee, S., **Sanyal, S., Sengupta, P.**, 2019. Origin of vesuvianite-garnet veins in calc-silicate rocks from part of the Chotanagpur Granite Gneiss Complex, East Indian Shield: The quantitative P-T-XCO<sub>2</sub> topology in parts of the system CaO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O-CO<sub>2</sub> (+Fe<sub>2</sub>O<sub>3</sub>, F). *American Mineralogist*, 104(5), 744–760. <http://doi.org/10.2138/am-2019-6811>
16. Ghosh, S., Bose, S., **Mandal, N.**, Laik, A., 2020. Mid-crustal ramping of the Main Himalayan Thrust in Nepal to Bhutan Himalaya: New insights from analogue and numerical experiments. *Tectonophysics*, 782-783, 228425
17. Ghosh, D., Maiti, G., **Mandal, N.**, 2020. Slab-parallel advection versus Rayleigh-Taylor instabilities in melt-rich layers in subduction zones: A criticality analysis. *Physics of the Earth and Planetary Interiors*, 307, 106560
18. Ghosh, D., Maiti, G., **Mandal, N.**, Baruah, A., 2020. Cold plumes initiated by Rayleigh-Taylor instabilities in subduction zones, and their characteristic volcanic distributions: the role of slab dip. *Journal of Geophysical Research: Solid Earth*, 125(8), e2020JB019814
19. Jacob, B.J., Misra, S., Parameswaran, V., **Mandal, N.**, 2020. Control of planar fabrics on the development of tensile damage zones under high-speed deformation: An experimental study with granite and gneiss. *Journal of Structural Geology*, 140, 104148
20. **Karmakar, S.**, Mukherjee, S., Dutta, U., 2020. Origin of corundum within anorthite megacrysts from anorthositic amphibolites, Granulite Terrane, Southern India. *American Mineralogist*, 105, 1161–1174. <http://doi.org/10.2138/am-2020-7108>.
21. Lan, Z., Zhang, S., Li, X., Pandey, S.K., Sharma, M., Shukla, Y., Ahmad, S., **Sarkar, S.**, Zhai M., 2020. Towards resolving the ‘jigsaw puzzle’ and age-fossil inconsistency within East Gondwana. *Precambrian Research*, 345, 105775; <https://doi.org/10.1016/j.precamres.2020.105775>
22. Maiti, G., **Mandal, N.**, 2020. How far does a subduction wedge follow lubrication dynamics? *Physics of the Earth and Planetary Interiors*, 298, 106346
23. Maiti, G., **Mandal, N.**, Misra, S. 2020. Insights into the dynamics of an orogenic wedge from lubrication theory: Implications for the Himalayan tectonics. *Tectonophysics*, 776, 228335
24. Maity, R., Venkateshwarlu, M., **Mondal, S.**, Kapawar, M.R., Gain, D., Paul, P., 2020. Magnetic and microscopic characterization of anthropogenically produced magnetic particles: a proxy for environmental pollution. *International Journal of Environmental Science & Technology*, in press. <https://doi.org/10.1007/s13762-020-02902-x>

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25. Maity, R., Venkateshwarlu, M., **Mondal, S.**, Kapawar, M.R., Gain, D., Chatterjee, S., Paul, P., (submitted in 2020; under review). Magnetic, microstructure, and geochemical techniques as potential pollution indicator in soils and dusts around thermal power station. *International Journal of Environmental Science & Technology*
26. Mandal, S., Banerjee, S., **Sarkar, S.**, Mondal, I., Roy Choudhury, T., 2020. Origin and sequence stratigraphic implications of high-alumina glauconite within the Lower Quartzite, Vindhyan Supergroup. *Marine and Petroleum Geology*, 112, 104040. <https://doi.org/10.1016/j.marpetgeo.2019.104040>
27. Mandal, S., Choudhuri, A., Mondal, I., **Sarkar, S.**, Chakraborty, P., Banerjee, S., 2019. Revisiting the boundary between the Lower and Upper Vindhyan, Son valley, India. *Journal of Earth System Science*, 128, 222
28. Marques, F.O., **Mandal, N.**, Barbosa, J., 2019. Basin development by relaxation of a buckled elastic layer: Insights from laboratory experiments. *Journal of Structural Geology*, 128, 103885
29. Mondal, S. K., Das, P.K., **Mandal, N.**, Arya, A. 2020. A novel approach to quantify the structural distortions of U/Th snub-disphenoids and their role in zircon to reidite type phase transition of uranothorite. *Journal of Physics: Condensed Matter*, 32(14), 145401
30. **Mondal, T.K.**, Bhowmick, S., Das, S., Patsa, A. 2020. Paleostress field reconstruction in the Western Dharwar craton, South India: Evidence from brittle faults and associated structures of younger granites. *Journal of Structural Geology*, 135, 104040
31. **Mondal, T.K.**, 2019. Deformation Fabric and Vein Emplacement in the Rocks of Gadag-Chitradurga Schist Belt (Western Dharwar craton, Southern India) - Relationship with Regional Tectonics. *Geological Society of India*, 93, 371
32. **Mukhopadhyay, S.**, Samanta, P., Sarkar, S., (submitted in 2020, under review). Control of sedimentation rate on sequence building pattern. *Marine and Petroleum Geology*
33. **Mukhopadhyay, S.**, Sen, A., Koley, A., Samanta, P., (submitted in 2020, under review). Evaluating the formative as well as shape-controlled dispersive mechanisms of mud balls in low-energy coastal settings- some new insights. *Sedimentary Geology*
34. Palmajumder, M., **Chaudhuri, S.**, Das, V.K., Das, A., Nag, S.K., 2019. Hydro-geochemical investigation and qualitative appraisal of groundwater of Taldangra Block, Bnakura Diistrict, West Bengal. *Indian Groundwater*, 13, 101-125
35. Roy, P., **Mandal, S.**, 2019. Behavioural Ecology, Biogeography and Evolution of *Telescopium telescopium* (Linnaeus, 1758) from Chandipur-on-Sea, Odisha, India. *Research & Reviews: Journal of Ecology*, 8(3): 1-7
36. **Sarkar, S.**, Banerjee, S., Chakraborty, P.P. 2020. Microbial Mat Structures and role of microbes in Precambrian siliciclastic sedimentation. *Episodes*, 43(1), 164-174
37. **Sarkar, S.**, Choudhuri, A., Mandal, S., Bose, P.K., 2019. Flat pebbles and their edge wise fabric in relation to 2 D microbial mat. *Geological Journal*, 54, 2566-2587. <https://doi.org/10.1002/gj.3312>
38. Talukdar, M., Mukhopadhyay, D., **Sanyal S.**, **Sengupta, P.**, 2019. Early Palaeoproterozoic structural reconstitution of a suite of rocks from the Mahadevi Layered Complex, Tamil Nadu, India. *Geological Journal*, 55, 3615-3642. <https://doi.org/10.1002/gj.3618>

### 5. Abstracts in Seminar/Conference/Symposium:

1. Adak, S., **Pal, D.C.**, Samanta, S., Patnaik, J.K., Pachamuthu, J., Sinha, D.K., (in press). Potential of tourmaline as discriminator between U-mineralized and non-mineralized system: evidence from EPMA-major and LA-ICPMS trace element composition of tourmaline in the Bangurdihi U-occurrence, western part of Singhbhum Shear Zone, eastern India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 8196-7600



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2. Chakrabarty, A., Karmakar, S., **Sanyal, S., Sengupta, P.**, (in press). Fluid induced origin of myrmekite in a porphyritic granitoid from parts of the Makrohar Granulite Belt of Central India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4124-3498
3. **Chaudhuri, S.**, Das, K.V., Debnath, K., 2019. Comparison of Scour Mechanisms and Downstream Bed Modification around Circular Pier for Different Stream Bed Characteristics– An Experimental Approach. HYDRO-19 INTERNATIONAL, 24<sup>th</sup> International Conference on Hydraulics, Water Resources and River Engineering, Osmania University, Hyderabad, India. 18– 20 December, p. 1101
4. **Chaudhuri, S.**, Das, K.V., Debnath, K., 2019. Erosion Mechanisms and Modification of Morphological Pattern of Meandering River Bank - a Case Study at the Middle Flow Regime of the Hooghly River near Nawadip, West Bengal, India. HYDRO-19 INTERNATIONAL, 24<sup>th</sup> International Conference on Hydraulics, Water Resources and River Engineering, Osmania University, Hyderabad, India. 18– 20 December, p. 1113
5. **Chaudhuri, S.**, Das, K.V., Debnath, K., 2019. Scouring and Downstream Bed Deformation due to Obstruction of Stream Flow – an Experimental Study with Fine-grained Non-Cohesive Sediment Bed. 34<sup>th</sup> IAS (International Association of Sedimentologists) Meeting of Sedimentology, an International Conference on Sedimentology to face societal challenges on risk, resources and record of the past, Department of Earth Sciences, Sapienza University, Rome, Italy 10 – 13 September, p. 1826
6. Chatterjee D., **Ghosh, A.**, Alexanderson H., 2019. A study of Late Quaternary Glacial-Interglacial Events in Kongsfjordhallet (North-West Svalbard), Arctic. Arctic and Southern Oceans, Present and Past Climate Responses, NCPOR, Goa, 20- 22 August, p.87
7. Chatterjee, D., **Ghosh, A.**, Alexanderson, H., 2019. A study of Late Quaternary benthic foraminiferal assemblages from Kongsfjordhallet, (North-West Svalbard). XX INQUA Congress: Paleoclimate- The Last Interglacial and Interglacial comparisons: local records and global signals, Dublin, Ireland 25 - 31 July
8. Chatterjee, D., **Ghosh, A.**, Alexanderson, H., 2019. Late Quaternary Glacial-Interglacial variability in Kongsfjorden (North-West Svalbard), Arctic – A multiproxy approach. XXVII Indian Colloquium on Micropaleontology and Stratigraphy, 4 - 6 November, p. 187
9. Chatterjee, S., Mukherjee, S., Karmakar, S., **Sanyal, S., Sengupta, P.**, (in press). Origin of ferroan-granitoids from a part of the Chotanagpur Granite Gneissic Complex (CGGC), East Indian Shield. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4106-3484
10. **Chatterjee, S.M.**, Roy, A., Sarkar, A.K., Manna, A., 2020. Mid-Neoproterozoic tectonics of Northwestern India and its significance. Humboldt Kolleg 2020 on “Flow”, Raichak, West Bengal, 3- 5 January, ISBN-978-93-83660-57-5
11. **Chatterjee, S.M.**, Sarkar, A.K., Roy, A., Manna, A., (in press). Meso to macroscale field structures in Phulad granite of South Delhi Fold Belt, Rajasthan, India: Evidence of syntectonic granite emplacement in ductile transpressive regime. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 2728-2308
12. Das, E., Karmakar, S., **Karmakar, S., Sengupta, P.**, (in press). Evidence for an ultra-hotspot (>1100°C) in the Precambrian Eastern Ghats orogen: Presence of sapphirine + quartz, corundum + hemoilmenite + spinelss intergrowth and osumilite in an Mg-Al rich rock. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4089-3764
13. Das, E., **Pal, D.C.**, Bandyopadhyay, A., Sarkar, D., Kashyap, V., (in press). Ore mineralogy, texture and trace element geochemistry of ore minerals from Kayad Zn-Pb ore, Ajmer, Rajasthan, western India: Economic and ore-genetic implications. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 5654 – 5213
14. Das, I., **Ghosh, A.**, 2019. A comparative study of Benthic foraminifera in Northern and Southern regions of Indian Sunderbans, West Bengal. XXVII Indian Colloquium on Micropaleontology and Stratigraphy, 4 - 6 November, p. 92



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15. Das, K.V., **Chaudhuri, S.**, Debnath, K., 2019. Effect of caly-sand mixture on river bank morphology and erosion. 34<sup>th</sup> IAS (International Association of Sedimentologists) Meeting of Sedimentology, an International Conference on Sedimentology to face societal challenges on risk, resources and record of the past, Department of Earth Sciences, Sapienza University, Rome, Italy 10 – 13 September, p. 1808
16. Das, S., **Ghosh, A.**, 2020. The study of Recent benthic foraminifera in the Chilka lake, Odisha. 107<sup>th</sup> Indian Science Congress, 3-7 January, p.133- 134
17. Das, S., **Ghosh, A.**, Mondal, S., 2019. A seasonal study of benthic foraminifera in the Chilika Lagoon, Odisha. XXVII Indian Colloquium on Micropaleontology and Stratigraphy, 4- 6 November, p. 100
18. Das S, Mondal, S., **Ghosh, A.**, 2019. Use of Magnetic Susceptibility as a proxy - to determine the pollution rate from Chilika lake sediments, 3<sup>rd</sup> National Geo Research Scholar Meet, 6 - 8 June, p. 3
19. Das, S., **Sanyal, S., Karmakar, S., Sengupta, S., Sengupta, P.**, (in press). Origin of Metasomatic Nepheline in an alkaline rock from parts of the Chotanagpur Granite Gneissic Complex (CGGC), India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4192-3571
20. Dasgupta, U., Barbieri, G., Vaiani, S.C., **Ghosh, A.**, 2019. Applying faunal indices for palaeoenvironmental reconstructions with benthic foraminifera: a case from a Holocene succession of the Po Delta, Italy. XX INQUA Congress: Linking land and sea - multiple approaches to investigating human-environment interactions in the coastal zone 2, Dublin, Ireland 25- 31 July
21. Dasgupta, U., **Ghosh, A.**, Buragohain, D., 2019. Reconstruction of past environment – a sediment core study from Chilka Lagoon, Odisha. XXVII Indian Colloquium on Micropaleontology and Stratigraphy, 4- 6 November, p. 99
22. Dey, A., Karmakar, M., **Sanyal, S., Sengupta, P.**, (in press). Controls on stability of sapphirine-cordierite-corundum in an amphibolite from parts of the Southern Granulite Terrane, India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4692-4151
23. **Ghosh, A.**, Dasgupta, U., Nomura, R., 2019. A study of pore geometry of Ammonia – A New biological proxy for bottom-water oxygen condition. XXVII Indian Colloquium on Micropaleontology and Stratigraphy, 4- 6 November, p. 117
24. **Ghosh, A.**, Dasgupta, U., Tsujimoto, A., Nomura, R., 2019. Reconstruction of palaeoenvironment of Chilka Lagoon, East coast of India using benthic foraminiferal records. XX INQUA Congress: Linking land and sea - multiple approaches to investigating human-environment interactions in the coastal zone, Dublin, Ireland 25-31 July
25. Ghosh, S., **Pal, D.C.**, Sarkar, B., Mukhopadhyay, S., Sinha, D.K., (in press). Mineralogy and preliminary geochemistry of heavy minerals in radioactive Quartz-Pebble-Conglomerates, Birtoal-Bagiyabahal area, Sundergarh district, Odisha, eastern India and their implications. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 6765-5990
26. Karmakar, S., **Sengupta, P.**, (in press). Formation of clinohumite in dolomitic marbles from parts of Central India: Evidence for Ti mobility during regional metamorphism. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4088-3446
27. Katiyar, V., **Chatterjee, S.M.**, Manna, A., Sarkar, A.K., (in press). Structural variation across Main Central Thrust (MCT) in Yamuna and Bhagirathi river valley section, NW Himalaya, India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4120-3471
28. Lahiri, N., Das, E., Karmakar, S., **Karmakar, S., Sengupta, P.**, (in press). Origin of oscillatory Ti-zoning in garnet from an UHT metamorphosed calc-silicate granulite from parts of Eastern Ghats Province, India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4188-3573
29. **Maiti, G. Sen, J., Mandal, N.**, 2020. Lubrication dynamics for exhumation of high-pressure rocks in subduction zones. EGU
30. Maiti, G. Sen, J., **Mandal, N.**, 2019. Gravitational collapse of an overriding plate in subduction zones: an insight from lubrication theory. Topo-Europe Conference, 5-10 May, 2019, Granada, Spain. Abstract Id: 26572

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31. Maity, R., **Mondal, S.**, 2019. Magnetic Susceptibility Mapping of Road Dust: An Appraisal to Environmental Pollution. 3rd National Geo-Research Scholars Meet, 6- 8 June
32. Maity, R., **Mondal, S.**, Venkateshwarlu, M., Kapawar, M.R., 2019. Rock magnetic investigations of road dust and fly ash near Mejia thermal power station of West Bengal, India: In determining the industrial pollution. 2<sup>nd</sup> Triennial Congress of FIGA, 13-16 October
33. **Mandal, S.**, Chakraborty, S., Roy, P., 2020. Seismic forcing for siliciclastic to carbonate transition in the Jurassic succession of Jaisalmer, Rajasthan. Humboldt Kolleg 2020 on “Flow”, Raichak, West Bengal, 3<sup>rd</sup> - 5<sup>th</sup> January, p. 59. ISBN- 978-93-83660-57-5
34. Manna, A., Dutta, U., **Chatterjee, S.M.**, Sarkar, A.K., Roy, A., (in press). Reaction enhanced deformation during exhumation of meta-gabbro in South Delhi Fold Belt, Rajasthan, India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 6104-5541
35. Mukherjee, S., Dey, A., **Sanyal, S., Sengupta, P.**, (in press). Origin and evolution of A-type granite from parts of the Chotanagpur Granite Gneissic Complex (CGGC), East Indian Shield. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4473
36. Neogi, M., **Ghosh, A.**, Dasgupta, U., 2019. Down-core distribution of benthic foraminifera from the central part of Chilika Lagoon, Odisha. XXVII Indian Colloquium on Micropaleontology and Stratigraphy, 4 - 6 November, p. 104
37. Palmjunder, M., **Chaudhuri, S.**, Das, K.V., Nag S.K., 2019. Status of Groundwater Scenario and its suitability for Irrigation and Drinking Purposes - a Case Study in Taldangra Block, Bankura District, West Bengal, India. HYDRO-19 INTERNATIONAL, 24<sup>th</sup> International Conference on Hydraulics, Water Resources and River Engineering, Osmania University, Hyderabad, India. 18– 20 December, p. 102
38. Paul, P., **Mondal, S.**, 2019. A Paleocurrent and Sedimentary Environmental Appraisal from The Lower Gondwana Rocks Using AMS Analysis. 3rd National Geo-Research Scholars Meet, 6- 8 June
39. Paul, S., **Ghosh, A.**, Chatterjee, D., 2019. A study of benthic foraminifera from the northern sector of Chilika Lake, Odisha. XXVII Indian Colloquium on Micropaleontology and Stratigraphy, 4 - 6 November, p. 105
40. Roy, A., **Chatterjee, S.M.**, Sarkar, A.K., Dutta, U., Das, S., Manna, A., (in press). Deformation and metamorphic mineral reactions in Grenvillian granitoids of South Delhi Fold Belt, Rajasthan, India and its tectonic significance. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4082-3481
41. Roy, A., Maiti, G., Sen, J., **Mandal, N.**, (in press). Analogue modelling of the gravity-induced crustal flow pattern in India-Asia continental collisional tectonics: a viscous rheological approach. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 1436-2888
42. Roy, S., **Pal, D.C.**, Samanta, S.K., Patnaik, J.K., Pachamuthu, J., Sinha, D.K., (in press). EPMA major and LA-ICPMS trace element geochemistry of chlorite, and fluid inclusion studies of quartz from U and Cu occurrence in the Bangurdi area, western part of the Singhbhum Shear Zone, eastern India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 7566-6782
43. Roy Choudhury, S., Dey, A., Brandt, S., **Sanyal, S., Sengupta, P.**, (in press). Petrology of a suite of metapelites from parts of Tamil Nadu, India: Evidence for Ediacaran-Cambrian collision in the Granulite Terrane of South India. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 4194-3572
44. Samanta, P., **Mukhpadhyay, S.**, Sen, A., Bhattacharya, A., Koley, A., Basu, A., (in press). The terrestrial fan deposits in the Neoproterozoic Kerur Formation of the Badami Group, Belgaum District, Karnataka, India: Control and stratigraphic Architecture. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract Number: 6028
45. **Sanyal, S.**, Roy Choudhury, S., Sinha, D.K., Panigrahi, B., Das, S., **Sengupta, P.**, (in press). On the formation of REE-bearing minerals associated with carbonatite from parts of the North Purulia Shear Zone (NPSZ), East Indian Shield. 36<sup>th</sup> International Geological Congress, New Delhi, India

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46. Sarkar, A.K., **Chatterjee, S.M.**, Roy, A., Manna, A., (in press). Interpretation of microstructures in deformed granite from the western part of South Delhi Fold Belt, Rajasthan and its tectonic implications. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract No. 2767-3459
47. Sen, A., Basu, A., Biswas, D., Samanta, P., **Mukhopadhyay, S.**, 2020. Sedimentation Pattern and Palaeogeographic Reconstruction from a Late Archaean BIF of Kushtagi-Hungund Schist Belt, Karnataka. Humboldt Kolleg 2020 on “Flow”, Raichak, West Bengal, 3 - 5 January
48. Sen, A., Ghosh, N., Prakash, B.G., Basu, A., Samanta, P., **Mukhopadhyay, S.**, (in press). Stratigraphic Evolution and Sequence Architectural Framework Analysis of the Western Portion of the Neoproterozoic Badami Group, Kaladgi Basin, Karnataka. 36<sup>th</sup> International Geological Congress, New Delhi, India. Abstract Number: 5312
49. Sur, S., **Mandal, S.**, Roy, P. 2020. Assessment of neotectonic effect on Quaternary deposits in Darjeeling Himalayas. Humboldt Kolleg 2020 on “Flow”, Raichak, West Bengal, 3 - 5 January, p. 70. ISBN- 978-93-83660-57-5
50. Tuti. L., Palmjunder, M., **Chaudhuri, S.**, Das, V.K., 2019. Control of Geology and Geo-morphology on Groundwater scenario of Indpur Block, Bankura, district, West Bengal, India – A pre-monsoon appraisal. HYDRO-19 INTERNATIONAL, 24<sup>th</sup> International Conference on Hydraulics, Water Resources and River Engineering, Osmania University, Hyderabad, India. 18– 20 December, p. 119

### 6. Ongoing Collaborations:

#### Anupam Ghosh

Prof. Ritsuo Nomura, Shimane University, Japan

Prof. Akira Tsujimoto, Shimane University, Japan

Prof. Helena Alexanderson, Lund University, Sweden

Prof. Stefano C. Vainia, Bologna University, Italy

Dr. Rahul Mohan, Scientist E, National Centre of Polar Research, Goa. Anupam Ghosh participated as a member of an International bilateral project (2016-2019) by Dr. Rahul Mohan under the DST- Russian Science Foundation on “Teleconnections of the Late Quaternary Paleoclimatic events between Sub-Polar North Atlantic and Southern Indian Ocean”

Dr. Tushar Kaushik, Scientist B, Agharkar Research Institute, Pune

#### Dipak C Pal

Prof. Chris McFarlane, and Prof. David Lentz, Department of Earth Sciences, University of New Brunswick, Canada

Dr. Louise Corriveau, Geological Survey of Canada

Prof. David Selby, Department of Earth Sciences, Durham University, UK

Prof. Dewashish Upadhyay, Department of Geology and Geophysics, IIT, Kharagpur

Dr. A.K. Sarangi, Uranium Corporation of India Limited

#### Nibir Mandal

Dr. Fernando Manuel Ornelas Guerreiro Marques; Departamento de Geologia, Faculdade de Ciências, Universidade de Lisboa, Lisboa Portugal

Dr. Changyeol Lee; Department of Earth System Sciences; Yonsei University, Seoul, South Korea

Prof. Santanu Bose; Department of Geology; Presidency University, Kolkata, India

Dr. Santanu Misra; Department of Earth Sciences; IIT Kanpur, India

Dr. Amiya Baruah; Department of Geology; Cotton University, Guwahati, India

Dr. Ashok Arya, BARC, India

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### **Pulak Sengupta**

Prof. Mauricio Ibanez Mejia, Department of Earth and Environmental Sciences, University of Rochester, USA

Dr. Soenke Brandt, Friedrich-Alexander-University of Erlangen-Nürnberg, Germany

Prof. R. Kleinschrodt, Department of Geology and Mineralogy, University of Cologne, Germany

Prof. M.M. Raith, Steinmann Institute of Geology, Mineralogy and Palaeontology, University of Bonn, Germany

### **Sanjoy Sanyal**

Prof. Mauricio Ibanez Mejia, Department of Earth and Environmental Sciences, University of Rochester, USA

Dr. Soenke Brandt, Friedrich-Alexander-University of Erlangen-Nürnberg, Germany

Prof. R. Kleinschrodt, Department of Geology and Mineralogy, University of Cologne, Germany

Prof. M.M. Raith, Steinmann Institute of Geology, Mineralogy and Palaeontology, University of Bonn, Germany

### **Sadhana M. Chatterjee**

Dr. Upama Dutta, IIT (ISM) Dhanbad, Jharkhand

### **Soumik Mukhopadhyay**

Dr. Pradip Samanta, University of North Bengal, Darjeeling- 734013, India

### **Subir Sarkar**

Prof. Santanu Banerjee, IIT Mumbai

Prof. Partha Pratim Chakraborty, Delhi University

### **Subrata Karmakar**

Prof. M.M. Raith, Steinmann Institute of Geology, Mineralogy and Palaeontology, University of Bonn, Germany

Dr. Kaushik Das, Department of Earth and Planetary Systems Science Graduate School of Science, Hiroshima University, JAPAN [Analytical data are generated at their laboratories for faculty member and his student, which are under process]

### **Susanta Chaudhuri**

Prof. Koustuv Debnath, Professor & Head, Department of Aerospace Engineering and Applied Mechanics, IEST, Shibpur, Howrah. W.B, India, Mobile: +919830434409

Dr. Krishnendu Barman, Assistant Professor, Department of Mathematics, Vidyasagar University, Paschim Midnapore, WB. India. Mobile: +918777809557

## **7. Awards/ Honors/Recognitions/Fellowships received:**

**Dipak C. Pal** received **D.N. Thakur award (2018-2019)** from the Mining Geological and Metallurgical Institute of India for outstanding contribution in Earth Sciences

**Susanta Chaudhuri** received the '**Best Paper award**' in the '**River Hydraulics**' theme for the presented paper entitled 'Comparison of scour mechanisms and downstream bed modification around circular pier for different stream bed characteristics – an experimental approach' in '**HYDRO-19 INTERNATIONAL**', 24<sup>th</sup> International Conference on Hydraulics, Water Resources and River Engineering, Osmania University, Hyderabad, India. December 2019

**8. Serving as member/expert in any national/international academic body/committee (in good standing)**

**Dipak C Pal**

- i) Council member of the International Association on the Genesis of Ore Deposit (IAGOD) as the Regional Councilor from India for four years' term (2016-2020)

**Nibir Mandal**

- i) Member of the Inter-academy panel (INSPIRE Programme), DST, India
- ii) Convener of the Sectional Committee (Earth Science), WAST (2017-)
- iii) Member of the Sectional Committee, WAST (2014-)
- iv) Core Member of the Programme Advisory Committee (SERB), (2015-)
- v) Member of the Council, Indian National Science Academy, New Delhi (2015)
- vi) Chairman of the INSPIRE Faculty Programme, Earth & Planetary Sciences (2016-)
- vii) Chairman of the Start-Up Research Grant (Young Scientist), SERB (2017-)
- viii) Convener of the Selection of Summer Fellowship, Earth Sciences, Indian Academy of Sciences (2018-)
- ix) Member of the Research Advisory Committee, Earth Sciences, CSIR-HRDG, New Delhi (2018-)
- x) Chairman (Subject) of the Committee in Basic Sciences, SPARC Programme, MHRD, New Delhi (2018)
- xi) Chairman, Expert Committee, Earth Sciences for SRG and NPDF programmes, SERB-India (2018-)
- xii) Member of the Faculty Selection Committee in Earth Sciences, PSC, Govt. of West Bengal, Kolkata (2019)
- xiii) Member of the Faculty Selection Committee in Earth Sciences, IIT Roorkee (2020)
- xiv) Member of the Selection Committee for Institute Awards, IIT Mumbai (2020)

**Pulak Sengupta**

- i) Member, Sectional Committee, INSA
- ii) Member, Sectional Committee, IASc
- iii) Member, Earth and Atmospheric Science, PAC, DST
- iv) Member, Earth and Environmental Sciences, DST-FIST
- v) Member, Inter Academy Science Panel
- vi) External Expert, SAIF program, UGC
- vii) External Expert, CAS program, Department of Geology, BHU

**Subir Sarkar**

- i) International Brand Ambassador, SEPM
- ii) Member, International association of Sedimentologist
- iii) Joint Secretary, Indian Association of Sedimentologist

**9. Editorial Board Member (in good standing) in any Journal:**

**Dipak C. Pal** is an Associate Editor, Economic Geology Section of Frontiers in Earth Science

**Pulak Sengupta** is an Associate Editor, Journal of Earth System Sciences, Springer-Verlag

**Subir Sarkar** is in the editorial board of Journal of Palaeogeography, Springer-Verlag and The Journal of the Indian Associations of Sedimentologists

**10. Notable Achievements of M.Sc./Ph.D. Students:**

- 1) 07 students qualified All India JAM (Joint Admission Test for MSc)



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- 2) On-campus placement drive: 07 students - Hindustan Zinc Limited (Vedanta Group)
- 3) Off-campus placement drive: 02 students - Rystad
- 4) 07 students qualified NET (02 JRF and 5 LS) and 08 students qualified GATE
- 5) 1 Research Scholar has been through with UPSC Examination, 2019 and selected to join Geological Survey of India (GSI) as Assistant Geologist
- 6) Shri Niloy Chakrabarti (Student) ranked first in the all India National Eligibility Test (NET) (Earth Atmosphere, Ocean and Planetary Sciences) and ranked second in GATE
- 7) Shri Sudip Kumar Mandal (DST INSPIRE SRF) received a grant form 'HPC-Europa3 Transnational Access programme' for conducting his research work in the School of Physics and Astronomy at University of Edinburgh.
- 8) Dr. Shreya Karmaker (Research Associate) received Saratlal Biswas Memorial Medal for her best published work in Mineralogy and Petrology, Asiatic Society 2019
- 9) Dr. Subham Mukherjee (Research Scholar) has been Awarded INSPIRE-Faculty Fellowship. He has also been awarded Kothari Post Doctoral Fellowship
- 10) Dr. Anindita Dey (Research Scholar) has been awarded Kothari Post Doctoral Fellowship
- 11) Dr. Enakshi Das (Research Scholar) has been selected and working as Assistant Professor in Department of Geology Shahid Matangini Hazra Government College for Women, Nimtouri, Medinipur, West Bengal
- 12) Dr. Saurodeep Chatterjee (Research Scholar) has been awarded Post-Doctoral Fellowship from IIT-ISM (Dhanbad)
- 13) Smt. Nivedita Lahiri (Research Scholar) has been selected and working as Assistant Professor in Hooghly Mohsin College, West Bengal
- 14) Smt. Indrani Mondal (Research Scholar) has been selected and working as Assistant Professor in J.K. College, Purulia, West Bengal. She also passed the Public Service Commission, Govt. of West Bengal selection and got placement in Shahid Matangini Hazra Government College for Women, Nimtouri, Medinipur, West Bengal as Assistant Professor

### INSTRUMENTATION SCIENCE

Phone: 033-2457-2187/2423

H.O.D: Dr. Anup Kr. Ghosh

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#### 1. A. Courses Offered :

Name of the Course	Duration of Course	No. of Students Enrolled
M.Sc.(Instrumentation)	2 Years	23
PhD	5 Years	1
Research Scholars		7

#### 1. B. Number of Faculty Members: 2, Vacant- 3

2. B. Major Research Activities:

1. Nano-Ag/DLC/Cellulose Free-Standing Films Towards Anti-bacterial and Bio-compatible Futuristic Bandage Applications D Das, R Dey, S Das, S Hussain, AK Ghosh, AK Pal Journal of Polymers and the Environment 28 (2020), 284-294
2. "Temperature and frequency dependent dielectric relaxation of Ni-Fe-Oxide nanocomposites" A. Ray, P. Maji, A. Roy, S. Saha, P. Sadhukhan, S. Pujaru, P. Sengupta, Yasnur Sk. and S.N. Das, **Material Research Express**, 6 (2020) 12
3. Electrochemical Energy Storage Properties of Ni-Mn-Oxide Electrodes for Advance Asymmetric Supercapacitor Application: A Ray, A Roy, S Saha, M Ghosh, S Roy Chowdhury, T. Maiyalagan, S K Bhattacharya, and S Das, **Langmuir** 35 (2019), 8257-8267
4. Electron – Phonon interaction to tune pseudocapacitive properties of NiO, S. Bhattacharjee, A. Ray, A. Samanta, S. Das, A. K. Mukhopadhyay, C. K. Ghosh, **Physica B**, 575 (2019) 411686
5. Photo detector based on graded band gap perovskite crystal, P. Sadhukhan, S. Das, **Solar Energy** 194 (2019) 563-568
6. Significantly improved and synergistic effect of Pt–ZnO–Bi<sub>2</sub>O<sub>3</sub> ternary hetero-junctions toward anode-catalytic oxidation of methanol in alkali, K. K. Bera, M. Chakraborty, S. R. Chowdhury, A. Ray, S. Das, S. K. Bhattacharya, **Electrochimica Acta**, 322 (2019) 134775
7. Perovskite methylammonium lead bromide incorporated poly (vinylidene fluoride) composite for flexible cantilever based self-powered vibration sensor, A. Sultana, M. M. Alam, K. Roy, P. Sadhukhan, S. Das, S. Sarkar, T. R. Middy, D. Mandal, **Materials Research Express** 6 (2019) 115709
8. Effect of morphological ordering on the electrochemical performance of MnO<sub>2</sub>-Graphene oxide composite: S. Saha, P. Maji, D. A Pethsangave, A Roy, A. Ray, S. Some, S.N. Das; **Electrochimica Acta** 317 (2019) 199-210
9. Methylammonium Lead Iodide Incorporated Poly (vinylidene fluoride) Nanofibers for Flexible Piezoelectric–Pyroelectric Nanogenerator, A. Sultana, S. K. Ghosh, Md M. Alam, P. Sadhukhan, K. Roy, M. Xie, C. R Bowen, S. Sarkar, S. Das, T. R. Middy, D. Mandal, **ACS applied materials & interfaces** 11 (2019) 27279-27287
10. Temperature Control Synthesis of Platinum Nanoparticle-Decorated Reduced Graphene Oxide of Different Functionalities for Anode-catalytic Oxidation of Methanol: S. Banik, A. Mahajan, A. Ray, D. Majumdar, S. Das and S. K. Bhattacharya; **FlatChem** 16 (2019) 100111
11. Electrochemical Energy Storage Properties of Ni-Mn-Oxide Electrodes for Advance Asymmetric Supercapacitor Application: A. Ray, A. Roy, S. Saha, M. Ghosh, S. Roy Chowdhury, T. Maiyalagan, S. K. Bhattacharya, S. N Das; **Langmuir** 35 (2019) 8257-8267
12. Low Temperature Excitonic Spectroscopy Study of Mechano-synthesized Hybrid Perovskite: P. Sadhukhan, A. Pradhan, S. Mukherjee, P. Sengupta, A. Roy, S. Bhunia, and S.N Das; **Applied Physics Letters** 114 (2019) 131102
13. Microstructure, optical and electrical characterizations of nanocrystalline ZnAl<sub>2</sub>O<sub>4</sub> spinel synthesized by mechanical alloying: effect of sintering on microstructure and properties: G. Maity, P. Maji, S. Sain, S.N. Das, T. Kar and S.K Pradhan; **Physica E: Low-dimensional Systems and Nanostructures** 108 (2019) 411-420
14. Study on Charge transportation and scaling behavior of CsPbI<sub>3</sub> microwire: P. Maji, S. Chatterjee, S.N. Das; **Ceramics International** 45 (2019) 6012-6020
15. Photovoltaic properties of F:SnO<sub>2</sub>/CdS/CuO/Ag heterojunction solar cell Author links open overlay panel, S Dolai, R Dey, S Hussain, R Bhar, A K Pal Materials Research Bulletin 109 (2019)1-9

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### LIFE SCIENCE & BIO-TECHNOLOGY

Phone: 033-2457-2189/2466

H.O.D: Prof. Biswadip Das

E-mail: hodlifescbiotech@jadavpuruniversity.in

#### 1. A. Courses Offered :

Name of the Course	Duration of the course	No. of students enrolled
M.Sc.(Biotechnology)	2 Years	45

#### 1. B. Number of Faculty Members :

Professors	Associate Professor/ Readers	Assistant Professor/Lecturer
3	0	2

#### 2. A. Area of Research Activities : (Broad Areas)

1. Eukaryotic Gene Expression and its regulation and fidelity using baker's yeast *Saccharomyces cerevisiae* as the model organism, Nuclear mRNA biogenesis and degradation, Yeast Molecular Genetics
2. Microbial Biodiversity & Microbial Biotechnology
3. Molecular Biology & Gene Technology
4. Cell biology of cancer, aging, Nanobiotechnology

#### 2. B. Major Research Project : (Departmental/Individual, Name of the Project/Funding Agency)

##### Investigators-Name of Project-Funding Agency

##### Prof. Parimal Karmakar

- Development of polyherbal based functional-biopolymer hydrogel for delivery of novel healing agents in excision and burn wound (BT/PR25380/NER/95/1168/2017)-DBT twinning , ongoing Project cost: 75.42 Lakhs-2018-21
- To assess the contribution of PTEN and its post-translational modulation in DNA repair DST- sub-pathways (EMR/2016/001151)-Dept of Science and Technology, Govt. of India, ongoing, Project cost 40.7 lakhs, 2017-20
- Development of functional biopolymer-based matrices for delivery of healing agents in 2018-21 chronic wound (File no: ST/P/S &T/2G-13/2017)-DBT,ongoing,-WB 15 Lakhs, 2018-21

##### Prof. Biswadip Das

Functional Role of Nrd1-Sen1-Nab3 (NNS) trimeric protein complex in the Nuclear mRNA surveillance in *Saccharomyces cerevisiae*-Funding Agency: DBT, Project Cost: 67.76 lakhs

##### Dr. Paltu Kumar Dhal

- Indigenous Microorganisms (IMO's)- based Technology for Bioremediation of Phosphogypsum generated from Phosphoric Acid Plants in India. (Code:570GLO2013)-PhosAgro/UNESCO/IUPAC Research-Ongoing Grant. Project Cost :US\$28,388
- Endophytic Bacterial Community of Rice Root from Saline Zone of Sundarban; West Bengal: Development of Microbial Biofertilizers using Indigenous Microorganisms (IMO's)- based Technology for Higher Rice Production-Funding Agency : SERB, GOI Ongoing Grant. Project Cost :38.19 Lakhs
- Agricultural Cultivation for Scientific Adaptation of *Santalum album* L. plant-Funding Agency: WB- DST. Project Cost: 12.11

##### Dr. Arunima Sengupta

- Development of anti-fibrotic therapeutic strategies in combating cardiomyopathy: Implication of FOXM1 transcription factor. RUSA 2.0 Project cost 10 Lakhs, till August 2020

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- AMPK, FOXO AND NFATC3 transcription factor function in regulation of cardiomyocyte proliferation. (Ref No: BT/Bio-CARe/01/9686/2013-14)-DBT-Project cost 50.78 lakhs, completed on May, 2019

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

#### Dr. Biswadip Das

**Invited lecture:** in 11<sup>th</sup> International Conference Biology of Yeast and Filamentous Fungi at University of Hyderabad, India (27/11/19-29/11/19): Presented an invited oration Entitled “Messenger RNA Surveillance in Eukaryotic Cells: safeguarding the cells and regulating the gene expression.”

**Session Chaired :** in a scientific session entitled ‘RNA Biogenesis’, 11<sup>th</sup> International Conference Biology of Yeast and Filamentous Fungi at University of Hyderabad, India 27/11/19-29/11/19)

#### Dr. Paltu Kumar Dhal

**Session Chaired:** 2nd International Conference on Advances in Bioprocess Engineering and Technology 2020 (ICABET 2020) -Department of Chemical Engineering and Department of Biotechnology, Heritage Institute of Technology, Kolkata- 20-22 January, 2020

#### Dr. Arunima Sengupta

##### Invited Lecture Delivered:

- National Conference on Stress Response and Diseases (UGC- SAP) Department of Biochemistry and Biophysics, University of Kalyani, West Bengal, India-6–7 March, 2020
- 19<sup>th</sup> All India Congress of Genetics and Genomics, International Symposium on “Air pollution and on its impact on human health”-CSIR-IICB & Archana Sharma Foundation of Calcutta-2–4 December, 2019

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

#### Dr. Biswadip Das

11<sup>th</sup> International Conference Biology of Yeast and Filamentous Fungi at University of Hyderabad, India 27–29 November, 2019

#### Dr. Paltu Kumar Dhal

Workshop on ‘From Ship to Coast: Blue Economy and Sustainable Livelihood’ - DWIH New Delhi, India 1 October, 2020

### 3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teachers, Title of the Course, Duration, Place)

#### Dr. Arunima Sengupta

Participants-Interdisciplinary Refresher Course in Life Science conducted by HRDC-CU-2019, Kolkata, Calcutta University, Bullygange Science College, Department of Botany, 4–17 January, 2020

### 3. E. Orientation Courses/Refresher Courses Organized: (Name of the Teachers, Title of the Course, if any, Duration,Place)

Dr.Paltu Kumar Dhal and Dr. Arunima Sengupta Joint Coordinators-Refresher course on Emerging areas of Life Science-HRDC-JU and Department of Life Science & Biotechnology, Jadavpur University 27 January–8 February, 2020

**4. A. Books/Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)**

De D., **Karmakar P.**, Bhattacharya D. (2020) Stem Cell Aging and Regenerative Medicine. In: . Advances in Experimental Medicine and Biology. Springer, New York, NY. [https://doi.org/10.1007/5584\\_2020\\_577](https://doi.org/10.1007/5584_2020_577)

Pranamita Kunda, Abhishek Mukherjee and **Paltu Kumar Dhal**. “Bacterial biological control agents for soil-borne diseases management in pulses: Present status and future prospects” in “MICROBIAL MITIGATION OF STRESS RESPONSE OF FOOD LEGUME PLANTS”. In book: Microbial Mitigation of Stress Response of Food Legumes. CRC press, Taylor and Francis (DOI: 10.1201/9781003028413-22)

**4. B. Articles Published in Journals:(Including National/International & Peer-reviewed Journals)  
(Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**

**Dr. Parimal Karmakar**

1. Effects of copper oxide nanoparticle on gill filtration rate, respiration rate, hemocyte associated immune parameters and oxidative status of an Indian freshwater mussel Abhishek Raya, Arunodaya Gautama, Santanu Dasa, Kunal Palb, Subhadeep Dasc, Parimal Karmakar, Mitali Raya, Sajal Raya, **Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology**, Volume 237, November 2020, 108855, IF 2.89
2. Radioprotection of thymine and calf thymus DNA by an azocompound: mechanism of action followed by DPPH radical quenching & ROS depletion in WI 38 lung fibroblast cells Durba Ganguly, Ramesh Chandra Santra, Swagata Mazumdar b, Abhijit Saha, Parimal Karmakar, Saurabh Das, **Heliyon**, Vol. 6, Issue 5, Published online: 29 May, 2020, IF
3. Essential oil impregnated luminescent hydroxyapatite: Antibacterial and cytotoxicity studies, Somtirtha Banerjee, Biswajoy Bagchi, Kunal Pal, Suman Bhandary, Arpan Kool, Nur Amin Hoque, Prosenjit Biswas, Pradip Thakur, Kaustuv Das, Parimal Karmakar, Sukhen Das. **Materials Science and Engineering: C**, 2020. IF 5.88
4. A dual role of cumin-seed extract towards the silver nanoparticle synthesis and stabilisation and its potential for antibacterial and anticancer activities through oxidative damage. Nurunnesa Siddiqui, Kunal Pal, Parimal Karmakar, Md Maidul Islam, Subrata Mukhopadhyay. **Adv. Nat. Sci.: Nanosci. Nanotechnol.** 11 (2020) 025019 (9pp). IF: 0.94
5. “Facile synthesis of antibiotic encapsulated biopolymeric okra mucilage nanoparticles: molecular docking, in vitro stability and functional evaluation” by Masum et al, **Advances in Natural Sciences: Nanoscience and Nanotechnology**, 2020. IF: 1.35
6. E2F5 promotes prostate cancer cell migration and invasion through regulation of TFPI2, MMP-2 and MMP-9. Karmakar D, Maity J, Mondal P, Shyam Chowdhury P, Sikdar N, Karmakar P, Das C, Sengupta S. **Carcinogenesis**. 2020 May 9. pii: bgaa043. doi: 10.1093/carcin/bgaa043. [Epub ahead of print], IF 5.33
7. The protective role of metformin in autophagic status in peripheral blood mononuclear cells of type 2 diabetic patients. Bhattacharya D, Dutta M, Mukhopadhyay M, Bhattacharyya M, Chowdhury S, Karmakar P. **Cell Biol Int**. 2020 April 1. doi: 10.1002/cbin.11355. [Epub ahead of print], IF 1.74
8. A mechanistic insight into the bioaccessible herbometallic nanodrug as potential dual therapeutic agent. D Bera, K Pal, B Ruidas, D Mondal, S Pal, BK Paul, P Karmakar, S Das, ... **Materials Today Communications**, Vol 24, September 2020, 101099, IF 2.678
9. 4-Methyl-2, 6-diformylphenol based biocompatible chemosensors for pH: discrimination between normal cells and cancer cells. T Dhawa, A Hazra, A Barma, K Pal, P Karmakar, P Roy **RSC Advances** 10 (26), 15501-15513. IF 3.049



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10. Green cardamom mediated phytosynthesis of ZnONPs and validation of its antibacterial and anticancerous potential, S Pal, K Pal, S Mukherjee, D Bera, P Karmakar, S Das., 2020 *Mater. Res. Express* 7 015068 .IF:1.9
11. Development of two fluorescent chemosensors for selective detection of Zn<sup>2+</sup> and Al<sup>3+</sup> ions in quinoline platform by tuning of substituent in the receptor part: Elucidation of ...P Ghorai, K Pal, P Karmakar, A Saha. **Dalton Transactions, Issue 15, 2020, IF:4.05**
12. Development of Rhodamine 6G-Based Fluorescent Chemosensors for Al<sup>3+</sup>-Ion Detection: Effect of Ring Strain and Substituent in Enhancing Its Sensing ...J Mandal, P Ghorai, K Pal, T Bhaumik, P Karmakar, A Saha. **ACS Omega(2020) ACS Omega** 2020, 5, 1, 145–157. IF2.58

### Dr. Biswadip Das

1. Das, S., Biswas, S., Chaudhuri, S., Bhattacharya, A. and **Das, B.** (2019) A nuclear zip code in *SKS1* mRNA promotes its slow export, nuclear retention and degradation by the Nuclear exosome/DRN in *Saccharomyces cerevisiae*. **J. Mol. Biol.**, 431, 3626-3646. (Impact Factor 4.76)
2. Chaudhuri, A., Das, S., and **Das, B.** (2020) The Role RNA *cis*-Elements in the intracellular trafficking, transport, and localization of messenger RNAs in *Saccharomyces cerevisiae* **WIRES RNA** e1591, 1-37 <https://doi.org/10.1002/wrna.1591>(Impact Factor 6.913)
3. Bhattacharjee, A., Das, S., Das, B., and Roy, P. (2020) Intercalative DNA binding, protein binding, antibacterial activities and cytotoxicity studies of a mononuclear copper(II) complex, **Inorg. Chimic. Acta**, 514, 119961-72. <https://doi.org/10.1016/j.ica.2020.119961> (Impact Factor 2.3)
4. Singh, P., Chaudhuri, A, Banerjea, M., Marathe, N., and **Das, B.** (2020) Nrd1p identifies aberrant and natural exosomal target messages during the nuclear mRNA surveillance in *Saccharomyces cerevisiae*. **bioRxiv**.doi:<https://doi.org/10.1101/2020.06.02.129106>

### Dr Ratan Gachhui

1. Soumyadev Sarkar, Avishek Mukherjee, Subhadeep Das, Bidisha Ghosh, Shouvik Chaudhuri, Debanjana Bhattacharya, Arpita Sarbajna, and Ratan Gachhui. "Nitrogen deprivation elicits dimorphism, capsule biosynthesis and autophagy in *Papiliotremalaurentii* strain RY1." *Micron* 124 (2019): 102708. Impact factor-1.52
2. Soumyadev Sarkar, Avishek Mukherjee, Rubia Parvin, Subhadeep Das, Uttariya Roy, Somdeep Ghosh, Punarbasu Chaudhuri et al. "Removal of Pb (II), As (III), and Cr (VI) by nitrogen starved *Papiliotremalaurentii* strain RY1." *Journal of basic microbiology* 59, no. 10 (2019): 1016-1030. Impact factor-1.58
3. Avishek Mukherjee, Soumyadev Sarkar, Suchetana Gupta, Sayanika Banerjee, Sanjib Senapati, Riya Chakrabarty, and Ratan Gachhui. "DMSO strengthens chitin deacetylase-chitin interaction: Physicochemical, kinetic, structural and catalytic insights." *Carbohydrate polymers* 223 (2019): 115032. Impact factor-7.182
4. Avishek Mukherjee, Soumyadev Sarkar, Rubia Parvin, Debbethi Bera, Uttariya Roy, and Ratan Gachhui. "Remarkably high Pb<sup>2+</sup> binding capacity of a novel, regenerable bioremediator *Papiliotremalaurentii* RY1: Functional in both alkaline and neutral environments." *Ecotoxicology and Environmental Safety* 195 (2020): 110439. Impact factor-4.52

### Dr. Paltu Kumar Dhal

1. Pranamita Kunda, **Paltu Kumar Dhal**, Abhishek Mukherjee. Endophytic bacterial community of rice (*Oryza sativa* L.) from coastal saline zone of West Bengal: 16S rRNA gene based metagenomics approach. *Meta Gene*. 18:79-86(2018)
2. Tilak Nayak, Debjit De, Chiranjib Barman, Parimal Karmakar, Argha Deb, **Paltu Kumar Dhal**. Characterization of indigenous bacteria from radon-rich groundwater and their tolerance to physicochemical stress. *Int. J. Environ. Sci. Technol.* 17, 1627–1636 (2020)

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3. **Dhal PK**, Kopprio GA, Gärdes A (2020) Insights on aquatic microbiome of the Indian Sundarbans mangrove areas. PLoS ONE 15(2): e0221543. <https://doi.org/10.1371/journal.pone.0221543>
4. Sucharita Ghosh, Tilak Nayak; **Paltu Kumar Dhal**, Tushar Kanti Danger, Soumendranath Chatterjee. CHARACTERIZATION OF PLANT GROWTH PROMOTING *Bacillus subtilis* (VBKT5) ISOLATED FROM VERMICOMPOST. Journal of Life Science (accepted)

### Dr. Arunima Sengupta

1. Sen P, Polley A, **Sengupta Arunima** and Chakraborty S.; Asporin reduces adult aortic valve interstitial cell mineralization induced by osteogenic media and Wnt signaling manipulation in vitro; International Journal of Cell Biology; 2020
2. Samanta J, Mondal A, Saha S, Chakraborty S, **Sengupta A.**; Oleic acid protects from arsenic induced cardiac hypertrophy via AMPK/FoxO/NFATc3 pathway; Cardiovascular Toxicology; doi: 10.1007/s12012-019-09550-9, 2019

### 5. Collaborative Programmes:

#### Dr. Biswadip Das

1. With Prof. Krishnaveni Mishra, School of Life Science, University of Hyderabad, area of work: mRNA nuclear retention, export and intranuclear targeting and recruitment in sub-nuclear structure
2. With Prof. Arindam Bhattacharyya, Department of Zoology, University of Calcutta, area of work: mRNA cellular localization
3. With Dr. Srikanta Goswami, National Institute of Biomedical Genomics, Kalyani, area of work: Transcriptomic analyses of the recruitment and binding profiles nuclear decay factors, exosome, exosomal cofactors to the aberrant mRNAs by RNA-Seq, ChIP-Seq and PAR-CLIP technique

## Annual Report 2019-20

### MATHEMATICS

Phone: 033-2457-2465

033-2414-6717

H.O.D. : Prof. Shamik Ghosh

Prof. Sudeshna Banerjea (since 01.02.2020)

E-mail :hod.mathematics@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
• B.Sc. (Hons.)	3 Years	110
• M.Sc. (Day)	2 Years	78
• M.Sc. (Night)	3 Years	78
• Ph.D.	5 Years	

#### 1. B. Number of Faculty Members: 28 (in position), 17(vacant)

- Professor: 22
- Associate Professor: 05
- Assistant Professor: 01
- Emeritus Professor: 01

#### 2. A. Areas of Research Activities:

Algebra, Mathematical Biology, Bio-Fluid Mechanics, Computer Science, Cosmology & Astrophysics, Differential and Computational Geometry, Dynamical Meteorology, Dynamical System, Fluid Mechanics, Functional Analysis, Game Theory, Graph Theory, Mathematical Physics, Operational Research, Plasma Dynamics, Real Analysis, Solid Mechanics

#### 2. B. Major Research Project:

##### Prof. Abhijit Lahiri

**Title:** Studies in Fractional Order Thermo-Elasticity

**Funding Authority:** RUSA-2.0 (Jadavpur University)

**Duration of the project:** 2019–2020

##### Prof. Arindam Bhattacharyya

**Title:** Meshing of three-dimensional objects and development of effective cost function

**Funding Authority:** RUSA-2.0 (Jadavpur University)

**Duration of the project:** 2019–2020

##### Prof. Farook Rahman

1. **Title:** Theoretical Study on Dark Matter, Gravastar and Wormhole Spacetimes

**Funding Authority:** SERB, DST

**Amount granted:** 8.03 Lakhs

**Duration of the project:** 2017-2020

2. **Title:** Investigation of the physical properties and characteristics of some Astrophysical objects

**Funding Authority:** RUSA-2.0 (Jadavpur University)

**Amount granted:** 5 Lakhs

**Duration of the project:** 2019-2020

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### Dr. Gopal Chandra Shit

1. **Title:** Modelling of electro-osmotic flow and heat transfer in a micro-channel for microfluidic applications  
**Funding authority:** SERB, DST  
**Amount granted:** 20.32 Lakhs
2. **Title:** Entropy Generation on Electrokinetic flow in the Microfluidic Channel  
**Funding authority:** RUSA-2.0(Jadavpur University)  
**Amount granted:** 5.70 Lakhs  
**Duration of the project:** 2019–2020

### Prof. Kallol Paul

1. **Title:** Birkhoff-James orthogonality and its application in the geometry of Banach spaces  
**Funding Authority:** MATRICS SERB, DST  
**Amount granted:** 6.60 Lakhs  
**Duration of the project:** 2018-2020
2. **Title:** On numerical radius inequalities and its applications  
**Funding Authority:** RUSA-2.0 (Jadavpur University)  
**Amount granted:** 4 Lakhs  
**Duration of the project:** 2019-2020
3. **Title:** Source of non-conventional Analytic and Algebraic study  
**Funding Authority:** RUSA-2.0 (Jadavpur University)  
**Amount granted:** 17.492 Lakhs  
**Duration of the project:** 2019-2020

### Prof. Nandadulal Bairagi

1. **Title:** Dynamics Preserving Discretization Technique for Nonlinear System of Differential Equations  
**Funding Authority:** MATRICS (SERB, DST)  
**Duration of the project:** 2018-2021
2. **Title:** Modelling and analysis of stochastic HIV infection with linear and nonlinear incidence.  
**Funding Authority:** CSIR  
**Duration of the project:** 2018-2021
3. **Title:** Modelling and analysis of stochastic ecological and eco-epidemiological systems with nonlinearity  
**Funding Authority:** Indo-French Centre for Applied Mathematics (IFCAM)  
**Duration of the project:** 2018-2021

### Prof. Shamik Ghosh

**Title:** A Study on Variations of Interval Graphs and Their Applications  
**Funding Authority:** RUSA-2.0 (Jadavpur University)  
**Amount:** 6.98 Lakhs  
**Duration of the project:** 2019-2020

### Prof. Subenoy Chakraborty

**Title:** Symmetries in Differential Equation and Its Application to Classical and Quantum Cosmology  
**Funding Authority:** Mathematical Research Impact Centric Support (MATRICS); Science and Engineering Research Board (SERB), DST, Govt. of India. (no. MTR/2017/000407)  
**Duration of the project:** 2018-2021

**Prof. Subhas Chandra Mandal**

**Title:** Wave Propagation in Cracked Anisotropic and Orthotropic Elastic Media

**Funding Authority:** RUSA-2.0 (Jadavpur University)

**Amount:** 6 Lakhs

**Duration of the project:** 2019-2020

**Prof. Sudeshna Banerjea**

1. **Title:** Water wave scattering by obstacles of various geometrical configurations

**Funding Authority:** Council of Science & Industrial Research (CSIR)

**Duration of the project:** 2016–2019

2. **Title:** Integral equation and its application to the problems on interaction of water waves with obstacles present in ocean.

**Funding Authority:** SERB, DST (recommended by MATRICS)

**Duration of the project:** 2018–2021

3. **Title:** Source of non-conventional energy in cosmology and water waves: analytic and algebraic study.

**Funding Authority:** RUSA (UGC)

**Duration of the project:** 2019–2020

**3. A. Invited Lectures Delivered/Session Chaired:**

**Prof. Abhijit Lahiri**

Presented a paper entitled “**Three Dimensional Thermoelastic Half Space with Three Phase Lags Using Memory Dependent Derivative**” in International Conference on Applied Physics and Mathematics, held on 25-26 November, 2019, Rome, Italy

**Prof. Arindam Bhattacharyya**

1. Delivered a plenary talk on “**Some vector fields and connections on warped product spaces**” at International Conference cum workshop on Differential Geometry and Non-associative Algebras organized by CIRM, Marseille, France during 11-16 November, 2019
2. Presented a talk on “**Meshing of three-dimensional objects with effective cost or energy function**” in 266th International Conference on Applied Physics and Mathematics (ICAPM) of IIER, held at Rome, Italy, during 25-26 November, 2019
3. Delivered an invited talk on “**Some Geometrical Flows on Differentiable Manifolds**” at National Conference on Recent Trends in Geometry and their Applications, held during 8-9 February, 2020 at Banaras Hindu University

**Prof. Bibhas C. Giri**

1. Delivered invited lecture in the Refresher Course on Algebra, Analysis and their Applications, Department of Mathematics, Jadavpur University, Kolkata, 29 November, 2019
2. Chaired a session in the 2nd International Conference on “Frontiers of Operations Research and Business Studies (FORBS 2019)” Calcutta Business School, Kolkata, 27-28 December, 2019

**Prof. Farook Rahman**

Delivered an invited talk on “Some Astrophysical phenomena in Finsler geometry” at International conference organized by Department of Mathematics, GLA University, Mathura in 2019

**Prof. Kallol Paul**

1. Invited talk delivered at International Conference on “**Recent advances in Operator Theory and Operator Algebras 2018**” organized at Indian Statistical Institute, Bangalore Centre during 13-19 December, 2019



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2. Delivered an invited talk at International Seminar on “**Systematic Approach to Modern Sciences and Its Philosophical Impacts**” organized by Bajkool Milani Mahavidyalaya, Purba Medinipur, West Bengal held during 6–8 February, 2020

### Dr. Manasi Mandal

1. Presented a paper entitled “**Fuzzy Structure Space of Semigroups**” in the International Conference of Numerical Analysis and Applied Mathematics 2019 (ICNAAM 2019), Rhodes Greece during 23-28 September, 2019
2. Presented a paper entitled “**Fuzzy Structure Space of Gamma Semigroups**” presented in the International Conference on Advances in Higher Mathematics, Mathematical Sciences and Mathematical Modeling, Organized by Calcutta Mathematical Society, Kolkata during 20-22 December, 2019

### Prof. Nandadulal Bairagi

Presented a paper entitled “**Pattern formation in a reaction-diffusion predator-prey-parasite model with prey infection under the influence of ecological and epidemiological parameters**” in the 63rd Annual Meeting of the Australian Mathematical Society at Monash University, Melbourne, Australia held during 3 – 6 December, 2019

### Dr. Nilanjana Mahata

Presented a paper titled “**Dynamical System Analysis of Three Fluid cosmological Model**” in International Conference of Numerical Analysis and Applied Mathematics ICNAAM 2019 during 23-28 September, 2019 at Rhodes, Greece

### Prof. Subenoy Chakraborty

1. Delivered an invited talk entitled “**Spacetime symmetry and killing vector field**” in the international conference on differential geometry and relativity at DDU University, Gorakhpur during 8-10 November, 2019
2. Delivered a talk on “**Classical Mechanics and Geometric Aspects**” of 3hrs. duration as a resource person in the refresher’s course organized by the Department of Mathematics, Jadavpur University, during 18-30 November, 2019
3. Delivered an invited talk on “**Space-time Symmetry and Killing Vector Field**” in NSMS 2020 at the Department of Mathematics, Burdwan University, during 9-11 January, 2020

### Prof. Subhas Chandra Mandal

Delivered a talk on “**Semi-infinite Moving Crack Between Two Bonded Dissimilar Orthotropic Strips**” in the International Conference on Applied Physics and Mathematics, Rome, Italy during 25-26 November, 2019

### Prof. Sudeshna Banerjee

Delivered lecture on “**The effect of porous curved barrier on the waves**” at 14 International Conference on Vibration Problems held in Crete, Greece from 01-04 September, 2019

### Prof. Sujit Kumar Sardar

1. Delivered a plenary talk at International Conference on Recent Advances in Mathematics and Applications (ICRAMA-2019) organized by Department of Mathematics, Tripura University, Tripura during 16–18 July, 2019
2. Delivered an invited talk at International Conference on Algebra and Related Topics with Applications (ICARTA-2019) organized by Department of Mathematics, Aligarh Muslim University, Aligarh during 17 – 19 December, 2019
3. Delivered an invited talk at International Conference on Semigroups and Applications (ICSAA-2019) organized by Department of Mathematics, Cochin University of Science and Technology, Kochi, Kerala during 9 – 12 December, 2019

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4. Delivered a plenary talk at Interdisciplinary seminar on Group Theory and Basic Statistics with Computation through R organized by Department of Mathematics and Department of Statistics, Maulana Azad College, Kolkata on 12 February, 2020
5. Chaired a paper reading session in ICRAMA-2019 organized by Department of Mathematics, Tripura University, Tripura, India during 16-18 July, 2019
6. Chaired a session on invited Talk in ICAACA-2020 organized by Department of Mathematics, Jadavpur University during 20-22 January, 2020
7. Acted as Judge in the Inter-College-University Poster Presentation Competition on 'Algebra and Number theory' organized by Department of Mathematics, Ramakrishna Mission Vidyamandira, Belur on 6 March, 2020

### Dr. Sukhendu Kar

1. Delivered lectures as Resource Person in UGC sponsored Refresher Course in Mathematics at Department of Mathematics, School of Mathematical Sciences, Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon during 19.08.2019 to 01.09.2019
2. Delivered an invited talk in the "International Conference on Recent Advances in Algebra, Analysis, and Applications" during 20 - 22 December, 2019, held at the Department of Mathematics and Statistics, Mohanlal Sukhadiya University Udaipur, (Rajasthan) India
3. Chaired a session in the "International Conference on Recent Advances in Algebra, Analysis, and Applications" during 20 - 22 December, 2019, held at the Department of Mathematics and Statistics, Mohanlal Sukhadiya University Udaipur, (Rajasthan) India

### 3 B. Seminar/Workshop/Conference/Symposium Attended/Organized:

#### Prof. Arindam Bhattacharyya

1. Organized a one-day seminar at Department of Mathematics, Jadavpur University on 13 March, 2020
2. Organized an International Conference at Calcutta Mathematical Society, during 21-23 December, 2019
3. Organized National Level Teachers' Enrichment Workshop during June, 2019 at Calcutta Mathematical Society organized jointly by Calcutta Mathematical Society and The (Indian) Mathematics Consortium, Pune

#### Dr. Gopal Chandra Shit

Participated and presented a paper entitled "**Mathematical Modelling of Electroosmotic Flow and Joule Heating Effects in a Slowly Varying Micro-Channe**" at the 9<sup>th</sup> International Congress on Industrial and Applied Mathematics held at the University of Valencia, Spain, during 15-19 July, 2019

#### Prof. Kallol Paul

1. Organized International Conference on Analysis, Algebras, Combinatorics and their Application (ICAACA2020) held at the Department of Mathematics, Jadavpur University, during 20-22, January 2020 sponsored by RUSA 2.0, JU and DST, Govt. of India, the conference was dedicated to the memory of Late Prof. T. K. Mukherjee
2. Organized a special session titled "**Geometry of linear operators and operator algebras**" in the 30th International Workshop on Operator Theory and its Applications (IWOTA 2019) during 22-26 July, 2019 at Instituto Superior

#### Dr. Manasi Mandal

Chaired the Symposium entitled "Session#28: The 8<sup>th</sup> Symposium on Generating functions of special numbers and polynomials and their applications (GFSNP2019)" in the International Conference of Numerical Analysis and Applied Mathematics 2019 (ICNAAM 2019), Rhodes Greece. during 23-28 September, 2019

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### Prof. Shamik Ghosh

Presented research paper entitled “**Characterization and recognition of proper tagged probe interval graphs**” in the Computing Conference, 2019 held in London, United Kingdom during 16-17 July, 2019

### Prof. Subenoy Chakraborty

Organized a one day seminar on “**The Building Stones for Physical Problems**” at Department of Mathematics, Jadavpur University on 28 February, 2020 where invited speakers are **Prof. Soumitra Sengupta** (Dean & Senior Professor, Department of Physical Sciences, IACS) and **Prof. Sujit Kumar Sardar** (Department of Mathematics, Jadavpur University)

### Prof. Subhas Chandra Mandal

1. Attended National Conference on Non-Linear Dynamics and Applications organized by Department of Mathematics, Jadavpur University on 13 March, 2020
2. Attended International Conference on Analysis, Algebra, Combinatorics and their Applications organized by Department of Mathematics, Jadavpur University on 20-22 January, 2020

### Prof. Sujit Kumar Sardar

Delivered a lecture at five-day Workshop on New UG Syllabus in Mathematics Under Dibrugarh University during 20 – 24 December, 2019

### 3. C. Orientation Courses/Refresher Courses Attended/Organized:

#### Prof. Sujit Kumar Sardar

Delivered a talk at Refresher Course on Algebra, Analysis and their Applications organized by The Department of Mathematics and Academic Staff College, Jadavpur University during 18 – 30 November, 2019

#### Dr. Sukhendu Kar

Organized Refresher Course on Algebra, Analysis and their Applications during 18 – 30 November, 2019 at the Department of Mathematics, Jadavpur University, Kolkata – 700032

### 4. A. Paper Published in Journals and Books:

#### Prof. Abhijit Lahiri

1. Narayan Das, Nantu Sarkar and **Abhijit Lahiri**: “Reflection of plane waves from the stress-free isothermal and insulated boundaries of a nonlocal thermoelastic solid”, *Applied Mathematical Modelling* 73(2019), 526–544
2. Nilanjana Gangopadhyaya, **Abhijit Lahiri**, Pulak Patra and Surath Roy: “Wave Propagation in an Unbounded Magneto Thermoelastic Rotating Medium Permeated by a Heat Source”, *Journal of Heat Transfer*, NOVEMBER 2019, Vol. 141/112001-1
3. Debkumar Ghosh, Ashis Kumar Das and **Abhijit Lahiri**: “Modelling of a Three Dimensional Thermoelastic Half Space with Three Phase Lags using Memory Dependent Derivative”, *Int. J. Appl. Comput. Math.*, 5:154 (2019), DOI: <https://doi.org/10.1007/s40819-019-0731-y>

#### Prof. Anup Bandyopadhyay

1. Sandip Dalui and **Anup Bandyopadhyay**: “Modulation instability of obliquely propagating ion acoustic waves in a collisionless magnetized plasma consisting of nonthermal and isothermal electrons”, *Astrophys Space Sci* (2019), 364:182, DOI: <https://doi.org/10.1007/s10509-019-3672-3>
2. Sandip Dalui and **Anup Bandyopadhyay**: “Effect of Landau damping on ion acoustic solitary waves in a collisionless unmagnetized plasma consisting of nonthermal and isothermal electrons”, *Indian J Phys.*, DOI: <https://doi.org/10.1007/s12648-020-01731-5>

#### Prof. Arindam Bhattacharyya

1. Shouvik Datta Choudhury, Santu Dey and **Arindam Bhattacharyya**: “Volume of a pentahedron revisited”. *Palestine Journal of Mathematics*, 8 (2019), no. 2, 275–278

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2. Santu Dey, Buddhadev Pal and **Arindam Bhattacharyya**: “A Non-Flat Riemannian Manifold Admitting Certain Vectors Fields”, *Journal of Dynamical Systems & Geometric Theories*, Vol. 17(2), 221–237, DOI: 10.1080/1726037X.2019.1668148
3. Soumendu Roy and **Arindam Bhattacharyya**: “Conformal Ricci Solitons On 3-Dimensional Trans-Sasakian Manifold”, *Jordan Journal of Mathematics and Statistics (JJMS)*, 13(1), 2020, 89 - 109
4. Shouvik Datta Choudhury and **Arindam Bhattacharyya**: “Effect of Ricci flow on a spherical metric”, *Bull. Calcutta Math. Soc.* 111 (2019), no. 2, 143–152

### Prof. Bibhas C. Giri

1. M. De and **B.C. Giri**: “Modelling a closed-loop supply chain with a heterogeneous fleet under carbon emission reduction policy”, *Transportation Research Part E: Logistics and Transportation Review*, 133 (2020) Article 101813
2. C. Mondal and **B.C. Giri**: “Pricing and used product collection strategies in a two-period closed-loop supply chain under greening level and effort dependent demand”, *Journal of Cleaner Production*, 265 (2020) Article 121335
3. S. Sarkar, S. Tiwari, H.M. Wee and **B.C. Giri**: “Channel coordination with price discount mechanism under price-sensitive market demand”, *International Transactions in Operational Research*, 27(5) (2020) 2509-2533
4. **B.C. Giri**, M.U. Molla and P. Biswas: “TOPSIS method for neutrosophic hesitant fuzzy multi-attribute decision making”, *Informatica*, 31(1) (2020) 35-63
5. **B.C. Giri** and S.K. Dey: “Game theoretic analysis of a closed-loop supply chain with backup supplier under dual channel recycling”, *Computers & Industrial Engineering*, 129(2019) 179-191
6. O. Dey and **B.C. Giri**: “A new approach to deal with learning in inspection in an integrated vendor-buyer model with imperfect production process”, *Computers & Industrial Engineering*, 131(2019) 515-523
7. **B.C. Giri** and B. Sarker: “Coordinating a multi-echelon supply chain under production disruption and price-sensitive stochastic demand”, *Journal of Industrial and Management Optimization (JIMO)*, 15(4)(2019) 1631-1651
8. **B.C. Giri**, C. Mondal and T. Maiti: “Optimal product quality and pricing strategy for a two-period closed-loop supply chain with retailer variable markup”, *RAIRO - Operations Research*, 53(2) (2019) 609-626
9. P. Biswas, S. Pramanik and **B.C. Giri**: “NH-MADM strategy in neutrosophic hesitant fuzzy set environment based on extended GRA”, *Informatica*, 30(2) (2019) 213-242
10. S. Bardhan, H. Pal and **B.C. Giri**: “Optimal replenishment policy and preservation technology investment for a non-instantaneous deteriorating item with stock-dependent demand”, *Operational Research*, 19(2) (2019) 347-368
11. **B.C. Giri** and M. Masanta: “Optimal production policy for a closed-loop supply chain with stochastic lead time and learning in production”, *Scientia Iranica, Transactions on Industrial Engineering(E)*, 26(5) (2019) 2936-2951
12. T. Maiti and **B.C. Giri**: “A two-echelon supply chain model with time varying selling price and demand rate”, *International Journal of Industrial Engineering: Theory, Applications and Practices*, 26(6) (2019) 898-914
13. P. Mandal and **B.C. Giri**: “A two-warehouse integrated inventory model with imperfect production process under stock-dependent demand and quantity discount offer”, *International Journal of Systems Science: Operations & Logistics*, 6(1) (2019) 15-26
14. **B.C. Giri** and S. Sharma: “Optimising an integrated production-inventory system under cash discount and retailer partial trade credit policy”, *International Journal of Systems Science: Operations & Logistics*, 6(2) (2019) 99-118

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15. A. Mukherjee, O. Dey and **B.C. Giri**: “An integrated vendor-buyer model with stochastic demand, lot size dependent lead time and learning in production”, *Journal of Industrial Engineering International*, 15(1) (2019) 165-178

### Prof. Farook Rahman

1. A. Das, S. Ghosh, D. Deb, **F. Rahaman** and S. Ray: “Study of gravastars under  $f(T)$  gravity”, *Nuclear Physics B*, 954, 114986 (2020)
2. K. Singh, N. Sarkar, **F. Rahaman** and S. Sarkar: “Relativistic compact stars with dark matter density profile”, *Eur. Phys. J. C*, 80, 255 (2020)
3. S. Banerjee, N. Paul, **F. Rahaman** and S. Ghosh: “Study of Gravastars in Finslerian Geometry”, *The European Physical Journal Plus*, 135, 185 (2020)
4. S. Roy Choudhury, D. Deb, S. Ray, **F. Rahaman** and B. K. Guha: “Anisotropic strange star in Finsler geometry”, *Int. J. Mod. Phys. D*, 29, 2050001 (2020)
5. T. Manna, M. Mondal and **F. Rahaman**: “Solar system Tests in Rastall gravity”, *Mod. Phys. Lett. A*, 33, 2050034 (2020)
6. S. Das, L. Baskey and **F. Rahaman**: “A new class of compact stellar model compatible with observational data”, *Eur. Phys. J. C*, 79, 853 (2019)
7. T. Manna, **F. Rahaman**, Sabiruddin Molla and Amna Ali: “Gravitational Lensing, Precession of Periapsis and Time Delay due to Wormhole in Quintessence Polyotropic Spacetime”, *Mod. Phys. Lett. A*, 34, 1950264 (2019)
8. Ksh N. Singh, A. Banerjee and **F. Rahaman**: “Einstein’s cluster mimicking compact star in the teleparallel equivalent of general relativity”, *Phys. Rev. D*, 100, 084023 (2019)
9. H. Shaw, Huafeisun, **F. Rahaman** and F. Ahmed: “Gravitational collapse of dust fluid and dark energy in the presence of curvature: B H formation”, *Mod. Phys. Lett. A*, 34, 1950240 (2019)
10. S. Ghosh, S. Basu, **F. Rahaman**, S. Ray and B. K. Guha: “Gravastars in  $(3 + 1)$  dimensions admitting Karmarkar condition”, *Annals of Physics*, 411, 167968 (2019)
11. N. Sarkar, S. Sarkar, **F. Rahaman** and P. Kuhûtig: “Possible formation of wormholes from dark matter in an isothermal galactic halo and void”, *Mod. Phys. Lett. A*, 34, 1950188 (2019)
12. S. Roychoudhuri, D. Deb, **F. Rahaman**, S. Ray and B. K. Guha: “Charged anisotropic strange stars in Finslerian geometry”, *Eur. Phys. J. C*, 79, 547 (2019)
13. A. Aziz, S. Ray, **F. Rahaman**, M. Khlopov and B. K. Guha: “Constraining values of bag constant for strange star candidates”, *Int. J. Mod. Phys. D*, 28, 1941006 (2019)
14. S. Biswas, D. Shee, **F. Rahaman** and S. Ray: “Relativistic strange stars in Tolman-Kuchowicz spacetime”, *Annals of Physics*, 409, 167905 (2019)
15. N. Singh, **F. Rahaman**, S. K. Maurya and F. Ortiz: “A generalized Finch-Skea class one static solution”, *Eur. Phys. J. C*, 89, 381 (2019)
16. S. Ghosh, D. Shee, **F. Rahaman**, S. Ray and B K Guha: “Gravastars with Kuchowicz metric potential”, *Results in Physics*, 14, 102473 (2019)
17. Ksh N. Singh, S. K. Maurya, M. K. Jasim and **F. Rahaman**: “Minimally deformed anisotropic model of class one space-time by gravitational decoupling”, *Eur. Phys. J. C*, 79, 851 (2019)
18. M. Azam, **F. Rahaman**, M. Sami and J. Bhatt: “THE PLANCKONIONS”, *Mod. Phys. Lett. A*, 34, 1950268 (2019)

### Dr. Gopal Chandra Shit

1. **G. C. Shit** and A. Bera: “Mathematical model to verify the role of magnetic field on blood flow and its impact on thermal behavior of biological tissue for tumor treatment”, *Biomedical Physics and Engineering Express*, vol.-6 (2020) 015032



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2. S. Maiti, S. Shaw and **G. C. Shit**: “Caputo–Fabrizio fractional order model on MHD blood flow with heat and mass transfer through a porous vessel in the presence of the thermal radiation”, *Physica A: Statistical Mechanics and its applications*, vol.-540 (2020) 123-149
3. **G. C. Shit** and S. Majee: “Effect of magnetic field on blood flow”, *eMagRes*, vol.-9(1) (2020) 49-59
4. **G. C. Shit** and S. Mandal: “Entropy analysis on unsteady MHD flow of Casson nanofluid over a stretching vertical plate with thermal radiation effect”, *International Journal of Applied and Computational Mathematics*, vol.-6(2) (2020), <https://doi.org/10.1007/s40819-019-0754-4>
5. N. K. Ranjit and **G. C. Shit**: “Entropy generation on electromagnetohydrodynamic flow through a porous asymmetric micro-channel”, *European Journal of Mechanics / B Fluids*, vol.-77(2019) 135-147
6. **G. C. Shit**, S. Maiti, M. Roy and J. C. Misra: “Pulsatile flow and heat transfer of blood in an overlapping vibrating atherosclerotic artery: A numerical study, In Press”, *Mathematics and Computers in Simulation*, vol.-166 (2019) 432 – 450
7. N.K. Ranjit, **G. C. Shit** and D. Tripathi: “Entropy generation and Joule heating of two layered electroosmotic flow in the peristaltically induced micro-channel”, *International Journal of Mechanical Sciences*, vol.-153-154 (2019) 430 – 444
8. **G. C. Shit** and S. Mukherjee: “MHD Graphene-Polydimethylsiloxane Maxwell nanofluid flow in a squeezing channel with thermal radiation effects”, *Applied Mathematics and Mechanics*, vol.-40, No.-2 (2019) 1269 – 1284

### Prof. Kallol Paul

1. K. Mandal, D. Sain and K. Paul: “Geometric characterization of polygonal Radon planes”, *Journal of Convex Analysis*, 26 (2019), 1113-1123
2. A. Mal, K. Paul, T.S.S.R.K. Rao and D. Sain: “Approximate Birkhoff-James orthogonality and smoothness in the space of bounded linear operators”, *Monatsh Math*, 190 (2019) 549-558, DOI: <https://doi.org/10.1007/s00605-019-01289-3>
3. D. Sain, A. Ray and K. Paul: “Extreme contractions on finite-dimensional polygonal Banach spaces”, *J. Convex Anal.*, 26 (2019) 877-885
4. D. Sain, K. Paul and K. Mandal: “On two extremum problems related to the norm of a bounded linear operator”, *Operators and Matrices*, 13 (2019) 421-432, DOI: <https://doi.org/10.7153/oam-2019-13-31>
5. D. Sain, K. Paul, P. Bhunia and S. Bag: “On the numerical Index of polyhedral Banach Spaces”, *Linear Algebra Appl.*, 577 (2019) 121–133
6. P. Bhunia, S. Bag and K. Paul: “Numerical radius inequalities and its applications in estimation of zeros of polynomials”, *Linear Algebra Appl.*, 573 (2019), 166-177
7. A. Mal and K. Paul: “Characterization of k-smooth operators between Banach spaces”, *Linear Algebra Appl.*, 586 (2020) 296-307, DOI: <https://doi.org/10.1016/j.laa.2019.10.013>
8. D. Sain, K. Paul and A. Mal: “Some remarks on Birkhoff-James orthogonality of linear operators”, *Expositione Mathematicae*, 38 (2020), 138-147, DOI: <https://doi.org/10.1016/j.exmath.2019.01.001>
9. P. Bhunia, R.K. Nayak and K. Paul: “Refinements of A-numerical radius inequalities and their applications”, *Adv. Oper. Theory*, DOI: <https://doi.org/10.1007/s43036-020-00056-8>
10. P. Bhunia, K. Paul and R.K. Nayak: “On inequalities for A-numerical radius of operators”, *Electron J. Linear Algebra*, 36 (2020) 143-157

### Dr. Manasi Mandal

**M. Mandal**: “Influence of  $\Theta$ -metric spaces on the diameter of rough weighted 1-2-limited set”, accepted for publication in *FILOMAT* dated 10/11/2019

**Prof. Nandadulal Bairagi**

1. Majumder, A., Adak, D. and **Bairagi, N.**: “Phytoplankton-zooplankton interaction under environmental stochasticity: Survival, extinction and stability”, *Applied Mathematical Modelling*, 89, 1382-1404, 2020
2. Das, P. N., Kumar, A., **Bairagi, N.** and Chatterjee, S.: “Effect of delay in transportation of extracellular glucose into cardiomyocytes under diabetic condition: A study through mathematical model”, *J. Biological Physics*, 46, 251-281, 2020
3. Chakraborty, B., Ghorai, S. and **Bairagi, N.**: “Reaction-diffusion predator-prey-parasite system and spatiotemporal complexity”, *Applied Mathematics and Computations*, 386, 125518, 2020
4. Mondal, S., Cao, X. and **Bairagi, N.**: “Study of a discretized fractional-order eco-epidemiological model with prey infection”, *Fractional Differential Calculus*, 10(1) 109-128, 2020
5. Das, P. N., Halder, S., **Bairagi, N.** and Chatterjee, S.: “Delay in ATP-dependent calcium inflow may affect insulin secretion from pancreatic beta-cell”, *Applied Mathematical Modelling*, 84, 202-2021, 2020
6. Ghorai, S., Chakraborty, P., Poria, S. and **Bairagi, N.**: “Dispersal-induced pattern forming instabilities in host-parasitoid metapopulations”, *Nonlinearity*, 100, 749-762, 2020
7. Adak, D., **Bairagi, N.**, and Hakl, R.: “Chaos in delay-induced Leslie–Gower prey–predator–parasite model and its control through prey harvesting”, *Nonlinear Analysis: Real World Applications*, 51, 102998, 2020
8. Mondal, S., Biswas, M. and **Bairagi, N.**: “Local and global dynamics of a fractional order predator-prey system with habitat complexity and the corresponding discretized fractional order system”, *Journal of Applied Mathematics and Computing*, 63, 311-340, 2020
9. Biswas, M. and **Bairagi, N.**: “On the dynamic consistency of a two-species competitive discrete system with toxicity: Local and global analysis”, *Journal of Computational and Applied Mathematics*, 363, 145-155, 2020
10. Mondal, C., Adak, D. and **Bairagi, N.**: “Optimal control in a multi-pathways HIV-1 infection model: A comparison between mono-drug and multi-drug therapies”, *International Journal of Control*, DOI: org/10.1080/00207179.2019.1690694, 2019
11. Mondal, S., **Bairagi, N.** and N’Guerekata, G. M.: “Global stability of a Leslie–Gower-type fractional order tritrophic food chain model”, *Fractional Differential Calculus*, 9(1) 149-161, 2019
12. Gupta, A., Das, P. N., Bouzeyen, R., Karmakar, S. P., Singh, R., **Bairagi, N.** and Chatterjee, S.: “Restoration of cytosolic calcium inhibits Mycobacterium tuberculosis intracellular growth: Theoretical evidence and experimental observation”, *Journal of Theoretical Biology*, 472, 110-123, 2019

**Prof. Subenoy Chakraborty**

1. S. Mishra and **S. Chakraborty**: “Stability and bifurcation analysis of interacting f(T) cosmology”, *Eur. Phys. J. C.* 79, 328
2. S. Pal and **S. Chakraborty**: “Dynamical system Analysis of a Three Fluid Cosmological Model: An Invariant Manifold approach”, *Eur. Phys. J. C.* 79, 362
3. S. Mishra and **S. Chakraborty**: “Dynamical system analysis of Einstein-skyrme model in a Kantowski-Sachs spacetime”, *Annals of Phys.* 406, 207
4. S. Mishra and **S. Chakraborty**: “Stability analysis of an interacting Holographic dark energy model”, *Mod. Phys. Lett. A.* 34, 1950147
5. S. Bhattacharya, S. Halder and **S. Chakraborty**: “Formation of wormholes in modified gravity: Exotic matter and stability”, *Mod. Phys. Lett. A.* 34, 19505200
6. Sujay Kr. Biswas, and **S. Chakraborty**: “Interacting Dark energy model in the brane scenario: A dynamical system analysis”, *Int. J. Geom. Meth. Mod. Phys.* 16, 1950115
7. S. Mishra and **S. Chakraborty**: “A Non-canonical scalar field Cosmological Model: Stability and Bifurcation Analysis”, *Mod. Phys. Lett. A.* 34, 1950261

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8. S. Dutta, M. Lakshmanan and **S. Chakraborty**: “Quantum Cosmology for non-minimally coupled scalar field in FLRW space-time: A Symmetry Analysis”, *Annals. of Phys.* 407, 1
9. S. Mondal, S. Dutta and **S. Chakraborty**: “Variable  $G$  and  $\ddot{E}$  gravity theory and analytical cosmological solutions using Noether symmetry approach”, *Gen. Rel. Grav.* 51, 105
10. A. Al. Mamon, P. Bhandari, and **S. Chakraborty**: “Study of thermal stability for different dark energy models”, *Int. J. Geom. Meth. Mod. Phys.* 16, 1950171
11. S. Pal and **S. Chakraborty**: “Dynamical system Analysis of a Dirac-Born-Infeld Model: A center manifold perspective”, *Gen. Rel. Grav.* 51,124
12. S. Pal and **S. Chakraborty**: “Dynamical system Analysis of Hesse scalar field in Teleparallel gravity: Invariant manifold technique”, *Int. J. Mod. Phys. A.* 28,1950156.
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15. S. Bhattacharjee and **S. Chakraborty**: “Cosmological solutions of Israel-Stewart transport equation”, *EPL* 128(6), 69001
16. A. Bose and **S. Chakraborty**: “Homogeneous and isotropic space-time, modified torsion field and complete cosmic scenario”, *Eur. Phys. J. C.* 3, 250

### Prof. Subhas Chandra Mandal

1. P. Mandal and **S. C. Mandal**: “Moving three collinear Griffith cracks at orthotropic interface”, *Journal of Solid Mechanics*, Vol.12, No.3 (2020)
2. Palas Mandal and **S. C. Mandal**: “SH-waves interaction with cracks at orthotropic interface”, *Waves in Random & Complex Media*, (2020), DOI: <https://doi.org/10.1080/17455030.2020.1720043>
3. Sourav Kumar Panja and **S. C. Mandal**: “Propagation of Love wave in multilayered viscoelastic orthotropic medium with initial stress”, *Waves in Random & Complex Media*, (2020), DOI: <https://doi.org/10.1080/17455030.2020.1810359>
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### Prof. Sudeshna Banerjea

Piyali Kundu, Jiteshwar Chatterjee, **Sudeshna Banerjea** and Paramita Maiti: “Waves Generated on Running Stream due to a Disturbance on Sea Bed”, *Int. J. Appl. Comput. Math.* (2020) 6(39), 2-17

### Prof. Sujit Kumar Sardar

1. Rajlaxmi Mukherjee, Pavel Pal, Tuhin Manna and **Sujit Kumar Sardar**: “On additively completely regular seminearrings: II”, *Comm. Algebra* 47 (2019), no. 5, 1954–1963(Taylor & Francis)
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3. Krishanu Dey, Sugato Gupta and **Sujit Kumar Sardar**: “Morita invariants of semirings related to a Morita context”, *Asian-Eur. J. Math.* 12 (2019), no. 2, 1950023, 15 pp.(World Scientific)
4. Kaushik Chakraborty, Sugato Gupta and **Sujit Kumar Sardar**: “A note on Morita equivalence preserving functor from the category of semigroups to the category of semirings”, *Southeast Asian Bull. Math.* 43 (2019), no. 2, 297–304

**Dr. Sukhendu Kar**

1. B. Dhara, N. Bera, **S. Kar** and B. Fahid: “Generalized Derivations and Generalization of Co-commuting Maps in Prime Rings”, Accepted for publication in *Taiwanese Journal of Mathematics*
2. S. Samata, S. Jana and **S. Kar**: “Note on Topological Ternary Semigroup”, Accepted for publication in *Asian – European Journal of Mathematics*
3. B. Dhara, **S. Kar** and S. Kuila: “A note on multiplicative (generalized)-derivations and left ideals in semiprime rings”, Accepted for Publication in *Rendiconti del Circolo Matematico di Palermo, Series 2*
4. S. Purkait, T. K. Dutta and **S. Kar**: “k-prime and k-semiprime ideals of semirings”, Accepted for publication in *Asian – European Journal of Mathematics*, World Scientific Publishing Company, (2021) 2150041 (12 pages), DOI: 10.1142/S1793557121500418
5. R. Sarkar, **S. Kar**, B. Biswas and S. Purkait: “Structure of Birkhoff center of c-semirings”, *Asian – European Journal of Mathematics*, Vol. (2021) 2150023 (9 pages), DOI: 10.1142/S1793557121500236
6. **S. Kar**, I. Dutta and K. P. Shum: “Structures of ternary semigroup of mappings”, *Lobachevskii Journal of Mathematics*, Vol. 41, No. 9 (2020), 1653–1659
7. B. Biswas, R. Sen Gupta, M. K. Sen and **S. Kar**: “Some properties of square element graphs over semigroups”, *AKCE International Journal of Graphs and Combinatorics*, Online Published, DOI: <https://doi.org/10.1016/j.akcej.2019.02.001>
8. S. Purkait, T. K. Dutta and **S. Kar**: “On m-clean and strongly m-clean rings”, *Communications in Algebra*, Vol. 48, No. 1 (2020), 218 – 227, DOI: <https://doi.org/10.1080/00927872.2019.1640236>
9. **S. Kar** and I. Dutta: “Global determinism of ternary semilattices”, *Asian – European Journal of Mathematics*, Vol. 13, No. 1 (2020), 2050083 (9 pages), DOI: 10.1142/S1793557120500837
10. B. Dhara, **S. Kar** and P. Das: “Pair of generalized derivations acting on multilinear polynomials in prime rings”, *Hacetatepe Journal of Mathematics and Statistics*, Volume 49 (2) (2020), 740 – 753 DOI: 10.15672/hujms.588747
11. **S. Kar**, A. Roy and I. Dutta: “On regularities in po-ternary semigroups”, *Quasigroups and Related Systems*, Vol. 28 (2020), 149 – 158
12. **S. Kar**, S. Purkait and R. Sarkar: “Birkhoff Centre of c-semiring”, *Asian-European Journal of Mathematics*, Vol. 12, No. 1 (2019) 1950003 (11 pages), World Scientific Publishing Company, DOI: 10.1142/S1793557119500037
13. P. Das, B. Dhara and **S. Kar**: “Generalized skew-derivations annihilating and centralizing on multilinear polynomials in prime rings”, *Proc. Indian Acad. Sci.* (2019) 129:18 DOI: <https://doi.org/10.1007/s12044-019-0462-3>
14. B. Biswas, **S. Kar**, M. K. Sen and T. K. Dutta: “A generalization of co-maximal graph of commutative rings”, *Discrete Mathematics, Algorithms and Applications*, Vol. 11, No. 1 (2019) 1950013 (13 pages), DOI: <https://doi.org/10.1142/S1793830919500137>
15. P. Das, B. Dhara and **S. Kar**: “Generalized derivations with centralizing conditions in prime rings”, *Communications of the Korean Mathematical Society*, 34 (2019), No. 1, pp. 83 – 93
16. B. Biswas, R. Sen Gupta, M. K. Sen and **S. Kar**: “On the Connectedness of Square Element Graphs over Arbitrary Rings”, *Southeast Asian Bulletin of Mathematics*, Vol. 43, No. 2 (2019), 153 – 164

**4. B. Books/Monographs Published:**

**Prof. Kallol Paul**

K. Paul, D. Sain and P. Ghosh: Book chapter titled “Symmetry of Birkhoff-James orthogonality of bounded linear operators” Ulam type stability, 331-344, Springer, Cham, (2019)

**5. Collaborative Programs:**

**Prof. Nandadulal Bairagi**

1. One-month research visit at the University of Grenoble, France under IFCAM during June-July, 2019
2. Short-term research visit at the VA Palo Alto Health System and Division of Endocrinology, Gerontology and Metabolism, Stanford University of Medicine from 23-27 December, 2019

**Prof. Shamik Ghosh**

Visited the Department of Mathematics & Statistics, University of Victoria, Canada for collaborative research work with Professor Jing Huang during 12-17 March, 2020

**Prof. Sudeshna Banerjee**

Visited University of Ghent Belgium from 15 March, 2019 to 04 April, 2019 to collaborate with Prof. Marnix Van Deale and delivered a lecture on “Scattering Problems in Water wave theory”

**6. Major Achievements:**

**Prof. Arindam Bhattacharyya**

**Awarded excellent paper** in 266th International conference on Applied Physics and Mathematics (ICAPM) of IIER, held at Rome, Italy, during 25-26, November 2019

**Prof. Bibhas C. Giri**

1. Selected **Fellow** of the West Bengal Academy of Science and Technology (WAST) 2019
2. **Outstanding Paper Award** at 27<sup>th</sup> West Bengal State Science and Technology Congress 2020, 27-28 February, 2020, Science City, Kolkata, India
3. **Best Paper Award** at the 2<sup>nd</sup> International Conference on Frontiers of Operations Research & Business Studies (FORBS 2019), Calcutta Business School, 27-28 December, 2019, Kolkata, India

**Prof. Farook Rahman**

Elected as a **Fellow** of Royal Astronomical Society (FRAS) (London) in 2019

**Prof. Kallol Paul**

Received **INSA bilateral exchange fellowship** for International Collaboration to visit Prof Lajos Molnar, University of Szeged, Hungary, sponsored by INSA and HAS (Hungarian Academy of Sciences), the visit took place during 1–30 November, 2019

**Prof. Nandadulal Bairagi**

Received COVID-19 Project: “**Anatomy of COVID-19 transmission dynamics: A modelling and computational approach from Indian perspective**”, funded by SERB, DST



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### PHYSICS

Phone: 033-2457-2448

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H.O.D: Prof. Debasish Lohar

Prof. Sukhen Das [since 13.01.2020]

E-mail: hod.physics@jadavpuruniversity.in

Over the time the Department of Physics has become a significant Centre of academic activities involving different branches of Physics. It has acquired distinction in research covering both theoretical and experimental Physics. It is ranked 2nd among all the Physics departments of all Indian universities (NISTADS, 2010) and ranked 11th among combined universities and research institutes (Current Science, vol. 97, no. 6 page 25, 2009) in India. It has received prestigious program like UGC DSA II: 170 Lakhs (2014-2019)

#### 1. A. Courses Offered:

	Name of the Course	Duration of the Course	No of Students Enrolled
i.	B.Sc., Physics (Honours)	3 Years	82
ii.	M. Sc., Physics (Day)	2 Years	45
iii.	M. Sc., Physics (Evening)	3 Years	45
iv.	M. Sc., Electronics	2 Years	19
v.	Post M. Sc. Diploma in Medical Physics	1 year	10
vi.	Ph.D.		

#### 1. B. Number of Faculty Members: 34

#### 1. C. Research Centers/Schools:

1. **Condensed Matter Physics Research Center (CMPRC)**  
Coordinator: Prof. Brajadulal Chattopadhyay
2. Relativity and Cosmology Research Center (RCRC)  
**Coordinator: Dr. Avijit Mukherjee and Dr. Somen Mondal**
3. Nuclear & Particle Physics Research Center (NPPRC)  
Coordinator: Prof. Argha Deb

#### 2. B. Major Research Project:

##### Details of the ongoing projects and completed projects during 2019-2020:

1. **Prof. Argha Deb, PI**, "Real Time Radon Monitoring for Seismic Surveillance", Funding agency: UGC, 5 years, Rs. 3.0 Lakhs
2. **Prof. Argha Deb, PI**, "Multi-station Soil Radon Monitoring for Earthquake Prediction", Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 2.0 Lakhs
3. **Prof. B. D. Chattopadhyay, PI** "Development of Microbial-incorporated 100% Fly ash Geopolymer: A Higher Strength and more Durable Cement-alternative for sustainable Construction Technology", Funding agency: RUSA 2.0 of Jadavpur University, 1 year, Rs. 7.78 Lakhs
4. **Prof. K. K. Chattopadhyay, Co-ordinator**, "DST Nanomission project in Nanoscience & Technology for PG teaching and Research", Funding agency: DST
5. **Prof. K. K. Chattopadhyay, PI**, "Low dimensional metal chalcogenides and its hybrids for energy storage and energy harvesting applications", Funding agency: RUSA-2.0 of Jadavpur University

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6. **Prof. Sukhen Das, PI**, “Waste water remediation: novel use of piezocatalytic ceramic- polymer nanocomposites”, Funding agency: SERB-DST. Rs. 30 Lakhs
7. **Prof. Sukhen Das, PI**, “Synthesis and Characterization of Piezoelectric & Photoactive Nanocomposite and their Application in Root Canal Disinfection”, Funding Agency: WB- DST. Rs. 13 Lakhs
8. **Prof. Sukhen Das, PI**, “Biocompatible Green nanomaterial mediated energy harvesting application and their effect on human cells” Funding agency: RUSA-2.0 of Jadavpur University. Rs. 6 Lakhs
9. **Prof. Nabin Baran Manik, PI**, “Study on the Effect of Carbon Nanotubes and Nanoparticles on Organic Photodetector”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 5.98 Lakhs
10. **Prof. Jayoti Das, PI**, “Development of Smart Material for Serum Protein Detection for Early Diagnosis of Cardio-Pulmonary Diseases”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 6.0 Lacs.
11. **Prof. Joydeep Chowdhury, PI**, “Fabrication of highly reproducible SERS active substrates through controlled plasmonics and their applications in ultrasensitive chemical and biological sensing”, Funding agency: CSIR, 3 years, Rs. 21.82 Lakhs
12. **Prof. Joydeep Chowdhury, PI**, “Immobilizing Enzymes in Biomimicking Lipid Membranes using Langmuir-Blodgett Technique for Enhanced Enzymes: Activities and applications in Biosensing”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 6.0 Lakhs
13. **Prof. Mitali Mondal, PI**, “Study on QGP and Its Properties Using Correlation and Fluctuation Phenomena in Ultra- relativistic Heavy Ion Collisions”, Funding agency: WB- DST, 3 years, Rs. 3.276 Lakhs
14. **Prof. Mitali Mondal, PI**, “Assessment of Radiological Impact of Environmental Radon in Some Selected Regions of West Bengal”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 5.0 Lakhs
15. **Dr. Sanat Karmakar, PI**, “Studies on the interaction of antimicrobial peptide with phospholipid membranes”, Funding agency: DBT, Govt. of India. (BT/PR8475/BRB/10/1248/2013), 3 years (21.06.2016-21.06.2019), Rs. 43.05 Lakhs
16. **Dr. Sanat Karmakar, PI**, “Role of amino acid and peptide binding on the structure, stability and physicochemical properties of phospholipid membranes: An abio-mimetic system”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 6.0 Lakhs
17. **Dr. Abhijit Samanta, PI**, “Study of entanglement entropy: Its implementation towards various aspects in Physics”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 10.0 Lakhs
18. **Dr. Bharati Tudu, PI**, “Understanding the evolution of perpendicular magnetic anisotropy and domain structures in ferromagnetic multilayer thin films”, Funding agency: SERB, Duration: 4 years (March 2017- March 2021), Rs. 53.9 Lakhs
19. **Dr. Bharati Tudu, PI**, “Perpendicularly Polarized Spin Transport in Semiconductors: An Investigation using Electrical Spin Injection and Detection”, Funding agency: DST-SERB, Duration: October 2018-2021 (3 years), 40.19 Lakhs
20. **Dr. Bharati Tudu, PI**, “Investigation of thermally robust (Co/X)<sub>n</sub> thin films for perpendicularly magnetized tunnel junctions”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 10.0 Lakhs
21. **Dr. Partha Pratim Ray, PI**, “Vacuum deposition of Fluorinated Zinc Phthalocyanine and Oligothiophene based plasmonic tandem solar cell”, Funding agency: SERB, DST, Rs. 46.14417 Lakhs
22. **Dr. Partha Pratim Ray, PI**, “Improvement in stability and performance of perovskite solar cell by developing new hole transport layer”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 7.0 Lakhs
23. **Dr. Partha Pratim Ray, PI**, Dr. Chandan Banerjee, IEST, Shibpur, Howrah, “Realization of high efficiency interdigitated back-contact (IBC) silicon heterojunction (SHJ) solar cells with novel front structure”, Funding agency: Solar Energy Research Initiative, DST, Govt. of India, Rs. 63,27,200/-
24. **Dr. Subhadipta Mukhopadhyay, PI**, “Implementation of all optical reversible logic gate circuits”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 1.5 Lakhs

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25. **Dr. Pabitra Kumar Paul, PI**, “Photophysical investigations of the effects of nano-clay minerals on artificial biomembrane prepared by Langmuir-Blodgett method”, Funding agency: SERB, DST, Govt. of India, Duration: 2016-2020, Rs. 32.34 Lakhs
26. **Dr. Pabitra Kumar Paul, PI**, “Spectroscopic and electrical characterizations of some imidazole derivatives organized in the restricted geometry of Langmuir-Blodgett films”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 6.0 Lakhs
27. **Dr. Saikat Kumar Seth, PI**, “Quantitative analysis of noncovalent interactions of organic solids for photosensitive Schottky barrier diode behavior”, Funding agency: SERB, DST, 3 years, Rs. 41.468 Lakhs
28. **Dr. Soumen Mondal, PI**, “Study of irregular radio galaxy”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 4.448 Lakhs
29. **Dr. Subrata Sarkar, PI**, “Synthesis of bismuth oxyhalides and its composites for enhanced photocatalytic activity: A little step towards a pollution free environment”, Funding agency: SERB, DST, 3 years, 37.95 Lakhs
30. **Dr. Kaustuv Das, PI**, “Study of zinc oxide thin films as gas sensor under high relative humidity”, Funding agency: WB-DST, 3 years, Rs. 6.21 Lakhs
31. **Dr. Kaustuv Das, PI**, “Development of Nanomaterial based Gas Sensor for Environment Monitoring”, Funding agency: RUSA-2.0 of Jadavpur University, 1 year, Rs. 5.36 Lakhs
32. **Dr. Kaustuv Das, Co-PI**, “Fabrication of Infrared Photo-detector based on 2D systems and Tuning the Detection Window by coupling with Nanostructures”, Funding agency: SERB, DST, 3 years, 65.18 Lakhs

### 3. A. Invited Lectures Delivered/Sessions Chaired:

#### Brajadulal Chattopadhyay

- Chaired a Technical Session and delivered a Plenary Lecture on Biocement technology: potential, progress and challenges at Indo-Australia Interdisciplinary Workshop on ‘Recent Advances in Biocementation Technology’ (January 04 - 05, 2020). IIT, Kharagpur
- Delivered a Workshop Invited Lecture on Microbial amended cement-alternative: A journey from Green House to Green Home at Indo- Australia Interdisciplinary Workshop on ‘Recent Advances in Biocementation Technology’ (04 - 05 January, 2020). IIT, Kharagpur
- Delivered a Keynote Address on Bacteria incorporated 100% Flys Ash Geopolymer: A new Hope for an Alternative and Sustainable Construction Material at International Civil Engineering and Architecture Conference (ICEARC 2019) at Osman Turan Congress Center In Karadeniz Technical University in Travyone, Turkey on 17 – 20 April, 2019

#### Kalyan Kumar Chattopadhyay

- Delivered a Keynote Address at the International Conference on Advances on Nanooptoelectronics and its applications 2020 (ICANOPA 2020), 12-14 October, 2020, Rajib Gandhi University, India
- Delivered an Invited Lecture at International conference on Nanoscience and Technology (ICONSAT) 5 -7 March, 2020, at Biswabangla Convention Centre, Kolkata
- Plenary Lecture at the International Conference on Chemistry for Human Development (ICCHD-2020), University of Calcutta
- Keynote Address for Symposium on Carbon Nanomaterial Electronics (SCNE) 2019 held during 8-9 November, 2019 at Birla Institute of Technology and Science (BITS) Pilani
- Invited Lecture at “International Conference on Materials Genome” during 5-7 February, 2020. SRM University
- Invited Lecture at Induction program at the Govt. college of Engineering and Ceramic Technology, 2 August, (1919) Kolkata

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- Keynote Lecture at 1st International Conference on Clean and Renewable Energy (ICCARE 2019) on 12 July, 2019 NIT Durgapur.
- Chaired a session at 1st International Conference on Clean and Renewable Energy (ICCARE 2019) on 12 July, 2019 NIT Durgapur
- Invited Lecture at the 40th AGM of EMSI, Hyderabad, Hyderabad International Convention Centre, 3-7 February, 2020
- Invited Lecture at the CMDAYS 2019, 29 August (2019) Vidyasagar University
- Invited Lecture at Industry, Academia and Student Interaction Program, NIT Durgapur, 13 August (2019)
- Invited Lecture at International conference IEMPHYS 2019, 14-17 November, at IEM Kolkata
- Invited Lecture at the Induction programme in the Govt. College of Engineering and Ceramic Technology, 1 August (2019)
- Invited Lecture at the International Conference on Current Trends in Materials Science and Engineering during 18-20 July, 2019 (CTMSE 2019) at S.N. Bose National Centre for Basic Sciences
- Invited Lecture at the Refresher Course of Applied Chemistry, of University of Calcutta, on 6 September (2019)
- Keynote lecture and session chair to 1st International Conference on Clean and Renewable Energy (ICCARE 2019) on 12 July 2019, NIT Durgapur.
- 10th S.P. Sengupta Memorial Lecture, at CSIR CGCRI, Organised by MRSI Kolkata Chapter (2019)
- Keynote lecture in the conference “Frontiers in Solid State Physics” (2019) at IACS, Kolkata
- Invited Lecture in the National Conference entitled “Contemporary Issues on Natural and Anthropocentric Effect in Environmental Crisis” held on 15 – 16 March, 2019 at Tehatta Govt. College
- Invited Lecture at the Calcutta University, Department of Electronic Science, 29 May (2019)

### Joydeep Chowdhury

- Invited talk on “Fabrication of novel SERS active substrates with Langmuir-Blodgett deposition technique” in the University of Brescia, Italy, VISPEC- 2019: Emerging Trends in Vibrational Spectroscopy, 11- 13 September, 2019
- Invited talk on “SERS active Langmuir-Blodgett film substrate for screening human PC-3 prostate and MDA-MB\_468 breast cancer cell lines” in the International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS-2020), JNCASR, Bengaluru, 24-28 February, 2020

### Pabitra Kumar Paul

- Invited Lecture at Third International Conference on Material Science (ICMS-2020) on “A spectrofluorometric based assay for selective and sensitive detection of amino acid L-Cysteine using gold nanoparticle and a cationic dye in aqueous environment”. Organized by: Department of Physics, Tripura University, Tripura. Duration: 04-06 March, 2020. Title of the Invited talk

### Sanat Karmakar

- Invited lecture on Soft Matter Young Investigator Meet, 12-14 May, 2019, Pine wood hotel Shilong, IISER, Pune, IISER Bhupal, IIT Mumbai, IIT Guwahati, SRM, NISER Bhubaneswar.
- Chaired a session and delivered an Invited Lecture at International conference on Nanotechnology, 28-29 December, 2019, Institute of fire and safety Engineering and Haldia Brajalalchak Welfare Organization

### Kaustuv Das

- Invited Oral Presentation at XXth International Workshop on Physics of Semiconductor Devices (IWPSD-2019) at Kolkata 16–20 December, 2019

3. B. Seminar/Workshop/Conference/Symposium Attended:

1. Indrani Ray, M. Saha Sarkar, Argha Deb, Mitali Mondal, P. Banerjee, **Review of Proton and Alpha Capture reaction cross-section of the p-Nucleus  $^{106}\text{Cd}$** , 64<sup>th</sup> DAE-BRNS Symposium on Nuclear Physics, Lucknow University, Lucknow, India, 23-27 December, 2019
2. Saheli Chowdhury, Chiranjib Barman, Argha Deb, Md. Nurujjaman, Dipok Bora, Debasis Ghose. Paper presenter - Saheli Chowdhury, **Study of soil  $^{222}\text{Rn}$  anomalies as earthquake precursor at a network of monitoring stations in Eastern India**, 2nd Triennial International Congress of Federation of Indian Geosciences Association (FIGA-2019), NGRI Hyderabad, India, 13-16 October, 2019
3. Saheli Chowdhury, Chiranjib Barman, Md. Nurujjaman, Dipok Bora, Debasis Ghose, Argha Deb. Paper presenter - Saheli Chowdhury, **Soil radon anomalies as earthquake precursors in eastern India: a networking approach**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
4. Saheli Chowdhury, Chiranjib Barman, Arindam Kumar Naskar, Mahasin Gazi, Gopa Bhowmik, Soma Biswas Ghosh, Md. Abdul Kayum Jafry, Subrata Biswas, Argha Deb, **Survey of  $^{222}\text{Rn}$  activity in soil in Bakreswar-Tantloi Geothermal Region of West Bengal and Jharkhand, India**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
5. Saheli Chowdhury, Argha Deb, Chiranjib Barman, Md. Nurujjaman, Dipok Bora, **Radon Time Series: A Non-linear Application**, National Seminar on New Directions in Physical Sciences (NDPS 2020), Jadavpur University, Kolkata, India, 25 February, 2020
6. Joyati Mondal, Hirak Kumar Koley, Srijita Mukherjee, Arindam Mondal, Gopa Bhoumick, Somnath Kar, Argha Deb & Mitali Mondal, **Analysis of Correlations and Fluctuations in High Energy Interactions**, National Seminar on New Directions in Physical Sciences (NDPS 2020), Jadavpur University, Kolkata, West Bengal, India, 25 February, 2020
7. Arindam Kumar Naskar, Mahasin Gazi, Javed Akhter, Joyati Mondal, Arindam Mondal, Sunil Maity, Mitali Mondal, Argha Deb, **Radon Danger in Ground Water: An Experimental Study in Ajothya Hill and Nearby Areas of West Bengal**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
8. Mahasin Gazi, Arindam Kumar Naskar, Hirak K. Koley, Swarnapratim Bhattacharyya, Rittika Sarkar, Imtiaz Ahmed, Rini Bhattacharyya, Mitali Mondal, Argha Deb, **Radiologically Safe Drinking Water in Darjeeling Hill and Foothill Areas: An Experimental Finding**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
9. D Das, R Sarkar, S Mukherjee, KK Chattopadhyay, **Sodium borohydride assisted reduction of toxic pollutants by silver coordinated melamine based polymeric material**, Materials Today: Proceedings (2020)
10. SK Sarkar, A Jha, KK Chattopadhyay, **Well-dispersed amorphous carbon nanotube-alumina nanocomposite for nanofluid with improved thermal conductivity**, AIP Conference Proceedings 2269 (1), 030072
11. S Pal, NS Das, B Das, B Das, S Mukhopadhyay, KK Chattopadhyay, **BaSnO<sub>3</sub> nanoparticles as blue emitting phosphor and efficient photocatalyst**, AIP Conference Proceedings 2220 (1), 020014 (2020)
12. D Mitra, R Sarkar, KK Chattopadhyay, P Chattopadhyay, **Impact of morphological change on improvement of photo-catalytic behavior of Co<sub>3</sub>O<sub>4</sub> based system**, AIP Conference Proceedings 2220 (1), 020029 (2020)
13. S Maity, M Samanta, T Roychowdhury, S Rakshit, KK Chattopadhyay, **Polypyrrole decorated amorphous CNT: A potential ORR electrocatalyst in alkaline medium**, AIP Conference Proceedings 2220 (1), 080039



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14. R Sarkar, D Das, B Das, S Sarkar, KK Chattopadhyay, **Efficient photocatalytic activity of bismuth oxyhalides with preferentially oriented (210) facets under visible light**, AIP Conference Proceedings 2220 (1), 020030 (2020)
15. B Das, B Das, S Pal, R Sarkar, NS Das, S Sarkar, KK Chattopadhyay, **Facile preparation of porous Ga<sub>2</sub>O<sub>3</sub> nano/microbars for highly efficient photocatalytic degradation**, AIP Conference Proceedings 2220 (1), 020013
16. R Chatterjee, GC Das, KK Chattopadhyay, **Enhancement of blue emission in novel ZnWO<sub>4</sub>:Ce<sup>3+</sup> nanophosphors for solid state lighting applications**, AIP Conference Proceedings 2100 (1), (2019), 020090
17. R Chatterjee, GC Das, KK Chattopadhyay, **Synthesis and characterization of highly luminescent green emitting BaAl<sub>2</sub>O<sub>4</sub>: Tb<sup>3+</sup> nanophosphors**, Materials Today: Proceedings 18, (2019), 1132-1137
18. MM Bhunia, S Das, K. K. Chattopadhyay, P. Chattopadhyay, **Enhanced heat transfer properties of RGO-TiO<sub>2</sub> based Ethylene Glycol Nanofluids**, Materials Today: Proceedings 18, (2019) 1096-1107
19. R Sarkar, D. Das, A. Mitra, S. Sarkar, K.K. Chattopadhyay, **Faceted Growth of Morphologically Tuned of BiOCl**, Materials Today: Proceedings 18, (2019)1086-1095
20. Simantini Majumdar, and Ruma Ray, **α-irradiation induced dielectric properties of chitosan based solid biopolymer electrolytes**, AIP Conference Proceedings 2020, 2220, 040001, Published Online: 05 May 2020
21. A. Sen, J. Das, **A New Tunnelling Model To Calculate GIDL Current For MOSFET And TFET**, CAS 2019 proceedings: 2019 International Semiconductor Conference: 42nd edition, 9–11 October, Sinaia, Romania
22. A. Sen, A. Das, J. Das, **MOSFET GIDL Current Variation with Impurity Doping Concentration—A Novel Approach**, 2019 International Conference on Power Electronics, Control and Automation (ICPECA), 16-17 November, 2019, New Delhi, India, DOI: 10.1109/ICPECA47973.2019.8975525
23. K. Sen, D. Basu, A. Sen, S.M. Hossain, J. Das, **Automated detection of profile axis angle of human finger for quantitative digital clubbing diagnosis**, 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), July 6-8, 2019, Kanpur, India, DOI: 10.1109/ICCCNT45670.2019.8944519
24. A. Sen, K. Sen, J. Das, **In – House Early Detection of Flat Foot and High Ankle Foot Using Image Processing**, 10th International Conference on Computing, Communication and Networking Technologies (ICCCNT), July 6-8, 2019 Kanpur,India,DOI: 10.1109/ICCCNT45670.2019.8944911
25. D. Basu, K. Sen, S.M. Hossain, J. Das, **Instrumentation and Development of Grating Coupler Sensor for Cost-effective and Precision Measurement of Biomolecules**, International Conference on Computing, Communication and Networking Technologies (ICCCNT), July 6-8, 2019, Kanpur, India, DOI: 10.1109/ICCCNT45670.2019.8944788
26. Choudhuri, S., Bharadwaj, S., Ali, S. S., Roy, N., Intema, H. T., Ghosh, A. 2019, **Peering towards Cosmic Dawn**, Proceedings of the International Astronomical Union, IAU, Symposium, 333, 157-161
27. Sanat Karmakar, Pabitra Maity and Animesh Halder, **Antimicrobial Peptide NK-2 as an Emerging Therapeutic Agent: A Study with Phospholipid Membranes**, Materials today: proceedings (2019), 18, 879-886  
Souravi Bardhan, Sukhen Das. Oral presentation on “**Natural calcite nanoparticle mediated sensing of hexavalent chromium**”. International Conference on Chemical and Environmental Sciences, IEM, Kolkata held on 19-21 September, 2019
28. Shubham Roy, Souravi Bardhan, Saheli Ghosh, Sukhen Das. Poster Presentation on “**Boehmite based MFNS for fluorescent sensing and removal: A waste to wealth conversion**”. 2019. National Seminar on Physics at Surfaces and Interfaces of Soft Materials, Jadavpur University held on 26-27 September, 2019

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29. Dhananjoy Mondal, Shubham Roy, Souravi Bardhan, Sukhen Das. Poster Presentation on “**Multifunctional fluorescence based Nanosensor for detection and removal of Cr(VI)**”. National Seminar on New Directions in Physical Sciences 2020, Jadavpur University held on 25 February, 2020
30. Souravi Bardhan, Sukhen Das. Oral Presentation on “**Natural nanoparticle based wastewater remediation**”. One Day Workshop on Material Synthesis and Characterization Techniques 2020, Jadavpur University held on 29 February, 2020
31. Dhananjoy Mondal, Sukhen Das. Oral Presentation on “**X-ray Crystallography**”. One Day Workshop on Material Synthesis and Characterization Techniques 2020, Jadavpur University held on 29 February, 2020
32. Shubham Roy, Souravi Bardhan, Jhilik Roy, Sukhen Das. Poster Presentation on “**Waste capacitor: A fresh approach to detect and remove Cr(VI) form water and making it an energy harvesting material**”. Third International Conference on Material Science (ICMS2020) held on 4-6 March, 2020
33. Sanghita Das, Sukhen Das, Anindita Dey. Oral Presentation on “**Guar gum micro-vehicle mediated delivery strategy of thymoquinone and piperine: An in vitro study of synergistic antibacterial and anticancer activity**”. 6th Annual Congress on Plant Science and Biology (EuroSciCon) held on 9-10 November, 2020
34. Debbethi Bera, Kunal Pal, Papiya Nandy, Sukhen Das. “**Functionalised Biomimetic Hydroxyapatite NPs as a Smart Material against Pathogenic Multidrug-Resistant Bacteria.**” UGC-SAP (DRS II) sponsored Modern Perspective of Research & Development in Biochemistry & Biophysics (MPRDBB), Kalyani University held on 14-15 March, 2019
35. Debbethi Bera, Kunal Pal, Papiya Nandy, Sukhen Das. “**Functionalised biomimetic Hydroxyapatite NPs as a Smart Material against Pathogenic Multidrug-Resistant Bacteria**”. India International Science Festival-2019, Young Scientists’ Conference, VigyanPrasar, held on 5-8 November, 2019
36. Debbethi Bera, Sukhen Das, Papiya Nandy. Oral Presentation on “**Phytofabrication of Biomimetic Nanoparticle as a Potential Dual Therapeutic Agent.**” 6<sup>th</sup> Annual Congress on Plant Science and Biology. (EuroSciCon) held on 9-10 November, 2020
37. Debbethi Bera, Sukhen Das, Papiya Nandy. Poster Presentation on “**Highly Fluorescent Carbon Nanoparticle: An Emerging Bioimaging Intervention**”. New Directions in Physical Sciences 2020, Jadavpur University and Indian Photobiology Society, held on 25 February, 2020
38. Bidisha Ghosh, Debasmita Ghosh, Kaustuv Das, Sukhen Das. Poster Presentation on “**Synthesis of bimetallic nanoparticles for biological applications**”. One Day National level seminar on Modern trends in Chemistry for Sustainable Development, Vijaygarh Jyotishray College and Indian Chemical Society, held on 3 March 2020
39. Subhadipta Mukhopadhyay **Computation of parameters from one dimensional model of surface**, International conferences on advances in higher Mathematics, Mathematical Sciences and Mathematical Modeling, 20-22 December, 2019, Calcutta Mathematical Society, Kolkata
40. Supriti Samanta, Goutam Kumar Maity and Subhadipta Mukhopadhyay, **Implementation of High Speed Compressors using MZI based adders**, 6th International Conference on Microelectronics, Circuits and Systems, Micro 2019, 6-7 July, 2019, Amity University, Kolkata
41. Subhadipta Mukhopadhyay, **An algorithm for surface structure determination from LEED experimental data**, National seminar on Applied mathematics and Mathematical Physics, AMMP 2020, Calcutta Mathematical Society, Kolkata, 29 February, 2020
42. Sangita Chatterjee, Soumen Mondal and Prasad Basu, **An improved approach to find the height of the accretion disk**, 2nd National Conference on Frontiers in Modern Physics Journal of Physics: Conference Series 1579(2020) 012008
43. Tapan K. Susmal, Soume Bera, Sabyasachi Pal, Soumen Mondal, **Discovery of Four Miscellaneous Radio Galaxies From LoTSSDR1**, 1579 (2020) 012021

44. Soume Bera, Sabyasachi Pal, Tapan K. Susmal, Soumen Mondal, Dusmanta Patra, **MRG: The Miscellaneous Radio Galaxies from the FIRST Survey**, 2nd National Conference on Frontiers in Modern Physics Journal of Physics: Conference Series 1579(2020) 012023
45. Biswajit Mahanty, Kuntal Maity, Subrata Sarkar, and Dipankar Mandal, **Polymer Nanofiber based Triboelectric Nanogenerator for Energy Harvesting and Self-Powered Electronics**, AIP Conference Proceedings 2265, 030655, (2020); <https://doi.org/10.1063/5.0016777>
46. Biswajit Mahanty, Kuntal Maity, Subrata Sarkar, and Dipankar Mandal, **Human Skin Interactive Self-powered Piezoelectric e-skin Based on PVDF/MWCNT Electrospun Nanofibers for Non-invasive Health Care Monitoring**, Materials today proceedings, 2020, ISSN 2214-7853
47. Biswajit Mahanty, Sujoy Kumar Ghosh, Subrata Sarkar, and Dipankar Mandal, **Improved Mechanical Energy Harvesting by Au-nanoparticles interfaced Poly(vinylidene fluoride) Electrospun fibers**, AIP Conference Proceedings 2115, 030607, 2019; <https://doi.org/10.1063/1.5113446>

### 3. C. Seminar/Workshop/Conference/Symposium Organized:

**Argha Deb and Mitali Mondal:** RUSA sponsored National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November 2019

**Mitali Mondal and Soumen Mondal:** One day National Seminar on “New Directions in Physical Sciences 2020: Special Emphasis on Material Science & Biophysics” on 25 February, 2020 at Department of Physics, Jadavpur University

**K. K. Chattopadhyay:** National Conference in Recent Developments in Nanoscience and Nanotechnology, (2019), Jadavpur University

**Sukhen Das:** One Day Workshop on Material Synthesis & Characterization Techniques (Under the DST-SERB funded SSR Scheme), Jadavpur University, Kolkata, India, 29.02.2020

**Sanat Karmakar:** Physics at surfaces and interfaces of soft materials (PSISM-2019), 26-27 September, 2019, CMPRC, Department of Physics, Jadavpur University

### 3. D. Orientation Courses/Refresher Courses Attended:

**Kaustuv Das:** 76<sup>th</sup> Orientation Programme UGC-Human Resource Development Centre Jadavpur University (from 03/02/2020 to 24/02/2020)

### 4. A. Books/Monographs etc. Published:

**Brajadulal Chattopadhyay:** Smart Nanoconcretes and Cement-Based Materials(**Elsevier Publication**), 2020, Chapter 20: Genetically-enriched microbe-facilitated self-healing nano-concrete, Pages 461-483

**K.K. Chattopadhyay:** Thermoelectric Materials: Improving Energy Efficiency and Decreasing CO<sub>2</sub> Emissions, Diptonil Banerjee, Kalyan K Chattopadhyay, Encyclopedia of Renewable and Sustainable Materials, Elsevier (in press) (2020)

**K.K. Chattopadhyay:** Diamond-Like Carbon: An Efficient Cost-Effective Material for Beverage Storing, KK Chattopadhyay, D Banerjee, Trends in Beverage Packaging, (Elsevier) (2019) 135-161

**Nabin Baran Manik:** Effect of Dye Concentration on Series Resistance of Thionin Dye – Based Organic Diode, Pallab Kumar Das, Swapan Bhunia, Sarmistha Basu and N. B. Manik, Apple Academic Press, 2020

**Sk. Saiyad Ali:** Visibility based angular power spectrum estimator for redshifted 21 cm experiments. Ali, S. S., Bharadwaj, S., Choudhuri, S., Ghosh, A., Roy, N, 2019, SKA-India Science Book Article, NCRA Publication, Version-2, Page 2013-220

**Sanat Karmakar:** Particle size distribution and zeta potential based on dynamic light scattering: Techniques

to characterize stability and surface charge distribution of charged colloids. Chapter 5 of the book entitled “Recent Trends in Materials: Physics & Chemistry” Studium Press (India) Pvt Ltd, ISBN: 978-93-85046-32-2

#### 4. B. Articles Published in Journals:

1. Saheli Chowdhury, Chiranjib Barman, Argha Deb, Sibaji Raha, Debasis Ghose, **Study of variation of soil radon exhalation rate with meteorological parameters in Bakreswar–Tantloi geothermal region of West Bengal and Jharkhand, India**, Journal of Radioanalytical and Nuclear Chemistry, 2019, Vol. 319: 23-32
2. Nayak, T., De, D., Barman, C., Karmakar, P., Deb, A., and Dhal, P. K., **Characterization of indigenous bacteria from radon-rich groundwater and their tolerance to physicochemical stress**, Int. J. Environ. Sci. Technol., 2019, 17, 1627–1636, 17 June 2019
3. Arghya Sil and Asim Kumar Ghosh, **Nontrivial topological phases on the stuffed honeycomb lattice**, Journal of Physics: Condensed Matter 32, 025601 (2019). Published on 16 October, 2019
4. Arghya Sil and Asim Kumar Ghosh, **First and second order topological phases on ferromagnetic breathing kagome lattice**, Journal of Physics: Condensed Matter 32, 205601 (2020). Published on 20 February, 2020
5. Prasun Das, Sangita De Sarkar and Asim Kumar Ghosh, **Tunable wavevector filtering in borophane based normal metal-barrier-normal metal junctions**, Journal of Physics: Condensed Matter 32, 235301 (2020). Published on 10 March 2020
6. Jit Sarkar, Swarniv Chandra, Jyotirmoy Goswami & Basudev Ghosh, **Formation of solitary structures and envelope solitons in electron acoustic wave in inner magnetosphere plasma with suprathermal ions**, Contrib plasma phys published 25 February, 2020 DOI: 10.1002/ctpp.20190020
7. Chinmay Das, Swarniv Chandra & Basudev Ghosh, **Amplitude modulation and soliton formation of an intenselaser beam interacting with dense quantum plasma:Symbolic simulation analysis**, Contrib plasma phys Accepted 10th March 2020 DOI: 10.1002/ctpp.202000028
8. J. Goswami, S. Chandra, J. Sarkar, S. Chaudhuri and B. Ghosh, **Collision-less shocks and solitons in dense laser-produced Fermi plasma**, Laser and particle Beams Accepted 15 December, 2019 <https://doi.org/10.1017/S0263034619000764>
9. Saheli Banerjee, Tuhin Kanti Biswas, Krishna Chattopadhyay, Brajadulal Chattopadhyay. (2020). **An Approach to Screen Genotoxic Susceptible Diabetic Population of various Prakriti Groups for Personalized Disease Management**, Journal of Alternative and Complimentary Medicine. (Accepted). [doi.org/10.1089/acm.2020.0269](https://doi.org/10.1089/acm.2020.0269)
10. Avishek Chatterjee, Atreyee Sarkar, Sudip Ghosh, Saroj Mandal, Brajadulal Chattopadhyay\*(2019). **Bacterium incorporated Fly ash geopolymer: A high performance, thermo-stable cement-alternative for future construction material**, Journal of Clean Technologies and Environmental Policy. (doi: 10.1007/s10098-019-01749-2)
11. Saheli Banerjee, Krishna Chattopadhyay, Tuhin Kanti Biswas, & Brajadulal Chattopadhyay. (2019), **Comparative analysis of the biochemical parameters among the three Prakriti individuals having Type 2 Diabetes Mellitus**, Indian Journal of Traditional Knowledge. 18(2): 242-249
12. Atreyee Sarkar, Avishek Chatterjee, Saroj Mandal and Brajadulal Chattopadhyay. (2019), **An Alkaliphilic Bacterium BKH4 of Bakreshwar Hot Spring Pertinent to Bio-Concrete Technology**, Journal of Applied Microbiology. 126: 1742-1750
13. S. Samanta, A. Maity, S. Chatterjee, R. Maiti, Debasish Biswas, S. Giri & D. Chakravorty, **Rice–Bernasconi Gorkov–Eliashberg Effect of Giant Dielectric Permittivity in Silica-Based Films Containing Interrupted Silver Nanowires**, Trans. Indian Inst. Metals, 72 (2019) 1963–1969
14. A. Maity, S. Samanta, R. Maiti, S. Chatterjee Debasish Biswas and D. Chakravorty, **Giant**



- magnetodielectric effect in composites of nanodimensional spin glass of system CoO-SiO<sub>2</sub> and mesoporous silica SBA-15**, J. Magn. Magn. Materials, 491(1) (December 2019) 165633
15. A. Maity, S. Samanta, S. Roy, Debasish Biswas and D. Chakravorty, **Giant Dielectric Constant of Copper Nanowires/Amorphous SiO<sub>2</sub> Composite Thin Films for Supercapacitor Application**, ACS Omega, 21(5) (2020) 12421–12430
  16. Tufan Paul, Pranab Kumar Sarkar, Soumen Maiti, Kalyan Kumar Chattopadhyay, **Multilevel Programming and Light-Assisted Resistive Switching in a Halide-Tunable All-Inorganic Perovskite Cube for Flexible Memory Devices**, ACS Applied Electronic Materials (2020) (In Press)
  17. Suvra Pal, Nirmalya Sankar Das, Brahami Das, Bikram Kumar Das, Subhadipta Mukhopadhyay and Kalyan Kumar Chattopadhyay; **V doped BaSnO<sub>3</sub> nanocubes as a Field emitting material: Experimental and theoretical investigation**, Applied surface science (2020), 530, 147102
  18. Partha Bairi, Kausik Sardar, Kausik Chanda, Madhupriya Samanta, Subhasish Thakur, Karamjyoti Panigrahi, Saikat Sarkar, Tufan Paul, and Kalyan Kumar Chattopadhyay; **Shape-Shifting via Salt Crystallization: Conversion of Nanostructured Polymer into Site-Selective Nitrogen-Doped Carbon Sheet with Enhanced Supercapacitive Performance**, ACS Applied Energy Materials (2020), 3, 6, 5984-5992
  19. M. Samanta, S.I. Ahmed, K.K. Chattopadhyay, C. Bose, **Role of various transport layer and electrode materials in enhancing performance of stable environment-friendly Cs<sub>2</sub>TiBr<sub>6</sub> solar cell**, Optik, 217, 164805 (2020)
  20. Rituparna Chatterjee, Gopes Das and Kalyan Kumar Chattopadhyay; **Luminescence properties of nano and bulk ZnWO<sub>4</sub>:Eu<sup>3+</sup> Phosphor for solid state lighting applications**, Materials Research Express (2020), In press
  21. Nripen Besra, Kausik Sardar, Soumen Maiti, Pranab Kumar Sarkar, Tufan Paul, Subhasish Thakur, Gautam Majumdar and Kalyan Kumar Chattopadhyay, **Incorporation of V<sub>2</sub>O<sub>5</sub> nanorods into perovskite photodetectors as an alternative approach to enhance device performance: a step towards stability against ambient water species**, Dalton Transaction (2020) (In press)
  22. Antika Das, Karamjyoti Panigrahi, Subhajit Saha, Bikram Kumar Das, Nirmalya Das, Saikat Sarkar, Rituparna Chatterjee and K.K. Chattopadhyay; **Yellow emitting Fe<sub>3</sub>O<sub>4</sub>/ZnS hybrid: a probe for in vitro dermatoglyphics and anti-counterfeiting applications**; Materials Research Bulletin (2020), 131, 110966
  23. Souvik Bhattacharjee, Nilesh Mazumder, Suvankar Mondal, Karamjyoti Panigrahi, Anibrata Banerjee, Dimitra Das, Saikat Sarkar, Dipayan Roy, and Kalyan Kumar Chattopadhyay; **Size- modulation of functionalized Fe<sub>3</sub>O<sub>4</sub>: Nanoscopic customization to devise resolute piezoelectric nanocomposites**; Dalton Transactions, (2020), 49, 23, 7872-7890
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  26. Suvankar Mondal, Tufan Paul, Soumen Maiti, Bikram Kumar Das and Kalyan Kumar Chattopadhyay; **Human Motion Interactive Mechanical Energy Harvester Based on All Inorganic Perovskite-PVDF Nano Energy**; Nano Energy (2020), 74, 104870
  27. Supratim Maity, Biswajit Das, Madhupriya Samanta, Bikram Das, Shrabani Ghosh and K.K. Chattopadhyay; **MoSe<sub>2</sub>-amorphous CNT hierarchical hybrid core-shell structure for efficient hydrogen evolution reaction**; ACS Applied Energy Materials (2020), 3, 5, 5067-5076



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29. Brahami Das, Biswajit Das, Nirmalya Sankar Das, Suvra Pal, Bikram Kr Das, Subrata Sarkar and K.K. Chattopadhyay; **Novel Ag<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub> type II p-n heterojunction as an efficient water cleanser for green cleaning technology**; Applied Surface Science (2020), 515, 145958
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31. Karamjyoti Panigrahi, Promita Howli and Kalyan Kumar Chattopadhyay; **3D network of V<sub>2</sub>O<sub>5</sub> for flexible symmetric supercapacitor**; Electrochimica Acta (2020), 337, 135701
32. Dipanwita Mitra, Promita Howli, Bikram Kumar Das, Nirmalya Sankar Das, Paramita Chattopadhyay and K. K.Chattopadhyay; **Size and phase dependent thermal conductivity of TiO<sub>2</sub>-water nanofluid with theoretical insight**; Journal of Molecular Liquids (2020), 302, 112499
33. Ratna Sarkar, Dimitra Das, Bikram Kumar Das, Anuradha Mitra, Nirmalya Sankar Das, Subrata Sarkar and K. K. Chattopadhyay; **Hollow Micro-spherical Bismuth Oxy-chloride for Superior Visible Light Induced Dye-sensitized Photocatalytic Activity and its Theoretical Insight**; Materials research Bulletin (2020), 125, 110778
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163. G. Mahmoudi, S. K. Seth, F. I. Zubkov, E. Lopez-Torres, A. Bacchi, V. Stilinovic, A. Frontera, **Supramolecular Assemblies in Pb(II) Complexes with Hydrazido-Based Ligands**, Crystals, 2019, 9, 323, 24 June, 2019
164. T. Mandal, A. Dey, S. K. Seth, J. Ortega-Castro, A. L. Rheingold, P. P. Ray, A. Frontera, S. Mukhopadhyay, **Influence of 2-Amino-4-methylpyridine and 2-Aminopyrimidine Ligands on the Malonic Acid-Cu(II) System: Insights through Supramolecular Interactions and Photoresponse Properties**, ACS Omega, 2020, 5, 460–470, 16 December, 2019
165. Soumen Mondal and Prasad Basu, **On the properties of dissipative shocks in the relativistic accretion flows**, Monthly Notices of the Royal Astronomical Society (MNRAS), Vol-497, 2119-2132, 2020. Online ISSN 1365-2966, Impact factor: 5.356 (2019)
166. Sultana, A., Alam, M.M., Roy, K., Sarkar, S., Mandal, D. **Perovskite methylammonium lead bromide incorporated poly(vinylidene fluoride) composite for flexible cantilever based self-powered vibration sensor**. Materials Research Express, 2019, 6(11), 115709
167. Sultana, A., Ghosh, S.K., Alam, M.M., Sarkar, S., Mandal, D. **Methylammonium Lead Iodide Incorporated Poly(vinylidene fluoride) Nanofibers for Flexible Piezoelectric-Pyroelectric Nanogenerator**, ACS Applied Materials and Interfaces, 2019, 11(30), pp. 27279-27287
168. Shib Shankar Singha, Siddheswar Rudra, Suchanda Mondal, Mukul Pradhan, Arpan Kumar Nayak, Biswarup Satpati, Prabir Pal, Kaustuv Das, Achintya Singha, **Mn incorporated MoS<sub>2</sub> nanoflowers: A high performance electrode material for symmetric supercapacitor**, Electrochimica Acta, (2020) vol. 338 p. 135815 Accepted 29 January, 2020

### 5. Collaborative Programmes:

#### International Collaborations

University of Delaware, USA Ecole Polytechnique, France University of Utah, USA University of Paris VI, France Kyushu Institute of Technology, Japan

#### National Collaborations

N.I.T. Sikkim, Diphu Govt College, Assam IICB, Kolkata, IEST, Kolkata VECC, Kolkata IIT Roorkee JNCASR, Bangalore, IIT (BHU), Varanasi, Jogesh Chandra Chaudhuri College, Kolkata, The Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune Cotton University, Guwahati, Assam, Midnapore City College, Paschim Medinipur, West Bengal Indian Centre for Space Physics, Garia, Kolkata

### 6. Major Achievements:

#### Achievement of the Students from Lab:

**Kalyan Kumar Chattopadhyay:** Brahami Das received Best paper presentation award in international conference VirtCon2020

**Kalyan Kumar Chattopadhyay:** Brahami Das received InSc Young Researcher award 2020

**Kalyan Kumar Chattopadhyay:** Supratim Maity received Young achiever award in 3rd International



## Annual Report 2019-20

Conference on condensed matter and applied physics held on 14-15 October, 2019

**Sukhen Das:** Debmalya sarkar, Namrata Das and Solanky Das won the first prize in UGC-AIU organized Zonal level Anveshan-2019 (Eastern Zone) in Basic Sciences category (12-13 February, 2020) and qualified for the National level Anveshan-2019

**Sukhen Das:** Shubham Roy received InSc Young Achiever award 2020

### Patent:

**Kalyan Kumar Chattopadhyay:** Large Scale synthesis of Cobalt Pthalocyanine nanotubes for supercapacitor applications, patent number: 201931011233, (2019), U. K. Ghorai, S. Mondal, J. Sarkar, A. Gain, K. K. Chattopadhyay

### 7. Research Scholars Awarded:

Argha Deb:	Javed Akhter
Sanjay Kumar:	Sumit Majumder
Joydeep Chowdhury:	Sannak Dutta Roy
Partha Pratim Ray:	Rajkumar Jana
Pabitra Kumar Paul:	Chaitali Hansda
Sanat Karmakar:	Pabitra Maity

## Annual Report 2019-20

### ACHIEVEMENTS OF DR. ATISHKUMAR CHATTOPADDHYAY

Principal Secretary,

FACULTY COUNCIL OF SCIENCE

[Scientific Achievement During 2020]

#### Area of Research Activities:

1. Synthesis and characterization of Nanocomposites for biomedical application by green synthesis
2. Synthesis of Nanoconjugates and its detailed Preclinical investigation
3. Pathophysiological investigation of various medicinal, herbal products by animal experimentation using histological, enzymatic and biochemical techniques
4. Development of herbal preparation, its detailed analysis and pre-clinical study
5. Detailed systemic toxicological investigation of the drugs and toxins, both short term and long term

#### Article Published in Journals:

1. Soumendra Darbar, Srimoyee Saha, Kausikisankar Pramanik and Atiskumar Chattopadhyay. Ameliorative efficacy of novel multi herbal formulation (AKSS16-LIV01) upon Haematological modulations induced by fixed dose combination of tramadol hydrochloride/paracetamol (THP). *Journal of Drug Delivery & Therapeutics*. 2020; 10(6):11-17
2. Soumendra Darbar, Srimoyee Saha, Kausikisankar Pramanik and Atiskumar Chattopadhyay. Sanative effect of multiherbal formulation–AKSS16-LIV01 upon CCl<sub>4</sub> induced hepatic dysfunction in mice. *Asian Journal of Pharmaceutical and clinical research* 2020 October-December. Vol 53, Issue 4 (Suppl), 669-676
3. Soumendra Darbar, Srimoyee Saha, Kausikisankar Pramanik and **Atiskumar Chattopadhyay**. Role of newly developed multi herbal formulation (AKSS16-LIV01) in ameliorating carbon tetrachloride induced haemato-toxicity in Swiss albino mice. *International Journal of Current Research in Biosciences and Plant Biology(IJCRBPB)*;2020;7(10), 22-30
4. Soumendra Darbar, Srimoyee Saha, Kausikisankar Pramanik and **Atiskumar Chattopadhyay**. In vitro phytochemical constituents, antimicrobial and antifungal activity of a low cost novel multi herbal formulation (AKSS16-LIV01). *International Journal of Advanced Research in Life Science International Journal of Recent Research in Chemical Science (IJRRCS)* Volume 1 Issue, 1 December 2020; 1-10
5. Soumendra Darbar, Srimoyee Saha, Kausikisankar Pramanik and **Atiskumar Chattopadhyay**. Therapeutic application of novel multi herbal formulation (AKSS16LIV01) against the inductive influence of Carbon Tetrachloride (CCl<sub>4</sub>) upon tissue and serum protein in experimental animals. *Bulletin of Environment, Pharmacology and Life Sciences* Volume 9 (12) 2020

#### Paper Presented in the International Seminar:

1. **Atiskumar Chattopadhyay**. Attenuation of CCl<sub>4</sub>-Induced Hepatic Dysfunction in Mice by Polyherbal Formulation (PHF). ICCIIFCPAS-2020; Vidhyasagar University, West Bengal. **Invited Talk**
2. Soumendra Darbar, and **Atiskumar Chattopadhyay**. Assessment of Safety Profile of a Newly Developed Herbal Formulation in Experimental Mice. ICCIIFCPAS-2020; Vidhyasagar University, West Bengal. **Invited Talk**
3. Soumendra Darbar, Srimoyee Saha, Kausikisankar Pramanik and **Atiskumar Chattopadhyay**. Redox Scavenging Potential and Antioxidant Activity of Silver Nanoparticle Coupled with *Andrographis paniculata* (AP-Ag NP) Against Carbon Tetrachloride (CCl<sub>4</sub>) Induced Hepatic Fibrosis in Mice *International Webinar Chemistry at the Bio-chemical Interface*, St. Paul's C. M. College, Kolkata; 29–30 August, 2020. **Oral Presentation**

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### Paper Presented in the National Seminar:

1. **Atiskumar Chattopadhyay**. Supplementation of seed dust of *viciafaba* and sesame ameliorates high lipid diet-induced dyslipidemia in rats. Indian Science Congress. 3-7 January, 2020, (Medical sciences including Physiology section) University of Agricultural Sciences, Bangalore, Karnataka, **Invited Talk**
2. Soumendra Darbar, and **Atiskumar Chattopadhyay**. Application of Nanotechnology in human and veterinary health. Indian Science Congress. 3-7 January, 2020, (Animal Science Section) University of Agricultural Sciences, Bangalore, Karnataka, **Invited Talk**
3. Soumendra Darbar, Srimoyee Saha, Kausikisankar Pramanik and **Atiskumar Chattopadhyay**. Safe and symptomatic medicinal use of surface functionalized metal based nanoparticles for hyperbilirubinemia treatment. Indian Science Congress. 3-7 January, 2020, (Medical sciences including Physiology section) University of Agricultural Sciences, Bangalore, Karnataka. **Invited Talk**

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**SECTION B**  
**[ACADEMIC REPORT (01.04.2019 –31.03.2020) ]**

**FACULTY COUNCIL OF INTERDISCIPLINARY STUDIES,  
LAW & MANAGEMENT**

**A. DEPARTMENT**



## Annual Report 2019-20

### ADULT, CONTINUING EDUCATION & EXTENSION

Phone: 033-2414-6236, 2457-2290

H.O.D: Partha Sarathi Chakraborty

E-mail: hodadultcontinuing@jadavpuruniversity.in

1. **(A) Courses Offered:** Details of the Courses offered during the period from 1 April 2019 to 31 March 2020 may be found in the Annexure 'A' attached herewith

1. **(B) Number of Faculty Members:** Three

2. **(A) Area of Research Activities:** Adult Education, Continuing Education, Communication, Engineering

3. **(B) Seminar/Workshop/Conference/Symposium Attended:**

**Santwan Chattopadhyay** presented paper: in an **International Seminar**

1. 'Arsenic and Drinking Water: An Undermined Human Rights Issue' organized by SAIRAP in Agartala, 18 June 2019
2. 'New Media & Contemporary Society: A Case Study' organized by DACEE JU, 17 July, 2019

**P S Chakraborty** has presented in an **International Seminar**

1. 'Arsenic and Drinking Water: An Undermined Human Rights Issue' organized by SAIRAP in Agartala, 18 June, 2019
2. 'New Media & Contemporary Society: A Case Study' organized by DACEE JU, 17 July, 2019

4. **(B) Articles published in Journals:**

1. V.Kumar, **P.S. Chakraborty**, and Dr. S. Dulal Krishna Mandal, "Performance and Engine test on a CI engine by using algae oil as an alternative fuel", **International Journal of innovative technology and exploring Engineering**, volume-8 issue -12, October, (2019), 1164-1169
2. A.Sengole Rayan, **Partha Sarathi Chakraborty**, Dulal Krishna Mandal, "Design and Fabrication of Three way Catalytic Converter by using AL<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> Coating as a Catalyst and Access of Emission Characteristics in C.I Engine", **International Journal of Innovative Technology and Exploring Engineering**, ISSN:2278-3075, Volume-8 Issue-12, October, 2019

5. **Collaborative Programmes:** Courses organised in collaboration with different organisations have been shown in **Annexure 'A'**

#### Annexure : 'A'

#### COURSES OFFERED

##### POST GRADUATE LEVEL COURSES:

Title of the Course	Duration	Course Fee	Eligibility
M.A. in Journalism & Mass Communication	2 Year	Rs.40,000/-	Graduate with 50 % in Hons./Major subject

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**POST- GRADUATE DIPLOMA LEVEL COURSES :**

<b>Title of the Course</b>	<b>Duration</b>	<b>Course Fee</b>	<b>Eligibility</b>
Post Graduate Diploma in Mass Communication	1 Year	Rs.20,000/-	Graduate in any discipline

**CERTIFICATE LEVEL COURSES :**

<b>Title of the Course</b>	<b>Duration</b>	<b>Course Fee</b>	<b>Eligibility</b>
One year Academic programme in Automobile Engineering	1 year	Rs.12000/	2 years diploma offered by the Dept.
One year Academic programme in Electrical Engineering	1 year	Rs.12000/	2 years diploma offered by the Dept.

## **B. INTERDISCIPLINARY SCHOOL**

ADVANCED STUDIES ON INDUSTRIAL POLLUTION CONTROL ENGINEERING

Phone: 033-2457-2482

Director: Prof. Abhijit Bhowal

E-mail: avijit.bhowal@jadavpuruniversity.in

**Publications:**

1. R. Gopinathan, **A. Bhowal**, C. Garlapati, Adsorption Studies of Some Anionic Dyes Adsorbed by Chitosan and New Four-Parameter Adsorption Isotherm Model. *Journal of Chemical Engineering Data* 64 (2019) 2320-2328
2. A. Sen, **A. Bhowal**, S. Datta, Application of natural dye on polytrimethylene terephthalate fiber. *Research Journal of Textile and Apparel*. 23(2019) 71-90
3. P. Banerjee, A. Mukhopadhyay, **P. Das**, Graphene oxide–nanobentonite composite sieves for enhanced desalination and dye removal, *Desalination* 451 (2019) 231-240
4. S. Mohanty, A. Ganguli, **P. Das**, P. Chaudhuri, Role of Manglicolous fungi isolated from Indian Sundarban mangrove forest for the treatment of metal containing solution: Batch and optimization using response surface methodology, *Environment Technology and Innovation* 13 (2019) 166-178
5. P Ganguly , S Sengupta , **P Das, A Bhowal**, Valorization of food waste: Extraction of cellulose, lignin and their application in energy use and water treatment, *FUEL*, 280(2020)118581
6. P Ganguly , R Sarkhel, **P Das, A Bhowal, A Saha**, Integral approach of treatment of phenolic wastewater using Nano-metal coated Graphene Oxide in combination with advanced oxidation, *Surfaces and Interfaces*, (2020) 100660
7. P Ganguly , R Sarkhel, **P Das**, Synthesis of pyrolyzed biochar and its application for dye removal: Batch, kinetic and isotherm with linear and non-linear mathematical analysis, *Surfaces & Interfaces Scienc*, 20 (2020) 100616
8. L Das, **P Das, A Bhowal**, C Bhattacharjee,, Synthesis of hybrid hydrogel nano-polymer composite using Graphene oxide, Chitosan and PVA and its application in wastewater treatment, *Journal of Environmental Technology and Innovation*, 18( 2020) 100664
9. L Das, **P Das, A Bhowal**, C Bhattacharjee, Treatment of malachite green dye containing solution using biodegradable Sodium alginate/NaOH treated activated sugarcane bagasse charcoal beads: Batch, optimization using response surface methodology and continuous fixed bed column study, *Journal of Environmental Managemen*, 276(2020) 111272
10. P Ganguly, A Khan, **P Das, A Bhowal**, Cellulose from lignocellulose kitchen waste and its application for energy and environment: Bioethanol production and dye removal, *Indian Chemical Engineering Journal* (Accepted)
11. A Ganguli, P Ganguly, **P Das, A Saha**, Integral approach for the treatment of phenolic wastewater using gamma irradiation and Graphene oxide, *Groundwater for Sustainable Degvelopment*, Vol 10 (2020) 100355
12. R Sarkhel, S Sengupta, **P Das, A Bhowal**, Comparative biodegradation study of polymer from plastic bottle waste using novel isolated bacteria and fungi from marine source, *Journal of Polymer Research*, DOI : 10.1007/s10965-019-1973-4, 27(16)2020
13. S Bhattacharya, P Banerjee, **P Das, A Bhowal**, S K. Majumdar and P Ghosh, Removal of aqueous carbamazepine using graphene oxide nanoplatelets: process modelling and optimization, *Sustainable Environment Research*, 30:17(2020)
14. P Banerjee, A Mukhopadhyay, P Das, Graphene oxide–nanobentonite composite sieves for enhanced desalination and dye removal, *Desalination*, 451(2019) 231-240
15. S Manna, S Prakash, P Das, Synthesis of graphene oxide nano-materials coated bio-char using carbonaceous industrial waste for phenol separation from water, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 581(2019) 123818

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16. U Roy, **P Das**, **A Bhowal**, Treatment of azo dye (congo red) solution in fluidized bed bioreactor with simultaneous approach of adsorption coupled with biodegradation: optimization by response surface methodology and toxicity assay, *Clean Technologies and Environmental Policy*, 21(8) 1675-1686

### Projects:

1. **Project Title:** Role of carbonaceous materials and cellulose nano-fibres polymeric composite for treatment of multiple pollutants present in waste water. Funding Agency: Dalmia Holdings Group Limited (2017-19)  
Investigator(s): Prof. P Das (and Prof. A. Bhowal)
2. **Project Title:** Green synthesis of iron nanoparticles from manglicolous fungi of Indian Sunderban and their application in sequestration of heavy metals from contaminated water  
Funding Agency: DBT sponsored project (in collaboration with University of Calcutta and National Institute of Technology – Rourkella) (2016-19)  
Principal Investigator: Prof. P Das.
3. **Project Title:** Removal of pharmaceutical derivatives present in wastewater by advanced oxidation integrating with microstructure and rotating packed bed of grapheme (G)/Graphene oxide (GO)/GO-metal nanocomposites. (2017-2020)  
Funding Agency: DST (in collaboration with IIT – Guwahati)  
Principal Investigator: Prof. P Das
4. **Project Title:** Synthesis of reduced Graphene oxide using gamma irradiation and Detoxification of wastewater using reduced Graphene oxide based nano- coated composite in presence of Gamma/UV/ photolytic radiation/irradiation technique  
Funding Agency: UGC-DAE Consortium  
Principal Investigator: Prof. P Das, Prof. A Bhowal
5. **Project Title:** Synthesis of Graphene oxide coated natural waste materials and its application for simultaneous treatment of wastewater containing fluoride and chromium: Reactor performance in batch, fluidized bed and membrane reactor  
Funding Agency: SERB DST  
Principal Investigator: Prof. P Das
6. **Project Title:** Zeolite-based Low-cost Hybrid Membrane Photo-Bioreactor System for Treating and Recycling of High Strength Industrial Wastewater  
Funding Agency: IMPRINT II (PI: Sujit Sen, NIT-Rourkella, CO-Investigator: Prof. B K Dutta, IITKGP), Prof. A B Pandit (ICT-Mumbai)  
Co-Investigator: Prof. P Das
7. **Project Title:** Integral approach of separation of polycyclic aromatic hydrocarbon from aqueous solution using waste biomass based magnetic nanocomposites and advanced oxidation  
Funding Agency: **RUSA 2**  
Principal Investigator: Prof. P Das, Prof. A Bhowal

### Book Chapter:

1. S Chowdhury, S. Pan, R. Balasubramanian and **P. Das**, 2019. Three-Dimensional Graphene-Based Macroscopic Assemblies as Super-Absorbents for Oils and Organic Solvents. In: *A New Generation Material Graphene: Applications in Water Technology*, Naushad, M. (Ed.). Springer, Switzerland, ISBN: 978-3-319-75483-3, pp: 43-68



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2. S Roy Barman, A Mukhopadhyay, **P Das**, 2019, Green Synthesis of Carbonaceous Adsorbents and Their Application for Removal of Polyaromatic Hydrocarbons (PAHs) from Water, Bioremediation A Sustainable Approach to Preserving Earth's Water, Taylor Francis Publications, 229 – 258
3. P Banerjee, A Mukhopadhyay, and P Das, , 2019. Biofunctionalized adsorbents for treatment of industrial effluents. *In: Bioremediation: A Sustainable Approach to Preserving Earth's Water*. Ed: S.K. Sharma, CRC Press, USA. Pp. 35-60 [ISBN: 978-1-138-59307-7]
4. P Banerjee, A Mukhopadhyay, and P Das, 2019. Azo Dye-Rich Wastewater Treatment by Combined Biodegradation–Adsorption Approach: Optimization, Modeling and Toxicity Analysis. *In: Waste Water Recycling and Management*. Ed: S.K. Ghosh, Springer Nature. Pp. 169-181 [DOI: 10.1007/978-981-13-2619-6\_14; ISBN: 978-981-13-2619-6]
5. Sarkhel R., Sengupta S., Das P., Bhowal A. (2020) Biodegradation of Plastic Waste Using Marine Micro-Organisms. In: Ghosh S. (eds) Urban Mining and Sustainable Waste Management. Springer, Singapore, pg 195-201 [DOI:10.1007/978-981-15-0532-4\_20]. ISBN: 978-981-15-0532-4.
6. P Ganguly., S Sengupta, P Das, A Bhowal (2020) Synthesis of Cellulose from Peanut Shell Waste and Its Use in Bioethanol Production. In: Ghosh S., Sen R., Chanakya H., Pariatamby A. (eds) Bioresource Utilization and Bioprocess. Springer, Singapore, pg 81-91 [DOI: 10.1007/978-981-15-1607-8\_10]. ISBN: 978-981-15-1607-8
7. P Ganguly, R Sarkhel, P Das (2020). The second and third generation biofuel technology: comparative perspectives. In: Sustainable Fuel Technologies Handbook [Accepted]
8. Sarkhel R., Sengupta S., Das P., Bhowal A. (2020) Biodegradation of Plastic Waste Using Marine Micro-Organisms. In: Ghosh S. (eds) Urban Mining and Sustainable Waste Management. Springer, Singapore, pg 195-201 [DOI:10.1007/978-981-15-0532-4\_20]. ISBN: 978-981-15-0532-4
9. Ganguly P., Sengupta S., Das P., Bhowal A. (2020) Synthesis of Cellulose from Peanut Shell Waste and Its Use in Bioethanol Production. In: Ghosh S., Sen R., Chanakya H., Pariatamby A.(eds) Bioresource Utilization and Bioprocess. Springer, Singapore, pg 81-91 [DOI: 10.1007/978-981-15-1607-8\_10]. ISBN: 978-981-15-1607-8
10. S R Barman, A Mukhopadhyay, P Das, 2019, Green Synthesis of Carbonaceous Adsorbents and Their Application for Removal of Polyaromatic Hydrocarbons (PAHs) from Water, Bioremediation A Sustainable Approach to Preserving Earth's Water. Editor S.K. Sharma. CRC press Taylor and Francis Group, Pp:229 -258 ISBN: 978-1-138-59307-7
11. S.R Barman, U.Roy, P. Das and A. Mukhopadhyay 2020. Membrane Processes for Removal of Polyaromatic Hydrocarbons (PAHs) from Wastewater. *In: "Green Chemistry and Water Remediation: Research and Applications"* Ed. S.K Sharma. Elsevier. (*Accepted*)
12. Manna S, Roy U, Biswas A, Sengupta S, Basak P, Das P (2020). Review on Trends in the Removal of Pharmaceuticals and Personal Care Products (PPCPs) from Water and Wastewater, *In 'Contaminants in Drinking and Wastewater Sources'*, Springer Transactions in Civil and Environmental Engineering, (Ed) M. Kumar et al. [Springer] [https://doi.org/10.1007/978-981-15-4599-3\\_10](https://doi.org/10.1007/978-981-15-4599-3_10)., 225-250
13. Biswas A, Manna S, Das P.(2020)Application of Nano materials in CO<sub>2</sub> sequestration, *In 'Chemo-enzymatic systems for CO<sub>2</sub> utilization'*, (Eds) Nanda AK, et al. [CRC Press, Taylor and Francis], <https://doi.org/10.1201/9780429317187>
14. U Pathak, T Mandal, **P Das**, D Dasgupta Mandal, S Datta, T.Kumar. Study of ammonia removal from simulated coke oven wastewater using commercial charcoal activated carbon.Waste Management and Resource Efficiency, Springer ISBN 978-981-10-7289-5 ISBN 978-981-10-7290-1 (eBook). <https://doi.org/10.1007/978-981-10-7290-1>
15. U Pathak, S Kumari, **P Das**, T Kumar, T Mandal. Role of Advanced Oxidation Process in Treatment of Coke Oven Wastewater—A Review.Wastewater Recycling and Management. Springer eBook ISBN: 978-981-13-2619-6; doi: 10.1007/978-981-13-2619-6

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16. U Pathak, D D Mandal, S K Jewrajka, **P Das**, T Kumar, T Mandal (2020) A consolidated stratagem towards defenestration of coke oven wastewater using various advanced techniques - An analogous study. Recent Trends in Wastewater Treatment and Water Resource Management, Springer, Singapore. [https://doi.org/10.1007/978-981-15-0706-9\\_6](https://doi.org/10.1007/978-981-15-0706-9_6)
17. U Pathak, D D Mandal, P Das, T Kumar, T Mandal (2020). Bioattenuation of Poly-aromatic Compounds by an isolated Bacterial Strain: Process optimization and toxicity analysis. Advances in Bioprocesses and Utilization of Biomass, Springer. Accepted 2020

### AUTOMOTIVE ENGINEERING

Phone : 033- 2414 -6927

Director : Prof. Ranajit Kumar Chakrabarti

Email: rkchakrabarti@yahoo.co.in

#### 1. Areas of Research Activities:

Research on development of a new generation of Automotive Engines

Methoding of Engine Castings

Development of new materials to be used for different automobile components and their microstructure interpretation and mechanical properties

Energy economy analysis and pollution control in Foundries producing automobile components by modifying the existing cupolas to divided blast cupolas

Research on preparation of Molding Sand having properties suitable for automobile castings

#### 2. Major Research Projects :

- a) “R&D and Innovation Centre for Howrah Foundry Cluster” sponsored by Technology Information Forecasting and Assessment Council (TIFAC), Department of Science and Technology, Government of India
- b) “Modification of divided blast cupolas and Conversion of conventional cupolas into divided blast cupolas for Howrah Foundries” - a project sponsored by Technology Information Forecasting and Assessment Council (TIFAC), Department of Science and Technology, Government of India

#### 3. Seminar/Workshop/ Conference/ Symposium Organized :

The R & D and Innovation Centre for Howrah Foundry Cluster building was inaugurated by Dr. Anil Kakodkar, Chairman, Technology Information Forecasting and Assessment Council (TIFAC), Department of Science & Technology (DST), Government of India, New Delhi. Eminent foundry technologist, entrepreneurs and expert members from IFA, HFA & IIF attended the inaugural function

Seminar/workshops were organized in collaboration with IFA, HFA and IIF at Jadavpur and Howrah

#### 4. Major Achievements :

- A. The project on R & D and Innovation Centre for Howrah Foundry Cluster has achieved the following major achievements.

### **Casting Simulation Laboratory**

Casting Simulation job had been completed for some major foundries in Howrah and Serampore successfully utilising facilities developed at our laboratory fully equipped with advanced solid modeling software namely ProE and casting simulation software PRO-CAST

Advanced training on the CAD software PRO-E and casting simulation software PRO-CAST have already been imparted to the project staff for honing their skill for simulation projects

- **Laboratories for Chemical/spectroscopic analysis, Metallurgical/ metallographic Testing**

The Nodel Centre is now fully equipped to take up the following Design and Testing Assignment:-

- 1) Metallography including In-Situ Metallography of casting at the foundry through Leica DMIL Metallurgical Microscope of German make and Apollo make In-Situ Kits
- 2) NDT-Portable Dynamic Hardness Tester of Askib Engineers Pvt. Ltd. Make Hardness Testing Machine.
- 3) Hardness, U.T.S, Y.S. & Elongation through Fine Testing make 20 Ton UTM
- 4) Chemical Analysis facilities using Strohein Apparatus etc

We have served to many foundries producing quality casting in Howrah belt with our testing facilities and got good response on regular basis. This has led them to become quality conscious and as a result some foundries have installed their own Metallurgical Microscope and other testing facilities

### **B. Mobile Casting Clinic**

The mobile casting Clinic, started functioning on regular basis from July 2009. The Mobile Casting Clinic is provided with sand testing equipments as well as recently installed temperature measuring device combined with carbon equivalent analyzer

An expert also accompanies the Mobile Casting Clinic who advises the industry regarding the reasons and remedies of the routinely encountered defects. Mobile Van moves along a route predetermined route by the Foundry Association for carrying our sand testing at nominal rates. Mobile Casting Unite has received an overwhelming response from foundries indicating and justifying its timely introduction

The Mobile Casting Clinic while on service at various foundries of Howrah Cluster carries out the following testing of sand at nominal yearly membership/registration fees and suggesting remedies of defects arising out of sand practice

- Determination of Moisture Content
- Permeability Test
- Mould Hardness Test
- Core Hardness Test
- Green Compressive Strength Test
- Comp actability Test
- Determination of AFS grain Fineness Number
- Determination of Total Clay Content

The Mobile Casting Clinic has also got the following additional test facilities for the foundries-

- Carbon Equivalent, Carbon %, Silicon % and temperature measurement
- Consultancy facility also available on request

Due to introduction of mobile casting clinic Howrah Foundry Cluster is not only happy to receive the service for testing facilities, they have become conscious also to go for quality casting, and as a result many foundries now in Howrah have set up their own sand testing laboratory

### **Consultancy Services through Mobile Casting Clinic**

Manufacture of high Phosphorous cast iron Railway brake block from cupola metal has been optimized and demonstrated in a Howrah foundry shop

### **Other Activities:**

#### **Modification of Divided Blast Cupola (DBC)**

An extended project work sponsored by TIFAC DST to the Jadavpur University deals with the proper modification of the DBCs of Howrah Foundry Cluster with an objective of energy economy by reduction of coke rate

Out of Five numbers of foundries in Howrah for which the modification work for their existing cupolas are to be carried out under the project, three numbers namely **M/s. Dhang Iron Company, Shree Shyam Iron Foundry and Super Iron Foundry** have already been completed satisfactorily. It was found that with the modifications, the cupolas could become much more energy efficient and coke consumption could go down around 30% and with an appreciable reduction in Suspended Particulate matter level. The cost involved for modifications recovered by the entrepreneurs in 4/6 months time

Dr. Prabhat Ranjan Executive Director-TIFAC visited R&D Centre in connection with the project monitoring committee meeting. He had highly appreciated implementation of the project and congratulated each team member of the School of Automotive Engineering, who was associated with this project. Dr. Ranjan requested Prof. Ranajit Chakrabarty, Director, School of Automotive Engineering, Jadavpur University to highlight the success story of the project with the details of background of the cluster, activities undertaken by the R&D and Innovation Centre at Jadavpur University, a report on implementation of the centre along with the audited fund utilization certificate

The project activities of the School conducted an in-depth study of the background of Howrah Foundry Cluster and also a study on the Technology Gap Analysis on the Howrah Foundry Cluster including that on Automotive Components

It was appreciated by Technology Information, Forecasting & Assessment Council (TIFAC) that this R&D and Innovation centre and Mobile Casting Clinic has become an excellent infrastructure to address the R&D and services, needs of the foundry industry in and around Howrah. It was also acknowledged by Technology Information, Forecasting & Assessment Council (TIFAC) that such kind of R&D infrastructure was not available anywhere in the eastern part in India

#### **Project Achievement Highlights:**

- Installation and successful running of nodal centre equipped with mechanical testing laboratory, metallographic laboratory, chemical laboratory including some sand testing facilities
- Installation and successful running of mobile casting clinic with revenue generation
- Generation of awareness amongst foundry owners for setting up their own sand testing lab. And using facility of mobile casting clinic
- Installation and successful running of casting simulation serving more than 10 foundries
- Successful modification of divided blast cupola leading to reduction of coke consumption around 33%
- Production of documentary film on Howrah Foundry Cluster

Extension proposals have been submitted to TIFAC involving four modules of training programme for foundry technicians, supervisory personnel and undergraduate students of Mechanical Engineering, proposed to be conducted by the R&D and Innovation Centre with the support from TIFAC

Technology Information, Forecasting & Assessment Council (TIFAC), Department of Science & Technology has advised that

- R&D and Innovation Centre for Howrah Foundry Cluster at the School of Automotive Engineering, Jadavpur University to prepare a detailed project report highlighting various project achievements

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- Unspent balance of the project towards non recurring expenditure may be utilized to meet the recurring expenditure for the project which should continue with the operation of the Nodal Centre and the Mobile Casting Clinic
- The School of Automotive Engineering may utilize the revenue generated from the project towards meeting the project recurring expenditure for continuing the operation of the Nodal Centre and the Mobile Casting Clinic
- TIFAC would continue to act as the knowledge partner for the “R&D and Innovation Centre” and mentor the Centre towards its planned activities in the future. TIFAC would extend technical and managerial support towards the Phase-II of the project for training and other allied programmes

### BIOSCIENCE & ENGINEERING

Phone: 033-2414-6567

033-2457-2316

Director: Dr. Piyali Basak

E-mail: dir.bioengg@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
M.E. (Biomedical Engineering)	2 Years	12

#### 1. B. Number of Faculty Members:

Professors	2 (2 Vacant)
Associate Professor	1 (Vacant)
Assistant Professors	3 (1 Vacant)

#### 2. A. Area of Research Activities:(Broad Areas)

Application of various branches of Engineering towards solutions of Bio-Science and Health related problems for the benefit of mankind. Current research activities include but not limited to following:

- Biomedical Instrumentation including development of Biomedical Sensors and Signal Conditioning Systems. Advanced Material for High Energy Imaging Devices etc. including their applications in Design of Bio-Implants
- Medical Imaging and Image Processing. Analysis and Processing of Biomedical Signals for Diagnosis and Therapy including applications involving Mathematical Modeling, Human Computer Interfacing, Artificial Intelligence, Rehabilitation Engineering etc
- Biomaterials Development and characterization of Bio-polymers in different form include membranes, nano-particle etc. which can be used as Bioactive Coatings, wound dressing. Evaluate Bio-Degradability and Drug Delivery property of different biopolymers. Biocompatibility testing including hemo-compatibility testing, cytotoxicity testing, MTT assay etc. Tissue Engineering
- Bioremediation of industrial waste by using microbial consortium
- Development of different drug from natural sources
- Biomechanics related to Soft and Hard Biological Tissues, Bio-Fluids, and Application of Finite Element Methods for analysis & Design of Biomechanical Systems
- Bio-informatics, In-silico analysis for assessment of action of different material, system



## 2. B. Major Research Project:

### Departmental

RUSA 2.0 Sponsored Departmental Research Project, “An Approach for Development of Next Generation Tissue Engineered Scaffold Using Biomaterials for Different Biomedical Applications Including Hypopharynx Reconstruction, Skin Tissue Regeneration”, PI: Dr. Piyali Basak

### Individual

RUSA 2.0 Sponsored Major Research Project, A Comparative Study of Gelatin –PVA and Gelatin-Corn Starch Nanocomposite Hydrogel Film Embedded with Green Synthesized Silver Nano-Particle for Different Biomedical Applications, PI: Dr. Piyali Basak

### Individual

RUSA 2.0 Sponsored Minor Research Project, “Upgradation of biosignal and biomedical image acquisition systems with realtime wireless data transmission and also upgradation of analytical sensing (Electro less coater, Electroplating and Anodization) set ups to remove the chemical smokes during the reaction time”. Ongoing

## 3. A. Invited Lectures Delivered/Sessions Chaired:

### Dr. Piyali Basak

- Co-chaired a technical session, One day workshop entitled ‘Bioactive glass, Ceramics & Composites in Healthcare: Current Technological Trends, 2020’, (BIOCOM 2020) at CSIR-Central Glass and Ceramic Research Institute, Kolkata, India; January 28, 2020
- Invited Talk to deliver an expert lecture in the workshop on 5 January, 2020, National Conference “Recent Trend in Biomedical Engineering, RTBE-2020” held on 3-7, January 2020 at NIT Durgapur

### Dr. Monisha Chakraborty

- Invited talk on “Innovation Incubation and Startup with IPR Possibilities” at NIT Manipur, 2019
- Invited talk on the occasion of celebration of **National Science Day** 2019 at Swapnopuran Shishu Shiksha Niketan, Hingolgunj, Basirhat, North 24 Parganas
- Invited talk on “Reference Collections as one-stop solution to foundational knowledge” as Guest Speaker at **Elsevier eBook Forum 2019 (South Asia)** held at Radisson Blu Hotel Guwahati
- Invited talk on “Entrepreneurship and Role of Technology” at Indian Chamber of Commerce, 10<sup>th</sup> Floor, 4, India Exchange Place, Kolkata in the workshop on Women Entrepreneurship “She-preneurship”, 2019
- Invited talk on “Daily Life Mathematics: Imagine, Invent and Inspire” in the **valedictory session** to the students in the Four Day workshop at Indumati Sabhagriha, 2019

## 3. B. Seminar/Workshop/Conference/Symposium Attended:

### International Conferences:

1. Samrat Paul, **Piyali basak**. PVA-microencapsulation: effective drug delivery system to inhibit epithelial to mesenchymal transition (EMT) in-vitro. International conference on cancer biology and anti-cancer therapies (**ICCB-2019**) held at Singapore during **24–25 June, 2019**
2. Samrat Paul, **Piyali Basak**. Anti metastasis activity: Evaluated by cell based adhesion assay on gelatin fibronectin coated plate invitro. Best poster Award Programme. 106th Indian Science Congress held at Phagawara, Jalandhar, India from 3–7 January, 2019
3. Manna S, Das P, Biswas S, Paul S, Das P, **Basak P**. “Synthesis of Novel Graphene Oxide Based Nanocomposites for Multiple Pollutants Separation”, 2<sup>nd</sup> International conference on Advances in Bioprocess Engineering and Technology, Heritage Institute of Technology, Kolkata, India 20.01.2020 to 22.01.2020

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4. **Dr. Piyali Basak**, RISUG® (Reversible Inhibition of Sperm Under Guidance) based bioactive gamma ( $\gamma$ ) radiated polymeric composites having selective anti-microbial activity and bio-compatibility for the application as the non-hormonal female contraceptive implant, Bioactive glass ceramics & composites in health care: current technological trends (BIOCOM) 2020, CGCRI Kolkata, One day
5. **Dr. Piyali Basak**, Evaluation of Sodium Alginate-iron oxide composite bead as novel antimicrobial agent, Indian Science Congress 2020, University of Agricultural Science, GKVK, Bangalore, Duration 3 -7 January
6. **Dr. Piyali Basak**, Evaluation of iron-oxide composite magnetic beads as bioremediation agent, BIOCOM 2020, CGCRI, KOLKATA, 28 January
7. Suwendu Manna, Pratik Das, Shreya Biswas, Samrat Paul, Papita Das, **Piyali Basak\***; Synthesis of Novel Graphene oxide based nanocomposite for multiple pollutant separation, Young Scientist Award-Nanomaterials and Nanotechnology, 2nd International Conference on Advances in Bioprocess Engineering and Technology (ICABET, 2020), Kolkata
8. **Dr. Piyali Basak**, Interdisciplinary approaches incorporating computational intelligence in modern pharmacognosy to address biological problems, International Conference on Electronic Systems and Intelligent Computing (ESIC 2020), National Institute of Technology, Arunachal Pradesh, 3 March 2020

### Monisha Chakraborty

9. "Contrast Enhancement of MRI Images using Histogram Equalization Techniques", published in IEEE International Conference on Computer Electrical & Communication Engineering (ICCECE), Kolkata
10. "NARX-Wavelet based Active Model for Removing Motion Artefacts from ECG", published in IEEE International Conference on Computer Electrical & Communication Engineering (ICCECE), Kolkata
11. "Optimal Filtering of Single Channel EEG Data using Linear Filters," published in IEEE International Conference on Bio Signals, Images, and Instrumentation (ICBSII), Chennai, India
12. "Fractal Characterization of ECG signals: Indian Classical Music as stimulus" published in IEEE International Conference on Bio Signals, Images, and Instrumentation (ICBSII), Chennai, India
13. "Fractal Characterization of Auditory Evoked Potentials" that is published in IEEE International Conference on Bio Signals, Images, and Instrumentation (ICBSII), Chennai, India
14. "CZT Thin Films using RF Sputtering and PVD", published in 22<sup>nd</sup> International Conference on Advances in Materials & Processing Technologies (AMPT 2019), held in Taipei, Taiwan on 2019
15. "CZT Thin Film using Simultaneous Vacuum Evaporation" is published in ICoSEM 2019 held at Kuala Lumpur on 2019
16. "Dispersion Entropy for the Automated Detection of Epileptic Seizures", accepted for publication in 15<sup>th</sup> IEEE ICIIS 2020
17. "Effects of Indian Classical Music on Heart Rate Variability", IEEE Sponsored 5th International Conference for Convergence in Technology (I2CT) 2019, Pune, Maharashtra, India, 2019
18. "Establishment of EMG-Force relationship obtained during Simultaneous Voluntary Contraction of Biceps and Flexor Digitorum Profundus Muscles", IEEE Sponsored 5th International Conference for Convergence in Technology (I2CT) 2019, Pune, Maharashtra, India
19. "Epilepsy Seizure Detection using Non-linear and DWT-based features", IEEE International Conference on Wireless Communications Signal Processing and Networking, 2019, SSN College of Engineering, Chennai

### National Conferences:

1. Review on effects of Gamma Knife Radiosurgery on Cancer Patients depending on Hazard ratio, Abstract published in National Conference on Environmental Radiation: Impact on Society and its Implications 2019
2. Radiation based techniques in neurophysiology, Abstract published in National Conference on Environmental Radiation: Impact on Society and its Implications, 2019
3. Noise Reduction in X-ray Images by Application of different types of Denoising Algorithms, Abstract published in National Conference on Environmental Radiation: Impact on Society and its Implications, 2019

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4. Recent Approaches in Radio-Diagnosis using Image Processing Methods Compensating Minimum Radiation Exposure, Abstract published in National Conference on Environmental Radiation: Impact on Society and its Implications, 2019
5. Risk Minimization Techniques in Radiotherapy: Present Scenario, Abstract published in National Conference on Environmental Radiation: Impact on Society and its Implications, 2019

### 3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teachers, Title of the Course, Duration, Place)

Dr. Piyali Basak, UGC sponsored Refresher Course, Inter-disciplinary Refresher Course on Emerging Areas of Life Science; 15 days (27 January to 8 February 2020), Jadavpur University, Kolkata-700032

### 4. A. Books/Monographs etc. Published:(Name of the Teacher, Name of the Book, Name of the Publisher)

1. **Piyali Basak**, *Samrat Paul, Subhendu Manna*. "Cellulases in paper and pulp, brewing and food industries: Principles associated with its diverse applications (Chapter 13); Current Status and Future Scope of Microbial Cellulases. (Accepted 25 August, 2020)
2. Biswas S. and **Basak P.** "Biodecolourization of Azo Dyes by Microbes", Textile Industry and Research in 2030: Challenges and Opportunities. Publisher: Shree Vaishnav Institute of Textile Technology. ISBN : 978-93-5351-406-8, April 2019
3. **Monisha Chakraborty** and M. S. J. Hashmi, "Metal-Semiconductor Contacts in Industrial Applications and Processing", published in Reference Module in Materials Science and Materials Engineering. Oxford: Elsevier, 2019, pp. 1–15. ISBN: 978-0-12-803581-8

### 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

1. Paul S, **Basak P**, Majumder R, Mukherjee A, Ghosh J, Patra S, Jana NK. Biochemical Estimation of Moringa oleifera Leaf Extract for Synthesis of Silver Nanoparticle Mediated Drug Delivery System. *J Plant Biochem Biot* 2020; 29 (1):86-93. DOI: <https://doi.org/10.1007/s13562-019-00517-z>
2. Podder S, **Paul S**, Basak P, Xie B, Fullwood NJ, Baldock SJ, Yang Y et al. Bioactive silver phosphate/polyindole nanocomposites. *RSC Advances*. 2020; 10 (19): 11060-11073. DOI: <https://doi.org/10.1039/D0RA01129K>
3. Guha Ray, P., Biswas, S., Roy, T., Ghosh, S., Majumder, D., **Basak, P.**, & Dhara, S. (2019). "Sonication assisted Hierarchical decoration of Ag-NP on Zinc Oxide Nanoflowers impregnated Eggshell Membrane: Evaluation of Antibacterial Activity and in vitro Cytocompatibility". *ACS Sustainable Chemistry & Engineering*. doi: 10.1021/acssuschemeng.9b01185, July 2019
4. Biswas S., **Basak P.**, Jasu A., "Exploring different sources for Malachite decolorising bacteria" *Journal of the Indian Chemical Society*, Volume 96, Issue 4, April 2019
5. Das, P., Ghosal, K., Jana, N.K., Mukherjee, A. and **Basak, P.**, 2019. Green synthesis and characterization of silver nanoparticles using belladonna mother tincture and its efficacy as a potential antibacterial and anti-inflammatory agent. *Materials Chemistry and Physics*, 228, pp.310-317; 2019/4/15
6. **Dr. Piyali Basak**, Anti-inflammatory effect of epidermal growth factor conjugated silk fibroin immobilized polyurethane ameliorates diabetic burn wound healing, *International Journal of Biological Macromolecules*, 15.01.2020, 143
7. Indu R, Adhikari A, Sur TK, **Basak P.** Elucidation of the effect of concomitant administration of Metformin and Diclofenac Sodium on insulin resistance, pro-inflammatory cytokines and oxidative stress markers in vivo models. *Research Journal of Biotechnology* (Accepted for Publication)

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8. Indu R, Adhikari A, **Basak P**, Sur TK. Spectroscopic monitoring of Metformin and Atorvastatin on artificial gastrointestinal fluid following drug-drug interaction rule: An In vitro Approach. *International Journal of Scientific and Technology Research*. 2020; 9(4): 2975-2981
9. A Saha, **P Basak**, S Pal, A THz Metasurface Coated SoC for SPR Excited Carcinoma Sensing *International Conference on Electrical and Electronics Engineering*, 2020/2/14, 1-6
10. T Adhikary, **P Basak** interdisciplinary Approaches Incorporating Computational Intelligence in Modern Pharmacognosy to Address Biological Problems *Electronic Systems and Intelligent Computing*, 2020, 11-19
11. P Das, S Manna, **P Basak** Analyzing the Effect of Temperature on the Outspread of COVID-19 around the Globe *medRxiv*, 2020/1/1, **doi**: <https://doi.org/10.1101/2020.05.19.20107433>
12. A Saha, **P Basak**, B Gupta, S Pal, A Biodegradable THz Metasensor For Malignancy Apoptosis *International Conference on Electrical, Electronics and Computer (IEEE)*, 2019/11/8, 1-5
13. A Basu, A Sarkar, U Maulik, **P Basak**, Three dimensional structure prediction and ligand-protein interaction study of expansin protein ATEXPA23 from *Arabidopsis thaliana* L., *Indian Journal of Biochemistry and Biophysics (IJBB)*, 2019/8/26, 56 (1), 20-27
14. P Pahari, **P Basak**, A Sarkar Ensemble based biomarker identification on pancreatic ductal adenocarcinoma gene expressions, *International Journal of Computers and Applications*, 2019/7/3, 1-7
15. Das, K Rajesh, V Lalzawmliana, K Bavya Devi, **P Basak**, D Lahiri, Development and Characterization of Acellular Caprine Chondral Cartilage Matrix for Tissue Engineering Applications, *Cartilage*, 2019/6/19, 1947603519855769
16. Bhuvaneshwaran Subramanian, Tarun Agarwal, Sanjoy Kumar Ghorai, Pijush Mandal, Santanu Chattopadhyay, **Piyali Basak**, Tapas Kumar Maiti, Sujoy K Guha, Biocompatible polyvinyl alcohol and RISUG® blend polymeric films with spermicidal potential, *Biomedical Materials*, 2019/4/15, 14 (3), 035017
17. S Paul, **P Basak**, N Maity, C Guha, NK Jana, Bis (isothiocyanatomethyl) benzene, a plant derived anti-neoplastic compound: purified from *Moringa oleifera* leaf extract, *Anti-Cancer Agents in Medicinal Chemistry (Formerly Current Medicinal Chemistry-Anti-Cancer Agents)* 2019/3/1, 19, 677-686
18. B Subramanian, T Agarwal, **P Basak**, TK Maiti, SK Guha, RISUG® based improved intrauterine contraceptive device (IUCD) could impart protective effects against development of endometrial cancer, *Medical hypotheses*, 2019/3/1124, 67-71
19. I Chakraborty, AJ Roy, T Kahali, P Hazra, **P Basak**, Synthesis and characterization of biodegradable polyurethane to assess lysine hydrochloride drug release for further in vivo potentiality and clinical research, *The Pharma Innovation Journal*, 2019; 8(4): 624-628
20. R Indu, A Adhikari, **P Basak**, TK Sur Effect of concomitant therapy of anti-diabetics and hypolipidemics on biochemical and histological parameters in animal models, *Asian Journal of Pharmacy and Pharmacology*, 2019, 5 (4), 771-778
21. R Indu, A Adhikari, **P Basak**, D Banerjee, TK Sur Evaluation of drug-drug interaction on concomitant administration of anti-diabetics and hypolipidemic in in vivo models *International Journal of Biosciences*, 2019, 14, 317-327
22. Bhuvaneshwaran Subramanian, Arun Prabhu Rameshbabu, Kuntal Ghosh, Pradeep K Jha, Rakhi Jha, Selvakumar Murugesan, Santanu Chattopadhyay, Santanu Dhara, Keshab C Mondal, **Piyali Basak**, Sujoy K Guha, Impact of styrene maleic anhydride (SMA) based hydrogel on rat fallopian tube as contraceptive implant with selective antimicrobial property, *Materials Science and Engineering: C*, 2019/1/1, 94, 94-107
23. A Bhattacharya, P Pahari, **P Basak**, A Sarkar Class Discriminator-Based EMG Classification Approach for Detection of Neuromuscular Diseases Using Discriminator-Dependent Decision Rule (D3R) Approach, *Recent Trends in Signal and Image Processing*, 2019, 49-56

### Dr. Monisha Chakraborty

24. "A Novel Methodology to study the Cognitive Load Induced EEG Complexity Changes: Chaos, Fractal and Entropy based approach", **Accepted in Biomedical Signal Processing and Control, Elsevier, 2020**

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25. “A python based support vector regression model for prediction of COVID19 cases in India”, published in **Chaos, Solitons & Fractals, Elsevier**, Volume 138, September 2020, 109942
26. “Epilepsy Seizure Detection using Kurtosis based VMD’s parameters selection and bandwidth features”, **Accepted in Biomedical Signal Processing and Control, Elsevier, 2020**
27. “High Energy Radiation Detection Materials: Fabrication and Applications”, published in **Advances in Materials and Processing Technologies, Taylor & Francis**, (2019) ISSN: 2374-068x (print) ISSN: 2374-0698 (online), doi: <https://doi.org/10.1080/2374068X.2019.1575714>
28. “Simultaneous Vacuum Evaporation for CZT Thin Film Fabrication”, **Advances in Materials and Processing Technologies, (2019), Taylor & Francis**, doi: <https://doi.org/10.1080/2374068X.2019.1666503>
29. “RF Sputtering and PVD Methods for CZT Thin Film Fabrication”, **Advances in Materials and Processing Technologies, (2019), Taylor & Francis**, doi: <https://doi.org/10.1080/2374068X.2019.1675974>
30. “Prospective treatment of Parkinson’s disease by a siRNA–LDH nanoconjugate”, **Med. Chem. Commun, Royal Society of Chemistry**, 2019, 10, 227-233, DOI: 10.1039/c8md00501j
31. “An in vitro comparative study of layered-double hydroxide nanoconjugate in the delivery of small interference and short-hairpin ribonucleic acid”, **Bull. Mater. Sci.** (2020) 43:10, <https://doi.org/10.1007/s12034-019-1976-0>
32. “Intercalation of shRNA-plasmid in Mg-Al layered double hydroxide nanoparticles and its cellular internalization for possible treatment of neurodegenerative diseases”, **Journal of Drug Delivery Science and Technology, Elsevier**, 52 (2019) 500–508
33. “Determination of half maximal inhibitory concentration of CaAl layered double hydroxide on cancer cells and its role in the apoptotic pathway”, **Applied Clay Sciences, Elsevier**, 168 (2019) 31–35
34. “ShRNA intercalation in CaAl-LDH nanoparticle synthesized at two different pH conditions and its comparative evaluation”, **Applied Clay Science, Elsevier**, 171 (2019) 57–64
35. “Incorporation of shRNA in bioactive glass coated SS316L implant material and its role in inhibition of the osteoclast activity for better post implantation fixation”, **Journal of Drug Delivery Science and Technology, Elsevier**, 52 (2019) 730–737

### 5. Collaborative Programmes:

#### Research Collaboration with:

1. Zoology Department, Burdwan University
2. IIT Dhanbad
3. Dept. of Veterinary Surgery & Radiology, W.B. University of Animal & Fishery Science
4. CSIR-CGCRI
5. CSIR-IICB
6. Department of Mechanical Engineering, Jadavpur University
7. School of Nanoscience & Technology, Jadavpur University
8. School of Energy Studies Jadavpur University
9. Computer Science & Engineering Department, Jadavpur University
10. Pharmaceutical Technology, Jadavpur University
11. Life Science & Biotechnology, Jadavpur University



## 6. Major Achievements:

### Dr. Monisha Chakraborty

1. **Section Editor** of Reference Module in Materials Science and Materials Engineering. Oxford: **Elsevier**
2. **Invited as Guest Speaker at Elsevier e-Book Forum 2019 (South Asia)** held at Radisson Blu Hotel Guwahati
3. **Invited as Institute guest for delivering Invited Lecture** during the Workshop on “Innovation Incubation and Startup with IPR Possibilities” held at NIT Manipur, 2019
4. **Joint Secretary of National Conference** on “Environmental Radiation: Impact on Society and its Implications (ERISI-2019)” to be held on 15-16 November, 2019
5. **Invited as Chief Guest and delivered lecture** at Swapnopuran Shishu Shiksha Niketan, Hingolgunj, Basirhat, North 24 Parganas on the occasion of celebration of National Science Day, 2019
6. Invited as **Guest of Honour at the workshop on Women Entrepreneurship** “She-preneurship” held in the main auditorium of **Indian Chamber of Commerce**, 10<sup>th</sup> Floor, 4, India Exchange Place, Kolkata, 2019
7. **Invited to deliver valedictory address** to the students in the Four Day workshop on Daily Life Mathematics: Imagine, Invent and Inspire conducted by Kolkata Nivedita Shakti and sponsored by the Department of Science & Technology and Biotechnology, Government of West Bengal at Indumati Sabhagriha, 2019
8. **An interview on** “Daily Life Mathematics: Imagine, Invent and Inspire” workshop is given in UPWORDS Magazine
9. **Co-Chaired a Technical session** at the Workshop, “Bioactive glass, Ceramics & Composites in Healthcare: Current Technological Trends, 2020”, (Acronym: BIOCUM 2020) held on 28 January, 2020 at CSIR-Central Glass and Ceramic Research Institute, Kolkata, India
10. **Invited as a panelist in the book** “Random Subterranean Mosaic: 2012-2018” launch event at **Oxford Book Store Kolkata, 2019**
11. **Felicitation on International Women’s Day**, 8 March, 2020 during the programme, a day long Seminar to mark International Women’s Day, Organized by Kolkata Nivedita Shakti in association with Indian Association for the Cultivation of Science at Mahendralal Sircar Auditorium, Indian Association for the Cultivation of Science, Kolkata
12. **Felicitation on International Women’s Day**, Organized by Khirodamoyee Gramin Pathagaar o Jolongi Shahitya Potrika in association with Bangla shilpi-Shahityik- Shomaj kormi-Sangbadik Somonwai Somiti, International School of Science and Culture, Ambedkar Cultural College at Krishnopodo Ghosh Memorial Trust Bhavan, Kolkata
13. A poem “Notun Porichoi” is published in the book, Shahitya Shomonwai, Aantorjatic Matribhasha Dibosh Shonkhya February, 2020
14. A rendition of Rabindrasangeet got place at Newspaper Jugoshonkhya Kolkata Sunday March, 08, 2020
15. Rendered Rabindrasangeet at CTVN AKD Plus Channel in the programme “Pratidiner Rabindranath”
16. A Rabindrasangeet rendition during the programme on 8th December, 2019 at Aliya University Auditorium got place at Banglar Jonarob Newspaper
17. A Rabindrasangeet rendition during the programme: “Shaptahik Notun Gotir Barshik Shahitya Sammelon got place at page 15 of Shaptahik Natun Goti Newspaper dated: 16-22 December, 2019
18. A Patriotic song rendition at Poshchim Banga Bangla Academy Auditorium during the programe “Bishishto Swadhinota Songrami Purnendu Proshad Bhattacharjer Shototamo Jonmodin uplokhye sambordhona Onusthan” Organized by Ekusher Bhabona at Poshchim Banga Bangla Academy on 15.10.2019. The mention of my name got place at Banglar Jonorob Newspaper dated: 16.10.2019 covering the above programme

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19. A poem “Aashapuron” got place in Natun Goti Eid Shankhya 2019. My Rabindrasangeet rendition got place at Natun Goti Weekly newspaper dated: 07.10.2019-13.10.2019, page 14 and my name as poet got place at Natun Goti Weekly newspaper dated: 28.10.2019-03.11.2019 covering the programme of the release of Natun Goti Eid Shankhya 2019 at Aliya University Auditorium
20. The mention and appreciations of my Rabindrasangeet rendition got place in Dainik Jugoshonkho Newspaper Dated: 23.09.2019, page-4, Natun Goti Weekly newspaper dated: 23.09.2019-29.09.2019, page-8 and in Puber Kolom Newspaper covering the programme at “Boichitro Sabhagriho” 15 Bankim Chatterjee Street, Kolkata-73
21. The poems are published in the book Ekush Shotoker Golpo Kobita Doshom Shonkolon, released at Jibananondo Sabaghar. Appreciations of my Rabindrasangeet got place in “Natun Gati” weekly newspaper, covering the programme “Ekush Shotoker Golpo Kobita, Doshom Shonkolon”
22. Invited guest in the programme on 20 April, 2019 at Bangla Academy organized by Ekusher Bhabona Potrika” covered in “Natun Gati” weekly newspaper

### Awards:

- 1: **ISCA Best Poster Award** (7 January, 2019) in Section Medical Science including Physiology by research Scholar **Samrat Paul**
- 2: Research Excellence Award 2020 awarded to **Dr. Piyali Basak** by Institute of Scholars
- 3: Research Leadership Award of the Year 2020 awarded to **Dr. Piyali Basak** by RULA award

### Annexures (Administrative)

#### Name of Student–(Name of Supervisors)–Title of Thesis

1. Anamika Basu–(Dr. Piyali Basak & Dr. Anasua Sarkar)–Evaluating the effect of plant protein expansion on mankind and overcoming its harmful effect using in silico study
2. Bhuvaneshwaran Subramanian–(Dr. Piyali Basak & Prof. Sujoy K Guha )–Characterization of RISUG® (hydrogel made of Styrene Maleic Anhydride polymer) based polymeric formulations having selective antimicrobial activity, bio-compatibility and anti-HIV activity for the application as non-hormonal female contraceptive implant
3. Rania Indu–(Dr. Piyali Basak & Dr. Anjan Adhikari)–Evaluation of Safety and Efficacy of Concomitant Drug Administration for Comorbidity in Animal Models
4. Preetam Guha Ray–(Dr. Piyali Basak & Prof. Santanu Dhara & Dr. Somenath Roy)–Surface Engineering of Polymeric Membranes and Silicon Microdevices for Biomedical Applications

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### COGNITIVE SCIENCE

Phone: 033-2457-2357

033-2414-6720

Director: Dr. Amrita Basu

E-mail: dir.cognitive@jadavpuruniversity.in

1. A. Courses Offered : Ph.D., M.Phil

1. B. Number of Faculty Members : 4

2. A. Area of Research Activities : Theoretical and Brain based processes in Emotion processing, Reasoning and thinking, Diagram perception, Neurobiology of language

3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

1. Chakraborty, Mihir, Plenary Talk, IJCRS 2019, Debrecen, Hungary

3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

1. Chakraborty, Mihir, Paraconsistency: Some basic issues, Paraconsistent Logic Pre-Conference Workshop, ICLA, March 1-5, 2019, Indian Institute of Technology Delhi

2. Soumya Dutta, Bijon Sarkar, Impact of emotional intelligence and cognitive intelligence on radio presenter's attention in All India Radio, Kolkata of India, The 11th Cracow Cognitive Science Conference (Attention and Memory), Jagiellonian University, Cracow, Poland, 11-12 May, 2019

3. Pratik Nath, Amrita Basu, Emotionality & Semanticity: An EEG study of Valence and arousal integration in Bengali phrases, Cognomics Conference, Bridging gaps: From genes to Cognition, Max Planck institute for Psycholinguistics, Nijmegen, Netherlands, 4-5 September, 2019

4. Amrita Basu, Expectation in semantic predictions: How affective variables modulate EEG insentence processing, Cognomics Conference, Bridging gaps: From genes to Cognition, Max Planck institute for Psycholinguistics, Nijmegen, Netherlands, 4-5 September, 2019

4. A. Books/Monographs etc. Published:

Theory of Graded Consequence: A General Framework for Logics of Uncertainty, (with Soma Dutta), Springer, e-Book ISBN: 978-981-13-8896-5, DOI: 10.1007/978-981-13-8896-5 (2019)

4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals)

5. Chatterjee, Amita, 'My Philosophical Journey', in Mind and Cognition: An Interdisciplinary Sharing, vol1, eds. Kuntala Bhattacharya et al, D.K. Printworld, New Delhi, 2019

6. Chatterjee, Amita, 'Responses', in Mind and Cognition: An Interdisciplinary Sharing, vol 2, eds. Kuntala Bhattacharya et al, D.K Printworld, New Delhi

7. Chatterjee, Amita, 'Gandhi: The Man behind Metaphors', Samiksa, Journal of the Indian Psychoanalytical Society, Kolkata, vol.63, 2019-20

8. Chatterjee, Amita, 'A Naturalist Scheme of Interlinking Mind, Body, Consciousness and Emotion', proceedings of the 24th World Congress in Philosophy, Beijing, China, 2019

9. Mihir Chakraborty, Soma Dutta and Andrez Skoron (2019) Information flow in logic for distributed systems: Extending graded consequence, Inf. Sci. 491: 232-250 (2019)

10. Mihir Chakraborty, Zhe Lin (2019) The Finite Embeddability Property for Topological Quasi-Boolean Algebra 5, ICLA 2019: 30-41 (2019)

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11. Reetu Bhattacharjee, Lopamudra Choudhury, Mihir Chakraborty (2019) Venn  $\text{io}_1$ : a diagram system for universe without boundary, *Logica Universalis*, 2019, 13(3), 289-346.
12. Jana Purbita, Mihir Chakraborty, (2020), Fuzzy  $\alpha$ -cut and related mathematical structures, (with Purbita Jana), *Soft Comput*, <https://doi.org/10.1007/s00500-020-05131-z>.

### 5. Collaborative Programmes:

Collaborative Programme with University of Brighton on Diagram logic and perception.

### 6. Major Achievements:

1. Chaired panel: Invited talk by Chris Cornelis, *Fuzzy Rough Sets: Achievements and Opportunities*, IJCRS 2019, Debrecen, Hungary
2. Adjunct Professor at Indraprastha Institute of Information Technology, Delhi, 2019.
3. Adjunct Professor at Indian Institute of Science Education and Research Kolkata, 2019

## CULTURAL TEXTS & RECORDS

Phone : 033-2414-6681

: 033- 2457-2943/2631

Director: Prof. Samantak Das

E-mail: [dir.ctr@jadavpuruniversity.in](mailto:dir.ctr@jadavpuruniversity.in)

### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
UGC approved PG diploma course, 2019-20 Digital Humanities and Cultural Informatics	1 Year	19
Certificate Course in Editing and Publishing	4 Months	42

### 1. B. Number of Faculty Members :

Director: Prof. Samantak Das

No Permanent Staff

### 2. A. Area of Research Activities: (Broad Areas)

Documentation and digitization of endangered cultural material

Electronic editing and software development

Research and training in the related fields

Strengthening collaboration among institutions with similar interests

## Annual Report 2019-20

### 2. B. Major Research Project:(Departmental/Individual, Name of the Project/Funding Agency)

Departmental-Conservation, Digitisation and Metadata Creation of Rare and Endangered Recordings of Indian Classical Music-RUSA 2.0

Departmental-Digitisation of paper records-Victoria Memorial Hall, Kolkata

Departmental-Two Centuries of Indian Print-Arts and Humanities Research Council, UK

Departmental-Jibanananda Das Papers-RUSA 2.0

Departmental-Shabdakalpa: online historical dictionary of the Bengali language-RUSA 2.0

Departmental-Famine Tales from India and Britain-Arts and Humanities Research Council, UK

### 3. C. Seminar/Workshop/Conference/Symposium Organized:

(Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

1. Workshop on Building Digital Archives: Tools, Techniques, Approaches EAP 1247, 5-8 November, 2019
2. International Conference under JU RUSA 2.0 Digital Humanities and Literary mapping: Pedagogy and Curricula, 7-9 January, 2020
3. Digital Humanities Workshop, jointly conducted by the University of Exeter, UK, and the School of Cultural Texts and Records, Jadavpur University, 24 July, 2019

## EDUCATION TECHNOLOGY

Phone: 033-2457-2442/2830

033-2414-6129

Director: Prof. Matangini Chattopadhyay

E-mail: dir.edutech@jadavpuruniversity.in

### 1. A. Courses Offered :

Name of the Course	Duration of Course	No.of Students Enrolled
Master in Multimedia Development, (4-semester)	2 Years	07
M. Tech IT (Courseware Engineering), (4-semester)	2 Years	22
Certificate Course on Multimedia Development & Applications	6 months	–
Post Graduate Diploma in Multimedia and Web Technology, (4-semester) (Distance mode),	1 Year	No Enrollment
M.A. in Environment and Development (4-semester) (Distance mode)	2 Years	Suspended (Decision taken by Dept.of Economics)



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### 1. B. Number of Faculty Members:

	Professor	Associate Professor	Assistant Professor	Assistant Professor ( <i>on contract</i> )	Total
<b>Sanctioned Posts</b>	(02+01) (XIth Plan)	(02)	(01)	(04)	(10)
<b>Existing Number Teachers</b>	(02)	(0)	(0)	(02)	(04)

### 2. A. Area of Research Activities (Broad Areas)

- Education Technology
- Teaching-Learning Methodology
- Intelligent Tutorial System
- Courseware Engineering
- Computer aided Language learning
- Learning Management System
- e-Learning
- Digital Distance Education
- Quality Assurance for e-Learning
- Multimedia Content Creation Process
- Multimedia Databases and Content Based Retrieval
- Image Processing and Pattern Recognition
- Mobile Multimedia Communication
- Distributed Object Computing
- Mobile Computing
- m-Learning
- Mobile Application
- Quality Assurance for m-Learning
- Cryptography and Steganography
- Wireless Sensor Network & Wireless Security
- Web Services & Web Technology
- Risk Management and Financial Engineering
- Speech / Character Recognition

### 2. B. Major Research Project :

- a. **Departmental / Individual:** Prof. Matangini Chattopadhyay, **Principal Investigator**, Prof. Samiran Chattopadhyay, Co-Principal Investigator, Dr. Saswati Mukherjee, Co-Investigator

**Name of the Project:** Cosmic Quest

**Funding Agency:** Vigyan Prasar, an autonomous organization under the Department of Science & Technology, Govt. of India, 2019 - 2021 (2 years), the total volume of the project is INR 2,07,53,532.80

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- b. **Departmental / Individual:** Prof. Matangini Chattopadhyay, **Coordinator**, Jadavpur University, India  
**Name of the Project:** Adaptation of TRAILS for hand-held devices  
**Funding Agency:** JU-RUSA 2.0, June 2019 – March 2020, the total volume of the project is INR 15,98,000.00
- c. **Departmental / Individual:** Dr. Saswati Mukherjee, **Principal Investigator**, Jadavpur University, India  
**Name of the Project:** Deep learning model for population-level cardio-vascular risk prediction and score generation in Type-2 Diabetes Mellitus  
**Funding Agency:** JU-RUSA 2.0, June 2019 – March 2020, the total volume of the project is INR 5,98,400.00
- d. **Departmental / Individual:** Mr. Joydeep Mukherjee, **Principal Investigator**, Jadavpur University, India  
**Name of the Project:** *Deep Learning Model for Analytical Study on Data Classification*  
**Funding Agency:** JU-RUSA 2.0, June 2019 – March 2020, the total volume of the project is INR 4,88,000.00.
- 3. A. Invited Lectures Delivered/Sessions Chaired:**
- Prof. Ranjan Parekh delivered lectures at the orientation training for curators organized by National Council of Science Museums (NCSM), Salt Lake, Kolkata, on 23 January, 2020
  - Prof. Ranjan Parekh delivered lectures at the UGC IDC course on “E-content, OER and MOOCs” organized by Calcutta University, Technology Campus, Salt Lake, Kolkata, on 7 February, 2020
  - Prof. Ranjan Parekh delivered lectures at the short term course on “MOOCs, E-content Development and Open Educational Resources” organized by School of Media Communication and Culture and Centre for Microprocessor Applications for Training Education and Research, Jadavpur University, Kolkata, on February 11, 2020
- 3. B. Seminar/Workshop/Conference/Symposium Attended:**
- Dr. Saswati Mukherjee attended International Conference on Frontiers in Computing and Systems (COMSYS-2020), Springer, Jalpaiguri Government Engineering College Jalpaiguri, West Bengal, India, during 13–15 January, 2020
  - Mr. Joydeep Mukherjee, attended Workshop on “Writing Quality Research Article for Publication”, held at Gandhi Bhavan, J.U, Kolkata-32 during 13–14 January, 2020
  - Mr. Joydeep Mukherjee, attended Workshop on “Startups & MSMEs working in Embedded System in West Bengal” held at K.P. Basu Memorial Hall, JU on 6 February, 2020
  - Mr. Susovan Jana, SRF, attended International Conference on Computer Science, Engineering, and Application - ICCSEA-2020, GIET University, Gunupur, India, 13–14 March, 2020 (Online)
  - Mr. Susovan Jana, SRF, attended International Conference on Computing, Power and Communication Technologies - GUCON 2019, Radisson BluHotel & Galgotias University, Greater Noida, NCR New Delhi, India, 27-28 September, 2019
- 3. D. Orientation Courses / Refresher Courses Attended:**
- Mr. Susovan Jana, SRF, attended Webinar on Scientific Writing for Journals, Springer Nature in Collaboration with Jadavpur University, 30 July, 2020 (Online)
  - Mr. Susovan Jana, SRF, attended Workshop on Writing Quality Research Articles for Publications, Jadavpur University, Kolkata, India, 13–14 January, 2020
  - Mr. Susovan Jana, SRF, attended One-week Short Term Course on “A pragmatic approach towards Machine Learning”, Jadavpur University, Kolkata, India, 3–9 January, 2020

**4. A. Books / Monographs / Book Chapters published:**

- Ranjan Parekh, “Fundamentals of Graphics using MATLAB”, CRC Press (Taylor & Francis), 03 December 2019 [ISBN: 978-0367184827] (book)
- Susovan Jana, Ranjan Parekh, Bijan Sarkar, “Automatic Classification of Fruits and Vegetables: A Texture-Based Approach”, in: Mandal J., Mukhopadhyay S., Dutta P., Dasgupta K. (eds), “Algorithms in Machine Learning Paradigms. Studies in Computational Intelligence”, chapter 5, vol. 870, pp. 71-89, Springer, 03 Jan. 2020 [ISBN : 978-981-15-1041-0] (book chapter)

**4. B. Articles Published in Journals and Conferences**

- Soumili Kundu, **Matangini Chattopadhyay**, “Med-Alert: An Android Application to Increase Adherence to Medication”, International Conference on Computational Intelligence, Data Science and Cloud Computing (IEM-ICDC 2020), IEM, Kolkata, 25 – 27 September, 2020
- Moumita Naskar, **Matangini Chattopadhyay**, “Mobile Application Development for West Bengal Tourism”, International Conference on Computational Intelligence, Data Science and Cloud Computing (IEM-ICDC 2020), IEM, Kolkata, 25 – 27 September, 2020
- Shilpi Bose, Chandra Das, Kuntal Ghosh, **Matangini Chattopadhyay**, Samiran Chattopadhyay, “A Framework for Neighbourhood Configuration to Improve the KNN based Imputation Algorithms on Microarray Gene Expression Data”, International Journal of Bioinformatics Research and Applications (IJBRA), Inderscience, Accepted, 2020
- Shilpi Bose, Chandra Das, Abhik Banerjee, **Matangini Chattopadhyay**, Samiran Chattopadhyay, “An Ensemble Filtering and Supervised Clustering based Informative Gene Selection Algorithm in Microarray Gene Expression Data”, 4th International Conference on Computational Intelligence and Networks (CINE-2020), IEEE, 27-29 February, 2020
- Chandra Das, Shilpi Bose, Abhik Banerjee, Sourav Dutta, Kuntal Ghosh, **Matangini Chattopadhyay**, “Comparative Performance Analysis of Different Measures to Select Disease Related Informative Genes from Microarray Gene Expression Data”, International Conference on Innovation in Modern Science and Technology (ICIMSAT-2019), Springer, 20 - 21 September, 2019
- Chandra Das, Shilpi Bose, Debanjana Karmakar, Agniswar Roy, Natasha Ghosh, Abhik Banerjee, **Matangini Chattopadhyay**, “Impact of Partition Based Clustering Algorithms to Cluster Samples in Microarray Gene Expression Data”, International Conference on Innovation in Modern Science and Technology (ICIMSAT-2019), Springer, 20 - 21 September, 2019
- Susovan Jana, **Ranjan Parekh**, Bijan Sarkar, “A De novo approach for automatic volume and mass estimation of fruits and vegetables”, Journal of Optik (Elsevier), vol. 200, p. 163443, January 2020
- Susovan Jana, **Ranjan Parekh**, Bijan Sarkar, “Volume Estimation of Non-axisymmetric Fruits and Vegetables using Image Analysis”, in Proc. of IEEE Computing, Power and Communication Technologies (GUCON '19), September 27-28, 2019, Noida, UP, India, pp. 628-633 [ISBN : 978-93-5351-098-5]
- Uttoran Roy Chowdhury, Susovan Jana, **Ranjan Parekh**, “Automated System for Indian Banknote Recognition using Image Processing and Deep Learning”, in Proc. of IEEE International Conference on Computer Science, Engineering and Applications (ICCSEA '20), 13-14 March, 2020, Gunupur, India, pp. 1-5 [ISBN : 978-1-7281-5830-3]
- S. Mallik, S. Halder, P. Saha, and **S. Mukherjee**, “Multi-factor Authentication-based E-Exam Management System (EEMS)”, in Proceedings of International Conference on Frontiers in Computing and Systems (COMSYS-2020), Springer, pp. 711 – 720, 13–15 January, 2020

**5. Collaborative Programmes:**

**National:**

Strategy Academy Centre for Advanced Studies (TSACAS), Kolkata School of Education Technology,

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Jadavpur University (SET, JU) and the Strategy Academy Centre for Advanced Studies (TSACAS) jointly started a program titled “Post Graduate Diploma in Management and Entrepreneurship” through Live and two-way interactive Digital Network and it is going on successfully

### 6. Additional Remarks:

- The Smart Classroom of SET is being utilized for Recording/Editing for the project “Cosmic Quest” funded by Vigyan Prasar, an autonomous organization under the Department of Science & Technology, Govt. of India
- Prof. Matangini Chattopadhyay guided Masters Degree research work of three (02) students, completed in June 2019
- Prof. Ranjan Parekh guided Masters Degree research work of three (03) students, completed in June 2019
- Mr. Joydeep Mukherjee guided Masters Degree research work of five (05) students, completed in June 2019

### ENERGY STUDIES

Phone: 033-2457-2460/2909

Director: Dr. Ratan Mandal

E-mail: dir.energy@jadavpuruniversity.in

1. **A. Courses Offered:** M.Tech in Energy Science & Technology

1. **B. Number of Faculty Members:** 02

2. **A. Area of Research Activities:**

- a) Solar PV
- b) Solar Thermal
- c) Bio Energy
- d) Wind Energy
- e) Advanced Solar PV Materials
- f) Building Energy Management

2. **B. Major Research Project:** DST PURSE II, State Fellowship (01), MNRE(02), RUSA 2.0 (02), CSIR (01)  
Dr. Ratan Mandal, Associate Professor & Director, School of Energy Studies

3. **A. Invited Lectures Delivered/Session Chaired:**

1. Delivered invited talk in the 2ND International Conference on Non-Conventional Energy -Nanotechnology & Nanomaterials for Energy and Environment (ICNNEE2019) on 18-19 October 2019 at JISCE College Campus, Kalyani, West Bengal on the topic entitled, “**Challenges & Opportunities of Copper (Cu) Based Semiconducting Device in Photovoltaic Applications**”

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2. Delivered invited talk in the National Conference on “Device Modeling and Soft Computing (DMSC 2019)” held on 13–14 September, 2019 at Mallabhum Institute of Technology, Bishnupur, Bankura on the topic entitled, “**Scope, Opportunities and Challenges of Copper (Cu) Based Semiconducting Device in Optoelectronic Applications**”
3. Participated and delivered an invited talk entitled “Energy in Transition: Present Status & Future Perspectives of Solar Energy” in Round Table Discussion Meet on “Thoughts on Alternative Sources of Energy Cost & Price” organized by Rajpur – Sonarpur Chapter of THE INSTITUTE OF COST AND ACCOUNTANT OF INDIA in Collaboration of Bharatiya Vidya Bhavan Institute of Management Science, Kolkata held on 2 November, 2019
4. Delivered an invited lecture on the topic entitled “Application of Solar Energy” in the One-day Seminar on “APPLICATION OF SOLAR ENERGY & IT’S BUSINESS OPPORTUNITY AT BENGAL” Organized by Department of Physics & Internal Quality Assurance Cell, Bhairab Ganguly College, Belghoria, West Bengal, held on 28 November, 2019
5. Delivered an invited lecture in a one day seminar on “Reduce Fossil-fuel Energy, Save Earth and Use Solar Energy: A Potential Source of Renewable Energy and related Job Opportunity in West Bengal” organized by Department of Physics in Collaboration with the IQAC at Purash-Kanpur Haridas Nandi Mahavidyalaya, West Bengal, held on 29.2.2020
6. Acted as Session Chair in the International Conference on Sustainable Water Resources Management under Changed Climate, ICSWRMCC-2020, Jadavpur University, 13-15 March, 2020

### 3. B. Seminar/Workshop/Conference/Symposium Attended:

1. Subhajit Mukherjee, Arijit Ganguly, **Ratan Mandal**, Asoke Kumar Paul, “Study of Power Factor Correction Technique for a grid connected Hybrid System”, 17-18 January, 2020, International Conference on Computer, Electrical & Communication Engineering (ICCECE), Date Added to IEEE Xplore: 14 October 2020, DOI: 10.1109/ICCECE48148.2020.9223021
2. Kunal Chowdhury and **Ratan Mandal**, “Agrivoltaic: A new approach of sustainable development”, International Conference On Sustainable Water Resources Management under Changed Climate, ICSWRMCC-2020, Jadavpur University, 13-15 March, 2020 accepted for publication in the EDITED VOLUME of the Book titled “Advances in Water Resources Management for Sustainable Use” published by Springer
3. Madhumita Das, **Ratan Mandal**, “Role of solar water pumping to enhance the energy and food security in Indian sub continental countries-India, Pakistan and Bangladesh: A Review” in International Conference on Sustainable Water Resources Management under Changed Climate, ICSWRMCC-2020, Jadavpur University, 13–15 March, 2020, accepted for publication in Edited Volume entitled “Water Resources: Current and Future Challenges and Research Directions”
4. Rakesh Naskar, Asit K. Ghosh and **Ratan Mandal**, “Some Studies on energy conservation and Thermal Comfort using Natural Refrigerants in Solar Thermal & Solar Photovoltaic powered Air-conditioning and Refrigeration System”, International Conference On Sustainable Water Resources Management under Changed Climate, ICSWRMCC-2020, Jadavpur University, 13–15 March, 2020, accepted for publication in Edited Volume entitled “**Water Resources: Current and Future Challenges and Research Directions**”
5. Adrita Santra, Antalina Saha, Soumya Ghorai, **Ratan Mandal**, Kamalika Ghosh, “Development of UV aided water purification system powered by Solar Energy for Remote Villages”, International Conference on Sustainable Water Resources Management under Changed Climate, ICSWRMCC-2020, Jadavpur University, 13–15 March, 2020, accepted for publication in Edited Volume entitled “**Water Resources: Current and Future Challenges and Research Directions**”



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6. Tarak Nath Chell, **Ratan Mandal**, Tushar Jash, “A review of the change in performance of photovoltaic panels due to dust accumulation- Challenges and their solution”, International Conference on Sustainable Water Resources Management under Changed Climate, ICSWRMCC-2020, Jadavpur University, 13–15 March, 2020, accepted for publication in Edited Volume entitled “Water Resources: Current and Future Challenges and Research Directions”
- 3. C. Seminar/Workshop/Conference/Symposium Organized:**
1. Acted as Organizing Secretary in Two-day National Seminar on “Conventional to Renewables – Transition in Indian Power Sector”, Jointly organized by School of Energy Studies, Jadavpur University and Alumni Association, NCE Bengal and Jadavpur University as a part of Activities of Jadavpur University under RUSA 2.0 and Centenary Celebration of Alumni Association held on 7 – 8 February, 2020 at Triguna Sen Auditorium, Jadavpur University
  2. Acted as Organizing Committee Member in the International Conference on Sustainable Water Resources Management under Changed Climate, ICSWRMCC-2020, Jadavpur University, 13–15 March, 2020
  3. Organized a Special Lecture Programme by Dr. Sanat Kumar Saha, Member (Eminent Scientist), West Bengal Council of Higher Education, Govt. of West Bengal, on “Energy and Environment – An Indian Perspective” on 13 May, 2019 at School of Energy Studies, Jadavpur University
- 4. B. Articles Published in Journals:**
1. Suman Haldar, **Ratan Mandal**, and Arindam Mondal, “Impact of clean transportation systems in rural economy: A study”, AIP Conference Proceedings 2091, 020013 (2019); <https://doi.org/10.1063/1.5096504>
  2. Rakesh Naskar, Asit K.Ghosh and **Ratan Mandal**, “ADVANCEMENT OF SOLAR REFRIGERATION TECHNOLOGY AND ITS IMPACT IN SOCIETY”, Science and culture 85(8-10):323, September 2019, DOI: 10.36094/sc.v85.2019.Solar Refrigeration Technology. Naskar.323
- 3. B. Seminar/Workshop/Conference/Symposium Attended:**
1. Tushar Jash, Soumya Ghorai, Deepanjan Majumdar, Susanta Ray, *PV assisted Fuzzy based EV charge scheduling for demand side energy management: a case study*, 2020, Proceedings of 2020 IEEE Calcutta Conference (CALCON)
  2. Tushar Jash, Apurba Sharma, Nabanita Banerjee, *An evaluation of engine performance of a compression ignition engine with biodiesel produced from different kinds of feedstock*, 2020, Accepted for publication in Advances in Water Resources Management for Sustainable Use, Lecture Notes in Civil Engineering, ISBN 978-981-336-411-0
  3. Tushar Jash, Tarak Nath Chell, Ratan Mandal, *A review of the change in performance of photovoltaic panels due to dust accumulation- challenges and their solution*, 2020, Accepted for publication in Water Resources: Current and Future Challenges and Research Directions, ISBN number: 978-81-941009-3-5
  4. Tushar Jash, Atanu Dutta, Deepanjan Majumdar, *Variation in fuel consumption with load in private cars – Scenario in real-time traffic conditions*, 2020, Accepted for publication in Advances in Water Resources Management for Sustainable Use, Lecture Notes in Civil Engineering, ISBN 978-981-336-411-

## Annual Report 2019-20

### ENVIRONMENTAL STUDIES

Phone: 033-2457-2543/2874/2491

Director: Prof. Pankaj Kumar Roy

E-mail: dir.environmental@jadavpuruniversity.in

#### 1. A. Courses Offered :

Name of the Course	No. of Students Enrolled
M. Tech in Environmental Biotechnology	20
Advanced Diploma in Industrial Safety & Environmental Management	30

#### 1. B. Number of Faculty Members: Four

#### 2. A. Area of Research Activities : (Broad Areas)

Environmental Biotechnology (Dr. Joydeep Mukherjee)

Toxic contaminants in environment and their remedies; Soil and plant science (Dr. Tarit Roychowdhury)

Air Pollution and Biodeterioration Studied (Dr. Subarna Bhattacharyya)

Trace metal biogeochemistry, atmospheric chemistry (Dr. Reshmi Das)

#### 2. B. Major Research Project : (Departmental/Individual, Name of the Project/Funding Agency)

##### Dr. Joydeep Mukherjee:

- Title: "Towards a Sustainable Earth (TaSE) research project "Opportunities and trade-offs between the Sustainable Development Goals (SDGs) for food, welfare and the environment in deltas" (Co-PI) Sponsored by: Department of Biotechnology, Government of India; Amount: Rs. 107,62,800.00; Duration: 2019-2021
- Title: Inventorization of plastic product manufacturing and recycling in West Bengal Sponsored by: West Bengal Pollution Control Board, Amount: Rs. 10,00,000.00

##### Dr. Tarit Roychowdhury

- Spatial distribution of uranium and associated water quality parameters in drinking and groundwater/drinking water of five districts (Nadia, Bardhaman, North 24 Parganas, Kolkata, Howrah) of West Bengal (Principal Investigator). *Sponsored by:* Board of Research in Nuclear Science (Department of Atomic Energy), Govt. of India. *Amount:* Rs. 26,94,300/-
- Mobility and mechanism of fluoride leachability into the aquifer of Sonarpur-Rajpur-Baruipur belt of the bank of Adi Ganga in South 24 Parganas district, West Bengal. *Sponsored by:* Water & Sanitation Support Organization, Public Health Engineering Department, Govt. of West Bengal. *Amount:* Rs. 3,75,100/-
- Studies on chronic exposure to arsenic toxicity through food chain and drinking water with respect to rice grain contamination in selected sites of West Bengal and search for mitigation options. *Sponsored by:* Higher Education, Science & Technology and Biotechnology, Department of Science & Technology, Govt. of West Bengal. *Amount:* Rs. 25,99,600/-
- 'IMPRINT II A' project, funded by Science and Engineering Research Board (SERB), Department of Science & Technology, Govt. of India: Arsenic and other contaminants free drinking water production of ~20,000 L/day in the arsenic affected area of India using laterite and ferromanganese slag based technology (IMPRINT-IIA, File number: IMP/2018/001228) A MOU has been assigned between IIT, Roorkee and Jadavpur University on this regard. *Amount:* Rs. 55,31,600/- (JU part: Rs. 13,28,400/-)
- Rashtriya Uchchar Shiksha Abhiyan (RUSA) Project, Jadavpur University: Investigations of chronic exposure of arsenic, fluoride and nitrate toxicity through drinking water and dietary intakes, adverse health effects and mitigation strategies in exposed population of West Bengal, India. *Amount:* Rs. 4,50,000/-

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**Dr. Reshmi Das:** *Duration:* September 2019-March 2020

1. ASEAN-India STI Cooperation Scheme, DST. 2019-2020. Rs. 2,30,000/- Project title: “Chemical Composition and Source Apportionment of Thai Aerosols.”
2. Rashtriya Uchchatar Shiksha Abhiyan (RUSA) Project, Jadavpur University. 2019-2020. Rs. 4,30,000/-: “Sources of Species Specific Mercury (Hg) In Urban Atmosphere.”
3. Start Up Grant, UGC. Rs. 10,00,000/-

**Dr. Subarna Bhattacharyya**

1. Government of West Bengal, Department of Higher Education Science & Technology and Biotechnology (Science & Technology Branch and Biotechnology Branch; Project title: “Profiling of indoor airborne ....mangrove plant extract”.
2. UGC-DAE Consortium for Scientific Research, Kolkata Centre “Inhibition of fungal bio-deterioration of construction materials using low and high LET ionizing radiation”

### **3. A. Invited Lectures Delivered/: (Name of the Teacher, Type of Session Chaired Participants, Name of the Seminar/Conference etc. Place, Duration)**

**Dr. Tarit Roychowdhury:**

1. Session Chair in the Technical Session 2, National Symposium on Sustainable Waste Management (NSSWM-2019), organized by Institute of Engineering & Management, Kolkata, India under the aegis of International Society of Waste Management, Air and Water (ISWMAW), Auditorium, Salt Lake, Kolkata, 20 April, 2019
2. Arsenic in the ground water and rice system. ‘Invited talk’ in the International Networking Workshop on ‘Arsenic: From Root to Gut’, Dept. of Biotechnology, Indian Institute of Technology, Kharagpur, in collaboration with University of Sheffield, UK and Bangladesh Agricultural University, Kolkata, supported by Academy of Medical Sciences, UK, 1-3 July, 2019
3. Awareness lecture on issue related to ‘Nirmal Vidyalaya Saptah – 2019’. Invited Awareness lecture on issue related to ‘Swachhta’, Debanandapur Saratchandra Shikshaniketan, Vill & PO: Debanandapur, District: Hooghly, 31 August, 2019
4. Invited lecture in the programme on ‘Go Green Initiative’ as ‘Panelist & Key Note Speaker’ on ‘Prakriti, Paribesh O Amra’, organized by Rotary Club of New Ballygunge, Rotary Sadan, 94/2 Jawaharlal Nehru Road, Kolkata, 31 August, 2019
5. AICTE sponsored six days ‘Short Term Training Programme’ on “Environmental Crisis and Sustainable Development’. Invited lecture on “Groundwater arsenic and fluoride contamination in West Bengal, India: Status, distribution, health effects, food chain contamination and remediation measurements’. Department of Chemistry, JIS College of Engineering, Kalyani, Nadia, 6 September, 2019
6. Invited talk entitled “Arsenic in the ground water and rice system’, in the workshop on ‘Arsenic in the environment and its health impact’, Organized by Salford University, UK, Mahabir Cancer Sansthan & Research Centre and A. N. College, Patna, Conference Hall, Bihar State Pollution Control Board, 13 September, 2019
7. Invited lecture entitled “Groundwater arsenic and fluoride contamination in West Bengal, India: Status, distribution, health effects, food chain contamination and remediation measurements”, Seminar and Discussion related to the issues on ‘Water use, water bodies conservation and water pollution’, organized by National Service Scheme, Kalyani Mahavidyalaya and Kanchrapara Bijnan Darbar, Seminar Hall, Kalyani Mahavidyalaya, Kalyani, Nadia, 21 September, 2019
8. Invited lecture entitled “Groundwater arsenic contamination in West Bengal, India: Status, distribution, food chain contamination, health effects and mitigation strategies”, International Conference ‘UEM GREEN 19’ on ‘Energy management for green environment and biodiversity conservation ecosystem management’, organized by University of Engineering and Management, UEM Plot III, New Town, Action Area III, Kolkata, 26 September, 2019

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9. Awareness lecture on issue related to “Plastic Waste Management” entitled “Responsibility of the citizens to keep the globe clean and green: special reference to Plastic Waste Management. Invited Awareness lecture on issue related to ‘Swachhta Hi Seva’, Garden Reach Shipbuilders & Engineers Ltd., Central Public Sector Undertaking, Ministry of Defence, 43/46 Garden Reach Road, Kolkata-700021, 27 September, 2019
10. International Advisory Committee Member and Session Chair in the International conference on ‘Sustainable Environmental Engineering and Science (SEES-2019)’, organized by Department of Civil Engineering, Dr. Sudhir Chandra Sur Degree Engineering College, 540 Dum Dum Road, Surer Math, Kolkata-700074, in association with Nihon University, Japan, 29-30 November, 2019
11. Invited talk on ‘Groundwater arsenic and fluoride contamination in West Bengal, India – status, distribution, magnitude, calamity, health effects, food chain contamination and mitigation strategies’, on the occasion of National Pollution Control Day, organized by Brainware University, 398 Ramkrishnapur Road, Barasat, Kolkata-700125, 2 December, 2019
12. National conference on ‘Sustainable advanced technologies for environmental management (SATEM-2019)’. Chaired the Technical Session III entitled “Water and wastewater treatment”, organized by Civil Engineering Department, Indian Institute of Engineering Science and Technology, Shibpur, 18-20 December, 2019
13. Invited talk on ‘Groundwater arsenic contamination in West Bengal, India with special reference to its status, distribution, magnitude, rice grain contamination, health effects and mitigation strategies’. Proceedings: A. Das, M. Joardar, N. Roy Chowdhury, A. De, D. Mridha, D. Saha, M. Pal, M. Mukherjee, B. Ghosh, S. Das, R. Ghosh, A. Bhowmick, P. Mukherjee, M. Das, P. Priyadarshni, A. Pal, K. Maji, S. Chakraborti, T. Roychowdhury. Two-day ICSSR-ESR sponsored International Conference on ‘The Sundarbans: Past, Present and Future Possibilities’, organized by Department of English, Sundarban Hazi Desarat College, Pathankhali, South 24 Parganas, 4-5 January, 2020
14. Invited talk on ‘Environment and Ecology of North Kolkata-Thoughts and Future’, organized by Sarkar Bagan Friends’ Circle, Prokriti Utsav 2020, dated 11 January, 2020
15. Invited talk on ‘State water scenario and its mitigation options: special reference to arsenic and fluoride’. Abstract: M. Joardar, N. Roy Chowdhury, A. Das, A. De, D. Mridha, D. Saha, M. Paul, S. Ghosh, A. Joseph, D. Sinha, B. Ghosh, S. Das, R. Ghosh, A. Bhowmick, P. Mukherjee, M. Das, A. Pal, K. Maji, S. Chakraborti, T. Roychowdhury. 5-Day Inspire Internship Science Camp, organized by Om Dayal Group of Institutions, Uluberia, Howrah, jointly with Department of Science and Technology, Govt. of India, 16 January, 2020
16. Keynote talk on ‘Environmental Issues’, organized by Ex-students’ Reunion Committee’, Byabattarhat Adarsha High school, Byabattarhat, Purba Medinipur, dated 19 January, 2020
17. Invited talk on ‘State ground water scenario, food chain contamination, health effects and mitigation options: special reference to arsenic and fluoride’, Seminar on ‘Atmospheric pollution in rural and urban area: Implications on air and water quality’, under the dissemination programme on the activities in DST-SERB funded project, organized by Calcutta Institute of Technology, Uluberia, Howrah, dated 12 February, 2020
18. International conference on ‘Energy and Sustainable Development (ICESD-2020)’, Chaired the the session (Invited Talk-2) on ‘Environmental Mitigation: A R & D approach’, by Dr. Supriya Sarkar, Head, R & D, Tata Steel, organized by Department of Mechanical Engineering, Jadavpur University, Gandhi Bhawan, dated 14-15 February, 2020
19. Invited talk on ‘Groundwater arsenic-contamination in West Bengal, India: Special reference to its status, distribution, magnitude, rice grain contamination, health effects and mitigation strategies’. Workshop on ‘Arsenic pollution – Problems, Effects and Mitigation Measures’. Department of Environmental Studies, Rabindra Bharati University, 28 February, 2020
20. Invited talk on ‘State groundwater scenario, food chain contamination, health effects and mitigation options: Special reference to arsenic and fluoride’. Certificate Course under ‘Green Skill Development Programme’, Invited speech on ‘Water pollution monitoring’, ENVIS Resource Partner on Environmental Biotechnology, Department of Zoology, University of Kalyani, 6 March, 2020

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21. Invited talk on 'Water conservation for future: Impact and protocol: State groundwater scenario, food chain contamination, health effects and mitigation options: special reference to arsenic and fluoride. Two days National Conference on 'Biotechnology and agricultural based interventions towards sustainable rural development'. Department of Biotechnology, Brainware University, Kolkata, 14-15 March, 2020

### Subarna Bhattacharyya

1. The Indian Science Congress Association, 107th session of Indian Science Congress (Engineering Science Section), 2020, Lecture title: Fungal Biodeterioration of Concrete and its Prevention using Nanoparticle Coating

### Reshmi Das:

1. Lecture title: Atmospheric Chemistry of Haze in Southeast Asia, Conference - 1<sup>st</sup> International Conference on Ubiquitous Energy management for Green Environment. Kolkata, West Bengal, India, September 24-27, 2019, Organizer: University of Engineering & Management, Kolkata, West Bengal
  2. Reshmi Das (Oral presentation): Paper presented: Mineral Dust Entrainment during Wildfires –Lead (Pb) Isotopes as Fingerprints, Conference - Goldschmidt 2019, Barcelona, Spain. 18–23 August, 2019, Organizer - European Association of Geochemistry and the Geochemical Society
  3. Reshmi Das (Workshop attended): Workshop Title - International Capacity Building Workshop on Ocean Acidification, 26-29 January, 2020; Organizer - Indian Institute of Science Education And Research Kolkata, West Bengal, India
- 3. C. Seminar/Workshop Conference/Symposium Organized : (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)**

### Dr. Tarit Roychowdhury

1. Arsenic accumulation in paddy plant during pre-monsoon cultivation and its additional entry in rice grain through post harvesting technology. A. Das, N. Roy Chowdhury, M. Joardar, A. De, D. Mridha, R. Ghosh, A. Bhowmick, T. Roychowdhury. Conference Proceedings: International Conference 'UEM GREEN 19' on 'Energy management for green environment and biodiversity conservation ecosystem management', organized by University of Engineering and Management, UEM Plot III, New Town, Action Area III, Kolkata, 26 September, 2019, pp. 44
2. Effect of acute and chronic arsenic toxicity through drinking water and rice grain with special reference to adverse health effects from arsenic affected areas in West Bengal, India. M. Joardar, N. Roy Chowdhury, A. Das, A. De, D. Mridha, R. Ghosh, A. Bhowmick, T. Roychowdhury. (First prize award) Conference Proceedings: International Conference 'UEM GREEN 19' on 'Energy management for green environment and biodiversity conservation ecosystem management', organized by University of Engineering and Management, UEM Plot III, New Town, Action Area III, Kolkata, 26 September, 2019, pp. 45
3. Oral presentation on 'Impact of groundwater on paddy, during cultivation, domestic scale post harvesting and cooking process'. Abstract: N. Roy Chowdhury, T. Roychowdhury. Water, Water Purification and Sustainability Workshop (WWPS). Integrative Taxonomy and Microbial Ecology Research Group & Centre for Climate and Environmental Studies, IISER Kolkata, 19 November, 2019
4. Arsenic uptake, accumulation and distribution in paddy plants at different phases of Boro (Pre-monsoonal) and Aman (Monsoonal) cultivation. N. Roy Chowdhury, M. Joardar, A. Das, T. Roychowdhury. International Conference on Sustainable Development & Climate Change; Amity University, Gwalior, Madhya Pradesh, 10-11 February, 2020
5. Assessment of groundwater quality of Nadia district of West Bengal: Health risk appraisal for drinking and household purpose. A. Das, M. Joardar, N. Roy Chowdhury, T. Roychowdhury. International Conference on Sustainable Development & Climate Change; Amity University, Gwalior, Madhya Pradesh, 10-11 February, 2020
6. Risk assessment on the health of school children due to arsenic toxicity with special importance on drinking water and rice grain from different areas of West Bengal, India. M. Joardar, N. Roy Chowdhury, A. Das,



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T. Roychowdhury. International Conference on Sustainable Development & Climate Change; Amity University, Gwalior, Madhya Pradesh, 10-11 February, 2020

### 4. B. Articles Published in Journals : (Name of the Teacher, Name of ( Including National / International the Articles, Name of Journal, & Peer-reviewed Journals) Date of Publication, Volume

1. Microbial diversity of the Sundarbans, the world's largest tidal mangrove forest, and its bioprospects: Kaushik Biswas and Joydeep Mukherjee: Invited book chapter in "Microbial diversity in ecosystem sustainability and biotechnological applications, Volume 2, Soil and agroecosystems: Publisher Springer Nature, 2019
2. Structural elucidation and antimicrobial activity of a diketopiperazine isolated from a *Bacillus* sp. associated with the marine sponge *Spongia officinalis*: Dhruva Bhattacharya, Tapan Kumar Lai, Joseph Selvin, Joydeep Mukherjee: *Natural Product Research*, DOI: [10.1080/14786419.2019.1672684](https://doi.org/10.1080/14786419.2019.1672684), 2019
3. *Euryhalinema mangrovii* gen. nov., sp. nov. and *Leptoelongatus litoralis* gen. nov., sp. nov. (Leptolyngbyaceae) isolated from an Indian mangrove forest: Sandeep Chakraborty, Veerabadhran Maruthanayagam, Anushree Achari, Arnab Pramanik, Parasuraman Jaisankar, Joydeep Mukherjee: *Phytotaxa*, 422, 58–74, 2019
4. Microbial diversity of the Sundarbans, the world's largest tidal mangrove forest, and its bioprospects: Kaushik Biswas, Joydeep Mukherjee: Book chapter in *Microbial Diversity in Ecosystem Sustainability and Biotechnological Applications, Volume 2, Soil and Agroecosystems* Eds. Tulasi Satyanarayana, Subrata Kumar Das, Bhavdish Narain Johri, Springer, 2020
5. Production enhancement of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) in *Halogeometricum borinquense*, characterization of the bioplastic and desalination of the bioreactor effluent: Riddhi Mahansaria, Sampa Bhowmik, Anusua Dhara, Amit Saha, Mrinal Kanti Mandal, Raja Ghosh, Joydeep Mukherjee: *Process Biochemistry*, 94, 243-257, 2020
6. Removal of Pb (II), As (III), and Cr (VI) by nitrogen starved *Papiliotrema laurentii* strain RY1: Soumyadev Sarkar, Avishek Mukherjee, Rubia Parvin, Subhadeep Das, Uttariya Roy, Somdeep Ghosh, Punarbasu Chaudhuri, Tarit Roychowdhury, Joydeep Mukherjee, Semantee Bhattacharya, Ratan Gachhui: *Journal of Basic Microbiology*, DOI: [10.1002/jobm.201900222](https://doi.org/10.1002/jobm.201900222), 2019
7. Investigation of environmental-concern trace elements in coal and its combustion residues from thermal power plants in eastern India. D. Saha, D. Chatterjee, S. Chakravarty, T. Roychowdhury. *Natural Resources Research* 2019, 28(4), 1505-1520 (IF: 3.708)
8. Phyto-remedial detoxification of arsenic by *Pistia stratiotes* and assessment of its anti-oxidative enzymatic changes. M. Pal, C. Goswami, M. Mukherjee, T. Roychowdhury. *Bioremediation Journal* 2019, 23 (3), 175-184 (IF: 1.724) <https://doi.org/10.1080/10889868.2019.1640182>
9. Arsenic contamination in Kolkata metropolitan city: Perspective of transportation of agricultural products from arsenic endemic areas. A. Biswas, S. Swain, N. Roy Chowdhury, M. Joarder, A. Das, M. Mukherjee, T. Roychowdhury. *Environmental Science and Pollution Research* 2019, 26, 22929-22944 (IF: 3.056).
10. Assessment of the effect of urban pollution on surface water-groundwater system of Adi Ganga, a historical outlet of river Ganga. S. Ghosh, S. Majumder, T. Roychowdhury. *Chemosphere* 2019, 237, 124507. <https://doi.org/10.1016/j.chemosphere.2019.124507> (IF: 5.778)
11. Health risk assessment on the school children due to arsenic toxicity with special emphasis on drinking water and rice grain from exposed and apparently control areas of West Bengal, India. M. Joarder, A. Das, D. Mridha, A. De, N. R. Chowdhury, T. Roychowdhury. *Exposure and Health* 2020. <https://doi.org/10.1007/s12403-020-00360-x> (IF: 4.762)
12. Quality and health risk evaluation for groundwater in Nadia district, West Bengal: an approach on its suitability for drinking and domestic purpose. A. Das, S. S. Das, N. R. Chowdhury, M. Joarder, B. Ghosh, T. Roychowdhury. *Groundwater for Sustainable Development* 2020, 10, 100351. <https://doi.org/10.1016/j.gsd.2020.100351> (Elsevier)

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13. Flow of arsenic between rice grain and water: its interaction, accumulation and distribution in different fractions of cooked rice. N. R. Chowdhury, A. Das, M. Joardar, A. De, D. Majumder, R. Das, M. M. Rahman, T. Roychowdhury. *Science of the Total Environment* 2020, 731, 138937. <https://doi.org/10.1016/j.scitotenv.2020.138937> (IF: 6.551)
14. Monsoonal paddy cultivation with phase-wise arsenic distribution in exposed and control sites of West Bengal, alongside its assimilation in rice grain. N. R. Chowdhury, A. Das, M. Mukherjee, S. Swain, M. Joardar, A. De, D. Mridha, T. Roychowdhury. *Journal of Hazardous Materials* 2020, 400, 123206. <https://doi.org/10.1016/j.jhazmat.2020.123206> (IF: 9.038)
15. Health risk assessment of co-occurrence of toxic fluoride and arsenic in groundwater of Dharmanagar region, North Tripura (India). P. Bhattacharya, S. Adhikari, A. C. Samal, R. Das, D. Dey, A. Deb, S. Ahmed, J. Hussein, A. De, A. Das, M. Joardar, A. K. Panigrahi, T. Roychowdhury, S. C. Santra. *Groundwater for Sustainable Development* 2020, 11, 100430. <https://doi.org/10.1016/j.gsd.2020.100430> (Elsevier)
16. Arsenic and its effect on nutritional properties of Oysters Mushrooms with reference to health risk assessment. A. De, D. Mridha, B. Bandopadhyay, T. Roychowdhury, A. S. Panja. *Biological Trace Element Research* 2020. <https://doi.org/10.1007/s12011-020-02224-6> (IF: 2.639)
17. Environmental concern elements in coal and coal combustion residues. D. Saha, T. Roychowdhury. *Journal of Indian Chemical Society* 2019, 96, 1-4
18. Assessment of groundwater quality in Bardhaman district, West Bengal with special reference to its WQI (Water Quality Index). A. Das, S.S. Das, A. De, M. Joardar, N.R. Chowdhury, T. Roychowdhury. *Indian Groundwater* 2019, 13, 62-70
19. Exposure to arsenic toxicity through drinking water with special reference to rice grain contamination and its adverse health effects in arsenic-affected areas from West Bengal, India. M. Joardar, N.R. Chowdhury, A. Das, A. De, T. Roychowdhury. *Indian Groundwater* 2019, 13, 92-100
20. Arsenic in your mushrooms? Invisible risk of bioaccumulation. A. De, D. Mridha, B. Bandopadhyay, T. Roychowdhury, A. S. Panja. *Current Science* 2020, 119(2), 169
21. Arsenic in rice: Dynamics during cooking. N. R. Chowdhury, A. Das, M. Joardar, A. De, D. Majumder, R. Das, M. M. Rahman, T. Roychowdhury. *Current Science* 2020, 119(6), 891
22. Majumdar, A., Satpathy, J., Kayee, J., and Das, R. (2020). Trace metal composition of rainwater and aerosol from Kolkata, a megacity in eastern India. *SN Applied Sciences*, 2, 2122 (Publisher: Springer Nature)
23. Mitra, S., and Das, R. (2020). Health risk assessment of construction workers from trace metals in PM<sub>2.5</sub> from Kolkata, India. *Archives of Environmental & Occupational Health* 1–16. (Publisher: Taylor and Francis)
24. Kayee, J., Sompongchaiyakul, P., Sanwlani, N., Bureekul, S., Wang, X., and Das, R. (2020). Metal Concentrations and Source Apportionment of PM<sub>2.5</sub> in Chiang Rai and Bangkok, Thailand during a Biomass Burning Season. *ACS Earth Space Chemistry* 4, 1213–1226. (Publisher: American Chemical Society)
25. Chowdhury, N.R., Das, A., Joardar, M., De, A., Mridha, D., Das, R., Rahman, M.M., and Roychowdhury, T. (2020). Flow of arsenic between rice grain and water: Its interaction, accumulation and distribution in different fractions of cooked rice. *Science of the Total Environment* 731, 138937. (Publisher: Elsevier)
26. George, S., Chua, M.L., ZheWei, D.Z., Das, R., Bijin, V.A., Connolly, J.E., Lee, K.P., Yung, C.F., Teoh, O.H., and Thomas, B. (2019). Personal level exposure and hazard potential of particulate matter during haze and non-haze periods in Singapore. *Chemosphere* 243, 125401. (Publisher: Elsevier)
27. Effect of air quality on respiratory health of roadside exposed people: a micro-level study from Kolkata, India *Indian J. Aerobiol.*, 31, (1 & 2) 33–40, 2019
28. Phytoremediation of chromium (VI) using mulberry silkworm food chain in lab-scale study, *Pollution Research* 38 (4): 1053-1060; 2019
29. Foldscopic visualization and identification of Airborne Fungi in Museum and Library Environment, *Journal of Emerging Technologies and Innovative Research*, 6(6), 2019
30. Development of health risk rating scale for indoor airborne fungal exposure, *Archives of environmental & occupational health*, 1-9, 2019

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31. Mycosynthesis of iron oxide nanoparticles using manglicolous fungi isolated from Indian sundarbans and its application for the treatment of chromium containing solution: Synthesis, adsorption isotherm, kinetics and thermodynamics study, *Environmental Nanotechnology, Monitoring & Management*, 12, 100276, 2019

### 5. Collaborative Programmes:

#### Dr. Tarit Roychowdhury

A MOU has been assigned between IIT, Roorkee and Jadavpur University regarding 'IMPRINT II A' project, funded by Science and Engineering Research Board (SERB), Department of Science & Technology, Govt. of India: Arsenic and other contaminants free drinking water production of ~20,000 L/day in the arsenic affected area of India using laterite and ferromanganese slag based technology (IMPRINT-IIA, File number: IMP/2018/001228)

#### Dr. Reshmi Das

Collaborative project - Sources of atmospheric lead (Pb) in the SEA (Southeast Asia) region. Collaborator –Earth Observatory of Singapore, Nanyang Technological University, Singapore

### 6. Major Achievements:

1. Environmental Coordinator, TEQIP-III, Jadavpur University
2. Mentored ASEAN Fellow, Ms. Jariya Kayee, PhD student of Marine Science Department, Chulalongkorn University, Bangkok, Thailand under the ASEAN-India STI Cooperation Scheme. Sponsored by Government of India, Department of Science and Technology, International Multilateral Regional Cooperation Division

## ILLUMINATION SCIENCE, ENGINEERING & DESIGN

Phone : 033-2414-6616

: 033- 2457-2541

Director: Dr. Kamalika Ghosh

E-mail : [dir.illumination@jadavpuruniversity.in](mailto:dir.illumination@jadavpuruniversity.in)

### 1. A. Courses Offered :

- (i) M.Tech (Illumination Technology & Design), 3 years Course
- (ii) 27 Students (1<sup>st</sup> Year)
- (iii) 18 Students (2<sup>nd</sup> Year)
- (iv) 14 Students (3<sup>rd</sup> Year)
- (v) 04 Project Fellows : 4

### In Research:

- 01- PhD degree awarded on 2020
- 01- PhD Thesis Submitted
- 01- Ongoing

### 1. B. Number of Faculty Members : 2

**2. A. Area of Research Activities : (Broad Areas)**

- a) Conservation of old artifacts cum Biological effects of light.
- b) Performance analysis and up gradation of Light Emitting Diodes.
- c) Daylight utilization through PV and urban planning
- d) Solar powered UV treated water treatment device

**2. B. Major Research Project :(Departmental/Individual, Name of the Project/Funding Agency)**

- a) Rusa 2.0: Performance Analysis of Solar powered LED Sources for Visual & Non visual Application in Remote Area
- b) Rusa 2.0: Smart Garden lighting system for Smart city applications

**3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)**

**Dr. Kamalika Ghosh**

- (i) Daylighting in Urban Context , International Conference on Electrical, Electronics, Civil & Computer Science, 30 April, 2019
- (ii) Thermal behaviour on the heat sink area of LED for different Thermal Interface Materials, International Conference on Impact of Changing Energy Mix in the Power Sector (The Institution of Engineers (India)), Conference proceeding– 23–24 November, 2019
- (iii) Development of UV aided water purification system powered by Solar Energy for Remote Villages, International Conference on Sustainable Water Resources Management under Changed Climate on 13-15 March, 2020

**Sri Parthsarathi Satvaya**

- (i) *Performance Study and Stability Analysis of an LED Driver*. In Advances in Control, Signal Processing and Energy Systems. Lecture Notes in Electrical Engineering book series, LNEE, vol. 591, pp 147-158, Springer, Singapore, First online, 15 September, 2019

**3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teachers, Title of the Course, Duration, Place)**

**Dr. Kamalika Ghosh**, *Computer vision and Multi media computation*, One week, IT Department. Jadavpur University

**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**

**Dr. Kamalika Ghosh**

- *Some Studies on the fading effect of Lamps on Archives*, Journal of Asiatic Society , ISSN 0368-3308, Volume LXI Issue 1, June, 2019
- *Studies on Germicidal Benefit of Ultra Violet Ray upon Old Paper Documents*, Light & Engineering, Russia (ISSN No.:0236 2945), Vol 27 pp 17-24, Date of Publication 12/09/2019
- *Analysis of Temperature at Substrate and Sink Area of 5 W COB-Type LEDs, with and without Driver*, Advances in Control, Signal Processing and Energy Systems (Springer), ISBN 978-981-32- 9345-8 DO [https://doi.org/10.1007/978-981-32-9346-5\\_11](https://doi.org/10.1007/978-981-32-9346-5_11), September, 2019
- *Universal control algorithm for automatic current regulated LED driver*, International Journal of Power Electronics, Vol. 12, No. 2, 2020, Inderscience Publishers, Switzerland, ISSN-1756638X, 17566398, Impact Factor -0.35
- *Daylighting in Urban Context*, International Journal of Computer Sciences and Engineering, Vol.-7, Special issue-18, May 2019, E-ISSN : 2347-2693, Impact Factor : 3.022, 5/1/2019

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### INTERNATIONAL RELATIONS AND STRATEGIC STUDIES

Phone : 033-2457-2498  
Director. : Prof. Shibashis Chatterjee  
E-mail : dir.irss@jadavpuruniversity.in

#### Lectures/Seminars:

SIRSS in collaboration with the ORF Kolkata Chapter organized a talk on 19 December, 2019, at ORF on 'Outer Space and International Security' by Shounak Set, Marie Curie Research Fellow, King's College, London

As part of a Workshop & Conference on "Global Protection of Migrants & Refugees" in collaboration with the Mahanirban Calcutta Research Group and Rosa Luxemburg Stiftung, the School hosted a lecture programme on November 26, 2019, with Dr. Liza Schuster, City, University of London, London on "The Role of Formal and Informal Institutions and Asylum Seeking from Afghanistan"

Organized a two-day seminar on "Engaging Asia: India's Foreign Policy in the 21st Century" in collaboration with the Jadavpur Association of International Relations (JAIR) and the Observer Research Foundation (ORF) Kolkata Chapter on 20-21 September at the ORF, Rajarhat

Organized an international seminar on "The 100 Years of School of International Relations" on Saturday, September 7, at Jadavpur University in collaboration with the Bengal Institute for Political Studies and is partially sponsored by the ICSSR Eastern Regional Centre

The School of International Relations and Strategic Studies, Jadavpur University organized a two-day seminar titled 'Security Challenges in the Global South: Traditional and Non-traditional Dimensions' under the RUSA Programme on 8-9 August, 2019

Organized a lecture entitled "Elites, Spoilers and Peace Negotiations to End Ethnic Civil Wars" to be delivered by Prof. Rajat Ganguly, Discipline of Global Studies, College of Arts, Business, Law and Social Sciences, Murdoch University, on 21 June, 2019

Prof. Rajat Ganguly, Discipline of Global Studies, College of Arts, Business, Law and Social Sciences, Murdoch University served as an Adjunct Visiting Fellow of the School of International Relations and Strategic Studies from April to July 2019

Dr. Sumit Roy, formerly Research Associate, South Asia Research Institute, and Centre for African Studies, School of Oriental and African Studies, University of London, was appointed a Visiting Senior Research Fellow of the School of International Relations and Strategic Studies from April 2019 to March 2020 for a project on 'Ethiopia-India: trends in political economy'

#### Publication:

SIRSS published a Working Paper titled 'India's 'Soft Power' - a comparative study' by Dr. Sumit Roy, Visiting Senior Research Fellow



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### LANGUAGES & LINGUISTICS

Phone : 033-2457-2144/2943/2420

Director: Dr. Samir Karmakar

E-mail: dir.language@jadavpuruniversity.in

#### 1. A. Courses Offered:

##### Linguistics

- (a) MA in Linguistics under the Faculty of Arts, J.U.
- (b) MPhil in Linguistics under the Faculty of Interdisciplinary Studies, Law and Management
- (c) PhD in Linguistics under the Faculty of Interdisciplinary Studies, Law and Management
- (d) Choice based undergraduate courses under Faculty of Arts
- (e) Certificate Course in Linguistics (evening) of 1 year duration

##### Language Courses:

- (a) Certificate Courses (1 year): French, German, Spanish, Korean, Japanese, English, Chinese, Bengali, Hindi, Sanskrit
- (b) Diploma Courses (1 year): French, German, Spanish, Japanese, Bengali, Hindi
- (c) Advanced Diploma Courses (1 year): French, Japanese
- (d) Advanced Diploma I and II (two years): Bengali

#### 1. B. Number of Faculty Members:

- (i) Dr. Indranil Dutta, Professor, School of Languages and Linguistics, J.U. (Date of Joining: 24/06/2020)
- (ii) Dr. Samir Karmakar, Assistant Professor and Director of the School
- (iii) Dr. Atanu Saha, Assistant Professor and Joint Director of the School
- (iv) Approved Guest faculties for linguistic courses: 4
- (v) Actual numbers of Guest faculties teaching linguistic courses: 2
- (v) Guest faculties for language courses: 21

#### 2. A. Area of Research Activities:

Language Documentation, Syntax, Semantics, Pragmatics, Grammatical Studies, Psycho-NeuroLinguistics, Phonetics and Phonology

#### 2. B. Major Research Project: (Departmental/Individual Name of the Project/Funding Agency)

- i. Study and research in Indigenous and Endangered languages in India with special focus to West Bengal funded by UGC, PI Atanu Saha and CoPI Samir Karmakar
- ii. Semantic and Syntactic Integration of Concepts in Event Construal: A Neuro-Psychological Studies of Serial Verb and Complex Predicate Constructions, funded by Department of Science and Technology, Govt. of India under the Cognitive Science Initiative program, PI Dr. Samir Karmakar
- iii. *Vakyapadiyam* and *Pramanasamuccaya*: A comparative study of the explanatory tools and techniques in the light of their respective socio-cultural perspectives (sponsored under RUSA 2.0) from July 2019 to March 2020, PI Dr. Samir Karmakar
- iv. Documenting two lesser known languages of West Bengal funded under RUSA 2.0, PI Dr. Atanu Saha
- v. Preparing the annotated corpus of three lesser known languages under RUSA 2.0, PI Dr. Atanu Saha, CO-PI Dr. Dipankar Das, Department of CSE, JU

#### 3. A. Invited Lectures Delivered /Sessions Chaired:(Name of the Teacher, Type of Participants, Name of the Seminar/Conference etc. Place, Duration)

Dr. Atanu Saha

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- i. Atanu Saha presented on One Language or Many? A Linguistic Perspective during the workshop organized by Department of English Aliah University April 6, 2019
- ii. Atanu Saha presented on Building Phoneme Inventories Using Phonology Assistant Version 4.0.0 and Look Ahead on 9 August 2019 during the NATIONAL SEMINAR ON LINGUISTICS AND LANGUAGE SCIENCES IN INDIA- (NASLILANSI-2019) & WORKSHOPS ON FORENSIC AND CORPUS LINGUISTICS organized by Center for Linguistics, JNU
- iii. Dr. Atanu Saha presented a paper entitled “Converging reciprocal strategies: contact and convergence” at the SALA-35 meeting which took place at the National Institute of Oriental Languages, and Civilizations (INALCO), 65 rue des GrandsMoulins in Paris, France from 29 –31 October, 2019
- iv. Dr. Atanu Saha, presented his thoughts during a roundtable discussion on “Endangered Languages: If not now, when?” on 7 February, 2020 organized by the Centre for Canadian Studies in collaboration with the School of Languages and Linguistics, Jadavpur University
- v. Dr. Atanu Saha presented on ASPECTS OF DATA ARCHIVING THROUGH OPEN SOURCE SOFTWARE in DIGITAL HUMANITIES AND LITERARY MAPPING: PEDAGOGY AND CURRICULA on January 9, 2020
- vi. Atanu Saha Chaired a session during the international conference on English learning and teaching skills 2019, on 25 July 2019 organized by Institute of Engineering and management, Kolkata
- vii. Atanu Saha chaired a session during the NATIONAL SEMINAR ON LINGUISTICS AND LANGUAGE SCIENCES IN INDIA- (NASLILANSI-2019) & WORKSHOPS ON FORENSIC AND CORPUS LINGUISTICS organized by Center for Linguistics, JNU on 9 August, 2019

### Dr. Samir Karmakar

- i. Karmakar, S. (2020). An invited talk delivered on “*bohushashikota ebong bharotborsho*” (“Multilingualism and India”) on 5 March 2020 to celebrate the Mother Tongue day in an event organized by the Bengali Department of Jadavpur University in collaboration of Bangladesh High Commission, Kolkata in Gandhi Bhavan
- ii. Karmakar, S. (2019). Participated as a panelists in a discussion on “Communication and Conflict in Multilingual Situation: The Task of the Linguist” along with the co-panelists Rafiqul Islam (National Professor, Bangladesh), R. Nakeerar (Language Division, Office of the Registrar General, Govt. of India), Maya David (Retd. Professor of University of Malay, Malayasia), ShyamSundar Bhattacharya (Philological Secretary, The Asiatic Society, Kolkata) under the moderatorship of Aditi Ghosh (Associate Professor, University of Calcutta) in the occasion of “Two day International Seminar on Language, Communication and Conflict in South and South-East Asia” jointly organized by the Asiatic Society Kolkata and the Linguistic Department of Calcutta University on 15 November, 2019
- iii. Karmakar, S. (2019). Sukumar Sen on the Study of Bengali Grammar: Critiquing and Appraising the Tradition. Invited lecture delivered in a two day National Seminar on “Revisiting the Contributions of Sukumar Sen” organized by The Asiatic Society, Kolkata on 9–10 July, 2019

### 3. B. Seminar/Workshop/Conference/Symposium/Attended:

#### Dr. Atanu Saha

- i. Atanu Saha presented on One Language or Many? A Linguistic Perspective during the workshop organized by Department of English, Aliah University 6 April, 2019
- ii. Atanu Saha presented on Building Phoneme Inventories Using Phonology Assistant Version 4.0.0 and Look Ahead on 9 August 2019 during the NATIONAL SEMINAR ON LINGUISTICS AND LANGUAGE SCIENCES IN INDIA- (NASLILANSI-2019) & WORKSHOPS ON FORENSIC AND CORPUS LINGUISTICS organized by Center for Linguistics, JNU
- iii. Dr. Atanu Saha presented a paper entitled “Converging reciprocal strategies: contact and convergence” at the SALA-35 meeting which took place at the National Institute of Oriental Languages, and Civilizations (INALCO), 65 rue des GrandsMoulins in Paris, France from 29-31 October, 2019

## Annual Report 2019-20

- iv. Dr. Atanu Saha, presented his thoughts during a roundtable discussion on “Endangered Languages: If not now, when?” on 7 February, 2020 organized by the Centre for Canadian Studies in collaboration with the School of Languages and Linguistics, Jadavpur University
- v. Dr. Atanu Saha presented on ASPECTS OF DATA ARCHIVING THROUGH OPEN SOURCE SOFTWARE in DIGITAL HUMANITIES AND LITERARY MAPPING: PEDAGOGY AND CURRICULA on 9 January, 2020
- vi. Atanu Saha Chaired a session during the international conference on English learning and teaching skills 2019, On 25 July 2019 organized by Institute of Engineering and management, Kolkata
- vii. Atanu Saha chaired a session during the NATIONAL SEMINAR ON LINGUISTICS AND LANGUAGE SCIENCES IN INDIA- (NASLILANSI-2019) & WORKSHOPS ON FORENSIC AND CORPUS LINGUISTICS organized by Center for Linguistics, JNU on 9 August, 2019

### Dr. Samir Karmakar

- i. Attended the Mother Tongue Day celebration on 5 March 2020 as an invited speaker. The event was organized by the Bengali Department of Jadavpur University in collaboration of Bangladesh High Commission, Kolkata in Gandhi Bhavan
- ii. Attended “Two day International Seminar on Language, Communication and Conflict in South and South-East Asia” as an invited speaker. The event was jointly organized by the Asiatic Society Kolkata and the Linguistic Department of Calcutta University on 15 November, 2019
- iii. Attended a two day National Seminar on “Revisiting the Contributions of Sukumar Sen” organized by The Asiatic Society, Kolkata on 9– 10 July, 2019

### Project Staffs:

- i. Bhowmik, R. (2020). “The cognitive aspect of word meaning in the Brahmakanòdòà of Vakyapadiyam” in the International Conference cum Workshop, ICISM-2020, Jadavpur University, Kolkata, January 16-18, 2020
- ii. Bhowmik, R. (2020). “Language Contact in the Classifiers of the Malda Variety of Khortha” at ICOIL-2, Department of Humanities and Social Sciences, Indian Institute of Technology Madras, 13-14 February, 2020
- iii. Bhowmik, R. (2019). “Language Shift in the Malda variety of Khortha” in the International Language Fest on Indigenous and Endangered Languages, Department of Linguistics, NEHU, Shillong, 25-26 October, 2019

### Post-Graduate Students:

- i. Banerjee, A. (2019). The paper titled “Gerunds and Bangla Clause-embedding Verbs”, presented at 31<sup>st</sup> European Summer School in Logic, Language and Information (ESSLLI 31) Student session held at University of Latvia, Riga from 5-16 August, 2019
- ii. Das, D., Stede, M., Ghosh, S., Chatterjee, L. (2020). DiMLex-Bangla : A Lexicon of Bangla Discourse Connectives. In Proceedings of the 12th International Conference on Language Resources and Evaluation (LREC 2020), pages 1097-1102, Palais du Pharo, France
- iii. Chatterjee, L. (2019). Intonation: A Speech act modifier in Bengali. In Proceedings of the 47th National Symposium on Acoustics, Cuttack, India
- iv. Sarkar, N. (2019). International seminar on Wiki Sangkalan o Bangla Unicode (21 June, 2019) by Aratrik in Jadavpur University
- v. Giri, P. and Sarkar, N. (2020). One day Workshop on Free Software/Web Resources For Linguistics/Community Work and for giving effort, ideas and knowledge organized by The School of Languages and Linguistics, Jadavpur University (8 February, 2020)
- vi. Giri, P. and Sarkar, N. (2019). One day Workshop on Academic Writing in English by The School of Languages and Linguistics, Jadavpur University (13 February, 2020)
- vii. Giri, P. and Sarkar, N. (2019). National Seminar on Revisiting the Contributions of Professor Sukumar Sen by Asiatic Society (9 – 10 July, 2019)

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- viii. Giri, P. and Sarkar, N. (2019). Suniti Kumar Chatterjee memorial lecture- 6: Lokokathar Shaili by Pallab Sengupta by Kolkata Society for Asian Studies and School of Languages and Linguistics in Jadavpur University, (30 August, 2019)
- ix. Giri, P. and Sarkar, N. (2019). Anti-plagiarism Software: Use & Benefit by Faculty of Engineering and Technology (8 November, 2019)
- x. Giri, P. and Sarkar, N. (2020). 6th National language Conference organized by Institute of Odia Studies and Research, Bhubaneswar and Sambalpur University, Burla held at Sambalpur, Odisha, India (23-26 February, 2020)
- xi. SWARNENDU MOITRA, MUDAFIA ZAFAR, ATANU SAHA AND SULKA MUNOT - Numeral Classifiers in Mech - 25th Himalayan Languages Symposium (HLS-25), University of Sydney - Sydney, AUSTRALIA - 24-29 June, 2019
- xii. SWARNENDU MOITRA, MUDAFIA ZAFAR, SHANKHA SANYAL, ARCHI BANERJEE, SAMIR KARMAKAR AND DIPAK GHOSH - A Spectrogram Analysis of Loan Words in MECH : Evidence in Favour of Loanword Adaptation - 24th International Symposium on Frontiers of Research in Speech and Music (FRSM-24) - Allenhouse Institute of Technology, Kanpur, INDIA 6 - 7 July, 2019
- xiii. MUDAFIA ZAFAR AND SWARNENDU MOITRA - The Curious Case of Oral Stops in Mech - 35th SOUTH ASIAN LANGUAGES ANALYSIS ROUNDTABLE (SALA-35) - Institut national des langues et civilisations orientales (INALCO), Paris, FRANCE 29- 31 October, 2019
- xiv. Swarnendu Moitra (2019). 31st European Summer School in Logic, Language and Information (ESSLLI - 31) - University of Latvia - Riga, LATVIA - 5 - 16 August, 2019
- xv. Swarnendu Moitra (2020). Neuromatch Academy - Online summer school for Computational Neuroscience - org. by IEEE brain, Facebook Reality labs, UPenn, Deep Mind and others - 13-31 July, 2020
- xvi. Dutta, A. (2020). Individuality of the Screenplay as a Translated Text. International Conference cum Workshop on Rhythm in Speech and Music from Neuro-cognitive perspective, Jadavpur University, 16-18 January, 2020
- xvii. Dutta, S. (2019). Lodha: A Struggle for Existence. 35th South Asian Languages Analysis Roundtable (SALA 35), INALCO, Paris, France, 29-31 October 2019
- xviii. Dutta, S. (2020). Bâcya: Typological Perspectives of Bangla Grammatical Voice. International Conference cum Workshop on Rhythm in Speech and Music from Neuro-Cognitive Perspective (ICRSM 2020), Jadavpur University, India, 16-18 January, 2020
- xix. Dutta, S. (2020). Case Marking of Rava in Comparison with Bangla. The Conference on Asian Linguistic Anthropology (CALA 2020), The University Putra Malaysia, Bintulu, Sarawak, Malaysia, 5–8 February, 2020
- xx. Dutta, S. (2020). Language Vitality, Attitude and Endangerment: Understanding from Field Work among Lodha Speakers. The Conference on Asian Linguistic Anthropology (CALA 2020). The University Putra Malaysia, Bintulu, Sarawak, Malaysia, 5–8 February, 2020
- xxi. Bishui, I. (2019). Valence Changing Devices in Rabha. 35th South Asian Languages Analysis Roundtable (SALA 35), INALCO, Paris, France, 29-31 October, 2019
- xxii. Bishui, I. (2020). Processing Bangla Idioms: Hitting the Nail on the Head. International Conference cum Workshop on Rhythm in Speech and Music from Neuro-Cognitive Perspective. Jadavpur University, India, 16-18 January, 2020
- xxiii. Mitra, S. (2019). Difference in Conceptual Structures among Ambiguous and Unambiguous Structures in Language. National Seminar on Linguistics and Language Sciences in India and Workshop on Forensic and Corpus Linguistics, Jawaharlal Nehru University, New Delhi, 9-10 August, 2019

**3. C. Seminar/Workshop/Conference/Symposium Organized:**

**Dr. Atanu Saha**

- i. Organized a talk by Dr Peter J. Keegan, Senior Professor, University of Auckland, & quot;Language Revitalization in the South Pacific—with a focus on New Zealand & quot; RUSA 2.0 International and National Academic Networking and Collaboration, IR Seminar Hall, 1 hour
- ii. Atanu Saha Workshop on Free software/web resources for linguists/community work on 8/2/2020. Resource person Dr. Peter Keegan, University of Auckland
- iii. Atanu Saha, “Academic writing for Linguistics” on 13 February 2020, Resource Person Dr. Kaustav Bakshi, Department of English, Jadavpur University
- iv. Atanu Saha Workshop on R-stats at room 109, teqip Building, JU on 17 February, 2020

**Dr. Samir Karmakar**

- i. International Conference cum Workshop on Rhythm in Speech and Music from Neuro-Cognitive Perspectives, 16–18 January, 2020, Jadavpur University, Kolkata
- ii. Organized an Workshop on Rhythm: The Essential Human Experience by Bruce Balentine during ICRSM 2020 on 16 January, 2020
- iii. Organized Suniti Kumar Chatterjee memorial lecture- 6: Lokokathar Shaili by Pallab Sengupta in collaboration with Kolkata Society for Asian Studies and School of Languages and Linguistics in Jadavpur University (30 August, 2019)

**3. E. Orientation Courses/Refresher Courses Organized:**

UGC-HRDC Short term courses for Teachers and Librarians on Language and Linguistics (STLAL1920), 19– 25 February, 2020

**4. A. Books/Monographs etc. Published:**

- i. Karmakar, S. and S.K. Sen (2020). *Itihas nirman ebong arjyo somosya* (the making of the history and the Aryan problem). Ananda Publishers, Kolkata

**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals)**

**Dr. Atanu Saha**

- i. Atanu Saha, Issues and Challenges in preparing Multilingual digital lexicons in Memorabilia to be published on the occasion of observing the glorious Martyrs’ Day and International Mother Language Day 2019. Special issue published by the International Mother Language Institute, Dhaka, Bangladesh
- ii. Atanu Saha, A Descriptive Study of Kuchak in JOURNAL OF ADVANCED LINGUISTIC STUDIES VOL. 8, NO. 1-2, JAN-DEC 2019 – (ISSN 2231-4075)
- iii. Atanu Saha, Anaphors in Toto in International Journal of Linguistics ISSN 1948-5425, 2019, Vol. 11, No. 6, pp. 104-110

**Dr. Samir Karmakar**

- i. 2020: “How light verbs shed light on attitude building.” (In Collaboration with Arka Banerjee) In Proceedings of SICOGG 22. 21-37
- ii. 2020: Fractal based Categorization of Bengali Phonemes: A Pilot Study.(In collaboration with Pijush Kanti Gayenand Shankha Sanyal) *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
- iii. 2020: In Search of Rhythm : A Correlational Study between Different Emotive Poetry pieces and Corresponding manifestation in the EEG signals using Fractal Analytics - a pilot study.(In collaboration with Ratul Ghosh, Shankha Sanyal, and Dipak Ghosh). *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
- iv. 2019: “Speech, emotion and language: A neuroscientific exploration” (In collaboration with Shankha Sanyal, Archi Banerjee, Dipak Ghosh). *The Journal of Acoustic Society of America*, 146, 2846 (2019)



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- v. 2019: “Intonational Cues in Bangla Polar and Information Seeking Questions.” (In collaboration with Pijush Kanti Gayen and Shankha Sanyal). 47th National Symposium on Acoustics - 2019. 17-19 October at Ravenshaw University, Orissa
- vi. 2019: “Is Speech emotion a universal construct: A Neuro-linguistic study”. (In collaboration with Shankha Sanyal, Archi Banerjee, Uddalok Sarkar, Dipak Ghosh). 47th National Symposium on Acoustics - 2019. 17-19 October at Ravenshaw University, Orissa
- vii. 2019: A Fractal Approach to Characterize Emotions in Audio and Visual Domain: A Study on Cross-Modal Interaction. (In collaboration with Sayan Nag, Uddalok Sarkar, Shankha Sanyal, Archi Banerjee, Souparno Roy, Ranjan Sengupta, Dipak Ghosh). *Journal of Image Processing & Pattern Recognition Progress*, 6(3), 2019 1-7
- viii. 2019: Is speech emotion an universal construct: A neuro-linguistic study.(In collaboration with Shankha Sanyal, Archi Banerjee, Uddalok Sarkar, Dipak Ghosh) *Proc. of the National Symposium on Acoustics-2019 (NSA-2019)*, 17-19 October, 2019, Ravenshaw University, Cuttack, India

### Project Staffs' Publications

- i. Bhowmik, R.(2019). Case Declensions in Khortha (Malda Variety). (P. Pal, Ed.), *International Bilingual Journal of Culture, Anthropology and Linguistics*, 1 (2-3), 75-84
- ii. Sanyal, S. Banerjee, A. Nag, S. Sarkar, U., Roy, S., Sengupta, R. and Ghosh, D. (2020). Tagore and Neuroscience: A Non-Linear Multifractal Study to encapsulate the evolution of Tagore Songs over A Century. *Entertainment Computing* (2020), 100367; <https://doi.org/10.1016/j.entcom.2020.100367>
- iii. Sanyal, S., Banerjee, A., Karmakar, S. and Ghosh, D. (2019). Speech, emotion and language: A neuroscientific exploration. *The Journal of the Acoustical Society of America* 146, 2846 (2019); <https://doi.org/10.1121/1.5136872>
- iv. Sarkar, U., Nag, S., Bhattacharyaa, C., Sanyal, S., Banerjee, A., Sengupta, R. and Ghosh, D. (2019). Language Independent Emotion Quantification using Non-linear Modelling of Speech. *Journal of Image Processing & Pattern Recognition* 6(3), 2019, 24-30
- v. Nag, S., Sarkar, U., Sanyal, S., Banerjee, A., Roy, S., Karmakar, S., Sengupta, R. and Ghosh, D. (2019). A Fractal Approach to Characterize Emotions in Audio and Visual Domain: A Study on Cross-Modal Interaction. *Journal of Image Processing & Pattern Recognition Progress*, 6(3), 2019 1-7
- vi. Banerjee, A., Sanyal, S., Roy, S., Sengupta, R., and Ghosh, D. (2020). FROM SPEECH TO SONGS VIA RECITAL—A CASE OF PHASE TRANSITION? A FRACTAL STUDY OF TAGORE’S WORK. *Trends in Electrical Engineering* 3 (9), 2020, 30-36
- vii. Roy, S., Banerjee, A., Sanyal, S., Ghosh, G. and Sengupta, R. (2019). Categorization of Indian Classical Music Using MB-BE Distributions. *Journal of Software Engineering Tools & Technology Trends* 6(3), 2019, 9-15
- viii. Sanyal, S., Banerjee, A., Sarkar, U., Karmakar, S. and Ghosh, D. (2019). Is speech emotion an universal construct: A neuro-linguistic study. *Proc. of the National Symposium on Acoustics-2019 (NSA-2019)*, 17-19 October, 2019, Ravenshaw University, Cuttack, India
- ix. Roy, S., Banerjee, A., Sanyal, S., Ghosh, D. and Sengupta, R. (2019). Raga Characterization of Indian Classical Music – Revisited with MB and BE Distributions. *Proc. of the National Symposium on Acoustics-2019 (NSA-2019)*, 17-19 October, 2019, Ravenshaw University, Cuttack, India
- x. Banerjee, A., Sanyal, S., Roy, S., Patnaik, P. and Ghosh, D. (2020). Song: Lyrics on the Melody or Melody of the Lyrics? *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
- xi. Basu, M., Banerjee, A. Sanyal, S. and Ghosh, D. (2020). HOW DOES MUSICAL NOTES CORRELATE WITH HUMAN EMOTION? A PSYCHO-ACOUSTIC EXPLORATION WITH INDIAN CLASSICAL MUSIC. *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020

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- xii. Roy, S., Banerjee, A., Sanyal, S., Ghosh, D., and Sengupta, R. (2020). IMPROVISATION IN INDIAN CLASSICAL MUSIC: PROBING WITH MB AND BE DISTRIBUTIONS. *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
- xiii. Banerjee, A., Sanyal, S., Roy, S., Patnaik, P., and Ghosh, D. (2019). AN ACOUSTICAL AND NEURO-COGNITIVE STUDY ON THE APPRAISAL OF READING, RECITATION AND SONG IN NONLINEAR PERSPECTIVE. *Proc. of the National Symposium on Acoustics-2019 (NSA-2019)*, 17-19 October, 2019, Ravenshaw University, Cuttack, India

### Post Graduate Students' Publications:

- i. Das, D., Stede, M., Ghosh, S., Chatterjee, L. (2020). DiMLeX-Bangla: A Lexicon of Bangla Discourse Connectives. In *Proceedings of the 12th International Conference on Language Resources and Evaluation (LREC 2020)*, pages 1097-1102, Palais du Pharo, France
- ii. Chatterjee, L. (2019). Intonation: A Speech act modifier in Bengali. In *Proceedings of the 47th National Symposium on Acoustics*, Cuttack, India
- iii. Dutta, S. (2019). A Semantic Interpretation of Bangla Numeral Classifier 'a'. *Jadavpur Journal of Languages and Linguistics*. Volume 03, Number 01, pp. 45-54
- iv. Gayen, P.K., Sanyal, S. and Karmakar, S. (2020). Fractal based Categorization of Bengali Phonemes: A Pilot Study. *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16–18 January, 2020
- v. Ghosh, R., Sanyal, S., Karmakar, S. and Ghosh, D. (2020). In Search of Rhythm : A Correlational Study between Different Emotive Poetry pieces and Corresponding manifestation in the EEG signals using Fractal Analytics - a pilot study. *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
- vi. Giri, Projita. (2019). Complements of Adjectives: A Comparative Study. *Indian Journal of Applied Linguistics (ISSN 0379-0037)*. Vol. 45, No. 1-2, 98 – 112
- vii. Banerjee, A. (2019). Gerunds and Bangla Clause-embedding Verbs. In *Proceedings of ESSLLI 2019 Student session*
- viii. Banerjee, A. (2019). On Belief Reports in Bangla. *Jadavpur Journal of Language and Linguistics (JJLL)*, 3(2): 29-41

### 6. Major Achievements:

- i. Dr Atanu Saha got appointed as an external examiner of M.Phil and PG diploma dissertations in Linguistics at Dr. B. R Ambedkar University, Agra on 13 July, 2019
- ii. School of Languages and Linguistics has received a Post-Doctoral position under the JU-RUSA 0.2 scheme for a period ranging from July 2019 to March, 2020
- iii. Jadavpur Journal of Languages and Linguistics receives its ISSN number and gets indexed in UGC Care list
- iv. Dr. Samir Karmakar receives a major research grant from DST-CSI
- v. Dr. Samir Karmakar receives conference grant from SERB, Govt. Of India

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### LASER SCIENCE & ENGINEERING

Phone: 033-2457-2487

033-2414-6372

Director: Prof. Dipten Misra

E-mail: dir. laserscience@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
M. Tech. in Laser Technology	2 Years	13

#### 2. A. Area of Research Activities:

Laser Science and Technology, Laser based Manufacturing and Measurement

#### 2. B. Major Research Project:

Estimation of laser ... wind loads, Rs.47.03 Lacs, DRDO, India

#### 3. A. Invited Lectures Delivered/Sessions Chaired:

- i. A.S. Kuar, Session Chair for Technical Oral Presentation Session 17 January, 2020 from 11.30 AM to 1.00PM. in International Conference on Advancements in Mechanical Engineering (ICAME 2020,16–18 January, 2020)
- ii. T. Ganguly, Invited talk in the TEQIP short courses held on 01 April, 2019 in the Physics department of NIT, Durgapore, India
- iii. T. Ganguly, Invited talk in the one day State level Seminar “Contemporary Physics” organized by the Department of Physics at Belda College, West Medinipore, India on 23 April, 2019
- iv. T. Ganguly, Invited talk in the one day National Seminar on “Recent Development and Future Challenges in Chemical Science”, organized jointly by the department of Chemistry, Behala College, Kolkata and Royal Society of Chemistry, Eastern India Section, Kolkata on 26 February, 2020

#### 3. B. Seminar/Workshop/Conference/Symposium Attended:

- i. T. Ganguly, Seminar on “Contemporary Physics” organized by the Department of Physics, Belda College, West Medinipore, India on 23 April, 2019
- ii. T. Ganguly, National Seminar on “Recent Development and Future Challenges in Chemical Science”, organized jointly by the Department of Chemistry, Behala College, Kolkata and Royal Society of Chemistry, Eastern India Section, Kolkata on 26 February, 2020

#### 4. A. Books/Monographs etc. Published:

- i. Somnath Paul, Chirantan Samajdar, Tapan Ganguly, Attempts to build light energy conversion devices in the book Foundations in Photonics and Fiber-Optics Applications (chapter 6,) published by Taylor and Francis, USA, 2019). CRC press, published also in Optics and Photonics news of Optical Society of America (OSA), USA
- ii. Paramasivan K, S. Das, S. Marimuthu, D. Misra, Temperature Gradient-Based Laser Bending of Full Plates and Plates With Cutout, in Handbook of Research on Developments and Trends in Industrial and Materials Engineering, IGI Global, 2020

#### 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals)

- i. Madhurima Chakraborty and Tapan Ganguly Adjustments in microenvironment of human Hemoglobin upon interactions with members of Gold and Carbon nanofamily Karnatak University Journal of Science 2020, 51, 28-39
- ii. I. Mitra, S. Paul, M. Bardhan, S Das, M Saha, A Saha, T. Ganguly Effects of Carbon Quantum Dots (CQDs) on the energy storage capacity of a novel synthesized short-chain dyad Chem Phys Letts 2019, 276, 1-6

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- iii. M.Chakraborty, I.Mitra, K. Sarkar, M. Bardhan, S.Paul, .S Basu, A Goswami, A. Saha, B. Show, T. Ganguly Fluorescence enhancement via aggregation effect due to microenvironmental alterations in human hemoglobin protein in presence of carbon quantum dots (CQD): Comparative spectroscopic approach Spectrochimica Acta Part A 2019, 215, 313-326
- iv. Somnath Paul, Ishani Mitra, Tapan Ganguly Role of photonics in building light energy conversion devices Indian J Theo Phys (in press, 2020)
- v. Tapan Ganguly Thermoluminescence and its applications Indian J Theo Phys (in press, 2020)
- vi. Aritra Ghosh, D. Misra, S.K. Acharyya, Experimental and Numerical Investigation on Laser Welding of 2205 Duplex Stainless Steel, Lasers in Manufacturing and Materials Processing Volume 6, 228–246 (2019)
- vii. Paramasivan K, S. Das, S. Marimuthu, D. Misra, Numerical Study of the Mechanism of Laser Forming Process, International Journal of Laser Science: Fundamental Theory and Analytical Methods, Volume 1, 347–382 (2019)
- viii. Paramasivan K, S. Das, S. Marimuthu, D. Misra, Selection of process parameters of AISI 304 for laser processing of materials, International Journal of Computational Materials Science and Surface Engineering Volume 9, Issue 1, 1-21 (2020)
- ix. Paramasivan K, D. Misra S. Dey, Design of a Heat Dissipation System for a Low Power Fibre Laser, International Journal of Laser Science: Fundamental Theory and Analytical Methods Volume 2, Issue 1, 53-70 (2020)
- x. Paramasivan K, S. Das, S. Marimuthu, D. Misra, Bowl-shaped Laser Forming of 304 Stainless Steel Circular Plates Using Radial Heating, International Journal of Laser Science: Fundamental Theory and Analytical Methods, Volume 2, Issue 1, 31-52 (2020)
- xi. D Kumar, S Ghosh, A S Kuar, S Paitandi, Laser transmission welding of thermoplastic with a beam wobbling technique using particle swarm optimization, Materials Today: Proceedings, Volume 26, Part 2,808-813 (2020)

## MATERIAL SCIENCE & NANO TECHNOLOGY

Phone: 033-2457-2183/2327

Director: Dr. Chandan Kumar Ghosh

E-mail: dir.nanotech@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
M.tech in Nanoscience and Technology	2 Years	18

### 1. B. Number of Faculty Members: 3

### 2. A. Area of Research Activities:

- Nanomaterials and density functional theory
- Optical and catalytic properties of nanomaterials
- Nanomagnetism
- Density functional theory

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- Antibacterial activity
- Synthesis of Nanomaterials and Nanocomposites
- Process Development of Metal Extraction
- Thermodynamics and kinetics
- Nano-biotechnology

### 2. B. Major Research Project: (Department/ Individual–Name of the Project–Funding Agency)

Dr. Sourav Sarkar–Size Selective Carbon Quantum Dots and its Application to Luminescence and Solar Cell–Science and Engineering Research Board (SERB)–DST

Dr. Mahua Ghosh Chaudhuri–Synthesis of drug (herbal values) entrapped nano material to treat cancer disease & other disease causing organisms–WBDST

Dr. Mahua Ghosh Chaudhuri–Design of nanocarriers for sustained release of conventional analgesic drugs –WBDST

Dr. Mahua Ghosh Chaudhuri–Development of transdermal patch using Nano carriers of controlled & sustained delivery of mixture of turmeric & slaked lime–RUSA 2.0

Dr. Kalyan Kumar Chattopadhyay–Synthesis of MgO–Carbon Refractory for Steel Making–Steel Authority of India–RDCIS (SAIL–RDCIS)

Dr. Kalyan Kumar Chattopadhyay–DST Nanomission project in Nanoscience & Technology for PG teaching and Research–DST- Nano Mission 2015 -2021

Dr. Kalyan Kumar Chattopadhyay–Low dimensional metal chalcogenides and its hybrids for energy storage and energy harvesting applications’–RUSA

### 3. A. Invited Lectures Delivered/ Sessions Chaired:

1. Prof. K.K. Chattopadhyay delivered an Invited Lecture at International conference on Nanoscience and Technology (ICONSAT) 5–7 March, 2020, at Biswabangla Convention Centre, Kolkata
2. Prof. K.K. Chattopadhyay, invitation for Plenary Lecture at the International Conference on Chemistry for Human Development (**ICCHD-2020**), University of Calcutta
3. Prof. K.K. Chattopadhyay, invitation for **Keynote Speaker** for Symposium on Carbon Nanomaterial Electronics (SCNE) 2019 to be held during 8–9 November, 2019 at Birla Institute of Technology and Science (BITS) Pilani
4. Prof. K.K. Chattopadhyay, invitation for invited Lecture at “*International Conference on Materials Genome*” during 5-7 February, 2020 at SRM University
5. Delivered invited Lecture at Induction program at the Govt. college of Engineering and Ceramic Technology, 2 August, 2019 Kolkata
6. Keynote Lecture at 1<sup>st</sup> International Conference on Clean and Renewable Energy (IC CARE 2019) on 12 July, 2019 at NIT Durgapur
7. Chaired a session at 1<sup>st</sup> International Conference on Clean and Renewable Energy (IC CARE 2019) on 12 July, 2019 at NIT Durgapur
8. Prof. K.K. Chattopadhyay, invitation for Invited Lecture at the 40<sup>th</sup> AGM of EMSI, Hyderabad, Hyderabad International Convention Centre, 3-7 February, 2020
9. Prof. K.K. Chattopadhyay, invitation for Invited Lecture at the CMDAYS 19, 29 August, (2019) Vidyasagar University
10. Prof. K.K. Chattopadhyay delivered an Invited Lecture at Industry, Academia and Student Interaction Program, NIT Durgapur, 13 August, 2019
11. 12. Prof. K.K. Chattopadhyay delivered an Invited Lecture at International conference IEMPHYS 2019, 14-17 November, at IEM Kolkata



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12. Prof. K.K. Chattopadhyay delivered an Invited Lecture at the Induction programme in the Govt. College of Engineering and Ceramic Technology, 1 August, 2019
  13. Prof. K.K. Chattopadhyay delivered an Invited Lecture at the International Conference on Current Trends in Materials Science and Engineering during 18-20 July, 2019 (CTMSE 2019) at S.N. Bose National Centre for Basic Sciences
  14. Prof. K.K. Chattopadhyay delivered an Invited Lecture at the Refresher Course of Applied Chemistry of University of Calcutta, on 6 September, 2019
  15. Prof. K.K. Chattopadhyay delivered Keynote lecture and session chaired to 1st International Conference on Clean and Renewable Energy (ICcare 2019) on 12 July 2019, NIT Dugapur
  16. Prof. K.K. Chattopadhyay delivered 10<sup>th</sup> S.P. Sengupta Memorial Lecture, at CSIR CGCRI, Organised by MRSI Kolkata Chapter 2019
  17. Prof. K.K. Chattopadhyay delivered Keynote lecture in the conference “Frontiers in Solid State Physics” (2019) at IACS, Kolkata
  18. Prof. K.K. Chattopadhyay delivered an invited Lecture at the Calcutta University, Department of Electronic Science, May 29, 2019
- 3. C. Seminar/ Workshop/ Conference/ Symposium Organized:**  
National Conference in Recent Developments in Nanoscience and Nanotechnology, 2019 at Jadavpur University; Convenor: Prof. K.K. Chattopadhyay
- 4. A. Books/ Monographs etc. Published:**
1. Thermoelectric Materials: Improving Energy Efficiency and Decreasing CO<sub>2</sub> Emissions, Diptonil Banerjee, Kalyan K Chattopadhyay, Encyclopedia of Renewable and Sustainable Materials, Elsevier (in press) (2020)
  2. Diamond-Like Carbon: An Efficient Cost-Effective Material for Beverage Storing, KK Chattopadhyay, D Banerjee, Trends in Beverage Packaging, (Elsevier) (2019) 135-161
- 4. B. Articles Published in Journals:**
1. Synthesis and Structure Determination of Calcium Silicate-Cellulose Nanograss Biocomposite, Nilormi Biswas, Aniruddha Samanta, Sanchali Mitra, Ripan Biswas, Soumik Podder, Ambarish Sanyal, Jiten Ghosh, **Chandan Kumar Ghosh** and Anoop Kumar Mukhopadhyay, J. American Ceramic Society (doi: 10.1111/JACE.16957)
  2. Bioactive silver phosphate/polyindole nanocomposites, Soumik Podder, Samrat Paul, Piyali Basak, Bowen Xie, Nigel J. Fullwood, Sara J. Baldock, Ying Yang, John G. Hardy and **Chandan K. Ghosh**, RSC Advances 10, 11060 (2020)
  3. Green biosynthesis of silver nanoparticles using Dregeavolubilis flowers: Characterization and evaluation of antioxidant, antidiabetic and antibacterial activity, Bhaskar Das, Arnab De, Soumik Podder, Shilpa Das, **Chandan Kumar Ghosh** and Amalesh Samanta, Inorganic and Nano-Metal Chemistry (DOI: 10.1080/24701556.2020.1814331)
  4. Effect of Annealing on the Defect-mediated Blue Phosphorescence in ZnO Nanocrystals, Sagnik Das, Uttam Kumar Ghorai, Rajib Dey, **Chandan Kumar Ghosh**, Mrinal Pal, RSC Advances (accepted 2020)
  5. Dipayan Roy, Saikat Sarkar, Kaustav Bhattacharjee, Karamjyoti Panigrahi, Bikram Kumar Das, Kausik Sardar, **Sourav Sarkar**, Kalyan Kumar Chattopadhyay, “Site specific nitrogen incorporation in reduced graphene oxide using imidazole as a novel reducing agent for efficient oxygen reduction reaction and improved supercapacitive performance”, Carbon, Volume 166, 2020, Pages 361-373
  6. Studies on leaching characteristics of electronics waste for metal recovery using inorganic and organic acids and base; Debarati Das, Siddhartha Mukherjee, **Mahua Ghosh Chaudhuri**, Waste Management and Research, DOI: 10.1177/0734242X20931929

7. Green synthesis of ZnO nanoparticle using *Trema orientalis* (L) leaf: An efficient photocatalyst for degradation of Zoxamide fungicide in aqueous organic media under UV light irradiation; Pijuskanti Purkayet, Saikat Maitra, Gopes Chanda Das, **Mahua Ghosh Chaudhuri**, International Journal of Environmental Analytical Chemistry (Accepted)
8. Green synthesis of TiO<sub>2</sub> nano particle: its characterization and potential application in zoxamide photodegradation; Pijuskanti Purkayet, Saikat Maitra, Gopes Chanda Das, **Mahua Ghosh Chaudhuri**, J. Water Environ. Nanotechnol., 2020; 5(3): 191-203. DOI: 10.22090/jwent.2020.03.001
9. Multilevel Programming and Light-Assisted Resistive Switching in a Halide-Tunable All-Inorganic Perovskite Cube for Flexible Memory Devices; Tufan Paul, Pranab Kumar Sarkar, Soumen Maiti, **Kalyan Kumar Chattopadhyay**, ACS Applied Electronic Materials (2020) (In Press)
10. V doped BaSnO<sub>3</sub> nanocubes as a Field emitting material: Experimental and theoretical investigation; Suvra Pal, Nirmalya Sankar Das, Brahami Das, Bikram Kumar Das, Subhadipta Mukhopadhyay and **Kalyan Kumar Chattopadhyay**; Applied surface science (2020), 530, 147102
11. Shape-Shifting via Salt Crystallization: Conversion of Nanostructured Polymer into Site-Selective Nitrogen-Doped Carbon Sheet with Enhanced Supercapacitive Performance; Partha Bairi, Kausik Sardar, Kausik Chanda, Madhupriya Samanta, Subhasish Thakur, Karamjyoti Panigrahi, Saikat Sarkar, Tufan Paul, and **Kalyan Kumar Chattopadhyay**; ACS Applied Energy Materials (2020), 3, 6, 5984-5992
12. Role of various transport layer and electrode materials in enhancing performance of stable environment-friendly Cs<sub>2</sub>TiBr<sub>6</sub> solar cell, M. Samanta, S.I. Ahmed **Kalyan Kumar Chattopadhyay**, C. Bose, Optik, 217, 164805 (2020)
13. Luminescence properties of nano and bulk ZnWO<sub>4</sub>:Eu<sup>3+</sup> Phosphor for solid state lighting applications; Rituparna Chatterjee, Gopes Das and **Kalyan Kumar Chattopadhyay**; Materials Research Express (2020), In press
14. Incorporation of V<sub>2</sub>O<sub>5</sub> nanorods into perovskite photodetectors as an alternative approach to enhance device performance: a step towards stability against ambient water species, Nripen Besra, Kausik Sardar, Soumen Maiti, Pranab Kumar Sarkar, Tufan Paul, Subhasish Thakur, Gautam Majumdar and **Kalyan Kumar Chattopadhyay**, Dalton Transaction 2020 (In press)
15. Yellow emitting Fe<sub>3</sub>O<sub>4</sub>/ZnS hybrid: a probe for in vitro dermatoglyphics and anti-counterfeiting applications; Antika Das, Karamjyoti Panigrahi, Subhajit Saha, Bikram Kumar Das, Nirmalya Das, Saikat Sarkar, Rituparna Chatterjee **Kalyan Kumar Chattopadhyay**; Materials Research Bulletin 2020,131, 110966
16. Size-modulation of functionalized Fe<sub>3</sub>O<sub>4</sub>: Nanoscopic customization to devise resolute piezoelectric nanocomposites; Souvik Bhattacharjee, Nilesh Mazumder, Suvankar Mondal, Karamjyoti Panigrahi, Anibrata Banerjee, Dimitra Das, Saikat Sarkar, Dipayan Roy, and **Kalyan Kumar Chattopadhyay**; Dalton Transactions, (2020), 49, 23, 7872-7890
17. Strain-induced partial phase transition in TiO<sub>2</sub> nanoparticles manifesting frequency dispersive pseudo-inductive switching of capacitance; Dipanwita Mitra, Souvik Bhattacharjee, Nilesh Mazumder, Bikram Kumar Das, Paramita Chattopadhyay, and **Kalyan Kumar Chattopadhyay**; Ceramics International, (2020) 46, 12, 20437-20447
18. Site specific nitrogen incorporation in reduced graphene oxide using imidazole as a novel reducing agent for efficient oxygen reduction reaction and improved supercapacitive performance; Dipayan Roy, Kaustav Bhattacharjee, Karamjyoti Panigrahi, Bikram Kumar Das, Kaushik Sardar, Sourav Sarkar and **Kalyan Kumar Chattopadhyay**; Carbon (2020), 166, 361-373
19. Human Motion Interactive Mechanical Energy Harvester Based on All Inorganic Perovskite-PVDF Nano Energy; Suvankar Mondal, Tufan Paul, Soumen Maiti, Bikram Kumar Das and **Kalyan Kumar Chattopadhyay**; Nano Energy (2020), 74, 104870

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20. MoSe<sub>2</sub>-amorphous CNT hierarchical hybrid core-shell structure for efficient hydrogen evolution reaction; Supratim Maity, Biswajit Das, Madhupriya Samanta, Bikram Das, Shrabani Ghosh and **K.K. Chattopadhyay**; ACS Applied Energy Materials (2020), 3, 5, 5067-5076
21. Dielectric and piezoelectric augmentation in self-poled magnetic Fe<sub>3</sub>O<sub>4</sub>/Poly(vinylidene fluoride) composite nanogenerators; Souvik Bhattacharjee, Suvankar Mondal, Anibrata Banerjee and **K. K. Chattopadhyay**; Materials Research Express (2020), 7, 4, 044001
22. Novel Ag<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub> type II p-n heterojunction as an efficient water cleanser for green cleaning technology; Brahami Das, Biswajit Das, Nirmalya Sankar Das, Suvra Pal, Bikram Kr Das, Subrata Sarkar and **K.K. Chattopadhyay**; Applied Surface Science (2020), 515, 145958
23. Ambient Processed CsPbX<sub>3</sub> Perovskite Cubes for Photocatalysis; Sayantani Das, Tufan Paul, Soumen Maity and **K.K. Chattopadhyay**; Materials Letters (2020), 267, 127501
24. 3D network of V<sub>2</sub>O<sub>5</sub> for flexible symmetric supercapacitor; Karamjyoti Panigrahi, Promita Howli and **Kalyan Kumar Chattopadhyay**; Electrochimica Acta (2020), 337, 135701
25. Size and phase dependent thermal conductivity of TiO<sub>2</sub>-water nanofluid with theoretical insight; Dipanwita Mitra, Promita Howli, Bikram Kumar Das, Nirmalya Sankar Das, Paramita Chattopadhyay and **K. K. Chattopadhyay**; Journal of Molecular Liquids (2020), 302, 112499
26. Hollow Micro-spherical Bismuth Oxy-chloride for Superior Visible Light Induced Dye-sensitized Photocatalytic Activity and its Theoretical Insight; Ratna Sarkar, Dimitra Das, Bikram Kumar Das, Anuradha Mitra, Nirmalya Sankar Das, Subrata Sarkar and **K. K. Chattopadhyay**; Materials research Bulletin (2020), 125, 110778
27. Negative capacitance switching in size-modulated Fe<sub>3</sub>O<sub>4</sub> nanoparticles with spontaneous non-stoichiometry: confronting its generalized origin in non-ferroelectric materials; Souvik Bhattacharjee, Anibrata Banerjee, Nilesh Mazumder, Kausik Chanda, Saikat Sarkar, Kalyan Kumar Chattopadhyay; Nanoscale (2020), 12, 3, 1528-1540
28. In-Situ Grown ZnS Nanoparticles on Amorphous Carbon Nanotubes Improved Cold Cathode Emission and Photoluminescence, A Jha, SK Sarkar, K. K. Chattopadhyay, Journal of Nanoscience and Nanotechnology 20 (12), 7686-7693
29. Room temperature processed copper phthalocyanine nanorods: a potential sonophotocatalyst for textile dye removal; M. Samanta, M. Mukherjee, U. K. Ghorai, C. Bose and K. K. Chattopadhyay; Materials Research Bulletin (2020), 123, 110725
30. In-situ grown ZnS nanoparticles on amorphous carbon nanotubes results improved cold cathode emission and photoluminescence; Arunava Jha, Sudipta Kumar Sarkar, Kalyan Kumar Chattopadhyay,; Journal of Nanoscience and Nanotechnology (2020), 20, 12, 7686-7693
31. Cathodoluminescence and photoluminescence from ZnS thin films deposited by novel seeded hydrothermal route; Rimpa Khan, Nirmalya Sankar Das and Kalyan Chattopadhyay; Journal of Materials Science: Materials in Electronics, (2019), 30, 21, 19189-19198
32. Blue Emitting BaAl<sub>2</sub>O<sub>4</sub>: Ce<sup>3+</sup> Nanophosphors with High Color Purity and Brightness for White LEDs; Rituparna Chatterjee, Subhajit Saha, Karamjyoti Panigrahi, Uttam Kumar Ghorai, Gopes Chandra Das and Kalyan Kumar Chattopadhyay; Microscopy and Microanalysis (2019), 25, 6, 1466-1470
33. Tailored CsPbX<sub>3</sub> Nanorods for Electron-Emission Nanodevices; Tufan Paul, Soumen Maiti, Nripen Besra, Biplab Chatterjee, Bikram Das, Subhasish Thakur, Saikat Sarkar, Nirmalya Sankar Das, Kalyan Kumar Chattopadhyay; ACS Applied Nano Materials (2019), 2, 9, 5942-5951
34. Bias-tuned dielectric properties and Non-Debye relaxation in vanadium doped BaSnO<sub>3</sub> nanocubes; Suvra Pal, Nirmalya Sankar Das, Souvik Bhattacharjee, Subhadipta Mukhopadhyay and Kalyan Kumar Chattopadhyay; Materials Research Express (2019), 6, 105029
35. Solution processed Copper Phthalocyanine nanowires: a promising Supercapacitor anode material; Madhupriya Samanta, Promita Howli, Uttam K. Ghorai, Moumita Mukherjee, Chayanika Bose and Kalyan Kumar Chattopadhyay; Physica E (2019), 114, 113654

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36. Tailored Mesoporous Nanocrystalline Ga<sub>2</sub>O<sub>3</sub> for Dye-Selective Photocatalytic Degradation; Brahami Das, Biswajit Das, Nirmalya S. Das, Subrata Sarkar and Kalyan K. Chattopadhyay; *Microporous & Mesoporous Materials* (2019), 288, 109600
37. CsPbBrCl<sub>2</sub>/g-C<sub>3</sub>N<sub>4</sub> Type II Heterojunction as Efficient Visible Range; Tufan Paul, Dimitra Das, Bikram Kumar Das, Soumen Maiti, Saikat Sarkar and Kalyan Kumar Chattopadhyay; *Journal of Hazardous Materials* (2019), 380, 120855
38. Co incorporated Ni<sub>3</sub>S<sub>2</sub> hierarchical nano/micro cactus for electrochemical water splitting; Rimpa Khan, Madhupriya Samanta, Shrabani Ghosh, Nirmalya Sankar Das and Kalyan Kumar Chattopadhyay; *International Journal of Hydrogen Energy*, (2019) 44, 39, 21315-21323
39. Three-dimensional VO<sub>2</sub>@PANI micro flower array for flexible supercapacitor; Karamjyoti Panigrahi, Promita Howli and Kalyan Kumar Chattopadhyay; *Materials Letter* (2019), 253, 90-94
40. Plasma Enhanced Chemical Vapor Deposited Amorphous Carbon Coating For Hydrophobicity Enhancement in Commercial Cotton Fabrics; D. Kundu, D. Banerjee, S. Ghosh, N.S. Das, S. Thakur, B. Das, K.K. Chattopadhyay; *Physica E* (2019), 114, 113594
41. Investigation of ORR performances on graphene/Phthalocyanine nanocomposite in neutral medium; Moumita Mukherjee, Madhupriya Samanta, Gour P Das and Kalyan Kumar Chattopadhyay; *Microscopy and Microanalysis* (2019), 25(6), 1416-1421
42. Textile-Based RGO-Muffled Cobalt (II, III) Oxide Hybrid Nano-architectures for Flexible Energy Storage Device; Promita Howli, Karamjyoti Panigrahi, Anuradha Mitra, Nirmalya Sankar Das and Kalyan Kumar Chattopadhyay; *Applied Surface Science* (2019) 485 238-246
43. Graphene wrapped organic nanotube: A promising material for ORR; Moumita Mukherjee, Madhupriya Samanta, Saikat Sarkar, Gour P. Das and Kalyan Kumar Chattopadhyay; *Materials Letters* (2019), 248, 8-11
44. Enhanced photoluminescence properties of low dimensional Eu<sup>3+</sup> activated Y<sub>4</sub>Al<sub>2</sub>O<sub>9</sub> phosphor compared to bulk for solid state lighting applications and latent fingerprint detection based forensic applications; Antika Das, Subhajit Saha, Karamjyoti Panigrahi, Uttam Kumar Ghorai and Kalyan Kumar Chattopadhyay; *Microscopy and Microanalysis* (2019), 25(6), 1422-1430
45. sp<sup>3</sup> Bonded 2-Dimensional Allotrope of Carbon: A First-Principles Prediction; Dipayan Sen, Bikram Kumar Das, Subhajit Saha, Rajarshi Roy, Anuradha Mitra and Kalyan Kumar Chattopadhyay; *Carbon* (2019) 146, 430-437
46. Morphology tailored Triazine-based Crystalline Organic Polymer for Efficient Mercury Sensing; Dimitra Das, Anuradha Mitra, Rituparna Chatterjee, Sumana Sain and Kalyan Kr. Chattopadhyay; *New Journal of Chemistry* (2019), 43, 4364-4376
47. Amorphous Carbon Nanotube Mediated Low-Temperature Synthesis of Red Emitting Self-assembled Europium Oxy-carbonate Microflower; D. Ganguly, D. Banerjee, B. Das, N.S Das, U.K. Ghorai, K. K. Chattopadhyay; *Materials Research Bulletin* (2019), 112, 307-313

### List of Published Papers of Prof. K.K. Chattopadhyay (In Conference Proceedings):

1. Sodium borohydride assisted reduction of toxic pollutants by silver coordinated melamine based polymeric material, D Das, R Sarkar, S Mukherjee, K K Chattopadhyay, **Materials Today: Proceedings** (2020)
2. Well-dispersed amorphous carbon nanotube-alumina nanocomposite for nanofluid with improved thermal conductivity, SK Sarkar, A Jha, K. K. Chattopadhyay, **AIP Conference Proceedings** 2269 (1), 030072
3. BaSnO<sub>3</sub> nanoparticles as blue emitting phosphor and efficient photocatalyst, S Pal, NS Das, B Das, B Das, S Mukhopadhyay, KK Chattopadhyay, **AIP Conference Proceedings** 2220 (1), 020014 (2020)
4. Impact of morphological change on improvement of photo-catalytic behavior of Co<sub>3</sub>O<sub>4</sub> based system, D Mitra, R Sarkar, K. K. Chattopadhyay, P Chattopadhyay, **AIP Conference Proceedings** 2220 (1), 020029 (2020)

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5. Polypyrrole decorated amorphous CNT: A potential ORR electrocatalyst in alkaline medium, S Maity, M Samanta, T Roychowdhury, S Rakshit, KK Chattopadhyay, **AIP Conference Proceedings 2220** (1), 080039
6. Efficient photocatalytic activity of bismuth oxyhalides with preferentially oriented (210) facets under visible light, R Sarkar, D Das, B Das, S Sarkar, K. K. Chattopadhyay, **AIP Conference Proceedings 2220** (1), 020030 (2020)
7. Facile preparation of porous Ga<sub>2</sub>O<sub>3</sub> nano/microbars for highly efficient photocatalytic degradation, B Das, B Das, S Pal, R Sarkar, NS Das, S Sarkar, K.K. Chattopadhyay, **AIP Conference Proceedings 2220** (1), 020013
8. Enhancement of blue emission in novel ZnWO<sub>4</sub>:Ce<sup>3+</sup> nanophosphors for solid state lighting applications, R Chatterjee, G C Das, K. K. Chattopadhyay, **AIP Conference Proceedings 2100** (1), (2019), 020090
9. Synthesis and characterization of highly luminescent green emitting BaAl<sub>2</sub>O<sub>4</sub>: Tb<sup>3+</sup> nanophosphors, R Chatterjee, GC Das, K. K. Chattopadhyay, **Materials Today: Proceedings 18**, (2019), 1132-1137
10. Enhanced heat transfer properties of RGO-TiO<sub>2</sub> based Ethylene Glycol Nanofluids, M M Bhunia, S Das, K. K. Chattopadhyay, P. Chattopadhyay, **Materials Today: Proceedings 18**, (2019) 1096-1107
11. Faceted Growth of Morphologically Tuned of BiOCl, R Sarkar, D. Das, A. Mitra, S. Sarkar, K.K. Chattopadhyay, **Materials Today: Proceedings 18**, (2019)1086-1095

### 6. Major Achievements:

#### Patents Obtained:

1. Large Scale synthesis of Cobalt Pthalocyanine nanotubes for supercapacitor applications, patent number: 201931011233, (2019), U. K. Ghorai, S. Mondal, J. Sarkar, A. Gain, K. K. Chattopadhyay

## MEDIA COMMUNICATION & CULTURE

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### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
UGC-approved Certificate Course on 'Radio Production'	6 Months	30
Ph.D.		5 (awarded 1)

### 1. B. Number of Faculty Members:

Director: Professor Abhijit Roy, Department of Film Studies

Joint Director: Dr. Sayantan Dasgupta, Department of Comparative Literature

No permanent faculty member; The UGC-approved Certificate Course on 'Radio Production' is taught by 5 teachers from Jadavpur University and 9 from outside the University



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### Academic Committee Members:

Professor Suranjan Das, Hon'ble Vice Chancellor – Chairman  
Professor Abhijit Roy, Director of the School – Vice Chairman  
Dr. Sayantan Dasgupta, Joint Director of the School  
Professor Sudeshna Banerjee, Department of History, Jadavpur University  
Professor Amites Mukhopadhyay, Department of Sociology, Jadavpur University  
Professor Partha Pratim Basu, Department of International Relations, Jadavpur University  
Professor Dalia Chakraborty, Department of Sociology, Jadavpur University  
Professor Nilanjana Gupta, Department of English, Jadavpur University  
Dr. Imankalyan Lahiri, Department of International Relations, Jadavpur University  
Professor Paromita Chakravarti, Department of English, Jadavpur University  
Professor Lopamudra Choudhury, Department of Philosophy, Jadavpur University  
Dr. Suchetana Chattopadhyay, Department of History, Jadavpur University  
Dr. Kaustav Bakshi, Department of English, Jadavpur University  
Prof. Sipra Mukherjee, Department of English, West Bengal State University  
Dr. Someswar Bhowmik, Director (retd.), Educational Multimedia Research Centre, Kolkata

### 2. A. Area of Research Activities: (Broad Areas)

- Media Studies, Communication Studies, Cultural Studies
- Digital Cultures
- News Television
- Indian Television, Television Studies
- Performance Studies
- Translation and Cultures
- Radio Studies
- Media and Convergence
- Urban Studies
- Children, Youth and Media
- Community Radio, Alternative Media Practices

### 2. B. Research Project (Department/Individual, Name of the Project, Funding Agency):

1. 'Digital Interventions: The Changing Contours of Media, Communication and Culture in India', RUSA project (Departmental support towards upgradation in research). Principal Investigators: Prof. Abhijit Roy and Dr. Sayantan Dasgupta
2. 'Youth Community Reporters' (Funding agency: UNICEF; Coordinator: Prof. Nilanjana Gupta) <http://www.youthcommunityreporters.com>
3. The School runs a project called 'Medianest' to commemorate the spirit, integrity and passion for news television of late Shri Sandipta Chatterjee, a journalist and television anchor of repute who died at the early age of 34 in 2012. With the support of an endowment from Sandipta's friends, 'Medianest' organizes annual 'Sandipta Chatterjee Memorial Lecture', publishes the lectures and runs an interactive blog called 'Newsly Yours' for nurturing new ideas on media, ethics, politics and society. <http://www.medianest.org.in>

**The School manages Jadavpur University's Community Radio: 90.8 Community Radio JU**

(Chairperson: Prof. Nilanjana Gupta; Convener: Dr. Iman Kalyan Lahiri). Launched on 14 April 2008, 90.8 MHz Community Radio JU is the first of its kind in eastern India. It provides an interactive platform for students, teachers, research scholars, staff of JU and local people around JU to showcase their talent, creativity and community work. Programmes broadcast by the radio station reach listeners within a radius of 10 kilometres around the University. Thematic focus: Education, Sports, Health & Hygiene, Traditional & Folk Song, Culture & Heritage, Music & Entertainment, Youth Issues, Child issues, Law, Drama on Social Issues, Disability Issues, Travel etc. The UGC-approved 6-month certificate course 'Radio Production' offered by the School uses the resource of the Community Radio for training its students. Some of the radio practical classes of the MA programme in Journalism and Mass Communication of JU are also held in the Community Radio

**3. A. Invited Lectures Delivered/Session Chaired by Academic Committee members (Name of the Teacher, Type of Participants, Name of the Seminar/Conference etc. Place, Duration):**

Please see the Annual Reports of the Departments to which the Director, Joint Director and Academic Committee members are primarily affiliated

**3. B. Seminar/Workshop/Conference/Symposium Attended (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration):**

Please see the Annual Reports of the Departments to which the Director, Joint Director and Academic Committee members are primarily affiliated

**3. C. Seminar/Workshop/Conference/Symposium Organised (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration):**

1. Colloquium on 'Porous City: Visual Storytelling to Allow Urban Youth Explore Possibilities Beyond Borders of Circumstance', a Fulbright-Nehru project involving students of JU, conducted in 2018-19 at the School by Professor Sanjeev Chatterjee, School of Communication, University of Miami. The project website ([porouscity.otherindias.com](http://porouscity.otherindias.com)) was launched on the occasion

Porous city is an experiment where sets of two young people from very different socio-economic and educational backgrounds are introduced to each other for the first time. Each pair's interactions are followed over a period of time and documented in various ways: photographs, video, diary entries etc. The project was motivated by the observation that life in the city leaves little time for human interaction beyond one's immediate circle and by the question: What would emerge if the city could be more 'porous'? Jadavpur University, 11 April, 2019

2. Week-long cross-cultural workshop on 'Communication across Borders: Issues and Challenges' in collaboration with Wake Forest University (WFU), United States. Students from WFU and Jadavpur University participated in this workshop exploring the JU campus and the multiple lives of the city of Kolkata, documenting and sharing their experience, 27 July –1 August, 2019
3. 'Is it Fake News?', a masterclass on authenticity of news by Swasti Chatterjee, Deputy Editor, boomlive.in, supported by the RUSA 2.0 project of the school 'Digital Interventions: The Changing Contours of Media, Communication and Culture in India'. Jadavpur University, 22 August, 2019
4. 'Yasukuni Shrine and Secularism in Japan', a talk by Professor Izumi Niwa, Tokyo University of Foreign Studies. Jadavpur University, 13 September, 2019
5. Panel discussion on 'E/merging Spaces: Performance, Power and Our Cityscape' organized by the School in collaboration with Pickle Factory season 2. A 'Digital Repository of Performance', combining resources collected under UPE and RUSA projects related to dance and performance ([www.projectperformance.in](http://www.projectperformance.in)) was launched on the occasion. Seagull Books, 36 C Shyama Prasad Mukherjee Road, Kolkata. 16 November, 2019

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6. *Janasiksha o Bidyasagar: Aajker Prekshit*, a day-long programme featuring lectures, discussion and songs by artistes from rural Bengal, organised by the School in collaboration with ‘Punarnaba, Kolkata’ Jadavpur University, 17 January, 2020
7. Screening of two films (*Piklu*, a short fiction by Mrinmoy Nandi, 2019, and *Voice of the Sundarbans*, a documentary by Tapas Mondal, 2019) followed by interaction with the film directors. The session with Shri Tapas Mondal was chaired by Dr. Sujit Kumar Mandal, Department of Comparative Literature, Jadavpur University on 27 January, 2020
8. ‘Could Google Translate Shakespeare?’, talk by Dr. Duncan Large (University of East Anglia), Academic Director, British Centre for Literary Translation and RUSA 2.0 Visiting Professor in the Department of Comparative Literature, Jadavpur University. Organised by the School under its RUSA 2.0 project in collaboration with the Department of Comparative Literature, Jadavpur University on 18 February, 2020
9. ‘On the Threshold of the Future’, panel discussion as part of the three-day (26-28 February 2020) international seminar on ‘Megacities: Conviviality and its Limits’, organised by the School in collaboration with Department of Architecture, Department of Comparative Literature, Department of Film Studies, Department of English, School of Oceanographic Studies and School of Environmental Studies under J.U. RUSA 2.0 programme, Jadavpur University, 28 February, 2020
10. ‘Reality Pantomime: Screens, News Media and the Orchestration of Outrage’, lecture by Dr. Suman Ghosh, Senior Lecturer in Film and Screen Studies, School of Creative Industries, Bath Spa University, UK, organised by the School under its RUSA 2.0 project, Jadavpur University, 3 March, 2020

### **Workshops/programmes organised by the ‘Youth Community Reporters’ project (funding agency: UNICEF)**

1. Conversation between Youth Community Reporters and renowned influencers and Youtubers on the occasion of Menstrual Hygiene Day. 90.8 Community Radio JU, Jadavpur University, 28 May, 2019
  2. Workshop on ‘Violence Against Children’, Jadavpur University, 10 June, 2019
  3. Workshop on ‘Third Gender and Cross Dressers’, Jadavpur University, 14 June, 2019
  4. Workshop on ‘Screen Time Management’, Jadavpur University, 7 September, 2019
  5. Workshop on ‘Peace Waves’, Jadavpur University, 7 September, 2019
  6. Outreach Program, Garfa DNM High School, 14 September, 2019
  7. Workshop on ‘Disability Issues’, Jadavpur University, 1 October, 2019
  8. Video-making workshops at the Indian Institute of Cerebral Palsy, Kolkata 28 November, 4 December, 6 December and 10 December, 2019
  9. Final Workshop and Review Meeting at Jadavpur University, 22 February, 2020
- 3. D. Orientation Courses/ Refresher Courses Attended: (Name of the Teachers, Title of the Course, Duration, Place)**
- Please see the Annual Reports of the Departments to which the Director, Joint Director and Academic Committee members are primarily affiliated
- 3. E. Orientation Courses/ Refresher Courses Organised: (Name of the Teachers, Title of the Course, if any, Duration, Place)**
- UGC-HRDC One-week Short Term Course on ‘MOOCs, E-content Development and Open Educational Resources’ organised by School of Media, Communication and Culture in collaboration with the Centre for Microprocessor Applications for Training, Education and Research, Jadavpur University. Coordinator: Prof. Abhijit Roy. Joint Coordinator: Prof. Subhadip Basu (Department of Computer Science and Engineering), 11-17 February, 2020

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### 4. A. Books/ Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher):

Please see the Annual Reports of the Departments to which the Director, Joint Director and Academic Committee members are primarily affiliated

### 4 B. Articles Published in Journals: (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume):

Please see the Annual Reports of the Departments to which the Director, Joint Director and Academic Committee members are primarily affiliated

### 5. Collaborative Programmes:

1. Colloquium on 'Porous City: Visual Storytelling to Allow Urban Youth Explore Possibilities Beyond Borders of Circumstance', a Fulbright-Nehru project involving students of JU, conducted in 2018-19 at the School by Professor Sanjeev Chatterjee, School of Communication, University of Miami. The project website ([porouscity.otherindias.com](http://porouscity.otherindias.com)) was launched on the occasion. Jadavpur University, 11 April, 2019
2. Week-long cross-cultural workshop on 'Communication across Borders: Issues and Challenges' in collaboration with Wake Forest University (WFU), United States, 27 July to 1 August, 2019
3. Panel discussion on 'Emerging Spaces: Performance, Power and Our Cityscape' organised by the School in collaboration with Pickle Factory season 2. A 'Digital Repository of Performance' related to dance and performance ([www.projectperformance.in](http://www.projectperformance.in)) was launched on the occasion. Seagull Books, 36C, Shyama Prasad Mukherjee Road, Kolkata, 16 November, 2019
4. *Janasiksha o Bidyasagar: Aajker Prekshit*, a day-long programme featuring lectures, discussion and songs by artistes from rural Bengal, organised by the School in collaboration with 'Punarnaba, Kolkata'. Jadavpur University, 17 January, 2020
5. UGC-HRDC One-week Short Term Course on 'MOOCs, E-content Development and Open Educational Resources' organised by School of Media, Communication and Culture in collaboration with the Centre for Microprocessor Applications for Training, Education and Research, Jadavpur University. Coordinator: Prof. Abhijit Roy. Joint Coordinator: Prof. Subhadip Basu (Department of Computer Science and Engineering), 11-17 February, 2020
6. 'Could Google Translate Shakespeare?', talk by Dr Duncan Large (University of East Anglia), Academic Director, British Centre for Literary Translation and RUSA 2.0 Visiting Professor in the Department of Comparative Literature, Jadavpur University. Organised by the School in collaboration with the Department of Comparative Literature, Jadavpur University, 18 February, 2020
7. 'On the Threshold of the Future', panel discussion as part of the three-day (26-28 February 2020) International Seminar on 'Megacities: Conviviality and its Limits', organised by School of Media, Communication and Culture in collaboration with Department of Architecture, Department of Comparative Literature, Dept. of Film Studies, Department of English, School of Oceanographic Studies and School of Environmental Studies under J.U. RUSA 2.0 programme Jadavpur University, 28 February, 2020

### 6. Major Achievements:

1. The School introduced its Ph.D Coursework in 2019-20. The classes and all the examinations have been completed successfully
2. Two websites ([www.mediacultureju.org](http://www.mediacultureju.org) and [www.projectperformance.in](http://www.projectperformance.in)) were developed, one article was published and two panel discussions, two talks and one masterclass were organised with support from the JU RUSA 2.0 project of the School 'Digital Interventions: The Changing Contours of Media, Communication and Culture in India'. The websites will be made public soon
3. A number of interviews, documents, photographs, audios, videos were collected by the RUSA 2.0 project of the School based on research and fieldworks in Kolkata and Mumbai

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4. Three new programmes were introduced by 90.8 Community Radio JU: (i) *Aamar Robithakur* as a sequel to the very popular programme *Ebong Rabindranath* (ii) *Khelar Chhole*, a programme on sports awareness and c. *Bishes Anusthan* about important days, personalities and events
5. Two videos titled *Be Alert! Stop Violence* (4 minutes 31 seconds) and *Rights to Equality* (10 minutes 6 seconds) were made under the Youth Community Reporters project funded by UNICEF
6. A total of sixty radio programmes were made and broadcast on 90.8 Community Radio JU under the Youth Community Reporters project funded by UNICEF
7. Two representatives from NHK, Japan's public service broadcaster, visited Radio JU to understand our organization and mode of programming

### MOBILE COMPUTING & COMMUNICATION

Phone: 033-2340-6224

Director: Dr. Punyasha Chatterjee

E-mail: dir.mobilecomputing@jadavpuruniversity.in

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
M. Tech in Distributed and Mobile Computing	2 Years	18

#### 1. B. Number of Faculty Members: 03 (02 – Permanent, 01 – Contractual)

#### 2. A. Area of Research Activities:

Distributed and Parallel Computing, Wireless Sensor Networks, Social Network Analysis, Computation Offloading, Smart Health Care, High Performance Computing, Internet of Things, Big Data and Cloud Computing, Distributed Algorithms

#### 2. B. Major Research Project :

1. **Title:** Environmental Monitoring: Testbed of Mixed Wireless Sensor Networks  
**Funding agency:** Department of Science and Technology, Promotion of University Research and Scientific Excellence (DST, PURSE Phase-II), Govt. of India  
**Period:** 4 years w.e.f. August, 2015  
**Investigators:** Prof Sarbani Roy, Dr. Chandreyee Chowdhury, Prof Nandini Mukherjee, Prof Sarmistha Neogy
2. **Title:** Participatory and Real Time Pollution Monitoring system for Smart City  
**Funding agency:** Higher Education, Science & Technology and Biotechnology, Department of Science & Technology, Government of West Bengal  
**Sanctioned amount:** Rs.13,20,800  
**Period:** 3 years w.e.f. July 2018  
**Principal Investigator:** Prof Sarbani Roy  
**Co-PI:** Dr. Chandreyee Chowdhury



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3. **Title:**e-Dietary Monitoring System using Pervasive Sensing and Machine Learning for children in rural areas  
**Funding Agency:**Rashtriya Uchcharitar Shiksha Abhiyan (RUSA 2.0)  
**Sanctioned amount:** Rs. 5 lakhs  
**Period:**1 year w.e.f. 2019  
**Principal Investigator:** Dr Punyasha Chatterjee
  4. **Title:**Developing Localized algorithms in Pervasive Computing environment  
**Funding Agency:** Department of Science and Technology, Promotion of University Research and Scientific Excellence (DST, PURSE Phase-II), Govt. of India  
**Sanctioned amount:** Rs. 3.6 lakhs  
**Period:** 4 years w.e.f. August, 2015  
**Investigators:** Dr Punyasha Chatterjee, Prof Sarmistha Neogy
- 3. B. Seminar/ Workshop/ Conference/Symposium Attended:**
1. **Faculty name :** Dr Punyasha Chatterjee  
**Name of the Paper Presented :** An Intelligent Highway Traffic Management System for Smart City  
**Name of the Conference :** Computing Conference 2019  
**Place :** London, United Kingdom  
**Duration :** 16-17 July 2019
- 3. C. Seminar/ Workshop/ Conference/Symposium Organized:**
1. **Faculty name :** Dr Punyasha Chatterjee  
**Name of the Workshop :** The Third International Workshop On Networking Women In Distributed Computing And Networks (NWDCN) in conjunction With ICDCN 2020  
**Place:** Kolkata, India  
**Duration:** 4 January, 2020
- 4. A. Books/ Monographs etc Published :**
1. Mandal P., **Chatterjee P.**, Debnath A.: An Intelligent Highway Traffic Management System for Smart City. In: Intelligent Computing. CompCom 2019, London. Advances in Intelligent Systems and Computing, vol 997, pp 1-10, Springer, Print ISBN 978-3-030-22870-5
  2. Mandal P., Rana M.K., **Chatterjee P.**, Debnath A., ns-3 Implementation of Network Mobility Basic Support (NEMO-BS) Protocol for Intelligent Transportation Systems. In: Data Management, Analytics and Innovation. Advances in Intelligent Systems and Computing 2019, Malaysia, vol 1042. pp 633-642, Springer, Singapore, Print ISBN 978-981-32-9948-1, First Online 25 October, 2019
- 4. B. Articles Published in Journals: (National/International/Peer-reviewed)**
1. Bhattacharya, S., Sinha, S., **Roy, S.** et al. Towards finding the best-fit distribution for OSN data. *Journal of Supercomputing*, Springer, 76, 9882–9900 (2020). <https://doi.org/10.1007/s11227-020-03232-y>
  2. Tanmoy Maitra and **Sarbani Roy**, XMSN: An efficient cross-layer protocol for mixed wireless sensor network, *International Journal of Communication Systems*, Wiley, Vol. 32, issue 9, June 2019. <https://doi.org/10.1002/dac.3946>

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3. Srimoyee Bhattacharjee, Rituparna Das, Sunirmal Khatua, **Sarbani Roy**, Energy-efficient migration techniques for cloud environment: a step toward green computing, *Journal of Supercomputing*, Springer, 76, 5192–5220, 2019. <https://doi.org/10.1007/s11227-019-02801-0>
4. M. Roy, **C. Chowdhury**, M. N. Anjum, **S. Neogy** (2019) Designing Secure and Reliable Mobile Agent Based System for Reliable MANET, *Journal of Ad Hoc and Ubiquitous Computing*, Inderscience, 32(1), 43 – 58.
5. B. Ray, A. Saha, S. Khatua and **S. Roy**, “Proactive Fault-Tolerance Technique to Enhance Reliability of Cloud Service in Cloud Federation Environment”, in *IEEE Transactions on Cloud Computing*, Jan 2020. doi: 10.1109/TCC.2020.2968522.
6. A. I. Middya, B. Ray and **S. Roy**, “Auction based Resource Allocation Mechanism in Federated Cloud Environment: TARA”, in *IEEE Transactions on Services Computing*, Nov 2019. doi: 10.1109/TSC.2019.2952772.
7. Tanmoy Maitra and **Sarbani Roy**, PBDT: An Energy-efficient Posture based Data Transmission for Repeated Activities in BAN, *Mobile Networks and Applications*, Springer, 25, pp. 328–340, Feb 2020. <https://doi.org/10.1007/s11036-019-01287-7>
8. Paramita Dey, Agneet Chatterjee and Sarbani Roy, Influence maximization in online social networks using different centrality measures as seed nodes of information propagation, *Sadhana*, Springer (2019) 44: 205. <https://doi.org/10.1007/s12046-019-1189-7>
9. Chowdhury, C., Roy, S., Ray, A. et al. A Fault-Tolerant Approach to Alleviate Failures in Offloading Systems. *Wireless Personal Communications*, Springer 110, 1033–1055 (2020). <https://doi.org/10.1007/s11277-019-06772-6>
10. **Ray, A., Chowdhury, C.**, Mallick, S., Mondal, S., Paul, S., **Roy, S.**, Designing Energy Efficient Strategies Using Markov Decision Process for Crowd-Sensing Applications. *Mobile Networks and Applications*, 25, 932–942 (2020). <https://doi.org/10.1007/s11036-020-01522-6>
11. A. Nandy, J. Saha, **C. Chowdhury** (2020). Novel features for intensive human activity recognition based on wearable and smartphone sensors, *Microsystem Technologies*, vol. 26, pp. 1889–1903 Springer, <https://doi.org/10.1007/s00542-019-04738-z>
12. A. Mallick, A. Saha, **C. Chowdhury**, S. Chattopadhyay (2019). Energy Efficient Routing Protocol for Ambient Assisted Living Environment, *Wireless Personal Communications*, 109, 1333–1355 (2019). <https://doi.org/10.1007/s11277-019-06615-4>, Springer
13. P. Roy, **C. Chowdhury**, D. Ghosh, S. Bandyopadhyay (2019). JUIndoorLoc: A Ubiquitous Framework for Smartphone-Based Indoor Localization Subject to Context and Device Heterogeneity, *Wireless Personal Communications*, Springer, 106(2):739–762 <https://doi.org/10.1007/s11277-019-06188-2>

## 6. Major Achievements:

Best Paper award: Mitra Tithi Dey, Punyasha C., Amlan C. Smart Waste Monitoring using Internet of Things, 4th International Conference on Data Management, Analytics & Innovation (ICDMAI 2020), 17 -19 January 2020, Delhi, India, *Advances in Intelligent Systems and Computing*, vol 1174. Springer, Singapore, Print ISBN 978-981-15-561

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### NATURAL PRODUCT STUDIES

Phone: 033-2457-2036

033-2414-6046

Director: Prof. Pulok Kumar Mukherjee

Prof. Pallab Kanti Haldar (since 6.2.2020)

E-mail: dir.naturalproduct@jadavpuruniversity.in

#### 1. B. Number of Faculty Members: 02

#### 2. A. Area of Research Activities:

School of Natural Product Studies (SNPS, J.U) has been working on evidence based scientific studies for evaluation of the medicinal plants used in the traditional practices medicine based drug discovery programme so as to make them available from 'Farm to Pharma'. The major area of research highlights on leveraging innovations in botanical research, particularly on rationally designed, carefully standardized, synergistic traditional formulations and botanical drugs for their scientific validation on several evidence based approaches. MoU has been signed for collaborative research program with several institutions and industries

SNPS, J.U has made significant contributions on metabolomic studies of medicinal and aromatic plants (MAPs) for chemo-profiling, marker analysis, quality control, safety surveillance and related aspects, which are useful bio-prospecting tools to make them available from 'Farm to Pharma'. The works on metabolite profiling for validation of MAPs for Alzheimer's diseases, anti-allergy, anti-infective, metabolic and lifestyle related disorder are very important and have a worldwide impact for the adoption of the therapeutic approaches available in MAPs. It has established the safety profile of MAPs and developed value added products through CYP450 mediated interaction study. Our work highlights on several parameters for quality evaluation and validation of MAPs along with development of high-throughput screening methodologies for drug screening and evaluation. SNPS, J.U works on systematic data mining of the existing formulations and single herbs can certainly help the drug discovery from MAPs. SNPS, J.U has more than 220 publications, several patents, 7 books, 20 book chapters. SNPS, J.U has research publications with cumulative Impact Factor >267; h-Index- 64, i10-index - 344; citation over 21400 times. SNPS, J.U has been appreciated by several industries and various products have been developed; technology transferred through University-Industry collaborations and the products/the process developed are being marketed

SNPS, J.U has been engaged with the development of international collaboration and coordination in the field of medicinal plant research and has organized several international and national conferences, workshops, seminars at Jadavpur University and other states of India as well to disseminate knowledge for promotion and development of MAPs

#### Major contributions of SNPS, J.U on Traditional medicine inspired drug development from MAPs are as follows:

- **Metabolomics, Quality control and standardization of herbal drugs**

SNPS, J.U has contributed a lot for the development of marker profiles of herbs related to analytical, bio-analytical techniques for MAPs with therapeutic importance. These works have been reported through books on "Quality Control and evaluation of Herbal Drug" [ISBN 978-0-12-813374-3], edited volume "GMP for botanicals" [ISBN 81-900788-5-2] and edited volume "Evidence based validation of herbal medicine" [ISBN978-0-12-800874-4] which has received worldwide impact. The school has been working till then in this field for development of quality control profile of herbal medicine through HPTLC, HPLC, LC-MS/MS, GC/MS and different other analytical and bio-analytical techniques. SNPS, J.U has performed metabolomics study for metabolite profiling of MAPs. Several works on UPLC-QTOF-MS analysis of *Luffa acutangula*, LC-QTOF-MS based metabolic profiling of *Coccinia grandis*, identification of bioactive constituents of *Momordica charantia* and *Lagenaria siceraria* fruits has been published in reputed impact journals. Researchers of SNPS, J.U have worked on the development of marker and biomarker profiles of the MAPs for the standardization and evaluation

have resulted several impact publications. [Chanda et al., 2020, Biomedical chromatography, 34: 12 (e4950); Singha et al., 2020, Journal of Planar Chromatography, <https://doi.org/10.1007/s00764-020-00061-w>; Chanda et al., 2020, Phytochemical Analysis, PMID: 32683785; Sharma et al., 2019, Journal of AOAC international, PMID: 31619314; Biswas et al., 2019, Journal of Planar Chromatography, 32: 1 (1-6); Chanda et al., 2019, Biomedical Chromatography, 33(4): e4463; Chanda et al., 2018, Phytochemical Analysis, 30(2):148-155; Nag et al., 2017, Indian Journal of Pharmaceutical Education and Research, 51(2):337-342; Mukherjee et al., 2016, *Current Science*, 111 (1624-1630); Chanda et al., 2014, Natural Product Research, 28;21 (1926-1928); Mukherjee et al., 2013, *Fitoterapia*, 84, 227–236; Mukherjee et al., 2012, Journal of Ethnopharmacology 2012, 143, 424-434; Mukherjee et al., 2011, Drug Information Journal, 45: 1-14; Mukherjee et al., 2010 Phytochemical Analysis (in press); Pandit et al., 2010; Biomedical Chromatography, 2011, 25, 959-962, Gantait et al., 2010. JAOAC International 93(2):492-5]

### Bio-prospecting of MAPs for development of therapeutically potent lead

- **Exploring anti-ageing leads from MAPs:**

SNPS, J.U have been working on development of leads from natural resources like antiaging. Several components have been screened and evaluated in this context for their hyaluronidase, elastase and matrix-metalloproteinase inhibitory activities. This work has been explored by the industrial partner Parker Robinson Ltd, Kolkata through Department of Science & Technology, Govt. of India and Industry sponsored project at the Jadavpur University. Several research work has been reported in details in this aspects (Maity et al, 2012, Natural Product Research, 26, 1939–1941, Mukherjee et al, 2011, Natural Matrix-Metalloproteinase Inhibitors - Leads from Herbal Resources in: Bioactive Natural Products, Elsevier Science Publishers, Amsterdam; Mukherjee et al, 2011, Phytomedicine 19, 64-73; Nema et al, 2011, Archives of Dermatological Research 303, 247–252; Maity et al, 2011, Journal of Ethnopharmacology 137, 1300–1305)

- **Evaluating of anti-tyrosinase inhibitory potential of MAPs:**

SNPS, J.U and its research team have been working on the development lead from botanicals and formulate value added product for skin whitening. Several medicinal plants have been screened in respect to their anti-tyrosinase enzyme inhibition potential. These findings are being explored by Industrial partner Emami Ltd., Kolkata through a collaborative research project on “Varnya formulation” leading to product development. Several research findings have been published in several reputed impact journals. [Biswas et al., 2020, Pharmaceutical Development and Technology, [doi.org/10.1080/10837450.2020.1835956](https://doi.org/10.1080/10837450.2020.1835956); Mukherjee et al., 2018, Journal of Herbal Medicine, [doi.org/10.1016/j.hermed.2018.09.002](https://doi.org/10.1016/j.hermed.2018.09.002); Biswas et al., 2017, Food Chemistry, 232 (689-696); Biswas et al., 2016, Journal of Ethnopharmacology, 192 (283-291); Biswas et al., 2016, Natural Product Research, 30 (1451-54); Biswas et al., 2015, Industrial Crops and Products, 74 (319–326)]

- **Exploring anti-infective, immunomodulatory potential of MAPs:**

SNPS, J.U has performed a well-defined scientific works on “Studies on Rhizomes of *Nelumbo nucifera* Gaertn. (Family-Nymphaeaceae)” relating to phytochemical, pharmacological, antimicrobial studies on its rhizomes leads to several potential publications and patent. Works on isolation and quantification of ‘Betulinic acid’ from the rhizome of *Nelumbo nucifera*, which is a potential steroidal triterpenoid compound possessing antitumor, anti-HIV activity and found to possess significant anti-inflammatory activity against different edema model. An international patent has been made by CSIR (International patent – No- WO03011891) entitled “A Process for Isolation of Betulinic Acid useful as Anti-HIV, Anti-tumoral and Melanoma-Specific Cytotoxic Agent”. Based on the traditional and folklore uses, many pharmaco-therapeutic activities of the constituents and different extracts of rhizomes have been evaluated. SNPS, J.U has been contributed in the field of medicinal plant research which includes phytochemical, phyto-pharmacological, antimicrobial, antiviral, anti-leishmania, hypoglycaemic, antiallergic and immune modulatory evaluation of different plant species including *Moringa oleifera*, *Cassia tora*, *Azadirachta indica*, *Dilena indica*, *Boswellia serrata*, *Leucas lavandulaefolia*, *Drymaria cordata*, *Cassia fistula*, *Ficus recemosa*, *Asparagus recemosus*, *Baliospermum montanum*, *Curculigo orchioides*, *Albizia*



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*lebbeck*, Indian Hypericum species and different other plant species along with their formulation of Indian folklore and traditional medicine. all these phytotherapeutic research findings has been published in reputed peer reviewed impact journals [Goswami et al., 2019, Phytomedicine, 51(94–103); Goswami et al., 2016, Indian Journal of Traditional Knowledge, 15 (474-481); Sill et al., 2016, International Immuno-pharmacology, 30 (18-26); Sarkar et al., 2014, Journal of Ethnopharmacology, 154 (170-175); Sarkar et al., 2015, Journal of Pharmacy and Pharmacology, 67 (951-962); Thakur et al., 2015, Indian Journal of Traditional Knowledge, 14 (658-663); Mukherjee et al., 2013, Microbiological Research, 168 (238–244); Venkatesh et al 2011, Planta Medica, 77: 1–3; Venkatesh et al 2010 Pharmaceutical Biology, 2010, 48(11): 1213-7; Venkatesh et al 2009, Journal of Ethnopharmacology, 126: 434-436; Venkatesh et al 2010, Immunopharmacology and Immunotoxicology 32(2): 272-276; Venkatesh et al 2010, Pharmaceutical Biology, 1-5], Nurul, et al., 2011, International Immuno pharmacology 11 (11), 1766-1772, Maity et al., 2012, Natural Product Research, 26 (20), 1939–1941; Mukherjee et al, 2010, Phytochemical Analysis, 21: 556-560; Mukherjee et al, 2010, Journal of Ethnopharmacology, 128 (2), 490–494; Mukherjee et al, 2010, Immunopharmacology and Immunotoxicology, 2010, 32(3): 466-472]; [Mukherjee et al, 2009, Pharmacy and Pharmacology, 61(4): 407–422; Mukherjee et al., 1997, J. Ethnopharmacology 58: 207-213]

- **Drug development for Alzheimer’s diseases as AChE inhibitors:**

SNPS, J.U has been working on cognitive disorder especially acetyl cholinesterase [AChE] inhibitors from MAPs for development of leads for Alzheimer’s disease (AD). It has developed several bioactivity guided isolation techniques for natural AChE inhibitors. The school has worked on evaluation and exploration of acetyl cholinesterase activity for several Indian medicinal plants which has been reported in reputed impact journals. SNPS, J.U have established screening techniques for the development of acetyl cholinesterase inhibitors from MAPs and have screened a group of medicinal plants and spices for their potential therapeutic efficacy. Screening of various Indian medicinal plants has been reported in high impact journals. [Das et al., 2019, Journal of Herbal Medicine, 22: 100348; Dalai et al., 2013, Oriental Pharmacy and Experimental Medicine, 14 (31-35), Bhadra et al 2012, Natural Product Research, 26 (16): 1519-1522; Bhadra et al 2011, Fitoterapia (82): 342–346; Satheesh et al 2009, Phytotherapy Research, 24 (4): 629-631; Satheesh et al 2009, Phytomedicine, 17 (3): 292-295]. This may be helpful in exploring natural health products effective against Alzheimer’s disease [Mukherjee et al 2011, Mini Reviews in Medicinal Chemistry (11), 247-262; Mukherjee et al 2007, Behavioural Brain Research, 178 (2):221-228; Mukherjee et al 2007, Planta Medica, 73: 285-288; Mukherjee et al 2007, Phytomedicine 14(4): 289-300; Mukherjee et al 2007, Phytotherapy Research, 21(12), 1142-1145; Bhadra, et al., 2012, Natural Product Research 26 (16), 1519-1522]

- **Development of value added herbal formulation and evaluation:**

SNPS, J.U has developed and patented the techniques for value added herbal formulation ‘Herbosomes’ to increase the bioavailability of therapeutically potent plant secondary metabolites with lower half life. Herbosomes are a value added herbal formulation for better absorption and therapeutic potentials have been developed by SNPS, J.U and patented. This is a concept on metabolomic approaches for herbal formulation development, which is unique in its nature as most of the secondary metabolites have very less half-life. SNPS, J.U has developed an improved process of preparing herbosomes, which is a value added herbal drugs delivery system to sustain the action and also to increase the bioavailability of several therapeutically important phytomolecules like betulinic acid, ursolic acid, catechine, ferulic acid, curcumin, quercetin, naringenin, hesperetin etc which have been published in reputed journals. [Biswas et al., 2019, Drug Development and Industrial Pharmacy 45(6), 946-958, Harwansh et al., 2017, Journal of Molecular Liquids, 237, 361-37; Harwansh et al., 2016, Journal of Photochemistry & Photobiology, B: Biology, 160 (318–329); Harwansh et al., 2015, Life Sciences 141(202–211); Bhattacharyya et al., 2014, Journal of Photochemistry and Photobiology B: Biology, 130 (293–298), Bhattacharyya et al., 2013, Journal of the Science of Food and Agriculture, 94 (1380-1388), Mukherjee et al., 2011, Food Research International, 44: 1088-1093; Maiti et al 2010, Journal of Science and Food Agriculture, 90: 43–51; Maiti et al. 2006, J. Pharmacy and Pharmacology 58: 1227-1233; Maiti et al., 2007, International J. Pharmaceutics 330: 155-



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163; Mukherjee et al, 2009, *J. Pharmacy and Pharmacology* 61: 407–422; Maiti et al., 2009, *AAPS Pharm Sci Tech.*, 10 (3) : 943-950 ; Venkatesh et al., 2009, *Food Chemistry* 57 (11): 4559–4565; Mukherjee Patent No: 00056/KOL/2006]

- **Safety evaluation of herbal medicine**

SNPS, J.U has been working on various parameters related to drug safety with special emphasis to botanicals including an overview on pharmacovigilance, safety study, risk management on drug and pharmaceuticals including natural health products and dietary supplements. The school has been working on safety evaluation of herbs and polyherbal formulation through metabolism mediated herb-drug interaction, which is one of the potential approaches in the field of pharmacovigilance study on herbal medicines. These safety prospects include the CYP450 modulating enzyme mediated interaction of herbal medicine and presence of contaminants such as heavy metals, persistent pesticides and aflatoxins and mostly for the evaluation of CYP450 enzyme predominance. SNPS, J.U are involved in assessing the safety of herbs through various models on drug modulating enzymes. Some potential publications has been made in this area by the researchers of SNPS, J.U (Kar et al., 2020, *Journal of Ethnopharmacology*, 266: 113457; Bahadur et al., 2017, *Synergy*, 4 (1–7); Bahadur et al., 2016, *Indian Journal of Pharmacology*, 48 (576-81), Ahmmed et al., 2016, *Journal of Ethnopharmacology*, 78 (34–39). Kar et al., 2017, *Journal of the Science of Food and Agriculture*, 97 (333-340); Ahmmed et al., 2015, *Indian Journal of Traditional Knowledge*, 14 (614-619); Ahmed et al., 2015, *Indian Journal of Traditional Knowledge*, 14 (614-619); Bahadur et al., 2015, *Indian Journal of Traditional Knowledge*, 14 (643-649); Kar et al., 2015, *Indian Journal of Traditional Knowledge*, 14 (626-631); Harwansh et al., 2014, *Journal of Ethnopharmacology*, 153 (674–681); Pandit et al 2012, *Food Research International*, 45 (1): 69–74; Pandit et al 2012 *Phytotherapy Research*, [In Press] doi: 10.1002/ptr. 3426; Pandit et al 2011, *JPC - Journal of Planar Chromatography - Modern TLC*; Ponnusankar et al 2011, *Journal of Ethnopharmacology* 133 (1), 120-125; Ponnusankar et al 2011 *Phytotherapy Research* 25, 151–154. Mukherjee et al 2011, *Drug Information Journal*, 45: 1–14; Mukherjee et al 2010, *Chinese Herbal Medicines*, 2(1): 1-15; Mukherjee et al 2010, *Drug Information Journal*, 40: 131–139; Mukherjee et al 2008, *Indian Journal of Traditional knowledge*, 7 (3): 379-383; Mukherjee and Houghton, 2009. *Evaluation of Herbal Medicinal Products - Perspectives of Quality, Safety and Efficacy*” Pharmaceutical Press, Royal Pharmaceutical Society of Great Britain, UK), Pandit, et al., 2012, *Food Research International* 2012, 45 (1), 69–74, Mukherjee et al., 2011, *Phytomedicine* 9 (1), 64-73

- **Exploring Synergy in MAPs research**

Multi-target approaches are increasingly applied to treat complex diseases in different disciplines of medicine – mainly based on empirical knowledge. There is a need to elucidate further the combinatory actions in the context of the theoretical basis, experimental design and quantification of synergy at different dose and effect levels. Thus exploring synergistic actions/effects of specified Medicinal and aromatic plants and their active compounds, including the “mechanistic” principles of synergy and the use of network analysis and suitable modern bioinformatics approaches to develop phytopharmaceuticals from botanicals. SNPS, J.U working on synergy research approach in terms of exploring and determining combinatory and synergistic (inter)actions of compounds and drugs made from traditional Indian medicinal plants through network pharmacology, validation of biological activity, omics techniques, multilevel systemic interaction with targets gene, protein, pathways. Based on this concept SNPS, J.U have published few articles in reputed journals. SNPS, J.U is also associated with the Synergy forum, University of Bonn, Bonn, Germany for promotion of medicinal plants through metabolomic studies with their chemical and biological perspectives. [Banerjee et al., 2020, *Phytochemical Analysis*, <https://doi.org/10.1002/pca.3011>; Banerjee et al., 2019, *Phytomedicine*, 60: 152944; Mukherjee et al., 2018, *Synergy*, 7:30-33]

- **Dissemination of Knowledge for promotion and development of MAPs:**

SNPS, J.U has been working extensively on dissemination of knowledge for promotion of ethnopharmacology, ethno-medicine and Medicinal and aromatic plant research at large. SNPS, J.U has organized several very effective and successful International/National conferences/ workshops/symposiums with the involvement

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of the renowned scientists and resource persons all over the world to develop national international collaborations and coordination. SNPS, J.U is working on the development of therapeutic leads from natural resource and has been working with several projects from DST, DBT and others

### 2. B. Major Research Project: (Name of the Teacher-Name of the Project-Funding Agency-Sanctioned order no. & date)

Prof. Pallab Kanti Haldar-“DBT-AYUSH Network on R&D Activities related to SARS-CoV-2 Virus and COVID-19 Disease”; Project entitled “Sub-Network 1: Studies on anti-SARS-CoV-2 activity of selected medicinal plants and formulations in cell culture model of virus infection”.-Department of Biotechnology, Govt. of India, New Delhi (DBT)-Vide anction letter F. No. BT/PR40374/TRM/120/484/2020, Dated 24.08.2020

Prof. Pallab Kanti Haldar & Prof. Pulok K Mukherjee-“Phytopharmaceutical development of *Trachyspermum ammi* for post kala-azar Dermal leishmaniasis (PKDL)”Department of Biotechnology, Govt. of India, New Delhi (DBT),-vide sanction letter F No. BT/PR29025/TRM/120/206/2018 Dated 20-09-2019

Prof. Pulok K. Mukherjee-“Medicinal plants of Cucurbitaceae family – Metabolomic Study and Therapeutic Evaluation”.-Department of Science and Technology (DST) Science & Engineering Research Board Sanction order No: EMR/2016/007037 dated 18.06.2018

Dr. Pallab Kanti Haldar-Zebrafish: a model for drug discovery-JU-RUSA 2.0 Departmental support towards upgradation in research-R-11/736/19 dated: 27.06.19

Prof. Pulok K. Mukherjee-Development of sensor probes for quantification of active constituents in *Andrographis paniculata* and *Piper nigrum* using Near Infrared Spectroscopy National Medicinal Plants Board-Sanction order No.Z.18017/187/CSS/R&D/WB-02/2017-18-NMPB-IV A dated 8.01.2018

### 3. A. Invited Lectures Delivered/ Session Chaired: (Name of the Teacher-Name of the Seminar-Duration and Place)

Prof. Pulok Kumar Mukherjee-7th International Congress of Society for Ethnopharmacology (SFEC 2020) on “Ethnopharmacology in development of scientifically validated quality products from Medicinal plants and Regulatory aspects”-15-17 February, 2020 Jamia Hamdard, New Delhi, India

Prof. Pulok Kumar Mukherjee-WHO Consultation Meeting Traditional, Complementary and Integrative Medicine (TCI), Service Delivery and Safety Department (SDS), World Health Organization (WHO)-16-18 October, 2019, Beijing, China

Prof. Pulok Kumar Mukherjee-International conference on 1st International Conference on Integrative Medicine-7 - 8 October, 2019, Mae Fah Luang University, Chiang Rai, Thailand

Prof. Pulok Kumar Mukherjee-Annual General meeting of the Japan Society for Cookery Science (JSCS) -26-27 August, 2019, Nakamura Gakuen University, Fukuoka, 814-0198, Japan

Prof. Pulok Kumar Mukherjee-19th International ISE Congress “Ethnopharmacology – bridging cultures and continents”.-12-14 June, 2019, The Technische Universität Dresden, Germany

Prof. Pulok Kumar Mukherjee-International Frontiers Forum on Traditional Chinese Medicine & 2nd Editorial Board Meeting of World Journal of Traditional Chinese Medicine, 29 June – 2 July, 2019, Shenzhen, China

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the teacher-Name of the Seminar-Duration and Place)

Prof. Pulok Kumar Mukherjee-7th International Congress of Society for Ethnopharmacology (SFEC 2020) on “Ethnopharmacology in development of scientifically validated quality products from Medicinal plants and Regulatory aspects” - 15-17 February, 2020, Jamia Hamdard, New Delhi, India

Prof. Pulok Kumar Mukherjee-WHO Consultation Meeting Traditional, Complementary and Integrative Medicine (TCI), Service Delivery and Safety Department (SDS), World Health Organization (WHO)-16-18 October, 2019, Beijing, China

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Prof. Pulok Kumar Mukherjee-International conference on 1st International Conference on Integrative Medicine 7-8 October, 2019, Mae Fah Luang University, Chiang Rai, Thailand

Prof. Pulok Kumar Mukherjee-Annual General meeting of the Japan Society for Cookery Science (JSCS) -26-27 August, 2019, Nakamura Gakuen University, Fukuoka, 814-0198, Japan

Prof. Pulok Kumar Mukherjee-19th International ISE Congress “Ethnopharmacology – bridging cultures and continents”. 12-14 June, 2019, The Technische Universität Dresden, Germany

Prof. Pulok Kumar Mukherjee-International Frontiers Forum on Traditional Chinese Medicine & 2nd Editorial Board Meeting of World Journal of Traditional Chinese Medicine, 29 June – 2 July, 2019, Shenzhen, China

### 3. C. Seminar/workshop/conference/symposium organized: (Name of the teacher-Name of the seminar-Duration and place)

Prof. Pulok Kumar Mukherjee **Chairman (Scientific Services)**-7th International Congress of Society for Ethnopharmacology (SFEC 2020) on “Ethnopharmacology in development of scientifically validated quality products from-Medicinal plants and Regulatory aspects”- 15–17 February, 2020 Jamia Hamdard, New Delhi, India

Prof. Pulok Kumar Mukherjee, **Organizing Secretary**-National Symposium on Promotion and development of Indian medicinal plants with special reference-Guduchi (*Tinospora cordifolia*)-School of Natural Product Studies, Jadavpur University, Kolkata, 7–8 September, 2019

### 4. A. Books/Monographs etc. Published: (Name of the Teacher-Name of the Book-Name of the Publisher)

Prof. Pulok Kumar Mukherjee-Quality Control and Evaluation of Herbal Drugs-Elsevier Science, USA, 2019, 784 pages, ISBN 978-0-12-813374-3.

Prof. Pulok Kumar Mukherjee-“*Nelumbo nucifera*: pharmacological profile, metabolite profile and therapeutic uses” in book titled “Natural Medicines: Clinical Efficacy, Safety and Quality”-CRC Press, Taylor and Francis group-. - 605 pages, ISBN 9781138733060

Prof. Pulok Kumar Mukherjee-“Globalization of traditional medicine under the modern medicine portfolio” in book titled “Natural Medicines: Clinical Efficacy, Safety and Quality”-CRC Press, Taylor and Francis group-. - 605 pages, ISBN 9781138733060

Prof. Pulok Kumar Mukherjee “Ayurveda: Evidence based approach for drug development” in book titled “Natural Medicines: Clinical Efficacy, Safety and Quality”-CRC Press, Taylor and Francis group-. - 605 pages, ISBN 9781138733060

Prof. Pulok Kumar Mukherjee-Drugs from Our Ancestors: Tradition to Innovation in book titled “Herbal Medicine in India: Indigenous Knowledge, Practice, Innovation and its Value”-Springer Singapore, 2019 620 pages ISBN 978-981-13-7247-6

### 4. B. Articles Published in Journals: (Name of the teacher-Name of the Article-Name of the journal, Date of publication and volume)

Singha S, Biswas S, Dasgupta B, Kar A, **Mukherjee Pulok K**-Standardization of some plants of cucurbitaceae family by validated High performance thin-layer chromatography (HPTLC)-JPC – Journal of Planar Chromatography – Modern TLC(2020)DOI: 10.1007/s00764-020-00061-w

Chanda J, **Mukherjee Pulok K.**, Kar A, Maitra PK, Singha S, **Halder P K**, Gajbhiye R, Vishnuvardh R-LC–QTOF–MS-based metabolite profiling and evaluation of α-glucosidase inhibitory kinetics of *Coccinia grandis* fruit-Biomedical Chromatography (2020)<https://doi.org/10.1002/bmc.4950>

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Chanda J, **Mukherjee Pulok K.**, Biswas R, Singha S, Kar A, **Halder P K**-Lagenaria siceraria and its bioactive constituents in carbonic anhydrase inhibition: A bioactivity guided LC-MS/MS Approach-Phytochemical Analysis (2020)<https://doi.org/10.1002/pca.2975>

**Mukherjee Pulok K.**, Biswas S, Banerjee S, Das B, Kar A, Katiyar C. K-Withania somnifera (L.) Dunal- Modern perspectives of an ancient Rasayana from Ayurveda-Journal of Ethnopharmacology (2020) Accepted for publication

Das B, Kar A, Matsabisab MG, **Mukherjee Pulok K.**-Anti-Cholinesterase Potential of Standardized Extract of PHELA a Traditional South African Medicine Formulation-Journal of Herbal Medicine, (2019) Volume 22, 100348doi.org/10.1016/j.hermed.2020.100348

Sharma A, Katiyar CK, Banerjee S, Chanda J, Kar A, Biswas S, **Mukherjee Pulok K.**-RP-HPLC and HPTLC Methods for Analysis of Selected Herbs Used as Complexion Promoters in Ayurveda and Unani Systems of Medicine-Journal of AOAC International, AOAC International(2019); doi:10.5740/jaoacint.19-0290

Banerjee S, BhattacharjeeP, Kar A, **Mukherjee Pulok K.**-LC-MS/MS analysis and Network Pharmacology of *Trigonella foenum-graecum*- a plant from Ayurveda against Hyperlipidemia and Hyperglycemia with combination synergy-Phytomedicine, Elsevier (2019); doi: 10.1016/j.phymed.2019.152944

Chanda J, **Mukherjee Pulok K.**, Biswas R, Malakar D, Pillai M-Study of pancreatic lipase inhibition kinetics and LC-QTOF-MS based identification of bioactive constituents of *Momordica charantia* fruits -Biomedical Chromatography (2019);33(4): e4463

Biswas S and **Mukherjee Pulok K.**-Validated High-Performance Thin-LayerChromatographic-Densitometric-Method for the Isolationand Standardization of Ayapanin in *Ayapana triplinervis*-Journal of Planar Chromatography (2019) 32: 1 (1-6)

Biswas S, **Mukherjee Pulok K.**, Harwansh R K., Bannerjee S, Bhattacharjee P-Enhanced bioavailability and hepatoprotectivity of optimized ursolicacid-phospholipid complex-Drug Development and Industrial Pharmacy (2019), 45(6), 946-958

### 5. Collaborative Programmes:

Several potential collaborations have been made with reputed institutions and industries for academic exchange and product development from natural resources through the quality research work. In this context some memorandum of understanding [MOUs] has been signed with the respective organizations and School of Natural Product Studies, Jadavpur University as follows:

- **Mae Fah Luang University, Chiang Rai, Thailand**, on the evidenced based validation and exploration of therapeutic potential of natural products for promotion and development of traditional medicine

### 6. Major Achievements:

- Birbal Sahni Birth Century Award (2019) From India Science Congress Association, Kolkata. India Awarded to Prof. Pulok Kumar Mukherjee
- President, International Society for Ethnopharmacology, Switzerland, For details Please Visit: [www.ethnopharmacology.org](http://www.ethnopharmacology.org)
- Best Poster Presentation award given to Mr. Amit Kar in 6th International Congress of Society for Ethnopharmacology (SFEC-2019) on Medicinal Plants and traditional medicine Ethnopharmacology at the interface of local and global needs, Manipal, Karnataka, 8-10 February, 2019

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### NUCLEAR STUDIES & APPLICATION

Phone: 033-2340-6159

033-2335-5813/5215

Director: Prof. Amitava Gupta

E-mail: dir.nuclearstudies@jadavpuruniversity.in

#### 1. A. Courses Offered :

Name of the Course	Duration of Course	No. of Students Enrolled
Master of Nuclear Engineering	2 Years	-
Ph.D(Engineering)	5 Years	16

#### 1. B. Number of Faculty Members : 3 (Associate Professor – 1; Assistant Professor – 2)

The SNSA is also supported by faculty members from different academic departments of the Faculty of Engineering and Technology of Jadavpur University

#### 2. A. Area of Research Activities: (Broad Areas)

Reactor Thermal Hydraulics, Surface science and engineering, Nuclear Materials, Computational and experimental fluid dynamics and heat transfer, Phase change heat transfer, Nuclear detectors and Instrumentation Systems, Nuclear Reactor Control, Real-time & embedded system Applications, Wireless sensor networks applications, Electrical Drive applications in Nuclear Power Plants, Safety, Security and Safeguards

#### 2. B. Major Research Project:(Departmental / Individual along with the names of Co-ordinator(s)/ Investigator(s)–Name of the Project Funding Agency)

Prof. Amitava Gupta–Indigenously Developed Spectroscopic Radiation Portal Monitors for National Security –MHRD/DRDOIMPRINT PROGRAM(with IIT Kanpur)

Dr. Amitabha Das–Multi-channel stackable input perfect reconstruction transmultiplexer for satellite communication–ISRO (Funds awaited)

#### 3. A. Invited Lectures Delivered/Sessions Chaired:(Name of the Teacher–Type of Participation (Invited Lecture/Session chaired/Panel expert/Keynote address)–Name of the Seminar/Conference–Place–Duration)

Amitava Gupta–Tutorial Lecture : Fractional Order Systems–IEEE CCTA 2019 City University of Hong Kong–City University of Hong Kong–19-21 August, 2019

Amitava Gupta–Invited talk:Control using FO elements–STC titled Fractional Calculus: Applications in Science & Engineering–NIT Uttarakhand–16-20 December, 2019

Amitava Gupta–Invited talk:Fraction Order Systems In Control–FOSTA 2019–NIT Silchar–6-17 August, 2019

Amitava Gupta–Invited talk:Threat Aware Control Systems Design for Nuclear Security–PDPU-WINS-Los Alamos Training Course on Nuclear Security PDPU Gandhinagar–4-6 September, 2019

Amitava Gupta–Invited talk:From the Earth to the Moon–JBNSTS Science Orientation Workshop – JBNSTS Kolkata–29-31 May, 2019

#### 3. B. Seminar/Workshop/Conference/Symposium Attended/Paper Presented:(Name of the Participants/ Authors–Title of the Paper Presented–Name of the Seminar–Place–Duration)

Ritabrata Saha, Aranyak Chakravarty, Koushik Ghosh, Achintya Mukhopadhyay, Swarnendu Sen–Flow dynamic study of a square natural circulation loop using supercritical water

Aranyak Chakravarty, Ritabrata Saha, Saheb Santra, Koushik Ghosh, Achintya Mukhopadhyay, Swarnendu Sen Dynamics of two-phase flow in a square natural circulation loop

Ritabrata Saha, Praneet Kumar Singh, Aranyak Chakravarty, Koushik Ghosh, Achintya Mukhopadhyay, Swarnendu Sen–Numerical analysis of single phase multichannel natural circulation loop–25<sup>th</sup> National



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Heat and Mass Transfer Conference and 3<sup>rd</sup> International ISHMT-ASTFE Heat and Mass Transfer Conference - IHMTC2019–IIT Roorkee, India–28–31 December, 2019

Subhrajyoti Sarkar, Ritesh Samanta, Akash Jha, Nirmalendu Biswas, Aranyak Chakravarty, Nirmal K. Manna–Onset of MHD Thermo-Bioconvection in a lid-driven porous cavity

Ritesh Samanta, Subhrajyoti Sarkar, Nirmalendu Biswas, Aranyak Chakravarty, Nirmal K. Manna–Linear Heating and Non-Newtonian Flow in Lid-Driven Cavity

### 3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher–Name of the Seminar/Conf/Workshop–Place–Duration)

Amitava Gupta–Earth Challenge: Celebrating the World Environment Day (School of Nuclear Studies & Applications, Force for Rural Empowerment & Economic Development (FREED), TEQIP-III)–ICCR Kolkata–20 June, 2019

Amitava Gupta–Workshop on IP Rights (Jointly with PHD Chambers Delhi)–Jadavpur University–13 November, 2019

### 4. A. Books/Monographs etc. Published:

**Book Chapters Published (Name of the Teacher–Title of the Chapter–Name of the Book–Name of the Publisher with ISBN No. if any)**

Amitava Gupta–Robust Control of Nuclear Reactors with Proportional–Integral-Derivative (PID) Controllers: The Fractional Order (FO) and Interval Approaches–Dynamics and Control of Energy Systems–ISBN 978-981-15-0535-5

Mithun Das–Performance and Emission Characteristics of Biodiesel–Diesel Blend–Encyclopedia of Renewable and Sustainable Materials–Elsevier, ISBN 978-0-12-813196-1

### 4. B. Articles Published in Journals: (Name of the Authors, Title of the Article, Name of the Journal, Volume (Issue), Pages from-To, Year)

1. K. Halder, D. Bose and A. Gupta, Stability and Performance Analysis of Networked Control Systems: A Lifted Sample-Time Approach with L<sub>2</sub> Induced Norm, *ISA Transactions*, **86**, 62-72, 2019
2. S. Banerjee, D. Bose, A. Hazra, S. Chattopadhyay, K. Ghosh, A. Gupta, Controller design for operation of a 700 MWe PHWR with limited voiding, *Nuclear Engineering & Design*, **357**, February 2020
3. S Das, K Halder, A Gupta, Delay Handling Method in Dominant Pole Placement based PID Controller Design, *IEEE Transactions on Industrial Informatics*, May 2019 (<https://doi.org/10.1109/TII.2019.2918252>)
4. S Das, K Halder, A Gupta, Transformation of LQR weights for Discretization Invariant Performance of PI/PID Dominant Pole Placement Controllers, *Robotica*, Cambridge University Press, 2019 (in Press, Digital version available)
5. T. Bar, C. Basu, M. Das, A.K. Santra, S. Sen., Simulation of heat transfer and dissipation in targets used in nuclear astrophysics experiments, *Nuclear Inst. and Methods in Physics Research B*, **449**, 105–116, 2019. (doi:10.1016/j.nimb.2019.04.064)
6. S. Dey, M. Das, R. Ganguly, A. Datta, M.M. Verma, A.K. Bera, Computational fluid dynamic analyses of flow and combustion in a domestic LPG cook stove burner: Part I - Design optimization of mixing tube-burner assembly, *Journal of Thermal Science and Engineering Applications*, **12 (3)**, 031010, 2020. (doi:10.1115/1.4044860)
7. M. Das, R. Ganguly, A. Datta, M. M. Verma, A.K. Bera, Computational fluid dynamic analyses of flow and combustion in a domestic LPG cook stove burner: Part II - Burning characteristics and overall performance, *Journal of Thermal Science and Engineering Applications*, **12 (3)**, 031011, 2020. (doi:10.1115/1.4044861)

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8. A.Chakravarty, N.Patankar, M.Panchagnula, Aerosol transport in a breathing alveolus, *Physics of Fluids*, **31(12)**, p. 121901, 2019
9. A. Chakravarty, P.Datta, K. Ghosh, S.Sen, A.Mukhopadhyay, Characteristics of thermal energy removal from heat-generating porous media considering liquid-vapour phase change, *International Journal of Heat and Mass Transfer*, **148**, p. 119073, 2020
10. A.Chakravarty, N. Biswas, K. Ghosh, N. K. Manna, A.Mukhopadhyay, S.Sen, Impact of side injection on heat removal from truncated conical heat-generating porous bed: thermal non-equilibrium approach, *Journal of Thermal Analysis and Calorimetry*, 2020(<https://doi.org/10.1007/s10973-020-09295-6>)

### 5. Collaborative Programmes:

Nature of Activity: Research Collaboration with IIT Kanpur under MHRD/DRDO IMPRINT Program

Participant: Prof. Amitava Gupta

Duration: Since 2018

### 6. Major Achievements:

Prof. Amitava Gupta delivered an invited lecture as a guest speaker in the Training Course on Nuclear Security organized by the PDPU Ahmedabad, the WINS Academy and the Los Alamos National Laboratories

### Patents granted/published/awarded in the year

**(Title of the Patent–Name of the inventors–Status National/International–Patent status Granted/ Published/Awarded–Patent Number–Date of Publication)**

SPILL-TRAY AND PAN SUPPORT FOR THERMAL EFFICIENCY ENHANCEMENT OF A DOMESTIC LPG STOVE–Bera A.K., Verma M., Das M., Datta A., Ganguly R–National–Granted 327999–03/01/2020

## OCEANOGRAPHIC STUDIES

Phone: 033-2457-2217/2870

Director : Prof. Tuhin Ghosh

E- mail: [dir.oceanography@jadavpuruniversity.in](mailto:dir.oceanography@jadavpuruniversity.in)

### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
M.Phil. in Oceanography and Coastal Management	2 Years	12
PG Diploma in Remote Sensing and GIS	1 Year	30

### 1. B. Number of Faculty Members: 4 (Professor - 2, Assistant Professor - 2)

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### 2. A. Area of Research Activities: (Broad Areas)

Climate Change, Carbon Dynamics, Wetland and Estuarine Biogeochemistry, Ecosystem Services, Climate Adaptation and Migration, Disaster Management, Socio-economic studies in the deltas

### 2. B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)

**Dr. Rahi Soren** (PI) - Resource Mapping the Early Recordings of Traditional Santali Songs (Funded by RUSA 2.0)

**Dr. Abhra Chanda** (PI) - Role of Sundarban mangrove sediments in phytoremediation of heavy metals (Funded by RUSA 2.0) – (Rs. 1.7 Lakhs)

**Prof. Sugata Hazra** (PI) - Opportunities and trade-offs between the SDGs for food, welfare and the environment in deltas, 2019-2021 (Funded by UKIERI-DBT) – (Rs. 1 Crore)

**Prof. Sugata Hazra** (PI) Delta-Scoping Pathways to Health System Resilience in the Sundarbans Delta: Redressing Climate Change Vulnerability to Population Health in South Asia, GCRF Pump Priming – University of York, UK 2020 (Rs. 4.5 Lakhs)

**Prof. Sugata Hazra** (PI) – Study of carbon dynamics in the Hugli estuary and the near shore coastal waters, 2020-2022 (Funded by NRSC, Dept. of Space, Govt. of India) – (Rs. 48 Lakhs)

**Prof. Sugata Hazra** (Co-PI) Tidal energy for village electricity supply in Indian Sundarban biosphere, 2018-2021. (Funded by DST-UKIERI) – (Rs. 56 Lakhs)

**Prof. Sugata Hazra** (PI) - Geospatial assessment of mangrove's species discrimination in Indian Sundarbans, their health and its effect on environment and climate using airborne hyperspectral (AVIRIS NG) and RISAT-I remote sensing data, 2017-2020(21) (Funded by Space Application Center, Govt. of India.) – (Rs. 53 Lakhs)

**Prof. Sugata Hazra** (PI) - Vulnerability Assessment of Mangroves and Corals of West Bengal, Odisha and Andaman Islands, 2017-2020(21) (Funded by Dept. of Science & Technology, Govt. of India). (Rs. 60 Lakhs)

**Prof. Tuhin Ghosh** (PI)-UKRI-GCRF funded Living Deltas Hub (INR 6.1 Crore) (<https://www.livingdeltas.org/>)

**Prof. Tuhin Ghosh** (PI) - UKRI-GCRF funded Flexible Funding for Rapid Response (INR 38 Lakhs)

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

**Dr. Rahi Soren** - *Mapping Traditional Santali Songs: An insight into the indigenous community perception*, International Conference under JU RUSA 2.0 on Digital Humanities and Literary Mapping: Pedagogy and Curricula, 7 – 9 January, 2020

**Dr. Rahi Soren** UGC-RUSA 2.0 Sponsored One-Day National Seminar on “Regional Cultures and Literatures: Locations and Linkages” Organised by Kabi Jagadram Roy Government General Degree College, Mejia in collaboration with Department of English, Jadavpur University, Kolkata, 19.02.2020. Kabi Jagadram Roy Government General Degree College Mejia, Bankura

**Dr. Rahi Soren** - *Non-native invasive species in city space: impacts and challenges*, International Forum on Megacities: Conviviality & Its Limits, Jadavpur University, 26-28 February, 2020

**Dr. Abhra Chanda** (acted as Judge) in the poster presentation session ‘International conference on *Inclusive Growth and Sustainable Development: Methods and Methodologies*’ in collaboration with Lady Brabourne College, Kolkata in March, 2020

**Prof. Tuhin Ghosh** - International Conference on Sustainable Water Resources Management under Changed Climate. (*Invited Speaker*) March, 2020

**Prof. Tuhin Ghosh** - International Seminar on ‘*Global Environmental Challenges: Environment, Society and Development in the Anthropocene*’ (*Chairperson*), March, 2020

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**Prof. Sugata Hazra** International Forum on Megacities: Conviviality & Its Limits, Jadavpur University 26-28 February, 2020 Session on 'Ecology, Environment, Urban Disasters' (Chair/Moderator)

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

**Dr. Rahi Soren**-A.NATIONAL SEMINAR ON WATER CONSERVATION AND HARVESTING: FOCUSING BIODIVERSITY ISSUES AND MANAGEMENT, Social Environmental and Biological Association, 08.02.2020

**Dr. Rahi Soren** - Language revitalization in the South Pacific – with a focus on New Zealand, Workshop by Peter Keegan, 27 January, 2020, School of Languages and Linguistics, Jadavpur University

**Dr. Rahi Soren** - Workshop attendance: "Language & Aesthetics of Folklore" - The Asiatic Society from 16-20 December, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organized:(Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

**Dr. Abhra Chanda** – Acted as Co-Chairperson in the International Conference on "Sustainable Water Resources Management under Changed Climate" for the Technical Session II-A entitled "Surface and Groundwater Quality and Management" 2020 from 5:00 - 6:00 P.M in TEQIP 201 on 13 March, 2020

**Prof. Sugata Hazra** - International Forum on Megacities: Conviviality & Its Limits, Jadavpur University 26-28 February, 2020 (Co-organiser)

### 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

- i. **Soren, R.** Women in Wildlife Ecology and Conservation Science - Hypatia and beyond, *Women and Education in India: A representative study*, Jogamaya Devi College Publications. Kolkata, 2020. ISBN: (978-81-938290-3-5)
- ii. Saha, S and **R. Soren**, Community perception of ecosystem of ecosystem services provided by water birds with changing landscape of East Kolkata Wetland, Women's Christian College Publication, Kolkata. 2020
- iii. Bhattacharyya S, **Chanda A, Hazra S, Das S, Das I** (2020) Delineating CO<sub>2</sub> and chlorophyll-a variability of an urban estuary with respect to changes in available dissolved nutrients: A microcosm study. *Indian Journal of Geo-Marine Science*, accepted for publication
- iv. Roy S, **Hazra S, Chanda A, Das S** (2020) Assessment of groundwater potential zones using multi criteria decision-making technique: a micro-level case study from red and lateritic zone (RLZ) of West Bengal, India. *Sustainable Water Resources Management* 6:4; <https://doi.org/10.1007/s40899-020-00373-z>
- v. Bhattacharyya S, **Chanda A, Hazra S, Das S, Choudhury SB** (2020) Effect of nutrient alteration on pCO<sub>2</sub>(water) and chlorophyll-a dynamics in a tropical aquaculture pond situated within a Ramsar site: a microcosm approach. *Environmental Science and Pollution Research*, <https://doi.org/10.1007/s11356-019-07106-6>
- vi. Mukhopadhyay A, Giri S, **Hazra S, Das S, Chanda A**, (2020) Influence of Oceanographic Variability on the Life Cycle and Spawning Period of *Sardinellafimbriata* in the Northern Part of Bay of Bengal. *Proceedings of the Zoological Society*, <https://doi.org/10.1007/s12595-019-00314-5>
- vii. Pattanaik, S, **Chanda, A, Sahoo, RK, Swain, S, Satapathy, DR, Panda, CR, Choudhury, SB, Mohapatra, PK** (2019) Contrasting intra-annual inorganic carbon dynamics and air-water CO<sub>2</sub> exchange in Dhamra and Mahanadi Estuaries of northern Bay of Bengal, India. *Limnology*, <https://doi.org/10.1007/s10201-019-005920>
- viii. Das, S, **Chanda, A, Hazra, S** (2019) Comparing the remotely sensed chromophoric dissolved organic matter (CDOM) product with in-situ CDOM in the northern Bay of Bengal, *Journal of Advanced Scientific Research*, 10(2), 33-36

- ix. Giri, S., **Hazra, S.**, Ghosh, P., Das, S., **Chanda, A.**, Das, I., Chakraborty, K., Ghosh, A., Mukhopadhyay, A., Maity, S (2019) Role of lunar phases, rainfall and wind in predicting Hilsa shad (*Tenualosailisha*) catch in the northern Bay of Bengal, *Fisheries Oceanography*, <https://doi.org/10.1111/fog.12430>
- x. Bhattacharyya, S., **Hazra, S.**, Das, S., Samanta, S., Mukhopadhyay, A., Dutta, D., Choudhury, S. B., **Chanda, A** (2019) Characterizing nutrient dynamics with relation to changes in partial pressure of CO<sub>2</sub> in a tropical sewage-fed aquaculture pond situated in a Ramsar wetland. *Water and Environment Journal*, <https://doi.org/10.1111/wej.12459>
- xi. **Chanda, A.**, Das, S., Bhattacharyya, S., Das, I., Giri, S., Mukhopadhyay, A., Samanta, S., Dutta, D., Akhand, A., Choudhury, S. B., **Hazra, S** (2019) CO<sub>2</sub> fluxes from aquaculture ponds of a tropical wetland: Potential of multiple lime treatment in reduction of CO<sub>2</sub> emission. *Science of the Total Environment*, 655, 1321-1333, <https://doi.org/10.1016/j.scitotenv.2018.11.332>
- xii. **Tuhin Ghosh** and Somnath Hazra (2020) *Ocean and Sustainable Development: A Preliminary Assessment for India in Sustainable Development Goals - An Indian Perspective*, Hazra, Somnath, Bhukta, Anindya (Eds.). Springer Nature
- xiii. Das, S., Ghosh, A., **Hazra, S.**, **Ghosh, T.**, Campos, R.S. and Samanta, S. (2020) Linking IPCC AR4 & AR5 frameworks for assessing vulnerability and risk to climate change in the Indian Bengal Delta. *Progress in Disaster Science*, Vol 7, (2020) 100110
- xiv. Maharjan, A., Campos, R.S., Singh, C., Das, S., Srinivas, A., Bhuiyan, M.R.A., Ishaq, S., Umar, M.A., Dilshad, T., Shrestha, K., Bhadwal, S., **Ghosh, T.** and Suckall, N. and Vincent, K. (2020) *Migration and Household Adaptation in Climate-Sensitive Hotspots in South Asia*. *Current Climate Change Reports*, Springer. <https://doi.org/10.1007/s40641-020-00153-z>
- xv. Sampath Kumar, G., Srinivas T. N. R. and **Ghosh, T.** (2019) Ecological perspective of marine microbial enzymes. *Journal of Emerging Technologies and Innovative Research* 6 (3), 210-230
- xvi. Shruti Thakur, Amit Ghosh, Somnath Hazra and **Tuhin Ghosh** (2019) Biomass Burning and Natural Vegetation Loss as a Consequence to Government Policy: A Case Study of Satjelia Island, Indian Sundarban Delta. *International Journal of Research and Analytical Reviews* 6 (1), 338-345
- xvii. Ghosh, A., Das, S., **Ghosh, T.** and **Hazra, S.** (2019) Risk of extreme events in delta environment: A case study of the Mahanadi delta. *Science of the Total Environment*, Elsevier, Volume 664, pp. 713-723 <https://doi.org/10.1016/j.scitotenv.2019.01.390>
- xviii. Chaube, NR., Lele, N., Misra, A., Murthy, T. V. R., Manna, S., **Hazra, S.**, Samal, R. N. (2019). Mangrove species discrimination and health assessment using AVIRIS-NG hyperspectral data. *Current Science*, 116(7), 1136.
- xix. Das I., Lauria V., Kay S., Cazcarro I., Arto A., Farnandes J.A., **Hazra S.**: Effects of Climate Change and management policies on marine Fisheries productivity in the north east coast of India. *Science of the Total Environment* 724. <https://doi.org/10.1016/j.scitotenv.2020.138082>
- xx. Hans A., **Hazra S.**, Das S. and Patel A (2019).: Encountering Gendered Space in Climate Change Policy in India : Migration and Adaptation. *Journal of Migration Affairs*, VII(I):1-24, DOI: 10.36931/jma.2019.2.1.1-24
- xxi. Hati JP, Goswami S, Samanta S., Pramanick N, DattaMajumdar S., Chaube NR, Misra A., Hazra S.(2020) : Estimation of vegetation stress in the mangrove forest using AVIRIS NG airborne hyperspectral data. *Modeling Earth Systems and Environment*, <https://doi.org/10.1007/s40808-020-00916-5>
- xxii. Bhadra T., **Hazra S.**, Sinha Ray SP., Barman B. C. (2020) Assessing the groundwater quality of the coastal aquifers of a vulnerable delta: A case study of the Sundarban Biosphere Reserve, India. *Groundwater for Sustainable Development*. <https://doi.org/10.1016/j.gsd.2020.100438>
- xxiii. Das S., Hazra S.(2020) : Trapped and Resettled: Coastal Communities in Sundarban Delta. *Forced Migration Review*, V 64, pp 15, [www.fmreview.org/issue64](http://www.fmreview.org/issue64)



**Book Chapters:**

- i. **Tuhin Ghosh** and Somnath Hazra (2020) Ocean and Sustainable Development: A Preliminary Assessment for India in Sustainable Development Goals - An Indian Perspective, Hazra, Somnath, Bhukta, Anindya (Eds.). Springer Nature
- ii. Ganges-Brahmaputra-Meghna Delta, Bangladesh and India: A Transnational Mega-Delta (2020) Md. Munsur Rahman, **Tuhin Ghosh**, Mashfqus Salehin, Amit Ghosh, Anisul Haque, Mohammed Abed Hossain, Shouvik Das, Somnath Hazra, Nabiul Islam, Maminul Haque Sarker, Robert J. Nicholls and Craig W. Hutton in 'Deltas in Anthropocene', Palgrave
- iii. Adapting to Change: People and Policies (2020) Emma L. Tompkins, Katharine Vincent, Natalie Suckall, RezaurRahman, **Tuhin Ghosh**, AdelinaMensah, Kirk Anderson, Alexander Chapman, GiorgiaPrati, Craig W. Hutton, Sophie Day and Victoria Price in 'Deltas in Anthropocene', Palgrave
- iv. AnirbanMukhopadhyayand **Tuhin Ghosh** (2019) Dynamics of the Sundarbans Forested Islands in the Context of Erosion-Accretion and Sea Level Rise. In H.S.Sen (Ed) TheSundarbans: A Disaster-Prone Eco-Region, Springer Nature Switzerland
- v. **Hazra,S**, Bhadra,T,Sinha Roy,S. P.(2019). 'Sustainable Water Resource management in Sundarban Biosphere Reserve' S.P.S.Ray (ed) *Ground water Development and Sustainable Solutions*. Springer Publishing House,pp147-157, <https://doi.org/10.1007/978-981-13-1771-2-8>
- vi. **Sugata Hazra**, Shouvik Das, Amit Ghosh, Pokkuluri Venkat Raju and Amrita Patel (2020) The Mahanadi Delta: A Rapidly Developing Delta in India, in 'Deltas in the Anthropocene' (EdRobert Nicholls et al.), PP 53-78, Palgrave
- vi. Stephen E. Darby, KwasiAppeaningAddo, **Sugata Hazra**, Md. Munsur Rahman and Robert J. Nicholls : Fluvial Sediment Supply and Relative Sea-Level Rise, in 'Deltas in the Anthropocene', PP 103-126, Palgrave
- vii Ricardo Safra de Campos, Samuel Nii Ardey Codjoe,W. Neil Adger, Colette Mortreux, **Sugata Hazra**,Tasneem Siddiqui, Shouvik Das, D. Yaw Atiglo, Mohammad Rashed, Alam Bhuiyan, Mahmudol Hasan Rocky and Mumuni Abu: Where People Live and Move in Deltas, in 'Deltas in the Anthropocene', PP 153-178, Palgrave
- viii. Robert J. Nicholls, W. Neil Adger, Craig W. Hutton, Susan E. Hanson, Attila N. Lázár, Katharine Vincent, Andrew Allan, Emma L. Tompkins, IñakiArto,Md. Munsur Rahman, **Sugata Hazra** and Samuel NiiArdeyCodjoe: Sustainable Deltas in the Anthropocene, in 'Deltas in the Anthropocene', PP 247- 280, Palgrave

**Blog:**

- i. Sumana Banerjee and **Tuhin Ghosh** (2020) Indian Sundarban Delta's Gosaba Community Development Block in the time of lockdown (<https://www.livingdeltas.org/blog-post-4.html>)

**5. Collaborative Programmes:**

Organized International conference on '*Inclusive Growth and Sustainable Development: Methods and Methodologies*' in collaboration with Lady Brabourne College, Kolkata in March 2020

**6. Major Achievements:**

Recognition in the Global Forum: Intergovernmental Panel on Climate Change (IPCC)

**Prof. Tuhin Ghosh**

**Lead Author** for Chapter 4: Sea Level Rise and Implications for Low Lying Islands, Coasts and Communities of the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate

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### Section III Annexures (Administrative)

#### Research Scholars Awarded:

a) Ph.D. / D.Phil. / D.Litt. Complete title of the thesis to be mentioned: **Ph.D. 3**

**Isha Das:** “The Catch Dynamics, Ecosystem Modeling and Sustainability of Marine Fishery in West Bengal”

**Tuhin Bhadra:** “Modelling Freshwater Availability & Demand in the Sundarban Bio Sphere Reserve, India”

**Dola Chakraborty:** “Geomorphology and sediment character of beach-dune complex along different sectors of north-eastern coast of India”

### STUDIES IN ENVIRONMENTAL RADIATION & ARCHAEOLOGICAL SCIENCES

Phone : 033-2414-6666

033-2457-2427

Director : Prof. Argha Deb

E-mail: argha.deb@jadavpuruniversity.in

1. **B. Number of Faculty Members :** 4 (four), No permanent faculty

2. **A. Area of Research Activities:**

(I) Study on alpha radioactivity in natural media

(II) Real time radon monitoring in air, water, soil for seismic surveillance

(III) Studies on Radiation resistant microbes

2. **B. Major Research Projects:**

#### Project Title

#### Funding Agency (Ongoing)

1. Real Time Radon Monitoring for Seismic Surveillance

UGC (UPE-II)

2. Multi-station Soil Radon Monitoring for Earthquake Prediction

RUSA-2.0

3. **B. Seminar/Workshop/Conference/Symposium Attended:**

i. Saheli Chowdhury, Chiranjib Barman, Argha Deb, Md. Nurujjaman, Dipok Bora, Debasis Ghose. Paper presenter - Saheli Chowdhury, **Study of soil <sup>222</sup>Rn anomalies as earthquake precursor at a network of monitoring stations in Eastern India**, 2nd Triennial International Congress of Federation of Indian Geosciences Association (FIGA-2019), NGRI Hyderabad, India, 13-16 October, 2019

ii. Saheli Chowdhury, Chiranjib Barman, Md. Nurujjaman, Dipok Bora, Debasis Ghose, Argha Deb. Paper presenter - Saheli Chowdhury, **Soil radon anomalies as earthquake precursors in eastern India: a networking approach**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019

iii. Saheli Chowdhury, Chiranjib Barman, Arindam Kumar Naskar, Mahasin Gazi, Gopa Bhowmik, Soma Biswas Ghosh, Md. Abdul Kayum Jafry, Subrata Biswas, Argha Deb, **Survey of <sup>222</sup>Rn activity in soil in Bakreswar-Tantloi Geothermal Region of West Bengal and Jharkhand, India**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019

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- iv. Saheli Chowdhury, Argha Deb, Chiranjib Barman, Md. Nurujjaman, Dipok Bora, **Radon Time Series: A Non-linear Application**, National Seminar on New Directions in Physical Sciences (NDPS 2020), Jadavpur University, Kolkata, India, 25 February, 2020
- v. Arindam Kumar Naskar, **Study of water-borne radon levels in some selected nursery and primary schools located at high radon prone zones in Susunia hill region of West Bengal, India**, National Seminar on New Directions in Physical Sciences (NDPS 2020), Jadavpur University, Kolkata, West Bengal, India, 25 February, 2020
- vi. Arindam Kumar Naskar, Mahasin Gazi, Javed Akhter, Joyati Mondal, Arindam Mondal, Sunil Maity, Mitali Mondal, Argha Deb, **Radon Danger in Ground Water: An Experimental Study in Ajodhya Hill and Nearby Areas of West Bengal**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
- vii. Mahasin Gazi, Arindam Kumar Naskar, Hirak K. Koley, Swarnapratim Bhattacharyya, Rittika Sarkar, Imtiaz Ahmed, Rini Bhattacharyya, Mitali Mondal, Argha Deb, **Radiologically Safe Drinking Water in Darjeeling Hill and Foothill Areas: An Experimental Finding**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organized:

- i. National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019

### 4. B. Articles Published in Journals:

- i. Saheli Chowdhury, Chiranjib Barman, Argha Deb, Sibaji Raha, Debasis Ghose, **Study of variation of soil radon exhalation rate with meteorological parameters in Bakreswar–Tantloi geothermal region of West Bengal and Jharkhand, India**, Journal of Radioanalytical and Nuclear Chemistry, 2019, Vol. 319: 23-32
- ii. Nayak, T., De, D., Barman, C., Karmakar, P., Deb, A., and Dhal, P. K., **Characterization of indigenous bacteria from radon-rich groundwater and their tolerance to physicochemical stress**, Int. J. Environ. Sci. Technol., 2019, 17, 1627–1636, 17 June, 2019

### 5. Collaborative Programmes:

Jadavpur – N.I.T. Sikkim Collaboration

Jadavpur – Diphu Government College Collaboration

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### WATER RESOURCES ENGINEERING

Phone: 033-2457-2485

033-2414-6161

Director: Prof. Asis Mazumdar

E-mail: dir.waterresource@jadavpuruniversity.in

#### 1. A. Courses Offered:

Programme: 4 Semester M.E. (Water Resources and Hydraulic Engineering)

Level of Study: Postgraduate

Total no. of Students: 23 per year [GATE: 10 (Gen) + 3 (SC/ST) Sponsored: 5] + 5 (OBC A & OBC B-)

Year of Commencement: 2003 (Approved by AICTE in 2003)

Programme: 6 Semester M.E. (Water Resources and Hydraulic Engineering)

Level of Study: Postgraduate

Total no. of Students: 23 per year [All Self Sponsored]

Year of Commencement: 2011 (Approved by AICTE in 2010)

Programme: Ph.D. (Engineering / Science)

Level of Study: Doctoral

Total no. of Students: 31 (at present)

Year of Commencement: 1987

#### 1. B. Number of Faculty Members: Six (6): 3 (Permanent) + 2 (Contractual) + 1 (Professor Emeritus)

#### 2. A. Area of Research Activities: (Broad Areas)

1. Development of Model for Arsenic Sludge Safe Disposal
2. Artificial Recharging of Aquifer
3. Limnological Study with special emphasis on Thermal Stratification in Turbulent Structure
4. Riverine Bank Stability Analysis
5. Soil Moisture Conservation
6. Soil Water Plant Relationship
7. Surge Profiles for Water Intake Pump System of a Thermal Power Plant
8. Sedimentation Transport Mechanism
9. Fluvial Hydraulics
10. Impact of Forested Watershed on Stream Flow and Water Quality
11. Impact of Leaching from Municipal Solid Waste Dumping Station on an Urban Watershed
12. Pressure Transients Analysis in a Metro City Water Supply System
13. Simulation and Water Assessment of Indian River Basins with Distributed and Lumped Modeling
14. Artificial Neural Network Analysis (ANN) for Riverine and Channel Flow Systems
15. Groundwater Flow Simulation by Ground Water Modeling System (GMS) and in-situ Validation by Vertical Electrical Sounding (VES)
16. Development of Low Cost Model for Filtration Unit in a Rural Community
17. Impact of Climate Change on Water Resources
18. Urban Hydrology including Storm Drainage
19. Rainwater Harvesting
20. Irrigation and Drainage Development Plan

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21. Sewer Transport System
22. River Basin Development
23. Wetland Management and Development
24. Investigation of Feasibility of Inland Water Transport
25. Development of Alternative Energy Sources, e.g., Tidal Power, Pump Storage Plants, Micro Hydel Plants etc.
26. Investigation of the Drinking Water Supply System
27. Investigation of the Contamination of Groundwater Sources in West Bengal
28. Design and Development of Source and Water Intake System for Drinking Water Supply and Treatment Plant
29. Development of Low Cost Potable Water Supply System
30. Watershed Management
31. Initiation of Benchmarking of Irrigation Projects for Performance Improvement
32. Study of Travel of Pollutant from on Site Sanitation Leach Pits

### 2. B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)

- DST- FIST, program awarded to School of Water Resources Engineering (5 years) funded by Department of Science & Technology, Govt of India
- Sequential MAR surface infiltration processes with aerated slow sand filtration- Rusa 2.0, Jadavpur University
- Study of Surface and sub-surface water flow and storage characteristics for creation of sustainable source on rain fed river in connection with comprehensive water security plan in rural West Bengal plan in rural West Bengal- Rusa 2.0, Jadavpur University
- Development of Strategy for Sustainable Drinking Water Source Creation through Natural Recharge for the Mitigation of Fluoride Contamination in Hydro-Geologically Critical Area of West Bengal - RUSA 2.0, Jadavpur University, Under MHRD, Govt. of India
- Inspection of 9 GPIs by the School of Water resources Engineering, Jadavpur university- Central Pollution Control Board
- Feasibility Study for Construction of Infiltration gallery/ Radial Collector Well to withdraw 45.46 MLD (10 MGD) water in River Damodar near Zuzuty under AMRUT Programme-Municipal Engineering Directorate, Govt. of West Bengal
- Appraisal of Sewerage Network of Zone-III of Gangtok town of Sikkim under National River Conservation Plan- NRCDC, MoEFCC, Govt. of India
- Scientific Assessment of Coastal Vulnerability and Sustainable Ecosystem management under Climate Change Scenario- Ministry of Science, Department of Science and Technology, NRDMS
- Study To Develop Appropriate Methods For Safe Disposal Of Arsenic-Rich Sludge - DST (Govt. of West Bengal)
- **Dr. Subhasish Das (Principal Investigator):** Shifting of Sediments Towards Channel Bank by Enhancing Local Scour around Bridge Pier like Structures – A Green Dredging Technique; Sponsored by JU-RUSA 2.0.
- **Prof. Dr. Asis Mazumdar (Principal Investigator) and Dr. Subhasish Das (Co-Investigator):** Study on impact of water harvesting structures created under CAMPA; sponsored by Forests, Environment and Climate Change Department, Govt. of Jharkhand

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

**Prof. Dr. Asis Mazumdar**



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- Keynote address & eminent panelists in the panel discussion on Challenges of Resilient and Sustainable Water Resource & Environmental Engineering on 4 March, 2020 in the Global Conference on Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies” (CRSIDE 2020) organized by American Society of Civil Engineers
- Delivered invited lecture on Water Resources Development and Management: Issues and Challenges, in the Evening lecture, organized by Civil Engineering Division West Bengal State Centre, The Institute of Engineers 12 February, 2020
- Delivered lecture on Rain Water Harvesting organized by Indian Plumbing Association, September, 2019

### Prof. Pankaj Kumar Roy

- Delivered invited lecture on Recent Trends Of Pollution Control Strategies For Wastewater Treatment, Jadavpur University, 20 December, 2020
- Resource person, Shatabarsher Aloye Gandhi-Saralar Samparka: Ekti Punarekshan, 26 February, 2020
- Chair Person, 7th International Congress Of The Society For Ethnopharmacology, India (Sfec 2020), School Of Pharmaceutical Education And Research, Jamia Hamdard, New Delhi, 15-17 February, 2020
- Resource person, The Challenges Facing Social Justice In And Of Higher Education, Vivekananda Hall, Subarnajayanti Bhavan, Jadavpur University, 27 January, 2020
- Delivered invited lecture on Sustainable Development On Civil Engineering Array, Department of Civil Engineering of Narula Institute of Technology, 13 -18 January, 2020
- Delivered invited lecture on “Waste To Wealth- The Current Scenario And Sustainable Technology” - Wtw-2020, Department Of Metallurgical And Materials Engineering, NIT Durgapur, 22 January, 2020
- Session Chair, Indian Science Congress Association, Bangalore, 3-7 January, 2020
- Delivered invited lecture on Environment and Sustainability, School of Oceanographic Studies, Jadavpur University, 14 September, 2019
- Aquifer depletion: An invisible threat to the world habitants, Shibpur Dinobundhoo Institution College, 19 September, 2019
- Session chair, 2nd World Congress on Climate Change, Berlin, Germany, 26-28 September, 2019
- Resource Person, Resilience in Mangrove Management: Experiences from Indian Sundarbans, Global Change Programme Jadavpur University (GCP-JU), 17 June 2019
- Delivered invited lecture on, Climate Change and water crisis, Civil Engineering Department IEST, Shibpur, 21 June, 2019
- Delivered invited lecture on Ceramic membrane based decentralized water treatment technology by CSIR-CGCRI in West Bengal : Success Story, Civil Engineering Department, Jadavpur University, 13 April, 2019
- Delivered invited lecture on, Recent Trends on Remediation of Contaminated Water bodies and Soil, Centre for Research on Environment and Water (CREW), National Institute of Technology Durgapur, 25– 29 March, 2019
- Delivered invited lecture on, Water Conservation and Sustainable Development - Laws, Policies, Challenges and Its Global Impact, Jyotirmoy School of Law, University of Calcutta, March, 2019

### Dr. Gourab Banerjee

- Delivered invited lecture as an eminent speaker in the seminar on Water Conservation and Rainwater Harvesting organized by Department of Sanitary Engineering, in collaboration with the Department of Microbiology of AIIH&PH, Kolkata, on 13 September, 2019
- Delivered invited lecture as Country Representative on **Water Resource Issues & Challenges in India: Country Report** at international workshop on “Promoting Sustainable Protection and Restoration of Soil, Groundwater and Water Environment”, held on 9–16 February, 2020 at NCKU, Tainan City, Taiwan

**Dr. Subhasish Das**

- Delivered an invited lecture on “Water Preservation & Sanitation” organised by All India Women’s Conference, Calcutta South West Suburban Branch at Balia Nafar Chandra Balika Vidyalaya on 29 July, 2019
- Delivered an invited lecture on “Water Preservation through Soil Moisture Conservation” in the One-Day National Seminar on “Water: Crisis and Conservation” organised by Institute of Science, Education and Culture (ISEC) In collaboration with Birla Industrial and Technological Museum (BITM) at the Seminar Hall, BITM, Kolkata on 23 November, 2019

**3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)**

- **Dr. Gourab Banerjee, Prof. Pankaj Kumar Roy, Prof. Arunabha Mazumdar, Prof. Asis Mazumdar,** - Evaluation of Integrated Cost-Effective model in hydro economic modelling framework for sustainable water resource management in rural India- 5th International Congress on Water, Waste and Energy Management (Water Waste-19) 22-24 July, 2019 Université Paris 8, Paris, France
- **Prof. Pankaj Kumar Roy-** Fuzzy Logic Algorithm Based Analytic Hierarchy Process for Delineation of Groundwater potential zones in complex topography, 2nd World Congress on Climate Change, Berlin, Germany, 26-28 September, 2019
- **Dr. Subhasish Das -** Optimum Process of Pipeline Selection in Water Distribution Network: Case Study. 4th International Conference on Civil, Architectural, Structural and Construction Engineering (4th ICCASCE), at Jeju Island, South Korea, 15-17 November, 2019
- **Prof. Pankaj Kumar Roy-** Community Based Waste Water Treatment System in Villages, Indian Science Congress Association, Bangalore, 3-7 January, 2020
- **Prof. Pankaj Kumar Roy-** One Day Workshop under RUSA 2.0 on Issues Related to Water Crisis Mitigation and Conservation Techniques under Changed Climate Scenario, Jadavpur University, 11 January, 2020
- **Dr. Gourab Banerjee, Prof. Arunabha Mazumdar, Prof. Pankaj Kumar Roy, Prof. Asis Mazumdar-** Surface Water Modeling for Water Quality Assessment of Hoogly river Near Haldia with Help of HEC-RAS in the International Conference on Sustainable Water Resources Management under Changed Climate 13–15 March, 2020. Venue: Jadavpur University
- **Prof. Pankaj Kumar Roy, Dr. Gourab Banerjee, Prof. Asis Mazumdar-** Water Quality Index Is An Important Tool of Groundwater: A Case Study in the International Conference on Sustainable Water Resources Management under Changed Climate 13-15 March, 2020. Venue: Jadavpur University
- **Prof. Pankaj Kumar Roy-** International Conference on Sustainable Water Resources Management under Changed Climate, Jadavpur University, 13-15 March, 2020

**3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)**

**Prof. Pankaj Kumar Roy**

- Acted as Coordinator, Institutional Strengthening of Gram Panchayet Program- II, School of Water Resources Engineering, Jadavpur University, 26-29 August & 2-5 September, 2019
- Acted as Coordinator, Institutional Strengthening of Gram Panchayet Program- II, School of Water Resources Engineering, Jadavpur University, 10-13 February & 17-20 February, 2020

**Prof. Dr. Asis Mazumdar**

- Acted as President in the International Conference on Sustainable Water Resources Management under Changed Climate 13-15 March, 2020. Venue: Jadavpur University

**Dr. Gourab Banerjee**

- Acted as Organizing Joint Secretary in the International Conference on Sustainable Water Resources Management under Changed Climate 13-15 March, 2020. Venue: Jadavpur University

**3. E. Orientation Courses/Refresher Courses Organized: (Name of the Teachers, Title of the Course, if any, Duration, Place)**

**Prof. Asis Mazumdar, Prof. Arunabha Majumder, Prof. Pankaj Kumar Roy, Dr. Gourab Banerjee**—Training on Water Quality Parameters for laboratory Personnel of Public Health Engineering, Directorate, Govt. of West Bengal, 2019

**4. A. Books/Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)**

1. John, Bernadette, Roy, Priyanka and **Das, Subhasish** (2020). Analysing the Influence of Groundwater Exploitation on Its Quality in Kolkata. *Lecture Notes in Civil Engineering*, Vol. 93, Sunil Kumar et al. (Eds): *Sustainability in Environmental Engineering and Science*, 10.1007/978-981-15-6887-9, 978-981-15-6886-2, 483944\_1\_En, Springer Nature
2. Mukherjee, Prasun, Das, Anubhab and **Das, Rajib** (2020). Determination of SCS runoff curve number and landuse characteristics of Khowai river catchment, Tripura, India. *Lecture Notes in Civil Engineering*, Vol 93, Sunil Kumar et al. (Eds): *Sustainability in Environmental Engineering and Science*, [http://doi-org-443.webypn.fjmu.edu.cn/10.1007/978-981-15-6887-9\\_19](http://doi-org-443.webypn.fjmu.edu.cn/10.1007/978-981-15-6887-9_19), Springer Nature

**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**

**International:**

Prof. (Dr) Pankaj Kumar Roy—M. Pal, M. Biswas Roy—Use of HEC-HMS Software for Quantitative Assessment of Water of Dumboor Reservoir, Tripura, India.—*International Journal for Research in Applied Science & Engineering Technology (IJRASET)*—7—2019

Prof. (Dr) Pankaj Kumar Roy—S. Halder, M. Biswas Roy—A Comprehensive Assessment of Land Use and Land Cover in Lateritic terrain through Remote Sensing and GIS in West Bengal.—*European Geographical Studies*. —6(1): 21-38—2019

Prof. (Dr) Pankaj Kumar Roy—V. Chakraborty, P. Das—‘Carbonaceous materials synthesized from thermally treated waste materials and its application for the treatment of Strontium metal solution: Batch and optimization using Response Surface Methodology’—*Environmental Technology & Innovation*—1-11—2019

Prof. (Dr) Pankaj Kumar Roy—A. Pal—Status and challenges of waste segregation in residential communities —*International Journal of Human Capital in Urban Management*—4, 303-310—2019

Dr. Rajib Das, Dr. Subhasish Das and Prof. (Dr.) Asis Mazumdar—Jaman, H.—Impact of Upstream Bridge Pier on the Scouring Around Adjacent Downstream Bridge Pier. —*Arabian Journal for Science and Engineering*, Springer Nature—Vol. 44, Issue 5, pp. 4359–4372.—2019

Dr. Subhasish—Mukherjee, Biprodip, Kuila, Asim —Optimized Hydraulic Design of an Water Distribution Network at West Medinipur in West Bengal: A Case Study. —*Journal of the Association of Engineers —India*, Vol. 89, No. 1&2, pp. 19-32.—2019

Dr. Subhasish—Jana, Sambaran, Dutta, Sourav and Roy, Debasri—Uncertainty in Hydrologic Response of a River Basin in India to Changed Climate Scenario. —*NDC – WWC Journal*—Vol. 8, No. 2, pp. 15-23.—2019

Dr. Subhasish Das and Dr. Rajib Das—John, Bernadette—Effect of changing land use scenario in Kolkata Metropolitan on the variation in volume of runoff using multi-temporal satellite images—*Journal of the Indian Chemical Society*—Vol. 97, Issue 4, pp. 555-562.—2020

Dr. Subhasish Das—Chakraborty, Souvik, John, Bernadette, and Maity, Prabir Kumar—Examining the extent of seawater intrusion from groundwater quality analysis at Purba Medinipur coast of India—*Journal of the Indian Chemical Society*—Vol. 97, Issue 4, pp. 587-594.—2020

Dr. Subhasish Das and Dr. Rajib Das—Maity Prabir Kumar—Geochemical Study and Remedial Measures of Seawater Ingression in the Southern Part of Purba Midnapur District in West Bengal, India. —*Indian Science Cruiser*—Vol. 34, No. 2, pp. 36-46. —2020

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- Dr. Subhasish Das and Prof. (Dr.) Asis Mazumdar–Mukherjee, Prasun–Evaluating volatility in quality indexing of saline water during tidal backwater incursion in Western Canals of South 24-Parganas, West Bengal –Journal of the Indian Chemical Society –Vol. 97, Issue 4, pp. 577-586.–2020
- Dr. Subhasish Das and Prof. (Dr.) Asis Mazumdar –Kuila, Asim, Mukherjee, Biprodip–Comparison of Flow Fields around a Horizontal Cylinder placed at Different Depths in Water Channel. –*Indian Science Cruiser*–Vol. 34, No. 4, pp. 27-33.–2020
- Dr. Subhasish Das–Chakraborty, Souvik, Maity, Prabir Kumar, John, Bernadette–Overexploitation Of Groundwater Causing Seawater Intrusion In The Coastal Aquifer of Egra in West Bengal.–*Indian Journal of Environmental Protection*–Vol. 40, No. 4, pp. 413-423. –2020
- Dr. Subhasish Das–John, Bernadette–Identification of risk zone area of declining piezometric level in the urbanized regions around the City of Kolkata based on ground investigation and GIS techniques.–*Groundwater for Sustainable Development, Elsevier*–Vol. –11, Article ID. 100354.–2020
- Dr. Subhasish Das–Chakraborty, Souvik, Maity, Prabir Kumar and–Investigation, simulation, identification and prediction of groundwater levels in coastal areas of Purba Midnapur, India, using MODFLOW.–*Environment, Development and Sustainability, Springer Nature*–Vol. 22, Issue 4, pp. 3805-3837.–2020
- Prof. (Dr) Pankaj Kumar Roy–M. Ghosh–Inactivation Kinetics of Gram- negative Bacteria in the Presence of Residual Free Chlorine–*Desalination & Water Treatment*–1-9–2020
- Prof. (Dr) Pankaj Kumar Roy–A. Ghosh, M. Biswas Roy–Estimation and prediction of the oscillation pattern of meandering geometry in a sub-catchment basin of Bhagirathi-Hooghly river, West Bengal, India. –*SN Applied. Science*-2020
- Prof. (Dr) Pankaj Kumar Roy–S. Halder, M. Biswas Roy–Fuzzy logic algorithm based analytic hierarchy process for delineation of groundwater potential zones in complex topography. –*Arabian Journal of Geoscience*-2020
- Prof. (Dr) Pankaj Kumar Roy–C. Ray, A. Majumder, M. Biswas, Roy –Performance Analysis of Some Low-Cost and Locally Available Adsorbents that Remove Excess Fluoride Ion from Raw Water to Develop a Filter for the Rural Population –*Journal of The Institution of Engineers (India): Series E* –1, 149-160–2020
- Prof. (Dr) Pankaj Kumar Roy–S. Nag, M. Biswas Roy–Optimum Prioritisation of Sub-watersheds based on Erosion Susceptible Zones through Modelling and GIS Techniques–*Modeling Earth Systems and Environment*.–6, 1529–1544–2020
- Prof. (Dr) Pankaj Kumar Roy–M. Biswas Roy, A. Kumar, A. Ghosh–Study to develop a co-relationship between water quality and land use pattern as index of riverine wetland with statistical approach.–*Quaestiones Geographicae*.–39. 34-43.–2020
- Prof. (Dr) Pankaj Kumar Roy–S. Halder, M. Biswas Roy–Analysis of groundwater level trend and groundwater drought using Standard Groundwater Level Index: a case study of an eastern river basin of West Bengal, India.–*SN Appl. Sci*–2, 507–2020
- Prof. (Dr) Pankaj Kumar Roy–S. Chatterjee, A. Majumdar, & M. Biswas Roy.–Water to Wastewater - Use, Reuse and Management from Perspective of Water Quality.–*International Conference of Energy and Sustainable Development 2020 (ICESD 2020)*-2020
- Prof. (Dr) Pankaj Kumar Roy–D. Chatterjee, M. Biswas Roy–Availability of Water in a Sustainable manner comparative Case Study from different part of West Bengal.–*International Conference of Energy and Sustainable Development 2020 (ICESD 2020)*-2020
- Prof. (Dr) Pankaj Kumar Roy–S. Bhattacharya, S. Halder, S. Nag, M. Biswas Roy–Surface water source estimation for sustainable management using Remote Sensing and GIS.–*International Conference of Energy and Sustainable Development 2020 (ICESD 2020)*-2020
- Prof. (Dr) Pankaj Kumar Roy–S.K. Mohiuddin, S. Basak, M. Biswas Roy & T. Ghosh–Changing Nature of Land-use land cover and its impact on water Quality Using GIS and Remote Sensing Techniques in Sagar Island, West Bengal, India.–*International Conference of Energy and Sustainable Development 2020 (ICESD 2020)*-2020

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Prof. (Dr.) Pankaj Kumar Roy–A. Pal–Fuzzy Logic and Statistical Based Modelling to Predict Rural Solid Waste Generation of West Bengal–International Journal of Innovative Technology and Exploring Engineering (IJITEE)–9, 44-49–2020

Prof. (Dr.) Pankaj Kumar Roy–N.S Mondal, S.K Basak, A Majumder, A Mazumdar–Arsenic removal using electro-coagulation: suitable electrode selection–Environment Asia–13(3): 13-25–2020

### **National:**

Prof. (Dr.) Pankaj Kumar Roy–M. Pal, M. Biswas Roy–Effect of Water Turbidity on the Seasonal Variation of Modeled Mixed Layer Depth- A Case Study of Dumboor Reservoir, Tripura–Journal of Scientific Research –64(02):30-37–2020

### **5. Collaborative Programmes:**

Indian Plumbing Professional League, Kolkata Chapter jointly organized by School of Water Resources Engineering, Jadavpur University and Indian Plumbing Association, Kolkata Chapter

### **6. Major Achievements:**

#### **Prof. Asis Mazumdar**

- i. Chairman, State Level Expert Appraisal Committee (SEAC), Govt. of Mizoram
- ii. Member, Arsenic Task Force, Govt. of West Bengal.
- iii. Nodal Coordinator RCFC-Eastern Region, NMPB, Ministry of Ayush
- iv. Nodal Officer, Key Resource Centre - Ministry of Drinking Water and Sanitation, Govt. of India
- v. Coordinator of Regional Centre, National Afforestation & Eco-Development Board (NAEB) (Ministry of Environment & Forests, Govt. of India)
- vi. Expert Member of Green Technology Watch Group, (Department of Science and Technology, Govt. of India)
- vii. Member of Corporate Level Inspection Committee, Kolkata Municipal Corporation
- viii. Sectional President, Engineering Science Section, 103 Indian Science Congress at Mysore, 2016
- ix. Chairman, Indian Plumbing Association, Kolkata Chapter
- x. Member of Corporation Level Authority on Groundwater Resources Development, Kolkata Municipal Corporation
- xi. Member of the National Expert Committee, Green Technology Watch Group (GTWG), Govt. of India, Department of Science & Technology
- xii. Peer Team Member of NAAC

#### **Prof. Arunabha Majumder**

- i. Member, Arsenic Task Force, Govt. of West Bengal
- ii. Member, Fluoride Task Force, Govt. of West Bengal
- iii. Member, State Level Committee on Solid and Liquid Waste Management in Rural West Areas, West Bengal
- iv. Member, Advisory Group, Water Technology Initiatives, Ministry of Science & Technology, Govt. of India.
- v. Member, National Advisory Committee on EU-India Research Project, DST
- vi. Governing Body Member, Institute of Environmental Studies & Wetland Management
- vii. Chairman, Environmental Committee Thakurpukur Cancer Hospital
- viii. Vice President, Institute of Public Health Engineers (India)
- ix. Member, Heritage Conservation Committee, KMC
- x. Member, State Level Clean Clearness Committee on Water & Sanitation, Tripura
- xi. Member, West Bengal State Level Ganga Monitoring Committee

#### **Dr. Pankaj Kumar Roy**

- i. Elected as the Dean of Faculty of Interdisciplinary Studies Law and Management, Jadavpur University in January, 2019



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- ii. Elected as a Recorder of section of “Engineering Sciences for 2018-2019 & 2019-2020 (106th & 107th Session) of the Indian Science Congress
- iii. Life Member- No. L28414, The Indian Science Congress Association
- iv. Regular reviewer of many reputed journals of Elsevier and Springer
- v. Acted as the Editor of the book entitled “Advances in Water Resources Management for Sustainable Use” by Springer
- vi. Delivered as many as nine lectures within the time frame
- vii. Acted as a chairperson and resource person in many reputed conferences
- viii. Acted as the coordinator in International Conference on Sustainable Water Resources Management under Changed Climate held in Jadavpur University
- ix. Acted as the coordinator in One Day Workshop under RUSA 2.0 on Issues Related to Water Crisis Mitigation and Conservation Techniques under Changed Climate Scenario, held in Jadavpur University
- x. Designated as the core committee member of the Department of Science and Technology, NRDMS cell
- xi. Designated as the committee member of Institute of Bioresources and Sustainable Development (IBSD), Imphal

### **Dr. Subhasish Das**

#### **Reviewer of International Projects:**

- i. *Engineering and Physical Sciences Research Council*, United Kingdom
- ii. *National Fund for Scientific and Technological Development*, Chile

#### **Reviewer of Referred SCI Journal Papers:**

- i. *Engineering Applications of Computational Fluid Mechanics*, Taylor & Francis, Hong Kong
- ii. *Measurement*, Elsevier BV, Netherlands
- iii. *Journal of Hydraulic Engineering*, American Society of Civil Engineers (ASCE), USA
- iv. *Environment, Development and Sustainability*, Springer Nature, Netherlands
- v. *Environmental Fluid Mechanics*, Springer Nature, Netherlands
- vi. *Marine Georesources & Geotechnology*, Taylor & Francis, United Kingdom

### **Dr. Gourab Banerjee**

- i. Country Representation in the International Workshop on “Promoting Sustainable Protection and Restoration of Soil, Groundwater and Water Environment”, held on 9–16 February, 2020 at NCKU, Tainan City, Taiwan jointly organized by National Cheng Kung University (NCKU) and Taiwan Ministry of Science and Technology (MOST)

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### WOMEN'S STUDIES

Phone: 033-2414-6531/6014

033-2457-2165

Director: Prof. Aishika Chakraborty (till 31 August, 2019)

Dr. Nandita Banerjee Dhawan (since September, 2019)

E-mail: director.sws@jadavpuruniversity.in

swsju@yahoo.com

#### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
M. Phil in Women's Studies	2 Years	18
Ph.D in Women's Studies	5 Years	3

- **Name of the Course: General Elective Course (GE Course) in Women's Studies** (offered to BA students of Jadavpur University since July 2010)

The School has formulated a new syllabus for the **General Elective** course in Women's Studies for the undergraduate level to be implemented from 2020. The details are as follows

- a. General Elective Course 1—Introduction to Women's Studies: Theories and Practices I
  - b. General Elective Course 2—Introduction to Women's Studies: Theories and Practices II
- We have 22 students in BA 4<sup>th</sup> semester enrolled for the course from the departments of English, Bengali, History, Comparative Literature, International Relations, Economics and Philosophy

- #### 1. B. Number of Faculty/Staff Members:
- 1 Professor in Women's Studies (Vacant since November 2018), 1 Professor, 1 Assistant Professor, 1 Assistant Librarian Gr. II, 1 Senior Assistant, 1 Peon  
Staff (Contractual): 1 Co-ordinator, Teaching and Learning Materials (till July 2020), 1 Professional Assistant, 1 Attendant.

**Project Staff:** 1 District Coordinator (CHILD LINE Project), 4 Rajiv Gandhi National Fellows (PhD); 1 NET/SRF Fellow

**RUSA Project Staff:** 2 Project Assistants (April 2019 to March 2020), 1 Project Assistant (May 2019 to March 2020), 2 Project Assistants (April 2019 to June 2019), 1 Project Assistant (April 2019 to May 2019), 1 Project Assistant (June 2019 to July 2019), 1 Documentation Officer (May 2019 to March 2020), 1 Office Assistant

- #### 2. A. Area of Research Activities:
- The School has conducted research programmes in the broad areas of Sustainable Development and Studies in Global South. The areas of research are as follows

- Archiving Women's Histories
- Culture, Migration, Identity
- Sustainability in Higher Education
- Poor Women and Housing
- Impact of Domestic Violence on Children

- #### 2. B. Major Research Project:
- The details of the projects are as follows

- **Archiving Women's Histories:** The Major Research Project (Institutional), '**Memories, Cultures, Movements: Archiving Women's Histories**' funded by **RUSA 2.0** focuses on archiving women's history, movements, culture and politics in Eastern India and Bangladesh. The documentation will make critical feminist scholarship more visible and exciting within the wider field of studies in global south, creating new knowledge base in social and bodily practice

- a) North East India: This project shall find and recover several small and little histories from informal and oral sources across the states mentioned, particularly from ethnographies, memoirs, private collections, graffiti, literary texts, and recordings both aural and visual of women's efforts at congregating, gathering and creating multitudes of democratic solidarities in the north eastern states of India
- b) Bangladesh: Taking 1971 as the defining moment in the history of South Asia this part of the project documents movements and memories of women in Bangladesh. Set against the political violence that preceded the birth of independent Bangladesh, the project privileges voice and agencies of women political and cultural activists, filmmakers, theater artists, writers and performers as they share their memories and experiences on the *muktijuddha* (freedom struggle). Based on oral histories and autobiographies of women the project documents women's resistance, subversion and stories of survival
- **Culture, Migration, Identity:** Professor Aishika Chakraborty is the Principal Investigator of a Major Research Project (Individual) funded by RUSA 2.0. The project titled, '**Culture, Migration and Identity: The Barred World of Indian Dance**' intertwines life-stories, interviews, press clippings and police files to investigate the underbelly of urban performance which is embedded within changing patterns of migration, trafficking and sexual labour. Based on archival and on-the-ground survey the research will undertake a comparative analysis of experiences of bar dancers concentrated at the two cities of Mumbai and Kolkata
  - **Sustainability in Higher Education:** Dr. Nandita Banerjee Dhawan is the Principal Investigator of a Major Research Project (Individual) titled, '**Transformation towards Sustainability in Higher Education: Interactional Dynamics in Gender and Intersectionality**' under the rubric of '**Sustainable Development**'. This project, funded by RUSA 2.0, considers the relation between policy-practice in the participation of the diverse academic staff (across markers of difference including gender, race, caste/ethnicity, religion, ability, etc.) in HE in India and South Africa, to study the interconnectedness of sustainability and the transformation agenda in teaching, research and governance within 4 institutions
  - **Poor Women and Housing:** Dr. Nandita Banerjee Dhawan is the Co-Investigator of the research project funded by **Global Challenges Research Funds**, the project, '**A Room of One's Own: Challenging Poor Women's Marginalisation in Urban Housing Regimes in India**' enables gender-specific analysis and mobilisation around questions of housing and urban restructuring and charts future vulnerabilities faced by poor women
  - **Impact of Domestic Violence on Children:** Dr. Nandita Banerjee Dhawan is the Principal Investigator. The project, '**Dip-stick Assessment on Impact of Domestic Violence on Children**', funded by **West Bengal State Commission for Protection of Child Rights (WBSCPCR)**, aimed to look at possible impacts of domestic violence on lives of children, the existing support systems and coping mechanisms and how best can they be supported to deal with such situations

### 3. A. Invited Lectures Delivered/Sessions Chaired:

#### Professor Aishika Chakraborty

##### Memorial Lecture

- Invited Speaker of Sufia Kamal Memorial Lecture Series, Department of Women and Gender Studies, University of Dhaka, Bangladesh, 14 March, 2019

##### Invited Lectures: (International)

1. "Politics of Pleasure or Perversion? Dancing Defiance in Troubled Times", Plenary speaker at the international conference organized by Diamond Harbour Women's University, and National Commission for Women, New Delhi on *Responding to Regional Disparities and Poverty: A Focus on the Women's Empowerment Perspectives*, on 6-7 March, 2020
2. "Mehfiltheke Bazar, Khemtatheke Cabaret: Sarirerbahudha Katha", Plenary speaker at an International conference organized by the Department of Comparative Literature, Shilchar University, Assam, International Conference, 29-30 November, 2019
3. "Chandalika: Ek Sariri spardhar uccharon", Invited Speaker at the Annual conference of *Bangladesh Itihas Parishad*, Dhaka University, 22-23 June, 2019

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### Invited Lectures: (National)

1. “*Samrat O Sundari : State, Patriarchy and an erotic Dancer*”, National Conference organized by School of Womens’ studies, Jadavpur University on State , Community, Citizenship: Rewriting Histories of Women, 16 -18 March, 2020
2. Invited as a Chair and Resource Person of the *Chikitsa* Workshop at Women’s Studies Centre at Savitribai Phule University, Pune, 12-13 March, 2020
3. “Patriarchy Dismantled or Reconstituted? Exotic Dancers of Calcutta”, Invited speaker at National conference on *Dismantling patriarchy and Gender Sensitization*, Department of History, Burdwan University, 3 March, 2020
4. Invited as a Chair and Resource Person at the 36<sup>th</sup> Annual Conference of *Itihas Samsad* at Brhmananda Keshab Chandra College, 25 January, 2020
5. Invited speaker to commemorate the 200<sup>th</sup> birth anniversary of Iswarchandra Vidyasagar organized by Indian Council for Cultural Relations and Vidyasagar Kristi Parishad and ICCR, Kolkata, 23 December, 2019
6. Plenary Speaker “Dancing on a Shaky Ground: Market, Morality and Culture”, ICSSR sponsored national seminar on “Gender in Indian History: Its Relation with Different Trajectories of Indian Women from 1857 to 1947,” organized by Vijoygarh Jyotish Ray College, Kolkata, 21 September, 2019

### Dr. Nandita Banerjee Dhawan: Invited Lectures

- Invited Speaker in an *International Seminar on Conjugal Relationship: Issues and Challenges*, PMS Mahavidyalaya, Jalpaiguri, India, 5 March 2020. Presented a paper, “From ‘conjugal’ to ‘intimacies’: The Politics of the Personal”
- Invited speaker in a panel discussion, “Access to Justice: Ideal and Reality”, St Xaviers College (Autonomous), Kolkata, India, 15 February 2020
- Invited speaker in a panel on “Charting a New Territory: Women as Changemakers in Higher Education”, National Conference on “Women’s Issues and Everyday Life: Power, Resistance and Representation”, St Xaviers College (Autonomous), Kolkata, India, 11 January 2020
- Invited speaker at the Refresher Course in Women’s Studies organized by University of North Bengal from 2 January to 15 January 2020. Delivered a lecture titled, “Women’s Studies and Higher Education” on 9 January 2020
- Invited Speaker in a Winter School on *A Room of One’s Own: Challenging Poor Women’s Marginalisation in Urban Housing Regimes in India*, Tata Institute of Social Sciences, Mumbai, India, 2-4 January 2020. Presented a paper, “Women in Kolkata Slums: Gendered Negotiations for Household Survival”

### 3. C. Seminar/Workshop/Conference/Symposium Attended:

#### Professor Aishika Chakraborty

- “Politics, Performance and Urbanism: the Cabaret Queen of Calcutta”, International conference of the International Federation of Theatre Research on Theatre, Performance and Urbanism, Shanghai Theatre Academy, Shanghai, China, 10 July, 2019
- “Dancing Dirty at Sacral Theatre: Cabaret in Calcutta,” International Council for Traditional Music, ICTM, Chulalokorn University, Bangkok, Thailand, 13 July, 2019
- “*Rabindranather Nrityabhabana : Samakaleen Prayog*”, One day seminar organised by International Theatre Institute and Bangladesh Shilpakala Academy, Dhaka, Bangladesh, 15 March, 2019
- “Calcutta Cabaret: The Sin and Sensation of Post-colonial Cityscape” at Research Centre of Women’s Studies, SNDT University, Mumbai, 16 September 2019
- “Discipline, Desire and Dissent: Re-writing Tagore’s Dance Dramas” at a collaborative conference on *Explorations in Women’s Studies: Identities and Intersectionalities*, organized by Centre for Women’s

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Studies, Visvabharati and School of Women's Studies, Jadavpur University, at Visva-bharati, 1 March, 2019

### Dr. Nandita Banerjee Dhawan

- Presented a paper, "Against the Odds: Gendered Realities of Urban Slums in Kolkata", *ASA19: Anthropological Perspectives on Global Challenges*, University of East Anglia, Norwich, UK, 3-6 September 2019
- Presented a paper, "Women's Studies in Higher Education: Critical Perspectives", *Emancipatory Imaginations: Advancing Critical University Studies*, Nelson Mandela University, Port Elizabeth, South Africa, 15-20 August 2019
- Presented a paper, "From 'piety' to 'fanaticism': Religion, Politics and Agency", *AAS-In-Asia Conference 2019*, Bangkok, 1-3 July, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organised:

#### Professor Aishika Chakraborty & Dr. Nandita Banerjee Dhawan

- Co-ordinators of Gender Sensitisation Workshop for College/University Teachers in collaboration with UGC-HRDC, JU. School of Women's Studies, Jadavpur University, 12-18 March, 2020

#### Dr. Nandita Banerjee Dhawan

- Organiser of colloquium, 'Transformation for sustainability? Gender and its intersections within participation in higher education'. 10-11 February, 2020 Jadavpur University, Kolkata, India (RUSA funding)
- Organiser of a workshop, *A 'Home' of One's Own: Experiences and Negotiations of Poor Women* in collaboration with Goldsmiths, University of London, at School of Women's Studies, Jadavpur University, Kolkata, 31 July -1 August, 2019

### 3. D. Orientation Courses/Refresher Courses Attended:

Dr. Nandita Banerjee Dhawan completed an online Refresher Course in Gender or Women's Studies organized by ARPIT, MHRD in February, 2020

### 4. A. Books/Monographs etc. Published:

#### Professor Aishika Chakraborty

##### Monographs: (In Bengali)

1. *Kolkatar Cabaret: Bangali, Younata Ebang Miss Shefali*, Gangchil, Kolkata, 2020
2. *Kolkatar Nach: Samakaleen Nagarnritya*, Gangchil, Kolkata, 2019

### 4. B. Articles Published in Journals, Chapters published in Books:

#### Professor Aishika Chakraborty

##### Book review:

*Anna Morcom, Illicit Worlds of Indian Dance: Cultures of Exclusion, Indian Journal of Gender Studies*, Vol 27, Issue 2, 16 Jun 2020

##### Select Chapters in Books:

1. "Calcutta Choreographs: At Streets, Stages and Night Clubs", " in Anuradha Roy and Melitta Waligora ed., *Kolkata in Space, Time and Imagination: Rethinking of Heritage*, Primus, New Delhi, 2020
2. "Dance of Dissent: Dancing Tagore in the Age of Nationalism", Panchali Ray ed., *Women Speak Nation: Gender, Culture and Politics*, (South Asian History and Culture) Routledge: New York, 2019
3. "Dancing into History: Gendered Bodies at Cross-Cultural Stage", Suparna Gooptu ed., *Writing Women in History: Glimpses from India's Colonial Past*, K .P. Bagchi, Kolkata, 2019



## 5. Collaborative Programmes:

The School has engaged in national and international research collaborations as given below :

- Dhaka University, Bangladesh
  - Central Women's University, Bangladesh
  - Cotton University
  - Queen's University, Belfast, United Kingdom
  - University of Johannesburg, South Africa
  - SNTD University, Mumbai
  - Jawaharlal Nehru University, New Delhi
  - Rabindra Bharati University, Kolkata
  - Burdwan University
  - Visva Bharati University
  - Goldsmiths College, University of London
  - West Bengal State Commission for Protection of Child Rights (WBSCPCR). The School invited international and national experts under the RUSA 2.0 scheme under the larger rubric of 'Studies in Global South' and 'Sustainable Development'
1. Professor Maleka Begum of Central Women's University, Dhaka, Bangladesh, a key resource person in the Research Thrust Area of the Studies in the Global South, was invited for a special lecture. She delivered a public lecture on the historic trajectory of Bangladesh Women's Movement while sharing her own activism and research with the School of Women's Studies
  2. Professor Ayesha Banu, Department of Women and Gender Studies, University of Dhaka, Bangladesh was invited to the research thrust area of Studies in the Global South. She contributed actively to the archival research project being carried out in the School. Other than teaching M.Phil and PhD scholars, she also gave a seminar and public lecture
  3. Dr. Dina Zoe Belluigi, Higher Education Studies, School of Social Sciences, Queens University, Belfast was invited to the research thrust area of Sustainable Development
  4. Dr. Maya Krishna Rao was invited, given her expertise in Theatre Studies and Women's Movement and Activism to contribute to the research project titled, "Memories, Cultures and Movements: Archiving Women's Histories" in the research thrust area focusing on *Culture of the Body* under Studies in the Global South
  5. Dr. Rakhee Kalita Moral, Department of English, Cotton University, Guwahati gave a public lecture along with teaching MPhil and PhD research scholars. She even gave a public lecture and contributed to the research project titled, "Memories, Cultures and Movements: Archiving Women's Histories" focusing on women healers of Meghalaya in the research thrust area Studies in the Global South

The School has collaborated with the following organisations with M.Phil scholars visiting these organizations in Kolkata for field work experience in their MPhil course on 'Research Methodologies'. We extended the tradition of exchange with women's movements further by having students from M.Phil programmes visit various NGOs for field work in their paper on Research Methodologies. This opportunity has provided our MPhil scholars an opportunity to understand the work done by different NGOs and help them apply the research methodologies learnt to work with communities of focus of the NGOs

- Parichiti
- South Kolkata Hamari Muskan
- Talash Society for Inner Strength, Peace and Equality
- Iswar Sankalpa
- Sanchar Arod

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- Sappho for Equality
- Durbar Mahila Unnayan Samiti

The School has maintained institutional exchange programmes with women's studies centres of other Universities in West Bengal such as Rabindra Bharati, Visva Bharati, Burdwan University, Calcutta University, Diamond Harbour Women's University and North Bengal University. The individual members of the School have also been a part of statutory and academic bodies of different departments of other Universities and colleges including National Institute of Technology, Durgapur and Ananda Mohan College, Kolkata. They have also been involved in teaching and academic and research activities of other Departments within the University

As a part of the UGC's commitment to achieve increased participation of women in higher education, a week-long **Gender Sensitisation Workshop** for college teachers in collaboration with UGC-HRDC was organized as observance of International Women's Week from 12-18 March, 2020. We had invited national and regional gender experts, academics, women writers, activists and legal practitioners as resource persons in this workshop

The School organized an Archival Methodology Workshop on 12-13 June, 2019 in collaboration with Centre for Studies on Borders and Movements (CSBM). The participants of the workshop were research scholars and fellows from Women's/Gender Studies. The sessions focused on the concept, structure and limitation of Archiving along with both qualitative and quantitative methods from the disciplines of history, cultural studies, geography and media studies. The focus areas also comprised of digital tools and archival practices along with an understanding of tools that interpret archival data

### Project Workshops

- A workshop titled, "A 'Home' of One's Own: Experiences and Negotiations of Poor Women" was organized by the School in collaboration with Rabindra Bharati University (RBU), Parichiti and Goldsmiths, University of London from 31 July to 1 August 2019 at Vivekananda Hall, Jadavpur University. The workshop was an outcome of a collaborative pilot study conducted in Kolkata by these organisations on the broad theme of poor women's housing and property rights in the context of urban restructuring in India, supported by Goldsmiths, University of London. The objective was to share the initial research findings with the participants and exchange ideas to tread a way forward. The invited resource persons came from National University for Educational Planning and Administration, New Delhi; Centre for Health and Social Justice, New Delhi; Tata Institute of Social Sciences, Mumbai. There were representatives from Ghar Bachao Ghar Banao Andolan, Mumbai and Women's Architects Forum, Mumbai
- The School organized an International Colloquium titled, "Transformation for Sustainability? Gender and its Intersections within Participation in Higher Education" on 10 and 11 February at Professor Anita Banerjee Memorial Hall, JU. The event, funded by RUSA 2.0, had regional, national and international participants from Savitribai Phule Pune University, University of Hyderabad, Tata Institute of Social Sciences Mumbai, Tata Institute of Social Sciences Hyderabad, Indian Statistical Institute, Queens University Belfast, University of Johannesburg South Africa, Institute of Development Studies Kolkata, International Centre for Research on Women New Delhi, Ambedkar University Delhi, Banaras Hindu University

### 6. Major Achievements:

- The School has focused on building capacity and disseminating expertise in Women's Studies, which has been a significant area of higher education in the country. Given the significance of UN Sustainable Development Goals of promoting equality and empowerment of women, the School has been an Advanced Centre of Women's Studies since 2011. Its rich experience of building resources in Women's Studies, are equipped to act as leaders of gender equality and women's empowerment goals in higher educational institutions

## Annual Report 2019-20

- The interdisciplinary research methodology of Women's Studies is an important tool of research to enable building of new knowledge in different fields of higher education
- The professionalization of Women's Studies by the School has helped in building of human resources, designing curriculum, excelling in research and increasing teaching programmes
- There has been extensive focus on training workshops and capacity building of human resources along with focus on outreach and extension activities for benefit of community, students and teachers

Some of the important objectives of the School between 1 April 2019 and 31 March 2020 have been as follows:

- Strengthening existing teaching programmes by renewing curriculum
- Introducing research programmes into areas of sustainable development and studies in global south
- Building international academic and research collaborations with international universities
- Building linkages with national Governmental and Non-Governmental bodies for research and action
- Strengthening women's studies programmes by establishing and expanding linkages with other Universities and Colleges
- Engaging with women's organizations and movements
- Involving the wider student body in the University and outside in addressing questions of gender
- Conducting gender sensitization programmes with college teachers and researchers
- Making significant contributions to knowledge production in Women's Studies by planning important publications and archive-building
- Developing a strong resource centre and dissemination of data and information through traditional and modern technology, information dossiers, information networks

### Students' Achievements

The School has always had students with MPhil and PhD fellowships who have engaged in meaningful research. The School has NET scholars (JRF or SRF), as well as those who have been awarded the Rajiv Gandhi National Fellowship. These scholarships, especially for students from marginalized sections of the society, help in emphasizing equity and inclusiveness which has been the focus of the UGC's XII plan

The students and research scholars of the School have made their academic presence felt nationally as well as internationally. They have participated in different regional, national and international conferences. Many of our MPhil scholars have joined as fellows and research assistants in research projects. The scholars have also presented their research in national and international seminars and conferences. They have participated in the National Conference organized by the Indian Association for Women's Studies in National Law University in January 2020. The MPhil students and research scholars also have publications in edited volumes and journals with ISBN and ISSN numbers respectively

The students have also participated in workshops on oral history, archival research methodology, winter schools, etc. Many MPhil students have registered in the School's PhD programme and have also joined as teachers in colleges and Universities after completing their MPhil programme

### Memorial Lectures and Special Public Lectures:

- The School in collaboration with Biplabtirtha Chattagram Smriti Sanstha organized **XXII Pritilata Waddedar Memorial Lecture** on "Ekattorer Muktijuddho: Narirproti Sohingsota o Bangladesher Nari Andolon" (in Bengali) by Professor Ayesha Banu, Department of Women and Gender Studies, Dhaka University on **11 June 2019** at Vivekananda Hall, JU. The lecture was chaired by Professor Aishika Chakraborty, Director, SWS, JU

## Annual Report 2019-20

- The **1st Radharani Debi Memorial Lecture** was delivered by Professor Gayatri Chakravorty Spivak on “Inaugurating Gender” on **15 July 2019** at Gandhi Bhavan, JU. The lecture was chaired by Professor Swapan Chakravorty, Department of English, JU
- The School organized **Xth Sulekha Dasgupta Memorial Lecture** on “Shataborsher Aloy Gandhi-Saralar Somporko: Ekti Punorekkhon” was delivered by Professor Tapati Sengupta, Loreto College and Guest Professor, Diamond Harbour Women’s University on **26 February 2020** at Vivekananda Hall, JU. The lecture was presided by Dr. Sudeshna Banerjee, Department of History, Jadavpur University
- The **XX Sukhalata Rao Memorial Lecture** was delivered in Bengali by the famous Dalit writer Smt Kalyani Thakur Charal on “Gotanugotik naribadi bonam dalit mohila khomotayon” on **12 March 2020** at Vivekananda Hall, JU. The lecture was chaired by Dr. Maroona Murmu, Department of History, JU
- The School organized the **V Ranjabati Sircar Memorial Lecture** on ‘Theatre Making and the Drawing in of Other Disciplines’ by Maya Krishna Rao on **7 November 2019** at Vivekananda Hall, JU. The lecture was chaired by Professor Malini Bhattacharya, former Professor in English, Jadavpur University and former Director, SWS, JU
- A **Special Public Lecture** titled, “Nari Andolaner Sekal-Ekal: Antorjatic Prekkhapot” was delivered by Professor Maleka Begum, Feminist Writer, Editor and Leader, Bangladesh on **24 May, 2019** at Vivekananda Hall, JU
- A **Special Public Lecture** was delivered by Dr. Rakhee Kalita Moral, Associate Professor, Department of English, Cotton University, Guwahati, titled, “Feminists, Deviants, Historians: Writing beyond Violence in Northeast India” on **11 June 2019** at Vivekananda Hall, JU
- A **Special Public Lecture** was delivered by Dr. Dina Zoe Belluigi, Critical Higher Education Studies, School of Social Sciences, Education and Social Work, Queens University Belfast, UK titled, “The Challenges facing Social Justice in and of Higher Education” on **27 January 2020** at Vivekananda Hall, JU. The lecture was chaired by Professor Sukanta Chaudhuri, Professor Emeritus, Jadavpur University

### School Journal

- The School publishes a journal (ISSN 2394-2142) regularly comprising academic articles, faculty research reports, book reviews and write-ups by students and researchers. The different sections of the Newsletter covering the editorial, activity report highlights, project report, obituary, and book reviews have greatly facilitated the networking objectives of the school and have acted as a catalyst for generating research and discussion on Women’s Studies among faculty and students within and outside Jadavpur University throughout its journey

### CHILDLINE

The CHILDLINE is a project of the Ministry of Women and Child Development, GOI. A phone number that is 1098 spells hope for millions of children across India, CHILDLINE is India’s first 24-hour, free, emergency phone service for children in need of aid and assistance. CHILDLINE has turned twenty four in June 2020. The School of Women’s Studies, Jadavpur University has been acting as the nodal organization for the CHILDLINE 24 Parganas (South) unit since 2003. The unit has successfully completed 17 years in June 2020

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## **C. INTERDISCIPLINARY RESEARCH CENTRE**



## Annual Report 2019-20

### AUROBINDO STUDY CENTRE

[Department of Philosophy]

Phone: 033-2457-2358/2638

Coordinator: Prof. Aparajita Mukhopadhyay

E-mail: [aparajita.mukhopadhyay@jadavpuruniversity.in](mailto:aparajita.mukhopadhyay@jadavpuruniversity.in)

Centre for Sri Aurobindo Studies, under the Department of Philosophy was established on 2005 as a UGC Centre under the scheme of Epoch Making Social Thinkers of India. The aim of the Centre is to understand the unique philosophical view of Sri Aurobindo that provides a pragmatic, justified foundation to the traditional Indian culture. This Centre, as an academic unit, targets to spread Sri Aurobindo's metaphysical standpoint that emphasizes on the harmony among all the elements of the world and on the peace of mind as the goal of human existence. The Indian philosophical concept of Divine life takes a new shape in his philosophy and enlightens us to understand life as a centre of huge possibilities and activities. To highlight his philosophical approach we regularly organize different academic activities like lectures, seminars, workshop by nationally and internationally acclaimed researchers and academicians. This year also we have conducted different academic programs under the RUSA Fund allocated to the Department of Philosophy

From 19–26 September, 2019 we organized a seven-day Workshop on 'Life and Philosophical Thought of Sri Aurobindo'. In this workshop our objective was to give the participants a glimpse on different aspects of Sri Aurobindo's philosophical perspective, viz, metaphysics, epistemology, his social thought. Apart from his philosophical view we also included lectures on his political activities at the time of India's National movement

We conducted a two-day state level Seminar on 'Revisiting Some Social Ideas of Sri Aurobindo' on 25 February, 2020. The focus of this seminar was to explain Sri Aurobindo's concept of Nationalism and Internationalism. His philosophy teaches us that nation is not just a piece of land, but it must be viewed as Mother. His metaphysical truth helps to overcome the boundary of the nation by widening the power of consciousness

Every year to celebrate the birth ceremony of Sri Aurobindo, Centre organizes the Annual Sri Aurobindo Memorial lecture. The Thirty Sixth Annual Sri Aurobindo Memorial lecture was held on 22 August, 2019. Professor Krishna Roy, Former Professor of Philosophy, Jadavpur University delivered lecture on Sri Aurobindo's political ideas, especially focusing on his pre- Pondicherry life

From the inception of the Centre we successfully organize a weekly Study Group. Research scholars, faculty members from different colleges and Universities are the members of this group. Here we encourage reading the texts of Sri Aurobindo through discussion and interactions. Presently Professor Soumitra Basu, Department of Philosophy, Jadavpur University is the mentor of this Study Group

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### BUDDHIST STUDIES

[Department of Philosophy]

Phone : 033-2457-2027

Coordinator: Prof. Madhumita Chattopadhyay

E-mail: madhumita.chattopadhyay@jadavpuruniversity.in

#### 1. Workshops:

##### International:

Organized a five day Workshop on **Buddhist Logic** from 22–26 July, 2019 for the Buddhist nuns at Zhejiang Buddhist Academy, Ningbo, China in joint collaboration with the Zhejiang Buddhist Academy, Zhejiang, Ningbo, China

##### National:

Organized a seven day Workshop On **Buddhist Logic for College and University Teachers** from 7–14 May, 2019 in which 30 teachers from different colleges and Universities participated

Organized a seven day Workshop on **Reading Mādhyamika Buddhist Texts** for **Research Scholars and Young College Teachers** from 20–27 November, 2019, under the RUSA 2.0 scheme in which **three participants from Iran, Italy and Sri Lanka** along with 32 participants from different parts of India participated

#### 2. Visiting Professor:

Professor Arindam Chakraborty, Department of Philosophy, Stony Brooke University, New York, USA visited the Center from 7-13 January, 2020 under the RUSA 2.0 scheme. He delivered three lectures and taught the scholar and students a chapter from the text *Abhidharmakośa*

### CANADIAN STUDIES

[Department of Comparative Literature]

Phone: 033-2457-2152

033-2414-6690

Coordinator: Prof. Suchorita Chattopadhyay

E-mail: sucharita.chattopadhyay@jadavpuruniversity.in

##### January 2020:

Professor Nalini Mohabir, Department of Geography, Planning, and Environment at Concordia University interacted with students and scholars on the Indo - Caribbean diaspora with reference to indentureship and refugee crisis. Her lecture enlightened the students on the efficacies of multiculturalism and the transnational hyphenated identities of the diaspora present in Canada

##### February 2020:

Professor Peter J Keegan, the University of Auckland interacted with scholars and students on Maori narrative traditions and Indigeneity

**7 February 2020:**

A discussion on Endangered language was organised by the Centre in collaboration with the School of Language and Linguistics, Jadavpur University. The panel discussion involved Dr. Atanu Saha, Dr. Sayantan Dasgupta, Dr. Peter Keegan and Dr. Debashree Dattaray and was moderated by Professor Suchorita Chattopadhyay. The focus was on the preservation of Indigenous languages and traditions in a global world

**Report on International Conference on “Canada and/in the Global South: fragmented Identities and New Identities”, 4-6 February, 2020**

A Three day International Conference on “Canada and/in the Global South: fragmented Identities and New identities” was organised by the Centre for Canadian studies on 4-6 February 2020

Amidst the multicultural mosaic of Canada, how did it manage to negotiate with the identity crisis? In one hand the indigenous communities are marginalised, on the other remained the dominant white Canadian. Apart from these two, is also present the diasporas originating in South Asia, Africa, and Caribbean islands. Some part of the diasporic community also belongs to the doubly migrated population. To explore how one’s identity was reshaped in that land of pluralistic heterogeneity and whether the redefinition of identity was cogent to the imposed labels, the conference sought to interrogate dynamics of the identity in Canada and the Global South

The Conference was conducted over ten academic sessions in the span of three days. It began with a welcome address by Professor Sayantan Dasgupta, Head, Department of Comparative Literature, Jadavpur University, which was followed by an inaugural address by Professor Suchorita Chattopadhyay. The keynote address was titled “Unist’ot’en, Standing Rock, Mauna Kea, DjabWurrun, Indigenous Place, Protest, and Protection in 2020”, delivered by Dr. Peter Keegan. He spoke in length about the history of the indigenous communities and their sacred lands, and how those lands are protected by the communities after much protests and disputes

In the following sessions, around forty participants participated and engaged in a critical intervention on the grounds and interrogations of identity, experienced by the communities in and across the borders. The notions of identity- fragmented, complicated or labelled afresh were explored, and the multiple dimensions of transnationalism formed integral crux of the academic dialogic exchanges

In the plenary session, Dr. Julie B Mehta delivered an eclectic lecture addressing the genocide of indigenous communities and discussed at length about the criticality of identity experienced by the indigenous communities. Dr. Harish C Mehta and Dr. Dheeman Bhattacharya articulated how the traditional knowledge of indigenous people were taken into account or the otherwise, in the historization of nationhood and culturalism

Since 2017, the Centre for Canadian Studies, JU has been awarding the Victor J.Ramraj Memorial Award for the best paper in Canadian Diaspora Studies and Renate Eigenbrod Memorial Award for the best paper in Indigenous Canadian Studies. These awards have been initiated by CCS with an aim to encourage the research endeavours of young scholars are being sponsored by Shastri Indo-Canadian Institute (India Office). All the papers were subject to blind peer review by an Inter-Institutional committee, which included a member nominated by SICI as well. This year’s conference saw the fourth Victor J.Ramraj Memorial Prize being awarded to Soumyaneel Dasgupta (MA student, Department of Comparative Literature, Jadavpur University) for his paper titled “ Welcome Nowhere: The Romani Diaspora in Canada”. The fourth Renate Eigenbrod Memorial Prize was jointly won by Ms.Rohini Chakraborty (MPhil Student, Department of Comparative Literature, Jadavpur University) for her paper titled “Trauma as a Baggage of the Pats Carried into the Dystopic Future and a Question of Justice Served and Justice Left ”, and Sirsha Banerjee ( MA student, Department of Comparative Literature, Jadavpur University) for his paper titled “Canada’ and the Other: Soundwaves of Resistance and Reconciliation” . Apart from the prize sponsored by SICI, the winners received messages on behalf of the late Dr. Victor J Ramraj and the late Dr. Renate Eigenbrod

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sent by Professor Ruby Ramraj (Department of English, University of Calgary, Canada), and Dr. Peter Kulchyski (Department of Native Studies, University of Manitoba, Canada) respectively, stating how the departed scholars would have been deeply honoured to know that they are (and will be) remembered through attachment of their names to the best student papers in the respective field of research

The three day interactive and interdisciplinary conference ended with a vote of thanks from Krishnendu Pal, Research Scholar, Centre for Canadian Studies, Jadavpur University

### 7 September 2020:

Due to the global pandemic, the centre sought to engage in academic exchanges through a series of lectures in online platforms. The first session of the series titled **Locating Indigeneity and Rearticulating Resilience** was on “Karbi Studies Today”. Dharamsing Teron( Centre for Karbi Studies, Diphu), spoke on the practices and nuances of publishing in the field of Karbi Studies. Vulli Dhanaraju(Department of History, Assam University, Diphu) spoke on theorization of Karbi Studies, based on history, narratives and representations. Badan Tisso (Centre for Karbi Studies, Diphu) discussed at length about rediscovering the forgotten symbols emphasising on the story of Nothengpi. While Dr. Debashree Dattaray delivered her lecture on ‘Insider/Outsider Stories’, the session was moderated by Professor Suchorita Chattopadhyay

### 16 September 2020:

The second session of the series was on “Santali Studies Today”. Thakur Prasad Murmu(Department of Santali, Sidho Kanho Birsha University) spoke on the Santali beliefs of rituals and customs. Professor Sudip Bhui(Centre for Indigenous Studies, SKBU ) discussed at length about how indigenous knowledge can offer a way of survival to the community and certain aspects of survival as reflected in the community lore. Professor Palton Murmu (Department of Santali, SKBU) delivered his talk on “ Lifestyle of Santals: Past and Present scenario”. Professor Aparajita Hazra and Professor Nibedita Mukherjee (Department of English, SKBU) spoke on reinventing classrooms and the challenges of pedagogical practices in the ambit of indigeneity. Sunila Murmu( SKBU) spoke on the festivals of Santal community and Sabiytiyeh Sakhi Murmu ( SKBU) spoke on the systems of internal administration and the way of representation of Santal community itself. The discussant was Dr. Debashree Dattaray and the moderator was Professor Suchorita Chattopadhyay

### 24 September, 2020:

The third session was on “Bodo Studies Today”. Professor Adaram Basumatary (Department of Bodo, Janata College, Kokrajhar) enlightened us on the background and development of Bodo Literature. Professor Anjali Daimari (Department of English, Gauhati University, Guwahati) delivered her lecture titles “ In Search of ‘Her’ Voice: Reading in Context”. Professor Anil Boro (Department of Folklore Research, Gauhati University) spoke at length about the aspects of Bodo culture, locating indigeneity in Bodo and how resilience rearticulated in the context. Professor Aleendra Brahma (Centre for North-Eastern Language Development, Centre Institute of Indian languages, Mysore) lectured on “ Resilience of Bodo : A Dowan (Patois) to a language”. Dr. Debashree Dattaray was the discussant and the session was moderated by Professor Suchorita Chattopadhyay

### 29 September 2020:

The fourth session was titled “Theory and Practice with Emerging Scholars”. Debjani Chakraborty (Phd Scholar, Department of Comparative Literature, Jadavpur University) spoke on the practice of listening as an essential tool to grapple with the question of epistemic violence on the field. Dipanjan Kundu (Phd Scholar, Department of English, SKBU) articulated on the politics of representation of indigeneity in Indian films and Popular culture. Krishnendu Pal (Phd Scholar, Department of Comparative Literature, JU) delivered his talk, titled “ To talk about Yourself and Your Own: Reading Ma-Nee Chacaby’s A Two-spirit Journey”. Dr. Debashree Dattaray was the discussant and the session was moderated by Professor Suchorita Chattopadhyay

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### 4 October 2020:

“Chhara Studies Today” was the fifth session of this series. Madan Meena (Visual artist, Researchers and Honorary Director, Adivasi Academy, Gujrat) spoke on the criminalization of the warriors. Dakxinkumar Bajrange (Filmmaker, Playwright, Activist, Artistic Director, Budhan Theatre) spoke on how the community of Chhharas struggled and is struggling for their reclamation of indigenous identity. Kalpana Gadgekar (DNT Research Activist and Actor, Ahmedabad, Gujarat) discussed at length on the struggle stories of Chhara women. Dr. Dheeman Bhattacharya (Assistant Professor, Centre for Comparative Literature, Visva-Bharati, Santiniketan) delivered his lecture titled “The Lower Depths: Problems of Drafting Urban Historiography on the Chhara community”. Dr. Debashree Dattaray was the discussant and the session was moderated by Professor Suchorita Chattopadhyay

### CLINICAL RESEARCH CENTRE [Department of Pharmaceutical Technology]

Phone: 033-2457-2048

Coordinator: Dr. Ketousetuo Kuotsu

E-mail: ketousetuo.kuotsu@jadavpuruniversity.in

#### 1. A. Courses Offered :

Name of the Course	Duration of Course	No. of Students Enrolled
Certificate Course in Pharmacovigilance	9 Months	22
Certificate Course in Hospital and Certificate Course in Dialysis	9 Months	02

#### 1. B. Number of Faculty Members :5 (Guest)

#### 2. A. Area of Research Activities: Pharmaceutics, Novel Drug delivery System, Nanoparticles, Pharmacology and Clinical Pharmacy

##### a) Research/Project Continued from Previous Year:

##### Project Title:

Design, Development and Characterization of Colon Targeted Oral Anticancer Drug delivery System, Modulation with Poly-l-lysine

Body composition monitorine in hemodialysis

Tracking of dry weight in hemodialysis

Calculation of KT/V by using different measurement of total body water

Prevalence of anamia and the causes in hemodialysis population

Blood pressure & antihypertensive drug use for hemodialysis patients in a territory hospital

Carbon dioxide insuffalations in routine coloscopy is safe and more comfortable that room air

Orophrangeal decontamination in critically III patient

Prevalence of periodontitis in patients with ischemic heart disease

Prevalence of animal in CKD patients on maiantaince hemodialysis



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- b) Published Papers and Articles in Journals/Edited Volumes:** *In-vitro* and *in-vivo* evaluation of polymeric microsphere formulation for colon targeted delivery of 5-fluorouracil using biocompatible natural gum katira, International Journal of Biological Macromolecules, 158, 922-936, 2020
- List of Major Projects : (10 Lakhs & above) from 1.4.2019 to 31.3.2020: 01
  - Central Facilities : Central Library and Placement Cell
  - Collaborations : No National/International MoU was signed during the period 1.4.2019 to 31.3.2020
- 2. B. Major Research Project :** *In-vitro* and *in-vivo* evaluation of polymeric microsphere formulation for colon targeted delivery of 5-fluorouracil using biocompatible natural gum katira, International Journal of Biological Macromolecules, 158, 922-936, 2020
- 4. B. Articles Published in Journals:** (Author(s)-Title-Name of Journal-Volume-Page-Year)
- Dr. Ketousetuo Kuotsu**  
Saumen Karan, Souvik Debnath, Ketousetuo Kuotsu, Tapan Kumar Chatterjee-*In-vitro* and *in-vivo* evaluation of polymeric microsphere formulation for colon targeted delivery of 5-fluorouracil using biocompatible natural gum katira-International Journal of Biological Macromolecules-158-922-936-2020

### COMPUTER AIDED DESIGN CENTRE [Department of Computer Science & Engineering]

Phone : 033-2414-6844  
: 033-2457-2960  
Director : Prof. Chiranjib Bhattacharjee  
E-mail : cadcentre@cadcentreju.org

#### 1. A. Courses Offered :

Name of the course	Duration of the course	No. of courses offered	No. of Students Enrolled
P.G. Diploma in Applied Remote Sensing and GIS (Geoinformatics)	1 Year	3	75
Diploma in Multimedia and Animation	1 Year	2	131
Auto CAD with AutoLISP	11 Weeks	5	131
Structural Analysis And Design	10 Weeks	2	60
Geospatial Technology	6 Months	1	11
Python Preparatory	2 Months	1	30
	<b>Total</b>	<b>14</b>	<b>345</b>

- 1. B. Number of Faculty Members:** The Centre is conducting various professional short-term courses with the help of visiting faculties

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### 2. A. Area of Research Activities: CAD and Geoinformatics (Broad Areas)

### 3. A. Invited Lectures Delivered/Sessions Chaired:(Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

- **Dr. Basudeb Bhatta**–GeoSimulation for Urban Growth–School & college teachers, Lecturers, research scholars –Application of Qualitative & Quantitative Techniques in Sustainable Urban Planning-Human Settlement Planning, Department of Architecture, Jadavpur University–20–26 September, 2019
- **Mr. Biswajit Giri**–Calculate Weighted Mean Income using Graphical Model in QGIS–School & college teachers, Lecturers, research scholars–Application of Qualitative & Quantitative Techniques in Sustainable Urban Planning–Human Settlement Planning, Department of Architecture, Jadavpur University–20–26 September, 2019
- **Dr. Basudeb Bhatta**–Introduction to ArcGIS software–Graduate students, college teachers, lecturers, research scholars etc.–Introductory Use of ArcGIS –Department of Geoinformatics Pandit Raghunath Murmu Smriti Mahavidyalaya Jamboni, Bankura – 722150–9 –13 December, 2019
- **Mr. Biswajit Giri**–Earth work analysis and Hydrological analysis using ArcGIS software–Graduate students, college teachers, lecturers, research scholars etc.–Advanced Use of ArcGIS in Urban Planning–Department of Geoinformatics, Pandit Raghunath Murmu Smriti Mahavidyalaya Jamboni, Bankura – 722150–9–13 December, 2019
- **Mr. Biswajit Giri**–Two day workshop on Geography Theory and Practical, Semester 5, paper-12 for Calcutta University–Calcutta University College teachers–Department of Geography, Loreto College in collaboration with UG Board of Studies, Geography and Calcutta University–Loreto College–11 January, 2020
- **Mr. Biswajit Giri**–National Symposium for Future Geographers (NSFG) 2020–Under graduate, graduate students, college teachers, lecturers, research scholars etc.–Department of Geography School of Science Adamas University–Adamas University, Barasat - Barrackpore Road, Jagannathpur, Kolkata, West Bengal 700126–3-4 March, 2020

### 3. C. Seminar/Workshop/Conference/Symposium Organized:

Organized a five day Workshop on Drone Mapping from 03–07 February, 2020

### 6. Major Achievements:

In the last 35 years, the Centre has trained more than 10,000 industry professionals, students and researchers in Computer Aided Design, Geographic Information System, Remote Sensing, Multimedia, and related areas. The Centre has also executed several R&D and Industrial projects since 1987. Recently the Centre is focusing to offer several cutting edge technologies to the industry professionals and higher education students

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### CONDENSED MATTER PHYSICS RESEARCH

[Department of Physics]

Phone: 033-2457-2448

Coordinator: Prof. Brajadulal Chattopadhyay

E-mail: bdc\_physics@yahoo.co.in

- 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)**
1. Dr. Alope Kumar Sarkar, Associate professor, Bijoy Krishna Girls' College, 5 August, 2019 (Monday) "Models of an electron-role of Vortices"
  2. Prof. Subrat Bandhu Ghosh, Director of Research at Manipal University Jaipur, 20.06.2019 at 4:00 PM on Advanced Engineered Materials for Biomedical and other Functional applications
  3. Dr. Sudeshna Shyam Choudhury, Assistant professor, Microbiology department, St. Xavier's College Kolkata 700016, 09.12.2019, 3 pm 'Effect of UV radiation on tea aroma'
  4. Ms. Anusuya Pal, Research Scholar, Worcester Polytechnic Institute, MA, USA, 13 January, 2020, 3:30 pm, 'Patterns Formed in Drying Bio Colloidal Drops with and without Liquid Crystal droplets'
- 3. C. Seminar/Workshop/Conference/Symposium Organized:(Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration):**
1. Condensed Matter Physics Research Centre (CMPRC), Jadavpur University organized a National Seminar on "Physics at surfaces and interfaces of soft materials" (PSISM-2019) during 26-27 September, 2019 at the Department of Physics. Participants from all over India attended
  2. One day seminar "Informatics and Modelling in Physics, Chemistry and Biology", jointly organised by CMPRC and CIRE (Center for Interdisciplinary Research and Education) at Physics Seminar room (Jadavpur University) on 19 September, 2019

**\*\* Since August 2020, regular seminars of CMPRC are being held as webinars**

### COUNSELLING SERVICES AND STUDIES IN SELF DEVELOPMENT

[Department of Philosophy]

Phone: 033-2457-2481

Coordinator: Prof. Samar Kumar Mondal

Joint Coordinator: Prof. Sanjib Mridha

E-mail: ccssju@gmail.com

**1. A. Courses Offered:**

Name of the Course	Duration of Course	No. of Students Enrolled
P.G Diploma Course in Counselling and Stress Management	2 Years	30

**1. B. Number of Faculty:** 10 including Coordinators (All are Guest Faculty Member)

**2. A. Area of Research Project :** Counselling, Stress Management and Self Development (Broad Areas)

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### 2. B. Major Research Project : RUSA-2.0

Individual : Professor Samar Kumar Mondal

Name of the Project - The Effects of Stress on Young Adults in West Bengal

Funding Agency –UGC

### 3. C. Seminar/Workshop/Conference/Symposium Organized:

Name of the Teacher : **Professor Samar Kumar Mondal** (Organiser)

State Level Workshop on MENTAL HEALTH OF INMATES OF CORRECTIONAL HOMES

Place : Darshan Bhavan Auditorium, Jadavpur University (Main Campus)

Duration : One Day (8 March, 2020)

#### Speakers:

#### a) Mr. Amitabha Pahari, b) Mr. Chittaranjan Ghorai

2. National Level Workshop on ‘CHILDREN IN CONFLICT WITH LAW (CICL): BALANCING JUSTICE-BASED AND CARE-BASED APPROACH’ in collaboration with MHF, Kolkata

Place: Darshan Bhavan Auditorium, Jadavpur University (Main Campus)

Duration : Three Day (11 –13 March, 2020)

#### Speakers:

a) Dr. Shekhar Seshadri (NIMHANS)

b) Ms. Sheila Ramaswamy (NIMHANS)

c) Dr. Jai Ranjan Ram (MHF)

### 3. E. Oriented Courses/ Refresher Courses/ STC Organized:

Name of the Teacher :**Professor Samar Kumar Mondal (Organizer)**

Title of the Course :UGC sponsored a Short Term Course in “Counselling and Stress Management” Place : Darshan Bhavan Auditorium, Jadavpur University (Main Campus) Duration : One Week (12 –18 September, 2019)

### 4. B. Articles Published in Journals: (Including National/ International & Peer-reviewed Journal)

Name of the Teacher -**Professor Samar Kumar Mondal**

Name of the Articles - Origin of Stress and its Management: An Analysis from the Perspective of Buddhism and Modern Psychology

Name of the Journal - Journal of the Department of Pali, University of Calcutta (ISSN: 0971-0655)

Volume - Vol-XXII, 2019

### 5. Collaborative Programmes :

1. Basanti Devi College

a) Certificate course in Basic Skills in Psychological Counselling

b) Advance Certificate course in Psychological Counselling

2. Ramkrishna Sarada Mission Vivekananda Vidyabhavan

a) Certificate course in Basic Skills of Counselling and Stress Management

### 6. Major Achievements:

1. The students of every batch of the 2 year P.G. Diploma course in Counselling and Stress Management assigned shortly in Calcutta Medical College and Nil Ratan Sircar Medical College and Hospital for internship

2. Hon’ble High Court of Kolkata has offered to work on four inmates of correctional Homes in our state, we are prepared to do this work but due to COVID situation we are not able to start our programme at the moment

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### 7. Outreach Activities:

- a) Anti-Ragging awareness Programme–Department of Electronics, Food Technology, Architecture, Pharmaceutical Technology and Mechanical Eng etc.
- b) The centre has opened a YouTube channel in the name of ‘Counselling Centre Jadavpur University’ and anybody can access all the programs of CCSSS of J.U.

### 8. Other Activities of the Centre:(2019-20)

1. Conducted a two days interactive workshop on ‘Stress Management’ with Derozio Memorial College, Kolkata from 25-26 September, 2019
2. Conducted a full day workshop on Stress Management for the guardians of Madhyamik and Higher Secondary 2020 with Udaypur Haradaya Nag Adarsha Vidyalaya, Belgharia on 30 November, 2019
3. Conducted a full day workshop on Management of Stress for the students of forthcoming H.S exam. with Udaypur Haradaya Nag Adarsha Vidyalaya, Belgharia on 14 December, 2019

## C. V. RAMAN CENTRE FOR PHYSICS & MUSIC

[Department of Physics]

Phone: 033-2457-2862

Coordinator: Prof. Argha Deb

E-mail: argha.deb@jadavpuruniversity.in

### 1. B. Number of Faculty Members : 1

### 2. A. Area of Research Activities:

- Effect of music and noise on autonomous nervous system
- A neuro-physical study on Music cognition and the brain
- Study of the melodic, rhythmic and emotional characteristics of music
- Studies of stochastic, chaotic and fractal behavior of speech and music signals
- Study on the phonetic quality and articulation patterns in Indian music visa-a-vi speech
- Study on the alankars in Indian classical music, namely, Taan, Meend, etc.
- Study on the Musical scales, consonance and dissonance, shrutis and the intervals used in the Indian classical music performance
- Study on Nasality in speech and music, the acoustic and perceptual cues of nasality, the degree of nasality and effect of nasality
- Study on the improvisation in different forms of Indian music
- Study on the Rhythm, tempo and styles in Indian music
- Analysis of different nuances of Indian music for finding out the features for estimating the physical correlates of musical terminologies
- Feature extraction and study on the Timbre and prosodic characteristics of vocal and instrumental music
- Modeling of emotion based on Hilbert space
- Music, meditation and consciousness



**2. B. Major Research Projects :**

1. DST Govt. of India CSRI funded Project on “Syntactic and Semantic integration of concepts in Event construals - A neuropsychological study of serial verbs and complex predicates”

Principal Investigator: **Dr. Samir Karmakar**

Co Principal Investigator: **Prof. Dipak Ghosh**

Project Duration: 3 Years

Project Cost: **Rs. 44, 36, 840**

**3. A. Invited Lectures Delivered/ Session Chaired:**

- Invited lectures were delivered by Prof. Dipak Ghosh, Emeritus Professor of the Centre in and around Kolkata on Emotions in music and its processing in the brain

**3. B. Seminar/Workshop/Conference/Symposium Attended:**

1. Dr. Shankha Sanyal, Dr. Archi Banerjee, Souparno Roy, Madhuparna Gangopadhyay, Dr. Anirban Patranabis, Dr. Kaushik Banerjee research scholars of the Centre presented 4 papers *International Symposium on Frontiers of Research in speech and Music (FRSM-2019)* held at Allenhouse Institute of Technology, Kanpur, India in July 6-7, 2019
2. Dr. Shankha Sanyal, Dr. Archi Banerjee, Souparno Roy research scholars of the Centre presented 3 paper at *National Symposium on Acoustics-2019 (NSA-2019)*, 17-19 October, 2019 held at Ravenshaw University, Cuttack, India
3. Dr. Shankha Sanyal, Dr. Archi Banerjee, Souparno Roy, Madhuparna Gangopadhyay, Dr. Anirban Patranabis, Dr. Kaushik Banerjee research scholars of the Centre presented 4 papers at the *International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, held at Jadavpur University, Kolkata, January 16-18, 2020

**3. C. Seminar/Workshop/Conference/Symposium Organized:**

1. Sir C.V. Raman Centre for Physics and Music in collaboration with School of Languages and Linguistics, Jadavpur University organized the *International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)* at Jadavpur University, Kolkata, January 16-18, 2020
2. Sir C.V. Raman Centre for Physics and Music in collaboration with Allenhouse Institute of Technology, Kanpur organized the *International Symposium on Frontiers of Research in speech and Music (FRSM-2019)* at Allenhouse Institute of Technology, Kanpur, India, 6-7 July, 2019

**4. B. Papers Published during the period:**

**a) Journals:**

1. **Tagore and Neuroscience: A Non-Linear Multifractal Study to encapsulate the evolution of Tagore Songs over A Century**  
Shankha Sanyal, Archi Banerjee, Sayan Nag, Uddalok Sarkar, Souparno Roy, Ranjan Sengupta, Dipak Ghosh *Entertainment Computing* (2020), 100367; <https://doi.org/10.1016/j.entcom.2020.100367>
2. **Speech, emotion and language: A neuroscientific exploration**  
Shankha Sanyal, Archi Banerjee, Samir Karmakar, Dipak Ghosh, *The Journal of the Acoustical Society of America* 146, 2846 (2019); <https://doi.org/10.1121/1.5136872>
3. **Language Independent Emotion Quantification using Non-linear Modelling of Speech**  
Uddalok Sarkar, Sayan Nag, Chirayata Bhattacharyaa, Shankha Sanyal, Archi Banerjee, Ranjan Sengupta, Dipak Ghosh, *Journal of Image Processing & Pattern Recognition* 6(3), 2019, 24-30
4. **A Fractal Approach to Characterize Emotions in Audio and Visual Domain: A Study on Cross-Modal Interaction**

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Sayan Nag, Uddalok Sarkar, Shankha Sanyal, Archi Banerjee, Souparno Roy, Samir Karmakar, Ranjan Sengupta, Dipak Ghosh, *Journal of Image Processing & Pattern Recognition Progress*, 6(3), 2019 1-7

5. **FROM SPEECH TO SONGS VIA RECITAL—A CASE OF PHASE TRANSITION? A FRACTAL STUDY OF TAGORE’S WORK**  
Archi Banerjee, Shankha Sanyal, Souparno Roy, Ranjan Sengupta, Dipak Ghosh, *Trends in Electrical Engineering* 3 (9), 2020, 30-36
6. **Categorization of Indian Classical Music Using MB-BE Distributions**  
Souparno Roy, Archi Banerjee, Shankha Sanyal, Dipak Ghosh, Ranjan Sengupta, *Journal of Software Engineering Tools & Technology Trends* 6(3), 2019, 9-15
7. **Music on Mind and Body: A Simultaneous EEG and EMG Study to Quantify Emotions from Hindustani Classical Music**  
Uddalok Sarkar, Soumyadeep Pal, Sayan Nag, Shankha Sanyal, Archi Banerjee, Souparno Roy, Ranjan Sengupta, Dipak Ghosh, *Research and Reviews: Journal of Neuroscience*. 2019; 9(2): 27–38p

### b) National/International Conferences:

1. **Is speech emotion an universal construct: A neuro-linguistic study**  
Shankha Sanyal, Archi Banerjee, Uddalok Sarkar, Samir Karmakar Dipak Ghosh *Proc. of the National Symposium on Acoustics-2019 (NSA-2019)*, 17-19 October, 2019, Ravenshaw University, Cuttack, India
2. **Raga Characterization of Indian Classical Music – Revisited with MB and BE Distributions**  
Souparno Roy, Archi Banerjee, Shankha Sanyal, Dipak Ghosh, Ranjan Sengupta *Proc. of the National Symposium on Acoustics-2019 (NSA-2019)*, 17-19 October, 2019, Ravenshaw University, Cuttack, India
3. **Fractal based Categorization of Bengali Phonemes: A Pilot Study**  
Pijush Kanti Gayen, Shankha Sanyal, Samir Karmakar *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
4. **In Search of Rhythm : A Correlational Study between Different Emotive Poetry pieces and Corresponding manifestation in the EEG signals using Fractal Analytics - a pilot study**  
Ratul Ghosh, Sankha Sanyal, Samir Karmakar, Dipak Ghosh *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
5. **Song: Lyrics on the Melody or Melody of the Lyrics?**  
Archi Banerjee, Shankha Sanyal, Souparno Roy, Priyadarshi Patnaik, Dipak Ghosh *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
6. **HOW DOES MUSICAL NOTES CORRELATE WITH HUMAN EMOTION? A PSYCHO-ACOUSTIC EXPLORATION WITH INDIAN CLASSICAL MUSIC**  
Medha Basu, Archi Banerjee, Shankha Sanyal, Dipak Ghosh *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
7. **IMPROVISATION IN INDIAN CLASSICAL MUSIC: PROBING WITH MB AND BE DISTRIBUTIONS**  
Souparno Roy, Archi Banerjee, Shankha Sanyal, Dipak Ghosh, Ranjan Sengupta *Proc. of International Conference cum Workshop on Rhythm in Speech and Music (ICRSM-2020)*, Jadavpur University, Kolkata, 16-18 January, 2020
8. **AN ACOUSTICAL AND NEURO-COGNITIVE STUDY ON THE APPRAISAL OF READING, RECITATION AND SONG IN NONLINEAR PERSPECTIVE**  
Archi Banerjee, Shankha Sanyal, Souparno Roy, Priyadarshi Patnaik, Dipak Ghosh *Proc. of the National Symposium on Acoustics-2019 (NSA-2019)*, 17-19 October, 2019, Ravenshaw University, Cuttack, India

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### DISASTER PREPAREDNESS & MANAGEMENT

Phone: 033-2457-2706

Coordinator : Dr. Gupinath Bhandari

E-mail: Gupinath.bhandari@jadavpuruniversity.in

#### 2. A. Area of Research Activities (Broad Area):

- Climate Change and Disaster Risk Reduction (DRR)
- Geohazards, Disaster Management and Resilience
- Flood, Draught, Earthquake, Cyclone
- Cyclone Shelter
- Coastal Regulatory Zone (CRZ)
- River and Ocean Dynamics and Engineering
- Ecofeminism, Gender Inequality
- Vulnerability Studies
- Risk Analysis
- Risk Management
- Disaster Preparedness

#### 3. A. Invited Lectures Delivered/Sessions Chaired: (Invited Lecture, Details)

**Dr. Gupinath Bhandari** delivered an online lecture on “*Construction of Sustainable Barrages & Embankments*”, 12 December, 2020, for a Course organised by ATI, Government of West Bengal

#### 3. B. Orientation Courses/Refresher Courses Organized:

- UGC Sponsored Refresher Course on “Disaster Management” (IDC), Organized by Centre for Disaster Preparedness & Management, Jadavpur University, Kolkata 700032, during 03 –15 February, 2020

#### 3. C. Seminar/ Conference/ Workshop Organised:

- International Conference on Sustainable Environment & Healthcare (ICSEH 2019), during 22 & 23 December, 2019, at Gandhi Bhawan, Jadavpur University, Kolkata 700032, Jointly organized by Centre for Disaster Preparedness & Management, Jadavpur University, Kolkata, India; Chittaranjan National Cancer Institute, Kolkata, India & Lincoln University College, Malaysia
- Offered two months Summer Internship, during May 01 to June 30, 2019 on **Environmental Remote Sensing and Cartography** through the ‘Primary Tool for Disaster Management’
- ‘TEQIP Phase III’ & ‘RUSA 2.0’, Jadavpur University Supported, Two Days National Workshop on “**Hands on Training and Exercise on the Tool for Planning of Sustainable Development: ArcGIS**”, during 06 & 07 September, 2019, organized in Collaboration with Electrical Measuring Instruments, EMI (An Authorized Partner of ESRI India)
- ‘TEQIP Phase III’ & ‘RUSA 2.0’, Jadavpur University Supported, One Week Interdisciplinary National Training Course on “Sustainable Development of Traffic Management”, organized Jointly with the Department of Civil Engineering, Jadavpur University, Kolkata; during 22–26 October, 2019

#### 3. D. Target Group and Beneficiaries:

- The initial target group for the training is the Government/ Non Government Officials directly dealing with the disasters, those who cater their service to the society
- The Disaster Management has no syllabus and no boundary  
The beneficiary would be all the members of the Society

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### 4. Future Academic Plans of the Centre (if any):

- To carry out the research work leading to PhD degree in different aspects of Disaster Management
- To carry out interdisciplinary research work in different aspects of Disaster Management
- To organize the Training Courses, Workshops, Seminars, Conferences on in different aspects of Disaster Management
- To organize the Awareness, Sensitization and Rehearsal on Disaster Preparedness at the grass root level
- To organize the Short-Term Course on Disaster Preparedness for the interested participants, those who are working in this field

## DISTRIBUTED COMPUTING

[Department of Computer Science & Engineering]

Phone: 033-2457-2403/2952

Coordinator: Prof. Chandan Mazumdar

E-mail: chandanmazumdar@jadavpuruniversity.in

### 2 A. Area of Research Activities:

Theory and Modeling of Distributed Systems, Synchronization Issues, Distributed Systems Security, Fault Tolerance in Distributed Systems, Real-Time Distributed Systems, Embedded Distributed Systems, Reliable Communication Protocols for Distributed Systems, Mobility and Management of mobility in Distributed Systems, Software Life Cycle Management for Distributed Systems, Web-based Systems, Reliability Issues, Digital Forensics, Disaster Management, IT for the under-privileged and handicapped, Enterprise Information Security, Data Privacy

### 2 B. Major Research Projects:

- i) Enhancement of PoliComp Tool - Information Security Policy Compliance Checker Tool based on Log Records, CARS project funded by SAG, DRDO, GoI.ii) Development of Indigenous Technologies for Secure Software Defined Network, funded by JCBCAT, DRDO, GoI.iii) Development of Prevent-Detect-Protect (PDP) Framework, funded by MeiTy, GoI.iv) Development of Vulnerability Detection Methodology for IoT Devices, funded by MeiTy, GoI

### 4 A. Books/Monographs etc. Published:

- i) Manna A., Sengupta A., and Mazumdar C., "A Quantitative Methodology for Business Process-Based Data Privacy Risk Computation", In: Chaki R., Cortesi A., Saeed K., Chaki N. (eds) Advanced Computing and Systems for Security. Advances in Intelligent Systems and Computing, vol 996, 2020, pp. 17-33, Published by Springer, Singapore

### 4 B. Articles Published in Journals:

"Security Concern" as a Metric for Enterprise Business Processes, P Mukherjee, C Mazumdar IEEE Systems Journal 13 (4), 4015-4026

### 6. Major Achievements: 3 PhD theses submitted

## HUMAN SETTLEMENT PLANNING

[Department of Architecture]

Phone: 033-2457-2824/2425

Jt.Coordinators: Prof. Jayita Niyogi & Prof. Suchandra Bardhan

E-mail: hsp.centre@jadavpuruniversity.in

### 1. A. Courses Offered:

Name of the Course	Duration of Course	No. of Students Enrolled
Short term Courses/workshops on Planning related topics	1 Week	30-75

1. B. **Number of Faculty Members:** Following two faculty members of Department of Architecture are acting as Joint Coordinators

### 2. A. Area of Research Activities:

- i. **Prof. Dr. Jayita Guha Niyogi:** Town and Regional Planning, Transportation Planning, Integrated Land use and Traffic System
- ii. **Prof. Dr. Suchandra Bardhan:** Landscape Planning, Green Infrastructure, Buildings and climate change & sustainability; Historic, regional & urban landscapes

### 2. B. Major Research Project:

**Departmental/Individual:** At the level of Centre

**Name of the Project:** Land Use Mapping; Land Use & Transportation planning; Heritage, Landscape and Urban studies of select areas in West Bengal

**Funding Agency:** Self-funded

### 3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher-Name of the Paper presented-Name of the Seminar/ Conference/Workshop-Place-Duration)

Prof. Jayita Guha Niyogi & Prof. Suchandra Bardhan, Coordinators & Ms. Dechen Donka Bhutia, Convenor -RUSA sponsored One-week National Workshop on 'Application of Qualitative & Quantitative Techniques in Sustainable Urban Planning' -Department of Architecture, JU-20-26 September, 2019

This Rashtriya Uchchattar Shiksha Abhiyan (RUSA) - JU sponsored workshop involved learning the basic principles of research in the field of environmentally sustainable development considering the social, environmental, technological and economic, dimensions of projects, policies and programs, as well as ethical and procedural considerations of any research project using qualitative or quantitative techniques and then focus on the practical application in urban planning by providing real-world examples of research methods as case studies. Specialized softwares for data handling and categorisation have been in use in qualitative or quantitative research, the uses of which have been included in the present course content. The workshop aims to interact with other special groups to promote common interests and develop intra-disciplinary connections to bridge the perceived gap between quantitative and qualitative research through discussions and establishment of a common platform with the purpose of enhancing meticulous research across the spectrum. Hands-on software exercises were conducted with SPSS, R-Software, Q-GIS 3.4 version and X L STAT

### Tentative Sub Themes:

- Landuse Projection Modelling and its application in Sustainable Urban Planning
- Pollution Projection Methods
- Shape and Directional Analysis and its Application in Urban Planning



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- Principal Components Analysis and Factor Analysis and its Application areas
- Analysis of Variance – One Way, Two Way and its Application in Urban Planning
- Statistical Inferences and Multivariate Analysis in Regional Planning
- Multi-Criteria Decision making Tools in Sustainable Urban Planning and assessment of Sustainability
- Geo – Simulation in GIS, QGIS, Hands on Training on QGIS
- Application of SPSS Software in Spatial Planning

### IC DESIGN & FABRICATION

[Department of Electronics & Telecommunication Engineering]

Phone: 033-2457-2406

033-2414-6217

Coordinator: Prof. Subir Kumar Sarkar

E-mail: [sksarkar.etce@jadavpuruniversity.in](mailto:sksarkar.etce@jadavpuruniversity.in)

#### 1. A. Courses Offered:

- Training Courses:** For students of MCKV Institute of Engineering (MCKVE), Gurunanak Institute of Technology (GNIT) & Narula Institute of Technology (NIT) under MOU signed between IC Design & Fabrication Centre and the concerned colleges(three colleges)
- Name of the Course:** Short term course on “Microelectronics Technology and VLSI Design”: for UG Engineering students of West Bengal  
Duration of the Course: 6 weeks.  
Number of students enrolled: 120 per year

#### 1. B. Number of Faculty Members: 6 Faculties in Administrative committee

#### 2. A. Area of Research Activities:

1. Electronic Devices including Semiconductor Nanodevices : Modeling and Simulation
2. Photonics Devices
3. Porous Silicon Formation by Alumina Template
4. Single electron & spintronics devices and their applications in VLSI circuits
5. Perovskite Solar Cells based on Titanium, Nickel and Cadmium doped BiFeO<sub>3</sub> active material
6. Organic and Inorganic Dyesensitized Solar Cells
7. VLSI Circuit Design and RF VLSI
8. VLSI interconnect delay optimization
9. CMOS MEMS integration and signal conditioning of gas sensor
10. Porous silicon low pressure sensors
11. Study of nanocrystalline silicon, Zinc Oxide TiO<sub>2</sub> and its application on Solar Cells and gas sensors.

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12. Design and simulation of RF MEMS based capacitive switch
13. Nano-devices and Low power VLSI circuits
14. MEMS, NEMS, RF MEMS
15. Microwave passive device
16. Antenna optimization
17. Substrate integrated waveguide
18. Microwave and millimeter wave antennas
19. Dielectric resonator antennas (DRA)
20. Antennas for 5G systems
21. Antenna Optimization
22. Digital watermarking and data security
23. Security and Cryptography
24. RFID and its applications
25. Wireless communication
26. Digital signal processing
27. Gas Sensors
28. Mobile Ad-hoc networks (MANET)
29. Wireless sensor networks (WSN)
30. Organic Field effect transistor
31. VLSI Architectures and algorithms

### 2. B. Major Research Project:

#### Prof. Subir Kumar Sarkar

1. Title of the project: Development of efficient solar cell structures with the exploration of suitable material in software domain and characterization of such solar cells, Role: Principal Investigator, Funding Agency: RUSA, Amount (Rs.):4.496 lakhs+1 scholar, Status: Project completed, Duration: (2019-2020)
2. Title of the project: Cost Effective and Manpower Efficient Real-Time Implementation of RFID Based Surveillance System for Poultry Based Industry in Rural/ Urban Region to Solve the Avian Influenza/Bird Flu Problem, Role: Principal Investigator, Funding Agency:DST-WB, Amount (Rs.):15.908 lakhs+1 scholar, Status: Ongoing, Duration: (2018-2020)
3. Title of the project: Analytical Modeling and simulation based verification for low dimensional devices suitable for Low Power Application, Role: Principal Investigator, Funding Agency: UGC UPE Phase-II, Amount (Rs.): 7.32 lakhs + 1 scholar, Status: Project completed, Duration:(2016-2019)
4. Title of the project: Low Power ASIC-VLSI Implementation of Secure and Authentication Algorithms for Defense Application, Role: Principal Investigator, Funding Agency: UGC UPE Phase-II, Amount (Rs.): 7.82 lakhs +1 scholar, Status: Project completed, Duration:(2016-2019)

#### Prof. Bhaskar Gupta

1. Principal Investigator of Project “Investigation on Electromagnetic energy absorption in plants and fruits along-with consequent effects”, 2019-2020 (Ongoing), Sponsored by JU-RUSA 2.0 Departmental support towards up-gradation in research, Rs.4,99,600/- Lakhs
2. Principal Investigator of Project “Propagation channel characterization for 5G applications”, 2019-2020 (Ongoing), JU-RUSA 2.0 Departmental support towards up-gradation in research, Rs. 22,41,000/- Lakhs.
3. Principal Investigator of Project “A COVID-19 META SCREEN”, 2019-2020 (Ongoing), IEEE SIGHT, with a sanctioned amount of US \$4,585.00

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4. Principal Investigator of Project ‘Miniatura Antenna Development for Communication between Airborne Drones in Swarm’ under DST India-Czech Joint Research Projects 2019 recommended for three years’ support. Disbursal of funds awaited

### **Prof. Sudipta Chattopadhyay**

1. Title of the Project: Development of Enhanced Security Models for LTE/LTE-A and IOT Networks, Funding Agency: JU RUSA 2.0, Ref. No.:R-11/715/19, Amount: Rs. 8.30928/- Lakhs, Duration: June 2019 - March 2020, Status: Completed

### **Dr. Sayan Chatterjee**

1. Co-Chief investigator of the project “Vision guided Auto-Lander for Planetary mission” 2019-2021 (ongoing) sponsored by Indian Space Research Organization (ISRO) under RESPOND scheme, Rs. 26.32/- Lakhs
2. Chief Investigator of Project “Design and Development of X band Dual Polarized Waveguide Slotted Array Antenna” Rs. 2017-2019-/-; extended to 2020, sponsored by Indian Space Research Organization (ISRO) under RESPOND scheme, Rs. 20.46/- Lakhs
3. Chief Investigator of Project “Design and Development of Adaptive Phased Array Antenna System for Dynamic Air Traffic RADAR used in Disaster Management” 2019-2020 (ongoing) under Major research project, RUSA Rs.7.10/- Lakhs
4. Coordinator of project “Versatile Data Acquisition & signal processing platform for Seismic Application: Design of RF subsystem” Sponsored by SMDP-C2SD, MeITy, India 2015-2020; extended to 2021 (ongoing), Rs.136/- Lakhs

### **Dr. Chandrima Mondal**

1. “Design of Frequency synthesizer, LNA and mixer at 2.45 GHz for seismic signal detection frontend”. In collaboration with IIT Kharagpur, MEITY, Rs.136/- Lakhs, 2015-2020, Co-PI
2. “Advanced Gate, Channel and Source/Drain Materials for Future Nanoelectronic Devices” RUSA 2.0, Rs.8/- Lakhs, 2019-2020, PI

## **3. A. Invited Lectures Delivered/Sessions Chaired: (India and Abroad)**

### **Prof. Subir Kumar Sarkar**

1. Delivered an IEEE Distinguished Lecture on “BiCMOS: A Current Trend in VLSI Design” in 10th IEEE EDS Mini-Colloquium on 28 February, 2020, organized by IEEE ED-NIST Student Branch Chapter, in association with Department of Electronics and Communication Engineering, NIST Berhampur
2. Delivered an IEEE Distinguished Lecture on “OFET based Devices and their Applications” on 9 September, 2019, organized by IEEE Student Branch Chapter of Kalyani Government Engineering College, in association with Department of Electronics and Communication Engineering, Kalyani Government Engineering College
3. Delivered an IEEE Distinguished Lecture on “Importance of Trust: When and Where”, on 12 April, 2019, organized by IEM IEEE COMSOC Student Chapter in association with the Department of Computer Science and Engineering, Institute of Engineering & Management, Gurukul Campus, Saltlake, Kolkata
4. Delivered an Invited talk on “Devices and VLSI Design: Issues and Challenges”, in two days seminar on Recent Trends and Challenges in Silicon and GaN Devices and Circuits during 27- 28 February 2020, organized by Department of ETC, PMEC, Berhampur, India
5. Delivered an Invited talk on “Trust Management in Wireless Self Organizing Networks” in 7th International Conference on Computers and Devices for Communications (CODEC-19) 19-20 December, 2019, organised by Institute of Radio Physics and Electronics, University of Calcutta, Kolkata, India
6. Delivered an Invited talk on “Transient Electronics: a Brief Study of the Materials and Devices” on 5 November 2019, organized at Heritage Institute of Technology, Kolkata, West Bengal, India
7. Delivered a keynote speech on “Good Practices and its Documentation for Improved Teaching-Learning in Winter School 2020” in three days program jointly organized by Department of Computer Science and

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Engineering (CSE) and Department of Electrical and Electronic Engineering (EEE) of University of Science and Technology Chittagong (USTC), Bangladesh during 26–28 January, 2020

8. Chaired the technical session in 7th International Conference on Computers and Devices for Communications (CODEC-19) on 19-20 December, 2019, Organized by Institute of Radio Physics and Electronics, University of Calcutta in Hotel Taj Gateway, Kolkata, India

### Prof. Bhaskar Gupta

1. One-day online Invited Lecture Talk programme organized by The IEEE EDS Kalyani Govt. Engineering College SB Chapter in association with Department of ECE, Kalyani Government Engineering College
2. Invited Talk on Analytical Modeling of Microstrip Traveling Wave Antennas at International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW- 2019), NIT Trichy, 23/05/2019
3. Invited talk on Analytical Modeling of Microstrip Traveling Wave Antennas at Fukuoka Institute of technology, Fukuoka, Japan on 20/02/2020
4. Invited talk on Electromagnetic Radiation Absorption in Indian Flora and Related Consequences: A Critical Issue for Sustainable Growth at Kumamoto, University, Kumamoto, Japan on 21/02/2020
5. Invited talk on Electromagnetic radiation absorption in Indian flora and related consequences: a critical issue for sustainable growth, IEEE RADIO 2019, September 2019, Reunion island
6. Chaired a session in Seminar on Full-wave analysis and design of Dielectric Resonator Antennas, Date: 13 March, 2020, Prof. Bratin Ghosh, IIT KGP, Seminar Room, Department of ETCE, Jadavpur University
7. Chaired a session in Seminar Talk delivered by Debdeep Sarkar, Post-doctoral Research Fellow, RMC Canada, Seminar Room, Department of ETCE, Jadavpur University
8. Chaired a session in Seminar on Method of Moments in Electromagnetics: Concepts and Practical Real-World Applications, 14 January, 2020, Dr. Arkaprov Das, Co-founder at Simyog Technology Private Limited Seminar Room, Department of ETCE, Jadavpur University
9. Chaired a session in One Day Seminar On “Harmonising Engineering Education With Nature”, Date: 18 December 2019, Time: 7:30 AM to 8:30 PM, Demonstrator: Dr. Nemaï Chandra Karmakar, Monash University, Australia
10. Chaired a session in IEEE MMT-S Mediterranean Microwave Symposium (MMS)2019 in Hammamet, Tunisia, on 1 November, 2019
11. Chaired a session in One Day Workshop on EM Educational Software – Introduction to TARANG, Date: 22 October 2019, Time: 01:00 AM to 5:00 PM, Demonstrator: Mr. Swapnil Gaul, NUMEREGION.
12. Chaired a session in Doctoral Scholars’ Colloquium, Date: 14 September 2019, Time: 10:30 AM to 04:30 PM, No. of Technical Presentations on Ph. D. Works: 6, Judges: Prof. (Dr.) A K Mullick (Retd. IIT Kharagpur), Mr. Arijit Majumder (SAMEER, Kolkata)
13. Chaired a session in One Day Seminar on Microwave System Design, Date: 03 September 2019, Time: 03:00 PM to 05:00 PM, Speaker, Mr. Arijit Majumder (SAMEER, Kolkata), Technical lecture on “Design of Highly Sensitive Wide Dynamic Range Microwave Receiver: An Engineer’s Perspective”
14. Chaired a session in Young Professionals Colloquium, Date: 18 April 2019, Time: 02:00 PM to 04:00 PM, Prof.(Dr.) Debasis Mitra (Department of ETCE, IEST Shibpur, Kolkata), Technical lecture on Electromagnetic Metamaterials and its application towards Antenna and Radar Engineering

### Prof. Sudipta Chattopadhyay

1. Delivered a lecture on “Design Strategies of Hardware Efficient Multiplier-less FIR Filter” in 3-day Workshop on “Digital Image Processing and its Applications”, held in Tripura Institute of Technology (TIT), Agartala, during 26-28 October, 2019
2. Delivered a lecture on “Women Power in Engineering” as Chairperson of IEEE Women in Engineering, (WIE) Kolkata Section, in the one-day program on “Working Women Scaling New Peaks Overcoming Hurdles”, held in Brainware Group of Institutions, on 4 April, 2019

**Dr. Sayan Chatterjee**

1. “Advancement of transmission line for modern communication system”, delivered in FDP on “Microwave Techniques in Wireless Application”, held in NIT Mizoram during 23– 27 April, 2019
2. Chaired a session “Technical Session 2: Security Track” on 14th January in International Conference on Frontiers in Computing and Systems (COMSYS-2020), held during 13-15 January, 2020, at Jalpaiguri Government Engineering College, West Bengal
3. Chaired a session “Antenna and propagation -1” on 1 November, 2019 in IEEE MMT-S Mediterranean Microwave Symposium (MMS) 2019 in Hammamet, Tunisia

**3. B. Seminar/Workshop/Conference/Symposium Attended: (India and Abroad)**

**Prof. Subir Kumar Sarkar**

1. Organized IEEE sponsored International seminar cum Research Colloquium on “MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019)” during 27-28 December, 2019 in Jadavpur University as General chair

**Prof. Sudipta Chattopadhyay**

1. Organized a Panel Discussion under Women in Engineering (WIE) Track on “Are women still suffering from visibility problem in workplace?” on 7 June, 2019, under IEEE Region 10 Symposium (TENSYP 2019) held at Kolkata during 5-7 June, 2019 as Chairperson of IEEE Women in Engineering, (WIE) Kolkata Section

**Dr. Sayan Chatterjee**

1. Organized Startup & MSME working in Embedded Systems in West Bengal in collaboration with TEQIP-III, JU and Nexgenetics Pvt Ltd on 6 February, 2020 at K.P. Basu Memorial hall, Jadavpur University
2. Acted as organizing coordinator for the programme titled “Entrepreneurship Summit 2020” (28 February, 1 March, 2020) under Graduate employability of TEQIP in Jadavpur University where students are the primary stakeholders of the event
3. Acted as organizing coordinator of Internal Hackathon of Smart India Hackathon and HPOC of Smart India Hackathon 2020 on 6 January, 2020 in Jadavpur University
4. Acted as organizing coordinator for the programme titled “Hackathon Hacknpitch 2020” on 29 February, 2020 in Jadavpur University under Graduate employability of TEQIP. UG students are involved to submit their solution after continuous 30 hours of hackathon
5. Acted as organizing coordinator for the programme titled “Bootcamp 2020” on 20 February in Jadavpur University, under Graduate employability of TEQIP where students are the primary stakeholders of the event
6. Acted as organizing coordinator of the programme ‘Launch X’ on 5-6 February organized in Jadavpur University by JU Ecell for the event E-summit 2020
7. Acted as organizing coordinator for the programme titled “Eweekend 3.0” in September 2019 in Jadavpur University under Graduate employability of TEQIP
8. Acted as organizing coordinator for the programme titled “Green business idea competition” jointly sponsored by TEQIP and Climate Launchpad in 10 August, 2019 in Jadavpur University
9. Acted as Programme committee Track Chair of VLSI/ system/ IOT track of the conference entitled “International Conference on Frontiers in Computing and System (COMSYS 2020) from 13 -15 January, 2020 at Jalpaiguri Govt. Engineering College
10. Acted as Technical Programme Committee Co-Chair of IEEE R-10 annual conference TENSYP-2019 7-9 June, 2019 at Kolkata



**3. C. Seminar/Workshop/Conference/Symposium Organized:**

**Prof. Subir Kumar Sarkar**

Organized IEEE sponsored International seminar cum Research Colloquium on “MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019)” during 27-28 December 2019 in Jadavpur University as General chair

**Prof. Sudipta Chattopadhyay**

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1. Organized Startup & MSME working in Embedded Systems in West Bengal in collaboration with TEQIP-III, JU and Nexgenetics Pvt. Ltd. on 6 February, 2020 at K.P.Basu Memorial hall, Jadavpur University
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4. Acted as organizing coordinator for the programme titled “Hackathon Hacknpitch 2020” on 29 February, 2020 in Jadavpur University under Graduate employability of TEQIP. UG students are involved to submit their solution after continuous 30 hours of hackathon
5. Acted as organizing coordinator for the programme titled “Bootcamp 2020” on 20th February in Jadavpur University, under Graduate employability of TEQIP where students are the primary stakeholders of the event
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8. Acted as organizing coordinator for the programme titled “Green business idea competition” jointly sponsored by TEQIP and Climate Launchpad in 10 August 2019 in Jadavpur University
9. Acted as Programme committee Track Chair of VLSI/ system/ IOT track of the conference entitled “International Conference on Frontiers in Computing and System (COMSYS 2020) from 13-15 January, 2020 at Jalpaiguri Govt. Engineering College
10. Acted as Technical Programme Committee Co-Chair of IEEE R-10 annual conference TENSYP-2019 7-9 June, 2019 at Kolkata

**4. A. Books/Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)**

**Book Chapters:**

**Prof. Subir Kumar Sarkar**

1. Bijoy Goswami, Suttanni Bhowmick, Arindam Haldar, Goutika Paul, Debodipta Basak and **Subir Kumar Sarkar**, “Implementation of L shaped dielectric double metal dual gate TFET towards improved performance characterized and reduced ambipolarity”, 2nd National Conference IPC 2019 at B.P. Poddar Institute of Management and Technology Kolkata West Bengal, 1-3 February, 2019. Published as book chapter in Networks and systems, in Information, Photonics and Communication in Lecture Notes , pp-21-29, Vol.79, 978-981-32-9453-0, January 2020

#### 4. B. Articles Published in Journals:

##### Prof. Subir Kumar Sarkar

1. Priyanka Saha, Pritha Banerjee, Dinesh Kumar Dash and **Subir Kumar Sarkar**, “Interface Trap Charge Induced Threshold Voltage Modeling of WFE High-K SOI MOSFET”, Silicon, Springer, doi.org/10.1007/s12633-020-00386-5, January, 2020, pp.2893-2900
2. Rounak Dutta and **Subir Kumar Sarkar**, “Analytical Modeling and Simulation based Optimization of Broken Gate TFET Structure for Low Power Applications” in the IEEE Transactions on Electron Devices, IEEE Transactions ON Electron Devices, Vol. 66, No. 8, pp.3513-3520, August, 2019
3. Dinesh Kumar Dash, Priyanka Saha and **Subir Kumar Sarkar**, “3-D Analytical Modeling of Triple Metal Tri-Gate Graded Channel High-k SON TFET for Improved Performance” Silicon, Springer vol. 12, pp-2041-2052, DOI: 10.1007/s12633-019-00268-5, December 2019
4. Subhrapratim Nath, Anup Dey, Prithviraj Pachal, Saikat Ray, Jamuna Kanta Sing and **Subir Kumar Sarkar**, “Perfomanace analysis of Gas Sensing Device and corresponding IoT Framework in Mines” Microsystem Technologies, Springer, doi.org/10.1007/s00542-019-04621-x, pp.-not included in any vol. and issue till date-September, 2019
5. Priyanka Saha, Dinesh Kumar Dash and **Subir Kumar Sarkar**, “Nanowire Reconfigurable FET as Biosensor: Based on Dielectric Modulation Approach”, Solid State Electronics, Elsevier, doi. 10.1016/j.sse.2019.107637, pp.107637(1)- (9), August 2019
6. Bikram Biswas, Anup Dey, Sutanni Bhowmick, Mandira Biswas, Subhashis Roy and **Subir Kumar Sarkar**, “Capacitive Multilayered Bio-Sensor Based on Dielectric Modulation towards Sensing of Biomolecules” Sensor Letters, Vol. 17, no. 9, pp. 701-703, September 2019
7. Dinesh Kumar Dash, Priyanka Saha and **Subir Kumar Sarkar**, “Analytical Modeling of Dielectric Engineered Strained DMDG-TFET”, IET Circuits, Devices & Systems, DOI:10.1049/iet-cds.2018.5293, pp.1039-1048, June 2019
8. Bikram Biswas, Anup Dey, Subhashis Roy and **Subir Kumar Sarkar**, “Fabrication of a WO<sub>3</sub> Conductometric Activated Thin Film Sensor for Resistance-to-frequency Conversion Based Sensing Application”, IETE Journal of Research, Taylor & Francis, DOI: 10.1080/03772063.2019.1615387, pp.-not included in any vol. and issue till date, May 2019
9. Debadipta Basak, Koelgeet Kaur and **Subir Kumar Sarkar**, “Active biquad tunable filter design”, Analog Integrated Circuits and Signal Processing, Springer, DOI: 10.1007/s10470-019-01457-3, pp.269-277, May 2019
10. Disha Bhattacharjee, Bijoy Goswami, Dinesh Kumar Dash, Ayan Bhattacharya and **Subir Kumar Sarkar**,” Analytical Modelling and Simulation of Drain Doping Engineered Splitted Drain Structured TFET and its Improved Performance in Subduing Ambipolar Effect”, IET Circuits, Devices & Systems, DOI:10.1049/iet-cds.2018.5261, pp.888-895, May 2019
11. Priyanka Saha and **Subir Kumar Sarkar**,” Drain current modeling of proposed Dual Material Elliptical Gate-All-Around Heterojunction TFET for enhanced device performance”, in Superlattices and Microstructures, Elsevier, DOI: 10.1016/j.spmi.2019.04.022, pp.194-207, April 2019

##### Prof. Bhaskar Gupta

1. Pal J, Patra K, **Gupta B.**, “A TM<sub>03</sub> mode reduced side lobe high-gain printed antenna array in K band for UDN and IoT applications in 5G.” Int J RF Microw Comput Aided Eng., vol. 30. No.11 (<https://doi.org/10.1002/mmce>)
2. R. Ghosal, Sudipta Maity, **Bhaskar Gupta** and Arijit Majumder, “Analytical Prediction of Resonant Frequencies of Annular Stacked Dielectric Resonator Antennas,” accepted for publication to International Journal of RF and Microwave Computer-Aided Engineering (Taylor & Francis) on 12 March, 2020 (<https://doi.org/10.1002/mmce.22237>)

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3. Sudipta Maity and **Bhaskar Gupta**, “Analytic Evaluation of Input Impedance of an Equilateral Triangular Dielectric Resonator Antenna”, accepted for publication to IETE Journal of Research (Taylor & Francis) on 28 October, 2019 (<https://doi.org/10.1080/03772063.2019.1684846>)
4. Sudipta Maity, Malay Gangopadhyaya and **Bhaskar Gupta**, “Theory and Experiment on Horizontally Inhomogeneous Rectangular Microstrip Antenna”, IET Microwaves, Antennas & Propagation, vol. 13, no. 3, pp. 352 – 359, February 2019 (<https://doi.org/10.1049/iet-map.2018.5116>)
5. Suman Pradhan, **Bhaskar Gupta** “Multiport Network Model of Double-stub Loaded Microstrip Ring Antenna for Tri-band Operation”, published in Radio-engineering Journal, Vol. 28, No. 3, September, 2019

### Prof. Sudipta Chattopadhyay

1. Prabhat Kumar Panda, **Sudipta Chattopadhyay**, “A Secure Mutual Authentication Protocol for IOT Environment”, *Journal of Reliable Intelligent Environments*, Springer, (Impact Factor: 1.610) DOI: 10.1007/s40860-020-00098-y, vol. 6, issue 2, pp. 79-94, January 2020
2. Subhabrata Banerjee and **Sudipta Chattopadhyay**, “Superposition modulation-based new structure of four-dimensional turbo code (4D-TC) using modified interleaver and its application in WiMAX & LTE systems”, *Personal and Ubiquitous Computing*, Springer, (Impact Factor: 2.212) DOI: 10.1007/s00779-019-01295-0, vol. 23, issue 5-6, pp. 943-959, November 2019
3. Subhabrata Banerjee and **Sudipta Chattopadhyay**, “Performance Analysis of Four Dimensional Code (4D-TC) using Moment Based Simplified Augmented State Diagram (MSASD) Approach: Extension to LTE System”, *Wireless Personal Communications*, Springer, (Impact Factor: 1.019) DOI: 10.1007/s11277-019-06510-y, vol. 108, issue 4, pp. 2077-2102, October 2019

### Dr. Sayan Chatterjee

1. Tarun Kumar Das, **Sayan Chatterjee**, “Spurious harmonic suppression in compact coupled-line bandpass filter with asymmetric perturbations”, *International Journal of Electronics*, pp. 576-595, Volume 107, 2020
2. Souma Guha Mallick, Arun kumar Gande, Bijit Biswas, **Sayan Chatterjee**, D.R.Poddar, “A planar eight-way compact substrate integrated waveguide based radial power divider with broadband performance”, *Microwave Opt. Technology Lett*, 2019, pp. 1-7
3. Amit Mondal, Sikha Bandyopadhyay, Ashok Kumar Mondal, **Sayan Chatterjee**, “Evaluation of New Acid Composition for Low Optical Reflectance Texturization of Multicrystalline Silicon Wafer for Solar Cell”, *IEEE Journal of Photovoltaics*, Vol 9, No. 4, pp.951-956, July 2019
4. Sourav Das Chowdhury, Bhaswar Dutta Gupta, **Sayan Chatterjee**, Ranjan Sen, Mrinmay Pal, “Rogue waves in a linear cavity Yb-fiber laser through spectral filtering induced pulse instability”, *Optics letters*, Volume 44, Issue 9, pp. 2161-2164, 2019

### Dr. Chandrima Mondal

1. J. Paul, **C. Mondal** and Abhijit Biswas, “Suppression of Buried Oxide Induced Variability on Digital Performance of GeOI<sub>p</sub>MOSFETs using Substrate Bias Scheme,” *Microsystem Technologies*, pp.1605-1611, November 2019
2. S. Dasgupta, **C. Mondal** and A. Biswas, “Role of grooving angle of 14-nm InAs quantum well for improvement of analog/RF and linearity performance”, IET circuits Devices and Systems, pp.1-7, October, 2019
3. S. Dasgupta, **C. Mondal** and A. Biswas, “Effect of temperature and channel thickness on digital and analog performance of InAs Quantum Well nMOSFETs”, *Microsystems Technologies*, pp.1-7, October, 2019

### Prof. Bhaskar Gupta and Subir Kumar Sarkar

1. Abir Jana, Komal Kumari, Anup Dey, P.S. Sreenivas Reddy, Bikram Biswas, **Bhaskar Gupta**, **Subir Kumar Sarkar**, “Fabrication of P-N Heterojunction Based MoS<sub>2</sub> Modified CuPc Nanoflowers for Humidity Sensing”, *Sensors and Actuator A*, Elsevier, doi.org/10.1016/j.sna.2019.111574, pp.111574(1)-(7), August, 2019

**Prof. Bhaskar Gupta and Dr. Sayan Chatterjee**

1. Amartya Banerjee, **Sayan Chatterjee**, **Bhaskar Gupta**, Anup Kumar Bandyopadhyay, “Analysis of uniform and tapered CPW –fed Zigzag Monopoles used as Feed structure for wide slot radiators”, *Radioengineering*, Vol 28, No 3, pp. 559-564, September 2019

**Prof. Sheli Sinha Chaudhuri and Dr. Sayan Chatterjee**

1. Arijit Majumdar, Soumyo Chatterjee, Sulagna Bose, **Sayan Chatterjee**, **Sheli S Chaudhuri**, Dipak R Poddar, “Differential evolution based small signal modeling of GaN HEMT”, *International Journal of RF and Microwave Computer Aided Engineering*, Volume 29, Issue 6, pp. 1-8, 2019

**Prof. Subir Kumar Sarkar and Prof. Sudhabindu Ray**

1. Subhashis Roy, Anup Dey, Bikram Biswas, Ayan Bhattacharya, **Sudhabindu Ray**, and **Subir Kumar Sarkar**, “Comparison of Annealing Temperature and Heterostructure Effects on ZnO Based Thin Film H<sub>2</sub> Sensor”, *Sensor Letters*, ASP, Vol. 17, No. 7, pp.505–510, July 2019
2. Savio Jay Sengupta, Bikram Biswas, Dipanjan Sen, **Sudhabindu Ray**, Subhashis Roy and **Subir Kumar Sarkar**. “A Novel Approach for RFID Based Distributed Security against Physical Access of University Data” *Journal of Information and Optimization Sciences*, vol. 40, Issue 8, pp. 1575-1582, February, 2020

**Articles Published in Conference :**

**Prof. Subir Kumar Sarkar**

1. Bijoy Goswami, Kousik Naskar, Sharmistha Shee kanrar, Anup Dey, Abir Jana and **Subir Kumar Sarkar**, “The Hypothesis of Two-Sources on TFET’s Ambipolar Current and its Quantum Confinement Effect”, 2020 8th International Electrical Engineering Congress (iEECON), Chiang Mai, Thailand, 4-6 March, 2020, pp. 1-4, doi: 10.1109/iEECON48109.2020.229576
2. Bijoy Goswami, Lavlesh Kumar Barman, Abir Jana, Anup Dey, Wasim Reja and **Subir Kumar Sarkar**, “A Source Pocket Doping in PNP-DG TFET to Preclude Ambipolar Current – Two Dimensional Simulation,” in 2020 8th International Electrical Engineering Congress (iEECON), 4-6, March, 2020, Chiang Mai, Thailand, pp. 1-4, doi: 10.1109/iEECON48109.2020.229575
3. Abir Jana, Disha Bhattacharjee, Komal Kumari, Anup Dey, Bijoy Goswami and **Subir Kumar Sarkar**, “Designing Memristor Based Timing Circuits and Performance Comparison with CMOS Counterparts” in Fourth International Conference on Smart Trends for Computing & Communications (SmartCom 2020) at Hotel Novotel, Siam Square, Bangkok, Thailand, 24-25 January, 2020
4. Anup Dey, Abir Jana, Komal Kumari, Bijoy Goswami, Poushali Nandi and **Subir Kumar Sarkar**, “Room Temperature Pt-Modified WO<sub>3</sub>/p-Si Film Gas Sensor for Detection of Methanol” in Fourth International Conference on Smart Trends for Computing & Communications (Smart Com 2020) at Hotel Novotel, Siam Square, Bangkok, Thailand, 24-25 January, 2020
5. Bijoy Goswami, Ayan Bhattacharya, Komal Kumari, Priyadarshini Das, Wasim Reja, **Subir Kumar Sarkar**, “A Novel Double Source TFET for Low Power Application”, 2019 IEEE 14th International Conference on Industrial and Information Systems (ICIIS), Peradeniya, Sri Lanka, 18-20 December, 2019
6. Sudipta Ghosh, Prithviraj Pachal, Sourav Guha, Supratim Kundu P. Venkateswaran, **Subir Kumar Sarkar** “Asymmetric Stack Gate-Oxide infused Graded Channel Tri-Metal Double Gate TFET” in INTERNATIONAL SEMINAR CUM RESEARCH COLLOQUIUM On MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019) at Jadavpur University, Kolkata, India, 27 December, 2019
7. Sharmistha Shee Kanrar, Bijoy Goswami, Abir Jana, Kousik Naskar and **Subir Kumar Sarkar**, “An Inight into Quantization Effects in Ultra-Thin Tunnel Field Effect Transistor” in an International Seminar Cum Research Colloquium on MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019) at Jadavpur University, Kolkata, India, 27-28 December, 2019



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8. Sudipta Ghosh, Prithviraj Pachal, Sourav Guha, Rahul Kumar, P. Venkateswaran, **Subir Kumar Sarkar**, “Double Gate p-n-p-n TFET with Hetero Oxide Dielectric and High-K Spacer Engineering” in an INTERNATIONAL SEMINAR CUM RESEARCH COLLOQUIUM On MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019) at Jadavpur University, Kolkata, India, 27 December, 2019
9. Dinesh Kumar Dash, Priyanka Saha, Kousik Naskar and **Subir Kumar Sarkar**, “Study of Dielectric Engineered Dual-Metal Double-Gate MOSFET for subduced SCEs” in an INTERNATIONAL SEMINAR CUM RESEARCH COLLOQUIUM On MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019) at Jadavpur University, Kolkata, India, 27 December, 2019
10. Abir Jana, Disha Bhattacharjee, Komal Kumari, Priyadarshini Das, Soumyajyoti Podder, **Subir Kumar Sarkar**, “Comparative study on Memristive, Spintronics and CMOS based Voltage Controlled Oscillators (VCO)” in an INTERNATIONAL SEMINAR CUM RESEARCH COLLOQUIUM On MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019) at Jadavpur University, Kolkata, India, 27 December, 2019
11. Takhellambam Gautam Meitei, Sinam Ajit kumar Singh, Swanirbhar Majumder, **Subir Kumar Sarkar**, “FPGA based Analysis of PCG Signal for Heart Conditions” in an INTERNATIONAL SEMINAR CUM RESEARCH COLLOQUIUM On MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019) at Jadavpur University, Kolkata, India, 27 December, 2019
12. Tiya Dey Malakar, Moutushi Singh, **Subir Kumar Sarkar**, “Surface Potential Profile of Nano Scaled Work Function Engineered Gate Recessed IR Silicon on Insulator MOSFET”, in 2nd International Ethical Hacking Conference 2019 (eHaCON 2019), Institute of Engineering and Management, Kolkata, 22 August, 2019 and in the series of Advances in Intelligent Systems and Computing volume 1065, by Springer.
13. Mandira Biswas, Anup Dey, Bijoy Goswami, Poushali Nandi and **Subir Kumar Sarkar**, “Fabrication of Pentacene based Organic Field-Effect Transistors and their device characterization” International Seminar Cum Research Colloquium On Mems based Sensors and Smart Nanostructured Devices (MSSND 2019), Jadavpur University, Kolkata, 27-28 December, 2019
14. Bikram Biswas, Anup Dey, Bijoy Goswami, Kousik Naskar, Subhashis Roy, Manas Jyoti Hazarika, Sutannti Bhowmick, Abir Jana and **Subir Kumar Sarkar**, “IoT-Based Smart Heart-Health Monitoring System” in International Seminar Cum Research Colloquium on MEMS based Sensors and Smart Nanostructured Devices (MSSND-2019) at Jadavpur University, Kolkata, India, 27-28 December, 2019
15. Subhrapratim Nath, Rupam Banerjee, Swarnanjan Bhaumik, Tuhin Karmakar, Jamuna Kanta Sing, **Subir Kumar Sarkar** “A Hybrid approach of ACO-Lévy flight and Firefly Algorithm in optimizing FANET Routing”, International Seminar Cum Research Colloquium On Mems based Sensors and Smart Nanostructured Devices (MSSND 2019), Jadavpur University, Kolkata, 27-28 December, 2019
16. K. Senthilkumar, and **Subir Kumar Sarkar** “Fabrication of Mn Doped TiO<sub>2</sub> Nano Materials for better Photonic and Spintronic devices”, International Seminar Cum Research Colloquium On Mems based Sensors and Smart Nanostructured Devices (MSSND 2019), Jadavpur University, Kolkata, 27-28 December, 2019
17. Subhrapratim Nath, Anup Dey, Prithviraj Pachal, Aditya Shankar, Jamu Kanta Sing, **Subir Kumar Sarkar** “IoT enabled Soil Sensor Device and Its Application for Maximizing Productivity”, International Seminar Cum Research Colloquium On Mems based Sensors and Smart Nanostructured Devices (MSSND 2019), Jadavpur University, Kolkata, 27-28 December, 2019
18. Suresh Patel, K. Senthil Kumar, Parthasarathi Chakrabarti and **Subir Kumar Sarkar** “Renovated nanostructured Devices for performance improvement”, International Seminar Cum Research Colloquium On Mems based Sensors and Smart Nanostructured Devices (MSSND 2019), Jadavpur University, Kolkata, 27-28 December, 2019.
19. Sharmistha Shee Karnar, Dinesh Kumar Dash and **Subir Kumar Sarkar** “Comparative study of threshold characteristics in low dimensional TFET with quantum confinement” in 7th International Conference on Computers and Devices for Communications (CODEC-19) 19-20 December, 2019



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20. Bijoy Goswami, Ayan Bhattacharya, Komal Kumari, Priyadarshini Das, Wasim Reja and **Subir Kumar Sarkar**, “A Novel Double Source TFET for Low Power Application” in 14th IEEE ICIIS University of Peradeniya, Sri Lanka, 18-20 December, 2019
21. Subhprapratim Nath, Indrajit Das, Sanjoy Roy, Abir Jana, Jamuna Kanta Sing and **Subir Kumar Sarkar** “Enhancing Packet Delivery Rate in Flying Ad-Hoc Network (FANET) Routing” in IEEE R10 Humanitarian Technology Conference (R10-HTC) Indonesia, 12-14 November, 2019
22. Deepanjan Sen, Savio Jay Sengupta, Abhishek Sharma, Wasim Reja, Bijoy Goswami and **Subir Kumar Sarkar** “A Novel Approach for RFID Based Smart EVM System”, 1st International Conference on Advance of Electrical Control and Signal System, Siksha O Anusandhan (D.U) Bhubaneswar, Odisha. 8-9 November, 2019
23. Bijoy Goswami, Sutanni Bhowmick, Debadipta Basak, Ayan Bhattacharya, Arindam Halder, Koelgeet Kaur, **Subir Kumar Sarkar** “2-D Analysis of a Centrally Aligned PNP-DG TFET to Preclude Ambipolar Conduction”, ECTI-CON 2019 International IEEE Conference, Pattaya, Thailand, 10-13 July, 2019

### Prof. Bhaskar Gupta

1. J. Pal, K. Patra and **B. Gupta**, “Indoor Channel Characterization and Modelling for 5G Applications at 22GHz”, 2019 IEEE 19th Mediterranean Microwave Symposium (MMS), Hammamet, Tunisia, 2019, pp. 1-4, doi: 10.1109/MMS48040.2019.9157298
2. Sayan Sarkar, **Bhaskar Gupta**, “A Dual Frequency Circularly Polarized UHF-RFID/WLAN Circular Patch Antenna for RFID Readers”, 2019 IEEE International Conference on RFID - Technology and Applications (RFID-TA), 2019, pp. 448-452, DOI: 10.1109/RFID-TA.2019.8892107
3. Arka Bhattacharyya and **Bhaskar Gupta**, “On the Size Reduction of Slotted Finite Ground Plane of a Circularly Polarized Microstrip Patch Antenna Using Substructure Characteristic Modes”, 13th European Conference on Antennas and Propagation 2019 (EuCAP 2019), Krakow, Poland, 31/03/2019-05/04/2019
4. Arka Bhattacharyya and **Bhaskar Gupta**, “Circularly Polarized Annular Slot Antenna Design on Deformed Ground Plane with Top Loading Using Characteristic Modes”, 13th European Conference on Antennas and Propagation 2019 (EuCAP 2019), Krakow, Poland, 31/03/2019-05/04/2019
5. Ayona Chakraborty, Suman Dey, Samik Chakraborty, **Bhaskar Gupta**, “Design and Characterization of a Yagi Uda Antenna Array for Weather Monitoring”, Proceedings of IEEE Radio Conference held at Reunion Island on 23-26 September, 2019
6. Ayona Chakraborty, Suman Dey, Samik Chakraborty, **Bhaskar Gupta**, “Modified Clover Arranged Reactively Loaded Dual Band Polarization Agile Omnidirectional Wire Antennas”, URSI RCRS 2020, Varanasi, India 12-14 February, 2020

### Prof. Sudipta Chattopadhyay

1. Prabhat Kumar Panda and **Sudipta Chattopadhyay**, “An Enhanced Mutual Authentication and Security Protocol for IOT and Cloud Server”, IEEE 5<sup>th</sup> International Conference on Computer and Communication Systems (ICCCS 2020), 22-24 February, 2020, Shanghai, CHINA
2. Chandrima Thakur and **Sudipta Chattopadhyay** “Enhancement of Secrecy Throughput Performance in a Cooperative Network with Interference-assisted Energy Harvesting”, IEEE 2019 International Symposium on Advanced Electrical and Communication Technologies (ISAECT), 27-29 November, 2019, Rome, ITALY
3. Kuheli Dutta, **Sudipta Chattopadhyay**, Vaishna Biswas, Suman Roy Ghatak” Design of Power Efficient Vedic Multiplier using Adiabatic Logic”, 2019 International Conference on Electrical, Electronics and Computer Engineering (UPCON), 8-10 November, 2019, Aligarh, INDIA
4. Anisha Sengupta, **Sudipta Chattopadhyay**, Suman Roy Ghatak, Vaishna Biswas “Two-Stage Spectrum Sensing Model for Varying SNR Conditions in Cognitive Radio Network”, 2019 International Conference on Electrical, Electronics and Computer Engineering (UPCON), 8-10 November, 2019, Aligarh, INDIA

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5. Chandrima Thakur and **Sudipta Chattopadhyay** “A novel Interference-aided Energy Harvesting Scheme for Cooperative Network”, 2019 IEEE Region 10 Symposium (TENSymp), 7-9 June, 2019, Kolkata, INDIA

### Dr. Sayan Chatterjee

1. Arka Bhattacharyya, Amartya Banerjee, **Sayan Chatterjee**, Bhaskar Gupta, “Dual-Band Minkowski Fractal Patch Antenna with Polarization Diversity”, Proceedings of IEEE International Conference (CALCON 2020), Kolkata, February, 2020
2. S. G. Mallick, B. Biswas, **S. Chatterjee**, G. A. Kumar and D. R. Poddar, “A Multilayered Transition between SIW and ESIW”, 2020 IEEE Calcutta Conference (CALCON), Kolkata, India, 2020, pp. 181-183, doi: 10.1109/CALCON49167.2020.9106421
3. Sohini Banerjee, Amartya Banerjee, **Sayan Chatterjee**, Malay Gangopadhyay, “Investigations on the Radiation Characteristics of a CPW-Fed Yagi-Inspired Strip Monopole Antenna”, Proceedings of IEEE International Conference (CALCON 2020), Kolkata, February, 2020
4. T. K. Das, and **S. Chatterjee**, “Improved Stopband Rejection in Compact Microstrip Filters by Transmission Zero Reallocation”, Proceedings of IEEE International Conference (CALCON 2020), February 2020, Kolkata, India
5. T. K. Das, and **S. Chatterjee**, “Compact coupled-line microstrip bandpass filter with spurious passband suppression using Minkowski fractal”. URSI Regional Conference on Radio Science (URSI-RCRS 2020), February 2020, Varanasi, India
6. Swarup Dandapat, Shrabanti Das, Moumita Das, **Sayan Chatterjee**, “High Speed Low Power CML Technique Based Frequency Divider in 180nm Technology”, International Conference on Frontiers in Computing and System (COMSYS-2020). Jalpaiguri, 13-15 January 2020
7. Chatterjee, **S.**, **Chatterjee**, S., Bandyopadhyay, B. and Majumder, A., “Simultaneous Control of Side Lobe Level and Beamwidth in Planar Array Antenna using Restricted Search Evolutionary Algorithms”, Proceedings of 2019 IEEE Asia-Pacific Microwave Conference (APMC), pp. 673-675, Singapore, 10 - 13 December, 2019
8. Baisakhi Bandyopadhyay, Soumyo Chatterjee, **Sayan Chatterjee**, Arijit Majumder, “Narrow Wall Slotted Planar Array Antenna by using Differential Feed at X Band”, Proceedings of 2019 Asia-Pacific Microwave Conference (APMC), pp. 521-523, Singapore, 10 - 13 December, 2019
9. Abhishek Chatterjee, Amartya Banerjee, **Sayan Chatterjee**, “Electrically Small Rectangular Microstrip Patch Antenna with Non-Foster Feeding Technique”, Proceedings of 2019 Asia-Pacific Microwave Conference, Singapore, 10 -13 December, 2019
10. Swarup Dandapat, Shrabanti Das, Moumita Das, **Sayan Chatterjee**, “Design of a Low Power Linear Down-Conversion Mixer at 2.45GHz CMOS 180nm Technology”, 7th international conference on computers and device for communication (CODEC). 19 December, 2019
11. Moumita Das, Swarup Dandapat, Shrabanti Das, **Sayan Chatterjee**, “Design of a Novel High-Q Active Inductor at 2.5 GHz in CMOS 180nm Technology”, 7th international conference on computers and device for communication.(CODEC), Kolkata, India, 19 December, 2019
12. **S. Chatterjee**, and T. K. Das, “Compact Hairpin-Line Bandpass Filter with Harmonic Suppression by Periodic Grooves”, Proceedings of 19th Mediterranean Microwave Symposium (MMS 2019), November, 2019, Hammamet, Tunisia
13. Moumita Das, Posiba Mostafa and **Sayan Chatterjee**, “A comparison study of on-chip and optimized gate inductor of an LNA”, 2nd International conference on Innovations in Electronics, Signal processing and Communication (IESC- 2019), pp.66-71, pp 80-84, March, 2019
14. Sohini Banerjee, Malay Gangopadhyay, Shreyasi Ghosh, Somnath Roy, Tuhin Majumder, Manoj Ghosh, Rajatava Mukherjee, Pracheta Chatterjee, Amartya Banerjee, **Sayan Chatterjee**, “Theoretical Investigations on Input Characteristics of a CPW-Fed Yagi-Inspired Strip Monopole Antenna”, IEEE International Electromagnetics and Antenna Conference (IEMANTENNA), 2019

**Dr. Chandrima Mondal**

1. S. Dasgupta, **C.Mondal** and A.Biswas, “Reduction of Harmonic Distortion of 14-nm InAs quantum well nMOSFET for high DC to AC conversion and high voltage gain,” 4<sup>th</sup> IEEE Electron Devices Technology and Manufacturing (EDTM) Conference Proceedings of Technical Papers, Malaysia, pp. 28-31, March, 2020
2. J. Paul, **C. Mondal** and Abhijit Biswas, “Analysis of Buried Oxide Variability in GeOI<sub>p</sub>MOSFETs for Digital Performance,” in Proceedings of 6th International Conference on Microelectronics, Circuits and Systems (MICRO 2019), Amity University Kolkata, pp. 111-115, July, 2019
3. S. Dasgupta, **C. Mondal** and A. Biswas, “Effect of temperature on digital and analog performance of InAs Quantum Well nMOSFETs”, in Proc. 6th International Conference on Microelectronics, Circuits and Systems (MICRO 2019), Kolkata, pp. 72-77, July, 2019

**Prof. Bhaskar Gupta and Dr. Sayan Chatterjee**

1. Samik Chakraborty, Ayona Chakraborty, **Bhaskar Gupta, Sayan Chatterjee**, “Dielectric Rectangular Slab Antennas featuring Dual Frequency and Better Impedance Matching”, Asia Pacific Microwave Conference (APMC), Singapore, 10-13 December, 2019

**5. Collaborative Programmes:**

**Prof. Subir Kumar Sarkar**

1. **Prof. Subir Kumar Sarkar** has collaborative research activities in the field of Spintronics with Prof. Supriyo Bandyopadhyay of Virginia Commonwealth University, USA
2. **Prof. Subir Kumar Sarkar** is presently continuing collaborative research activities in nanodevices with Dr. Partha Bhattacharya of **Indian Institute of Engineering Science and Technology, Shibpur (former BESU)**
3. **Prof. Subir Kumar Sarkar** is presently continuing collaborative research work with:  
Dr. Pranab Kishore Dutta and Mr. Swanirbhar Majumder of **North Eastern Regional Institute of Science and Technology (NERIST)**  
Dr. Ashish Kumar De and Prof. B. Maji of **National Institute of Technology, Durgapur**  
Dr. N. B. Singh of **Manipur Institute of Technology**  
Mr. Sudipta Ghosh and Mr. Subhrapratim Nath of **Meghnad Saha Institute of Technology, Kolkata**  
Dr. Bijoy Kantha and Dr. Saheli Sarkhel of **Netaji Subhash Engineering College, Garia, Kolkata**  
Mr. Dinesh Kumar Dash of **Parala Maharaja Engineering College, Berhampur, Odisha**  
Mr. Bijoy Goswami of **Assam engineering College, Guwahati, Assam**

**Prof. Bhaskar Gupta**

1. National Symposium/ Workshop on **Applications of Engineering and Technology towards Sustainable Growth** (The Event is a curtain-raiser of World Environment Day Programme) in collaboration with Vivekananda Institute of Environment & Management held on 4 June, 2019
2. Research collaboration with Czech Technical University, Prague, Czech Republic culminating in joint execution of a research project as mentioned earlier

**Dr. Sayan Chatterjee**

1. As delegation team member from 25–31 August, 2019 under the **RUSA incubation programme, Jadavpur University to Mentor Institute MUMA college of Business, University of South Florida** for setting up entrepreneurship ecosystem and incubation center in Jadavpur University

## 6. Major Achievements:

### Prof. Subir Kumar Sarkar

1. Has been selected as **IEEE Electron Device Society Distinguished Lecturer (Region 10)**
2. Has guided **56 PhD scholars** and PG thesis of 92 M.E/M.Tech students. Presently, 6 more scholars have been registered for PhD
3. Has been invited several times as one of the expert members in various National Level Accreditation Board
4. Has been invited as the Technical Committee Member of IEEE Region 10 Symposium (IEEE TENSYP 2019) in Biswa Bangla Convention Centre, Kolkata, India during 7-9 June, 2019
5. Has been invited as the Organizing Committee Member in International Graphene and Carbon Nanotubes Conference (OLCGCNC-2019), at Dubai, UAE during 14-15 October, 2019
6. Has foreign trip being invited by :  
Department of Computer Science and Engineering (CSE) and Department of Electrical and Electronic Engineering (EEE) of University of Science and Technology Chittagong (USTC), Bangladesh

## 7. Awards:

- Honoured with the prestigious **IETE – Brig M L Anand Award-2019** for notable expertise in **Network domain** as evident from his 183 research papers, 20 P.G and 18 PhD thesis guidance and publication of two books (CRC Press and Arctech House) whose review came in IEEE communication magazine and has been cited 500 times
- Received **Prof. S K Mitra Memorial Award-2019** for one of his research papers entitled “**Analytical Surface Potential Modelling-Based Small Signal Analysis and RF Performance Characterization of DMG SOI MOSFET for Better RFIC Application**”, published in IETE Technical Review Vol. 35 No. 3, May-June, 2018 in the best research oriented paper category

## 8. Post Doctoral Guidance:

### Prof. Subir Kumar Sarkar

Dr. K. Senthil Kumar of Department of Electronics and Communication, Dr. M.G.R Educational and Research Institute, is currently pursuing Post Doctoral research under the guidance of Prof. Subir Kumar Sarkar

### Prof. Sudipta Chattopadhyay

1. Holding the position of Chairperson, IEEE WIE Kolkata Section till December 2019
2. Nominated as a member of Academic Council, Siksha ‘O’ Anusandhan Deemed to be University, Bhubaneswar
3. Nominated as a National Advisory Committee member for IEEE WIE International Leadership Summit held in Bangalore, during 30-31 August, 2019
4. Nominated as Academic Advisor for Techno India Group of Institutes

### Dr. Sayan Chatterjee

#### Award/ Recognition :

1. Elected as **SAKURA SCIENCE Alumni as Indian representative** under JST
2. **Outstanding Volunteer** award of **IEEE Kolkata section** in 2019-20
3. **Convener, Institute Innovation Council** in Jadavpur University in 2019
4. Member of the **interview board for the 60th Batch of Jagadish Bose National Talent Search Senior Scholar (UG -I) selection** process on 21st and 22nd September (9 AM to 5.30PM), 2019 at JBNSTS, Kolkata

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5. Acted as **Co-coordinator of IC design and Fabrication center of ETCE department, JU**
6. Invited as **mentor for the event “Tailoring a Research proposal” sponsored by DAAD** at Consulate General of Germany in Kolkata on 20 November, 2019. Execom member, IEEE Kolkata section
7. Acted as **NBA coordination committee member**, FET of Jadavpur University from 24 July, 2019 till date

### 8. Consultancy Project:

Title of project :Implementation of AI & Industry 4.0 in Ship Building industry

Sponsoring agency:Garden Reach Shipbuilders & Engineers Ltd.

Period: One year

### Prof. Bhaskar Gupta and Dr. Sayan Chatterjee

#### Consultancy Project: (Title of Project, Sponsoring Agency, Period)

- 1 All purpose identification of imported 12mm pixel LED, N N Chakrabarty Customs consultant, One month(July 2019)
- 2 Identification of imported Multi Media Speaker bearing model no. JIL 3949, JIL 3938 JIL 3968 and JIL 3969, Jupiter international limited, One month (March 2019)
- 3 Consultation for setting up communication system (except VHF), Neora Hydro, One month(from December 2019)
- 4 Identification of imported Multimedia speaker bearing no 3300C, 3300D, 3300F, 3300G, SP1792, 4400B, 4400C, 3300, 5500D, SP5500, SP904, SP6600, N N Chakrabarty Customs consultant, Two months (from December, 2019)
- 5 Investigation of electronic good from seized consignment and whether these could be used for any terrorist activity, Office of the Commissioner of Customs (Airport), Two months

## INDOLOGY

[Department of Sanskrit]

Phone:033-2457-2254

033-2414-6010

Coordinator: Prof. Tapan Sankar Bhattacharyya

E-mail: tapans.bhattacharyya@jadavpuruniversity.in

### Brief History of the Centre:

The Department of Sanskrit, Jadavpur University earned in 1989 the University Grants Commission-recognized then rare distinction of Department of Special Assistance, with Prof. Rabisankar Banerji as its Coordinator for a life time, subsequently led by Prof. Manabendu Banerjee (acting) and Prof. Bijoya Goswami. Since 1997, it has had also a University-funded Centre for Indology, being first coordinated by Prof. Manabendu Banerjee, then by Prof. Nandita Bandyopadhyay (Joint Coordinator Prof. Debarchana Sarkar), then by Prof. Debarchana Sarkar and now by Prof. Tapan Sankar Bhattacharyya



## Annual Report 2019-20

### Book Published:

Centre for Indology, Department of Sanskrit, Jadavpur University published a book entitled *Mugdhabodham Vyākaranam* Vol. I, on March, 2020

Second volume of this book will be published soon

### KNOWLEDGE BASED SYSTEM [Department of Electrical Engineering]

Phone: 033-2457-2442

033-2414-6723

Coordinator: Prof. Smita Sadhu

E-mail: [smita.sadhughosh@jadavpuruniversity.in](mailto:smita.sadhughosh@jadavpuruniversity.in)

### Area of Research Activities:

Design and research in the areas of estimation and filtering techniques, fault detection and identification of nonlinear hybrid systems, real time computer control systems and safety critical and high consequence software, design review and audit of aero engine control system, aircraft stabilization, railway signaling and interlocking systems

### Major Research Projects:

1. **Robustness Analysis of AFADEC Control Laws Covering Redundancy Management**, sponsored by Gas Turbine Research Establishment, (DRDO, Ministry of Defence), Bengaluru, Rs. 24.78 lakhs. Members involved: Prof. Smita Sadhu (PI), Dr. Gautam Sarkar, Mr. Susanta Ray, Prof. T.K.Ghoshal (Hon. Adv.), Prof. K.Majumdar (Hon. Adv.), Prof. P.N.Basu (Hon. Adv.)
2. **Development and Validation of Algorithm for Estimation and Tracking of High Velocity Manoeuvring Targets** sponsored by Program AD, (DRDO, Ministry of Defence), Hyderabad, Rs. 21.53 lakhs. Members involved: Prof. Smita Sadhu (PI), Dr. Gautam Sarkar, Mr. Susanta Ray, Prof. T.K.Ghoshal (Hon. Adv.), Prof. P.N.Basu (Hon. Adv.)

### Articles Published:

#### International Journals

1. Nilanjan Patra, Smita Sadhu, Tapan Kumar Ghoshal, "Adaptive state estimation for tracking of civilian aircraft", *IET Science, Measurement & Technology*, Volume: 12, Issue: 6, 2018, pp. 777 - 784, DOI: 10.1049/iet-smt.2017.0529

#### International Conferences

2. Dasgupta, Sudeshna, Smita Sadhu, and Tapan Kumar Ghoshal. "Disturbance Observers for Nonlinear MIMO Systems-An Alternative Design Approach". In *2019 53rd Annual Conference on Information Sciences and Systems (CISS)*, pp. 1-6. IEEE, 2019

### Interaction with other institutions/organizations:

1. Prof Smita Sadhu acted as External Examiner for evaluation of M.E. thesis at the Department of Electrical Engineering, IEST, Howrah in April, 2019
2. Prof Smita Sadhu is an External expert for the Ph.D. Committee of two candidates enrolled at the Department of Electrical Engineering, IEST, Howrah
3. Prof. T.K. Ghoshal is Distinguished Visiting Professor, Department of Aerospace Engineering, IIT Kanpur.

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4. Prof. T.K. Ghoshal is member of the VTOL UAV Project Team, IIT Kanpur
5. Prof. Smita Sadhu acted as reviewer for IEEE Transactions on Aerospace and Electronic Systems, IEEE Transactions on Control Systems Technology, Elsevier Aerospace Science and Technology and many IEEE conferences

### Major Achievements:

1. One doctoral student has been awarded PhD degree in 2019. The candidate has utilized the facilities of CKBS
2. Three Post Graduate theses have been awarded under the supervision of the Coordinator. The candidates have utilized the facilities of CKBS

## LATIN AMERICAN LITERATURE & CULTURE

[Department of Comparative Literature]

Phone: 033-2457-2140

Coordinator: Prof. Kavita Panjabi

E-mail: kavita.panjabi@jadavpuruniversity.in

### Seminar Organized:

**International Forum on Megacities: Conviviality & Its Limits**, held at Jadavpur University, Kolkata from 26-28 February, 2020. Multidisciplinary seminar, organized jointly with the Department of Architecture, Department of Film Studies, School of Oceanographic Studies, School of Environmental Studies, School of Media, Communication and Culture & CAS III, Department of English. Participants from Argentina, Australia, Bangladesh, Mexico and India

## MATHEMATICAL BIOLOGY & ECOLOGY

[Department of Mathematics]

Phone: 033-2457-2743

033-2414-6717

Coordinator: Prof. Nandadulal Bairagi

E-mail: nbairagi.math@jadavpuruniversity.in

1. **Courses Offered:** Centre for Mathematical Biology and Ecology, Department of Mathematics, offers Mathematical Biology as a special paper in the Final M.Sc.
2. **Areas of Research Activities: (Broad Areas)**
  - (a) Mathematical Ecology
  - (b) Epidemiology

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- (c) Bioeconomic modeling of exploitation of natural resources
- (d) Marine ecosystems
- (e) Pest management
- (f) Physiology
- (g) Systems Biology
- (h) Environment & sustainable development

### 3. Major Research Project:

#### Prof. Nandadulal Bairagi

1. **Title:** Modelling and analysis of stochastic HIV infection with linear and nonlinear incidence.  
**Funding Authority:** CSIR  
**Duration of the project:** 2018-2021
2. **Title:** Dynamics preserving discretization technique for nonlinear system of differential equations.  
**Funding Authority:** MATRICS (SERB, DST)  
**Duration of the project:** 2018-2021
3. **Title:** Modelling and analysis of stochastic ecological and eco-epidemiological systems with nonlinearity  
**Funding Authority:** Indo-French Centre for Applied Mathematics (IFCAM)  
**Duration of the project:** 2018-2021

### 4. Invited Lectures Delivered/Session Chaired:

#### Prof. Nandadulal Bairagi

1. One month research visit at the University of Grenoble, France under IFCAM during June-July 2019
2. Presented a paper entitled “Pattern formation in a reaction-diffusion predator-prey-parasite model with prey infection under the influence of ecological and epidemiological parameters” in the 63rd Annual Meeting of the Australian Mathematical Society at Monash University, Melbourne, Australia held during 3–6 December, 2019
3. Short-term research visit at the VA Palo Alto Health System and Division of Endocrinology, Gerontology and Metabolism, Stanford University of Medicine from 23-27 December, 2019

#### Prof. Priti Kumar Roy

1. Delivered two invited talks at the Workshop, School of Mathematics and Applied Statistics University of Wollongong, Northfields Avenue, Wollongong, NSW 2522, Australia held in 20-21 February, 2020
2. Delivered lecture at 3rd Asia-Pacific Conference on Applied Mathematics and Statistics (AMS 2020) conference as a **Keynote Speaker** at Sydney, Australia held in 17-19 February, 2020
3. Visited Beijing Technology and Business University, China, as visiting professor to give lectures for international students of BTBU and for collaborative research work with Prof. Xianbing Cao and his colleagues in the School of Mathematics and Applied Statistics from 7–27 July, 2019
4. Visited Moscow State University, Russia, from 13-27 October, 2019 under DST-RFBR joint research project and given a lecture on “Methanol Toxicology and Treatment: A Mathematical Study to Explore Alcohol Dynamics”, 20 November, 2019

### Paper Published in Journals and Books:

#### Prof. Nandadulal Bairagi

1. Majumder, A., Adak, D., **Bairagi, N.:** *Phytoplankton-zooplankton interaction under environmental stochasticity: Survival, extinction and stability.* **Applied Mathematical Modelling**, 89, 1382-1404, 2020

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2. Das, P. N., Kumar, A., **Bairagi, N.** and Chatterjee, S.: *Effect of delay in transportation of extracellular glucose into cardiomyocytes under diabetic condition: A study through mathematical model.* **J. Biological Physics**, 46, 251-281, 2020
3. Chakraborty, B., Ghorai, S., **Bairagi, N.**: *Reaction-diffusion predator-prey-parasite system and spatiotemporal complexity.* **Applied Mathematics and Computations**, 386, 125518, 2020
4. Mondal, S., Cao, X., **Bairagi, N.** *Study of a discretized fractional-order eco-epidemiological model with prey infection,* **Fractional Differential Calculus**, 10(1) 109-128, 2020
5. Das, P. N., Halder, S., **Bairagi, N.** and Chatterjee, S.: *Delay in ATP-dependent calcium inflow may affect insulin secretion from pancreatic beta-cell.* **Applied Mathematical Modelling**, 84, 202-2021, 2020
6. Ghorai, S., Chakraborty, P., Poria, S. and **Bairagi, N.**: *Dispersal-induced pattern forming instabilities in host-parasitoid metapopulations.* **Nonlinearity**, 100, 749-762, 2020
7. Adak, D., **Bairagi, N.**, and Hakl, R.: *Chaos in delay-induced Leslie–Gower prey–predator–parasite model and its control through prey harvesting.* **Nonlinear Analysis: Real World Applications**, 51, 102998, 2020
8. Mondal, S., Biswas, M. and **Bairagi, N.**: *Local and global dynamics of a fractional order predator-prey system with habitat complexity and the corresponding discretized fractional order system.* **Journal of Applied Mathematics and Computing**, 63, 311-340, 2020
9. Biswas, M. and **Bairagi, N.**: *On the dynamic consistency of a two-species competitive discrete system with toxicity: Local and global analysis,* **Journal of Computational and Applied Mathematics**, 363, 145-155, 2020
10. Mondal, C., Adak, D. and **Bairagi, N.**: *Optimal control in a multi-pathways HIV-1 infection model: A comparison between mono-drug and multi-drug therapies.* **International Journal of Control**, DOI: org/10.1080/00207179.2019.1690694, 2019
11. Mondal, S., **Bairagi, N.** and N'Guerekata, G. M.: *Global stability of a Leslie-Gower-type fractional order tritrophic food chain model,* **Fractional Differential Calculus**, 9(1) 149-161, 2019
12. Gupta, A., Das, P. N., Bouzeyen, R., Karmakar, S. P., Singh, R., **Bairagi, N.**, Chatterjee, S.: *Restoration of cytosolic calcium inhibits Mycobacterium tuberculosis intracellular growth: Theoretical evidence and experimental observation.* **Journal of Theoretical Biology**, 472, 110-123, 2019

### Prof. Priti Kumar Roy

1. N. L. Grigorenko, É. V. Grigorieva, **Roy Priti Kumar**, E. N. Khailov: *Optimal control problems for a mathematical model of the treatment of psoriasis.* **Computational Mathematics and Modeling**, Vol. 31, No. 1, DOI 10.1007/s10598-019-09461-y, 2020
2. **Roy Priti Kumar**, A. K. Roy, E. N. Khailov, F A Basir, É. V. Grigorieva: *A Model of the Optimal Immunotherapy of Psoriasis by Introducing IL - 10 and IL - 22 Inhibitor,* **Journal of Biological Systems**, Vol. 28, No. 03, pp. 609-639, 2020
3. Chatterjee A N, **Roy Priti Kumar**: *Smoking habit: a biomathematical study,* Vol. (2020), **Commun.Math.Biol. Neurosci.** Article ID: 20, <https://doi.org/10.28919/cmbn/4319>, 2020
4. Cao Xianbing, Roy A K, Basir F. A., **Roy Priti Kumar**: *Global dynamics of HIV infection with two disease transmission routes - a mathematical model.* **Commun. Math. Biol. Neurosci**, Article ID: 8, <https://doi.org/10.28919/cmbn/4397>, 2020
5. Cao Xianbing, Basir F. A., Xue-Zhi Li, **Roy Priti Kumar**: *Impact of combined therapy in HIV-1 Treatment: A double impulsive Approach,* **Int. Journal of Appl. Comput. Math.**, DOI: 10.1007/s40819-020-00861-y, 2020
6. Basir F Al, **Roy Priti Kumar**: *Study on enzyme inhibition in biodiesel synthesis: Effect of stepwise addition of methanol and removal of glycerol,* **Energy Ecology and Environment**, DOI: 10.1007/s40974-019-00112-x, 2019

**Prof. Dipak Kesh**

1. Maji, C., **Kesh, D.** and Mukherjee, D., **2019**. Bifurcation and global stability in an eco-epidemic model with refuge. *Energy, Ecology and Environment*, 4(3), pp.103-115
2. Maji, C., Mukherjee, D. and **Kesh, D.**, **2020**. Study of a fractional order model of chronic wasting disease. *Mathematical Methods in the Applied Sciences*, 43(7), pp.4669-4682

**6. Major Achievements:**

**Prof. Nandadulal Bairagi**

Received COVID-19 Project: “Anatomy of COVID-19 transmission dynamics: A modelling and computational approach from Indian perspective”, funded by SERB, DST

**MEDICINAL FOOD & APPLIED NUTRITION**

[Department of FTBE]

Phone: 033-2457-2241

033-2414-6822

Coordinator: Dr. Dipankar Halder

E-mail: dipankar.halder@jadavpuruniversity.in

**A. Area of Research Activities:**

Food processing & health care nutrition, nutria- genomics & traditional medicine in critical health care, natural products formulations for making functional foods, viz. medicinal value of food components like resveratrol and Honey

**B. Major Activities:**

Research collaboration was with Cardiovascular Research Center, University of Connecticut, School of Medicine, Farmington, CT 06030-1110 USA. It was also engaged in organizing international collaborative research cum training centre through national and international institutes by organizing extension work, outreach programs, seminar, workshop, industry interacted training program, critical health care nutrition demonstration program, and research on processing and product development. Ph. D scholars have done work and published papers on natural products like tocotrienol in rice bran oil for cardioprotection, *Swietenia macrophylla* or Mahogany seeds for regeneration of pancreatic beta cells in diabetes, natural antioxidant like resveratrol as drug molecules against stomach ulcer, and fortification of natural products in bakery and confectioneries, beverages like tea, coffee, vinegar etc. including extension and outreach program in health care counseling



**MICROPROCESSOR APPLICATIONS FOR TRAINING EDUCATION AND RESEARCH**

[Department of Computer Science & Engineering]

Phone: 033-2457-2367/2407

Co-ordinator: Prof. Mita Nasipuri

E-mail: mita.nasipuri@jadavpuruniversity.in

**1. A. Approved Courses:**

Name of the Course (short term)	Duration of the course	No. of students
1. Introduction to Linux and C Programming	88hrs	30
2. Object Oriented Programming with C++ and JAVA	70 hrs	30
3. Python Programming	40hrs	30
4. Android App Development	40hrs	30

**1. B. Number of Faculty Members:** 8 (Professor – 6, Associate Professor– 2)

**2. A. Area of Research Activities (Broad Areas):** AI, Pattern Recognition & Image Processing, High Performance Computing, IoT, Soft Computing, Artificial Neural Networks, Evolutionary Computation, Bio-Medical Image Processing, Multimedia Technology Development, OCR of Handwritten Bengali Text, Bioinformatics, Face Processing, Machine Learning, Deep learning

**2. B. Major Research Project:(Departmental/Individual, Name of the Project/Funding Agency)**

**Ram Sarkar**, Multi-lingual Text Analytics for Camera-based Handheld Devices (**Principal Investigator**), SERB, Govt. of India, 2017-2020, Rs. 25,96,440/- (CO-PI: **Prof. Subhadip Basu**)

**Sarbani Roy**, Participatory and real time pollution monitoring system for smart city (**Principal Investigator**), Funded by Dept. of Science and Technology and Biotechnology, Govt. of West Bengal, 2018-2021, Rs. 13,20,800/- (CO-PI: **Dr. Chandreyee Chowdhury**)

**Nibaran Das**, Automatic Generation of Cytological Images to Augment Data for Diagnosis of Ductal Carcinoma Using Deep Learning, (**Principal Investigator**), SERB, Govt. of India, 2019-2022, Rs. 26,93,500/-

**Susmita Ghosh**, “Distributed Cognitive System for Healthcare” under Consortium Project on “Development of Application Oriented AI Systems” (Co-PI), MeitY, Govt. of India, 2020-2023, Rs. 24,52,000/-

**Debotosh Bhattacharjee**, Development of object detection techniques from degraded complex video sequences due to dynamic variations of scenes by different atmospheric conditions for security and surveillance, Principal Investigator, DRDO, Govt. of India, 2018-2020, Rs. 64,77,000.00/-

**Debotosh Bhattacharjee**, Prediction of diseases through computer assisted diagnosis system using images captured by minimally-invasive and non-invasive modalities, Co- Principal Investigator, MHRD, Govt. of India, 2019-2021, Rs. 47,68,775.00/-

**Debotosh Bhattacharjee**, Development of a computer-assisted diagnosis system for segmenting and detecting abnormalities and disease diagnosis, Principal Investigator, DST, Govt. of India, 2019-2021, Rs. 8,83,000.00/- and Euro 13,500.00

**Subhadip Basu**, Development of some analytical tools for analysis of large-scale protein-protein interaction networks, (Principal Investigator), DBT, Govt. of India, 2017-2021, Rs.48,22,125/-, **Co PI, Prof. Mita Nasipuri**

**3. A. Invited Lectures Delivered/Sessions Chaired:(Name of the Teacher, Type of Participants, Name of the Seminar/Conference etc. Place, Duration)**

**Ram Sarkar**

1. Session Chaired, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India
2. Delivered a lecture for the Awareness Training on Cyberphysical systems used in ‘Industry 4.0’ on AI & Pattern Recognition, on 03-07-2019

**Sarbani Roy**

1. Delivered two lectures on IoT in TEQIP-III sponsored 2-week Faculty Development Program on Machine Learning and Internet of Things, Tripura Institute of Technology, Agartala, 03-15 June, 2019
2. Delivered a tutorial on Participatory Sensing and IoT-Cloud based Smart City Applications: Opportunities, Challenges and Case studies, IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS 2019), 16-19 December, 2019, Goa, India

**Nibaran Das**

1. Session Chaired, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India
2. Delivered a lecture for the Awareness Training on Cyberphysical systems used in ‘Industry 4.0’ on AI & Pattern Recognition, on 04-07-2019
3. Delivered lectures on “Clustering Algorithms”, and “Convolutional Neural Network and its Applications” at Two Weeks Faculty Development Program (under Twinning arrangement) on Machine Learning and Internet of Things, Tripura Institute of Technology, 03-04 June, 2019
4. Delivered lecture on “Machine Learning: From Shallow to Deep”, at Four-day Training/Workshop under RUSA 2.0 on “Big Data Analysis”, jointly organized by Department of Economics and Department of Computer Science and Engineering, Jadavpur University, 22 January, 2020

**Debotosh Bhattacharjee**

1. Session Chaired, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India
2. Session Chaired, in IEEE CALCON 2020, at Hotel Senses, Kolkata on 28-29 February, 2020

**Mita Nasipuri**

1. Served as a judge for both oral and poster presentations in the subject discipline of Engineering (Computer Science & Engineering, Information Technology, Electronics Engineering) on 23 December, 2019 in 4th Regional Science & Technology Congress (Southern Region), 2019 held at Maulana Abul Kalam Azad University of Technology, West Bengal (MAKAUT-WB) Main Campus, Haringhata, Nadia. 23-24 December, 2019
2. Served as Session Chair for a keynote address on Compact System-level Models for Design and Synthesis of Smart Sensing Systems in ICDCN 2020, 4 January, 2020, Kolkata, India
3. Acted as Session Chair of a keynote address on 14 January, 2020 in COMSYS 2020, 13-15 January, 2020, Jalpaiguri Government Engineering College, Jalpaiguri, India
4. Acted as a Track Chair for Computer Science and Engineering track of CALCON 2020, 28-29 February, 2020, Kolkata, India
5. Acted as Session Chair of a keynote address on 28 February, 2020 in CALCON 2020, 28-29 February, 2020, Kolkata, India
6. Chaired a technical session in ACSS 2020 on 29 February, 2020, Kolkata, India
7. Delivered a talk in the ICMR-NICED celebration of International Women’s Day, 2020 held on 13 March, 2020 at NICED-II Auditorium, Kolkata, India

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### Nandini Mukherjee

1. Delivered lectures in the TEQIP-III Sponsored Faculty Development programme (FDP) (under twinning arrangement) on “Machine Learning and Internet of Things” at Tripura Institute of Technology, Tripura from 3–15 June, 2019
2. Delivered lectures in the TEQIP-III sponsored two weeks FDP on ‘Internet of Things and Sensor Networks’, organized by the Department of Computer Science and Engineering, Tripura Institute of Technology, Agartala from 3–16 January, 2020
3. Delivered a lecture in the National Seminar on “Role of Women Scientists in Developing Science and Society in India”, jointly organised by Asiatic Society and All India People’s Science Network at Vidyasagar Hall of the Asiatic Society on 13–14 January, 2020

### Susmita Ghosh

1. Invited talk on “Cognitive Computing” at the School of Information Technology, King Mongkut’s University of Technology, Thonburi, Thailand, May, 2019
2. Delivered lecture on “Big Data Analysis using Fuzzy Logic”, at Four-day Training/Workshop under RUSA 2.0 on “Big Data Analysis”, jointly organized by Department of Economics and Department of Computer Science and Engineering, Jadavpur University, 24 January, 2020
3. Delivered lecture on “Evolutionary Algorithms: What, How and Where” at the International Conference on “Biologically Inspired Techniques in Many Criteria Decision Making (BITMDM’ 2019)”, Fakir Mohan University, Balasore, 19-20 December, 2019
4. Delivered lectures on “Cluster Analysis” and “Classification”, at two weeks AICTE Sponsored Faculty Development Program on Natural Language Processing for the Digital Humanities (NLPDH 2019), National Institute of Science and Technology, Berhampore, Orissa, 02-03 December, 2019
5. Delivered lecture on “Machine Learning - What, Why, When and How?” at the Pre Conference Workshop of the International Conference on Intelligent Computing and Remote Sensing, C V Raman College of Engineering, Bhubaneswar, 18 July, 2019
6. Delivered lectures on “Data Clustering Methods” and “Cognitive Computation” at “Two Weeks FDP on Data Science and Big Data Analytics”, Easwari Engineering College, Chennai, 14-15 June, 2019
7. Delivered lectures on “Introduction to Machine Learning”, “Supervised Learning” and “Artificial Neural Networks” at Two Weeks Faculty Development Program (under Twinning arrangement) on Machine Learning and Internet of Things, Tripura Institute of Technology, 03-04 June, 2019

### Subhadip Basu

1. Session Chaired, IEEE CALCON 2020, at Hotel Senses, Kolkata on 28-29 February, 2020
2. Session Chaired, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India
3. Invited Talk at the Ichapur Gun Shell Factory at the 2 days Awareness Training on ‘Industry 4.0’ on 04 July, 2019
4. Panel Discussion on “Is Data science and AI the Future of Statistics?” at St. Xavier’s College, Kolkata, on 14 March, 2020

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Seminar/Conference/Workshop/Symposium, Date, Place, Duration)

#### Sarbani Roy

- Attended and presented two papers on IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS 2019), 16-19 December 2019, Goa, India
- An approach to detect travel patterns using smartphone sensing (authors: Devroop Kar, Asif Iqbal Middy and Sarbani Roy)

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- Smartphone-based drowsiness detection system for drivers in real-time (authors: Iman Chatterjee and Sarbani Roy)

### Nibaran Das

- Attended and presented a paper on seventh National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG) will be held at Hubballi, Karnataka from 22 to 24 December, 2019
- SynCGAN: Using learnable class specific priors to generate synthetic data for improving classifier performance on cytological images (authors: Soumyajyoti Dey, Soham Das, Swarnendu Ghosh, Shyamali Mitra, Sukanta Chakrabarty, Nibaran Das)

### Susmita Ghosh

- Attended and presented a paper titled “A Combined Framework for Dimensionality Reduction of Hyperspectral Images using Feature Selection and Feature Extraction”, In 2019 IEEE Recent Advances in Geoscience and Remote Sensing: Technologies, Standards and Applications (TENGARSS), Kochi, India, October 19, 2019

### 3. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

**Sarbani Roy**, Demo Chairs, ICDCN 2020, Kolkata, India, 4-7 January, 2020

**Ram Sarkar, Nibaran Das, and Chintan Kumar Mandal**, Local Arrangements Chairs, ICDCN 2020, Kolkata, India, 4-7 January, 2020

**Sarbani Roy** organized and delivered lectures, One-week Short Term Course on Applications of Computational Intelligence in Text, Image and Sensor Data Processing, organized by the Department of Computer Science & Engineering, Jadavpur University, Kolkata, India, 3-8 February, 2020

**Nandini Mukherjee** served as Co General Chair, 21st International Conference on Distributed Computing and Networking (ICDCN 2020) jointly organised by Jadavpur University at Kolkata, India from 4-7 January, 2020

**Nandini Mukherjee** organised a Four-day Workshop on “Big Data Analysis” jointly with the Department of Economics, Jadavpur University, Kolkata, under RUSA 2.0 during 20 –24 January, 2020

**Susmita Ghosh** served as a Joint Coordinator, two-week Faculty Development Program held at Tripura Institute of Technology in June 2019 (under Twinning Activity of TEQIP III Project)

**Debotosh Bhattacharjee** served as joint Program Chair, International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India

**Subhadip Basu** served as Co General Chair at International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on 13–15 January, 2020 at Jalpaiguri Government Engineering College, West Bengal, India

**Subhadip Basu** served as Co Finance Chair, 21st International Conference on Distributed Computing and Networking (ICDCN 2020) jointly organised by Jadavpur University at Kolkata, India from 4–7 January, 2020

### 3. E. Orientation Courses/Refresher Courses Organized: (Name of the Teachers, Title of the Course, if any, Duration, Place)

**Subhadip Basu: Joint Coordinator**, UGC Human Resource Development Centre, Jadavpur University sponsored One-week Short Term Course on “MOOCs, E-content Development and Open Educational Resources”, jointly organized by School of Media, Communication and Culture & Centre for Microprocessor Applications for Training, Education & Research at Department of Computer Science and Engineering, Jadavpur University, 11-17 February, 2020

**4. A. Books/Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)**

Obaidullah, S. (Ed.), Santosh, K. (Ed.), Goncalves, T. (Ed.), **Das, N. (Ed.)**, Roy, K. (Ed.). (2020). Document Processing Using Machine Learning. New York: Chapman and Hall/CRC, <https://doi.org/10.1201/9780429277573>

**4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**

1. M. Ghosh, R. Guha, A. Chakrabarty, R. Sarkar, S. Mirjalili, "Introducing Clustering based Population in Binary Gravitational Search Algorithm for Feature Selection", *Applied Soft Computing, Elsevier*, 2020
2. S. K. Ghosal, S. Mukhopadhyay, S. Hossain, R. Sarkar, "Application of Lah Transform for Security and Privacy of Data through Information Hiding in Telecommunication", *Transactions on Emerging Telecommunications Technologies, Wiley*, 2020
3. S. Saha, A. Chakraborty, A. Chatterjee, S. Dhargupta, S. K. Ghosal, R. Sarkar, "Extended Exploiting Modification Direction based Steganography using Hashed-Weightage Array", *Multimedia Tools and Applications, Springer*, 2020
4. S. Kundu, S. Paul, S. K. Bera, A. Abraham, R. Sarkar, "Text-line Extraction from Handwritten Document Images using GAN", *Expert Systems with Applications, Elsevier*, Vol. 140, 2020
5. S. Dhargupta, M. Ghosh, S. Mirjalili, R. Sarkar, "Selective Opposition based Grey Wolf Optimization", *Expert Systems with Applications, Elsevier*, 2020
6. S. Malakar, S. Paul, S. Kundu, S. Bhowmik, R. Sarkar, M. Nasipuri, "Handwritten Word Recognition using Lottery Ticket Hypothesis based pruned CNN model: A new benchmark on CMATERdb2.1.2", *Neural Computing and Applications, Springer*, 2019
7. P. Ahmed, S. Kundu, T. Khan, V. Bhateja, R. Sarkar, A.F. Mollah, "Handwritten Arabic Numerals Recognition using Convolutional Neural Network", *Journal of Ambient Intelligence and Humanized Computing, Springer*, Springer, 2020
8. A. Chatterjee, S. K. Ghosal, R. Sarkar, "LSB based Steganography with OCR: An Intelligent Amalgamation", *Multimedia Tools and Applications, Springer*, 2019
9. S. K. Bera, A. Chakrabarti, S. Lahiri, E. H B. Smith, R. Sarkar, "Normalization of unconstrained handwritten words in terms of Slope and Slant Correction", *Pattern Recognition Letters, Elsevier*, Vol. 128, pp. 488-495 2019
10. I. Chatterjee, M. Ghosh, P. K. Singh, R. Sarkar, M. Nasipuri, "A Clustering Based Feature Selection Framework for Handwritten Indic Script Classification" *Expert Systems, Wiley*, 2019
11. B. Ray, A. Saha, S. Khatua and S. Roy, "Proactive Fault-Tolerance Technique to Enhance Reliability of Cloud Service in Cloud Federation Environment," in *IEEE Transactions on Cloud Computing*, January 2020 doi: 10.1109/TCC.2020.2968522
12. A. I. Middy, B. Ray and S. Roy, "Auction based Resource Allocation Mechanism in Federated Cloud Environment: TARA," in *IEEE Transactions on Services Computing*, November 2019 doi: 10.1109/TSC.2019.2952772
13. Bhattacharya, S., Sinha, S., Roy, S. et al. Towards finding the best-fit distribution for OSN data. *Journal of Supercomputing*, Springer, 76, 9882–9900 (2020). <https://doi.org/10.1007/s11227-020-03232-y>
14. Tanmoy Maitra and Sarbani Roy, PBDT: An Energy-efficient Posture based Data Transmission for Repeated Activities in BAN, *Mobile Networks and Applications*, Springer, 25, pp. 328–340, February 2020. <https://doi.org/10.1007/s11036-019-01287-7>
15. Paramita Dey, Agneet Chatterjee and Sarbani Roy, Influence maximization in online social networks using different centrality measures as seed nodes of information propagation, *Sadhana*, Springer (2019) 44: 205. <https://doi.org/10.1007/s12046-019-1189-7>



16. Tanmoy Maitra and Sarbani Roy, XMSN: An efficient cross-layer protocol for mixed wireless sensor network, *International Journal of Communication Systems*, Wiley, Vol. 32, issue 9, June 2019. <https://doi.org/10.1002/dac.3946>
17. Srimoyee Bhattacharjee, Rituparna Das, Sunirmal Khatua, Sarbani Roy, Energy-efficient migration techniques for cloud environment: a step toward green computing, *Journal of Supercomputing*, Springer, 76, 5192–5220, 2019. <https://doi.org/10.1007/s11227-019-02801-0>
18. Chowdhury, C., Roy, S., Ray, A. et al. A Fault-Tolerant Approach to Alleviate Failures in Offloading Systems. *Wireless Personal Communications*, Springer 110, 1033–1055 (2020). <https://doi.org/10.1007/s11277-019-06772-6>
19. Ray, A., Chowdhury, C., Mallick, S., Mondal, S., Paul, S., Roy, S., Designing Energy Efficient Strategies Using Markov Decision Process for Crowd-Sensing Applications. *Mobile Networks and Applications*, 25, 932–942 (2020). <https://doi.org/10.1007/s11036-020-01522-6>
20. A.Gupta, R. Sarkhel, N.Das, and M. Kundu, “Multiobjective optimization for recognition of isolated handwritten Indic scripts”, *Pattern Recognit. Lett.*, vol. 128, pp. 318–325, 2019, doi: <https://doi.org/10.1016/j.patrec.2019.09.019>.
21. S. Ghosh, A. Pal, S. Jaiswal, K. C. Santosh, N. Das, and M. Nasipuri, “SegFast-V2: Semantic image segmentation with less parameters in deep learning for autonomous driving”, *Int. J. Mach. Learn. Cybern.*, vol. 10, no. 11, pp. 3145–3154, 2019, doi: [10.1007/s13042-019-01005-5](https://doi.org/10.1007/s13042-019-01005-5)
22. S. Ghosh, N. Das, I. Das, and U. Maulik, “Understanding Deep Learning Techniques for Image Segmentation”, *ACM Comput. Surv.*, vol. 52, no. 4, August 2019, doi: [10.1145/3329784](https://doi.org/10.1145/3329784)
23. S. Ghosh, N. Das, and M. Nasipuri, “Reshaping inputs for convolutional neural network: Some common and uncommon methods”, *Pattern Recognition*, Vol- 93, pp. 79-94 2019, doi: [10.1016/j.patcog.2019.04.009](https://doi.org/10.1016/j.patcog.2019.04.009).
24. R. Roy, S. Ghosh and A. Ghosh, “Clinical Ultrasound Image Standardization using Histogram Specification”, *Computers in Biology and Medicine*, vol.120, pp. 1037-1046, 2020
25. Ayan Seal, Angel Garcia-Pedrero, Debotosh Bhattacharjee, Mita Nasipuri, Mario Lillo-Saavedra, Ernestina Menasalvas, Consuleo Gonzalo-Martin, “Multi-scale RoIs selection for classifying multi-spectral images”, *Multidimensional Systems and Signal Processing*, volume 31, pages 745–769, Springer, 2020
26. Satyabrata Maity, Amlan Chakrabarti, Debotosh Bhattacharjee, “Background modeling and foreground extraction in video data using spatio-temporal region persistence features”, *Computers & Electrical Engineering*, 81, 106520, Pergamon 2020
27. Shib Sankar Bhowmick, Debotosh Bhattacharjee, Luis Rato, “Integrated analysis of the miRNA–mRNA next-generation sequencing data for finding their associations in different cancer types”, *Computational Biology and Chemistry*, 84, 107152, Elsevier, 2019
28. Debotosh Bhattacharjee, Hiranmoy Roy, “Pattern of Local Gravitational Force (PLGF): A novel Local Image Descriptor”, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2019
29. Sourav Pramanik, Supratim Ghosh, Debotosh Bhattacharjee, Mita Nasipuri, “Segmentation of Breast-region in Breast Thermogram using Arc-approximation and Triangular-space Search (BATS)”, *IEEE Transactions on Instrumentation and Measurement* 69 (7), 4785-4795, 2019
30. Parama Bagchi, Debotosh Bhattacharjee, Mita Nasipuri, “Reg3DFacePtCd: Registration of 3D Point Clouds Using a Common Set of Landmarks for Alignment of Human Face Images”, *KI-KünstlicheIntelligenz* 33 (4), 369-387, Springer 2019
31. Pramit Ghosh, Debotosh Bhattacharjee, Mita Nasipuri, “Intelligent Toilet System for Non-invasive Estimation of Blood-Sugar Level from Urine”, *IRBM* 41 (2), 94-105, Elsevier Masson, 2019
32. Chinmaya Panigrahy, Ayan Seal, Nihar Kumar Mahato, Debotosh Bhattacharjee, “Differential Box Counting Methods for Estimating Fractal Dimension of Gray-Scale Images: A Survey”, *Chaos, Solitons & Fractals*, Elsevier, Vol. 126, pp. 178-202, 2019

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33. Priya Saha, Debotosh Bhattacharjee, Barin Kumar De, Mita Nasipuri, “A Survey on Image Acquisition Protocols for Non-posed Facial Expression Recognition Systems”, *Multimedia Tools and Applications*, Springer, Vol. 78, Issue 16, pp. 23329–23368, 2019
34. Sourav Pramanik, Debotosh Bhattacharjee, Mita Nasipuri, “Breast abnormality detection using combined texture and vascular features”, *International Journal of Computational Science and Engineering*, Vol 18, No.2, Pages 140-153, 2019
35. Shib Sankar Bhowmick, Debotosh Bhattacharjee, and Luis Rato, “*In silico* markers: an evolutionary and statistical approach to select informative genes of human breast cancer subtypes”, *Genes & Genomics*, Springer, Vol. 41, Issue 12, pp. 1371–1382, 2019
36. Kaushiki Roy, Debotosh Bhattacharjee, Mita Nasipuri, “A Transfer-learning Based Deep Learning Framework for Automated Classification of Pap Smear Cervical Images”, *Basic & Clinical Pharmacology & Toxicology*, Wiley, 2019
37. Kakali Das, Mrinal Kanti Bhowmik, Omkar Chowdhury, Debotosh Bhattacharjee, Barin Kumar De, “Accurate segmentation of inflammatory and abnormal regions using medical thermal imagery”, *Australasian Physical & Engineering Sciences in Medicine*, Springer, Vol.42 No.2, Pages.647-657, 2019
38. Mrinal Kanti Bhowmik, Tathagata Debnath, Debotosh Bhattacharjee, Paramartha Dutta, “EF-index: Determining number of clusters (K) to estimate number of segments (S) in an image”, *Image and Vision Computing*, Elsevier, Vol. 88, Pages 29-40, 2019
39. Mrinal Kanti Bhowmik, Kakali Das, Debotosh Bhattacharjee, “Temperature Profile Guided Segmentation for Detection of Early Subclinical Inflammation in Arthritis Knee Joints From Thermal Images”, *Infrared Physics & Technology*, Elsevier, Vol. 99, Pages 102-112, 2019
40. Shib Sankar Bhowmick, Debotosh Bhattacharjee, and Luis Rato, “Identification of tissue-specific tumor biomarker using different optimization algorithms”, *Genes & Genomics*, Springer, Vol. 41 No.4, Pages. 431-443, 2019
41. Mrinal Kanti Bhowmik, Priya Saha, Anu Singha, Debotosh Bhattacharjee, Paramartha Dutta, “Enhancement of robustness of face recognition system through reduced Gaussianity in Log-ICA”, *Expert Systems with Applications*, Elsevier, Vol. 116, Pages. 96-107, 2019
42. Anindita Sarkar Mondal, Sarmistha Neogy, Nandini Mukherjee, Samiran Chattopadhyay, “A survey of issues and solutions of health data management systems”, *Innovations in Systems and Software Engineering (A NASA journal)* 15, First Online 16 April, 2019, pages 155-166, Springer
43. Anindita Sarkar Mondal, Sarmistha Neogy, Nandini Mukherjee, Samiran Chattopadhyay, “Performance analysis of an efficient object-based schema oriented data storage system handling health data”, *Innovations in Systems and Software Engineering (A NASA journal)* 16, First Online 24 September, 2019, pages 63–77, Springer
44. Bose, S., Sarkar, D. and Mukherjee, N. A Framework for Heterogeneous Resource Allocation in Sensor-Cloud Environment. *Wireless PersCommun* 108, 19–36 (2019). <https://doi.org/10.1007/s11277-019-06383-1>
45. Safikureshi Mondal, Nandini Mukherjee, An efficient reachability query based pruning algorithm in e-health scenario, *Journal of Biomedical Informatics*, Volume 94, 2019, <https://doi.org/10.1016/j.jbi.2019.103171>
46. A. Gupta and N. Mukherjee, “A Cloudlet Platform With Virtual Sensors for Smart Edge Computing”, in *IEEE Internet of Things Journal*, vol. 6, no. 5, pp. 8455-8462, October 2019, doi:10.1109/JIOT.2019.2918405
47. Yvonne Schill, Monika Bijata, Olga Kopach, Volodymyr Cherkas, Dalia Abdel-Galil, Katrin Böhm, Markus H Schwab, Michiyuki Matsuda, Valerie Compan, Subhadip Basu, Krystian Bijata, Jakub Wlodarczyk, Lucie Bard, Nicholas Cole, Alexander Dityatev, Andre Zeug, Dmitri A Rusakov, Evgeni Ponimaskin, “Serotonin 5-HT 4 receptor boosts functional maturation of dendritic spines via RhoA-dependent control of F-actin”, *Communications Biology*, Nature Publication Group, *in press*

48. S. Bhowmik, S. Malakar, R. Sarkar, S. Basu, M. Kundu, M. Nasipuri, Off-line Bangla handwritten word recognition: a holistic approach, *Neural Comput. Appl.* 31 (2019) 5783–5798. <https://doi.org/10.1007/s00521-018-3389-1>
49. S. Saha, A. Prasad, P. Chatterjee, S. Basu, M. Nasipuri, Protein function prediction from dynamic protein interaction network using gene expression data, *J. Bioinform. Comput. Biol.* 17 (2019). <https://doi.org/10.1142/S0219720019500252>
50. BlazejRuszczycki, Katarzyna Karolina Pels, Agnieszka Walczak, Katarzyna Zam³yñska, Micha³ Such, Andrzej Antoni Szczepankiewicz, Ma³gorzata Hanna Hall, Adriana Magalska, Marta Magnowska, Artur Wolny, Grzegorz Bokota, Subhadip Basu, Ayan Pal, Dariusz Plewczynski, Grzegorz Wilczynski, “Three-Dimensional Segmentation and Reconstruction of Neuronal Nuclei in Confocal Microscopic Images”, *Frontiers in Neuroanatomy*, 13 (81), 2019
51. Anup Kumar Halder, Micha³ Denkiewicz, Kaustav Sengupta, Subhadip Basu, Dariusz Plewczynski, “Aggregated Network Centrality Shows Non-Random Structure of Genomic and Proteomic Networks”, *Methods*, Elsevier, in press, 2019
52. S Saha, P Chatterjee, S Basu, M Nasipuri, D Plewczynski, “FunPred 3.0: improved protein function prediction using protein interaction network”, *PeerJ* 7, e6830, 2019
53. Adam Krzystyniak, EwaBaczynska, Marta Magnowska, Svitlana Antoniuk, Matylda Roszkowska, Monika Zareba-Kozioł, Nirmal Das, Subhadip Basu, Michal Pikula, Jakub Wlodarczyk, “Prophylactic Ketamine Treatment Promotes Resilience to Chronic Stress and Accelerates Recovery: Correlation with Changes in Synaptic Plasticity in the CA3 Subregion of the Hippocampus”, *International Journal of Molecular Sciences* 20 (7), 1726, 2019
54. P Urban, V Rezaei, G Bokota, M Denkiewicz, S Basu, D Plewczynski, “Dendritic Spines Taxonomy: The Functional and Structural Classification Time-Dependent Probabilistic Model of Neuronal Activation”, *Journal of Computational Biology*, DOI: 10.1089/cmb.2018.0155, *in press*
55. S Paul, S Saha, S Basu, PK Saha, M Nasipuri, “Text localization in camera captured images using fuzzy distance transform based adaptive stroke filter”, *Multimedia Tools and Applications*, DOI: 10.1007/s11042-019-7178-3, *in press*
56. Anirban Mukhopadhyay, Sourav Kumar, Souvik Roy Chowdhury, Neelotpal Chakraborty, Ayatullah Faruk Mollah, Subhadip Basu, Ram Sarkar, “Multi-Lingual Scene Text Detection Using One-Class Classifier”, *International Journal of Computer Vision and Image Processing (IJCVIP)*, Vol. 9 (2), pp. 48-85, 2019
57. Halder, A.K., Chatterjee, P., M., Nasipuri, Plewczynski, D., Basu, Subhadip, “3gClust: Human Protein Cluster Analysis”, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, Volume: 16, Issue: 6, pp. 1773-1784, 2019

## 5. Collaborative Programmes:

### Susmita Ghosh

1. Harvard University, USA
2. University of Massachusetts Dartmouth, USA
3. Rochester Institute of Technology, USA
4. King Mongkut’s University of Technology Thonburi, Thailand
5. Indian Statistical Institute, Kolkata

### Debotosh Bhattacharjee

1. Medical University, Vienna, Austria
2. Northumbria University, UK
3. University of Sassari, Italy
4. Edge Hill University, UK

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5. IIITDM Jabalpur, India
6. Tripura University, India

### Subhadip Basu

1. Honorary **Research Scientist** at the Department of Electrical and Computer Engineering, University of Iowa, USA
2. Nencki Institute of Experimental Biology, Warsaw, Poland
3. Hannover Medical School, Hannover, Germany

### 6. Major Achievements:

#### Ram Sarkar

- Winner: ICDAR 2019 Competition on Document Image Binarization -DIBCO 2019, Sydney, Australia
- Winner: ICDAR 2019 Competition on Recognition of Early Indian Printed Documents- REID 2019, Sydney, Australia

#### Susmita Ghosh

- Associate Editor, CAAI Transactions on Intelligence Technology (from IET)

#### Debotosh Bhattacharjee

- Fellow, West Bengal Academy of Science and Technology(WAST)

## NUCLEAR & PARTICLE PHYSICS RESEARCH CENTRE

[Department of Physics]

Phone: 033-2457-2352

Joint Coordinator: Prof. Argha Deb

E-mail: argha.deb@jadavpuruniversity.in

### 1. B. Number of Faculty Members: 4 (four)

#### 2. A. Area of Research Activities:

- High energy hadronic and leptonic interactions
- Relativistic and ultra-relativistic heavy ion interactions
- Quark gluon plasma
- Environmental radioactivity
- Radon Physics
- Hadron structure
- Beyond Standard Model
- Supersymmetry

#### 2. B. Major Research Projects :

Project Title	Funding Agency	Project Cost (Ongoing)
1. Study on QGP and Its Properties	DST	Rs. 3.276 Lakh

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Using Correlation and Fluctuation  
Phenomena in Ultra-relativistic  
Heavy Ion Collisions

2. Assessment of Radiological Impact of Environmental Radon in Some Selected Regions of West Bengal DST ( RUSA 2.0) Rs. 5 lakh

### 3. B. Seminar/Workshop/Conference/Symposium Attended:

- i. Indrani Ray, M. Saha Sarkar, Argha Deb, Mitali Mondal, P. Banerjee, **Review of Proton and Alpha Capture reaction cross-section of the p-Nucleus  $^{106}\text{Cd}$** , 64<sup>th</sup>DAE-BRNS Symposium on Nuclear Physics, Lucknow University, Lucknow, India, 23-27 December, 2019
- ii. Indrani Ray, **The experimental study of a few  $p$ -nuclei for  $A>100$  – Status and Scope**, School cum workshop on Low Energy Nuclear Astrophysics (SLENA2020), Saha Institute of Nuclear Physics, Kolkata, India, 10-14 February, 2020
- iii. Indrani Ray and Srijita Mukherjee, **Gamma Spectroscopic Methods to Study the  $p$ -Process Nucleosynthesis - A Short Review**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
- iv. Saheli Chowdhury, Chiranjib Barman, Argha Deb, Md. Nurujjaman, Dipok Bora, Debasis Ghose. Paper presenter - Saheli Chowdhury, **Study of soil  $^{222}\text{Rn}$  anomalies as earthquake precursor at a network of monitoring stations in Eastern India**, 2nd Triennial International Congress of Federation of Indian Geosciences Association (FIGA-2019), NGRI Hyderabad, India, 13-16 October, 2019
- v. Saheli Chowdhury, Chiranjib Barman, Md. Nurujjaman, Dipok Bora, Debasis Ghose, Argha Deb. Paper presenter - Saheli Chowdhury, **Soil radon anomalies as earthquake precursors in eastern India: a networking approach**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
- vi. Saheli Chowdhury, Chiranjib Barman, Arindam Kumar Naskar, Mahasin Gazi, Gopa Bhowmik, Soma Biswas Ghosh, Md. Abdul KayumJafry, Subrata Biswas, Argha Deb, **Survey of  $^{222}\text{Rn}$  activity in soil in Bakreswar-Tantloi Geothermal Region of West Bengal and Jharkhand, India**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
- vii. Saheli Chowdhury, Argha Deb, Chiranjib Barman, Md. Nurujjaman, Dipok Bora, **Radon Time Series: A Non-linear Application**, National Seminar on New Directions in Physical Sciences (NDPS 2020), Jadavpur University, Kolkata, India, 25 February, 2020
- viii. Joyati Mondal, HIRAK KUMAR KOLEY, Srijita Mukherjee, Arindam Mondal, Gopa Bhoumick, Somnath Kar, Argha Deb & Mitali Mondal, **Analysis of Correlations and Fluctuations in High Energy Interactions**, National Seminar on New Directions in Physical Sciences (NDPS 2020), Jadavpur University, Kolkata, West Bengal, India, 25 February, 2020
- ix. Arindam Kumar Naskar, **Study of water-borne radon levels in some selected nursery and primary schools located at high radon prone zones in Susunia hill region of West Bengal, India**, National Seminar on New Directions in Physical Sciences (NDPS 2020), Jadavpur University, Kolkata, West Bengal, India, 25 February, 2020
- x. Arindam Kumar Naskar, Mahasin Gazi, Javed Akhter, Joyati Mondal, Arindam Mondal, Sunil Maity, Mitali Mondal, Argha Deb, **Radon Danger in Ground Water: An Experimental Study in Ajodhya Hill and Nearby Areas of West Bengal**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019



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- xi. Mahasin Gazi, Arindam Kumar Naskar, Hirak K. Koley, Swarnapratim Bhattacharyya, Rittika Sarkar, Imtiaz Ahmed, Rini Bhattacharyya, Mitali Mondal, Argha Deb, **Radiologically Safe Drinking Water in Darjeeling Hill and Foothill Areas: An Experimental Finding**, National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
- 3. C. Seminar/Workshop/Conference/Symposium Organized:**
- i. National Conference on Environmental Radiation: Impact on Society and its Implications (ERISI-2019), Jadavpur University, Kolkata, India, 15-16 November, 2019
- 4. B. Articles Published in Journals:**
- i. Saheli Chowdhury, Chiranjib Barman, Argha Deb, Sibaji Raha, Debasis Ghose, Study of variation of soil radon exhalation rate with meteorological parameters in Bakreswar–Tantloi geothermal region of West Bengal and Jharkhand, India, Journal of Radioanalytical and Nuclear Chemistry, 2019, Vol. 319: 23-32.
  - ii. Nayak, T., De, D., Barman, C., Karmakar, P., Deb, A., and Dhal, P. K., Characterization of indigenous bacteria from radon-rich groundwater and their tolerance to physicochemical stress., Int. J. Environ. Sci. Technol., 2019, 17, 1627–1636, 17 June, 2019
- 5. Collaborative Programmes:**
- I. Jadavpur – N.I.T. Sikkim Collaboration
  - II. Jadavpur – Diphu Govt College Collaboration

### PLASMA STUDIES

[Department of Mathematics]

Phone: 033-2457-2714/2379

Coordinator: Dr. Anup Bandyopadhyay

E-mail: anupb.math@jadavpuruniversity.in

- 1. B. Number of Faculty Members:** No Permanent Faculty Member, Teachers, Researchers of participating Departments, other Institutes, Colleges, Participate in the activities of the Centre
- 1. C. Participating Departments:** Instrumentation Science, J.U., Mathematics, J.U., Physics, J.U
- 1. D. Collaborating Institutes:**
- International:**
- i) Universita Degli Studi de Milano-Bicocca (Italy)
  - ii) Centre Lasers Intenseset Application, University Bordeaux, France
  - iii) University of North Carolina, Charlette (USA)
  - iv) Bejing Agricultural University (China)

**India:**

- i) Tata Institute of Fundamental Research (Mumbai)
- ii) Saha Institute of Nuclear Physics (SINP), Kolkata, Plasma Division
- iii) Institute for Plasma Research, Gandhinagar
- iv) Indian Statistical Institute, Kolkata, Physics & Mathematics Unit
- v) University of Calcutta, Department of Applied Mathematics
- vi) Viswa Bharati University, Santiniketan, Department of Mathematics

**2. A. Area of Research Activities: (Jointly with Dept. of Instrumentation Science, Physics & Mathematics, JU)**

- i) Basic Plasma Physics : Linear & Non-linear wave processes.
- ii) Laser Plasma interaction: Inertial confinement fusion (ICF) related collaborative theoretical & experimental programme.
- iii) High Energy Density Plasma: Fluid Dynamics, Interfacial Fluid Instabilities applicable to ICF target and Astrophysics
- iv) Dusty Plasma
- v) Astrophysical Plasma

**2. B. Major ongoing Research project (Jointly with Department of Instrumentation Science & Mathematics, JU) Name of the Teacher-Title of the Project-Funding Agency**

Prof. M. Khan (PI)Prof. R. Bhar (Co-PI)Prof N.Chakrabarti (Co-PI)Prof Samiran Ghosh (Co-PI)Dr.Sachindranath Das(Co-PI)-Time Dependent Nonlinear Structure in Plasmas in the Frame Work of Lagrangian Fluid Description-CSIR, Govt.of India, Duration: 2017- 21

Prof. M. Khan (Co-PI)Prof. R. Bhar (PI)Prof.R.K.Roychoudhury (Co-PI), ACNCP & ISI(Ex), Kolkata  
Prof.Anup Bandyopadhyay-Structural Properties and Astrophysical Application of Quantum Plasma  
SERB, Govt. of India, Duration: 2017-21

**2. C. Seminar/Workshop/Conference/Symposium Organized: (Name of the Teacher, Name of, the paper presented (if any) Name of the Seminar, Place, Duration)**

Conveners: Prof R. Bhar Prof. Anup Bandyopadhyay Family members of Prof. M.R. Gupta, ACNCP, Centre for Plasma Studies-M. R. Gupta Memorial 3rd National Seminar-Centre for Plasma Studies, JU, Department of Mathematics and ACNCP, Kolkata 6 August, 2019

Convener:Prof R. Bhar Prof.Anup Bandyopadhyay-SERB,CSIR, SN Bose National Centre for Basic Sciences, Centre for Plasma Studies, ACNCP-National Seminar on Nonlinear & Complex Phenomena  
Centre for Plasma Studies & ACNCP-February 18-19, 2020

**3. A. Invited Lecture Delivered/Chairing a Session: (Name of the Teacher-Type of Seminar/Workshop/Conference-Organizer/Place-Duration-No of days/Week)**

Prof R. Bhar-Invited Lecture in National Conference on ‘Science, Technology and Engineering Applications of Microscopy(STEM-2019)’, Also chaired a technical session.-Jointly organized by Academy of Microscopic Sc. & Tech(AMST), India, and Department of Chemistry, Institute of Basic Sciences, Dr Bhimrao Ambedkar University, Agra-November, 11–12, 2019-2 days

**3. C. Award / Honour, etc.: Ph.D. Degree Awarded:**

**1. Aniruddha Mitra**

Title of the thesis: Studies of some structural and dynamical properties of quantum fluids

Supervisor : Prof. Manoranjan Khan, JU & Prof. R. K. Roychoudhury, ACNCP

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### 2. **Arnab Sikdar**

Title of the thesis: Study of some problems on nonlinear wave processes in collisional pair ion plasma

Supervisor: Prof. Manoranjan Khan, JU & Prof. Samiran Ghosh, CU

### 3. **Sankirtan Sardar**

Title of the thesis: Some problems on existence and stability of dust ion acoustic solitary waves and double layers

Supervisor: Prof. Anup Bandyopadhyay

### 4. **B. List of Publications in Referred Journals during (2019-20):**

1. The Effects of Free Vortex Decay in Quasi-Classical and Ultra-Quantum Turbulence, A Mitra, Journal of Low Temperature Physics 194 (1-2), 88-98, 2019
2. Light trapping by the dark matter, A Mitra, M Khan, R Roychoudhury  
Astrophysics and Space Science 365 (7), 1-5, 2020
3. Nanosized iron telluride for simultaneous nanomolar voltametric determination of dopamine, uric acid, guanine and adenine, S.Pradhan, S.Pramanik, D.K.Das, **R.Bhar**, R. Bandyopadhyay, P. Milner, New Journal of Chemistry (2019),43(26),10590 – 10600
4. Modulation instability of obliquely propagating ion acoustic waves in a collisionless magnetized plasma consisting of nonthermal and isothermal electrons, Sandip Dalui & **Anup Bandyopadhyay**, Astrophys Space Sci (2019) 364:182 <https://doi.org/10.1007/s10509-019-3672-3>, Published online: 21 October, 2019
5. Effect of Landau damping on ion acoustic solitary waves in a collisionless unmagnetized plasma consisting of nonthermal and isothermal electrons, Sandip Dalui & **Anup Bandyopadhyay**, Indian J Phys <https://doi.org/10.1007/s12648-020-01731-5>, Published online: 19 March, 2020

## STUDIES IN CULTURAL DIVERSITY & WELLBEING

Phone: 033-2457-2347

: 033-2414-6102

Jnt. Coordinators: Dr. Muktipada Sinha

Dr. Manojit Mondal

E-mail: [csdwju.2019@gmail.com](mailto:csdwju.2019@gmail.com)

The 'Centre for Studies in Cultural Diversity and Wellbeing' (formerly known as Special Education & HEPSN Cell) had started its journey in 2002 with financial support from the UGC 'Higher Education for persons with Special Needs' (HEPSN) project. Supported by the UGC UPE-I programme during 2003 to 2008, the Cell was included in the UGC UPE II programme since December 2012. On June, 2014 it was renamed into 'Centre for Studies and Rehabilitation of Differently Abled Persons' which was further renamed into 'Centre for Disability Studies and Rehabilitation' on and from November 2017. For a brief period, it was rechristened as 'Centre for Disability Studies'. At present, the Centre is known as 'Centre for Studies in Cultural Diversity and Wellbeing'. As its name suggests, through a number of projects the Centre dedicates itself to study the various cultural diversities within the University space. It aims to understand the diverse cultural backgrounds of its students and also investigate some aspects of the rich heritage of social-cultural practices focusing particularly on Bengal

**1. A. Courses Offered:**

- **Counselling Course:** The Centre continues the one year Post Graduate Diploma course in “Guidance, Psychological Counselling & Family Therapy” (passed by Executive Council of Jadavpur University) on and from 2nd May 2013 with a dozen of Resource persons and Faculties from different universities and some Psychiatrists as well as Psychological Counselors. Initially 40 new candidates took admission this year. However owing to the course’s popularity and ample number of deserving candidates, the capacity was increased by 10. At present the Centre is successfully running its seventh batch with 50 attending students

**The Centre has started two new courses:**

1. One year Diploma in Psychological Counselling in collaboration with ‘Caring Minds Psychological wellness Centre’, Kolkata in 2018. The course is centered around providing in-depth knowledge of Human Psychology, and Special emphasis given on skills and techniques of Counselling, Interactive sessions, group discussions and role plays. It is a practice – oriented course with regular mock sessions and project work. The main benefits of the course are:
  - Generating self-awareness
  - Better understanding of others
  - Building the basic counselling skills of empathy, acceptance, and unconditional positive regard
  - Personal growth
2. Six month certificate course on Psychotherapy in collaboration with ‘Caring minds Psychological Wellness Centre’, Kolkata. The course focuses on: Behaviour Therapy, Ellis’s Rational Emotive Behaviour Therapy, Beck’s Cognitive Therapy, Third wave therapies – Mindfulness-based Cognitive Therapy, Dialectical Behaviour Therapy and Acceptance & Commitment Therapy, Interpersonal Therapy, Humanistic and Existential Therapy

**The key benefits of the course are:**

- Centred around providing in-depth knowledge of various forms of Psychotherapy
- Training in an integrative approach to a level appropriate for safe, ethical and effective practice
- Interactive sessions, group discussions and role plays
- Practice – oriented course with regular mock sessions and project work

3. Special B.Ed (ASD) RECOGNIZED BY rci. 2years:

The Centre has started a special B.Ed course designed to cater to children with Autism Spectrum Disorder. The 2 year course strives to train educators who can specifically teach special children suffering from ASD

**The key benefits of the course are:**

- To create equal opportunities of education
- Develop an inclusive society
- To build up more resource persons for education and rehabilitation of children with ASD

**2. A. Area of Research Activities:**

The centre aims at exploring the intrinsic realities of different cultures which are often overlooked or homogenized in overarching categories such as ‘culture’. This centre is also working towards creating an awareness concerning the role of physical and mental health in sustenance of a community

**2. B. Major Research Projects:**

**I. “Rabijiboni” (Life of Tagore) in English: Translation, Transnationalism and Global South**

This project undertook the translation into English of the nine volume biography of the celebrated poet and thinker Rabindranath Tagore, “Rabijiboni” authored in Bengali by Prashanta Kumar Pal. Despite being an iconic figure of South Asian socio-political thoughts, biographies of Tagore are not accessible in any mainstream global languages to showcase his deep engagement with the anti-colonial movements. It was thus crucial that Prasanta Kumar Pal’s *Rabijiboni* (a nine volume biography in Bengali),

demonstrating how contemporary socio-historical issues were profoundly imbricated in Tagore's life and works, reached English speaking readers both within and outside India. The project if completed successfully would have added not just to the knowledge repository of studies in the global south, but would also address the huge contingent of Tagore's lovers at the transnational global spaces in understanding him as the early proponent of radical decolonization

'Centre for Studies in Cultural Diversity and Wellbeing', Jadavpur University ventured to undertake the translation of this seminal work funded by RUSA-II as we believe that translation plays a key role in societal development and it necessitates that fundamental research must feed back into society. Additionally, the Centre itself installed JAWS software in some of the departmental libraries of the University along with the Central Library. JAWS is a computer screen readable software that allows visually disabled users to read with a text-to-speech output. However this software cannot read in Bengali. If undertaken by the Centre, it can be taken into account that the English translation is flexible enough to be accessed by users who are not familiar with the Bengali tongue

The project initially kickstarted its venture with four translators. Two more contractual translators were later employed on a daily basis to meet the hefty demand of the rigorous scholarly nature of the work. Owing to the extensive fact checking and referencing required during the process of the translation, the translators were required to dedicate more time to the work than was initially anticipated

Unfortunately, owing to the countrywide lockdown exercised because of the global Covid-19 pandemic the project could not be continued

## **II. Changing Scenario of Bhadu and Tusu: A Study on Festivity of Rarh Bengal:**

The Centre has started a one year project called "Changing Scenario of Bhadu and Tusu: A Study on Festivity of Rarh Bengal" (under R.U.S.A. 2.0) on and from 10 June, 2019. In the modern time i.e. the time of globalization and information communication technology, the nature of the traditional folk festival of Bhadu and Tusu has been changed with the passage of time. In the present study, the researchers studied the changing pattern of the traditional folk festivity of Rarh Bengal

### **3. B. Seminar/Workshop/Conference/Symposium Attended:**

1. Dr. Muktipada Sinha attended an Instructor Training from Mental Health First Aid from 9–13 March, 2020. His participation in the course was funded by UGC RUSA 2.0
2. Dr. Muktipada Sinha, Joint Coordinator of the Centre organized a UGC sponsored one day national seminar on "Suicide Prevention: Role of Media in Community Awareness" on 12 September, 2019. He also delivered a lecture as a resource person in this seminar which was collaborated by Mental Health Foundation, Kolkata and Suicide Prevention Speciality Section of Indian Psychiatric Society and supported by West Bengal Academy of Pediatrics.
3. On 3-4 January, 2020, Dr. Muktipada Sinha organized and acted as a resource person in the UGC-sponsored International Conference on "Community and Mental Health: Connect, Communicate and Care" in collaboration with mental Health Foundation, Kolkata

### **3. C. Seminar/Workshop/Conference/Symposium Organized:**

1. On 30 and 31 August 2019, the Centre organized a two day International seminar on "Education and Library Culture in Digital Era" in collaboration with Byanjanbarna Foundation. The Library at the Salt Lake campus of the University also collaborated in the seminar. Prof. Manojit Mandal delivered a lecture on Library Culture and the Rural-Urban Digital Divide in Contemporary India
2. The Centre organized a seven day International Workshop on "Research in Culture and Humanities: Methodological Issues and Emerging Trends". The Department of Bengali of Dr. Shyama Prasad Mukherjee University at Ranchi, Jharkhand and the Department of Mass Communication of the University of Gour Banga collaborated with the Centre to conduct this workshop. The workshop took place from 17-23 October of 2019. Prof. Manojit Mandal delivered a lecture on "Emerging Trends in Research in Humanities: Problems and Perspectives"



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3. On 6 and 7 January, 2020, the Centre organized an UGC sponsored two day International Seminar in collaboration with Sidho-Kanho-Birsa University. The title of the seminar was “Rethinking Rabindranath: Modernity, Coloniality, Decoloniality”. The special inaugural lecture here was once again delivered by Prof. Manojit Mandal. Dr. Muktipada Sinha acted as a resource person and delivered a special lecture at the seminar
  4. On 11 and 12 February, 2020 the Centre organized an UGC Sponsored International Seminar on “Emerging Scenario of Folk Culture in Rural Bengal: A Critical Enquiry”. The seminar was collaborated by the department of Political science of Sidho-Kanho-Birsa University and the Department of Bengali from Dr. Shyama Prasad Mukherjee University, Ranchi, Jharkhand. Dr. Muktipada Sinha delivered a special inaugural lecture at the two day seminar
- 5. Collaborative Programmes:**  
On 21 February 2020, the Centre celebrated “Bhasha Dibas” jointly with Department of Education, Jadavpur University. The programme was inaugurated by Dr. Muktipada Sinha and Prof. Manojit Mandal, Joint Coordinators
- 6. Major Achievements:**  
The centre has been successfully conducting a course entitled “Guidance, Psychological Counselling and Family Therapy” for seven consecutive years. The number of student intake had to be increased by ten seats due to the high demand for the course

### STUDY OF RELIGION AND SOCIETY

[Department of Sociology]

Phone: 033-2457-2555

033-2414-6058

Joint Coordinators: Prof. Piyali Sur & Dr. Manojit Mandal

E-mail: piyali.sur@jadavpuruniversity.in

1. **A. Courses Offered:**  
One Year PG Diploma Course in Society, Religion and Social Work (Evening) at Centre for the Study of Religion and Society
2. **A. Area of the Research Activities:**  
Sociology of Religion.  
Religion & Health / Aging/ Gender/ Media/ Ecology Etc.
2. **B. Major Research Project:**  
Completed a Project on “Can religion have a role in mitigating socio-economic impacts of natural disasters? Acceptability of the Law of Karma for promoting Disaster Risk Reduction Policies” under RUSA 2.0
4. **A. Articles Published in Books:**  
Debstuti by Prof. Ruby Sain

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**SURFACE SCIENCE**  
[Department of Chemistry]  
Phone: 033-2457-2503/2693  
Coordinator: Prof. Soumen Ghosh  
E-mail: soumen.ghosh@jadavpuruniversity.in

### 1. B. Number of Faculty Members: 09

Number of Students Working for the Ph.D.: 07

### 2. A. Area of Research Activities: Surface and Biophysical Chemistry

In the financial year of April, 2019-March, 2020, the research works on the following topics were undertaken:

1. Elaborate investigation on the transition of rod-like micelle mediated by Surface Active Ionic Liquid (SAIL) and conventional surfactants in presence of different additives
2. Stability of hydrophobic colloids.
3. Deciphering of ligand to metal charge transfer process
4. Physicochemical and conformational studies on the interaction of myoglobin with an amino-acid based anionic surfactant
5. Influence of solvent, electrolytes,  $\alpha$ -CD, OTAB on the krafft temperature and aggregation of sodium tetradecyl sulfate
6. The application of silver nanoclusters to sensing, cell imaging and construction of molecular logic gates
7. Relevance of  $\delta$  -stacking in tuning the neighboring structural pattern of soft nano-aggregates
8. Current status of enthalpy–entropy compensation phenomenon
9. Commemorating 75 years of microemulsion

### 2. B. Major Research Project:

#### Prof. Soumen Ghosh

Name of the Project – i) Colloidal and Solution Behaviour ..... Solvent  
Funding Agency - Council of Scientific and Industrial Research, Govt. of India  
ii) Unveiling the Interaction between Biopolymer and Synthesized Gemini Surfactant  
Jadavpur University – RUSA 2.0

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

#### Prof. Soumen Ghosh

- i) Acting as a **Chairperson** in 19th National Conference on “Surfactants, Emulsions and Biocolloids (NATCOSEB-XIX)”, on October 18–20, 2019, organized by Department of Chemistry, Amity University, Kolkata and Indian Society for Surface Science and Technology, Jadavpur University, Kolkata
- ii) **Invited Speaker** in the International Seminar cum Lecture Workshop on “Interface of Chemical and Biological Science”, 29-30 November, 2019 organized by Department of Chemistry, Cooch Behar Panchanan Barma University, Cooch Behar, West Bengal - 736101 in association with Indian Chemical Society, Kolkata, India

### 3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)

#### Prof. Soumen Ghosh

- i) National Seminar on “Celebration of the International Year of the Periodic Table (CIYPT), August 13 & 14, 2019” under RUSA 2.0 Program organized by Department of Chemistry, Jadavpur University, Kolkata - 700032, W. B.

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- ii) One day Seminar on “Trends in Surface Science and Related Areas (TSSRA-XVI)”, 12 September (Thursday), 2019 held in Department of Chemistry and Chemical Technology, Vidyasagar University, Midnapore – 721102 jointly organized with ISSST, Jadavpur University, Kolkata

### 4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals in the financial year of 2019-20)

1. IrO<sub>2</sub> and Pt Doped Mesoporous SnO<sub>2</sub> Nanospheres as Efficient Electrocatalysts for the Facile OER and HER”, Piyali Bhanja, Bishnupad Mohanty, Astam K. Patra, Soumen Ghosh, Bikash Kumar Jena, and Asim Bhaumik, ChemCatChem, 11 (2019) 583-592
2. Interaction between a bio-tolerable amino-acid based amphiphile (*N*-dodecanoylsarcosinate, SDDS) and modified cationic polymers, hydroxyethylcelluloses (JR 400, and LM 200) in isopropanol-water medium, Bithika Mandal, Soumen Ghosh, Satya P. Moulik, Colloids and Surfaces A: Physicochemical and Engineering Aspects, 566 (2019) 156-165
3. Physicochemical and conformational studies on interaction of myoglobin with an amino-acid based anionic surfactant, sodium *N*-dodecanoyl sarcosinate (SDDS), Satyajit Mondal, Maria Luz Raposo, Asitanga Ghosh, Prieto Gerardo, Soumen Ghosh, Colloids and Surfaces A: Physicochemical and Engineering Aspects, 567 (2019) 167-174
4. Influence of solvent, electrolytes,  $\alpha$ -CD, OTAB on the krafft temperature and aggregation of sodium tetradecyl sulfate, Nitai Patra, Arpan Mal, Apensu Dey, Soumen Ghosh, Journal of Molecular Liquids, 280 (2019) 307-313
5. Effect of carbohydrate based polymers on worm-like micelles of cetyltrimethylammonium *p*-toluenesulfonate in aqueous media: Detail physicochemical and antimicrobial properties survey, Arpan Mal, Ankita Saha, Gargi Dinda, Soumen Ghosh, Journal of Molecular Liquids, 299 (2020) 112153-112164
6. Theoretical approaches on the synergistic interaction between double-headed anionic amino acid-based surfactants and hexadecyltrimethylammonium bromide, Manas Barai, Manas Kumar Mandal, Habiba Sultana, Emili Manna, Sourav Das, Kaushik Nag, Soumen Ghosh, Anuttam Patra, Amiya Kumar Panda, Journal of Surfactants and Detergents, 23 (2020) 891-902
7. Relevance of  $\delta$ -stacking in tuning the neighboring structural pattern of soft nano-aggregates, Gulmi Chakraborty, Soumik Bardhan, Soumen Ghosh, Swapan K. Saha, Journal of Molecular Liquids, 317 (2020) 114013 – 114021
8. An elaborate investigation on the transition of rod-like micelle of cetyltrimethylammonium *p*-toluenesulfonate in presence of different additives, Ankita Saha, Arpan Mal, Soumen Ghosh, Journal of Molecular Liquids, 309 (2020) 113084 – 113094
9. Studies on the self-aggregation, interfacial and thermodynamic properties of a surface active imidazolium-based ionic liquid in aqueous solution: Effects of salt and temperature, Sourav Das, Nitai Patra, Arnab Banerjee, Bijan Das and Soumen Ghosh, J. Molecular Liquids 320 (2020) 114497 – 114512
10. Temperature comparative studies on self-assembly of sodium dodecyl sulphate and didodecyl dimethyl ammonium bromide in aqueous, brine and trifluoroethanol media, Apensu Dey, Rajesh Banik and Soumen Ghosh, J. Surfactants and Detergents (online)
11. Spectroscopic study on the interaction of curcumin with single chain and gemini surfactants”, Satyajit Mondal and Soumen Ghosh, Chemical Physics Letters (online)
12. Interaction between a bio-tolerable amino-acid based amphiphile (*N*-dodecanoylsarcosinate, SDDS) and modified cationic polymers, hydroxyethylcelluloses (JR 400, and LM 200) in isopropanol-water medium, Bithika Mandal, Soumen Ghosh, Satya P. Moulik, Colloids and Surfaces A: Physicochemical and Engineering Aspects, 566 (2019) 156-165
13. Commemorating 75 years of microemulsion, Animesh Kumar Rakshit, Bappaditya Naskar, Satya Priya Moulik, Current Science, 116 (2019) 898

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14. Stability of hydrophobic colloids: Perspectives and current opinion, Animesh Kumar Rakshit, Bappaditya Naskar, Satya Priya Moulik, Journal of Dispersion Science and Technology, (2019) 1-11
15. Current status of enthalpy–entropy compensation phenomenon, Satya Priya Moulik, Bappaditya Naskar, Animesh Kumar Rakshit, 117 (2019) 1286
16. Antiamyloid activity of functionalized cerium oxide nanoparticle on lysozyme fibrillation: spectroscopic and microscopic investigation, Bobby Samai, Anirban Basu, Soumya Sundar Mati, Subhash Chandra Bhattacharya, Materialia, 6 (2019) 100285
17. Deciphering of Ligand to Metal Charge Transfer Process: Synthesis, Spectroscopic and Theoretical Study, Swadesh Ghosh, Dipti Singharoy, Jnan Prakash Naskar, Subhash Chandra Bhattacharya, Chemistry Select, 4 (2019) 458-464
18. Perceptive of block co polymers as potential delivering system of synthesized pyridine and pyrimidine derivatives: Spectroscopic and computational approach, Swadesh Ghosh, Dipti Singharoy, Jnan Prakash Naskar, Subhash Chandra Bhattacharya, Journal of Molecular Liquids, 291 (2019) 111103
19. The Application of Silver Nanoclusters to Sensing, Cell Imaging and Construction of Molecular Logic Gates, Bobby Samai, Soumya Sundar Mati, Dipti Singharoy, Subhash Chandra Bhattacharya, Chemistry Select, 16 (2019) 4739-4746
20. Thermodynamic Properties of Aqueous Sodium Nitrate Solutions under Superambient Conditions, Somnath Pramanik, B Das, Journal of Solution Chemistry 48 (2019) 167-179
21. Ion-Solvation and Ion-Association Behavior of Tetraphenyl phosphonium Chloride, Sodium Tetraphenylborate and Sodium Chloride in Polyethylene Glycol+ Water Mixtures at 298.15 K, Bidyut Debnath and Bijan Das, Journal of Solution Chemistry 48 (2019) 849-861
22. Counterion-binding and related phenomena in sodium alginate-sodium chloride-water ternary systems: A conductometric study, Sudipa Santra, Bijan Das, Journal of Molecular Liquids 296 (2019) 111930
23. Concentration, medium and salinity-induced shrinkage/expansion of Poly (sodium styrenesulfonate) in 2-ethoxyethanol-Water mixed solvent media as probed by viscosimetry, Ranjit De, Bijan Das, Journal of Molecular Structure 1199 (2020) 126992
24. Spectroscopic and interfacial investigation on the interaction of hemoglobin with conventional and ionic liquid surfactants, Satyajit Mondal, Arnab Banerjee, Bijan Das, Journal of Molecular Liquids 301 (2020) 112450
25. Drug-surfactant comicellization: Propranolol hydrochloride-surface active ionic liquid systems in aqueous medium, Urmila Saha, Arnab Banerjee, Bijan Das, Journal of Molecular Liquids, 309 (2020) 113164
26. Influence of hydrophobic and electrostatic interactions on counterion-dissociation in sodium carboxymethylcellulose-polyethylene glycol (PEG) solutions, Bidyut Debnath, Bijan Das, Journal of Molecular Liquids, 310 (2020) 113088
27. Correlation of the Volumetric Properties of Uni-Univalent Electrolytes in Methanol—Water Mixed Solvent Media: A Pitzer Ion-Interaction Approach, Somnath Pramanik, Bidyut Saha, Bijan Das, Journal of Solution Chemistry 49 (2020) 825-815
28. Studies on the self-aggregation, interfacial and thermodynamic properties of a surface active imidazolium-based ionic liquid in aqueous solution: Effects of salt and temperature, Sourav Das, Nitai Patra, Arnab Banerjee, Bijan Das and Soumen Ghosh, J. Molecular Liquids 320 (2020) 114497–114512
29. DFT study on the redox behavior of two dioxovanadium (v) complexes with N<sub>2</sub>O donor Schiff base ligands and their use in catalytic oxidation of ortho-aminophenol, Snehasish Thakur, Snehasish Banerjee, Saurabh Das, Ghovik Chattopadhyay, New Journal of Chemistry 43 (2019) 18747-18759
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33. A Zn II complex of ornidazole with decreased nitro radical anions that is still highly active on *Entamoeba histolytica*, Promita Nandy, Soumen Singha, Neha Banyal, Sanjay Kumar, Kasturi Mukhopadhyay, Saurabh Das, RSC Advances 10 (2020), 23286-23296
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37. Spectroscopy driven DFT computation for a structure of the monomeric Cu<sup>2+</sup>-Curcumin complex and thermodynamics driven evaluation of its binding to DNA: Pseudo-binding of Curcumin to DNA, Tanmoy Saha, Soumen Singha, Sanjay Kumar, Saurabh Das, Journal of Molecular Structure 1221 (2020) 128732
38. Fruit extract capped colloidal silver nanoparticles and their application in reduction of methylene blue dye, Mwkthang Swargiary, Atanu Mitra, Dipankar Halder, Santosh Kumar, Biocatalysis and Biotransformation 37 (2019) 183-189
39. Phytosynthesis of silver nanoparticles using *Zingiber officinale* extract: evaluation of their catalytic and antibacterial activities, Gargi Dinda, Dipankar Halder, Atanu Mitra, Nabanita Pal, DK Chattoraj, Journal of Dispersion Science and Technology, 41 (2020)1-8
40. Silver nanoparticle modulates the aggregation of beta-lactoglobulin and induces to form rod-like aggregates, Subrata Sardar, Md Anas, Sanhita Maity, Sampa Pal, Hasan Parvej, Shahnaz Begum, Ramkrishna Dalui, Nayim Sepay, Umesh Chandra Halder, International journal of biological macromolecules, 125 (2019) 596-604
41. In silico fight against novel coronavirus by finding chromone derivatives as inhibitor of coronavirus main proteases enzyme, Nayim Sepay, Nadir Sepay, Ashique Al Hoque, Rina Mondal, Umesh Chandra Halder, Mohd Muddassir, Structural Chemistry, (2020)
42. Antioxidant ferulic acid prevents the aggregation of bovine  $\alpha$ -lactoglobulin in vitro, Sampa Pal, Sanhita Maity, Subrata Sardar, Shahnaz Begum, Ramkrishna Dalui, Hasan Parvej, Kaushik Bera, Anirban Pradhan, Nayim Sepay, Swarnali Paul, Umesh Chandra Halder, Journal of Chemical Sciences, 132 (2020) 1-13
43. Anti-COVID-19 terpenoid from marine sources: A docking, admet and molecular dynamics study, Nayim Sepay, Aishwarya Sekar, Umesh C Halder, Abdullah Alarifi, Mohd Afzal, Journal of molecular structure, (2020) 129433

## 6. Major Achievements:

### Prof. Soumen Ghosh

Award of Bronze Medal from Chemical Research Society of India (CRSI) in 2020 (received a letter regarding this)



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### SUSTAINABLE DEVELOPMENT AND RESOURCE EFFICIENCY MANAGEMENT

[Department of Mechanical Engineering]

Phone: 033-2457-2256/2488

Coordinator : Prof. Sadhan Kumar Ghosh

E-mail: sadhankghosh9@gmail.com

#### Major Research Project:

##### International Research Projects ongoing- Prof. Sadhan K Ghosh as PI

1. **SINTEF, Norway funded project (2020- October 2021) :** Ocean Plastic Turned into an Opportunity in Circular Economy (OPTOCE), Collaborative Research Project to Combat Marine Littering and Microplastics in Asia, (in India, Thailand, Vietnam, China and Norway), funded OPTOCE-project, SINTEF Energi AS, SINTEF Fiskerioghavbruk AS, SINTEF Petroleum AS and NorskMarintekniskForskningsinstitutt AS (MARINTEK), Norway, Prof. Sadhan K Ghosh has been invited to Lead the project in India in March 2020
2. **UNCRD, Japan; ISWMAW, CRIC (Consortium of researchers in international collaboration), India supported Research Project, 3<sup>rd</sup> phase :** International Collaborative Research Project on, “Global Status of implementation of Circular Economy” (2020-2022), participated by experts from 20 countries. Prof Sadhan K Ghosh is the Project Leader. Participating countries to be decided soon to develop the project, “Circular Economy: Policy, Innovation, Technology and Business”
3. **Royal Academy of Engineering, UK funded (2019-2021):** Circular Economy adoption within small and medium sized enterprises in India and the UK. (40,000 GBP) (Contd.)
4. **Funded by Global Challenge Research Funding, UK (2019-2020):** Social Wellbeing and Mental Health Challenges of Employees of Small and Medium Sized Enterprise (SMEs) in Emerging Economies (2019-2020) : (10,000 GBP) (Contd.)
5. **Shota Rustaveli National Science Foundation (SRNSF), Georgia, funded (2019-2022):** Development of an Integrated Methodology for Determination of the Likelihood of Emerging Illegal Dumpsites in High Mountainous Rural Regions on the Example of Georgia, (GEL 180 000). Partner: Institute of Hydrometeorology at Georgian Technical University, Georgia (Contd.)
6. **IGES Centre Collaborating with UNEP on Environmental Technologies (CCET), Japan and International Society of Waste Management, Air and Water (ISWMAW), India funded(2018-20):** Developing Indore Case Study, the cleanest city in India (USD 5000)
7. **European Union funded: Horizon 2020 Research projects from European commission (July 2018 – June 2022):** PI from Jadavpur University, Project Entitled, “India H<sub>2</sub>O bio-mimetic and phyto-technologies Designed for low-cost purification and recycling of water. 20 participating organizations from 7 countries- India, UK, Denmark, Singapore, Spain, Netherlands and Israel. (INR 130 million) (Contd.)
8. **UNCRD, Japan; ISWMAW, CRIC (Consortium of researchers in international collaboration), India supported Research Project, 2<sup>nd</sup> Phase:** International Collaborative Research Project on, “Global Status of implementation of Circular Economy” (2019-2021), participated by experts from 14 countries. Prof Sadhan K Ghosh is the Project Leader. Participating countries : Brazil, Denmark, Georgia, India, Mexico, Morocco, Philippines, Russian Federation, Slovenia, South Africa, Tanzania, Tunisia, Turkey and USA to develop the project, “Circular Economy: Recent Trends in Global Perspective” (Contd.)

##### National Research Projects (Funded) ongoing - Prof Sadhan K Ghosh as PI

9. **ISI, Kolkata funded(2019-2021):** Pro-Environmental attitude survey (PES), Psychology Research Unit of the Indian Statistical Institute, Kolkata (INR 12,60,000) (Contd.)

**Invited lectures delivered/Session Chaired (2019-20)**

**Lectures delivered in foreign Countries and India by Prof. Sadhan K. Ghosh**

1. **Germany, Berlin:** Delivered keynote speech on, “Reduction of marine litter by a functioning circular economy” Invited by German Recycling Technologies and Waste Management Partnership e.V. in the RETech conference “Recycling management against marine litter” held at Berlin, Germany during on 21 and 22 November, 2019
2. **Bangladesh, on invitation from IGES, Japan & SACEP, Sri Lanka:** Delivered Speech on “Waste separation at source at Indore” at the Second Sub-Regional workshop on Preparation of status Report and sub-regional Roadmap for Implementing the Global Waste Management Goals toward Addressing SDGS in South Asia to be held in Dhaka, Bangladesh 15 -17 July, 2019 and coordinated the session on, “Holistic waste management/ integration of 3Rs”, at the Meghna Hall, Hotel Pan Pacific Sonargaon, Dhaka, Bangladesh
3. **Sri Lanka, on invitation from IGES, Japan & SACEP, Sri Lanka:** Delivered Key Note speech on, “*Importance of Roadmap moving from waste management towards circular economy incorporating Polluter Pay Principle and EPR*” on 16 September and second keynote speech on 17 September on, “*Importance of national data management on waste and experience of the application of Swachh Bharat Mission in India in gathering data from cities (data types, procedure and management)*”, at the Third Sub-Regional Workshop on preparation of status report and sub-regional roadmap for implementing the globalwastemanagement goals towards addressing SDGs in South Asia scheduled to be held from 16-17 September 2019, in Colombo, Sri Lanka. at the The Kingsbury Hotel Colombo, Sri Lanka
4. **USA :** Delivered the *Opening Plenary Speech* in Annapolis, Maryland, Washington DC, on “Sustainable Waste Management in Ribboning & Retting of Jute : Alternative to Plastics”, in the 34th International Conference on Solid Waste Technology and Management, by Widener University, USA held during 31 March - 03 April, 2019
5. **India at India Habitat Centre :** Delivered the address on, “Waste to Energy” in the International Seminar of Waste to Energy, on 31 January, 2020 invited by Steag Germany at India Habitat Centre, New Delhi
6. **India at India Habitat Centre :** Panelist in the “Waste and Waste- Water Management in WSDS 2020 Corporate Conclave” on 30 January, 2020 in the Stein Auditorium, India Habitat Center, Lodhi Road, New Delhi invited by TERI at the World Sustainable Development Summit 2020
7. **India at Indore :**Delivered speech on, how to improve the waste management at Indoor”, at Indore Municipal Corporation, by IGES, Japan and ISWMAW. June 2019
8. **India at IconSWM, KIIT, Odisha:** Delivered the Keynote Speech at 9th IconSWM-CE 2019 (International Conference on Solid Waste Management, held at KIIT, Odisha during 27-30 November, 2019
9. **ANU, Guntur:** Keynote speech in the inaugural on national seminar on Ecofriendly Technologies for sustainable waste management, AT ANU, Guntur, Urban sustainability through Circular Economy towards sustainable waste management” during 7-8 February, 2020
10. **NIT, Durgapur :** Delivered keynote speech on “Circular Economy” at the national seminar on waste management and Circular Economy sponsored by TEQIP, NIT Durgapur
11. **CUSAT, Cochin:**Delivered keynote speech on “Sustainable Waste Management” at the International Conference On Energy, Environment, Materials And Safety (ICEEMS’ 19), 25-27 April, 2019, Venue: Seminar Complex, CUSAT, Cochin University of Science & Technology
12. **JU :** Delivered several lectures on “Anti Plagiarism, benefits and software application” for the teachers and research scholars of Jadavpur University, on 1.10.2019 and several other dates covering nearly 1000 teachers and research scholars
13. **JU :** Delivered lecture on “ How to write quality research articles for publication” at the two day workshop at Jadavpur University attended by more than 400 teachers and research scholars, during 13-14 January, 2020

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14. **CUSAT, Cochin:** Delivered plenary lecture on “Marine Littering and Micro plastics-global status, actions and way forward”, at the Department of Civil Engineering, Cochin University of Science and Technology, Kochi, India in International workshop on Sustainable Technologies for “Waste to Energy& Waste to Wealth” – Challenges and Opportunities, STWEAW’19 on 16 December, 2019
15. **IEM, Kolkata:** Delivered keynote speech on “Resource Circulation in Circular Economy” at the Institute of Engineering & Management, Kolkata on 24 April, 2019 in the National Symposium on Resource Circulation and Waste Management
16. **UGC- HRDC, JU:** Delivered speech on “Innovation” at the 74th Orientation programme for teachers and librarian of universities and colleges on 11 September, 2019 at the UGC-Human Resource Development Center, Jadavpur University
17. **CU:** Delivered speech on “Innovation in waste plastics Recycling & Jute Ribboning” at the Orientation programme for teachers of universities and colleges at the department of Chemical Engineering, Calcutta University, Rajabazar Campus

### Session Chaired (2019-20) (Description–Date–Venue)

Panel Discussion on How to Reduce marine littering and adopt Recycling” held at Berlin, Germany on 22 November, 2019.–22 November, 2019–Berlin, Germany

Chaired the 9th International Conference on Solid Waste Management, 8th IconSWM held during 27-30, November 2019.–27-30 November, 2019–KIIT, Odisha

Chaired the inaugural and valedictory programme of the 9th IconSWM 2019 (International Conference on Solid Waste Management),– 30 November, 2019–KIIT, Odisha

Chaired the Technical Session in the 34<sup>th</sup> International Conference on Solid Waste Technology and Management, Philadelphia, Widener University, USA held in March-April, 2019–April 2019–Annapolis, Maryland, Washington DC USA

Third Sub-Regional Workshop on preparation of status report and sub-regional roadmap for implementing the global waste management goals towards addressing SDGs in South Asia scheduled to be held from 16-17 September, 2019, in Colombo, Sri Lanka –16 September 2019–The Kingsbury Hotel Colombo, Sri Lanka

### Conference attended by Prof. Sadhan K Ghosh

1. 34<sup>th</sup> International Conference on Solid Waste Technology and Management, Philadelphia, Widener University, USA held during March, 2019, at **Annapolis, Maryland, Washington DC**
2. 9<sup>th</sup> International Conference on Solid Waste Management, 9<sup>th</sup> IconSWM 2019 at KIIT, Odisha India, by International Society of Waste Management, Air and Water (ISWMAW), CQMS, Jadavpur University, IISc Bangalore and KIIT during 27-30 November, 2019
3. National seminar on Eco friendly Technologies for sustainable waste management, AT ANU, Guntur, Urban sustainability through Circular Economy towards sustainable waste management” during 7-8 February, 2020

### Seminar /Conference /Symposium organized by Prof. Sadhan K Ghosh

1. 9<sup>th</sup> International Conference on Solid Waste Management, 9<sup>th</sup> IconSWM 2019 at KIIT, Odisha, India, by International Society of Waste Management, Air and Water (ISWMAW), CQMS, Jadavpur University, IISc Bangalore and KWSA, JSMCWM
2. WED (World Environment Day) Celebration Workshop on 5 June, 2019 seminar at Jadavpur University
3. Indo - Taiwan Workshop in August 2019 by CQMS, JU and Fu Jen Catholic University
4. Research Review Meeting and Workshop, GCRF ESRC, UK seed corn funded research project, Social Wellbeing and Mental Health issues of employees in SMEs, 27-28 January, 2020 at Centre for Sustainable Development and Resource Efficiency Management, Jadavpur University, Kolkata, India

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5. Royal Academy of Engineering (RAE), UK funded research project , Circular Economy Adoption in SMEs in India and the UK, 27 January, 2020 at Centre for Sustainable Development and Resource Efficiency Management, Jadavpur University, Kolkata, India
6. Two day workshop on “**Writing quality research articles for publication**” at Jadavpur University attended by more than 400 teachers and research scholars, during 13-14 January, 2020

### **Publications by Prof. Sadhan K Ghosh during (2018-19) Published in Peer Reviewed Journal**

1. Baidya R, Debnath B, Ghosh S. K., & Rhee S. W. (2020). Supply chain analysis of e-waste processing plants in developing countries. *Waste Management & Research*, 38(2), 173-183
2. Swathy Sadala, Saikat Dutta, Radhika Raghava, TS Sasi Jyothsna, B Chakradhar and Sadhan Kumar Ghosh, Resource recovery as alternative fuel and raw material from hazardous waste. Special Issue of 9th IconSWM 2019: WM&R, Vol 37, Issue 11, 2019; page(s): 1063-1076; <https://doi.org/10.1177/0734242X19854124>

### **Published in Book Chapters:**

1. Baidya R, Saha I, Bhattacharya T, & **Ghosh, S. K.** (2020). Sustainable Waste Transportation in Kolkata Using DBMS and Image Sensing. In *Waste Management as Economic Industry Towards Circular Economy* (pp. 129-136). **Springer, Singapore**
2. **Ghosh, S. K.** (2020) Introduction to Circular economy and, *Circular Economy : Global Perspective*, 2020, **Springer, Singapore**
3. Saha I, Kundu A., **Ghosh S.K.** (2019) A Study to Establish an Energy-Efficient Sustainable Business Model in Virtual ERP. In: Ghosh S. (eds) *Waste Management and Resource Efficiency*. Springer, pp: 1167-1174. DOI:10.1007/978-981-10-7290-1\_96. Link: [https://link.springer.com/chapter/10.1007%2F978-981-10-7290-1\\_96](https://link.springer.com/chapter/10.1007%2F978-981-10-7290-1_96)

### **Published in Conference Proceedings (2019-20)**

1. Ghosh A, Ghosh S.K., Sarkar, J. P, & Das B (2019). Municipal solid waste management and waste-to-energy in the context of a circular economy and energy recycling in Asian Countries. 27-30 November, 2019, 9<sup>th</sup> International Conference on Sustainable Waste Management towards Circular Economy, Bhubaneswar, India
2. Ghosh A & Ghosh, S.K. (2019). Study the Impact on Global Plastic Waste Trade: Challenges and Emerging Solutions to the China’s Plastic Ban. 27-30 November, 2019, 9<sup>th</sup> IconSWM-CE, International Conference on Sustainable Waste Management towards Circular Economy, Bhubaneswar, India
3. Raktim Dasgupta. & Ghosh S.K. (2019). “Problems and Prospects of tea industry in india”, 27-30 November, 2019, 9<sup>th</sup> IconSWM-CE, International Conference on Sustainable Waste Management towards Circular Economy, Bhubaneswar, India
4. Baidya R, **Ghosh S.K.**, (2019), Assessing the Awareness of Citizen on Municipal Solid Waste Management in the City of Kolkata: A Case Study, 9th International Conference on Sustainable Waste Management towards Circular Economy -2019, Bhubaneswar, Odisha, India, 27 – 30 November, 2019
5. Baidya R, **Ghosh S.K.**, (2019), Co-processing of Purified Terephthalic Acid in Cement Kiln. 9th International Conference on Sustainable Waste Management towards Circular Economy -2019, Bhubaneswar, Odisha, India, 27– 30 November, 2019
6. Ipsita Saha , Amit Kundu and **Sadhan Kumar Ghosh**, A Decision Support System for Environment Friendly Sustainable Model of IT Service Sector Industries, 9th International Conference on Sustainable Waste Management towards Circular Economy (Icon SWM) 2019 organized by KIIT (Kalinga Institute of Industrial Technology) (DU), Bhubaneswar, Odisha, India and International Society of Waste Management, Air and Water (ISWMAW) at KIIT, Bhubaneswar, Odisha, India, 27-30 November, 2019

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7. Ipsita Saha , Amit Kundu and **Sadhan Kumar Ghosh**, Waste Management Strategy of SME Sector towards Environmental Sustainability, 9th International Conference on Sustainable Waste Management towards Circular Economy (Icon SWM) at KIIT, Bhubaneswar, Odisha, India 27-30 November, 2019

### **Books as Editor :Edited volume /Int. Journal as Chief Editor /Editor /Associate Editor by Prof. Sadhan K Ghosh**

1. Associate Editor, International Journal of Materials Cycle and Waste Management
2. Editor: Circular Economy : Global Perspective, 2020, contribution from 21 countries on Circular Economy, published in November 2019, Springer Nature Publication
3. Editor: Recent Trends in Waste Water Treatment and Water Resource Management with Springer Nature Singapore Pte Ltd, 2020
4. Editor : Proceedings of 9th IconSWM 2019, in November 2019, ISWMAW
5. Energy Recovery Processes from Wastes, Theme based book, ISBN 978-981-329-228-4, Springer Nature, © 2020
6. Solid Waste Policies and Strategies: Issues, Challenges and Case Studies
7. Emerging Technologies for waste valorisation and environmental protection : Published in 2020, Springer Nature. ISBN 978-981-15-5735-49

**Special Program Promoting Cycling:** On invitation by Chinese Taipei University Sports Federation (CTUSF) and Fu Jen Catholic University, Inaugurated and participated in the International Sports and Nature familiarization activity (First of its kind in Jadavpur University); As the head of delegation of the Cycling Team participated in the Summer Cycling Programme in Taiwan invited by the Chinese Taipei University Sports Federation (CTUSF) and Fu Jen Catholic University with two officers, Dr. Rajat Ray, Dean of Students and Dr. Aparup Konar, DoP and ten students across Jadavpur university during 02-07 September, 2019

### **Outstanding Achievement of Prof. Sadhan Kumar Ghosh in 2020-21:**

1. **Advocacy of Anti Plagiarism system :** As the Chairman of the concerned committee, he lead the team in developing the “**Anti Plagiarism Policy, 2019, Jadavpur University**” and implemented from 1 December, 2019 at the FET, Jadavpur University for all theses to be submitted for the partial fulfillment of the Phd, M. Phil and M. E degree

## **TRANSLATION OF INDIAN LITERARURES (CENTIL)**

[Department of Comparative Literature]

Phone: 033-2457-2156

Coordinator: Dr. Sayantan Dasgupta

E-mail: til.centre@jadavpuruniversity.in

### **2. B. Major Research Project: (Departmental/Individual, Name of the Project/Funding Agency)**

#### **Sayantan Dasgupta:**

1. “Comparative Literature: Academic Social Responsibility and the UN Sustainable Development Goals: Towards a New Humanities in India” (2019-2020) UGC RUSA 2.0 (Principal Coordinator, Project of Department of Comparative Literature).



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2. RUSA 2.0 project on REDEFINING 'INDIAN' LITERATURE: ARCHIVING AND TRANSLATING INDIGENOUS AND MARGINALISED TRADITIONS (UGC RUSA 2.0)
3. RUSA 2.0 Project- "Digital Interventions: The Changing Contours of Media, Communication and Culture in India" project of the School of Media, Communication and Culture, Jadavpur University (2019-2020) [with Professor Abhijit Roy]
4. "The Contemporary Bodo Short Story," project funded by The Asiatic Society, Kolkata(2019)

### **Shradhanjali Tamang**

1. "Filmmaking Practices in the Eastern Himalayas" (2019-2020) UGC RUSA 2.0 project (Principal Investigator)
2. "Redefining 'Indian' Literature: Archiving and Translating Indigenous and Marginalised Traditions" (2019-2020) UGC RUSA 2.0 project, Collaborator (Principal Investigator – Sayantan Dasgupta)

### **3. A. Invited Lectures Delivered/Sessions Chaired:(Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)**

#### **Sayantan Dasgupta:**

1. "Introducing the Theme of the Seminar-Workshop on Translating Bodo Short Stories" at the Asiatic Society, 21 October, 2019
2. Presented Keynote Address at the seminar on "Crossing the Border: Multiculturality in Eastern Indian Literature", organized by Sahitya Akademi, 1 September, 2019
3. Invited presentation on Translation Workshop-cum-Seminar at the Asiatic Society, 16 May, 2019
4. Presented an invited paper on "Pedagogy, Relevance, Comparativism: A Historical Narrative" at Three-Day National-level Centenary Commemoration Seminar on The Establishment of the Department of Modern Indian Languages at the University of Calcutta. Organised by Department of CILL, University of Calcutta. 7 May, 2019 (6-8 May, 2019)

### **3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the Teacher, Name of the Paper Presented, Name of the Seminar, Place, Duration)**

#### **Shradhanjali Tamang**

1. Presented a paper titled "Discussing the Oral Nature of *Tamba* Tradition" in a three day national level seminar titled "Centenary Commemoration Seminar On The Establishment of the Department of Modern Indian Languages at the University of Calcutta", organised by the Department of Comparative Indian Language and Literature in collaboration with Central Institute of Indian Languages, 6- 8 March, 2019, University of Calcutta
2. Participated as English Language resource person in "Translating Bodo Short Stories: A Seminar-Workshop organised by "Redefining 'Indian' Literature: Archiving and Translating Indigenous and Marginalised Traditions" (2019-2020) UGC RUSA 2.0 project, JU in collaboration with The Asiatic Society, Kolkata and University of East Anglia, 21-25 October, 2019

### **3. C. Seminar/Workshop/Conference/Symposium Organized:**

#### **Sayantan Dasgupta**

1. Organized a one-day seminar, "Academic Social Responsibility across Borders: Formulating a New Humanities Pedagogy" for The Centre for Translations of Indian Literatures (CENTIL) in collaboration with the Humanities in India Program (India Dialogue), University of East Anglia at Jadavpur University on 13 June, 2019
2. Organized a translation workshop on "Workshop on Literary Translation Techniques" in collaboration with Deb Sahitya Kutir, 20-21 August, 2019, in Jadavpur University, Kolkata

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3. Organized a “Workshop on Graphic Narratives” as part of the RUSA 2.0 departmental project on UN Sustainability Development Goals: Towards a New Humanities in India from 16-20 September, 2019, in Jadavpur University, Kolkata
4. Organized a five-day long seminar on “Translating Bodo Short Stories” in collaboration with The Asiatic Society, Kolkata from 21-25 October, 2019 in The Asiatic Society, Kolkata and Jadavpur University, Kolkata
5. Organized a one-day symposium titled “Celebrating the City: Representations of Kolkata in Indian Literature” in collaboration with Sahitya Akademi on 9 January, 2020, in Jadavpur University, Kolkata
6. Organized a translation workshop on “Translating Nepali Short Stories to English” in collaboration with Gurudas College, Kolkata on 14 February, 2020, in Gurudas College, Kolkata
7. Co-organized a translation workshop on “Comparative Literature: Texts, Contexts and Concepts” from 3-6 March, 2020 in Jadavpur University, Kolkata

### **Shradhanjali Tamang**

1. Organized a two-day “Workshop on Literary Translation Techniques” for Centre for Translation of Indian Literatures (CENTIL) in collaboration with the Deb Sahitya Kutir Heritage Foundation, 20- 21 August, 2019
2. Organized a one-day seminar, “Academic Social Responsibility across Borders: Formulating a New Humanities Pedagogy” for The Centre for Translations of Indian Literatures (CENTIL) in collaboration with the Humanities in India Program (India Dialogue), University of East Anglia at Jadavpur University on 13 June 2019

### **4. A. Books/Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)**

**Sayantana Dasgupta:** The Dalit Lekhika (ed. with Kalyani Thakur). Kolkata: Stree-Samya Books, 2020

### **4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)**

**Sayantana Dasgupta:**

1. “A Ghost Story” in Duncan Large et al ed., My BCLT: Celebrating 30 Years of the British Centre for Literary Translation. University of East Anglia, 2019
2. “Trailokyanath Mukhopadhyay’s Kankabati” in Indian Literature 313, New Delhi: Sahitya Akademi, September-October 2019
3. “Studying Translation in India” in Indian Literature 312. New Delhi: Sahitya Akademi, July-August 2019
4. “Manto Reloaded, Hussein Remixed: Exploring Intermedial Translation in South Asia” in Jadavpur Journal of Comparative Literature, Kolkata: Jadavpur University, 2019

### **6. Collaborative Programmes:**

**Sayantana Dasgupta:**

1. “Translating Bodo Short Stories”, collaboration of CENTIL with the Asiatic Society, 2019-2020

## Annual Report 2019-20

### VICTORIAN STUDIES

[Department of English]

Phone: 033-2414-6681

033-2457-2145

Coordinator: Saswati Halder

Joint Coordinator: Sutanuka Ghosh

E-mail: saswati.halder@jadavpuruniversity.in

The **Centre for Victorian Studies** was set up in 2010 with the objective of making it a meeting place for fruitful research in the area. The Centre has collaborated with the 'Victorian Studies Centre' of the **University of Leicester (UK)** whose members have expressed a keen interest to work with the faculty of Jadavpur University. **The Centre has an interdisciplinary approach to research and has worked in collaboration with the sister departments of the Arts Faculty of Jadavpur University, like Comparative Literature, History and Bengali.** We hope to make it function as a nodal centre for all researchers / college teachers working in the area in other Colleges and Universities of West Bengal as well

**The Confidential Clerk**, broadly concerned with scholarship, new research and a keen understanding of nineteenth century literary history and theory, is an online journal of the Centre which has published its first issue in March 2015. Interdisciplinary, international and innovative, the journal is committed to provide a forum for original and unpublished research papers from students, young researchers and established authors. Articles will not only explore and integrate theories and methods of various fields of inquiry - gender, art, history, music, anthropology, psychology, military studies, urbanism, literary criticism, religious studies, social history, economics, popular culture studies, and the history of science, among others - but also test and open up the very limits of disciplinary boundaries. The sixth issue of **The Confidential Clerk**, is a collection of original and unpublished research papers on **The Brontës and their Contemporaries: Texts and Contexts (1816-1855)**

## V. RAVI CHANDRAN CENTRE FOR PHARMACEUTICAL SCIENCES

[Department of Pharmaceutical Technology]

Phone : 033-2414-6677

: 033-2457-2588

Coordinator.: Prof. Biswajit Mukherjee

E-mail : vrccps.centre@jadavpuruniversity.in

### 1. Vision of the centre:

- Formulation and development, site-specific drug targeting by conventional and non-conventional approaches for cancer chemoprevention and diabetes
- Neurobiochemical and neuropharmacological study associated with brain aging  
Further, to, provide fellowship to U.G. students by merit-cum-means basis  
To develop the centre as a unit in the Eastern India to conduct research to resolve and assist regarding formulation development and drug targeting related research  
Financial assistance in terms of fellowship to PhD scholars to carryout research work in area as mentioned above

**2 A. Area of Research Activities:**

**Pharmaceutics**

**Field of Interest:**

Pharmaceutics, Biopharmaceutics & Pharmacokinetics, Pharmaceutical Biotechnology, Hepatocarcinogenesis & chemoprevention, Antisense Technology, Diabetes and Cancer correlation, Nanotechnology, Transdermal drug delivery systems, Liposomal drug delivery system, Dental formulations

**2. B. Major Research Project : (Name of the Faculty–Title of the project–Duration (in months)–Funding Agency)**

- Prof. Biswajit Mukherjee–Antibody conjugated polymeric nanoparticles containing an anticancer drug for prostate cancer therapy: in vitro and in vivo study(Individual: Ashique Al Hoque)–60 months (2017-2022)–DST-Inspire
- Prof. Biswajit Mukherjee–Characterization and role in sperm egg interaction and fertilization of a sperm outer surface phosphoprotein (MPS) located at acrosomal tip.(Individual: Dr. Prasanta Ghosh)–36 months(2019-2022)–CSIR RA
- Prof. Biswajit Mukherjee–Bioflavonoids loaded PLGA nanoparticles a novel strategy to target lung metastasis.( Individual: Ramkrishna Sen)–36 months(2019-2022)–ICMR
- Prof. Biswajit Mukherjee–Development of peptide and aptamer conjugated polymeric nanoparticles for targeted delivery of Garcinol against colon-cancer: in vitro and in vivo study. (Individual: Brambhachari Paul)–36 months (2018-2021)–NDF scheme, AICTE
- Prof. Biswajit Mukherjee–Development of apigenin loaded ligand conjugated nanoliposomes to target liver cancer cell.( Individual: Moumita Pauzdar)–24 months (2019-2021)–ICMR
- Prof. Biswajit Mukherjee–Design and development of antibody conjugated biodegradable nanoparticle containing Paclitaxel for the treatment of cancer(Individual: Iman Ehsan) – 36 months (2018-2021)–ICMR
- Prof. Biswajit Mukherjee–Site-specific targeting of biodegradable polymeric nanoparticle for the treatment of lung cancer: an in-vitro and in-vivo approach (Individual: Leena Kumari)–36 months(2018-2021)–CSIR

**3. A. Invited Lectures Delivered/Sessions Chaired:**

**(Name of the faculty–Title of the paper–Name of the Workshops/ Seminars/ Conferences/ Guest Lectures–Year–Date–Place)**

Prof Biswajit Mukherjee–Continuing education program–Pharmacy council of India–2019–15-17 February, 2019–Gupta college of Pharmacy, Asansol, W.B

Prof Biswajit Mukherjee–Chairing the season–International conference on Biotechnological Innovations in Food and health care–2019–27–28 January–BITS Pilani, Dubai

Prof Biswajit Mukherjee–Delegates and resource person–National seminar on Advance in Pharmaceutical Technology: Opportunities and challenges–2019–22–23 February–Adamas University

Prof Biswajit Mukherjee–Way Forward to Tackle Challenges of COVID 19 in India–Webinar organized by Indian Association of Pharmaceutical Scientists and Technologists; International Pharmaceutical Federation; and Manipal academy of higher education–2020–17 August, 2020–Online

Prof Biswajit Mukherjee–Sessions chaired–on-line demonstration session of USP-4 Dissolution flow-through Test Apparatus, organized by SORTAX–2020–8 July, 2020–Online

**3. B. Seminar/Workshop/Conference/Symposium Attended: (Name of the faculty/student–Title of the paper–Name of the Workshops/ Seminars/ Conferences–Year–Date–Place)**

Prof Biswajit Mukherjee–International conference on Biotechnological Innovations in Food and health care–2019–27–28 January–BITS Pilani, Dubai

Prof Biswajit Mukherjee–Way Forward to Tackle Challenges of COVID 19 in India–Webinar organized by Indian Association of Pharmaceutical Scientists and Technologists; International Pharmaceutical Federation; Manipal academy of higher education–2020–17 August, 2020–Online

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Prof Biswajit Mukherjee–Mega Flagship event for Young Researchers in the field of Pharmaceutical Sciences DISSO RESEARCH PRESENTATIONS INDIA 2020 - ONLINE Society for Pharmaceutical Dissolution Sciences (SPDS) in collaboration with the Association of Pharmaceutical Teachers of India (APTI)–2020–4, 5 and 7 June–Online

Prof Biswajit Mukherjee–Sessions chaired–on-line demonstration session of USP-4 Dissolution flow-through Test Apparatus, organised by SORTAX–2020–8 July, 2020–Online

Prof Biswajit Mukherjee–Sessions chaired–Web session by Mr. Debasish Chakraborty, VP, Piramal Enterprise and Mr. Amit Kanabar, Head COE, Macleod’s Pharmaceutical, organized by Indian Association of Pharmaceutical Scientists and Technologists–2020–3 October–Online

### 3. C. Seminar/Workshop/Conference/Symposium Organized: (Types of activity (Workshops/ Seminars/ Conferences/ Guest Lectures)–Title of the event–Year–Duration (in months)

**Conference**–3<sup>rd</sup> Pharmaceutical Technology IAPST International Conference–January 2019–2 days

**Workshop**–One day Nation Workshop on “Pharmaceutical Technology: How it works”–October 2019–1 day

**Workshop**–on-line demonstration session of USP-4 Dissolution flow-through Test Apparatus, organized by SORTAX–8 July, 2020–1 day

**Webinar**– “Way Forward to Tackle Challenges of COVID-19 in Indian”, Webinar organized by Indian Association of Pharmaceutical Scientists and Technologists; International Pharmaceutical Federation; Manipal academy of higher education–August 2020–1 day

**Webinar**–Web session by Mr. Debasish Chakraborty, VP, Piramal Enterprise and Mr. Amit Kanabar, Head COE, Macleod’s Pharmaceutical, organized by Indian Association of Pharmaceutical Scientists and Technologists–October 2020–1 day

**Invited Lecture**–Mr. Bijoy Gopal Chakraborty Vice President Biologics Technical Operations at Dr. Reddy’s Laboratories–2019–1 day

### 3. D. Orientation Courses/ Refresher Courses Attended:

(Name of the faculty–Title of the paper–Name of the Workshops/ Seminars/ Conferences/ Guest Lectures–Year–Date–Place)

Prof Biswajit Mukherjee–Continuing education program–Pharmacy council of India–2019–15-17 February, 2019, Gupta college of Pharmacy, Asansol, W.B

### 4. A. Books/Monographs etc. Published: (Authors–Title of the Chapter–Book –Name of the Publisher)

**Biswajit Mukherjee**, Soma Sengupta, Soumyabrata Banerjee, Moumita Dhara, Ashique Al Hoque, Leena Kumari, Manisheeta Ray, Iman Ehsan, and Alankar Mukherjee–Transdermal Nano medicines for Reduction of Dose and Site-Specific Drug Delivery–Nano Medicine and Nano Safety, M. K. Das, Y. V Pathak (eds.), **In Press (2020)**–Springer Nature Singapore Pte Ltd.

**Biswajit Mukherjee**, Debasmita Dutta, Prasanta Ghosh, Brahamacharry Paul, Ramkrishna Sen, and Samrat Chakraborty–Recent Trends for Nano medicine Safety–Nano Medicine and Nano Safety, M. K. Das, Y. V Pathak (eds.), **In Press(2020)**–Springer Nature Singapore Pte Ltd.

**Biswajit Mukherjee**, Moumita Dhara, Debasmita Dutta, Apala Chakraborty, Shreyasi Chakraborty, Soma Sengupta, Laboni Mondal, Lopamudra Dutta, Kushal Pal–Basics on biopolymeric Nanomaterials (Chapter 1)–Biopolymer-Based Nanomaterials in Drug Delivery and Biomedical Applications **In Press(2020)**–Elsevier

**Biswajit Mukherjee**, Leena Kumari, Iman Ehsan, Prasanta Ghosh, Soumyabrata Banerjee, Samrat Chakraborty, Manisheeta Ray, Ashique Al Hoque, Ratan Sahoo–Guar gum-based nanomaterials in drugdelivery and biomedical applications (Chapter 6)–Biopolymer-Based Nanomaterials in Drug Delivery and Biomedical Applications **In Press(2020)**–Elsevier



**Biswajit Mukherjee**, Samrat Chakraborty, Iman Ehsan, Apala Chakraborty, Leena Kumari, Alankar Mukherjee, Sounak Sarkhel.–Conventional and Nonconventional Approaches to Site-Specific Targeting of Nanotherapeutics in Some Infectious Diseases and Metabolic Disorders. (Chapter 6.)–Nanoformulations in Human Health.2020 S. Talegaonkar, M. Rai (eds.),–Springer Nature Switzerland AG

**Biswajit Mukherjee**, Ashique Al Hoque, Shreyasi Chakraborty, Leena Kumari, Somdatta Roy, Paramita Paul.–Nanomedicine: Could It Be a Boon for Pulmonary Fungal Infections?–Nanomedicine for the Treatment of Disease: From Concept to Application.–Apple Academic Press. New York.2019:141.Edited By Sarwar Beg, Mahfoozur Rahman, Md. Abul Barkat, Farhan Jalees Ahmad

**Biswajit Mukherjee**, Iman Ehsan, Debasmita Dutta, Moumita Dhara, Lopamudra Dutta, Soma Sengupta.–Nanomedicinal Genetic Manipulation: Promising Strategy to Treat Some Genetic Diseases.–Nanomedicine for the Treatment of Disease: From Concept to Application.–Apple Academic Press.New York.2019:141.Edited By Sarwar Beg, Mahfoozur Rahman, Md. Abul Barkat, Farhan Jalees Ahmad

**4. B. Articles Published in Journals:** (Including National/International & Peer-reviewed Journals)

**(Authors–TitleJournal–Volume: issue; page numbers–Year–Impact Factor provided by JCR only)**

Chakraborty S, Dlie ZY, Chakraborty S, Roy S, **Mukherjee B**, Besra SE, Dewanjee S, Mukherjee A, Ojha PK, Kumar V, Sen R–Aptamer-Functionalized Drug Nanocarrier Improves Hepatocellular Carcinoma toward Normal by Targeting Neoplastic Hepatocytes.–Molecular Therapy- Nucleic Acids.–5;20:34-49–2020–7.032

DK Mal, **B Mukherjee**–Educational Motivation and Legislative Approaches for Safe and Effective Hand Washes and Hand Rubs in Hand Health Care During COVID-19 Pandemic–**Asia Pacific Journal of Public Health**, –1010539520962612–2020–1.459

DK Mal, **B Mukherjee**–Personal Protective Equipment (PPE), their Standards, Donning-doffing Procedures and Challenges of Indian Drug Regulatory Authorities with the New Indian PPE Manufacturers.–**AIJR Preprints**–2020

Chakraborty S, Dlie ZY, **Mukherjee B**, Besra SE, Sengupta S, Sen R, Mukherjee A.–A Comparative Investigation of the Ability of Various Aptamer-Functionalized Drug Nanocarriers to Induce Selective Apoptosis in Neoplastic Hepatocytes: In Vitro and In Vivo Outcome.–**AAPS PharmSciTech**–21(3):89–2020–2.608

Apala Chakraborty, Soumyabrata Banerjee, **Biswajit Mukherjee**, Mrinal Kanti Poddar–Calorie restriction improves aging-induced impairment of cognitive function in relation to deregulation of corticosterone status and brain regional GABA system.–**Mechnaism of Ageing and Development**.–Vol: 198 No: 111248–2020–4.3

Dewanjee S, Chakraborty P, **Mukherjee B**, De Feo V.–Plant-Based Antidiabetic Nanoformulations: The Emerging Paradigm for Effective Therapy.–**International Journal of Molecular Sciences**.–23;21(6).–2020–4.189

Soumyabrata Banerjee, **Biswajit Mukherjee**, Mrinal Kanti Poddar–Carnosine restores aging-induced elevation of corticosterone status and brain regional amyloid-beta in relation to down regulation of locomotor activity.**Journal of System and Integrative Neuroscience**–DOI: 10.15761/JSIN.1000210–2019 2.92

Paul B, Gaonkar RH, Mukhopadhyay R, Ganguly S, Debnath MC, **Mukherjee B**–Garcinol-loaded novel cationic nanoliposomes: in vitro and in vivo study against B16F10 melanoma tumor model.–**Nanomedicine (Lond)**. –14(15):2045-2065–2019–4.717

Laboni Mondal, **Biswajit Mukherjee**, Kaushik Das, Sanchari Bhattacharya, Debasmita Dutta, Shreyasi Chakraborty, Murari Mohan Pal, Raghuvir H Gaonkar, Mita Chatterjee Debnath. CD-340 functionalized doxorubicin-loaded nanoparticle induces apoptosis and reduces tumor volume along with drug-related cardiotoxicity in mice.–**International Journal of Nanomedicine**–14;8073–8094–2019 4.471

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Debasmita Dutta, Brahamacharry Paul, **Biswajit Mukherjee**, Laboni Mondal, Suparna Sen, Chinmay Chowdhury & Mita Chatterjee Debnath–Nanoencapsulatedbetulinic acid analogue distinctively improves colorectal carcinoma *in vitro* and *in vivo*.–**Scientific Reports**–9;11506–2019–4.011

Shreyasi Chakraborty, Iman Ehsan, **Biswajit Mukherjee**, Laboni Mondal, Saheli Roy, Krishna Das Saha, Brahamacharry Paul, Mita Chatterjee Debnath, Tanmoy Bera–Therapeutic potential of andrographolide-loaded nanoparticles on a murine asthma model.–**Nanomedicine:NBM** –20:102006 .–2019–6.5

Jnanranjan Panda, Bhabani Sankar Satapathy, Sumit Majumder, Ratan Sarkar, **Biswajit Mukherjee**, Bharati Tudu.–Engineered polymeric iron oxide nanoparticles as potential drug carrier for targeted delivery of docetaxel to breast cancer cells.–**Journal of Magnetism and Magnetic Materials**.–485:165-73–2019–2.683

Chakraborty T., Das M.K., Dutta L., **Mukherjee B.**, Das S., Sarma A.–Successful Delivery of Zidovudine-Loaded Docosanol Nanostructured Lipid Carriers (Docosanol NLCs) into Rat Brain.–In: Pathak Y. (eds) **Surface Modification of Nanoparticles for Targeted Drug Delivery**. Springer, Cham–245-276 2019

### 5. Collaborative Programmes: (Name of collaborating organization–Nature of collaboration–Outcome of collaboration)

Prof. A. Samanta and Prof. B. Mukherjee–Fabrication and Characterization of Natural Polysaccharide based Bio-erodible localized spongy scaffold: A New Advanced Wound Care Tool Defense Research Development Organization (DRDO-LSRB)–Das S, De A, Das B, Mukherjee M, Samanta A. (2020) Development of gum odina –gelatin based antimicrobial loaded biodegradable spongy scaffold: A promising wound care tool. Journal of applied polymer science. On press

Prof. Biswajit Mukherjee jointly with Dr. Bhaskar Majumder, Dibrugarh University–Development of Nanostructured Lipid carriers (NLCs) based on natural and synthetic lipids for brain targeting of Zidovudine Grant No.-BT/504/NE/TBP/2013 (DBT) Chakraborty T., Das M.K., Dutta L., Mukherjee B., Das S., Sarma A. (2019) Successful Delivery of Zidovudine-Loaded Docosanol Nanostructured Lipid Carriers (Docosanol NLCs) into Rat Brain. In: Pathak Y. (eds) **Surface Modification of Nanoparticles for Targeted Drug Delivery**. Springer, Cham. 245-276. [https://doi.org/10.1007/978-3-030-06115-9\\_14](https://doi.org/10.1007/978-3-030-06115-9_14)

### 6. Major Achievements:

(Authors–Title–Journal–Volume: issue; page numbers–Year–Impact Factor provided by JCR only)

- Chakraborty S, Dlie ZY, Chakraborty S, Roy S, **Mukherjee B**, Besra SE, Dewanjee S, Mukherjee A, Ojha PK, Kumar V, Sen R.–Aptamer-Functionalized Drug Nanocarrier Improves Hepatocellular Carcinoma toward Normal by Targeting Neoplastic Hepatocytes.–**Molecular Therapy- Nucleic Acids**. –5;20:34-49–2020–7.032
- Laboni Mondal, **Biswajit Mukherjee**, Kaushik Das, Sanchari Bhattacharya, Debasmita Dutta, Shreyasi Chakraborty, Murari Mohan Pal, Raghuvir H Gaonkar, Mita Chatterjee Debnath.–CD-340 functionalized doxorubicin-loaded nanoparticle induces apoptosis and reduces tumor volume along with drug-related cardiotoxicity in mice.–**International Journal of Nanomedicine**–14;8073–8094–2019 4.471
- Debasmita Dutta, Brahamacharry Paul, **Biswajit Mukherjee**, Laboni Mondal, Suparna Sen, Chinmay Chowdhury & Mita Chatterjee Debnath–Nanoencapsulatedbetulinic acid analogue distinctively improves colorectal carcinoma *in vitro* and *in vivo*.–**Scientific Reports**–9;11506–2019–4.011
- Shreyasi Chakraborty, Iman Ehsan, **Biswajit Mukherjee**, Laboni Mondal, Saheli Roy, Krishna Das Saha, Brahamacharry Paul, Mita Chatterjee Debnath, Tanmoy Bera–Therapeutic potential of andrographolide-loaded nanoparticles on a murine asthma model.–**Nanomedicine:NBM**–20:102006 –2019–6.5

### Name of the Fellows Working:

Dr. Soumyabrata Banerjee, Post Doctoral Researcher

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Ms. Apala Chakraborty, SRF, ICMR

Dr. Souvik Dey (Individual: Souvik Dey) Ramalingaswami Fellow, Department of Pharmaceutical Technology, Jadavpur University, Kolkata

### Review Articles:

1. Poddar M K and Chakraborty A. "Dietary Calorie Restriction as an Epigenetic Rejuvenator in Aging-Induced Decline of Cognitive Function". Acta Scientific Nutritional Health 3.10 (2019): 116-124.
2. Banerjee S, Poddar MK. Aging and Mammalian Platelet Biomarker. Thromb Haemost Res. 2019; 3(4):1034

### Selected Conference Publication:

1. Soumyabrata Banerjee, Biswajit Mukherjee, Mrinal K. Poddar (2019) Aging-induced neurodegeneration in relation to brain regional A $\beta$  deposition, locomotor and cognitive function: role of carnosine. 2019 ISN-ASN Meeting organized by the International Society for Neurochemistry (ISN) jointly organised with the American Society for Neurochemistry (ASN) held at Montréal, Canada on August 04-08, 2019
2. A. Chakraborty, S. Chakraborty, S. Roy, S. Chakraborty, B. Mukherjee, SE Besra. Aptamer conjugated nano-liposomal drug carrier- an approach to target glioma. ASOMPS XVI. Colombo, Sri Lanka, 2018
3. A. Chakraborty, S Banerjee, B Mukherjee, MK Poddar. Role of Calorie Restriction During Aging in Relation to Cognitive Function and Hippocampal GABA System. 3rd IAPST, Bhubaneswar, India

### Awards:

- Dr. Soumyabrata Banerjee and Ms. Apala Chakraborty received 2<sup>nd</sup> and 3<sup>rd</sup> prize respectively, in 3<sup>rd</sup> Pharm. Tech. IAPST International Conference, Odisha

## WELDING TECHNOLOGY

[ Department of Metallurgical & Material Engineering]

Phone : 033-2457-2325/2265/2174

Coordinator: Prof. Akshay Kr. Pramanick

E-mail: wtc.centre@jadavpuruniversity.in

**Year of establishment:** 2002

**Annual Budget:** Rs. 12,000.00(University Budgetary grant; excludes project funds and earnings)

**Major Objectives:** To strengthen the understanding & cooperating in promoting the development of Welding Technology.

### Major Activities:

To conduct training programme for fresher and experience personnel engaged in welding

To conduct long term and short term academic courses on welding technology

To undertake industry oriented research projects

To offer consultancy services for assessment and solution of industrial problem

### Faculty Profile:

There is no sanctioned post. The coordinator's profile is given below;

Name :A,K. Pramanick  
Last degree :PhD  
Designation :Professor  
Research Interest :Physical Metallurgy, Composites and Joining of Materials  
/Specialization  
Contact details :akshay99.ju@gmail.com  
A. SRF under state fellowship: One

### Publications:

#### A. Journal Publications:

1. **Sourav Debnath, Akshay Kumar Pramanick**, "Fabrication of beta-tricalcium phosphate/ crystalline silica- aluminium metal matrix composites: physical, mechanical, and in vitro biological evaluations", Biotechnology and Biological Sciences, CRC Press- Taylor & Francis, ISBN: 978-0-367-43161-7 (Hbk), ISBN: 978-1-003-00161-4 (eBook), Nov. 2019, pp. 48-56
2. **Sourav Debnath, Soumyajit Roy, Akshay Kumar Pramanick**, "An Exploratory Comparative Study of Fabricated Silica- Aluminium Metal Matrix Composites with Casted Aluminium-Silicon Alloys" JPCS- IOP Publishing (ISSN 17426588), 1579 (2020) 012014, pp. 1-6. (Scopus index) doi:10.1088/1742-6596/1579/1/012014
3. Soumyajit Roy, Barun Kr. Das, Akshay Kr. Pramanick, and Prasanta Kr. Datta. "The Technology Inherent in Indian Traditional Craft Metal Casting Process", Indian Foundry Journal, VOL 65, ISSUE 8, AUG 2019, pp-27-37

#### B. List of paper-presentations in National/International Conferences:

##### National Conference :

1. Sourav Debnath, Soumyajit Roy, Akshay Kumar Pramanick, "An Exploratory Comparative Study of Fabricated Silica – Aluminium Metal Matrix Composites with Casted Aluminium-Silicon Alloys", National Conference on Frontiers in Modern Physics (NCFMP 2020), organized by Department of Physics, Adamas University in collaboration with IOP Science from 6 to 7 February 2020 at Adamas University, Kolkata

##### International Conference:

1. Sourav Debnath, Akshay Kumar Pramanick, "Fabrication of beta-tricalcium phosphate/ crystalline silicaaluminium metal matrix composites: physical, mechanical, and in vitro biological evaluations." BIOSPECTRUM, International Conference on Biotechnology and Biological Sciences, organized by University of Engineering & Management (UEM) in collaboration with The Institution of Engineers (India) from 8 to 10 August, 2019 at UEM, Kolkata

### Ph.D (Engineering)

1. **Ph.D: 3 (Ongoing)**

### Projects: (Ongoing)

1. Title of the project: Comparative study of Corrosion Behaviour of MIG welded , TIG welded and Resistance welded Similar and Dissimilar Materials under RUSA 2.0 programme
2. Develop Procedure for joining Next generation High Temperature Material to be used for Supercritical/ Ultra Supercritical power plant by friction Stir welded under Ministry of Steel.,Govt. of India

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## **D. SPECIAL PROGRAMME**



## Annual Report 2019-20

### GLOBAL CHANGE PROGRAMME

Phone: 033-2457-2389/2815

Coordinator: Dr. Anupam Debsarkar

E-mail: anupamdeb.sarkar@jadavpuruniversity.in

The Global Change Programme at Jadavpur University (GCP-JU) marks the beginning of a multidisciplinary and comprehensive approach in India at the University level to address the issues of global change and related issues like climate change. GCP-JU comprising theoretical, empirical and action research projects as well as outreach activities seeks to have a direct impact on policy implementation and global change related negotiations at the local, national and international levels. Specifically, GCP-JU has been providing research inputs to The Intergovernmental Panel on Climate Change (IPCC), Millennium Assessment Report (2005), Stern Review Report (2006), and Global Energy Assessment of IIASA (International Institute for Applied Systems Analysis) at the international level. The research centre has also worked with Ministry of Environment and Forest towards preparation of NATCOM (National Communication) for United Nations Framework Convention on Climate Change (UNFCCC) and helps in capacity building within India and many developing countries. At the state level, GCP - JU is involved in the preparation of comprehensive report to ascertain the climate change impact, vulnerability and mitigation potential within the state of West Bengal

GCP-JU provides an ideal platform to researchers, working professionals, governmental and non- governmental organizations to research, network and collaborate on various local, national and international global change issues. GCP-JU collaborates with various governmental and non- governmental organizations to organize state level, national and international seminars, meetings and workshops which stimulate intellectual dialogue and facilitate policy making

#### Primary Aim is capacity building through

- Targeted research
- Short training programmes
- Outreach activities
- Information dissemination

#### Internship at GCP-JU:

Graduate/undergraduate students from Jadavpur University and various parts of India as well as from other countries worked as interns and worked with researchers associated with various ongoing projects

1. Soham Banerjee (The Energy and Resource Institute)
2. Ahana Bag (Department of Law, University of Calcutta)
3. Sachindra Rai (Department of Civil Engineering, Indian Institute of Engineering Science and Technology, Shibpur)
4. Swapnil Basu (Department of Civil Engineering, Indian Institute of Engineering Science and Technology, Shibpur)

#### Visiting Fellows:

Individual researchers, doctoral fellows, faculty members of various academic institutions as well as working professionals have the opportunity to conduct a part of their research or project in collaboration with GCP-JU. The visiting scholars/ working professionals can avail GCP-JU resources to facilitate their work and share their understanding of global change issues with the researchers at GCP-JU through workshops, seminars and group discussions. Dr. Souran Chatterjee from Central European University, Budapest, Hungary has worked as a visiting fellow during July-December, 2019

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### Post-Doctoral Research:

Through various project activities Post-Doctoral fellowship is helping advanced fellows to pursue research on frontier areas

### Activities During: April 2019 to March 2020

1. 2019, Mar 29, One day workshop on Systematic Review Methodology at Global Change Programme-JU
2. 2019, November 8, Stakeholder Workshop on “Sustainable Urban Pollution Management and Associated Socio-Economic Impact: A Study of Kolkata Megacity” under RUSA 2.0 funded Project at Committee Room No.-I, Aurobinda Bhawan, Jadavpur University
3. 2019, November 14 & 15, Dissemination Workshop of Three Special Reports of IPCC at Biswa Bangla Convention Center, New Town, Kolkata
4. 2019, December 12, hosting U.S. Science Envoy for Air Quality Dr. James Schauer
5. 2019, December 16, ‘Health Check-up Camp for Street Hawkers’ under RUSA 2.0 funded Project at Gariahat Crossing, Kolkata, India

### Research Projects (Completed/Ongoing):

1. UTFORSK funded project “Sustainable Energy and Environment Solutions: Technology and Policy” – Ongoing
2. RUSA 2.0 funded project “Sustainable Urban Pollution Management and Associated Socio-Economic Impact: A Study of Kolkata Megacity” –Ongoing

### Publications: (April 2019 to March 2020)

#### In Peer Reviewed Journals:

1. Satiprasad Sahoo, Saumava Dey, Anirban Dhar, Anupam Debsarkar and Biswajeet Pradhan (2019). “On projected hydrological scenarios under the influence of bias-corrected climatic variables and LULC”, *Ecological Indicators*, 2019, 106: 105440
2. Maiti Sanjib Kumar, Hazra Tumpa and Debsarkar Anupam (2019). “Lead Removal from Landfill Leachate by Electrocoagulation process using Iron Electrodes: Influence of pH and Direct Current”, *Research Journal of Chemistry and Environment* 2019, 23 (6): 62-69
3. Satiprasad Sahoo; Anirban Dhar; Anupam Debsarkar; Amlanjyoti Kar; Narayan Kayet (2019). “Identification of water-stressed area based on the interrelationship of soil moisture and seasonal rice cultivation”, *Paddy & Water Environment* 2019, August, 2019
4. Piku Sen, Anupam Debsarkar and Debasish Pal (2019). “Isolation of Chromium Resistant Bacteria from Contaminated Soil and Its Performance Evaluation for Hexavalent Chromium Removal”, *International Journal of Engineering and Advanced Technology* 2019, 9 (1): 6539-6546
5. Satabdi Biswas, Anupam Debsarkar and Gupinath Bhandari (2019). “Efficacy of Rainwater Harvesting (RWH) in Overcoming Water Scarcity Problem of Amdanga Block, North 24 Parganas, West Bengal – A Statistical Approach”, *Indian Journal of Regional Science* 2019, L1 (2):8-15
6. Karstensen Jonas, Joyashree Roy, Barun Deb Pal, Glen Peters, Robbie Andrew(2020), Key Drivers of Indian Greenhouse Gas Emissions, *Economic & Political Weekly*, 2019, 55 (15): 46-53
7. Rissman, Jeffrey, Chris Bataille, Eric Masanet, Nate Aden, William R. Morrow III, Nan Zhou, Neal Elliott, Rebecca Dell, Niko Heeren, Brigitta Huckestein, Joe Cresko, Sabbie A. Miller, Joyashree Roy, Paul Fennell, Betty Cremmins, Thomas Koch Blank, David Hone, Ellen D. Williams, Stephane de la Rue du Can, Bill Sisson, Mike Williams, John Katzenberger, Dallas Burtraw, Girish Sethi, He Ping, David Danielson, Hongyou Lu, Tom Lorber, Jens Dinkel, Jonas He, (2020), Technologies and policies to decarbonize global industry: review and assessment of mitigation drivers through 2070, *Applied Energy*, 266 (2020): 114848

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- Sohini Sen, Debashish Das, Anupam Debsarkar and Raja Ghosh (2019) "Investigating Real Time Ambient Air Quality Status and Land Surface Temperature during Kalipuja/Diwali Festival in different Land Use types –Case study Kolkata", International conference (IASTEM), 14-15 November at Shanghai, China
- Satabdi Biswas and Anupam Debsarkar (2020) "Socio-Economic Assessment of Arsenic and Iron Contamination of Groundwater and Feasibility of Rain Water Harvesting (RWH): A Case Study of Amdanga Block, North 24 Parganas, West Bengal, India", International Conference on Sustainable Water Resources Management-Under Changed Climate, March 13 (13-15), 2020 School of Water Resources Engineering, Jadavpur University

### Articles in Edited Volumes/Book Chapters: (April 2019 to March 2020)

- Mookherjee, I., Roy, A., Dutta, A., Debsarkar, A., and Aitch, P. (2019). "Sustainable Management of Arsenic-Bearing Sludge", *Waste Management and Resource Efficiency*. Springer Publication
- Jana, S. K., & Roy, J. (2020). Climate Change and Diseases of Plants and Animals: A Study in Home Gardens of West Bengal, India. In A. Karmaoui, A. Ben Salem, & A. Shah (Eds.), *Climate Change and Anthropogenic Impacts on Health in Tropical and Subtropical Regions* (pp. 37-62). Hershey, PA: IGI Global

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3. Jana, S and J. Roy (2019), Biodiversity and Impacts of Climate Change in Home Gardens: Evidence from a Study in West Bengal, India. pp 113-132. Ch 7 in the edited volume Current State and Future Impacts of Climate Change on Biodiversity. ed, Ashok Kumar Rathoure and Pawan Bharati Chauhan ISBN13: 9781799812265, IGI Global

### JADAVPUR UNIVERSITY PRESS (Publications)

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#### Books Published in the Current Year:

1. Barnita Bachi, ed. *Urban Utopias: Memory, Rights, and Speculation*. ISBN 978-93-83660-72-8
2. Ursula le Guin, *Irasindhur Jadukar*, trans. Sudeshna Datta Chaudhuri.(translation of the *A Wizard of Earthsea*) ISBN 978-93-83660-49-0, Rs 250
3. Sukanta Chaudhuri trans., Koustabh Chakraborty illus. *Red Ant Black Ant* (translation of *Lal-Kalo* by Girindrashekhar Basu). ISBN 978-93-83660-59-9, Rs 200
4. *Fernando Pessoa Kobita*, trans. Rita Ray. ISBN 978-93-83660-60-5, Rs 120
5. Kathrin Schmidt, *Nodi o Debdut*, trans. Sulagna Mukhopadhyay. ISBN 978-93-83660-61-2, Rs 70
6. Kanishka Sarkar, ed. *Bangali Naarir Odhikaar, Unnoyon o Kshomotayon*, ISBN 978-93-83660-62-9, Rs 300

#### Forthcoming Titles in 2020-21:

1. Takeshi Nakajima, *Biplobi Rashbehari Bosu o Japan*, trans. into Bengali by Kazuhiro Watanabe
2. Graham Shaw, *Subaltern Squibs and Sentimental Rhymes: the Raj Reflected in Light Verse*
3. Kakuzo Okakura, *Chaayvaad*; trans. into Hindi by Lav Kanoi
4. Atanu Saha, ed. *Dictionary of the Kurmali Language*
5. Hansda Showvendra Shekhar, *Adibasira Naachbe Na*, trans. into Bengali by various hands
6. Murakami Haruki, *Hatita udhao*, trans. into Bengali by Abhijit Mukherjee and others
7. Yukio Mishima, *Swarnamandir*, trans. into Bengali by Abhijit Mukherjee
8. *Czeslaw Miloszer kobita*, trans. into Bengali by Kamil Siedczynski
9. Rajat Baisya, *Makers of Jadavpur: The Technological Perspective*
10. Syed Mujtaba Ali, *Chachakahini: Tales from Berlin*, trans. into English by various hands

#### Events and Highlights:

1. JUP published its 50<sup>th</sup> title *Urban Utopias: Memory, Rights, and Speculation* during the year under review. It is JUP's first OA (open-access title) and was supported by a grant from Utrecht University, Netherlands

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2. JUP designed and produced an exhibition titled 'Ishwarchandra Vidyasagar as Printer and Publisher' for The Asiatic Society, Kolkata, launched on 26 September, 2019, and designed the catalogue for the exhibition presented by the Asiatic Society, Kolkata. The exhibition was also a part of Asiatic Society's retail space at the Kolkata International Book Fair, 2020
3. JUP launched *Indian Drama in English: The Beginnings*, edited by Ananda Lal, on 27 December, 2019, at G D Birla Sabhaghar to inaugurate The Red Curtain's three-day festival. As part of the launch, Prof. Lal delivered a talk about the unknown history of Indian theatre in English before independence with theatre scholar and dramaturge Rustom Bharucha
4. Set up and staffed a stall of JUP books for the University Convocation, 24 December, 2019
5. JUP team participated in the New Delhi World Book Fair from January 4-12, 2020 to observe the book publication and consumption trends in the country's capital
6. Participated in the Kolkata Book Fair 2020, provided a space to retail JUP and NCE Bengal books. JUP employees staffed the stall for the entire period of the book fair, representing Jadavpur University in one of the largest book fairs in the world today
7. JUP participated in the Kolkata District Book Fair at the Park Circus Maidan from 3-8 March, 2020

### Rights Acquisition:

Over the last few years, JUP has acquired translation rights to some of most well-known world writers for translation into Bengali, and English. Some of these works have already been published while others are in production. The authors/works whose rights have been acquired are as follows:

1. Yukio Mishima, *Kinkakuji*, from Wylie Agency
2. Neel Mukherjee, *The Lives of Others*, from Wylie Agency
3. Atin Bandyopadhyay, *Neelkantha pakhir khonje*, from the heirs
4. Aime Cesaire, *Ume tempeteet Un saison au Congo*, from Seuil, France
5. Maryse Conde, *Tituba...sorciere*, from Mercure de France
6. Raphael Confiand, *La panse du chacal*, from Mercure de France

### Activities under RUSA 2.0 Project: 'Academic Publishing in India: Issues and Challenges':

- A. Under the RUSA 2.0 project, 'Academic Publishing in India: Issues and Challenges' three project fellows went to New Delhi to interview people in administrative positions in several publishing houses. The focus of the interviews was on the academic publishing activities of the respective houses
- B. The team interviewed Arpita Das of Sage Yoda Press, Diyasree Chattopadhyay of Madhubun Books, B. N. Verma of Primus Books, Padmaja Anant of Orient Blackswan, and Sunandini Banerjee of Seagull Press. They also interviewed the team of Vishva-Bharati Granthana Vibhaga, and collected an interview from the JU Press itself, as representative of the two major university presses in Bengal, and as examples of bilingual academic presses
- C. The two Bengali language presses that the team interviewed were Ababhash Books and Dhyanbindu

### Backlist:

7. *Desiring India: Representations through British and French Eyes 1584-1857*, ed. Nirajan Goswami ISBN 978-93-83660-50-6, Rs 495
8. *Indian Drama in English: The Beginnings*, ed. Ananda Lal. ISBN 978-93-83660-52-0, Rs 450
9. Amartya Sen, *Calcutta after Independence: A Personal Memoir*. ISBN 978-93-83660-53-7, Rs 30
10. J. H Broomfield, *Elite Conflict in a Plural Society*. Fiftieth Anniversary Edition. With a new introduction by Sekhar Bandyopadhyay. ISBN 978-93-83660-45-2, Rs 650
11. Humphry House, *I Spy with My Little Eye*. Eds. Sajni Mukherji and Sujaan Mukherjee. ISBN 978-93-83660-44-5, Rs 200



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12. Sukanta Chaudhuri, *Chandalika: Prakritir Abhisar*. ISBN 978-93-83660-43-8, Rs 50
13. Hariprabha Takeda, *The Journey of a Bengali Woman to Japan and other essays*, trans. Somdatta Mandal. ISBN 978-93-83660-47-6, Rs 350
14. Subrata Sinha, *Adhunikatar Kabyatattva and Sudhindranath Dutta*. ISBN 978-93-83660-42-1, Rs 400
15. H. Dutta, *Lieut. Suresh Biswas: His Life and Adventures*. ISBN 978-93-83660-33-9, Rs 300
16. INCOM 2018: Proceedings of the First International Conference on Mechanical Engineering. Eds. Achintya Mukhopadhyay, Prasanta Sahoo and Swanendu Sen. ISBN 978-93-83660-38-4. Print and CD. *Not for sale*
17. Samir Saha, *Samaj, bijnan o Halden*. ISBN 978-93-83660-34-6, Rs 100
18. Rui Zink, *Shesher sedin*. Translated by Rita Ray from the Portuguese and published with financial assistance from the Camoes-Instituto da Cooperacao e da Lingua, I.P. ISBN 978-93-83660-37-7, Rs 300
19. *E-Learning and Higher Education in India and Italy: Research Study and Analysis*. Eds. Supriya Chaudhuri, Sritama Chaudhuri and Andrea Reggiani. ISBN 978-93-83660-36-0. *Not for sale*
20. Dante Alighieri, *Norok (L'Inferno)*. Translated from the Italian into Bengali by Alpana Ghosh under the general editorship of Sukanta Chaudhuri, and third in the Italio-Bangla Anubad series
21. Haruki Murakami, *Samudratate Kafka II*. Second volume, translated from the Japanese into Bengali by Abhijit Mukherjee
22. Rui Zink, *Ek dojon Rui Zink*, collection of short stories. Translated from the Portuguese into Bengali by Rita Ray
23. Haruki Murakami, *Samudratate Kafka I*. Translated from the Japanese into Bengali by Abhijit Mukherjee. ISBN: 978-93-83660-25-4. Bengali. 382 pages. 2016. Rs 300
24. Sayantan Dasgupta and Kabita Lama, eds., *Call of the Hills: A Coursebook of Indian Nepali Literature in Translation*. ISBN 978-93-83660-06-3. English. 250 pages. 2016. Rs 250
25. Sangeeta Dutta and Subhoranjan Dasgupta, eds., *Tagore: The World as His Nest*. ISBN: 978-93-83660-14-8. English. 222 pages. 2016. Rs. 650
26. *Journal of the Moving Image* 13. ISSN: 2230-9160. English. Academic journal of the Department of Film Studies, Jadavpur University.
27. *Tamang Selo: A Coursebook of Indian Nepali Literature in Translation*. ISBN: 978-93-83660-05-6 Nepali/English. 201 pp. 2015. Rs 200
28. Pulin Behari Das, *Astracharchaa: Pulin Behari das Rachanasamgraha*; eds. Deeptanil Ray and Nikhilesh Bhattacharya. ISBN: 978-93-83660-13-1. 516 pages. Rs 700. 2015
29. Mohit Ray, *Five Thousand Mirrors: The Water Bodies of Kolkata*. ISBN: 978-81-926767-7-7. 324 pages. Rs 495. 2015
30. P.B. Shelley, *Kaaler joyjatra*. trans. Malini Bhattacharya. A translation of P. B. Shelley's *The Triumph of Life*. ISBN: 978-93-83660-04-9. 95 pages. Rs 150. 2015
31. Madhumita Chattopadhyay and Tirthanath Bandyopadhyay, eds., *Ethics: An Anthology*. ISBN: 978-81926767-9-1. 260 pages. Rs 450. 2015
32. Amiya Bandyopadhyay, *Khanasmriti*. ISBN: 978-81-927525-8-7. 170 pages. Rs 150. 2014
33. Tushar Kanti Sarkar, Shefali Maitra and Indrani Sanyal, eds., *Wittgenstein: jagat, bhasa o chintan*. ISBN 978-81-86954-96-6. Rs 350. 2013
34. Madhabendranath Mitra, Amita Chatterjee and Prayas Sarkar, eds., *Manodarshan: sarirbad o tar bikalpa*. ISBN 978-81-86954-98-0. Rs 300. 2013
35. Amita Chatterjee, ed., *Bharatiya dharmaniti*. ISBN 978-81-86954-99-7. Rs 350. 2013
36. Robert Antoine and Hrishikesh Basu, trans., *Aeneid*. ISBN 978-81-86954-93-5. Rs 400. 2013

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37. Amlan Das Gupta, eds. and trans., *Henry Sargent's Aeneid of 1810*. ISBN 978-81-86954-92-8. Rs 200. 2013
38. Ashutosh Roy, *Amar cheen probash*. With an introduction by Prof. Amit Bhattacharya. ISBN 978-81-86954-97-3. Rs 100. 2013
39. Sukanya Dasgupta, ed. *Aspects of Modernity: American Women's Poetry*. ISBN 978-81-927525-9-4. Rs 550. 2014
40. *Essays on Half-tone Photography* by Upendrakishore Raychowdhury. ISBN 978-81-927525-5-6. Rs 300. 2014
41. Bidhusekhar Shastri Bhattacharya, *Rabidrasanglapkanika o o nannyo rochona*. ISBN 81-86954-66-X. 210 pp. Rs 170. 2011
42. Niccolo Machiavelli, *Rajpurush*, trans. Doyeeta Majumder, with an introduction by Swapan Chakravorty. A translation of Niccolo Machiavelli's *Il principe*, translated from the original Italian. ISBN 978-81-86854-76-7. 156 pp. Rs 270. 2012
43. Leonardo da Vinci, *Shilpachinta*, trans. and ed. Sukanta Chaudhuri. A translation from Leonardo's writings and sketches on art. ISBN 978-81-86854-77-5. 87 pp. Rs 200. 2012
44. Supriya Chaudhuri and Sukanta Chaudhuri, eds., *Petrarch: The Self and the World*. ISBN 978-81-86854-91-1. 252 pp. Rs 495. 2012. [Distributed by Orient Blackswan]
45. Madhuja Mukherjee, ed., *Aural Films Oral Cultures: Essays on Cinema from the Early Sound Era*. ISBN 978-81-86854-81-2. 216 pp. Rs 450. 2012 [Distributed by Orient Blackswan]
46. Gangadhar Kar Nyayacharya, *Tarkabhasha*, Vol. I; 398 pp.; ISBN 978-93-80336-67-1; Rs 450. 2012 [Distributed by Mahabodhi Society]
47. Sumitra Mukherjee and Sujata Roychoudhury, *Aspects of Interpersonal Communication* (Self-Empowerment Series, general editor: Soumitra Basu). ISBN 978-81-86954-82-9. 133 pp. Rs 100. 2012
48. Subhrangshu Aditya, Sahana Nag and Susmita Chatterjee, *Ragaragir paristhiti kibhabe saamalno jay* ('Nijer bikasher jonyo' granthamala, general editor: Soumitra Basu). ISBN 978-81-86954-83-6. 106 pp. Rs 100. 2012
49. Sumitra Mukherjee and Sujata Roychoudhury, *Kathopakathan o taar nanan aangik* (Nijer bikasher jonyo' granthamala, general editor: Soumitra Basu). ISBN 978-81-86954-84-3. Rs 100. 2013
50. Subhrangshu Aditya, Sahana Nag and Susmita Chatterjee, *Managing Anger-Provoking Situations* (Self-Empowerment Series, general editor: Soumitra Basu). ISBN 978-81-86954-85-0. Rs 100. 2013

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Development Editor: Dr Devalina Mookerjee

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#### JUP books are available at the following outlets:

- A. Kolkata:  
College Street: Baibhasik, Dey's, Dhyandindu  
South Kolkata: Read Bengali Book; Study; JUP office on JU Main Campus
- B. Bolpur: Boiwallah
- C. E-retail: Flipkart, Amazon.in
- D. E-editions: Google Play Books (select titles)
- E. Select JUP titles are distributed by Orient Black Swan, Mahabodhi Society and Alphabet Books

## Annual Report 2019-20

### NATIONAL SERVICE SCHEME (NSS)

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The motto of the National Service Scheme is 'NOT ME BUT YOU'. It is in the line of this motto, the NSS unit of J.U., under the co-ordinatorship of the **Dr. Anupam Debsarkar** does various activities of the body emphasizing on community and student welfare and to develop a sustainable sensitivity in the student-volunteers towards their fellow beings, particularly the underprivileged and the challenged. The activities are categorized into two parts - **Regular activities** and **Special Camps**. The NSS activities of Jadavpur University from **1<sup>st</sup> April, 2019** to **31<sup>st</sup> March, 2020** are mentioned below:

#### A. Major Achievements: (2019-2020)

1. NSS Student volunteers from Jadavpur University viz. Mr. Uday Karmakar (Sanskrit, PG-II), Mr. Bikash Chandra Ghorai (M. Phil- I), Mr. Koushik Palui (Education, PG-I), Mr. Bani Kumar Das (Philosophy, UG-III), Mr. Sumanta Pramanik (Philosophy, UG-III), Miss Tinni Mandal (Sociology, UG- II), Miss Payal Barman (Philosophy, UG- II), Miss Sagarika Shil (Philosophy, UG-II), Miss Sangita Jana (History, PG- I), Miss Raktima Baidya (Sanskrit, UG-II), participated in the National Integration Camp at Banwarilal Bhalotia Collage, Asansol from 21–27 June, 2019
2. NSS Programme Officers from Jadavpur University viz. Dr. Debdas Mandal ( Dept. of Sanskrit), Dr. Lalit Lalitav Mohakud ( Dept. of Education) participated in the state level training of trainers programme (Awareness and education for prevention for drugs abuse and alcoholism) at Presidency University from 25 –26 September, 2019
3. NSS Student Volunteers from Jadavpur University viz. Mr. Uday Karmakar (B. Lib, UG-I), Miss. Tinni Mandal (Sociology, UG- III) participated in the Pre Republic Day Parade Camp at National Institute of Technology (NIT), Durgapur from 8–17 November, 2019
4. NSS Student volunteer from Jadavpur University viz. Mr. Ranajit Jana (B.Ed.), Mr. Ujan Natic (I.R.,P.G.- I) participated in the International Youth Exchange Programme at Taiwan from 7–15 January, 2020
5. NSS Student volunteer from Jadavpur University Miss. Tinni Mandal (Sociology, UG- III) participated in the Republic Day Parade Camp, 2020 at Rajpath, Delhi from 1<sup>st</sup> January to 31 January, 2020
6. NSS Student volunteers from Jadavpur University viz. Mr. Subhadip Mandal (Bengali, PG- I), Mr. Uday Karmakar (B. Lib, UG-I), Miss Sagarika Shil (Philosophy, UG-III) were selected for Republic Day Parade Camp, 2020 at Red Road, Kolkata from 5–27 January, 2020

#### B. Special Camps: (2019-2020)

1. Environment enrichment and conservation programme at Jadavpur University Main Campus, Sarsuna Bazar and Thakurpukur Bazar, dated 19 – 25 July, 2019. No. of participants- 50 (Male- 26 Female- 24), total beneficiaries- 255 (Male- 185 Female- 70)
2. Village development with project identification programme at Hariharpur Hospital Para, Mallickpur, Pin- 700145, dated 20-26 July, 2019. No. of participants - 50 (Male - 28 Female-22), total beneficiaries- 200 (Male - 121 Female- 79)
3. Cleaning and beautification programme under 'Swachha Bharat Abhiyan' with health checkup programme at Foolar Basti, Moti Mistri Basti, Sannashi Basti, Kendua Road, Ward no. 101, Kolkata, dated 1–7 August, 2019. No. of participants - 50 (Male- 23 Female- 27), total beneficiaries- 256 (Male - 158 Female- 98)
4. Village development programme with health check up and mosquito net, cloths, Food and educational kits distribution at Matsa Bandar, Kakdwip, South 24 Parganas dated 3–9 August, 2019. No. of participants - 50 (Male -27 Female- 23), total beneficiaries- 500 (Male -320 Female-180)

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5. Cleaning and beautification programme with educational kits distribution, cancer awareness and personality development camp at Charalkhali, PO-Chandanpur, PS- Hingaljanj, North 24 Parganas, dated 26 October to 1 November, 2019. No. of participants -50 (Male- 28 Female- 22), total beneficiaries- 231 (Male-152 Female-79)
6. Cleaning and beatification programme under ‘Swachha Bharat Abhiyan’ with Personality & leadership quality development programme at Jadavpur University Main Campus, dated 9–15 December, 2019. No. of participants-50 (Male - 30 Female- 20)
7. Village development with health, Food, sanitation awareness camps at Jemspur, Gosaba, South 24 Parganas, dated 20–26 December, 2019. No. of participants- 50 (Male - 26 Female - 24), total beneficiaries - 256 (Male - 166 Female - 90)
8. Awareness programme on environment with health checkup and educational kits distribution camp at Barisha High School, 133 Diamond Harbour Road, Behala Chowrasta, Jadu Colony, Barisha, Kolkata- 700008, dated 19<sup>th</sup> to 25<sup>th</sup> December, 2019, No of participants- 50 (Male -26 Female -24), total beneficiaries- 254 (Male -142 Female - 112).
9. Education and literacy awareness programme at Nawsha High School, Vill+ PO- Nawsha, Dist- South 24 Paraganas, dated 6–12 February, 2020. No of participants- 647 (Male- 401 Female- 246)
10. Awareness programme on environment and health with health checkup and educational kits distribution camp at Shishu neer School, 6 Vivekananda Sarani, Natun Bazar, Bansdrani, Kolkata- 700070, dated 20–26 December, 2019. No. of participants- 50 (Male - 27 Female - 23), total beneficiaries- 214 (Male -154 Female -60)
11. Science awareness and popularization programme at Sarat Sadan, Behala, Kolkata, dated 22–28 February, 2020. No. of participants-50 (Male - 29 Female - 21), total beneficiaries- 580 (Male – 380 Female -200)

### C. Regular Activities: (2019-2020)

1. Rally on “Mangal Sovajatra” at Gangulibagan to Jadavpur University 3 no. gate, 15 April, 2019. No. of participants -25 (Male- 19 Female-06)
2. Celebration of voter awareness programme at Sarat Sadan, Hawrah Maidan, Hawrah, 23 April, 2019 No. of participants- 30 (Male- 16 Female- 14)
3. Celebration of “Rabindra Jayanti” at Dr. Triguna Sen Auditorium, Jadavpur University Main Campus, 8 May, 2019. No. of participants - 60 (Male- 32 Female- 28)
4. Rally on observation of world environment day at Jadavpur University to Golpark More, Kolkata, 5 June, 2019. No. of participants- 152 (Male- 92 Female- 60)
5. Seminar on the pledge for life- tobacco free youth with NSS at Ramakrishna Mission Ashram, Narendrapur, Kolkata, 10 June, 2019. No. of participants- 20 (Male-10 Female- 10)
6. Observation of World No- Tobacco Day at Dr. K. P. Basu Memorial Hall, Jadavpur University Main Campus, 12 June, 2019. No. of participants - 205 (Male-108 Female- 97)
7. Celebration programme on “International Day of Yoga” at OAT, Jadavpur University Main Campus, Kolkata, 21 July, 2018. No. of participants- 457 (Male- 257 Female- 200)
8. Celebration programme on “International day of yoga” at C. P. Road, Panchabati, Kolkata- 700145, 23 June, 2019. No. of participants- 224 (Male- 112 Female- 112)
9. Observation of ‘Save the Water Day’ at Jadavpur University Main Campus, 12 June, 2019. No. of participants - 100 (Male- 58 Female- 42)
10. Observation of Banamahatsav week at Jadavpur University Main Campus, 17 July, 2019. No. of Participants- 123 (Male- 52 Female- 71)
11. Awareness programme on human trafficking and situation of the victim involves and to promote and protect their right at American Center, 38 A.J. L. Neheru Road, Kolkata- 700071, 30 July, 2019. No of participants - 16 (Male- 13 Female- 3)

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12. Tree plantation programme and sapling distribution programme at Jadavpur University Main Campus, 1<sup>st</sup> August, 2019. No of participants -110 (Male- 80 Female-30) total beneficiaries- 600
13. Old cloths distribution programme at The Refuse, 125A Bipin Bihari Ganguly Street, Kolkata- 700012, dated 14 August, 2019. No. of participants -35 (Male- 20 Female- 15), total beneficiaries- 527
14. Celebration of Independence Day at Jadavpur University and Netaji Colony, Dhakuria, Kolkata 15 August, 2019. No of participants- 150 (Male- 99 Female- 51), total beneficiary-100
15. Orientation Programme for J.U. Students at Gandhi Bhavan, Jadavpur University Main Campus, 21 August, 2019. No of participants- 527 (Male- 322 Female-105)
16. Cleaning and beautification programme at Jadavpur University Main Campus, 28 August, 2019. No of participants-50 (Male- 26 Female- 24)
17. Flag off ceremony for International Youth Exchange Programme at Jadavpur University Main Campus, 1 September, 2019. No of participants- 152 (Male- 80 Female- 72)
18. Rally on environment and pollution and tree plantation programme at Nazrul Bhavan, Jadavpur University Main Campus, 6 September, 2019. No of participants- 150 (Male- 98 Female-52)
19. Cleaning and beautification programme at Play Ground, Jadavpur University Main Campus, 9 September, 2019. No of participants- 52 (Male-32 Female-20)
20. Blood donation camp at Department of Physical Education, Jadavpur University Main Campus, 12 September, 2019. No of participants- 51 (Male-32 Female-19), total donors- 82 (Male- 42 Female-40)
21. Talent search programme at Barisha High School, Barisha, Kolkata, 15 September, 2019. No of participants -59 (Male- 31 Female-28), total beneficiaries- 2000
22. Lecture on environment and water pollution programme at Sursuna Collage, Sarsuna, Kolkata, 25 September, 2019. No of participants- 251 (Male- 181 Female-70)
23. Celebration programme on 200 years' birth anniversary of Iswar Chandra Vidyasagar at Dharmatala, Kolkata, 26 September, 2019. No of participants – 40 (Male- 28 Female- 12)
24. Cloth distribution programme among the Slum dwellers at Southern Avenue Park, Meghnath Saha Sarani, Kolkata-700029, 2 October, 2019. No of participants- 25 (Male - 15 Female -10), total beneficiries-200
25. Awareness programme on Environment: Plastic & water pollution at Jadavpur University Main Campus, 7 November, 2019. No. of participants - 85 (Male- 46 Female- 39)
26. Stack holder workshop on sustainable urban pollution management associated socio-economy impact- A study of Kolkata mega city at Committee Room No I, Jadavpur University Main Campus, 8 November, 2019. No of participants- 35 (Male-18 Female- 17), total beneficiaries - 54 (Male- 54)
27. District Level Declamation Contest -"Patriotism and nation building" at Mrinmoyee Madhusudan Memorial Hall, Jadavpur University Main Campus, 13 November, 2019. No of participants - 150 (Male- 90 Female- 60)
28. Celebration of children's day at Mrinmoyee Madhusudan Memorial Hall, Jadavpur University Main Campus, 14 November, 2019. No of participants -36 (Male- 23 Female- 13)
29. Lecture on "Fragment of modernity: Satyajit and Ritwik" at Dr. Triguna Sen Auditorium, Jadavpur University, 15 November, 2019. No of participants - 26 (Male- 13 Female- 13)
30. Inter University Debate Competition at Viswa Bangla Convention Center, 15 November, 2019. No of participants -2 (Male-2)
31. Rally and leaflet distribution programme on against Dengue and Scrub Typhus and environment awareness programme at Parnasree Bus Stand, Behala, Ward no-131, Kolkata, Ward no-125,126,127,128 under borough No 14 & 16, 8 December, 2019. No of participants - 23 (Male- 15 Female- 7), total beneficiaries-1200 (Male- 600 Female-600)
32. Health awareness with health checkup programme for Street Hawkers at Gariahat More, Kolkata -700019, 16 December, 2019. No of participants- 10 (Male- 7 Female- 3), total beneficiaries- 126 (Male-115 Female- 11)



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33. Cleaning and beautification programme at Play ground, Jadavpur University, 6 January, 2020. No of participants- 36 (Male - 25 Female- 11)
34. Rally on “National Youth Day” at Jadavpur to Golpark, Kolkata, 12 January, 2020. No of participants- 354 (Male- 200 Female- 154)
35. Workshop on “Pledge for Life- Tobacco free youth” at Dr. K. P. Basu Memorial Hall, Jadavpur University, 15 January, 2020. No of participants -105 (Male-75 Female- 30)
36. Pulse polio immunization programme at Netaji colony, Dhakuria, Kolkata, 19 January, 2020. No of participants- 10 (Male- 5 Female- 5), total beneficiaries- 52 (Male-32 Female-20)
37. Cycle Rally on Fit India at Jadavpur University Main Campus, 19 January, 2020. No of participants- 56 (Male- 41 Female-15)
38. Celebration programme on ‘National Youth Day’ and National Youth Leadership Award Programme at Dr. K. P. Basu Memorial Hall, Jadavpur University, 21 January, 2020. No of participants- 354 (Male- 212, Female- 142)
39. Special lecture programme on environment (water and plastic) pollution with adolescent empowerment and ending child marriage at Nawsha High School, Vill+ PO- Nawsha, Dist- South 24 Paraganas, 6 February, 2020. No of Participants - 647 (Male- 401 Female- 246)
40. Cultural programme and leadership development programme at Dr. Triguna Sen Auditorium, Jadavpur University, 7 February, 2020. No of participants - 256 (Male- 156 Female- 100)
41. Anveshan: Student Research Convention at Gandhi Bhavan, Seminar Hall, Dept. of Physical Education, Dept of Physics, Jadavpur University, 12–13 February, 2020. No of participants -154 (Male-75 Female-79)
42. The celebration of ‘National Science Day’ at Mrinmoyee Madhusudan Memorial Hall, Bidhan Chandra Bidyathi Bhaban, Jadavpur University, 28 February, 2020. No of participants- 142 (Male-91 Female-51)

### REGIONAL CENTRE, NATIONAL AFFORESTATION & ECO-DEVELOPMENT BOARD

[Ministry of Environment, Forests & Climate Change, Govt. of India]

Ph: 033-2457-2324

033-2414-6979

Coordinator: Prof. Asis Mazumdar

E-mail: asis.mazumdar@jadavpuruniversity.in

**1. B. Number of Faculty Members/Scientists :** 01 (Coordinator) + 01 (Sr. Scientist) + 01 (Scientist) + 01 (Research Assistant)

**2. A. Area of Research Activities: (Broad Areas)**

1. Afforestation & Eco-development
2. Joint Forest Management
3. Forest Development Agency
4. Green India Mission
5. Small & Micro Forest Enterprise
6. Soil & Moisture Conservation

## Annual Report 2019-20

7. Indigenous Technologies
8. Capacity Building & Forest Conservation
9. Wasteland Development & Biodiversity Conservation
10. Soil Water Plant Relationship
11. Impact of Forested Watershed on Stream Flow and Water Quality
12. Watershed Management
13. Natural Resources Management
14. Clean Development Mechanism
15. Carbon Sequestration
16. REDD+

### 2. B. Major Research Project:

**Coordinator:** Prof. (Dr.) Asis Mazumdar

**Name of the Project:**

- (i) Study on Impact of Forest Patta Grant on Forests in Sahebgunj, Porahat, Garhwa, Simdega, Hazaribag Forest Division of Jharkhand
- (ii) Impact of Water Harvesting Structures created under CAMPA in Khunti, Koderma, Medininagar, Saranda Forest Division of Jharkhand

**Funding Agency:** Department of Forests, Environment & Climate Change Government of Jharkhand

### 6. Major Achievements:

- The Regional Centre over the years has played significant role in Human Resources Development Activities by organizing over 189 workshops, 234 Training Programmes for thousands of participants of the State Forest Departments (West Bengal, Jharkhand, Bihar, Sikkim and Andaman & Nicobar Islands) as well as for the grass root level Community/Organizations
- Conducted more than **140** important **Research Studies** and 25 Success Stories/Case Studies covering a wide spectrum of pertinent issues on Natural Resources Management in Eastern Region
- Carried out the field monitoring and evaluation work for over **367 Centrally Sponsored Projects** (AOFFP, IAEDP, NTFP, IPVM, Sample Check etc.) in last 10 years throughout the Country
- Prepared **4 Status Reports** on Natural resources of three different states and also several Wasteland Maps
- Developed cost-effective Agro-forestry model for Red Lateritic Wastelands and Biological Reclamation for abandoned Collieries model
- Formulation of **Joint Forest Management Strategies and Norms for the Union Territory of Andaman & Nicobar Islands** under the sponsorship of Andaman & Nicobar Administration
- The Centre has evaluated **64 projects of National Afforestation Programme (NAP)** implemented through Forest Development Agencies (FDAs) in Arunachal Pradesh, Assam, Bihar, Orissa, Mizoram, Manipur, Sikkim, Uttar Pradesh and West Bengal
- Organized **seven “Refresher Course for Indian Forest Service (IFS) Officers”** in association with the School of Water Resources Engineering, Jadavpur University, which is unique among the Regional Centres of NAEB
- Developed the **“Strategic Plan and Financial Framework for Large-Scale Development Programme of Sundarban Biosphere Reserve”** funded by Sundarban Biosphere Reserve (under UNDP project)
- Established the first **Small and Micro Forest Enterprise (SMFE)** in India under Dhalbhum FDA, East Singhbhum, Jharkhand and replicated the same in **Seraikela Forest Division in Jharkhand** and **Purulia Forest Division in West Bengal**

## Annual Report 2019-20

- Registered as **one of the 25 Business Incubators** by Ministry of Small and Micro Enterprises (MSME) to promote innovative ideas and young entrepreneurs and currently 5 such ideas are being implemented
- Prepared the “**State Report on National Programme on Promoting Medicinal Plants Conservation and Traditional Knowledge for Enhancing Health and Livelihood Security for West Bengal (UNDP-CCF-II Project No. 13047)**” funded by Research Circle, Directorate of Forests, Govt. of West Bengal
- Implemented project on “**Strategic Knowledge Management, Advisory Support and Capacity Building for Wood Based SMEs to Enhance Market Potential through Sustainable Business Practices**” funded by WWF-India, New Delhi as part of EUROPEAN Commission - SWITCH ASIA project on Sustainable and Responsible Trade Promoted to Wood Processing SMEs through Forest and Trade Networks in China, India and Vietnam
- Prepared 2 reports on “**Meta Evaluation of Different Evaluation Programmes on NAP Implemented through FDAs in India**” based on evaluation reports of all Indian states
- Conducted a consultative study on “**Landscape Survey and developing Micro-plan for enhancement of Forest Quality and improvement of Ecosystem Services in the Identified Districts of Odisha**” in partnership with Indian Institute of Forest Management (IIFM) funded by Department of Forests, Government of Odisha under **Green India Mission**
- Conducted “**Evaluation of Central Sponsored Schemes implemented by Sundarban Biosphere Reserve**” funded by Sundarban Biosphere Reserve, Directorate of Forests, Govt. of West Bengal
- Completed **mid-term evaluation of activities implemented (2009-10 to 2014-15) in the state of Sikkim by ‘State CAMPA’**, Sikkim, Forests, Environment & Wildlife Management Department, Govt. of Sikkim in 2016
- Completed “**Examination of Microplans and Compilation of APOs in the state of West Bengal**” funded by West Bengal Forest and Biodiversity Conservation Project, Directorate of Forests, Government of West Bengal
- “**Technical assistance for evaluation of NAP implemented through WBSFDA in West Bengal**” funded by WBSFDA, Directorate of Forests, Government of West Bengal
- Technical Assistance for “**DPR preparation for Forestry Interventions for Clean Ganga in the state of West Bengal**” funded by WBSFDA, Directorate of Forests, Government of West Bengal
- Conducted a consultative study on “**Landscape Survey and Capacity Building for preparation of microplan in selected landscape of West Bengal for Preparation of Perspective Plan under Green India Mission in West Bengal**” funded by Directorate of Forests, Govt. of West Bengal
- Implementation of **Medicinal Plants Conservation Area (MPCA)** in Kankrajhore, West Midnapore, West Bengal by Silviculture (South) Division, Directorate of Forests, Govt. of West Bengal
- Prepared **Local Volume Table** for Roadside Trees of Selected Species in West Bengal by West Bengal Forest Development Cooperation, Directorate of Forests, Govt. of West Bengal

**REGIONAL-CUM-FACILITATION CENTRE (RCFC)**

**(EASTERN REGION)**

**NATIONAL MEDICINAL PLANTS BOARD (NMPB)**

**[Ministry of AYUSH, Government of India]**

Ph: 033-2457-2324

033-2414-6979

Nodal Coordinator: Prof. Asis Mazumdar

E-mail: rfcncmpb@jadavpuruniversity.in

**1. B. Number of Faculty Members/Scientists :** 01 (Nodal Coordinator) + 01 (Regional Director) + 01 (Deputy Director) + 03 (Consultant) + 02 (Technical Assistants)

**2. A. Area of Research Activities: (Broad Areas)**

Regional-cum-Facilitation Centre (RCFC), National Medicinal Plants Board (NMPB), Jadavpur University has been established as one of the seven such Centres in different regions (East, West, North-I, North-II, South, Central and North East) of the country under the Ministry of AYUSH, Government of India during 2017-18. This RCFC, NMPB for Eastern Region will act as one stop center for the growers, cultivators, researchers, traders and other stakeholders of medicinal plants. The centre caters the state of Bihar, Jharkhand, Odisha, West Bengal & Sikkim and would function in close co-ordination with State Medicinal Plants Board (SMPBs), the State implementing agency of the medicinal plants component of the AYUSH Mission. The RCFC, NMPB is to provide a service window for growers of medicinal plants for supporting conservation, development, marketing, cultivation and provide handholding support to stakeholders in terms of technology dissemination and also for establishing primary processing facilities etc. besides undertaking identified research relevant to the area concerned as and when assigned

**The Major Functions of the RCFC, NMPB are:**

- To act as multifaceted facilitating arm of NMPB
- Development of Quality Planting Materials (QPM)
- Development of Agrotechnology of medicinal plants
- Setting up of primary processing, grading, marketing facilities
- To develop managerial and technical skill among the stakeholders
- Facilitation of sale of medicinal plants and produces
- To provide inputs on conservation, sustainable cultivation, technology upgradation, training & research
- Domestication of wild species in demand
- To function as a platform for bringing together the different stakeholders
- To organize periodical meetings, workshops, consultation of stakeholders
- To review of the projects sanctioned by NMPB to various organizations
- To collect and maintain database of all concerned Sectors of the Medicinal Plants in the states and Integration of database of various States of the region concerned
- To develop strategy for Information, Education and Communication (IEC) and its implementation
- To document and disseminate success stories of activities supported by NMPB

**2. B. Major Research Project:**

**Coordinator:** Prof. Asis Mazumdar

## Annual Report 2019-20

**Name of the Project:** Development of Hi-Tech Nursery for Development of Skilled Manpower for Medicinal Plants Propagation

**Funding Agency:** JU-RUSA 2.0

**3. A. Invited lecturers delivered/Sessions chaired: (Name of the teacher/Scientist, Type of participation, Name of the Seminar/ Conference etc., Place, Duration)**

Dr. Sanjay Bala Resource Person Training program for ASU&H industry representatives and regulatory personnel with the help of CCRAS and its peripheral institutes for capacity building initiative about regulatory and enforcement issues pertaining to Ayurvedic, Siddha, Unani & Homoeopathic (ASU&H) drugs organized by Ministry of AYUSH Salt-lake, Kolkata 8-9 August, 2019

Dr. Sanjay Bala Resource Person 12<sup>th</sup> Kalinga Herbal Fair Bhubaneswar, Odisha 6–7 November, 2019

Prof. Asis Mazumdar & Mr. Sudipto Ghosh Resource Person National Seminar on “Medicinal Plant & Its scope for MSMEs in this field” in National Mega Trade Fair organized by MSME-DI, Kolkata Meghalaya House, Russel Street, Kolkata 6 March, 2020

**3. B. Seminar/Workshop/Conference/Symposium attended:(Name of the teacher/Scientist, Name of the paper presented (if any), Name of the Seminar, Place, Duration)**

Prof. Asis Mazumdar-Consultation Meeting for Finalization of Operational Guidelines of “Mission Medicinal Plants for Supply Chain Management” AYUSH Bhawan, Ministry of AYUSH, Delhi 3 October, 2019

Prof. Asis Mazumdar-Regional Consultative Workshop on Strengthening Medicinal Plants Sector KFRI, Kerala 18 May, 2018

Dr. Sanjay Bala, Dr. Soumyajit Biswas & Mr. Sudipto Ghosh-Awareness Workshop on Medicinal Plants Nadia, West Bengal 19 June, 2019

Dr. Sanjay Bala, Dr. Soumyajit Biswas & Mr. Sudipto Ghosh-Awareness Workshop & Buyer Seller Meet on Medicinal Plants’ organized by NABARD Medinipur, West Bengal 26 July, 2019

**3. C. Seminar/Workshop/Conference/Symposium organized: (Name of the Workshop /Training Programme, Duration, Place)**

1. Regional Workshop cum Buyer Seller meet, 25 April, 2019, Jadavpur University, Kolkata
2. State Level Buyer-Seller Interactive/Consultative Workshop on Medicinal Plants 21 August, 2019 Patna, Bihar
3. 25 September, 2019, Bhubaneswar, Odisha
4. Training Programme on Cultivation, Value Addition and Marketing of Medicinal Plants, 27 November, 2019, Mayurbhanj, Odisha
5. 18 December, 2019, Susunia, Bankura, West Bengal
6. 8 January, 2020, Balangir, Odisha
7. 28 January, 2020, Vaishali, Bihar
8. 4 February, 2020, Bhangar, South 24 Pgs, West Bengal
9. 11 February, 2020, Angara, Ranchi, Jharkhand
10. Industry-Institute interaction for the promotion of medicinal plants 24 February, 2020, Jadavpur University, Kolkata
11. Regional Level Consultative Workshop on Medicinal Plants, 26 February, 2020, Jadavpur University, Kolkata



**4. B. Articles published in Journals:(Name of the Author Name of the Article Name of the Journal Volume and Page no.Date of publication)**

**International:**

Barsha Majumder, Susmita Das, Soumyajit Biswas, Asis Mazumdar, Asok K. Biswas, Differential responses of photosynthetic parameters and its influence on carbohydrate metabolism in some contrasting rice (*Oryza sativa* L.) genotypes under arsenate stress *Ecotoxicology* 29: 912-931 June, 2020

**6. Major Achievements:**

- A Regional Workshop cum Buyer Seller meet was conducted at Jadavpur University Campus. The programme was attended by 338 participants covering Bihar, Jharkhand, Odisha and West Bengal. Traders and Industries from all over India attended the Meet. Apart from the workshop 10 numbers of stalls were installed for product display and interaction with different stakeholders at the venue
- RCFC-ER has organized two “State Level Buyer-Seller Interactive/Consultative Workshop on Medicinal Plants” in Bihar & Odisha
- RCFC-ER has organized **Six Training Programmes** on Cultivation, Value Addition and Marketing of Medicinal Plants in the state of Bihar, Jharkhand, Odisha & West Bengal
- RCFC-ER provided training **642 nos.** of medicinal plants cultivators in the state of Bihar, Jharkhand, Odisha & West Bengal
- More than Four lakh Quality Planting Materials (QPM) were raised in multiple locations by engaging various organizations in the state of Bihar, Jharkhand, Odisha, Sikkim & West Bengal & distributed through local farmers
- Carried out the field monitoring and evaluation work for two NMPB funded projects in Odisha & Sikkim.
- RCFC-ER collected data on medicinal plants cultivation for **11668 nos.** of farmers from Nadia district along with GPS tagging of their cultivation lands
- RCFC-ER collected Schedule TA data of some major ASU Manufacturing units of Bihar
- RCFC-ER published Activities and Achievement booklet for 2019-20 of RCFC-ER, NMPB, JU
- RCFC-ER documented 1 success story on *Bacopa monnieri* cultivation in South 24 Parganas district of West Bengal.
- RCFC-ER participated in National Level Arogya Fair during 22-25 August, 2019 at Mumbai & 7<sup>th</sup> Indian National Exhibition-cum-Fair-2019 at Metropolitan Dev. Authority (KMDA) Ground, Patuli, Kolkata from 25 – 29 September, 2019
- Redesigned and republished the brochure of RCFC-ER
- Improved the modern Nursery at Jadavpur University campus & provided Training (1<sup>st</sup> Batch of 20 from Bihar & Jharkhand: 24-28 February, 2020 & 2<sup>nd</sup> Batch of 20 from Odisha & WB: 2–6 March, 2020) through “Development of QPM and Skilled Manpower for Medicinal Plants Propagation”, under RUSA 2.0 (Rashtriya Uchchatar Shiksha Abhiyan)
- RCFC-ER Developed herbal garden of 41 spp. For demonstration within the nursery compound
- Published Manual for Production of Quality Planting Materials (QPM) for Medicinal Plants
- The 1<sup>st</sup> and 2<sup>nd</sup> fortnight Market Price data of top 100 Medicinal and Aromatic Plants from 25 Major Markets of India (Kolkata, Siliguri and Berhampur Market) is being collected for “e-CHARAK”- e-Channel for Herbs, Aromatic, Raw material and Knowledge, a platform to enable information exchange between various stakeholders involved in the medicinal plants sector which has been jointly developed by the National Medicinal Plants Board (NMPB), Ministry of AYUSH, Government of India and Centre for Development of Advanced Computing (C-DAC)

## Annual Report 2019-20

- RCFC-ER assisted in 5 nos. of research identified concerned with the region viz., Identification of High Yielding Stevia Cultivars Suitable for Gangetic Alluvial Regions of West Bengal; Assessment of Active Principle of Medicinal Plants for Recommendation of Cultivation as Quality Plant Materials; Giloy: Quality Assessment of Bioactive compounds for selection of Elite Plant from wild Plant Genetic Resource for Recommendation of Cultivation; *Tinospora cordifolia* - evaluation of quality related Safety issues; Quality Planting Material Production of *Stevia rebaudiana* through Polyploidy Induction

**RURAL & CRYOGENIC TECHNOLOGIES**  
[A Grant in aid Centre of Department of Science & Technology  
and Bio-technology Govt. of West Bengal]  
Phone : 2414-6747/6735/6965  
          : 2457-2585  
Director : Prof.(Dr.) Swapan Chandra Sarkar  
E.mail:director.crct@gmail.comrcct.centre@jadavpuruniversity.in

**1. Number of Associated Faculty Member: 06**

- 2. Centre for Rural & Cryogenic Technologies** (Former Advanced Centre of Cryogenic Research – Calcutta ) has the distinction of being born on 2 November, 1979 (the time when the Institute of Cryogenics, University of Southampton, UK was also born) as a R & D Institute of Cryogenics with initial GRANT from Commerce and Industries Department of Government of West Bengal to promote cryogenics research and education/ training in all fields of science and technology with Prof. Akhyananda Bose ( the founder president of Indian Cryogenics Council) as its Founder Director. It is a grant in aid autonomous organization under Department of Science & Technology, and Bio Technology Government of West Bengal and it also receives grant from Department of Higher Education (Social Education Branch) on scheme basis. The Centre is an affiliated unit of Jadavpur University and academically recognized for offering Ph.D. under Faculty for Interdisciplinary studies, Law & Management (FISLM)

**3. Area of Research**

Promoting research in the field of cryogenic and allied science for its potential development in education & training towards spread of knowledge in the multi-dimensional fields for the improvement of human society. The work aimed at solving the difficulties of society, planning of education and training to create trained manpower in cryogenic science & technology, cryopreservation including Rural technology and other relevant areas by utilizing knowledge of this front line discipline

**3. A. Research Activities Under**

- i) Cryogenics in production, maintenance, measurement, control and its utilization for scientific investigation
- ii) Investigation of phenomena, techniques and concepts of fertilizer, steel, petrochemicals, material science, gas purification, environmental science, agricultural chemistry, food science, biology, chemicals & pharmaceutical science
- iii) Defence, atomic energy and space science

**3. B. Academic and Research activities in Cryogenic/Rural & Allied Technology during financial year 2019-20 at Centre for Rural & Cryogenic Technologies**

The institute is known for promoting Cryogenic science application towards the benefit of the Human society

## Annual Report 2019-20

Different research programme conducted in the Institute during current year (2019-20) are summarized below

### 1. Ongoing External Funding Project:

#### a. UK-India Project under GCRF (Global Challenges Research Fund)

The network brings renowned researchers from multiple disciplines and world class institutions – coming together to conduct impactful research

Prof. (Dr.) S. C. Sarkar attended the project meeting-cum-Agricultural-field-visit in Hyderabad 19-23 January 2020. S.C. Sarkar has become a project partner from the Centre in the prestigious UK-India research Project entitled “**Transforming Cold Food Chains in India through Space Science and Technologies– Transition**”, in which a consortium is formed from UK & India and CRCT at JU is included along with IIT-Madras, NIT-Goa, Linde-India, BIM Tech. & Centre for Sustainable Agriculture, Hyderabad. The project is funded by Science & Technology Facilities Council- UK and will be led by RAL (Rutherford Application Laboratories) Oxford and University of Sheffield –UK

It is found that 40 percent of fresh fruits and vegetables wastage in developing countries occurs in the supply chain due to the lack of cold chain infrastructure, innovative business model, effective policies and knowledge gaps. Leveraging on advanced technological, supply chain, farming and policy making expertise from multidisciplinary stakeholders from the UK and India, the project aims at analyzing the current state of cold food supply chain in India to evaluate transitions and transformative pathways to sustainable cold food chain systems in India

In addition to **employing** STFC’s technological capabilities in space sciences and advanced computing, the project is equally considering low-tech, indigenous grass-root level innovations to generate measurable impact on our beneficiaries and stakeholders

**The project will have tremendous scope in maintaining food supply chain in COVID-19 like pandemic situation**

#### b. Indian Council of Medical Research Funded Project:

Improvement of human semen quality utilizing two novel Innovation sperm vertical velocity and motility promoting protein-Principal Investigator–Dr. G.C. Majumdar. The project is going to its completion phase

### 2. Ph.D. Programme of the Centre:

**A few students are being provided a small assistance and are being encouraged for enrolling for Ph.D.**

**Registered Ph.D. Student:** Ms. Shrabani Ghosh has registered for Ph.D. (Sc.) Programmes under Dr S.C Sarkar in . Ph.D. (Science) Scholarship Rs. 8000.00/ month will be receiving from Jadavpur University under The scheme of Swami Vivekananda Merit Cum Means Scholarship and CRCT need not pay her fellowship

### 3. Invited Talk

**107th Indian Science Congress(3-7January,2020) University of Agricultural Sciences, Bangalore an A Govt. of India initiative under Department of Science & Technology**

**The theme of the Congress: Science & Technologies- Rural Development**

Prof.(Dr.) Swapan Chandra Sarkar delivered a Keynote address on being invited at the 107th Indian Science Congress 2020, held on 3-7 January, 2020 at UAS Bangalore. The Congress was attended by few Nobel Laureate and 10,000 delegates from all sphere of Science & Technology

### 4. Dissertation Work:

**M.Sc (Instrumentation Science) JU**

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A student namely Sree Peouse Dutta had completed Dissertation Work studies in digital thermometer based on AVR microcontroller at cryogenic temperature range under Dr.G.P. Mandal

### 5. **Workshop on Cryogenic: CRYO – 2020**

The institute organized Published proceeding of National Workshop on Cryogenic under the banner CRYO – 2020 on 16 March, 2020

In CRYO -2020, We have focused the topics:

- i) Cryogenic Rocket propulsion using Liquid Hydrogen as eco-friendly cryogenic fuel,
- ii) Material science
- iii) Pisciculture as well as
- iv) Agriculture

The endeavour benefitted a large cross section of the teaching, research student communities and industries in this interdisciplinary field of science and technology which have immense scientific and societal value. To make the workshop a great success, eminent Scientist and faculty member from IITs, Variable Energy Cyclotron Centre (Department of Atomic Energy, Government of India), Central Inland Fisheries Research Institute with hand on experience had been invited to speak before the audience Proceedings contains valuable articles from all the above organization which will be important resouces in the subject

### 6. **Publication:**

- i) **Debajyoti R.Chowdhury, Nathuram Chakraborty and Swapan C. Sarkar**, Development of a cryogenic condenser and computation of its heat transfer efficiency based on liquefaction of nitrogen gas Mechanics and Mechanical Engineering 2019 Vol. 23 page 291–296
- ii) **PK Chakraborty and BN Mondal, BK Chaudhuri**, “Exact analytical Model for the Evaluation of complex Einstein relation for disordered semiconductor with parabolic band”, Open Access Journal of Mathematical and Theoretical Physics 2019;2(1):22 27
- iii) **Debajyoti R. Chowdhury, Nathuram Chakraborty, and Swapan C. Sarkar**, Thermodynamic Efficiency Evaluation Of A Low Pressure Turbo Expander Cryogenic Cycle Based On Exergy Analysis. THERMAL SCIENCE: Year 2019, Vol. 23, No. 3B, pp. 2097-2106

## SYLFF PROGRAMME

[Jadavpur University –Ryoichi Sasakawa Young Leaders Fellowship Fund Programme]

Phone: 033-2457-2389/2498

Director: Professor Shibashis Chatterjee

E-mail: shibashis.chatterjee@jadavpuruniversity.in

In 2003-2004, Jadavpur University became the First Indian University among the 69 SYLFF (The **RYOICHI SASAKAWA YOUNG LEADERS FELLOWSHIP FUND**) Institutions across 44 countries to earn SYLFF status and receive an endowment of one million US dollars (US\$1,000,000) from the Nippon Foundation. The JU-SYLFF programme provides a unique opportunity for students in Social Sciences and Humanities as fellowships are awarded to postgraduate students whose studies focus on the broad theme: Tradition, Social Change and Sustainable Development and those which adopt a Holistic Approach, that is, any issue or problem relevant to

## Annual Report 2019-20

contemporary Indian society. It provides a unique research opportunity to the postgraduate students of the M.A., M. Phil. and Ph. D. levels, and is one of the highest-valued scholarships in India

### JU-SYLFF Fellows: work in progress

#### M A Level:

- 1) Shaberi Das
- 2) Manoswini Sarkar

#### Ph D Level:

- 3) Lalrinawmi ColvomLulam

### JU-SYLFF SRA Awardees:

- 1) Shounak Set: Visited Department of International Relations and Strategic Studies, Jadavpur University, Kolkata, West Bengal, India (September, 2019-March, 2020)

### Pre-Application Orientation:

The annual Sylff Pre-Application Orientation was held at Vivekananda Hall on 6 September, 2019. The objective was to encourage and guide students to develop a research-oriented mind. During the day, participants were introduced to the various facets of the Sylff programme: its goals, multidisciplinary approach, leadership initiatives, social action programs, various activities et al. The programme began with an introductory speech by the JU-Sylff Project Director, Professor Shibashis Chatterjee. This was followed by an informative presentation by Prof. Partha Pratim Basu on how to write a research proposal. The current fellows and some graduated fellows also shared their journey as part of the programme and talked about their respective areas of research to provide the students with basic ideas about the kind of interdisciplinary research that SYLFF engages in. Additionally, they also introduced the applicants to the activities conducted as a part of the SYLFF association, such as weekly meetings, monthly lecture series, LANS meet, newsletter, etc.

### Lecture Series Organized:

The **JU- SYLFF Lecture Series** was started in April 2016. The idea was to involve academic experts and graduate SYLFF fellows for the academic enrichment of the SYLFF community and university students in general. An overview of the lectures delivered:

- On 25 April, 2019, Mr. Abhijit Sadhukan, Assistant Professor, Kazi Nazrul University, delivered a lecture titled *Social Stratification and Mobility: Caste in Early India*
- On 11 July, 2019, Ms. Sritama Chatterjee, PhD Scholar, University of Pittsburgh, delivered a lecture titled *Quotidian Oceans, Bureaucratic Waters: Genres and Forms of Hydrocolonialism on the Bay of Bengal (1870-1920)*
- On 27 November, 2019, Ms. Sreya Maitra, Assistant Professor, Department of Political Science, Maulana Azad College, delivered a lecture on *Conflict of identities in Sri Lanka: Making and Unmaking of Challenges*
- On 6 January, 2020, Ms. Sebanti Chatterjee, Assistant Professor, Department of Sociology, Sharda University, delivered a lecture on *Choral traditions in Goa and Shillong: Negotiating Identities and Artistic Traditions*
- On 3 February, 2020, Mr. Rupert Avis, Researcher, Music Department, University of York, delivered a lecture on *Bi-musical Curricula and "Abyssal Thinking"-The Case of KM Music Conservatory, India*
- On 24 February, 2020, Prof. T. David Ito, Professor, Graduate Program in Death & Life Science, Sophia University delivered a lecture on *Community-Based Integrated Care System in Japan*
- Lecture on *Maternal Frame & the Rise of the Counterpublic among Naga women in India* by Ms. Payel Ghosh, PhD Research Fellow, Jadavpur University, which was scheduled on 16 March, 2020, has been postponed due to the pandemic



## Annual Report 2019-20

A team of professors and students from Musashi University, Tokyo, Japan visited Jadavpur University in August, 2019. The JU-Sylff Association collaborated with Global Change Programme-Jadavpur University (GCP-JU) to organise an interactive seminar for them on 26 August, 2019. Professor Shibashis Chatterjee, the Director of JU-Sylff, started the session with a welcome address and an introduction to the Sylff programme, followed by an address by Dr. Anupam Deb Sarkar, the Coordinator of GCP-JU, who provided a glimpse into the work done by Global Change Programme. The students from Musashi University delivered a presentation on Japanese culture, traditions and customs, and even organised an ice-breaker session with popular Japanese games while the students from Jadavpur University delivered a presentation on India's progress in meeting 6 of the 17 Sustainable Development Goals of the UN (Goal 1- No Poverty, Goal 2- Zero Hunger, Goal 3- Good Health and Well-being, Goal 4- Quality Education, Goal 5- Gender Equality and Goal 13- Climate Action). Dr. Sanjay Gopal Sarkar, the Joint Registrar of Jadavpur University, enriched the occasion with his presence and his words of encouragement to the students

The JU-Sylff Association shall publish the 13<sup>th</sup> issue of *Fellows*, the annual newsletter when the Jadavpur University campus reopens after the Covid-19 pandemic-related lockdown lifts

The JU-Sylff Association was the first to apply for and be awarded the **Local Association Networking Support (LANS)** grant from the Sylff Association in Tokyo, in 2018. The grant consists of a maximum US\$5,000 to cover the long-distance transportation costs of participating fellows. It was a matter of great honour for JU-Sylff to receive the LANS grant for the third time, in 2020. JU-Sylff LANS meet 2020 in Kolkata was scheduled to be held on 26–27 March, 2020 in the Jadavpur University campus. Graduated JU-Sylff fellows from Ireland, and from different parts of India were invited. Day 1 was to consist of the annual visit to the Premananda Leprosy Mission Hospital as part of the Social Action Programme at JU-Sylff. Day 2 was planned around the academic and professional experiences of fellows around the theme of Epistemology in the present times. The JU-Sylff Association had planned to divide discussions and presentations by fellows into four panels on reinterpreting ecology, re-examining cultural sovereignty, understanding identity, and expanding the boundaries of archives in contemporary times. The annual newsletter of JU-Sylff, *Fellows*, was also scheduled to be released on Day 2. However, JU-Sylff LANS meet 2020 had to be postponed due to the sudden and unforeseen Covid-19-related lockdown in India and worldwide. With permission from the Tokyo Foundation for Policy Research, the event shall be rescheduled when the pandemic situation improves and gatherings are declared safe

### Activities of JU-SYLFF Fellows:

#### Shyamasree Dasgupta

#### Seminar/Workshop/Conference/Symposium Attended:

- Panel of Climate Vulnerability Assessment in the Indian Himalayan Region in the 10<sup>th</sup> Biennial Conference of Indian Society of Ecological Economics, held at the Centre for Economic and Social Studies, Hyderabad (6-8 November, 2019)
- Climate vulnerability and risk assessment in the Indian Himalayan Region- paper presented in C2E2 Himalaya 2019 at IIT Mandi (18-20 April, 2019)

#### Articles/Papers/Works published in Journals:

- Dasgupta, S., Chakraborty, D. and Roy, J (2020). Selected Issues in Economics of Greenhouse Gas Emission Mitigation in Majumdar, B (Ed). Reference Module in Materials Science and Materials Engineering. Vol 9. Elsevier
- Sankhyayan, P. and Dasgupta, S. (2019). 'Availability' and/or 'Affordability': What matters in household energy access in India? *Energy Policy*. 131 (2019) 131–143 (Elsevier).

#### Books/Monographs Published:

- Report: Climate Vulnerability Assessment for the Indian Himalayan Region using a Common Framework (2019). Report under Indian Himalayas Climate Adaptation Programme. <http://ihcap.in/reports>

## Annual Report 2019-20

### Invited Lectures:

- Resource Person in the Workshop “Methods of Collection of Quantitative Data” in the pre-conference workshop on research methods in social sciences organized by Indian Association for Social Sciences and Health and IIT Mandi (5-7 December, 2019)
- Panellist of the session on “Vulnerability Assessment in the Indian Himalayan States” in the “Himalayan Summit on Climate Change” held on 27 & 28 November, 2019 at Dr Ambedkar International Centre, Janpath, New Delhi, as part of the 10th CMS VATAVARAN – International Film Festival and Forum on Environment & Wildlife
- “Energy Access and Sustainable Development: A case of lighting and cooking fuel demand in India” – Distance talk delivered for Asian University for Women, Bangladesh (1 July, 2019)

### Major Research Projects:

- “Climate vulnerability and risk assessment at the national level using a common methodological framework” funded by the Swiss Agency of Development and Cooperation, Embassy of Switzerland and the Department of Science and Technology, Government of India

### Shounak Set

#### Articles Published in Journals:

- “Betwixt and Between Transformation? India and Nuclear South Asia”, UK PONI Papers (December, 2019), Royal United Services Institute
- “India’s Space Power: Revisiting the Anti-Satellite Test”, Carnegie Endowment for International Peace, 6 September, 2019
- “India’s Mission Shakti: Retrospect and Prospect”, Center for Advanced Study of India, India in Transition, University of Pennsylvania, 29 July, 2019, and The Hindu: Business Line, 30 July, 2019
- “India’s leap in the space”, Shounak Set and Harsh V Pant, Business Standard, 4 April, 2019

#### Invited Lecture:

- “Outer Space and International Security”, organised by Observer Research Foundation Kolkata and School of International Relations & Strategic Studies, Jadavpur University, on 19 December, 2019

#### Major Research Project:

- Marie Skłodowska Curie Global India ETN ESR under the European Union’s Horizon 2020 underway (2017-2020)

#### Seminar/Workshop/Conference/Symposium Attended:

- Attended UK PONI (Project on Nuclear Issues) Annual Conference 2019 on 6 June, 2019

#### Major Achievements:

- Won the Sylff Research Abroad (SRA) Grant and visited the Department of International Relations and Strategic Studies, Jadavpur University, Kolkata, West Bengal, India (September 2019-March, 2020)

#### Miscellaneous:

- Featured in BBC Asian Network, “Indian Students in London react to Indian election results”, 23 May, 2019

### Soumya Bhowmick

#### Articles Published in Journals:

- *BIMSTEC and the fourth industrial revolution: The role of technology in regional development*, 11 March, 2020, Observer Research Foundation, Issue Brief No. 344 (Co-authored)
- *Human Capital Formation through Public Education: BIMSTEC and the fourth industrial revolution: The role of technology in regional development*, 11 March, 2020, Observer Research Foundation, Issue Brief No. 344 (Co-authored).

## Annual Report 2019-20

- *How Fares India?* on 17 September, 2019, Observer Research Foundation, Occasional Paper No. 212, (Co-authored)
- *SDG Index and ease of doing business in India: A sub-national study*, 17 July, 2019, Observer Research Foundation, Occasional Paper No. 199, (Co-authored)

### Seminar/Workshop/Conference/Symposium Attended:

- Sub-regional cooperation: BIMSTEC and Northeast India in Perspective, IIT Guwahati and ORF Kolkata, Guwahati (February 2020)
- Kolkata Colloquium 2019: Reimagining BIMSTEC – Eastern India’s flagship conference on the Bay of Bengal (connectivity, climate, trade and culture) - hosted by Observer Research Foundation, Department for International Development, Govt. of the UK and Konrad Adenauer Stiftung, Germany – Kolkata (November, 2019)
- IPCC Dissemination Workshop: Key Messages from Three Special Reports of IPCC (SR 1.5, SRCCL and SROCC, Department of Environment, Government of West Bengal and West Bengal Pollution Control Board in collaboration with IPCC and Global Change Programme, Jadavpur University, Kolkata (November, 2019)
- International Forum on Energy Economy and Energy Security and Symposium at China Nonferrous Metal Industry’s Foreign Engineering And Construction Company Ltd., Graduate School Chinese Academy of Social Sciences, Beijing (June, 2019)

### Seminar/Workshop/Conference/Symposium Organised:

- Raisina Dialogue 2020 – India’s flagship conference on geopolitics and geoeconomics - hosted by Observer Research Foundation and the Ministry of External Affairs, Government of India – New Delhi (January 2020)

### Purbasha Auddy

#### Presentations Made:

- ‘What does “Digital” aspire to do to the “Humanities”?’ at international seminar on Digital Humanities and Literary Mapping: Pedagogy and Curricula organised by the Department of Comparative Literature, Jadavpur University, 7-9 January, 2020
- ‘Managing and Execution: Perceiving the Workflow, Creating Metadata’ at British Library Endangered Archives Program (EAP-1247) workshop on Building Digital Archives: Tools, Techniques, Approaches organised by the School of Cultural Texts and Records, Jadavpur University, 5-8 November, 2019

### Reep Pandi Lepcha

#### Invited Lectures

- Delivered a lecture on methodology titled ‘Narratives: Positing the Possibilities of Indigenous Epistemologies’ at Social Sciences Winter School Workshop organized by Kaziranga University, Indian Institute for Public Governance and Anthropol India Foundation at Sikkim, from 28 December 2019 -1 January 2020

### Seminar/Workshop/Conference/Symposium Attended:

- Social Sciences Winter School Workshop organized by Kaziranga University, Indian Institute for Public Governance and Anthropol India
- *International Workshop on Liminal Ontologies* from 14-17 January, 2020 conducted jointly by Centre for Karbi Studies and The University of Tartu. Where ‘Nebulous Borders: Migrating/Migration Narratives as Sites of Contacts, Contestations and Co-existence’ was presented.
- Foundation at Sikkim, from 28 December 2019 -1 January 2020
- ‘Narratives and Nature: Positing the Possibilities of Indigenous Epistemologies’ at *Articulating Adivasi and Tribal Feminism in India* held at Indira Gandhi Rashtriya Manav Sangraliya (IGRMS), Bhopal 15-17 November, 2019. Also chaired a session themed Narrative of Change and Transformation at the seminar.

## Annual Report 2019-20

- ‘Understanding Indigenous Episteme: Exploring the Labyrinth of Mutanchi Narratives from Sikkim’ in the panel: *Lifestyle, Identities and Social Capital in South Asia* at ICAS11 held at Leiden University from 16-19 July, 2019
- University of Chicago (Delhi Center) Workshop on ‘Creative Criticality in Colonial and Indigenous Archives’ 22-23 April, 2019, where ‘Indigenous Community Narratives: Building Archives, Telling Stories’ was presented

### Awards/Grants Won:

- Travel Grant for 600 Euros for International Conference of Asian Scholars-11 to present a paper in the panel ‘State, Society And Shifting Realities in Sikkim Himalaya’ 16-19 July, 2019
- International Society of Folk Narrative Research Travel Grant of upto \$1000, Ragusa, Italy, 12–16 June, 2018. Paper titled: ‘Understanding Indigenous Episteme: Exploring the Labyrinth of Mutanchi Narratives from Sikkim.’
- RUSA Travel Grant of Rs. 80000/-2.0 Support to Students for attending Conference/Seminar/Workshop to attend IMCAS-2019

### Sujaan Mukherjee

#### Seminar/Workshop/Conference/Symposium Organised:

- International Seminar on ‘Megacities: Conviviality and its Limits’ at Jadavpur University, on 26-28 February, 2020
- Resource person at the inauguration of the AHRC-ICHR funded ‘Calcutta Riverfront Heritage and Diaspora’ project undertaken by University of Nottingham (UK), University of Calcutta, and Heritage Walks Calcutta on 15 January, 2020
- Moderator of a session titled ‘Participatory History through Heritage Walks and Blogs’ at ‘Kolkata Tales and Beyond: Sustainable Heritage and Policy in Kolkata,’ a workshop organized by the Department of English, University of Liverpool and the Department of English, Jadavpur University, on 29 May, 2019

#### Invited Lectures/Talks Delivered:

- Lecture on ‘The Raibenshe Performers of Bengal,’ as part of the Intangible Cultural Heritage course at Loreto College, Kolkata, 26 February, 2020

#### Collaborative Programmes:

- As Senior Executive in the Education and Outreach Department at DAG Museum’s *Ghare Baire*, led a collaboration with Victoria Memorial Hall, Kolkata, for a virtual exhibition titled ‘An Inheritance of Imaginations.’

#### Major Achievements:

- Led the Education and Outreach Department at Ghare Baire, a museum of Bengal art produced and curated by DAG in collaboration with NGMA, commissioned by the Ministry of Culture, Government of India

#### Miscellaneous:

- Designed book covers for several publications by Jadavpur University Press, including Amartya Sen, *Calcutta after Independence: A Personal Memoir* (2020), Ananda Lal, ed., *Indian Drama in English: The Beginnings* (2019)

### Sreerupa Sengupta

#### Seminar/Workshop/Conference/Symposium Attended:

- Attended an advanced professional training program on *SDG and Global Governance* organised by Managing Global Governance Academy, German Development Institute, Bonn in August - December 2019
- Attended a training program on *Diplomacy of the 21st Century*, organised by Federal Foreign Office, Berlin in September, 2019

## Annual Report 2019-20

- Attended a workshop on *Feminist Foreign Policy* organised by Federal Foreign Office, Berlin in September, 2019

### Research Projects:

- PI Evaluation of One Stop Centre, funded by the National Commission for Women, New Delhi
- PI Evaluation of Regional Vocational Training Centres for the skill-development of Women, funded by the National Commission for Women, New Delhi

### Collaborative Programmes:

- Worked on a collaborative project with Zebralog, a social communications organisation based in Bonn, to design a campaign to enhance participation of migrant youth in urban planning. She did this project during her stay at the German Development Institute in October-November, 2019

### 7. Other Academic Activities:

Academic Staff / Scientist of the center acted as Paper setter, Paper reviewer, expert member for various University/IITs

## UGC-HUMAN RESOURCE DEVELOPMENT CENTRE

Phone :033-2335-9349/5215

:2340-6209/6115

Director : Prof. Rajat Acharyya

E-mail: dirhrdc@jadavpuruniversity.in

### 1. B. Number of Faculty Members : Two (2)

### 3. A. Invited Lectures Delivered/Sessions Chaired: (Name of the Teacher, Type of Participants, Name of the Seminar / Conference etc. Place, Duration)

Nandan Bhattacharya (Invited Speaker) Education and Technology: One Policy, Two Citizens.

International Webinar on Education and Technology: Some emerging Ethical Issues organized by

Department of Philosophy, West Bengal State University on 22.08.2020. [https://drive.google.com/file/d/1\\_1B3aBdrqPlonUVWDzqndg1fqNrbGdgT/view?usp=sharing](https://drive.google.com/file/d/1_1B3aBdrqPlonUVWDzqndg1fqNrbGdgT/view?usp=sharing)

Nandan Bhattacharya (Invited Speaker) Sociocultural scenario of rural India: Where are we heading to. 2 Days International Seminar entitled 'Emerging Emerging Scenario of Rural India: Society, Education and Culture', 15-16 November, 2020, Department of Bengali, Tripura University, Tripura

Nandan Bhattacharya (Invited Speaker) 7 Days International Workshop entitled 'Research in Culture and Humanities': Methodological Issues and Emerging Trends, 17-23 October, 2019, Center for Studies in Cultural Diversity and Wellbeing

### Programmes Conducted:

In the academic session 2019-20, the UGC-HRDC, Jadavpur University, has conducted altogether 17 programmes including four (4) Orientation Programmes, 7 Refresher Courses and Five (6) Short Term Courses. The details of these courses are given below, with time distribution of courses indicated in Figure 1.



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Programme	Conducted at	Time	
<b>A</b>			
<b>Orientation Programme</b>			
<b>A1</b>	73 OP	UGC-HRDC	8–27 July, 2019
<b>A2</b>	74 OP	UGC HRDC	26 August - 15 September, 2019
<b>A3</b>	75 OP	UGC-HRDC	25 November - 14 December, 2019
<b>A4</b>	76 OP	UGC-HRDC	3 February - 24 February, 2020

## **B** **Refresher Courses**

### **B 1** **Subject Specific Refreshers Courses**

- B 1(i)** Librarianship in the –New Paradigm–Library and Information Sciences–27 August-9 September, 2019
- B 1(ii)** Adhunikar Madhyajug Charcha–Department of Bengali–18–30 November, 2019
- B1 (iii)** Algebra, Analysis and their Application–Department of Mathematics–18–30 November, 2019
- B1 (iv)** Instrumentation and Automation –Department of Instrumentation & Electronics Engineering–9–21 December, 2019

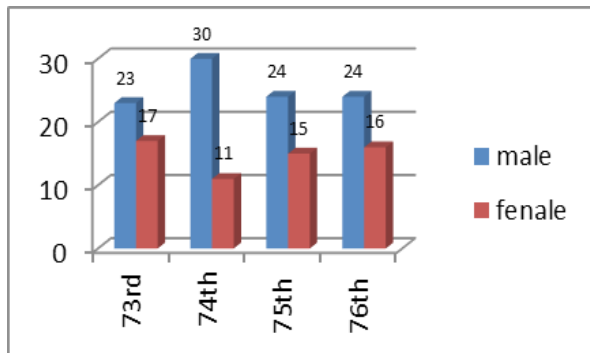
### **B 2** **Inter-disciplinary Refreshers Courses**

- B 2 (i)** Non- conventional Energy-A paradigm shift towards sustainability–Department of Power Engineering–1 January –18 January, 2020
- B 2 (ii)** Emerging areas of Life Science (IDC)–Department of Life Science and Biotech–27 January-2 February, 2020
- B 2 (iii)** Disaster Management–Centre for Disaster Preparedness and Management –3–15 February, 2019

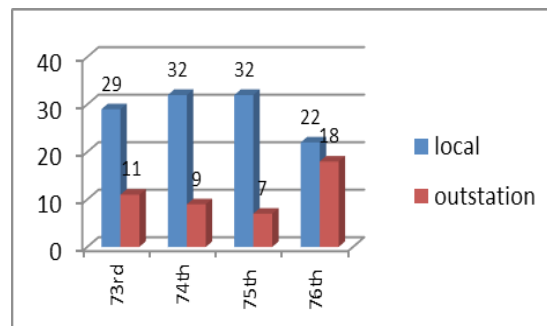
## **C** **One-week Short Term Courses**

- C1** Counseling and Stress Management–Centre for Counselling Services and Studies in Self Development (CCSSS)–12–18 September, 2019
- C2** Disability Studies–Department of Education–20–26 November, 2019
- C3** Research Methodology–Department of Economics–20–26 November, 2019
- C4** Workshop on MOOCs, e-content development and Open Educational Resources–School of Media, Communication and Culture and Centre for Microprocessor Applications for Training, Education and Research–11–17 February, 2020
- C5** Language & Linguistics–School of Languages and Literature and Linguistics–19–25 February, 2020
- C6** Gender Sensitization–School of Women’s Studies–12–18 March, 2020

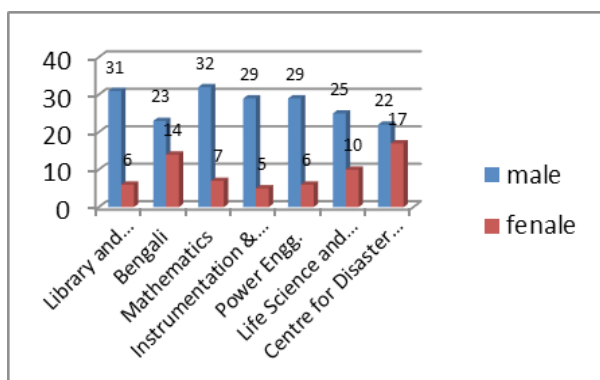
**Distribution of Participants in different Programmes**



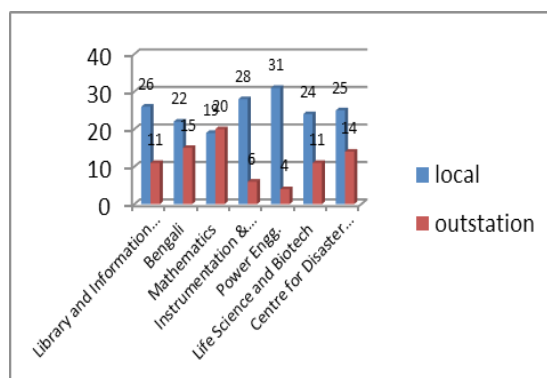
**Distribution of Male and Female Participants in Orientation Programmes**



**Distribution of Local and Outstation Participants in Orientation Programmes**

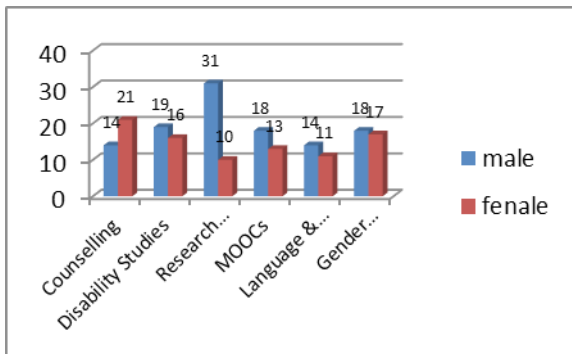


**Distribution of Male and Female Participants in Refresher Courses**

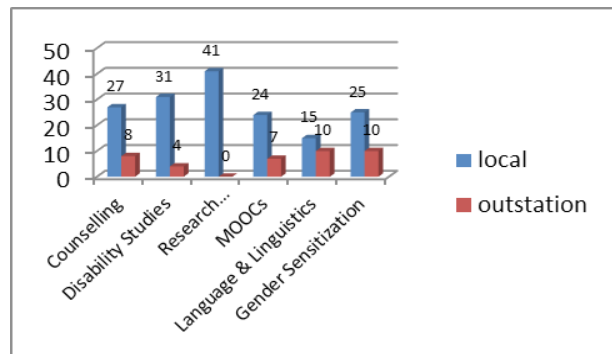


**Distribution of Local and Outstation Participants in Refresher Courses**

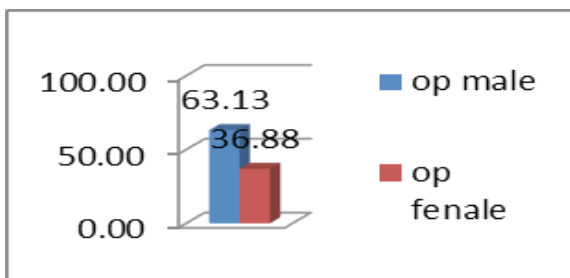
Annual Report 2019-20



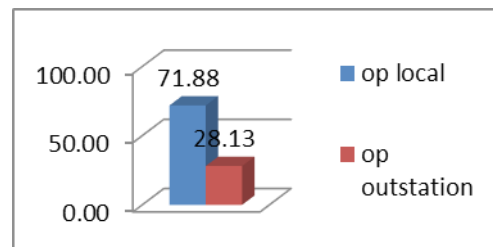
Distribution of Male and Female Participants in Short Term Courses



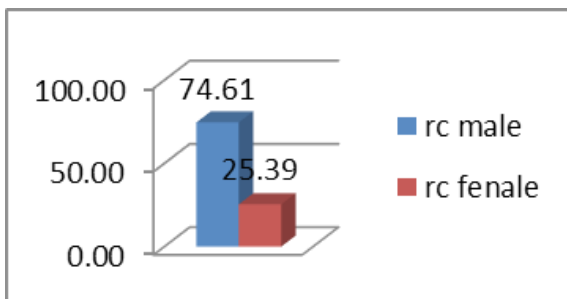
Distribution of Local and Outstation Participants in Short Term Courses



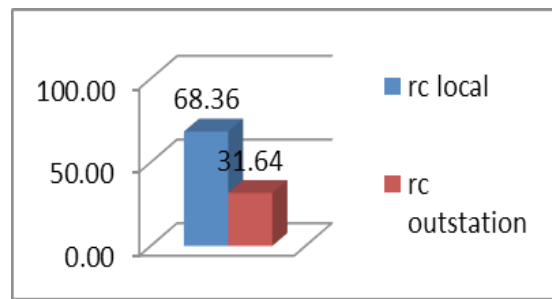
Percentage of Male and Female Participants in Orientation Programme



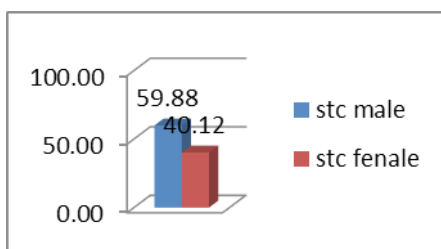
Percentage of Local and Outstation Participants in Orientation Programme



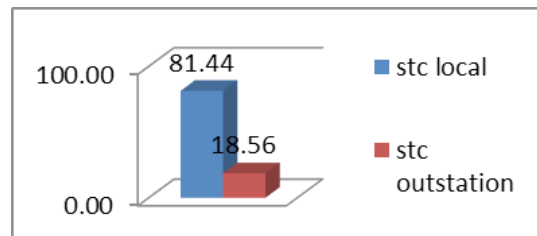
Percentage of Male and Female Participants in Refresher Courses



Percentage of Local and Outstation Participants in Refresher Courses

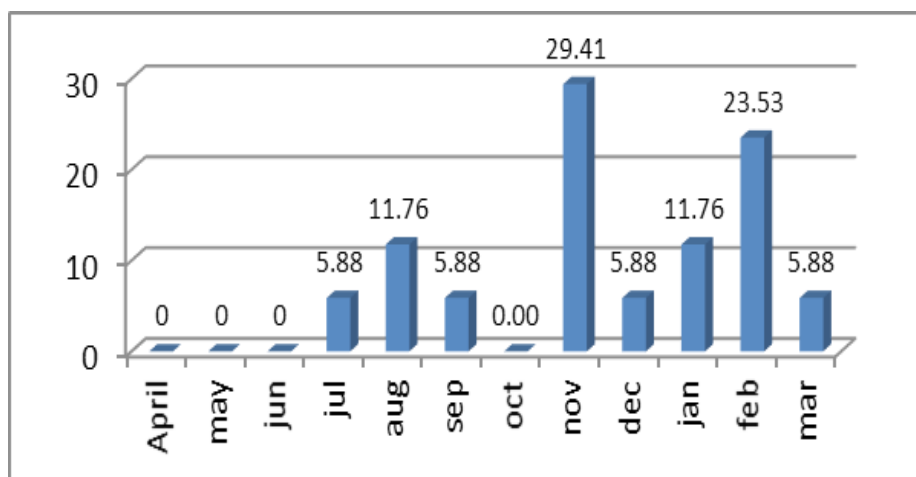


Percentage of Male and Female Participants in Short Term Courses



Percentage of Local and Outstation Participants in Short Term Courses

Periodicity of the Programmes



4. A. Books/Monographs etc. Published : (Name of the Teacher, Name of the Book, Name of the Publisher)

A Contract has been signed between Routledge India (Taylor & Francis) and the UGC-HRDC, JU, in publishing a Book Series entitled **Contemporary Issues in Social Science Research**, with Rajat Acharyya (Director) and Nandan Bhattacharya (Assistant Director) as Series Editors. As per the agreement on Book Series, HRDC-JU and Routledge India will publish six (6) volumes in four years. **A Royalty of 32,139.00/- has been allotted for the published book titled as 'Research Methodology for Social Sciences'.**

(Volume/Title–Volume Editor–Status of the Book)

Research Methodology for Social Sciences–Rajat Acharyya & Nandan Bhattacharya–Published 2020 ISBN 978-0-367-46392-2

Peace and Conflict Studies: A Reader–Shibashis Chatterjee & Anindya Jyoti Majumdar–In Press

History and Philosophy of Science–Nandan Bhattacharya–Submitted for review (On 11 September)

4. B. Articles Published in Journals: (Including National/International & Peer-reviewed Journals) (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

Dr. Nandan Bhattacharya

Bhattacharya, N. 2020. Post Corona world: Who will win. *International Journal of Sociology and Political Science* **2(1)**: No. 01-03.

Bhattacharya, N. 2020. Carlos Celdrán: Cuba to Kolkata. *Theatre Street Journal*; **4(1)**:125-130.

Bhattacharya, N. 2019. Origin and Evolution of Theatre: A Biological Interpretation. *Journal of Studies in Social Sciences*, **18(2)**: 270-295. <https://doi.org/10.28924/ip/jsss.1897>

5. Collaborative Programmes:

UGC-HRDC, JU has organised 'Experiential Learning' under Mahatma Gandhi National Council of Rural Education during 2019-2020 session. In Orientation Programmes two days have been allotted for this event. The first day was dedicated for the theoretical lectures and the second day a field visit. A residential school in Kolkata (Park Institution for Girls) where first generation learners stay and learn was selected and a social survey was performed by the participants. The whole programme were coordinated by Dr. D. K. Chakraborty (Programme Coordinator) and Dr. Mukti Pada Sinha (Department of Education, Jadavpur University) on behalf of HRDC, JU

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### 6. Major Achievements:

- Separate Website
- Online and paperless functioning
- Transparency in selection of Participants
- Implementation of social inclusion in selection of participants
- Organising programmes on Disability Studies, MOOCs, Gender Sensitisation
- Organising special programmes for Teacher Educator

### Section III Annexures (Administrative)

#### The list of members of Academic Advisory Committee:

- 1) Prof. Suranjan Das, Vice Chancellor, Jadavpur University, Kolkata and **Chairman**
- 2) Prof. Rajat Acharyya, Director, UGC-HRDC, Jadavpur University and **Member Secretary**
- 3) Prof. Dhruvajyoti Chattopadhyay, Vice Chancellor, Amity University Kolkata and **UGC Nominee**
- 4) Prof. Sibaji Raha, Director, Bose Institute, Kolkata, Member
- 5) Prof. K. L. Tuteja, Former Tagore Fellow, Indian Institute of Advance Study, Shimla, Member
- 6) Prof. Sudhir Kumar Sopory, Ex-Vice Chancellor, Jawaharlal Nehru University, New Delhi, Member
- 7) Prof. Rakesh Mohan, Director, UGC-HRDC, North Eastern Hill University, Shillong, Member
- 8) Dr. Snehamanju Basu, Registrar, Jadavpur University
- 9) Sri Gour Krishna Pattanayak, Finance Officer, Jadavpur University

#### Teachers :

Existing Faculty Members (Arts, Engg. and Tech., Science & ISLM as on 31.3.2020.)

Dr. Rajat Acharyya

Director (Additional Charge), UGC-HRDC,

Professor of Economics

Jadavpur University

Kolkata –700032, India

Phone (O) 033-24146328, 033-23359439, (M) 9831273244

Dr. Nandan Bhattacharya

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