

ADVANCED STUDIES ON INDUSTRIAL POLLUTION CONTROL ENGINEERING

Phone : 2457-2482/2698

Director. : Dr.Avijit Bhowal

2. **B. Number of Faculty Members: 06** (attached to the School)

3. **A. Area of Research Activities:**

- Industrial Pollution Control & Waste management
- Membrane Separation
- Process intensification

B: Major Research Projects:

Prof. Siddhartha Datta & Prof. Avijit Bhowal

[1] *Title:* Study on the Enrichment and Adaptability on Marine Water of Microbial Consortia used in Biodigestor Technology (ongoing)

Funding agency: Defence Research Laboratory

Report published on "Effect of Exposed Environment on the Health Status of Urban Population in West Bengal, Case Study: Kolkata", (executed in collaboration with Environment Governed Integrated Organization, Kolkata and supported by Dept. Of Environment, Govt. of West Bengal)

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

Prof. Siddhartha Datta

1. U.S. Roy, A. Aich, B. Chattopadhyay, **S. Datta**, S. K. Mukhopadhyay, Studies on the toxicity of composite tannery effluent using guppy (*Poecilia reticulata*) as a fish model, *Environmental Engineering and Management Journal* 12 (2013) 557-563.
2. A. Kumar, B. Bhunia, D. Dasgupta, T. Mandal, A. Dey, **S. Datta**, P. Bhattacharya, Optimization of culture condition for growth and phenol degradation by *Alcaligenes faecalis* JF339228 using Taguchi Methodology. *Desalination and Water Treatment* 51(2013) 3153-3163.
3. U. S. Roy, A. R. Goswami, A. Aich, B. Chattopadhyay, **S. Datta**, S. K. Mukhopadhyay, Changes in physicochemical characteristics of wastewater carrying canals after relocation of Calcutta tannery agglomerates within the East Calcutta Wetland ecosystem (a Ramsar site). *International Journal of Environmental Studies* 70(2013) 203-221.
4. A. R. Goswami, A. Aich, S. Pal, B. Chattopadhyay, **S. Datta**, S.K. Mukhopadhyay, Antioxidant response to oxidative stress in zooplankton thrived in wastewater-fed ponds in East Calcutta Wetland Ecosystem, a Ramsar site. *Toxicological and Environmental Chemistry* 95(2013) 627-634
5. A. Mondal, S. Ghosh, A. Bhowal, **S. Datta**, Vanadium extraction using pseudo-emulsion based hollow-fiber with strip dispersion technique. *Separation Science and Technology* 28(2013) 877-883.
6. M. Mukherjee, J. Basu, **S. Datta**, Air quality analysis and indexing of Kolkata city with respect to vertical floor heights and seasonal variation. *Toxicological and Environmental Chemistry* 94(2012) 1864- 1885
7. P. D. Saha, S. Chowdhury, **S. Datta**, S. K. Sanyal. Removal of Pb(II) from aqueous solutions by adsorption onto clayey soil of Indian origin: Equilibrium, kinetic and thermodynamic profile. *Korean Journal of Chemical Engineering* 29 (2012) 1086-1093.

8. S. Chatterjee, L. Singh, B. Chattopadhyay, **S. Datta**, S. K. Mukhopadhyay, A study on the waste metal remediation using floriculture at East Calcutta Wetlands, a Ramsar site in India. *Environmental Monitoring and Assessment* 184 (2012) 5139-5150.
9. A. Choudhury, S. Sengupta, C. Bhattacharjee, **S. Datta**, Effects of co-solutes on Cr(VI) removal by micellar enhanced ultrafiltration (MEUF) process. *Desalination and Water Treatment* 44 (2012) 67-74.
10. A. Bhowal, G. Bhattacharjee, **S. Datta**, Continuous removal of hexavalent chromium by emulsion liquid membrane in a modified spray column. *Separation and Purification Technology* 99 (2012) 69-76.
11. A. Chowdhury, A. Bhowal, **S. Datta**, Equilibrium, thermodynamic and kinetic studies for removal of Copper (II) from aqueous solution by onion and garlic scale. *Water Journal* 4 (2012) 37-51.

Prof. Avijit Bhowal

1. A. Mondal, **A. Bhowal**, S. Datta, Gas-liquid sensible heat transfer in spray and packed bed under a centrifugal field. *Industrial Engineering Chemistry Research* 52(1) (2013) 499-506.
2. A. Mondal, S. Ghosh, **A. Bhowal**, S. Datta, Vanadium extraction using pseudo-emulsion based hollow-fiber with strip dispersion technique. *Separation Science and Technology* 28(2013) 877-883.
3. **A. Bhowal**, G. Bhattacharjee, S. Datta, Continuous removal of hexavalent chromium by emulsion liquid membrane in a modified spray column. *Separation and Purification Technology* 99 (2012) 69-76.
4. A. Chowdhury, **A. Bhowal**, S. Datta, Equilibrium, thermodynamic and kinetic studies for removal of Copper (II) from aqueous solution by onion and garlic scale. *Water Journal* 4 (2012) 37-51.

AUTOMOTIVE ENGINEERING

Phone : + 91-33- 6454-9769/2414-6927
 Int. : 2457-2242
 Director. : Prof. Ranajit Kumar Chakrabarti
 Jt. Director: Prof. Gautam Sutradhar

1. Areas of Research Activities :

Research on Alternative fuels.

Research on development of a new generation of Automotive Engines.

Development of methoding of Engine Castings.

Development of new materials to be used for different automobile components and their microstructure interpretation.

Energy economy analysis and reduction of environmental pollution in Foundries producing automobile components by modifying the existing cupola system.

Research on preparation of sand 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.
Principal Investigator – Prof. R.K. Chakrabarti
- b) "Modification of 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.
Principal Investigator – Prof. R.K. Chakrabarti
- c) "Performance and emission test along with durability test for different TBOs in agricultural diesel generator set" – a project sponsored by Department of Biotechnology, Government of West Bengal.
Principal Investigator – Prof. R.K. Chakrabarti

3. Seminar/Workshop/ Conference/ Symposium Organized :

Organised a one day seminar on different activities of the R&D and Innovation centre on development of high quality castings at Sarat Sadan, Howrah, in December 2010.

4. Major Achievements:

The projects on R&D and Innovation Centre for Howrah Foundry Cluster has achieved the following major objectives:

- **Installation of Casting Simulation Laboratory**

A sophisticated laboratory has been installed for investigation of defects related to casting supplied by the foundries as well as the prototype casting for foundries which may be developed by pouring of molten metal into the mould designed by the process of casting simulation.

In order to achieve the above, the Casting Simulation Laboratory has been made operational with the installation of imported ProE and ProCAST softwares.

The capability of this centre has been demonstrated at council meeting of Indian Foundry Association recently to the foundry entrepreneurs in order to inculcate into them a mindset for going into higher technological inputs into their products. Till now six casting simulation jobs of the following foundries have been completed:

Sl. No.	Name of the Foundry	Number of Jobs
1.	Sett Iron Foundry	One Job
2.	Techno Aid Private Limited	Two jobs
3.	Bharat Engg. Works	Two jobs
4.	Calcutta Iron Udyog	One Job

Presently works is in progress on simulation related jobs received from CLW (Chittaranjan Locomotive works).

- **Laboratories for Chemical/Spectroscopic Analysis, Metallurgical/ Metallographic Testing :**

Metallurgical Microscope with all accessories has been installed recently and made operational for the service of Howrah Foundry Cluster and revenue generation for nodal centre. Other chemical lab equipments viz Strohlein designed Carbon Sulphur determination apparatus with tube furnace, Muffle furnace etc. and NDT equipments such as In-Situ Metallography Kits with camera, Portable Dynamic Hardness tester & Poldi Hardness tester and Analogue Type High

tensile testing machine etc. have already been ordered and are expected to be installed shortly for the service of Howrah Foundry Cluster. Brochure and leaflet indicating rates have already been distributed through the IFA, HFA. Recently a metallurgical testing report from a renowned foundry producing heavy gear box & valves and railway components have been completed.

- **Nodal Centre:**

The building and laboratory facility of R&D and Innovation Centre was inaugurated by Dr. Anil Kakodkar, Chairman TIFAC and Homi Bhabha Chair Professor-DAE in a function held on 6th January, 2012. The equipments available for testing have been housed in the respective lab of the centre.

B) Mobile Casting Clinic

The mobile casting clinic was inaugurated on 30th April, 2009 and houses state-of-the-art equipments for carrying out sand testing. The year-wise results of the Mobile Casting Clinic are listed below:

MOBILE CASTING CLINIC							
CONSOLIDATED STATEMENT OF TARGET, REVENUE GENERATION							
		1st Year		2nd Year		3rd Year	
		Target	Achieved	Target	Achieved	Target	
Achieved							
	Total number of members enrolled	-----	36	-----	56	-----	57
	Membership and Testing	-----	Rs. 84,000.00	Rs.1,23,000.00	Rs. 1,56,000.00	Rs. 1,58,000.00	Rs.
							1,77,800.00

Consultancy through Mobile Casting Clinic: A technical problem on the microstructural defect of railway Brake Shoe/Block for **M/s Rose Island Engineering Works** was solved by the "R&D and Innovation Centre for Howrah Foundry Cluster" to meet the specified specification of **RDSO**. Recently an assignment was received on failure analysis from **CLW (Chittaranjan Locomotive works)**. **M/s Asit Iron Foundry** has sought the expertise of R&D and Innovation Centre for Howrah Foundry Cluster against their proposal for utilization of briquette prepared out of boring and turning from machines, in cupola melting for replacement of scrap.

- **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- Cupola A** have already been completed satisfactorily and out of modification for two more foundries, it is expected to carry out modification work of **Om Iron Foundry** during puja holidays. Also the final negotiation with

M/s M. H. Iron Foundry is in process and expect to finish final technical discussion with other two foundries shortly.

The report from **M/s Dhang Iron Company** after modification is highly satisfactory as there are improvement in a) Coke: metal form 1:6 to 1:10 in split charging, b) Melting rate from 2.5 ton/hr to 3.5 ton/hr, c) Considering price of coke as Rs. 12000/- per ton, the saving for /10 ton/day melting is Rs. 6,600/- and yearly Rs. 5,94,000.00 saving considering 45 weeks having 2 castings/week.

- a) Recovery period for modification cost is roughly in 4 months.
- b) Saving of 1 working hour of electricity for 10 ton/day melting.
- c) Reduction in 34% coke after modification leading considerable reduction both in gaseous and particulate emission.

The modification divided blast cupola for **Shree Shyam Iron Foundry** has been carried out successfully in May-2011. The coke consumption for per day melt for both split charges and bed coke reduced substantially to the tune of 600Kg per day melt saving of Rs. 7,200.00 per day and Rs. 9,72,000.00 per year considering 45 casting weeks in year. The melt rate has also been improved to an average of 3.5 tons per hour.

The modification for **Super Iron Foundry** has been carried out successfully in November-2011. The coke consumption for per day for both split charges and bed coke have been reduced and melt rate has been improved to an average of 3.7 tons per hour.

- **Documentary Film on Howrah Foundry Cluster**- an extended project of R&D and Innovation Centre for Howrah Foundry Cluster-a film highlighting the practices followed & need for improved operation and Ideal Foundry Practices to be followed have been produced already. The dubbing of the film in Hindi as well as in Bengali has already been completed.
- **Future extension project for R&D and Innovation Centre for Howrah Foundry Cluster. The following proposals for new projects have been placed before TIFAC, DST and are expected for their final approval:-**
 - I. **Identification and Introduction of value added products with higher project margins for the Howrah Foundries. This is essential for the Howrah Foundries to survive.**

Terms of Reference of the above work.

- a) Manufacturing of value added products.
- b) Technology requirement for the products.
- c) Technology source for the products.
- d) Cost of Technology for the products.
- e) Lead time for the foundries for Technology adaptation (Switch over time).

II. Introduction of Low Cost Automation for different processes in the Foundry. The areas where such automation is required:

- a) Charging of the Cupola Furnace.
- b) Casting process used by the foundries.

Terms of Reference

- a) Manufacturing of value added products.
- b) Technology requirement for the products.
- c) Technology source for the products.
- d) Cost of Technology for the products.
- e) Lead time for the foundries for Technology adaptation (Switch over time).

III. Optimization of Cupola Design for achieving

- a) Best Combustion Rate.
- b) Highest Melt/Coke ratio.
- c) Lowest pollution.
- d) Lowest energy consumption.
- e) Lowest Green House Gas emission.

For the above, the following Terms of Reference is required.

- a) Optimization of Air Blast System.
 - b) Maximization of Combustion efficiency by Maximum Heat Transfer during combustion. A team of experts from Academic Institution & industries shall be formed for achieve the above
- iv. Survey of the status of Technology and Quality issues in Aluminium foundries in and around Howrah.**
- v. Development of Compacted Graphite Iron Ingot Moulds, Drilling Machine Housings etc**

BIOSCIENCE & ENGINEERING

Phone : +91-33-2414-6567
 Int. : 2457-2316
 Director : Dr. Himadri Chattopadhyay

1. A. Courses Offered:

Name of the Course :	Duration of the Course:	Intake	of
Students: M.E. (Biomedical Engineering)	Four Semesters (2 years)	11 per year	

1. B. No. of Faculty Members :

Professors 2 (1 Vacant)	Associate Professor 1 (Vacant)	Assistant Professor 3 (1 Vacant)
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2. A. Area of Research Activities:(Broad Areas)

Application of various branches of Engineering towards solutions of Bio-Medical and Health related problems for the benefit of mankind. Current research activities include but not limited to following:

- i. Biomedical Instrumentation including development of Biomedical Sensors and Signal Conditioning Systems.
- ii. Medical Imaging and Image Processing.
- iii. Biomechanics related to Soft and Hard Biological Tissues, Bio-Fluids- fluid/structure interactions, and Application of Finite Element Methods for analysis & Design of Biomechanical Systems.

- iv. Biomaterials e.g. Bio-polymers, Bioactive Coatings & Membranes, Bio-Degradable Polymers, Advanced Material for High Energy Imaging Devices etc. including their applications in Design of Bio-Implants, Drug Delivery Systems including antibiotic assay, Tissue Engineering including hemo-compatibility testing, biocompatibility testing etc. and Drug design.
- v. Analysis and Processing of Biomedical Signals for Diagnosis and Therapy including applications involving Mathematical Modeling, Human Computer Interfacing, Artificial Intelligence, Rehabilitation Engineering, Advanced Materials for High Energy Imaging Devices etc.

B. Major Research Project :

Dr.. A. Chanda and team, R&D and Innovation Centre for Baruipur, TIFAC (GOI)

Dr. Monisha Chakraborty, Studies and Applications of II-VI Compound Based Semiconducting Devices, UGC

Dr. M Bagchi, In Silico Approaches for Design of Chemotherapeutic Agents Using Combinatorial Libraries, CSIR

3. A. Invited Lectures Delivered/Session Chaired :

1. Name of the Teacher: Prof. D. N. Tibarewala
 Type of Participation : I n v i t e d T a l k & S e s s i o n C h a i r
 Name of the Seminar/Conf. : National Seminar on Biomedical Engg. Research & its application (BERA 2011)
 Place: JIS College of Engg., Kalyani
 Duration: 29-30th July'11
2. Name of the Teacher: Dr. A. Chanda
 Type of Participation : I n v i t e d T a l k
 Name of the Seminar/Conf. : Advancements in Bioceramic Materials at Gano Viswabidyalaya, Savar
 Place: Dhaka, Bangladesh
 Duration: Dec, 2011
3. Name of the Teacher: Dr. A. Chanda
 Type of Participation : Chaired a Session
 Name of the Seminar/Conf. : National Seminar on Bio-Fluid Mechanics
 Place: Kolaghat Engg. College, West Bengal.
 Duration: Jan, 2012
4. Name of the Teacher: Dr. Monisha Chakraborty
 Type of Participation : Chaired a session Medical Electronics
 Name of the Seminar/Conf. : International Conference on "Innovative Techno Management Solutions For Social Sector (IEMCON-2012)
 Place: Institute of Engineering and Management Organized by, in collaboration with IEEE held at Science City, Kolkata
 Duration: Jan, 17, 2012

B. Seminar/Workshop/Conference/Symposium Attended:

Dr. M Chakraborty

Participated in the National Seminar on "Dignity in Disability: Women in Focus", Jointly organized by Jadavpur University and National Institute for the Orthopaedically Handicapped, Kolkata, on December, 10, 2012 at TEQIP Building, Jadavpur University

Dr. P. Basak

— Sen S., **Basak P.**, Basu D. **Cloning of lipid transfer protein gene in suitable fashion for monitoring expression in plant** World Congress on Biotechnology, Hyderabad **2012**

Neha Arora, Asif Ali, Nandan kumar Jana, **Piyali Basak**. **Synthesis characterisation of polyether urethane coat for preventing implant infection**. International Conference on Natural Polymers (ICNP **2012**) Kottayam, Mahatma Gandhi University, 26-28 October 2012.

Neha Arora, Asif Ali, Nandan Kumar Jana, **Piyali Basak**. 81st Annual Meeting of Society of Biological Chemists (India) and Symposium on Chemistry and Biology: **Two Weapons Against Diseases**. 8-11 November, **2012**.

Neha Arora, Asif Ali, Nandan kumar Jana, **Piyali Basak**. **Biodegradation of Polyether urethane**. International conference on Recent Advances in Applied Physics and Material Science (RAM 2013) Bikaner, Govt. College of Engineering and Technology, 1-2 February, **2013**.

Prasanta Bera, Asif Ali, Neha Arora, Dewaki Nandan Tibarewala, **Piyali Basak**. **Polyvinyl Hydrogels for Iontophoresis**. International conference on Recent Advances in Applied Physics and Material Science (RAM 2013) Bikaner, Govt. College of Engineering and Technology, 1-2 February, 2013.

Participated in the National Seminar on "Dignity in Disability: Women in Focus", Jointly organized by Jadavpur University and National Institute for the Orthopaedically Handicapped, Kolkata, on December, 10, 2012 at TEQIP Building, Jadavpur University

4. Training Course/ Workshop Organized:

Dr. Monisha Chakraborty and Dr. Piyali Bask three weeks UGC sponsored Refresher Course on "Recent Trends in Biomedical Engineering" at Jadavpur University from 11.06.2012 to 30.06.2012

Dr A. Chanda organized a Two day workshop on Hemodynamics between 13-14 August, 2012.

4. A. Books/Monographs / Book Chapters etc. Published :

- Ghosal S., Darbar R., Neogi B., Das A. & **D.N. Tibarewala**: **"Application of Swarm Intelligence Computation Techniques in PID Controller Tuning – A Review"**: *In Advances in Intelligent and Soft Computing, Springer Series 2012, Volume 132*.

B. Articles Published in Journals:

Prof. D.N. Tibrewala

1. Subhrangsu Aditya, D. N. Tibarewala : "Comparing ANN, LDA, QDA, KNN and SVM algorithms in classifying relaxed and stressful mental state from two-channel prefrontal EEG data" *International Journal of Artificial Intelligence and Soft Computing, Volume 3(2)*, pp. 143-164, 2012.
2. Bag R., Das A., & Tibarewala D.N. : "Signal Correction Technique (SCT) Application for the Control of Blood Sugar level of Living Body", *International Journal of Engineering Science and Technology (IJEST)*, 4(1), pp.179 - 188, 2012.

3. Anilesh Dey, Sayan Mukherjee, Sanjay Kumar Palit, D.K. Bhattacharya and D.N. Tibarewala : "A new kind of dynamical pattern towards distinction of pre-meditative and meditative states through HRV", *Intl. J. Research and Reviews in Comp.Sc.*, 3(3), pp. 1611-1615, 2012.
4. Neogi B., Ghosal S., Mukherjee S., Das A., Tibarewala D.N. : "Simulation techniques with a prosthetic approach towards biologically active artificial internal organs: an overview", *International J. Biomed. Engg. And Tech.*, Vol.9 (3), pp. 213-229, 2012.
5. Sourav Chandra, Koushik Bakshi, Amit Konar, D. N. Tibarewala : "Neural Network Based Prediction of Parkinsonian Hand Tremor using Surface Electromyography", *International Journal of Signal and Imaging Systems*, Vol. 5(4), 246-252, 2012.
6. Khasnobish, Anwasha; Bhattacharyya, Saugat; Singh, Garima; Jati, Arindam; Konar, Amit; Tibarewala, D. N. : Janarthanan, R. "**The Role of Empirical Mode Decomposition on Emotion Classification Using Stimulated EEG Signals**" *Advances in Computing and Information Technology* 178: 55-62 , 2013.
7. Banerjee, Anwasha; Konar, Amit; Janarthana, R.; Tibarewala, D. N. : "**Electro-oculogram Based Classification of Eye Movement Direction**" *Advances in Computing and Information Technology* 178: 151-159, 2013
8. A. Dey, S. K. Palit, D. K. Bhattacharya, D. N. Tibarewala : "Study of the Effect of Central Nervous System Through Long Term Analysis of EEG Signal in Time Domain", *International Journal of Engineering Sciences & Emerging Technologies*, (ISSN: 2231-6604), Vol. 5(1), 59-67, 2013.

International Conferences:

- Rakshit P., Bhattacharyya S., Konar A., Khasnobish A., Tibarewala D. N. & Nagar A. K. : "**Artificial Bee Colony Based Feature Selection for Motor Imagery EEG Data**", *Seventh International Conference on Bio-Inspired Computing: Theories and Application BIC-TA 2012, Singapore*, Dec 14-16, 2012.
- Chatterjee S., Bhattacharyya S., Khasnobish A., Konar A., Tibarewala D. N. & Janarthanan R. : "**Study of inter-session variability of long term memory and complexity of EEG signals**", *Proceedings of Third International Conference on Emerging Applications of Information Technology EAIT 2012, Kolkata*, Nov 30 – Dec 1, pp. 106-109, 2012.
- Singh G., Khasnobish A., Jati A., Bhattacharyya S., Konar A., Tibarewala D. N. & Janarthanan R. : "**Object-shape classification and reconstruction from tactile images using image gradient**", *Proceedings of Third International Conference on Emerging Applications of Information Technology EAIT 2012, Kolkata*, Nov 30 – Dec 1, pp. 93-96, 2012.
- Singh G., Jati A., Khasnobish A., Bhattacharyya S., Konar A., Tibarewala D. N. & Nagar A.K. : "**Object-shape recognition from tactile images using regional descriptors**", *Proceedings of Fourth World Congress on Nature and Biologically Inspired Computing NABIC 2012, Mexico City*, Nov 5-9, pp. 53-58, 2012.
- Banerjee Anwasha, Konar Amit, Janarthanan R., Tibarewala D. N. : "**Identification of Eye Movement from EOG by SVM and KNN techniques**", *Proceedings of International conference on Advancements in Engineering & Management (ICAEM 2012)*, Hyderabad, India,
- Bhattacharyya S., Sengupta A., Chakraborti T., Banerjee D., Khasnobish A. Khasnobish A., Konar A., Tibarewala D. N. & Janarthanan R. : "**EEG controlled remote robotic system from motor imagery classification**", *Proceedings of Third International Conference on Recent Computing, Communication and Networking Technologies ICCCNT 2012, Coimbatore*, Jul 26-28, pp. 1-8, 2012.

- Singh G., Jati A., Khasnobish A., Bhattacharyya S., Konar A., **Tibarewala D. N.** & Janarthanan R. : **"Negative emotion recognition from stimulated EEG signals"**, *Proceedings of Third International Conference on Recent Computing, Communication and Networking Technologies ICCCNT 2012, Coimbatore, Jul 26-28, pp. 1-8, 2012.*
- Roy R., Konar A., **Tibarewala D. N.**, Janarthanan R. : **"EEG driven model predictive position control of an artificial limb using neural net"**, *Proc. 2012 Third International Conference on Computing, Communication and Networking Technologies (ICCCNT'12), 26 - 28 July, 2012.*
- Khasnobish A., Bhattacharyya S., Singh G., Jati A., Konar A., **Tibarewala D. N.**, Janarthanan R. : **"The Role of Empirical Mode Decomposition on Emotion Classification using Stimulated EEG Signals"**, *Proc. 2nd Intl. Conf. Art. Intel. Soft Comp. and Applications (AIAA-2012), July, 2012, Chennai, India, 2012.*
- Khasnobish A., Jati A., Singh G., Bhattacharyya S., Konar A., **Tibarewala D. N.**, Kim E. & Nagar A.K. : **"Object-shape recognition from tactile images using a feed-forward neural network"**, *Proceedings of International Joint Conference on Neural Networks IJCNN 2012, Brisbane, Jun 10-15, pp. 1-8, 2012.*

National Conferences:

- Rinku Roy, Amit Konar, **D. N. Tibarewala** : **"EEG driven Artificial Limb Control using State Feedback PI Controller"**, *2012 IEEE Students' Conference on Electrical, Electronics and Computer Science*, April 2012.
- Subhojit Sarker, Ankur Ganguly and **D. N. Tibarewala** : **"On Non-Linear Analysis of Heart Rate Variability among Healthy Male and Female Population explored through Power Law Slope"**, *National Conference On Electronics, Communication and Signal Processing (NCECS-2012), 19th September, 2012, Siliguri Institute of Technology, Siliguri, 2012.*
- Rajorshi Sarkar, Subhojit Sarker, Ankur Ganguly and **D. N. Tibarewala** : **"Wireless Unicast Transmission and Computer Aided Visualization of a Digitized Analog Signal via a Zig-Bee Personal Area Network"**, *National Conference On Electronics, Communication and Signal Processing (NCECS-2012), 19th September, Siliguri Institute of Technology, Siliguri, 2012.*

Dr. M Chakraborty

Journal Papers

1. "Estimation of 'x' in Cadmium Zinc Telluride Thin Films using X-ray Diffraction Analysis", *International Journal of Engineering Research and Applications*, Vol. 2, Issue 2, Mar-Apr 2012, pp.994-1001.
2. "Detection of Carotid Artery from Pre-Processed Magnetic Resonance Angiogram", *ACEEE Int. J. on Information Technology*, Vol. 02, No. 02, April 2012, pp-35-39.
3. "Comparison of Normal and Ventricular Tachyarrhythmic Electrocardiograms using Scatter Plots", *ACEEE Int. J. on Information Technology*, Vol. 02, No. 02, April 2012, pp-32-34.
4. "Optimum Metal-Semiconductor Contact for Cadmium Sulphide Thin Film", *International Journal of Engineering Research and Applications* Vol. 2, Issue 6, Nov-Dec, 2012, pp.793-799.
5. "Comparative Study on Retinal Blood Vessel Detection", *International Journal of Engineering Research and Applications*, Vol. 2, Issue 6, Nov-Dec, 2012, pp. 1292-1301.
6. "Comparison of Normal, Ventricular Tachyarrhythmic and Atrial Fibrillation Electrocardiograms using Scatter Plots" *International Journal of Electronics Signals and Systems*, Vol-1, Issue-2, 2012, pp-20-24, 2012.

7. "Determination of Signal to Noise Ratio of Electrocardiograms Filtered by Band Pass and Savitzky-Golay Filters", Elsevier Procedia Technology, Vol. 4, 2012, pp-830 – 833.
8. "Application of Color-Based Segmentation Approach to Detect Berlin's Edema", Elsevier Procedia Technology, Vol. 4, 2012, pp-600 – 603.

Conference Papers Published:

1. "A Comparison Based Contrast Enhancement Algorithm Designed For Retinal Fundus Image Pre-processing", Published in the proceedings of CSIR Sponsored National Conference on Modern Trends in Electronic Communication and Signal Processing, Organized by Department of Electronics, BPC College, Piravom, Keralam, August, 3-4, 2012.
2. "Comparison between Edge Detection Algorithms", Published in the proceedings of CSIR Sponsored National Conference on Modern Trends in Electronic Communication and Signal Processing, Organized by Department of Electronics, BPC College, Piravom, Keralam, August, 3-4, 2012.
3. "Comparison of Segmentation Algorithms Based on Thresholding Technique Developed on Two Color Models: RGB and HSV", Published in the proceedings of CSIR Sponsored National Conference on Modern Trends in Electronic Communication and Signal Processing, Organized by Department of Electronics, BPC College, Piravom, Keralam, August, 3-4, 2012.
4. "Optimisation of Filter Order and Frame Length of Savitzky-Golay Filter in Eliminating Noise From Electrocardiograms", Published in the proceedings of CSIR Sponsored National Conference on Modern Trends in Electronic Communication and Signal Processing, Organized by Department of Electronics, BPC College, Piravom, Keralam, August, 3-4, 2012.
5. "Brain Tumor Detection from MR Images: Image Processing, Slicing and PCA Based Reconstruction", published in the Third International Conference on Emerging Applications of Information Technology (EAIT), Organized by CSI Kolkata Chapter, November 29 - December 01, 2012, Kolkata, India, EAIT 2012 proceedings are published by the IEEE and are available in IEEE Xplore.
6. "Development of Edge Detection Algorithms Based on Sobel and Prewitt Methods", published in the International Conference on Speech, Image, Biomedical and Information Processing, 2012, Organized by Chitkara University, Punjab, November, 1-2, 2012.
7. "Noise Elimination from Electrocardiograms: A DSP-Based Approach", published in the International Conference on Speech, Image, Bio medical and Information Processing, 2012, Organized by Chitkara University, Punjab, November, 1-2, 2012.
8. "Image Enhancement Algorithm Developed for Detecting Retinal Vessel Occlusion Diseases: An Alternative Approach over Angiograms", published in International Conference on Speech, Image, Bio medical and Information Processing, 2012, Organized by Chitkara University, November, 1-2, 2012.
9. "Exudates, Retinal and Statistical Features Detection from Diabetic Retinopathy and Normal Fundus Images: An Automated Comparative Approach", published in the proceedings of IEEE National Conference on Computing and Communications Systems NCCCS-2012, Organized by Department of Computer Science Engineering and Department of Information Technology, Dr. B. C. Roy Engineering College, Durgapur, November, 21-22, 2012.
10. "A New Method for Brain Tumor Segmentation Based on Watershed and Edge Detection Algorithms in HSV Colour Model", published in the proceedings of IEEE National Conference on Computing and Communications Systems NCCCS-2012, Organized by Department of Computer

Science Engineering and Department of Information Technology, Dr. B. C. Roy Engineering College, Durgapur, November, 21-22, 2012.

11. "Development of ECG Signal Compression Algorithm Using Discrete-Cosine-Transformation", published in the proceedings of International Conference on Electrical, Electronics and Computer Science, Organized by Interscience Open Access Journal, Bhubaneswar, September, 22, 2012.
12. "Development of a DSP Based Algorithm for Processing of Normal and Diseased Electrocardiograms" published in the proceedings of the International Conference on Recent Advancement in Engineering and Technology, Organized by Interscience Open Access Journal, Kolkata, September, 16, 2012.
13. "LPG-PCA Algorithm and Selective Thresholding based Automated Method: ALL & AML Blast Cells Detection and Counting", published in 2012 International Conference on Communications, Devices and Intelligent Systems (CODIS), December 28 and 29, 2012 in Technical Collaboration with IEEE Communications Society (COMSOC) Kolkata Chapter, 2012.
14. "Application of Walsh Transformation Technique on ECG Signal", published in the proceedings of 2013 Second National Conference on Instrumentation and Control, Organized by Department of Applied Electronics and Instrumentation Engineering, Heritage Institute of Technology, Kolkata, February, 26-27, 2013.
15. "Application of Discrete Fourier Filter and Chan-Vese Segmentation for Biomedical Images", published in the proceedings of 2013 Second National Conference on Instrumentation and Control, Organized by Department of Applied Electronics and Instrumentation Engineering, Heritage Institute of Technology, Kolkata, February, 26-27, 2013.
16. "Colour Image Segmentation Technique", published in the proceedings of 2013 Second National Conference on Instrumentation and Control, Organized by Department of Applied Electronics and Instrumentation Engineering, Heritage Institute of Technology, Kolkata, February, 26-27, 2013.

Dr. P. Basak

1. **Basak, P.**, Adhikari, B. (2012) Effect of the solubility of antibiotics on their release from degradable polyurethane, Materials Science and Engineering C Vol. 32, No.8, pp. 2316-2322.
2. **Basak, P.**, Sen, S. (2012) Degradation Study and its Effect in Release of Ciprofloxacin from Polyetherurethane, Adv. Mat. Res. Vol. 584, pp. 474-478. DOI: 10.4028/www.scientific.net/AMR.584.474.
3. Sagiri, S. S., Behera, B., Pal, *K., **Basak, P.** (2012) Lanolin based organogels as a matrix for topical drug delivery. J. Appl. Polym. Sci. Vol. 128, No. 6, pp. 3831–3839. doi: 10.1002/app.38590.
4. **Basak, P.**, Adhikari, B. (2012) Biodegradation of Polyester Urethane in Simulated Body Fluid. Polym. Plast. Tech. Eng., Vol. 52, No. 4, pp. 358-367 (DOI: 10.1080/03602559.2012.751409).
5. Bera, P., Ali, A., Arora, N., Tibarewala, D.N., **Basak, P.** (2013) Polyvinyl alcohol Hydrogels for Iontophoresis. AIP Conf. Proc., Vol. 1536, pp. 1223-1224 (2013); doi: 10.1063/1.4810681
6. Arora, N., Ali, A., Jana, N.K., **Basak, P.** (2013) Biodegradation of Polyether urethane. AIP Conf. Proc., Vol. 1536, pp. 1225-1226; doi: 10.1063/1.4810682

6. Major Achievements :

Prof. D. N. Tibarewala

- Member of the **PhD Selection Committee** (under new UGC Rules) of **School of Bioscience and Engineering**, Jadavpur University.
- Member of committees for Curriculum and Syllabus of **Master of Biomedical Engineering** on several occasions.
- Member of the Academic Committees of **School of Energy Studies & School of Bioscience and Engineering**, Jadavpur University
- Nominated external Expert Member on **Board of Studies for Biomedical Engineering** of **Banaras Hindu University, Varanasi, UP**.
- Nominated external Expert Member on **Board of Studies for Biomedical Engineering** of **Biju Patnaik University of Technology**, Rourkela, Orissa.
- Nominated external Expert Member on **Board of Studies for Biomedical Engineering** of **North East Hill University, Shillong, Meghalaya**.
- Nominated external Expert Member on **Board of Studies for Biomedical Engineering** of **Birla Institute of Technology (DU)-Mesra, Ranchi, Bihar**.
- Have served as **Member Expert (NBA – AICTE)** for Biomedical Engineering.
- Expert Member, JRF/SRF Selection Committees of **National Institute for the Orthopaedically Handicapped**, Kolkata.
- Expert Member, Curriculum Development Committee for Biomedical Engineering, **National Institute for Technical Teachers' Training and Research**, Kolkata.
- Served as Expert Member in **Faculty Selection Committees** in various colleges under **West Bengal University of Technology**.
- Served as Expert Member in **Faculty Selection Committees** at **North East Hill University, Shillong, Meghalaya**

COGNITIVE SCIENCE

Phone : + 91-33-2414-6720
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 Director. : Dr. Lopamudra Choudhury

1. **Area of Research Activities: (Broad Areas)**

Logic of diagrams, Perception, Visual illusion, Cognitive Science, Applied Ethics

Amit Konar, Professor, Department of Electronics and Telecommunications

Artificial Intelligence; Brain-Computer Interfacing; Rehabilitative Robotics; Perceptual Computing

Amita Chatterjee, Emeritus Professor, School of Cognitive Science

Logic (Indian and Western), Philosophy of Mind and Cognitive Science

Mihir Kr. Chakraborty, Visiting Professor, School of Cognitive Science

Logic of diagrams, Belief and Rationality, Cultural differences in mathematics

Maushumi Guha, Assistant Professor of Philosophy, Jadavpur University

Philosophy of Mind, Developmental cognition, Philosophy and Neuroscience

Amrita Basu, Visiting EEG Expert, School of Cognitive

Cognitive Neuroscience of Language, Auditory Perception, Electrical Neuroimaging, Perception of Continuity and Bistability

Smita Sirker, Assistant Professor of Philosophy, Jadavpur University

Moral Reasoning; Psychology of Human Reasoning; Perception and Reasoning, Philosophy of Mind, Belief and Rationality

2. Major Research Project:

(Departmental/Individual, Name of the Project/Funding Agency)

Lopamudra Choudhury:

1. Principal Investigator: DIT funded National Centre for Perception Engineering (NCPE) project on Perception and Cognition (Phase II)
2. UGC funded UPE II Excellence Program in Cognitive Science (Cognitive Psychology and Informatics for Neuro-Prosthesis and Rehabilitative Applications.)

Amit Konar:

1. **Perception Engineering** - Investigator of a national project jointly undertaken by IIT Delhi, IIT Bombay, IIIT Hyderabad and Jadavpur University, and funded by Department of Information Technology (DIT). This project is aimed at developing shape perception from tactile images.
2. **UGC-UPE-II Excellence Program in Cognitive Science** - Coordinator of this UGC sponsored project. This project is aimed at developing EEG driven position control of an artificial limb.

Amita Chatterjee:

1. Principal Investigator of the subproject 'Perception of Emotion and its Cognitive Modeling', of the DIT funded main project on Perception Engineering granted to the Centre for Cognitive Science as one of the nodal centres of Perception Engineering.
2. UGC funded UPE II Excellence Program in Cognitive Science

Mihir Kr. Chakraborty:

1. DIT funded NPPE project II.

Maushumi Guha

1. UGC funded UPE II Excellence Program in Cognitive Science

Amrita Basu:

1. DIT funded NPPE project II.
2. UGC funded UPE II Excellence Program in Cognitive Science

Smita Sirker:

1. Investigator of the subproject 'Perception and Reasoning' of the DIT funded main project on Perception Engineering granted to the Centre for Cognitive Science as one of the Nodal Centre of Perception Engineering.

3. Invited Lectures Delivered/ Sessions Chaired:

(Name of the Teacher, Type of Participants, Name of the Seminar/Conference etc., Place, Duration)

Dr. Lopamudra Choudhury

1. *Mental Image in Science and the Human Cognitive System*, under the DST Programme in Multidisciplinary Perspectives on Science, Technology and Society, IAS, Bangalore, Sept 26, 2012.
2. Delivered keynote address in the *Interdisciplinary Conference on Human Machine Interaction* organised by Thinkdom at Ramakrishna Mission Ashrama Narendrapur on 30th June 2013.
3. Delivered two lectures on Methods of Reasoning in the Refresher Course organised by the ASC North Bengal University on Research Methodology during 22-23 August 2013.

Professor Amita Chatterjee

1. Acted as a Resource Person in ICPR Fellows' Meet in August 2012.
2. Presented the keynote address and another paper in the Third School on the Mahâbhârata organized by IAS, Shimla in August 2012.
3. Delivered lectures in 2 refresher courses organized by the Department of Education and the Department of Philosophy, university of Calcutta in December 2012.
4. Chaired the lectures at the Department of Philosophy, Jadavpur University, by Professor Flanagan and Professor Dan Zahabi, ICPR International Fellows in December 2012 and January 2013 respectively.
5. Delivered 2 ICPR National Fellow Lectures at the University of Tripura.
6. Delivered 1 ICPR National Fellow Lecture at Ravenshaw University, Cuttack, Orissa.
7. Delivered 1 ICPR National Fellow Lecture at Sri Sankaracharya University, Kalady, Kerala.
8. Delivered 2 Lectures as Visiting Fellow at the Department of Philosophy, University of North Bengal.
9. Chaired 1 ICPR National Fellow Lecture delivered by Professor V. Pahi at Jadavpur University, Kolkata.

Professor Mihir Kr. Chakraborty

1. Tutorial Lecture on The Theory of Graded Consequence, 4th World Congress and School on UNIVERSAL LOGIC, March 29—April 7, 2013, Rio de Janeiro, Brazil.
2. Paraconsistency and Complementation Operator, (joint work with Soma Dutta), UNILOG, March 29—April 7, 2013, Rio de Janeiro.
3. Proof Theory for the Theory of Graded Consequence, (joint work with Soma Dutta), UNILOG, March 29—April 7, 2013, Rio de Janeiro.
4. Lectured at the invitation of LoLITA (the Group of Logic, Language, Information Theory and Application) University of Rio Grande do Norte, Natal RN, Brazil, April 8—14, 2013.
5. Delivered lecture at the School on Logic, organised by ICPR (Indian Council For Philosophical Research) Lucknow, March 11—22, 2013.
6. Invited talk at the National Seminar on *Fuzzy Sets Rough Sets and Soft Computing*, Tripura University, Agartala, 2013

4. Seminar/Workshop Conference /Symposium Attended:

(Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration)

Dr. Lopamudra Choudhury

1. Jointly with Mihir Kr Chakraborty, "The square of opposition and visual cognition", presented in the Third World Congress on Square of Opposition- Beirut, Lebanon, 26- 30th June 2012.

2. Jointly with Mihir Kr Chakraborty, "Representation of Negation in Diagrams", presented in the third International Workshop on Euler Diagrams, at the University of Kent, Canterbury, UK on 2nd of July, 2012.
3. Presented a paper on "Computability Cognition and Turing" in the conference on Beyond the Obvious: Conference to Commemorate the Birth Centenary of Alan Mathison Turing, on 18th of December, 2012, Center for Experiments in Social and Behavioural Sciences, School of Cognitive Science, School of Mobile Computing and Communications, and School of Media, Communication and Culture, Jadavpur University.

Professor Amit Konar

1. Anisha Halder, Aruna Chakraborty, **Amit Konar** and Atulya K. Nagar, "Computing with Words Model for Emotion Recognition by Facial Expression Analysis Using Interval Type-2 Fuzzy Sets," in *Proc. of International Conference on Fuzzy Systems (FUZZ-IEEE)*, Hyderabad, India, 2013.
2. Pratyusha Rakshit, Archana Chowdhury, **Amit Konar** and Atulya K Nagar, " Multi-objective Evolutionary Approach of Ligand Design for Protein-Ligand Docking Problem", in *Proc. of IEEE Congress on Evolutionary Computation (CEC)*, Cancun, Mexico, June, 2013.
3. Pratyusha Rakshit, **Amit Konar**, Swagatam Das, and Atulya K. Nagar, "ABC-TDQL: An Adaptive Memetic Algorithm", in *Proc. of IEEE Symposium Series on Computational Intelligence*, Singapore, 2013.
4. Saugat Bhattacharyya, Pratyusha Rakshit, **Amit Konar**, D. N. Tibarewala, Swagatam Das, and Atulya K. Nagar, "Differential Evolution with Temporal Difference Q-Learning Based Feature Selection for Motor Imagery EEG Data", in *Proc. of IEEE Symposium Series on Computational Intelligence*, Singapore, 2013.
5. Anuradha Saha, **Amit Konar**, Pratyusha Rakshit, and Atulya K. Nagar, "Olfaction Recognition by EEG Analysis using Differential Evolution Induced Hopfield Neural Net", in *Proc. of IEEE 13th International Joint Conference on Neural Networks(IJCNN)*, Dallas, TX, 2013.
6. Abhishek Ghosh Roy, Pratyusha Rakshit, **Amit Konar**, Samar Bhattacharya, Eunjin Kim, and Atulya K. Nagar, "Adaptive Firefly Algorithm for Nonholonomic Motion Planning of Car-like System", in *Proc. of IEEE Congress on Evolutionary Computation*, Hyderabad, India, 2013.
7. Pratyusha Rakshit, **Amit Konar**, and Atulya K. Nagar, "DEMO-TDQL: An Adaptive Multi-objective Optimization Algorithm", in *Proc. of IEEE Congress on Evolutionary Computation*, Hyderabad, India, 2013.
8. Pratyusha Rakshit, Archana Chowdhury, **Amit Konar**, and Atulya K. Nagar, "Multi-objective Evolutionary Approach of Ligand Design for Protein-Ligand Docking Problem", in *Proc. of IEEE Congress on Evolutionary Computation*, Hyderabad, India, 2013.
9. Pratyusha Rakshit, **Aruna Chakraborty**, **Amit Konar**, and Atulya K. Nagar, "Secondary Membership Evaluation in Generalized Type-2 Fuzzy Sets by Evolutionary Optimization Algorithm", in *Proc. of IEEE International Conference on Fuzzy Systems*, Hyderabad, India, 2013 (accepted, to be published).
10. R. Janarthanan, **Aruna Chakraborty**, **Amit Konar** and Atulya K. Nagar, "Adhoc Reasoning in Chained Fuzzy Systems Realized with Diens-Rescher Implication", in *Proc. of IEEE International Conference on Fuzzy Systems*, Hyderabad, India, 2013.
11. Sriparna Saha, Anupam Banerjee, Sumana Basu, **Amit Konar**, Atulya K. Nagar, "Fuzzy Image Matching for Posture Recognition in Ballet Dance", in *Proc. of International Conference on Fuzzy Systems (FUZZ)*, IEEE, Hyderabad, India, 2013.

12. Sriparna Saha, Shreya Ghosh, **Amit Konar**, Atulya K. Nagar, "Gesture Recognition From Indian Classical Dance Using Kinect Sensor", in *Proc. of 5th International Conference on Computational Intelligence, Communication Systems and Networks (CICSyN)*, Madrid, Spain, IEEE, 2013.
13. Sriparna Saha, Shreya Ghosh, **Amit Konar**, Ramadoss Janarthanan, "Identification of Odissi Dance Video Using Kinect Sensor", in *Proc. of 2nd International Symposium on Pattern Recognition and Image Processing (PRIM)*, IEEE, 2013.
14. Sriparna Saha, Lidia Ghosh, **Amit Konar**, Ramadoss Janarthanan, "Fuzzy L Membership Function Based Hand Gesture Recognition for Bharatanatyam Dance", in *Proc. of International Conference on Computational Intelligence and Communication Networks (CICN)*, Mathura, India, IEEE, 2013.
15. Sriparna Saha, Shreya Ghosh, **Amit Konar**, Ramadoss Janarthanan, "A Study On Leg Posture Recognition From Indian Classical Dance Using Kinect Sensor", in *Proc. of International Conference on Human Computer Interactions (ICHCI)*, IEEE, 2013.
16. Pavel Bhowmik, Pratyusha Rakshit, **Amit Konar**, Eunjin Kim, Atulya K. Nagar: DE-TDQL: An Adaptive Memetic Algorithm. in *Proc. of Congress in Evolutionary Computation (CEC)*, Brisbane Australia, June 10 – 15, 2012.
17. Papia Das, Pratyusha Rakshit, **Amit Konar**, Mita Nasipuri, and Ramadoss Janarthanan, "A Recurrent Fuzzy Neural Model of A Gene Regulatory Network For Knowledge Extraction Using Invasive Weed and Artificial Bee Colony Optimization Algorithm", in *Proc. of IEEE International Conference on Recent Advances in Information Technology*, Kolkata, March, 2012, pp. 385-391.
18. Pavel Bhowmik, Pratyusha Rakshit, **Amit Konar**, Eunjin Kim, and Atulya K. Nagar, "DE-TDQL: An Adaptive Memetic Algorithm", in *Proc. of IEEE Congress on Evolutionary Computation*, Brisbane, Australia, June, 2012, pp. 1-8.
19. Arindam Jati, Garima Singh, Pratyusha Rakshit, **Amit Konar**, Eunjin Kim, and Atulya K. Nagar, "A Hybridization of Improved Harmony Search and Bacterial Foraging for Multi-Robot Motion Planning", in *Proc. of IEEE Congress on Evolutionary Computation(CEC)*, Brisbane, Australia, June, 2012, pp. 1-8.
20. Anisha Halder, Pratyusha Rakshit, Sumantra Chakraborty, Amit Konar, Eunjin Kim, and Atulya K. Nagar, "Reducing Uncertainty in Interval Type-2 Fuzzy Sets for Qualitative Improvement in Emotion Recognition from Facial Expressions", in *Proc. of IEEE International Conference on Fuzzy Systems*, Brisbane, Australia, June, 2012, pp. 1-8.
21. Papia Das, Pratyusha Rakshit, **Amit Konar**, Mita Nasipuri, and Atulya K. Nagar, "Fuzzy Relational System for Identification of Gene Regulatory Network", in *Proc. of International Conference on Bioinformatics and Computational Biology*, Las Vegas, USA, July, 2012.
22. Pratyusha Rakshit, Pratyusha Das, **Amit Konar**, and Atulya K. Nagar, "Call Admission Control Using Artificial Bee Colony Optimization", in *Proc. of International Conference on Genetic and Evolutionary Methods*, Las Vegas, USA, July, 2012.
23. Pratyusha Rakshit, Dhrubojyoti Banerjee, Amit Konar, and Ramadoss Janarthanan, "An Adaptive Memetic Algorithm for Multi-Robot Path-Planning", in *Proc. of Swarm, Evolutionary and Memetic Computing Conference*, December, 2012, Bhubaneswar, pp. 248-258.
24. Pratyusha Rakshit, Saugat Bhattacharyya, **Amit Konar**, Anwesha Khasnobish, D. N. Tibarewala, and Ramadoss Janarthanan, "Artificial Bee Colony Based Feature Selection for Motor Imagery EEG Data", in *Proc. of Seventh International Conference on Bio-Inspired Computing: Theories and Applications, Advances in Intelligent Systems and Computing*, Volume 202, December, 2012, pp. 127-138.

25. Pratyusha Rakshit, Papia Das, Archana Chowdhury, **Amit Konar**, Mita Nasipuri, and Atulya K. Nagar, "Evolutionary Approach of Ligand Design for Protein- Ligand Docking Problem Using Artificial Bee Colony Optimization", in *Proc. of International Conference on Bioinformatics and Computational Biology*, USA, July, 2012.
26. Pratyusha Rakshit, Pratyusha Das, Archana Chowdhury, **Amit Konar**, and Atulya K. Nagar, "Evolutionary Approach for Designing Protein-Protein Interaction Network Using Artificial Bee Colony Optimization", in *Proc. of IEEE International Conference on Computing, Communication and Networking Technologies*, Coimbatore, India, July, 2012, pp. 1-8.
27. Pratyusha Rakshit, Archana Chowdhury, **Amit Konar**, and Atulya K. Nagar, "Evaluating the Designing Perspective of Protein-Protein Interaction Network using Evolutionary Algorithm", in *Proc. of Nature and Biologically Inspired Computing*, November, 2012, Mexico city, Mexico, pp. 130-137.
28. Dhrubojyoti Banerjee, Pratyusha Rakshit, **Amit Konar**, and Ramadoss Janarthanan, "Path-Planning of Mobile Agent using Q-Learning and Real-Time Communication in an Unfavourable Situation", in *Proc. of World Congress on Information and Communication Technologies*, October, 2012, pp. 89-94.
29. Khasnobish A., Jati A., Singh G., Bhattacharyya S., **Konar A.**, Kim E., Tibarewala D.N. and Nagar A.K. "Object-Shape Recognition from Tactile Images Using a Feed-forward Neural Network", in *Proc. of International Joint Conference on Neural Networks (IJCNN)*, Brisbane, Australia, June 10 – 15, 2012.
30. Arindam Jati, Garima Singh, Pratyusha Rakshit, **Amit Konar**, Eunjin Kim, Atulya K. Nagar: A Hybridisation of Improved Harmony Search and Bacterial Foraging for Multi-robot Motion Planning. in *Proc. of IEEE Congress on Evolutionary Computation (CEC)*, Brisbane, Australia, June 10 – 15, 2012 (Accepted).
31. Anisha Halder, Pratyusha Rakshit, Sumantra Chakraborty, **Amit Konar**, Eunjin Kim, Atulya K. Nagar: Reducing Uncertainty in Interval Type-2 Fuzzy Sets for Qualitative Improvement in Emotion Recognition from Facial Expressions. in *Proc. of FUZZ-IEEE*, Brisbane, Australia, June 10 – 15, 2012.
32. **Amit Konar**, **Aruna Chakraborty**, Anisha Halder, Rajshree Mandal, and R. Janarthanan, "Interval Type-2 Fuzzy Model for Emotion Recognition from Facial Expression," in *Proc. of PerMin-2012*, pp. 114-121, CDAC, Kolkata.
33. Chatterjee S., Bhattacharyya S., Khasnobish A., **Konar A.**, Tibarewala D.N. & Janarthanan R. , "Study of inter-session variability of long term memory and complexity of EEG signals", in *Proceedings of Third International Conference on Emerging Applications of Information Technology EAIT, Kolkata*, Nov 5-9, pp. 106-109, 2012.
34. Singh G., Khasnobish A., Jati A., Bhattacharyya S., **Konar A.**, Tibarewala D.N. & Janarthanan R. , "Object-shape classification and reconstruction from tactile images using image gradient", in *Proceedings of Third International Conference on Emerging Applications of Information Technology EAIT 2012*, Kolkata, pp. 93-96, Nov 30 – Dec 1, 2012.
35. Singh G., Jati A., Khasnobish A., Bhattacharyya S., **Konar A.**, Tibarewala D.N. & Nagar A.K. , "Object-shape recognition from tactile images using regional descriptors", in *Proceedings of Fourth World Congress on Nature and Biologically Inspired Computing NABIC*, Mexico City, Nov 5-9, 2012, pp. 53-58, 2012.
36. Bhattacharyya S., Sengupta A., Chakraborti T., Banerjee D., Khasnobish A. Khasnobish A., **Konar A.**, Tibarewala D.N. & Janarthanan R. , "EEG controlled remote robotic system from motor

- imagery classification", in *Proceedings of Third International Conference on Recent Computing, Communication and Networking Technologies ICCCNT*, Coimbatore, Jul 26-28, 2012, pp. 1-8, 2012.
37. Singh G., Jati A., Khasnobish A., Bhattacharyya S., **Konar A.**, Tibarewala D.N. &Janarathanan R., "Negative emotion recognition from stimulated EEG signals", in *Proceedings of Third International Conference on Recent Computing, Communication and Networking Technologies ICCCNT*, Coimbatore, Jul 26-28, 2012, pp. 1-8, 2012.
 38. Roy R., Konar A., Tiabarewala D.N., Janarathanan R., "EEG driven model predictive position control of an artificial limb using neural net", in *Proc. of Third International Conference on Computing, Communication and Networking Technologies (ICCCNT'12)*, 26 Jul - 28 Jul 2012
 39. Khasnobish A., Bhattacharyya S., Singh G., Jati A., **Konar A.**, Tibarewala D.N.,Janarathanan R., "**The Role of Empirical Mode Decomposition on Emotion Classification using Stimulated EEG Signals**", in *Proc. of 2nd Intl. Conf. Art. Intel. Soft Comp. and Applications (AIAA-2012)*, July, 2012, Chennai, India.
 40. Rinku Roy, **Amit Konar**, D. N. Tibarewala, "EEG driven Artificial Limb Control using State Feedback PI Controller," in *Proc. of IEEE Students' Conference on Electrical, Electronics and Computer Science*, April 2012.
 41. Banerjee Anwasha, AniruddhTibrewal, **Konar Amit**, Janarathanan R., "Gaze Detection from stimulated Electro-oculogram", in *Proceedings of International Conference on Recent Trends in Computer Science and Engineering (ICRTCSE 2012)*, ISBN 978-81-9089-807-2, pp 40, Chennai, India, May 3-4, 2012.
 42. Banerjee Anwasha, Chatterjee Somsirsa, **Konar Amit**, Tibrewala D.N., "Performance analysis of various algorithms to classify Electro-oculogram for control application", in *Proceedings of IEEE Students' conference on Electrical, Electronics and Computer Science (SCEES 2012)*, pp 294-298, Bhopal, India, March, 2012.
 43. Banerjee Anwasha, **Konar Amit**, Janarathanan R., Tibarewala D.N.," Identification of Eye Movement from EOG by SVM and KNN techniques", in *Proceedings of International conference on Advancements in Engineering & Management (ICAEM 2012)*, Hyderabad, India, February 28-29, 2012.
 44. Banerjee, A.; Chakraborty, S.; Das, P.; Datta, S.; **Konar, A.**; Tibarewala, D.N.; Janarathanan, R., "Single channel electrooculogram(EOG) based interface for mobility aid," in *Proc. of 4th International Conference on Proc. of Intelligent Human Computer Interaction (IHCI)*, vol., no., pp.1,6, 27-29 Dec. 2012.
 45. Banerjee, Anwasha; Datta, Shounak; Das, Pratyusha; **Konar, Amit**; Tibarewala, D.N.; Janarathanan, R., "Electrooculogram Based Online Control Signal Generation for Wheelchair," in *Proc. of International Symposium on Electronic System Design (ISED)*, vol., no., pp.251-255, 19-22 Dec. 2012.
 46. Banerjee Anwasha, **Konar Amit**, Tibarewala D.N., Janarathanan R., "Detecting Eye Movement Direction from stimulated Electro-oculogram by Intelligent Algorithms", in *Proc. of IEEE International Conference on Computing, Communication And Networking Technology(ICCCNT 2012)*, Tamilnadu, India, July 26 – 28, 2012.
 47. Banerjee Anwasha, Das Pratyusha, DattaShounak, **Konar Amit**, Janarathanan R., Tibarewala D.N., "Real Time Electro-oculogram driven Rehabilitation aid", in *Proceedings of International Conference on Advances in Computing, Advances in Intelligent Systems and Computing, Springer*, ISSN: 1867-5662, Volume 174, 2012, pp 435-440.

48. Banerjee Anwasha, **Konar Amit**, Janarthanan R., Tibarewala D.N., "Electro-oculogram based Classification of Eye Movement Direction", in *Proceedings of the Second International Conference on Advances in Computing and Information Technology (ACITY), Advances in Intelligent Systems and Computing, Springer, ISSN 2194-5357, Volume 178, 2013, pp 151-159.*
49. Kingshuk Chakravarty, Diptesh Das, Aniruddha Sinha and **Amit Konar**, "Feature selection by Differential Evolution Algorithm-A case study in personnel identification," in *Proc. of Congress in Evolutionary Computation (CEC), 2013, Cancun, Mexico.*
50. Debatri Chatterjee, Arijit Sinharay and **Amit Konar**, "EEG-Based Fuzzy Cognitive Load Classification during Logical Analysis of Program Segments", in *Proc. of IEEE International Conference on Fuzzy Systems, 2013, Hyderabad, India.*
51. Diptesh Das, Aniruddha Sinha, Kingshuk Chakravarty and **Amit Konar**, "Stabilization of Cluster Centers over Fuzziness Control Parameter in Component-wise Fuzzy c-Means Clustering", in *Proc. of IEEE International Conference on Fuzzy Systems, 2013, Hyderabad, India.*

Professor Amita Chatterjee

1. Presented a paper on the International Conference on Self and Others organized by the School of Philosophy, JNU in January 2012.
2. Presented two papers in two national seminars at Calcutta Logic Circle and at the School of Experimental Social Sciences, Jadavpur University respectively on Alan Turing and his contributions to Cognitive Science in October 2012 and December 2012.
3. Presented a paper on Swami Vivekananda's Understanding of Harmony among mankind in the seminar organized by Jadavpur University to commemorate the 150th Birth Anniversary of Swami Vivekananda on 28-29 January 2012.
4. Presented a paper on 'A framework for understanding the relation between music and emotion' in the National Seminar organized by C.V. Raman Centre for Physics and Music and SRA, Kolkata.
5. Presented a paper on 'A Few Spectres in the Ontological Spectrum' in a seminar on Metaphysics organized to commemorate 100 years of the Department of Philosophy, University of Calcutta.

Dr. Smita Sirker

1. 'Some Aspects of Mathematical Pluralism', (presented by co-author M. K. Chakraborty), at International Conference on *Cultures of Mathematics and Logic*, at the Institute of Logic and Cognition of Sun Yat-sen University, Guangzhou, China, 9-12 November 2012.
2. Attended a 10-day Workshop on *Navya Nyaya*, organized by Indian Council of Philosophical Research, New Delhi in association with Ramakrishna Mission Institute of Culture, Golpark, Kolkata from 20 June to 30 June 2012.

5. Seminar/Workshop Conference/ Symposium Organized:

(Name of the Teacher, Name of the paper presented, if any, Name of the Seminar, place, Duration)

Professor Amit Konar

1. Acted as a Program Chair in IEEE Computational Intelligence Society Flagship Conference Fuzz-IEEE, 2013, held in Hyderabad in July 8-11, Hyderabad.

6. Orientation Courses/Refresher Courses Attended :

(Name of the Teacher, Title of the Course/ Place, Duration)

Dr. Smita Sirker

1. Attended a UGC Sponsored Refresher Course on Metaphysics, organised by the Department of Philosophy, University of Calcutta in association with Academic Staff College, University of Calcutta, from 29 November – 19 December 2012.

7. **Books/Monographs etc. Published:**

(Name of the teacher, Name of the Book, Name of the Publisher)

Professor Amit Konar

1. **Amit Konar**, and **Aruna Chakraborty**, *Emotion Recognition–A Pattern Analysis Approach*, Wiley-Blackwell, 2013 (to appear).
2. **Amit Konar**, and Sumantra Chakraborty, *Abduction: Reasoning with Type-1 and Type-2 Fuzzy Sets*, Springer, Heidelberg, 2013 (to appear).
3. **Amit Konar** and Jaya Sil, *Rough and Fuzzy Pattern Recognition*, Springer, 2013 (to appear).
4. **Konar A.**, Tibarewala D., Bhattacharyya S., and Khasnobish A., *Non-Invasive Human-Computer Interface for Rehabilitative Applications*, Bio-systems and Bio-robotics Series, Springer, Heidelberg, 2013(to appear).
5. **Konar, A** and Ghosh, S, *Call Admission Control in a Mobile Cellular Network: A Computational Intelligence Approach*, Springer, Heidelberg, 2012.

Professor Amita Chatterjee

1. Reviewed a manuscript for Indian Institute of Advanced study, Shimla.
2. Completed editing the draft manuscript of the ICPR-sponsored seminar on 'Marxism and Beyond' and submitted it to the publisher.

8. **Articles Published in Journals:**

(Name of the teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume)

Dr. Lopamudra Choudhury

1. *On representing Open Universe*, jointly with Mihir Chakraborty *Studies in logic*, Vol 5, No 1 (2012), pp 96-112.
2. *An Effort to Understand the Concept Formation in the Visually challenged*, N. Bhattacharya & L. Choudhury, *IJDL*, Vol. 42, No. 2, June, pp. 137-149, 2013.

Professor Amit Konar

1. Pratyusha Rakshit, **Amit Konar**, Pavel Bhowmik, Indrani Chakraborty, Swagatam Das, Lakhmi C. Jain, and Atulya K. Nagar, "Realization of An Adaptive Memetic Algorithm using Differential Evolution and Q-Learning: A Case Study in Multi-Robot Path-Planning", *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, July, 2013, vol. 43, no. 4, pp. 814-831.
2. Pratyusha Rakshit, **Amit Konar**, Swagatam Das, Lakhmi C. Jain, and Atulya K. Nagar, "Uncertainty Management in Differential Evolution Induced Multi-objective Optimization in Presence of Measurement Noise", *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2013 (to appear).
3. Anisha Halder, Rajshree Mandal, and **Amit Konar**, "Fuzzy Based Hierarchical Algorithm for Template Matching in Emotional Facial Images," *Journal of Intelligent and Fuzzy Systems*, IOS Press, vol. 24, no. 2, pp. 201- 214, 2013 .
4. Archana Chowdhury, **Amit Konar**, Pratyusha Rakshit, and Atulya K. Nagar, "A Multi-Objective Evolutionary Approach to Evaluate the Designing Perspective of Protein-Protein Interaction Network", *Journal of Network and Innovative Computing (JNIC)*, vol. 1, July 2013.

5. Anisha Halder, **Amit Konar**, Rajshree Mandal, Pavel Bhowmik, **Aruna Chakraborty** and Nikhil R. Pal, "General and Interval Type-2 Fuzzy Face-Space Approach to Emotion Recognition," *IEEE Trans. on Systems, Man and Cybernetics: Systems*, 2013.
6. **Amit Konar**, Sapam Jeetu Singh, Indrani Chakraborty and Lakhmi C. Jain, "A Deterministic Q-learning for Path-Planning of a Mobile Robot," *IEEE Trans. on Systems, Man and Cybernetics: Systems*, 2013 (to appear).
7. Anisha Halder, Rajshree Mandal and **Amit Konar**, "A hierarchical algorithm for fuzzy template matching in emotional facial images," *Journal of Intelligent and Fuzzy Systems*, IOS Press, 2013.
8. **Aruna Chakraborty**, **Amit Konar**, Nikhil R. Pal and Lakhmi C. Jain, "Extending the Contraposition Property of Propositional Logic for Fuzzy Abduction," *IEEE Trans. on Fuzzy Systems*, 2013 (to appear).
9. Anisha Halder, **ArunaChakraborty** and **Amit Konar**, and Srishti Shaw, "A New Approach to Emotion Recognition from the Lip Contour of a Subject," *Int. Journal of Artificial Intelligence and Tools*, 2012.
10. Sumantra Chakraborty, **Amit Konar** and Nikhil R. Pal, "A Fast Algorithm to Compute Precise Type-Centroids for Real-Time Control Applications," *IEEE Trans. on Cybernetics*, 2013 (to appear).
11. Tathagata Chakraborty, Abhronil Sengupta, **Amit Konar** and Nikhil R. Pal, "Robust 3D Face Recognition Using an Expression Generic Representative Face Model," *IEEE Trans. on Systems, Man and Cybernetics: Systems*, 2013 (to appear).
12. Saugat Bhattacharyya, **Amit Konar**, and D. N. Tiberwala, "Decoding of Motor Imagery and Error Related Potential for EEG-Driven Position Control of a Robotic Arm", *IEEE Transactions on Cybernetics*, submitted in July, 2013.
13. Anuradha Saha and **Amit Konar**, "Olfactory Perception by EEG-Analysis Using Differential Evolution Induced Recurrent Neural Network", *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, submitted in July, 2013.
14. Anwesha Banerjee, Shounak Datta, **Amit Konar** and D. N. Tibrewala, "Development strategy of eye movement controlled rehabilitation aid using electrooculogram," *Int. J. of Scientific and Engineering Research*, vol. 3, issue 6, June 2012.
15. Anisha Halder, **Amit Konar**, **Aruna Chakraborty** and Rajshree Mandal, "Emotion Recognition from Facial Expressions Using Type-2 Fuzzy Sets", In *Emotion Recognition-A Pattern Analysis Approach*, Wiley-Blackwell, 2013 (to appear).
16. **Amit Konar**, **Aruna Chakraborty** and Anisha Halder, "A Review of Pattern Recognition Techniques", In *Emotion Recognition-A Pattern Analysis Approach*, Wiley-Blackwell, 2012 (to appear).
17. Anisha Halder, Srishti Shaw, Kanika Orea, Pavel Bhowmik, **Aruna Chakraborty**, and **Amit Konar**, "A Computational Intelligence Approach to Emotion Recognition from the Lip Profile of a Subject," In *Modern Image Processing Algorithms Employing Computational Intelligence Techniques*, Springer Amitava Chatterjee and Patrick Siarry (Eds.), 2012 (to appear).
18. Rajshree Mandal, AnishaHalder, **Amit Konar** and Atulya K. Nagar "A Fuzzy Condition Sensitive Hierarchical Algorithm for Approximate Template Matching in Dynamic Image Sequence", In *Modern Image Processing Algorithms Employing Computational Intelligence Techniques*, Springer Amitava Chatterjee and Patrick Siarry (Eds.), 2012 (to appear).
19. **A. Konar**, **A. Chakraborty**, P. Bhowmick, Souvick Das and A. Halder, "Emotion Recognition from facial expression, voice and EEG signals," In *Cross-Disciplinary Applications of Artificial*

Intelligence and Pattern Recognition: Advancing Technologies, V. K. Mago and N. Bhatia (Eds.), IGI Global, 2012.

20. K. Bakshi, S. Chandra, **A. Konar** and D. N. Tiberawala, "Hand Tremor Prediction and Classification Using Electromyogram Signals to Control Neuro-Motor Instability," In *Cross-Disciplinary Applications of Artificial Intelligence and Pattern Recognition: Advancing Technologies*, V. K. Mago and N. Bhatia (Eds.), IGI Global, 2012.
21. S. Sikdar, A. K. Pal, V. Talukdar and **A. Konar**, "Biclustering of Gene Microarray Data Using Multi-objective Evolutionary Optimization Algorithms," In *Recent Trends in Computational Biology and Computational Statistics Applied in Biotechnology and Bioinformatics*, Ajit K. Roy (Ed.), New India Publishing Agency, New Delhi, 2012.
22. **A. Chakraborty** and **A. Konar**, "Stability and Chaos in Cognitive Reasoning," In *Reasoning in Intelligent Systems, J. Nakamatshu (Ed.)*, World Scientific, 2012.

Professor Amita Chatterjee

1. "Naturalism in Classical Indian Philosophy", The Stanford Encyclopedia of Philosophy (Spring 2012 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/spr2012/entries/naturalism-india/>
2. 'Affective Information Processing and Representations', co-authored with Dana Sugu, M.K. Kundu et al. (Eds.): PerMIn 2012, LNCS 7143, pp. 42–49 (2012)

Professor Mihir Kr. Chakraborty

1. Many –Valued Logics, Fuzzy Logics and Graded Consequence: A Comparative Appraisal, (joint work with Soma Dutta and Sanjukta Basu), in *Logic and its Applications*, Kamal Lodaya (Ed.), LNCS 7750, 5th Indian Conference ICLA, Chennai, India, January 2013, Springer, 2013, pp 197–209.
2. Mihir K. Chakraborty (with Mohua Banerjee), Rough Sets : Some Foundational Issues, in *Fundamenta Informaticae XX*, pp 1-13, 2013.
3. Mihir K. Chakraborty (with Smita Sirker), Nest of the Mystery Bird, *Symmetry: Culture and Science*, Vol 24, 2013.
4. Mihir K. Chakraborty, Membership function based Rough Sets, *International Journal of Approximate Reasoning* (accepted for publication)

9. Collaborative Programmes:

Professor Amit Konar

- i. Prof. Lakhmi C. Jain, Univ. Of South Australia, Adelaide.
- ii. Prof. Anca Ralescu, Univ. Of Cincinnati, USA.
- iii. Prof. Atulya K. Nagar, Liverpool Hope University, UK.
- iv. Prof. Nikhil R. Pal, Indian Statistical Institute, Kolkata.

Professor Amita Chatterjee

- i. Collaboration with the international project of Intellectual Humility and Cultural Diversity in Philosophy

10. Major Achievements:

Professor Amit Konar

- i. Appointed as an Associate Editor of *IEEE Trans. on Fuzzy Systems* for the period 2012-2013, *IEEE Trans. on Systems, Man and Cybernetics(Part-A)* for the period 2012 and *Neurocomputing*, Elsevier for the period 2012-2013.
- ii. Total citation of **Amit Konar** in 2012-13: 1002 (by Google Scholar citation)
- iii. Patent: One Indian patent entitled "A novel approach to measure cognitive load of subjects by EEG analysis," by Arijit Sinharay, Debatri Chatterjee and **Amit Konar** has been filed.
- iv. Served as the program co-chair for the prestigious IEEE Computational Intelligence Flagship Conference: *FUZZ-IEEE*, 2013.

Professor Amita Chatterjee

- i. Appointed as the ICPR National Fellow from 2012 – 2014.

Professor Mihir Kr. Chakraborty

- i. Invited Council Member of Indian Council of Philosophical Research, New Delhi, 2012 - 13

Dr. Smita Sirker

- i. Associate Editor, *Jadavpur Journal of Philosophy*, Bi-annual journal of Department of Philosophy, Jadavpur University

CULTURAL TEXTS & RECORDS

Phone	: + 91-33-2414-6681
Int.	: 2457-2943
Director.	: Prof. Amlan Das Gupta
Jt. Director	: Prof. Subha Chakraborty Dasgupta

I. PROJECTS

A: DIGITISATION OF CULTURAL MATERIAL: MAJOR PROJECT UNDER AUSPICES OF UPE - II

i. Digitisation of Cultural Materials

Two major collections are being processed in the School. This has been taken up in 2011.

a. Suchitra Mitra Papers

Suchitra Mitra Collection comprises handwritten documents and typescripts, prints and publications, books, and records. Objects documented till date are mostly hand-written documents and typescript, prints and publications, sketchbooks, and miscellaneous items. Approximately 3700n images processed.

b. Shankho Chaudhuri Papers

As of 31 January 2013, the Sankho Chaudhuri collection stands at:

- 645 catalogue entries (digital copies not made, so details of digital copies not entered)
- 578 catalogue entries (complete with details of digital copies)
- 1589 digital images for catalogue entries 1-578.

ii. Early Bengali books:

The focus for this phase of the project is on books published in Bengal between 1868 (a year after the Press and Registration of Books Act) and 1914 (the start of World War I). Bibliographical record and title page transcript of relevant books have been collected from 16 libraries, including

the National Library, Asiatic Society, Bangiya Sahitya Parishad, Serampore College, Uttarpara Jaykrishna Library and British Library. The data is now being digitised.

iii. Electronic Editing

School of Cultural Texts and Records coordinated and cooperated with the developer-programmers Arunashish Acharya (Lecturer, School of Education Technology, JU) and Neel Basu from SCTR's end, towards development of a new collation software.

The gross collation program 'Chhatrobhango' now includes a fine collation tool: 'Tafat'. Together, this pack of programs is called "Prabhed". The program now has a stable 32 bit executable version.

Also an interlinked three-tier easy-to-use result display has been created to show the gross and fine collation results step-by-step.

Currently bug-fixing is in progress, and a 64 bit version of the program is being prepared.

iii. Physical Culture of Bengal

This new project has identified places, people and organisations across Bengal that are keeping alive traditional forms of physical activity, such as Indian-style wrestling, the martial dance form of Raibeshe and lathi-khela or stick-wielding games. Field work has been conducted and practitioners of these forms have been interviewed.

iv. Travel Literature Database

1. Library visited
 - 1.1 Bangiyo Sahitya Parishat
 - 1.2 Rammohan Library
 - 1.3 Baghbazar Reading Library
 - 1.4 West Bengal State Library (ongoing)
2. Catalogue entries
 - 2.1 Magazines: 49
 - 2.2 Books: 61
 - 2.3 Images: 2769
3. Catalogue survey
 - 3.1. Accounts of Travel in Bengali: Books: 483
 - 3.2. Accounts of Travel in Bengali : Magazines: 31

v. Digital Music Archiving

Approximately 350 hours of audio has been added to the Digital Archive of Music. Collections accessed are:

1. Indrani Majumdar Collection of Early Recorded Songs from Bangla Theatre - Second Lot
2. Arup Sengupta Collection
3. James Stevenson Collection of North Indian classical Music
4. Saptarshi Hazra Collection of North Indian Classical music
5. Mihir Purakayastha Collection of modern Bangla Songs from Broadcast recordings

B: DIGITIZATION OF SOUTH ASIAN CULTURAL RESOURCES (IN COLLABORATION WITH BRITISH LIBRARY, LONDON) FUNDED BY SIR RATAN TATA TRUST, MUMBAI

Work on the project started immediately after receipt of the draft award letter in September 2012. Professor Sukanta Chaudhuri visited the British Library in October and discussed possible collaborations. The first instalment of the grant was received in mid November.

1. The first project taken up was the digitization of a rare collection of street books from Shri Bireshwar Bandyopadhyay. Approximately 200 books (2200 images) have been digitized.
2. A web resource of bibliographies and printing history has been commissioned at granthsouthasia.wordpress.com
3. A pilot digitization project has been undertaken at Maulana Abul Kalam Azad Library and Museum.

Other Projects:

4. Indrani Majumdar Collection (audio), Kolkata
5. The Tribal and Research and Training Centre Collection, Chaibasa, Jharkhand
6. Estate of Buddhadeva Bose. poet and scholar, Kolkata
7. Sujit Raha collection (audio) Guwahati, Assam
8. The Jewish Community in Kolkata: A Web Resource

C: BICHITRA: COMPLETE ELECTRONIC VARIORUM EDITION OF RABINDRANATH TAGORE'S WORKS IN BENGALI AND ENGLISH

The School has launched a major website hosting a complete online variorum edition of all the works of Rabindranath Tagore in English and Bengali, including all significant variants and revisions in both manuscript and print. The project is funded by the Ministry of Culture, Government of India under its programme for Rabindranath's 150th birth anniversary. Rabindra-Bhavana, Visva-Bharati, is a major project partner, and is making available all the relevant material in its collections.

The project has resulted in a website (bichitra.jdvu.ac.in) with the following components:

1. Image files of all textually significant versions of all Tagore's works in manuscript and print
2. Plain text files of each of these versions
3. A complete collation of all the versions using the special software 'Pathantar' developed by the School
4. An overview of the comparative structure of the various versions of a work.

Special mention must be made of the software 'Pathantar', the only collation software to date in any alphabet other than the Roman. It can compare variant versions of a large number of texts, using any selected version as the base. The full collation appears in a four-window screen display designed for the purpose, with the different versions colour-coded and variants highlighted.

II. COURSES

A: PG Diploma course in Digital Humanities and Cultural Informatics - Intake 25 (currently 20)

The School has introduced a 2 semester PG Diploma course in digital humanities and cultural informatics with financial support from the UGC under its Innovative Programmes Scheme. This is the first course of its kind in the country. The course will serve:

- (a) to orient students in the ways in which the study of the humanities today has been transformed by the inevitable presence of digital technology, to the extent that the very understanding of the method and aims of the “humanities” has to come to terms with new technological and economic compulsions. This critical and reflective component of digital humanities lies at the heart of the proposed course. This would provide theoretical insights into the most important changes taking place in the very definition and scope of the humanities as digital humanities brings the arts and technology into integration.
- (b) to familiarize students with the basic rationale, objectives, possibilities and processes of digital record-keeping and data processing; and engaging with new forms of textuality.
- (c) to develop practical skills in electronic archiving, processing, editing and on-screen presentation of cultural material on a variety of platforms and for diverse communities of users;
- (d) to train students to apply principles of textual, editorial and communication theory to technical situations, so that they can produce high quality work in a digital environment.

Besides formal instruction through lectures, practical classes, workshops and demonstrations, the course will comprise a series of readings, discussions, and projects that will familiarize the students with some of the areas and disciplines shaping the field.

The first semester will provide a theoretical grounding in the field of digital humanities and cultural informatics. Students will go on in semester 2 to study in detail the problems and prospects of the application of digital technology to book history and publishing, archives, literature, music, images and film through case studies, discussions and demonstrations.

The course is being proposed by the School of Cultural Texts and Records in collaboration with the core departments of the Faculty of Arts, Jadavpur University and other interdisciplinary schools and centres of the university.

B: Certificate Course in Editing and Publishing – Intake - 30

The School conducted its regular 4-month Postgraduate Certificate Course in Editing and Publishing, to train students in the basic skills required to edit texts for the publishing industry and the media, and to see the work through the entire production process. The course comprised actual text editing, production design, printing-house practice and relevant computer skills, as well as marketing, entrepreneurship and intellectual property issues. It includes visits to printing and publishing units.

Many eminent Indian publishers, printers and media professionals act as guest faculty for this course. It has proved popular with employers, as borne out by intensive campus recruitment, subsequent job offers and internships.

C: PhD in Textual Studies (Broad Area) Intake – 3

III. FACULTY

Number of Faculty Members: No permanent faculty: all teachers from contributing Departments

SUKANTA CHAUDHURI

(Please also see under “Department of English”)

PROJECTS

Principal Investigator, Bichitra Tagore Online Variorium Project.

PUBLICATIONS

1. Editor: *Renaissance English Pastoral Poetry: An Anthology and Companion*, 2 vols., Manchester Univ Press, forthcoming
2. Presentation on Bichitra, Centre for Material Texts, University of Cambridge, June 2012
3. 'The Elusive Classic' — paper at conference on 'The Ancient and the Modern', Ettore Paratore Foundation & La Sapienza University, Rome, September, 2012
4. 'Text and Identity' — lecture at School of Advanced Studies in the Humanities, University of Bologna, September 2012

SUPRIYA CHAUDHURI

(Please see under "Department of English")

SWAPAN CHAKRAVORTY

(Please see under "Department of English")

AMLAN DAS GUPTA

(Please also see under "Department of English")

A. Invited Lectures Delivered/ Sessions Chaired:

Lecture on Theory and Practice: Ustad Alladiya Khan, IGNC, New Delhi, 2013

Lecture on Amir Khusrau, Jashn e Khusrau, Aga Khan Memorial Trust, New Delhi, 2013

B. Seminar/ Workshop/ Conference/ Symposium Attended:

1. "North Indian Classical music in the Long 1940s" , Three-day National Workshop, The Nation Unbound: India in the 1940s, Indian Institute of Advanced Study, Shimla, 10-12 May 2012.
2. Presentation on Music Archiving, Archives Workshop on 26/27 June 2012 at Saptak Archives Ahmedabad
3. Paper "The Digital Object of Desire" with Subrata Sinha IASA International Conference, New Delhi, November, 2012.
4. Paper, "Notes from the Dustheap", Digital Humanities Seminar, Presidency University, 2012
5. Paper on Digital Archives and Digital Humanities, Documentation Seminar, Dept of Film Studies, Jadavpur University, 2013

C. Seminar/ Workshop/ Conference/ Symposium Organized:

Owning and Using: Circuits of Knowledge in North Indian Classical Music.

Two-Day Research Symposium organized by the School of Cultural Texts and Records, Jadavpur University, Kolkata in collaboration with Macquarie University, Sydney 15-16 January, 2013

4 A. Books/ Monographs Published:

The First Book of Virgil's Aeneid Translated into the Bengalee Language by Henry Sargent (1810); Facsimile of text with a triglot rendition including a new English translation from the Latin and notes, by Abhijit Gupta, Amlan Das Gupta and Lav Kanoi. (forthcoming: Jadavpur UP, Kolkata, 2013)

4. B. Articles Published:

Print Publications:

1. "Women Singers and the Beginnings of the Recording Industry in India" in Women Contesting Culture, eds. P Chakravarti and K Panjabi, Kolkata: Stree/Samya, 2012
2. Digital Publications:
3. Augustine on Memory: A Note on Confessions 10.8-37. 2012
4. North Indian Classical Music in the 'Long' 1940s, 2012

5. The Digital Object of Desire (with Subrata Sinha), 2013
all in <http://humanitiesunderground.wordpress.com>

5. Collaborative Programmes:

See under "Projects"

MOINAK BISWAS

(Please also see under "Department of Film Studies")

1. Projects:

Coordinator, 'Future of Celluloid'. Funded by the Navajbai Ratan Tata Trust, Mumbai, and Jadavpur University, housed at the Media Lab of the Department.

2. A. Invited Lectures Delivered/Session Chaired:

1. Lecture titled 'From Space to Location: The City in our Cinema', School of Culture & Creative Expressions, Dr. B R Ambedkar University, Delhi, December, 2012.
2. Lecture titled 'Political theory and film theory', at Refresher Course on 'Political and Social Theory', Department of Political Science, University of Calcutta, March, 2013
3. Lectures on 'Cinema of Satyajit Ray', 'Realism and Indian Cinema' and 'Film and New Media', at Film Appreciation Course organized by the Film and Television Institute, Pune and National Film Archive, Pune, June, 2013.
4. Lecture on 'Contemporary Indian Cinema', at Film Appreciation Course organized by Chalachchitra Satabarsha Bhavan, Kolkata, July, 2013.

F. Seminar/Workshop/Conference/Symposium Attended

1. Title of Paper 'On the Bengal Situation'

Name of Seminar: 'Social Thought in Indian Languages' Organized by Centre for the Study of Developing Societies, Delhi February, 2013. 2 days.

G. Seminar/Workshop/Conference/Symposium Organized

1. Name of workshop organized: 'Digital filmmaking', Vivekananda College, Thakurpukur, Kolkata. June, 2012. 1 day.
2. Name of workshop organized: 'Digital filmmaking'. Naihati Rishi Bankim College, Naihati. December, 2012. 5 days.

H. Orientation Courses/ Refresher Courses

1. Title of Lecture: 'Political theory and film theory' Refresher Course on 'Political and Social Theory', Department of Political Science, University of Calcutta March, 2013

4. A. Books/ Monographs etc. Published

1. Essay title 'Drishyantar parba', in (book) Bamraj, tattwa o charchay, edited by Prabrit Dasmahapatra and Rajesh Bhattacharya, Charchapad, Kolkata, January, 2013.
2. 'Las Novelas y otros Horizontes' (Spanish translation of original English essay 'The Novel and other Horizons'), in (book) Las Edades de Apu, Estudios sobre la Trilogia de Satyajit Ray, edited by Luis Miranda, University of Las Palmas, Spain, March, 2013.

C. Articles Published in Journals

1. Title of article: 'Nisarga o natyalap', in (Journal) Chitravas, 'Komal Gandhar o Ritwik' Special Issue, Vol, No, January, 2013.

Edited Journals:

1. Bio-Scope, South Asian Screen Studies, Vol. 3. No. 2, July, 2012 and Vol 4. No. 1. January, 2013

2. Journal of the Moving Image, No. 11, 'Teaching Film Studies in India', December, 2012.

ABHIJIT GUPTA

(Please also see under "Department of English")

1. Publications

(a) Books

1. Eds. With Aparna Chaudhuri and Pradipta Sarkar, *The Crazy Tales of Pagla Dashu & Co.* (New Delhi: Hachette, 2012)

(b) Articles

1. 'Book History in India', *Histoire et civilization du livre, revue internationale*, 2012
2. 'Popular printing and intellectual property in colonial Bengal', *Thesis Eleven*, 113:1, December 2012
3. 'Cultures of the Body in Colonial Bengal: The Career of Gobor Guha', *The International Journal of the History of Sport*, 29:12, 1687-1700
4. 'Abar gachtalay, ba anand mashir bichitra jiban', *Charcha* 1 (July 2012)
5. 'Popular Culture and Postcolonial Literary Production in India', in Ato Quayson., ed, *The Cambridge History of Postcolonial Literature*, Vol. 2 (Cambridge: Cambridge University Press, 2012)

(c) Translations

1. 'The Wrestler', in *The Crazy Tales of Pagla Dashu & Co.* (New Delhi: Hachette, 2012)

(d) Articles/Reviews in Newspapers/Journals

1. 'Virgil-er Aeneid: prothom bangla onubad', *Desh*, 2 February 2013
2. 'Fatwa', *Rabibarowari, Ei shomoy*, 19 November 2012
3. 'Sunil Gangopadhyay, the rebel who wove magic in Bengali', *Hindustan Times*, 23 October 2012
4. 'Swanirbhar noy baangla comics', *Anandabazar Patrika*, 8 September 2012
5. 'The notorious word "cut-off"', *Millennium Post*, 6 July 2012
6. 'The Lady Dances in the Dark', *Outlook*, July 2, 2012, review of *Rhythms of Darkness* by Anjana Basu
7. 'In Stead was Found the New Journalist', *Millennium Post*, 15 May 2012

2. Projects

1. P.I.: 'Location Register of Bengali Books 1868-1947', UPE-II Programme, UGC
2. P.I.: 'Physical Cultures of Bengal', UPE-II Programme, UGC

3. Conferences (National and International)

1. 'Mudlarks, Toshers and Sewermen: Getting Down and Dirty with Dickens and Dodger', at 'The Dickens World: Post-Imperial Readings', Jadavpur University, 18-20 December 2012
2. 'Early Bengali Books: Issues and Challenges', at 'Digital Humanities in India', Presidency University, 24-25 Sept. 2012

3. Special Lectures

1. 'Print and missionary networks in early 19th-century South and South-East Asia', CRASSH, Cambridge University, 4 February 2013

2. 'Missionaries as Bibliographers: James Long and John Murdoch', Leicester University, 23 January 2013
3. 'Utopian Longings: the case of SF in India', 4 December 2012, Department of English, Jadavpur University
4. 'Planetary Spaces: the case of Mars', 4 December 2012, Department of English Jadavpur University
5. 'Chinese Printing in Serampore: a preliminary survey', Serampore College, 24 August 2012

SAMANTAK DAS

(Please see under Department of Comparative Literature)

RAJESWAR SINHA

(Please see under Department of Bengali)

EDUCATION TECHNOLOGY

Phone : +91-33-2414-6129

Int.: 2457-2442

Director : Prof. Samar Bhattacharya

Jt. Director : Dr. Matangini Chattopadhyay

1. A. Courses Offered:

Name of the Course:	Duration of Course:	No. of Students
Enrolled:		
Master in Multimedia Development,	(4-semester) 2 Years	25
M. Tech IT (Courseware Engineering),	(4-semester) 2 Years	18
Post Graduate Diploma in Multimedia and Web Technology (Distance mode)	(4- semester) 1 Year	12
Post Graduate Diploma in Risk Management and Financial Engineering,	(2- semester) 1 Year	Nil
M.A. in Environment and Development (Distance mode)	(4- semester) 2 Years	15

1. B. Number of Faculty Members:

Sanctioned Posts	Professor (02+01) (XIth Plan))	Associate Professor (02)	Assistant Professor (01)	Assistant Professor (on contract) (04)	Total (10)
Existing Number Of Teachers	Professor (0)	Associate Professor (01)	Assistant Professor (01)	Assistant Professor (on contract) (03)	Total (05)
	Emeritus Professor (02)				

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

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

- a) **Departmental / Individual:** Dr Matangini Chattopadhyay as Principal Investigator, Professor Samar Bhattacharya and Dr Ranjan Parekh as Co-Principal Investigators.

Name of the Project: *Design and Development of Web Based Teaching Material for Undergraduate and Postgraduate Laboratory.*

Funding Agency: University with Potential for Excellence - Phase II, September 2012 – March 2014, the total volume of the project is Rs. 50.00 Lakhs.

- b) **Departmental / Individual:** Matangini Chattopadhyay as Principal Investigator, Saswati Mukherjee as Co- Principal Investigator.

Name of the Project: *Studies on Intrusion Detection in Wireless Network.*

Funding Agency: University with Potential for Excellence - Phase II, 2012 – March 2014, the total volume of the project is 5.00 Lakhs.

- c) **Departmental / Individual:** Prof. Subrata Pal – Co-Principal Investigator

Name of the Project: Development of Tissue Expander and Micro vascular Device for Human System,

Project completed.

Funding Agency: Department of Science and Technology, Govt. of India, 2010-2013, the total volume of the project is Rs 45.00 Lakhs.

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

- Dr. Ranjan Parekh acted as visiting faculty and external examiner for the course MS Science Communications, National Council of Science Museums (NCSM) for session 2012-2013.
- Professor Samar Bhattacharya delivered lecture on "Technology for e-Learning of music", in a three-day invitational workshop entitled "Frontiers of Research on Speech and Music", organized by ITC Sangeet Research Academy, Kolkata and Sir C. V. Raman Centre for Physics and Music, Jadavpur University, March 05-07, 2013.

B. Seminar/Workshop /Conference/Symposium Attended (Name of the teacher, Name of the Paper presented, if any, Name of the Seminar, Place, Duration) :

- Saswati Mukherjee presented the paper entitled "**Detection of Selective Forwarding Attack in Wireless Ad hoc Networks using Binary Search**" in the Third International Conference of Emerging Applications of Information Technology, ISI Kolkata, November 30 - December 01, 2012.

4. A. Books/Monographs etc. Published (Name of the teacher, Name of the Book, Name of the Publisher):

- Ranjan Parekh, "Principles of Multimedia", 2nd edition, McGraw Hill, September 2012 [ISBN: 1-25-900650-6]
- Professor Subrata Pal, "Design of Artificial Human Joints & Organs", Springer Verlag, Funded by AICTE

B. Articles Published in Journals/Conferences (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume):

- R. Parekh, "Using Texture Analysis for Medical Diagnosis", IEEE Multimedia, vol. 19, no. 2, pp. 28-37, April 2012 [ISSN: 1070-986X]
- A. Das, R. Parekh, "Iris Recognition using a Scalar based Template in Eigen-space", International Journal of Computer Science and Telecommunications (IJCT), vol. 3, no. 5, pp. 74-49, May 2012 [ISSN: 2047-3338]
- A. Kumar, R. Parekh, "Palmpoint Recognition in Eigen-space", International Journal on Computer Science and Engineering (IJCSE), vol. 4, no. 5, pp. 788-794, May 2012 [ISSN: 0975-3397]
- B. P. Das, R. Parekh, "Recognition of Isolated Words using Features based on LPC, MFCC, ZCR and STE, with Neural Network Classifiers", International Journal of Modern Engineering Research (IJMER), vol. 2, no. 3, pp. 854-858, May 2012 [ISSN: 2249-6645]
- A. Das, R. Parekh, "Improved Iris Recognition in 2D Eigen Space", International Journal of Computer Applications" (IJCA), vol. 52, no. 19, pp. 1-6, August 2012 [ISSN: 0975-8887]
- J. Chaki, R. Parekh, "Plant Leaf Recognition using Gabor Filter", International Journal of Computer Applications" (IJCA), vol. 56, no. 10, pp. 26-29, October 2012 [ISSN: 0975-8887]

- S. Karar, R. Parekh, "Palm Print Recognition using Zernike Moments", International Journal of Computer Applications" (IJCA), vol. 55, no. 16, pp. 15-19, October 2012 [ISSN: 0975-8887]
- K. Datta, N. Patra, Observer Based Road-tire Friction Estimation for slip control of Braking System, paper presented in International Conference on Modeling, Optimizing and Computing ICMOC-12, held at NI University, Tamilnadu April 10-11, 2012. Paper published in Journal, Proceeding Engineering, Vol. 38, pp. 1566-74, 2012, Elsevier.
- K. Datta, N. Patra, Sliding mode Controller for Wheel-slip control of Anti-lock Braking system, paper presented and published in Proceeding IEEE International Conference on Advanced Communication, Control and Computing Technologies, pp. 422-428, held in August 23-25, 2012 at Tamilnadu. Paper will also be available Through IEEE xplore.
- Prमित Mazumdar and Arunasish Acharya, "Dynamic, Localised and Personalised Marketing Model", International Journal of Computer Science and Telecommunications, Volume 3, Issue 6, June 2012.
- Susmita Ghosh Chattopadhyay and Arunasish Acharya, "Mark up Based Content Adaptation Technique", International Journal of Computer Science and Telecommunications, Volume 3, Issue 6, June 2012.
- Tarkeshwar Prasad, Arunasish Acharya, "An Architecture of Cloud Computing based Online Examination System", International Journal Of Computer Science & Technology (Ijcst)-Vol III Issue II, Ver 3, April To June, 2012 (ISSN 2229-4333/09768491).
- Tarkeshwar Prasad, Arunasish Acharya, "Prospects of Cloud Computing Over other Related Technologies", International Journal Of Computer Science & Technology (IJCST)-Vol III Issue II, Ver 3, April To June, 2012 (ISSN 2229-4333/09768491).
- Saswati Mukherjee, Matangini Chattopadhyay, Ayan Lahiri, Samiran Chattopadhyay, "An efficient binary playfair algorithm using a 4x4 playfair key matrix", 11th International Conference on Computer Information Systems and Industrial Management (CISIM 2012), September 26-28, 2012, LNCS, vol. 7564, pp 314-325.
- Saswati Mukherjee, Matangini Chattopadhyay, Samiran Chattopadhyay, Prince Bose, Agnishwar Bakshi, "**Detection of Selective Forwarding Attack in Wireless Ad hoc Networks using Binary Search**", Third International Conference of Emerging Applications of Information Technology (EAIT 2012), November 30-December 01, 2012, pp 382-386.
- Sourav Roy, Amitava Choudhury, Joydeep Mukherjee "An Approach towards Detection of Indian Number Plate from Vehicle "International Journal of Innovative Technology and Exploring Engineering (IJITEE), Volume-2, Issue-4, March 2013. [ISSN: 2278-3075].
- Amitava Chowdhury, Joydeep Mukherjee, "An Approach towards recognition of size and shape independent Bangla Handwritten numerals" International Journal of Science and Research(IJSR), Vol.2, Issue 1, January, 2013. [ISSN: 2319-7064]
- Annesha Malakar, Joydeep Mukherjee "Image Clustering using Color Moments, Histogram, Edge and K-means Clustering" International Journal of Science and Research(IJSR), Volume 2 Issue 2 February 2013 Edition. [ISSN: 2319-7064]
- Kalyan Roy, Joydeep Mukherjee "Image Similarity Measure using Color Histogram, Color Coherence Vector, and Sobel Method" International Journal of Science and Research (IJSR), Volume 2 Issue 2 February 2013 Edition. [ISSN: 2319-7064]

5. Collaborative Programmes:

National:

- Strategy Academy Centre for Advanced Studies (TSACAS), Kolkata School of Education Technology, 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:

- 04 students have registered for PhD program (including joint guide for 03) under Dr. Matangini Chattopadhyay.
- Dr. Matangini Chattopadhyay guided Masters Degree theses of 6 students, completed in June 2012.
- Dr. Ranjan Parekh guided Masters Degree theses of 5 students, completed in July, 2012.
- Ms. Jyotismita Chaki joined as JRF at SET, funded by TEQIP Phase-II under the supervision of Dr. Ranjan Parekh, during August 2012.
- Mr. Arunasish Acharya guided Masters degree theses of 7 students, completed in June 2012.
- Mr. Joydeep Mukherjee guided Masters Degree thesis of 7 students, completed in June and Nov. 2012.
- Ms Saswati Mukherjee guided Masters degree theses of 6 students, completed in June 2012.
- Soudip Ghosh has submitted his Ph. D theses titled "Biomechanical studies on various aspects of human strength in health and injury" under Prof. S. Pal in 2012.
- Shubhomoy Chatterjee has registered for Ph D program under Prof. S. Pal at Bengal Engineering and Science University.
- Prof. Samar Bhattacharya is acting as a member of Working Group of E-learning by Ministry of Communications and Information Technology, Department of Information Technology, Government of India.
- Prof. Samar Bhattacharya is a member of Administrative committee Department of Film Studies, Jadavpur University.
- Prof. Samar Bhattacharya has been designated as a member of the Academic Advisory Committee for "Bichitra", a Jadavpur University project for a complete electronic variorum edition of Tagore's works in Bengali and English.

ENERGY STUDIES

Phone : + 91-33-2414-6823
Director. : Prof. Biswajit Ghosh

1. A. Course Offered:

- i. M.Tech in Energy Science & Technology,
- ii. PG Diploma in Energy Management & Audit

B. Number of Faculty Members: 5 (one post is unfilled)

2. **A. Area of Research Activities:** a. Advanced Materials and Solar Photovoltaic, b. Solar Thermal Energy, c. Bio-Energy and d. Energy Conservation & Management.

B. Major Research Projects:

Departmental: PURSE Program and TEQIP Program

Individual:

- i. UK India Educational Research Initiatives (UKIERI) Thematic Partnership Program entitled "Development of Electroless deposited contacts for Radiation Sensors and Solar Cells", partnership with University of Surrey, UK and Newcastle University, UK, Coordinator: Prof. B. Ghosh
- ii. UK India Educational Research Initiatives (UKIERI) Trilateral Research in Partnership (TRIP) Program entitled: "Development of Graphene based Sensing Systems", partnership with University of California, Los Angeles, USA and Newcastle University, UK. Coordinator: Prof. B. Ghosh

3. **A. Invited Lecture Delivered and Session Chaired;**

Invited Lecture Delivered by Prof. B. Ghosh

- i. "Lighting the Tomorrow", Key note Address at the National Seminar at KIIT University, Bhubaneswar, Odisha.
- ii. "On the aspects of Science and Religion", MCKV Vidyapith, Liluah, Howrah,.
- iii. "Towards Innovative Teaching and Learning Methodologies", Faculty Development Program, KIIT University, Bhubaneswar, Odisha,
- iv. "Impact of Solar Power on Economy, Ecology & Empowerment", KIIT University, Bhubaneswar, Odisha,
- v. "Indian Initiatives towards Clean and Safe Energy Technologies", Future Institute of Engineering & Management, Kolkata
- vi. "Initiatives towards Sustainability", BESU Alumni Association, Salt Lake, Kolkata
- vii. "Light – Light Integration: The Coming Age", Lighting India International, Chennai.
- viii. "Possibilities on International Cooperation in developing Clean and Safe Energy", Annecy-Chambery, University of Savoie, France.
- ix. "Performance of a 10MWp grid-integrated PV Plant in salty warm and humid ambience in India", 28th EUPVSEC, Paris, France.

Session Chaired by Prof. B. Ghosh:

27th EUPVSEC, Sept. 24-28, 2012, Farnkfurt, Germany.

3. **B. Seminar / Workshop / Conference Attended:**

Prof. B. Ghosh, 27th EUPVSEC, at Frankfurt, Germany and 28th EUPVSEC at Paris, France:

Research Paper Presented:

- a. Design and development of a 10 MWp Grid Connected PV power plant in salt and marshy land of India.
- a. Rooftop Building Integrated Photovoltaic Systems: An option for delivering total Management.
- b. Development of nano-structured 'Cu_{2-x}S' film for photovoltaic applications.

3. **C. Seminar / Workshop / Conference Organized:**

- i. Solar Power: From Technology to Energy Solution", May 2-5, 2012.

4. A. Publications:

Books / Monograph Published: "Fundamentals of Solar Electricity", by Prof. B. Ghosh, Published by: Techno University & Netaji Subash College of Engineering & Technology.

Research Papers: Six in various Journals and International conference Proceedings.

Patents:

1. Patentee :Prof. Biswajit Ghosh on behalf of Jadavpur University
Patent No.: 242622
Patent Title: A Process for Gasification of Bio-Mass.
2. Patentee :Prof. Biswajit Ghosh on behalf of Jadavpur University
Patent No.: 254535
Patent Title: A Method of Fabricating Electrical Contact.
3. Patentee :Prof. Biswajit Ghosh on behalf of Jadavpur University
Patent No.: 254397
Patent Title: A Production of Defect Induced Electrical Contact with Anti-Diffusion Barrier and a Method Thereof.
4. Patentee : -do- & ONGC
Patent No.: 254840
Patent Title: A Method for deposition of Anti-Corrosive Coating on Metallic and Non-Metallic Substrate Surface.
5. Patentee :Prof. Biswajit Ghosh on behalf of Jadavpur University
Patent No.: Pending
Patent Title: A Method for purification of Synthetic Gas and extraction of Bio-Diesel feedstock.
6. Patentee :Prof. Biswajit Ghosh on behalf of Jadavpur University
Patent No.: Pending
Patent Title: A Method for production of green filler for plastic items.
7. Patentee :Prof. Biswajit Ghosh on behalf of Jadavpur University
Patent No.: Pending
Patent Title: A Method for production of Stable Super Black Coating
8. Patentee :Prof. Biswajit Ghosh on behalf of Jadavpur University
Patent No.: Pending
Patent Title: A Method for production of Electrical Contact to the Solid Oxide Fuel Cells.

5. Collaborative Research Work:

- i. University of Surrey, Guildford, UK
- ii. Newcastle University, Newcastle, UK
- iii. University of California, Los Angeles, USA
- iv. University of Cambridge, Cambridge, UK
- v. Center for Solar Energy Research, OpTIC Glyndwr University, UK.
- vi. Polytechnique Annecy – Chambéry, University of Savoie, France.
- vii. National University of Malaysia, Kuala Lumpur, Malaysia.

6. Outreach Activities:

- i. Integrated Rural Energy planning in Island Villages of Sunderban, Dt. 24 Paragonas.
- ii. Plugging into New Life: A Energy Sec

ENVIRONMENTAL STUDIES

Phone : + 91-33-2414-6110/6147
Int. : 2457-2543
Director. : Dr. Joydeep Mukherjee

1. **A. Courses Offered:** M. Tech. (Environmental Biotechnology) 4 Semester, Intake 10

B. Number of Faculty Members: One

2. **A. Areas of Research Activities:** Environmental Biotechnology

4. B. Articles Published in Journals

Application of rural slaughterhouse waste as an organic fertilizer for pot cultivation of solanaceous vegetables in India: Roy M, Karmakar S, Debsarcar A, Sen PK, **Mukherjee J**: International Journal Of Recycling of Organic Waste in Agriculture 2013, **2**:6 (doi:10.1186/2251-7715-2-6) Enhanced biotransformation of fluoranthene by intertidally-derived *Cunnighamella elegans* through biofilm-based and niche-mimic cultivations: Sayani Mitra, Arnab Pramanik, Srijoni Banerjee, Saubhik Haldar, Ratan Gachhui, **Joydeep Mukherjee**: Applied and Environmental Microbiology (in press), 2013

6. **Major Achievements:** Dr. Joydeep Mukherjee joined as UGC Associate Professor under Faculty Recharge Programme

ILLUMINATION SCIENCE, ENGINEERING & DESIGN

Phone : + 91-33-2414-6616
Int. : 2457- 2541
Director. : Prof. Saswati Mazumdar
Jt. Director : Dr. Suchandra Bardhan

1. A. COURSES OFFERED:

- 6 – Semester (Evening) **M.Tech course on Illumination Technology & Design** has been started from 2011 – 2012. Total intake 18 students per semester. Course fee @ Rs. 24,000/- per student and Rs.30,000/- per sponsored students per semester.

- Six months Certificate course on “Advanced Wireman Course – Wiring, Lighting & Electrical safety” was organized from January to June, 2013. Course fee was @Rs. 2000/- and total number participants were 57.
- Six months Certificate course on “Advanced Wireman Course – Wiring, Lighting & Electrical safety” was organized from July to December, 2012, sponsored by West Bengal Minorities Development & Finance Corporation, assisted by Kolkata Police. Course fee was @Rs. 3000/- and total number participants were 63.
- Three months Certificate course on “Fire, Electrical Safety & Disaster Management” was organized from 2nd August, 2013. Course fee was @Rs. 500/-per student and @Rs 1000/- per sponsored student. Total number participants were 71.

1. B. NUMBER OF FACULTY MEMBERS:

2(two) Lecturer posts have been sanctioned and advertised but not selected. Courses are being run by 25 visiting faculties (Internal & External).

2. A. Thrust Area of Research of the School

- Road lighting design in Indian context
- Ballast- Igniter -Lamp characteristics
- Lamp-life estimation
- Energy efficient low-cost lighting control system,
- Human powered Battery charger
- Rural lighting system design & development
- Daylight integrated energy efficient artificial lighting
- Energy efficient “Road Lighting”, “Museum Lighting” & “Flood Lighting”

2. B. MAJOR OBJECTIVES OF THE SCHOOL

1. To organize Degree & Certificate Courses
2. To organize Seminars and Workshops
3. To undertake Testing & Consultancy Job
4. To continue Research Activities
5. Providing Technical support to 2nd year students for their Thesis work of Master of Illumination Engineering Course run by Electrical Engg. Dept.
6. To organize Special lectures by Experts.

3. C. SEMINARS /WORKSHOPS / CONFERENCE /SYMPOSIUM ORGANIZED:

Lecture No.	Date	Speaker	Industry / Organization	Topic
1	25.8.12	Mr. Sirshendu Pal	GE Lighting	Current practice & Future Industrial trends of Lighting
2	25.8.12	Mr. B. Rohatgi	Binary Optoelectronics	Optimizing LED lighting for Greater Energy savings
3	8.9.12	Ms. Sudeshna Mukhopadhyay	Philips Lighting University	Trends in Architectural Lighting
4	8.9.12	Mr. R. P. Savita	Victoria Memorial Hall	Museum Lighting

5	21.9.12	Mr. Vikas Rana	Philips Electronics India Limited	Lighting Software – DIALux (Interior)
6	7.11.12	Mr. Manick Sorcar	Sorcar Engg. Inc. USA	Laser Animation –Part - I
7	8.11.12	Mr. Kaniska Sen	Standard Robotics, Kolkata	Stage Lighting
8	21.11.12	Mr. Manick Sorcar	Sorcar Engg. Inc. USA	Laser Animation –Part – II
9	22.11.12	Mr. Manick Sorcar	Sorcar Engg. Inc. USA	Laser Animation –Part – III
10	24.11.12	Mr. Soumyadipta Guin	Verb Films, Kolkata	Motion Picture Lighting Technique
11	26.11.12	Mr. Kalyan Chakraborty	KC & Associates, Kolkata	Creative approach to lighting design in different activity areas
12	30.11.12	Mr. Dipankar Banerjee	Indcon, Kolkata	System Design & Planning and Internal Presentation of Electrification Project
13	24.06.13	Mr.S.Chakraborty	Bajaj Electricals Ltd.	Accelerating LED revolution

- A whole day long **Industry Institute Interactive program** was held on 22/12/2012. In the newly renovated lecture room “K.C.Roy Hall” of E.E. Department funded by TEQIP. The program was coordinated by Sri Suddhasatwa Chakraborty.

Name of the Workshop: Industry Institute Interactive Program: Latest Development and Challenges in different fields of Artificial Lighting Design

Industry or Institution Name : Jadavpur University

Description about Programme : The following lectures were organized:-Ms. Sudeshna Mukherjee of **Philips Electronics India Ltd.** on “**Latest change in Lighting Application**”, Prof. Susanta Bhowmik of **Consulting Engineering Services (India)** on “**Concerns to the Consultant for Effective Design of Outdoor Lighting**”, Dr. Rajat Subhra Mondal of **Osram India** delivered lecture on “**Transition to Solid State Lighting**”, This was followed by lectures of Sirsendu Paul of **GE lighting** on “**LED Application & Reliability**”, Tuhin Banerjee of **Jayanta Lamp** “**The importance of incandescent lamp in modern era**”, and Sri Dipon Sarkar of **Marc Eco Lighting** on “**Energy efficient LED lighting**”.

FELICITATION PROGRAMME:

One felicitation programme was organized by School of Illumination Science, Engineering & Design on 22/12/2013 to honour LIGHTING STALWARTS of West Bengal.

Honorable Vice-Chancellor Prof. Souvik Bhattacharya ,Pro Vice Chancellor Prof. Siddhartha Datta, Prof. Ashoke Nath Basu, Former Vice Chancellor , Prof. Partha Pratim Biswas ,Co-ordinator of TEQIP, Prof. Nirmal Kumar Deb, Head of the Electrical Engineering Department, Prof. Saswati Mazumdar Director,School of Illumination Science, Engineering & Design attended the programme and felicitated **Prof. Sunil Ranjan Bandopadhyay**, who initiated in India the foundation stages of Illumination Engineering Education in the Electrical Engineering Department of Jadavpur University. He was honoured for his Pioneering contribution for “Lighting Education”. Then **Sri Pranab Kumar Bandyopadhyay** , ex-Philips was felicitated, for his

Pioneering Contribution in “Creating Lighting Awareness”. A Memento- the posthumous award on memory of Late **Sri Tapas Sen** was handed over to his son Sri Joy Sen, for his lifetime achievement in the field of Creative Lighting. **Sri Kanishka Sen** was felicitated for his pioneering contribution in the field of Stage Lighting, **Sri Soumendu Roy** was felicitated for his contribution in the field of Cinematographic Lighting, and **Sri Sridhar Das** ,who is the inventor of “Chandannagar Lighting” received the honour for his pioneering contribution in the field of Entertainment Lighting. All the eminent stalwarts shared some of their valuable experiences of their lives with the audience.

4. B. ARTICLES PUBLISHED IN JOURNALS

- i) D. Banerjee, S. Mazumdar, A. Sur, “Design & Performance Analysis of a Power-Factor- Corrected Constant Light Output Electronic Ballast” proceedings of 2012 1st international conference on Power & Energy Merist(ICPEM) 28-29 December IEEE Conference, ISBN 978-1-4673-1667-5 pages 126
- ii) P. Das, M. Ghosh and S. Mazumdar, “Modified single energy meter for rural domestic energy management supplied from solar panel based small grid system” proceedings of an International Journal Electrical and Electronics Engineering(ELELIJ) Volume 2, No 1, February 2013.
- iii) M.Ghosh, S.Ghosh, Avik Chakraborty, S. Mazumdar, “Automated micro-controller based room lighting energy management using dimmable CFL ballast considering day-light penetration” proceedings of IOSR Journal of Electrical and Electronics Engineering (IOSR-JEEE) e-ISSN:2278-1676 Volum-5, Issue 1 (Mar-Apr. 2013), pp 23-17.
- iv) S. Chakraborty, S. Mazumdar, “Road Lighting in Kolkata – A Review” proceedings of The Association of Engineers, Journal of India ISSN 0368-1106, Volume 83 No. 1, pp-17-27, January-March 2013.
- v) M.Ghosh, S. Mazumdar, “Development of a Computer Based Low cost Lighting System Controller” proceedings of The Association of Engineers, Journal of India ISSN 0368-1106, Volume 83 No. 1, pp-36-42, January- March 2013

6. MAJOR ACHIEVEMENTS :

A project on “Distribution of Solar Powered Retrofit CFL System to Non-electrified Areas” funded by UGC XI th Plan Outreach Research Work of Rs. 1, 00,000/-, P.I. Dr. Saswati Mazumder was successfully completed .

40 numbered solar powered lanterns were distributed to 40 needy but meritorious school students of Bali, a non -electrified Island in Sundarban on 15th September, 2012.

Prof. Siddhartha Datta, Pro- Vice Chancellor, Prof. Kalyan Kumar Roy, the former Professor of JU attended this programme with some faculties, staff and students of Jadavpur University.

7. TESTING:

Measurement of lamp ballast parameter/Testing of Luminaire Photometry and ballast performance of:-

Techno Fliers Enterprise	Rs. 11,236/-
Glacier Engineering	Rs. 44,944/-
Jayanta Lamp Industries	Rs. 13,483/-
Tekstar Enterprises	Rs. 13,236/-
ENGEL Industries	Rs. 11,742/-

8. CONSULTANCY:

Lighting System Design of reception Area and ground floor to first floor staircase area of DOEACC Rs. 10,000/-

INTERNATIONAL RELATIONS & STRATEGIC STUDIES

Phone : 2457-2498
Director. : Professor Gautam Kumar Basu
Jt. Director : Professor Ajitava Raychaudhuri

1. A. Courses Offered:

The School has introduced multi-disciplinary Ph.D. programme from 2011-2012 academic session. Currently, candidates have been working on areas such as Global Powers and India : Implications for India's Regional Security in the Post-Cold War Period; India's Energy Strategy since 1991 : The China Factor; Sino-Indian Relations and India's North East : Conflict and Cooperation since 1990's; Idea of Conflict and Conflict Resolution : The Gandhian Perspective; Dynamics of Global Environmental Regime : Rio and After; India-Australia Relations since 2000 A.D. : Indifference, Proximity and Relevance; Sanghai Cooperation Organization : Economic and Security Implications.

B. Number of Faculty Members:

The Academic activities of the School are conducted by the Academic Committee whose members are drawn from different Departments spread over the three Faculties of the University i.e. Arts, Science and Engineering and Technology. Even the Director and the Joint Director of the School are from the Department of International Relations and the Department of Economics respectively.

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

The School has special interest in the areas of International Relations and Strategic Studies broadly defined comprising subjects such as Methodologies of International Relations and Strategic Studies, Global Public Policy and Foreign Policy Analysis, Global Political Economy, Governance of Science and Technology Policies, Global Environmental Politics, Global Human Rights, and Human Security issues.

B. Major Research Projects:

A major research project on *Dynamics of Security: Perspectives of the State and Citizens* has been undertaken by the School under the UGC-UPE-II Programme of the University.

3. A. Relevant information in this connection will be available from respective Departmental profiles on faculty since faculty members of the School are drawn from several Departments of our University.
3. B. Relevant information in this connection will be available from respective Departmental profiles on faculty. The School faculty is drawn from University Departments.
3. C. Seminars/Workshops/Conferences/Symposium Organized

- i) The School in collaboration with the Council for Political Studies, Kolkata and Department of International Relations organized a seminar on ***Studying Indian Political Thought through Texts: Reading M. N. Roy Today***, on 5th October 2012. The lectures were delivered by Professor Gauripada Bhattacharya (Retired Professor, Department of International Relations, Jadavpur University), Professor Sobhanlal Datta Gupta (S. N. Banerjee Professor of Political Science [Retired], University of Calcutta) and Professor Tridib Chakrabarti (Department of International Relations, Jadavpur University). The sessions were chaired by Professor Bholanath Banerjee (Department of Sociology, University of Calcutta) and Professor Purusottam Bhattacharya (Department of International Relations, Jadavpur University).
- ii) The School in Collaboration with the Department of International Relations organized the Second Jayantanuja Bandyopadhyaya Memorial Lecture on November 2, 2012. The lecture was delivered by Professor Arun Kumar Banerji (Ex-Director, SIRSS, Jadavpur University). The theme was ***India-China Relations: It Takes Two for a Tango***.
- iii) The School of International Relations and Strategic Studies, Jadavpur University organized a National Seminar on ***South Asia: Global Order, Integration and Future Possibilities*** under the UGC funded **University of Potential of Excellence-Phase-II Scheme**. The seminar has been organized in collaboration with Netaji Institute of Asian Studies, Kolkata during March 19-20, 2013. Professor Gautam Kumar Basu, Director, SIRSS, Jadavpur University, delivered the Welcome Address. Key-note address was delivered by Professor Arun Kumar Banerji, Ex-Director, SIRSS. The session was chaired by Professor Jayanta Kumar Ray (previously of University of Calcutta). Those who delivered lectures in this National Seminar included, Professor Shantishree Pandit (University of Pune), Dr. Binoda Kr. Mishra (Director, CSIRS, Kolkata), Professor Sabyasachi Basu Raychudhuri (Vice-Chancellor, Rabindra Bharati University, Kolkata), Professor Siddhartha Mitra (Department of Economics, Jadavpur University), Professor Apurba Baruah (North Eastern Hill University, Shillong), Professor Samir Kumar Das (Vice-Chancellor, North Bengal University), Dr. Aneek Chatterjee (Presidency University, Kolkata), Dr. Manish (Sikkim University), His Excellency, Mr. Dasho Shering Wangda (Hon'ble Consul General of Bhutan in Kolkata). Various technical sessions were chaired by Professor Purusottam Bhattacharya (Department of International Relations, Jadavpur University), Professor Rajat Acharya (Department of Economics, Jadavpur University), Professor Gautam Kumar Basu (Director, SIRSS, Jadavpur University), Professor Om Prakash Mishra (Department of International Relations, Jadavpur University), Dr. Sreeradha Datta (Director, MAKAIS, Kolkata). The Valedictory Address was delivered by Professor Aswini Kumar Ray (previously of Jawaharlal Nehru University). Professor Radharaman Chakraborti (Ex-Vice-Chancellor, Netaji Subhas Open University, Kolkata) chaired this valedictory session. Dr. Shibashis Chatterjee and Dr. Anindya Jyoti Makumdar were Joint Coordinators of this Seminar.

3. D. Orientation Courses/Refresher Courses Organized:

One UGC-ASC Refresher Course on ***Emerging Trends and Contemporary Debates in International Relations*** is likely to be held from November 26, 2013 through December 19, 2013.

4. A. Books/Monographs etc. Published:

The First Jayantanuja Bandyopadhyaya Memorial Lecture entitled ***Foreign Policy the Age of Transition: Two Asian Models*** delivered by Professor Radharaman Chakraborti has been published in November 2012.

B. Articles Published in Journals:

- i) A Research Paper on ***Facets of Global Governance in a Changing World*** by Dr. Sumit Roy, Visiting Senior Research Fellow has been published in ***The West Bengal Political Science Review*** (Vol.14, No.2).
- ii) A review article entitled ***Glimpses of India's Northeast*** by Smt. Asha Kumari Mistry, UGC-Research Fellow, has been published in ***The West Bengal Political Science Review*** (Vol.14, No.2).

5. Collaborative Programme:

- i) The School in collaboration with the Council for Political Studies, Kolkata and Department of International Relations organized a seminar on ***Studying Indian Political Thought through Texts: Reading M N. Roy Today***, on 5th October 2012.
- ii) The School of International Relations and Strategic Studies, Jadavpur University organized a National Seminar on ***South Asia : Global Order, Integration and Future Possibilities*** under the UGC funded **University of Potential of Excellence-Phase-II Scheme**. The seminar has been organized in collaboration with Netaji Institute of Asian Studies, Kolkata during March 19-20, 2013.

6. Major Achievement:

The School has been able to pursue its activities in specific thrust areas outlined above, during the year under review. Besides holding regular lectures, discussions, and seminars the School was able to carry on work on research projects and occasional papers mentioned above. The active publication programme of the School was also sustained during the year under review.

LANGUAGES & LINGUISTICS

Phone : 2457-2943
 Director. : Prof. Supriya Chaudhuri (Dept. of English)
 Jt. Director : Prof. Abhijit Mukhopadhyay (Dept. of Electrical
 Engg.) : Prof. Mahidas Bhattacharya (Linguistics)

Courses Taught:

Regular Courses:

PhD Course In Linguistics
 Extra-Departmental (ED) Course in Linguistics: UG, Faculty of Arts, 6 Semesters
 Certificate Course on Introduction to Linguistics: In 2 Semesters
 Extra-Departmental (ED) Course in Portuguese: UG, Faculty of Arts

Language Courses:

Certificate Courses: (1 Year): Bengali, French, German, Hindi, Italian, Portuguese, Sanskrit, Spanish and English
Diploma Courses: (1 Year): Bengali, French, German, Japanese, Italian, Korean, Portuguese, Sanskrit, Spanish
Advanced Diploma Courses: (1 Year): Bengali, French, Portuguese.

MA and M Phil Courses to be introduced which is now under process in the Administration.

Academic Activities :

The School Of Languages and Linguistics (SLL) conducts the language teaching and linguistics in different levels. The research activities related to the said areas are being organized. Besides these regular activities, seminar, workshops, special lecturers etc. are also organized in collaboration with other institutes.

Introducing Linguistics in the Post Graduate level is obviously a Historical Event not only in the university but also in the State itself as this is the 2nd Linguistic Department after 1904 i.e. the establishment of a Linguistic Department (at that time which was known as Comparative Philology) in the University of Calcutta.

In this academic year the appointments of Dr. Samir Karmakar and Mr. Atanu Saha have made confident the linguistic branch of the School to introduce the regular Linguistic courses in different levels under the leadership of Prof. Mahidas Bhattacharya, present Director of the School. The linguistic study was introduced in the year of 2010 under this SLL which is now flourishing rapidly. Two linguistic courses i.e. MA and M Phil have been started in this academic year. The M Phil was approved by the Academic Committee in 2011.

The school also conducts twenty six language courses on seven foreign and three Indian Languages respectively where more than 350 students take admission each year in average.

Workshop:

21.02.2013: Seminar on "Mother Tongue Day" inviting Foreign Students.

22.02.2013: Seminar on "Language Diversity and Multilingualism-Bilingualism". The School organized

2012: Work shop in "Translation – Problems and challenges (linguistics aspect)" in collaboration with National Translation Mission, Mysore. 17-20 December 2013. This Translators' Orientation Programme was organized jointly by the School in collaboration with the National Translation Mission and the School of Languages, JU at Kolkata in December 2012. The programme focused on orienting translators regarding the social role they are expected to play as knowledge text translators, the theoretical import of their work and the practical problems they are likely to face while translating different disciplines.

08.03.2013: A Reception of Seminar on the Italian Language and Culture.

Lunching of JU Site : <https://sites.google.com/site/julanguagesandlinguistics/home>

07.12.2012 Celebration celebration of the birthday of Noam Chomsky on Dec 7th.

22.11. 12 Screening "Why do we talk" on 27th of November 3:00 pm onward at Vivekananda Hall of our University.

2013, February. A cultural program on Luso-Sangeet.

Academic Activities of Faculty:

Professor Supriya Chaudhuri (Director) *see under English Department*

Professor Mahidas Bhattacharya (Joint Director)

(April 1st to 31st March 2013)

[2.A] **AREA OF RESEARCH:**

Spoken Language Processing, History of Language study & Linguistics for Literature.

[2.B] **Major Research Projects:**

Natural Language Processing

[3.A] **INVITED TALK:**

1. 2013: Invited Talk on Linguistics: As a method of knowledge paradigm and a tool to define the feature of language as a semi natural system. 15.01.13
2. 2013 Key note Address **Vivekananda of 19th century: is the earliest expression of Indian Nationalism**, International School of Dravidian Linguistics, Kerala.
3. 2013. January, Series of Invited UGC Lectures on 'Computational Linguistics', University of Calcutta.

[3. E] Workshop Attended

1. 5-6 March , 2013, Frontier's of Music and Speech Organized by CV Raman Center for Physics and Music.
2. 30.04.2013 Chetanar Rane Panna hala sabuj, by CV Raman Center for Physics and Music.
3. Several others in different Seminar and workshops.

[4.B] Paper Published :

1. 2012 Bhattacharya M. BhaSaar utsa sandhaane (In Search of Origin of Language) Saradiyaa Samkhya, Pathikrit, 2012.
2. 2013 Bhattacharya M. Bhasha BishleSaner Dhaaraabaahikataa EkTi Bhinna riitir Baijnaanik Manan – Aalochan Chakra, January 2013.

Published in Other Journals :

1. **2013 Bhattacharya M.** Ekush Satake Sadharan Manane Viduasagar, Viduasagar Smarak Proceedings. Sabang Midnapore
2. **2013 Bhattacharya M, Banglaa NaaTak ki yauna biSaye mouna , Barna Parichaya 2013.**

[5] Workshop Organized:

1. 2012: **Translators' Orientation Programme** in collaboration with National Translation Mission CILL, Mysore. 17.12.2012 to 20.12.2012.

[6.] Major Achievements:

Successfully introduced Linguistics Courses one after another since 2010 under the School Of Languages and Linguistics in different Levels:

- i) Certificate:** One-Year Certificate Course in introduction to Linguistics (2010)
- ii) Undergraduate:** Six ED courses in undergraduate Levels which is equivalent to the Pass course of Linguistics under the Calcutta University. (2010)
- iii) Post Graduate:** MA in Linguistics (2013)
- iv) M Phil:** M Phil (two years) in Linguistics (2013)
- v) PhD:** PhD in Linguistics (2011).

[7] Membership Achievement:

1. Members of the Board of Adjudicators , University OF Kerala .
2. Member of the Board of adjudicator . Assam Universtiy Silchar.
3. Member of the Board of Studies , University of Calcutta.
4. Member of the Board of Adjudicators , Asiatic Society.
5. Member of the Moderator's Group, Barasat Govt. College.

Professor Abhijit Mukherjee (Joint Director)

[3 A]. Invited Talk

1. Abhijit Mukherjee delivered a talk titled, "Lessons from the Meiji Restoration of Japan and Its Applicability in the Indian Context", organized by the International Centre at the South-East Asian Studies Dept. of Calcutta University, Alipore Campus, on 5th September, 2013.

[4 B]. Articles Published:

1. Mukherjee Abhijit : ' 1Q84 obdhi aste giye', Samatat (175), 44th year, 3rd issue, pp 495 – 508
2. Mukherjee Abhijit : 'Ekti ananya jeevan' (A review of the book on the life of Rashbihari Bose, 'Nakamura no Bose' by Takeshi Nakajima), Samatat (176), 44th year, 4th issue, pp 632 – 638

[6] Major Achievement

Training Received: Mrs. Subha Bose attends the Short Term Training Course for Japanese Teachers from July to Sept. 2013 at the Nihongo Centre, The Japan Foundations, Kita-Urawa, Japan with due certificate of successful completion.

No. of students who have received the proficiency certificates of the Japan Foundation through the **JLPT Examination** is 4.

Dr Samir Karmakar, Assistant Professor (Linguistics)

[1A] Courses Offered:

- a. An optional course on Cognitive Linguistics in The School of Cognitive Science at the level of MPhil in the academic year 2012-13 second semester

[2A] Area of Research Activities:

Cognitive Linguistics, Discourse analysis, Semantics of Space and Time, Mathematical modeling of Conceptual Space

[2B] Major Research Projects:

Emergence of Number System in Pre-School Child Language, JU Research Fund Ref. R-11/A/11/13.

[3 A]. Invited Lectures Delivered/ Sessions Chaired:

1. "Emergent Literacy and Integral Approach", a series of four lectures delivered Teachers' Training Workshop in Institute of Education for Women, Hastings House, Kolkata 27, on 22 May 2013.
2. "Language and Market", delivered at *OKD Institute of Social and Developmental Studies, (Sponsored by Indian Council of Social Science Research and Government of Assam)*, Guwahati, 12 April, 2013.
3. "Constitution of Language: Neoliberal practices in Multilingual India", delivered at *South Asian University – A university established by the South Asian Association for Regional Cooperation (SAARC)* Delhi, 22 March, 2013.
4. "Vanishing Voices", Key Note Speech, delivered at *Lokbhasha Sanmelan, Dr. Punjab Rao Deshmukh Smriti Sabhagriha, Dhanbate National College, Nagpur, Maharashtra*, 13 January 2013.

[3 B]. Seminar/ Workshop/ Conference/ Symposium Attended:

1. Seminar on "Education for what and whom?" at *OKD Institute of Social Change and Development, (Sponsored by Indian Council of Social Science Research and Government of Assam)*, Guwahati, 10-12 April, 2013.
2. Workshop on "Mapping Changes and Transformations in Educational Systems and Discourses – Issues, Possibilities and Strategies" at *South Asian University – A university established by the South Asian Association for Regional Cooperation (SAARC)*, New Delhi, 21-22, 2013.

3. Symposium on Lokabhasha, at at *Lokbhasha Sanmelan, Dr. Punjab Rao Deshmukh Smriti Sabhagriha, Dhanbate National Annual Report* Dr. Samir Karmakar April 2012 – March 2013

[4B]. Articles Published:

1. "Dharonaar (Bi)nirmaan, ((Re)construction of Concept). In *Charvak*, Vol. 1, No. 3. pp. 289-300.
2. "Tool as non-elaborated aesthetic form". (In collaboration with V. V. Binoy). In *Science and Culture*, Vol. 78, Nos. 7-8, pp. 317-321.
3. "Language, Map, Currency Etc.". In *Counter Currents*, Issue: Jan 22, 2013.
4. "Linguistic Right and Language of Politics". In *Counter Currents*, Issue: Sept 19, 2012

[6] Major Achievements:

Editorial Board Membership of *Third Front: Journal of Humanities and Social Science* (ISSN: 2320-9631)

ATANU SAHA , ASSISTANT PROFESSOR (LINGUISTICS)

[3 A.] Invited Lectures Delivered/ Sessions Chaired:

2011 : Looking at language contact in Indosphere through reciprocity at **the University of Nijmegen, The Netherlands** on Nov. 11th 2011. <http://www.ru.nl/linc/@824431/linc-lecture-atanu/> retrieved as on 4/3/2012.

[3.B.] Seminar/ Workshop/ Conference/ Symposium/training programmes Attended:

2012: Language Documentation in North Eastern Indigenous Linguistic Society Language documentation using ELAAN and Transcriber DBI, Kharguli , Guwahaty, Assam; January 31st-1st Feb. 2012.

[3 C.] Seminar/ Workshop/ Conference/ Symposium Organized:

Worked as a member of Finance & Hospitality committee for organizing SCNL 3 [Student Conference on Linguistics] , held at JNU from February 19th-21st, 2009.

[4. B.] Articles Published:

2012: **An Analysis of the Problems and Causes of Errors in Spoken English: A Case Study of the Female Engineering Students in the Age Group of 18-21 Years** In *Language in India* (Online journal) Volume 12 : 4th April 2012 (Eds.). M. S. Thirumalai, ISSN 1930-2940. With Sakshi Chanana <http://www.languageinindia.com/april2012/atanufinal.pdf> retrieved as on April 20th 2012. pp. 37-56.

2011 : **Census and the aspects of Bangla Hindi Bilingualism with special reference to west Bengal.** In *Language in India* (Online journal) Volume 11 : 3 March 2011 (Eds.). M. S. Thirumalai,ISSN 1930-2940.<http://www.languageinindia.com/march2011/atanucensusfinal.html> retrieved as on 21/02/2012. 81-119.

[Articles in Proceedings]

2012: **The expression of reciprocity: a case of Language contact** in the North East in proceedings of the 34th All India Conference of Linguists at North Eastern Hill University, Central Institute of Indian languages, Linguistic Society of India & Indian Council for Social Science Research, Nov 1-3, 2012.

[Conference Papers/ Invited Talks]

2012 : Comparative segmental differences between two dialects of the Assamese and Bangla language and their standard varieties in 7th international conference on North Eastern Indigenous Linguistic Society at Don Bosco Institute of Management, Kharguli, guwahaty Assam, on Feb 2nd 2012.

2012: Assamese subjects: ergative or Agentive? In 6th Students conference of linguistics in India at Banaras Hindu University, Banaras, Uttar Pradesh on Feb. 19th 2012.

Mother Tongue Survey of India by Ministry of Home Affairs; Govt. of India; Field linguistics with a given questionnaire Prof. Anvita Abbi and Prof. Hari Madhab Roy ongoing.

6. Major Achievements:

- Awarded UGC Junior Research Fellowship in linguistics June 2007.
- A Short stay PhD fellowship at the University of Utrecht, The Netherlands from August 2011 to November 2011.

Dr Rita Ray, Assistant Professor (Portuguese):

[3 C]. Seminar/ Workshop/ Conference/ Symposium Organized:

1. Festival of Portugal February 2012
2. Creative Writing Workshop with Portuguese Writer Rui Zink October 2011

[4 A] Books/ Monographs Published:

Castelao: Matters of Life/Jeeboner shat-shotero, translated from Galician into English and Bangla by Rita Ray, Monfakira, Kolkata, 2012.

MATERIALS SCIENCE & NANOTECHNOLOGY

Phone : +91-33-6512 8386
Int. : 2457-2327/2180
Director. : Dr. K. K. Chattopadhyay

1. A. Course Offered:

Course Offered :	Duration:	No. Of Students :
M.Tech. In Nano Sc. & Tech.	2 years	18

B. Number of Faculty Members:

Contractual Assistance Professor - 2
Honorary services from Engg. Faculty – 10
Honorary services from Science Faculty – 2
Visiting Faculty - 1

2. A. Areas of Research Activities:

- i) Development of multifunctional nanostructured materials
- ii) Physical properties of Low dimensional systems

- iii) Carbon Nanomaterials: CNT, Graphene and their composites
- iv) Semiconductor Nanomaterials
- v) Transparent conducting oxides: p-type and n-type oxide nanomaterials
- vi) Multiferroic materials
- vii) Nano-bio Materials
- viii) Ab initio calculations; DFT studies

2. B. Major Research Projects

1. Title of Project/Facilities: Prepared Burden (Steel Nugget) for Solid State Reduction and subsequent Melting in EF as an Alternative Route for Steel Making
Funding and Collaborated Agency: RINL
Period: 2009 – till date
Named by Teachers involved / (P.I.): Dr. R. Dey, Prof. M.K. Mitra, Prof. S. Mukherjee & Prof. G.C. Das
2. Title of Project/Facilities: Scientific Collaboration to jointly ... simulated nuclear reactor environment'
Funding and Collaborated Agency: BARC, Mumbai
Period: 2008-till date
Named by Teachers involved / (P.I.): Prof. P.K. Mitra, Prof. M.K. Mitra, Prof. S. Paul, Prof. P. Majumder, Dr. (Mrs.) S. Banerjee
3. Title of Project/Facilities: Processing of Titanium bearing magnetite for the recovery of Metal values
Funding and Collaborated Agency: Ministry of Steel SDF
Period: 2010-till date
Named by Teachers involved / (P.I.): Prof. S. Mukherjee, Dr. R. Dey
4. Title of Project/Facilities: Synthesis of MgO-Carbon Refractory for Steel Making
Funding and Collaborated Agency: SAIL-RDCIS
Period: 2013-15
Named by Teachers involved / (P.I.): Dr. K.K. Chattopadhyay (P.I.), Prof. S. Mukherjee,
5. Title of Project/Facilities: Micro fracture Toughness of Alumina – Silica – Metal - Tungsten Carbide Nanocomposite
Funding and Collaborated Agency: AICTE
Period: 2007 – 2010
Named by Teachers involved / (P.I.): Prof. S. Mukherjee
6. Title of Project/Facilities: Investigation of Lubricating Properties of Automotive Oil & Grease with Addition of CNT & Metal Oxide
Funding and Collaborated Agency: Balmer Lawrie & Co. Ltd
Period: 2007 – 2012
Named by Teachers involved / (P.I.): Dr. K.K. Chattopadhyay (P.I.) & Prof. S. Mukherjee,
7. Title of Project/Facilities: Financial assistance for PG Teaching Program in Nanoscience & Technology
Funding and Collaborated Agency: DST- Nano Mission
Period: 2008 – 2013

- Named by Teachers involved /(P.I.): Prof. S. Mukherjee & Dr. K.K. Chattopadhyay
8. Title of Project/Facilities: Synthesis & Characterization of transparent p type semiconductor based on Copper-Aluminium Oxide based Material for transparent electronics
Funding and Collaborated Agency: DST
Period: 2005-08
Named by Teachers involved /(P.I.): Dr. K.K. Chattopadhyay (P.I.)
 9. Title of Project/Facilities: Data collection of corrosion Zn-Al coating
Funding and Collaborated Agency: Electro-Steel Ltd
Period: 2007-12
Named by Teachers involved /(P.I.): Prof. S. Mukherjee
 10. Title of Project/Facilities: Processing of Titani-ferrous Magnetite for extraction of Ti
Funding and Collaborated Agency: Ministry of Steel-SDF
Period: 2010-13
Named by Teachers involved /(P.I.): Prof. S. Mukherjee
 11. Title of Project/Facilities: Recovery of precious and scattered metals from waste
Funding and Collaborated Agency: UGC
Period: 2012-15
Named by Teachers involved /(P.I.): Prof. S. Mukherjee, Dr. M. Ghosh Chaudhuri
 12. Title of Project/Facilities: Development of wide band gap p-type transparent metal oxide chalcogenides thin films for oxide electronics
Funding and Collaborated Agency: DST
Period: 2012-2014
Named by Teachers involved /(P.I.): Dr. K.K. Chattopadhyay (P.I.)
 13. Title of Project/Facilities: Scientific collaboration to jointly build a recirculation ... nuclear reactor environment.
Funding and Collaborated Agency: BARC
Period: 2012-2014
Named by Teachers involved /(P.I.): Dr. M. Ghosh Chaudhuri, A. Chanda, M.K. Mitra, P.K. Mitra, S. Banerjee

3. A. Invited Lectures Delivered:

LIST OF INVITED LECTURES DELIVERED(2012 -2013):

Dr. K.K. Chattopadhyay

1. Delivered invited lectures in the UGC Refreshers Course organized by the Department of Food Technology, JU entitled 'Interdisciplinary approach for food technology Research' on 15th July, 2013.
2. Delivered invited lectures in the UGC Refreshers Course organized by the Department of Physics, University of Calcutta, entitled '21st Refresher Course in Physics for university and college teachers during June 18 – July 09, 2013' on 26th June, 2013.
3. Delivered invited lectures in the UGC Refreshers Course organized by the Department of Instrumentation Science, JU on 13th March, 2013.
4. Delivered invited lectures in the UGC Refreshers Course organized by the Department of Physics, Burdwan University during June 28 to July 18, entitled '1st Refreshers course in Materials Science' on 4th July, 2013.

5. Delivered invited lectures in the UGC Refreshers Course organized by the Department of Physics Jadavpur University, entitled 'Interdisciplinary approach for food technology Research' on 14th July, 2013.
 6. Delivered invited lecture on the 'paradigms in materials research' in a meeting organized by Indian Institute of Metals, JU on 3.8.13.
 7. Delivered Invited talk in the National Seminar entitled " Nanotechnology, Lithography and nanotubes' JIS College of Engineering, 19th July, (2013)
 8. Delivered Invited talk at Two days workshop entitled 'Nanotechnology for Industry', JU, 25th, July, 2013.
 9. Delivered Keynote lecture at the Annual meeting of Elico Ltd.; Hyderabad, 20th April, 2013.
 10. Delivered Invited talk at National Seminar on Nanotechnology at IEM, Kolkata, 14th March, 2013
 11. Delivered Invited talk at One day seminar on 'Experimental Techniques in Condensed Matter Physics, Department of Physics, Jadavpur University, 21th March, (2013).
 12. Delivered Invited talk at International Conference on Materials Science (ICMS), Tripura University, 22nd February (2013)
 13. Chaired a session at International Conference on Materials Science (ICMS), Tripura University, 22nd February (2013)
 14. Delivered an Invited talk at International Conference entitled "India-Singapore meeting on Advanced Nanotechnology", IIT Kharagpur, 25-26th February, (2013)
 15. Delivered Invited talk at Second International Symposium on Semiconductor Materials and Devices (ISSMD-2), 31 Jan – 2 Feb, 2013, Jammu University
 16. Chaired a session in Second International Symposium on Semiconductor Materials and Devices (ISSMD-2), 31 Jan b, 2013, Jammu University
 17. Delivered invited talk at UGC-CPE program seminar at Midnapore College, Department of Physics, 28 January, 2013
 18. Invitation to deliver invited talk at India-Moscow symposium in 22-23 January, 2013, at S.N Bose National Centre for Basic Sciences
 19. Delivered invited talk at National conference entitled "Advanced and Functional Materials' (To celebrate 60th Birthday of Prof. A.K. Raychaudhuri) at S.N Bose National Centre for Basic Sciences, 1-2 March, 2013
 20. Delivered Keynote Lecture at 2nd National Conference on Electronics, Communication and Signal Processing (NCECS-2012) September 19, 2012 at Siliguri Institute of Technology.
 21. Delivered Invited talk at National Workshop on Physics of Quantum Nano Systems from 27th to 29th March 2012 at Jhargram, Midnapore.
 22. Invited talk at National Seminar on Advancement in Modern Physics, August 23&24, 2013; Dept. of Physics, R.K. Mission Residential College; Narendrapur, Kolkata.
 23. Invited talk at CMDAYS-13, NIT Rourkella, August 29-31, 2013.
 24. Invited at National short-term course on Modern Methods in Materials Processing & Characterization (M3PAC2013) NIT Durgapur, September 17-21, 2013.
 25. Invited talk at the Refreshers course entitled " Recent development on Nanoscience and Technology, Sept. 10 – 30, (2013) at Jadavpur University
- 3. B. Seminar / Workshop / Conference / Symposium Attended:**
- 1 WAFM-2012 -Workshop on "Advance Functional Materials" -**Soumen Maiti** - Participation BHU, March 2012
 - 2 CFOCM 2012 -Barium/strontium carbonate modified amorphous carbon nanotubes as efficient cold cathode-**S. Maity**, A. Jha, N. S. Das, K. K. Chattopadhyay" - Poster - SNBCBS May 2012

- 3 NCSDTIRST 2012 - Effect of inter-electrode distance on field emission properties of conducting polymer modified by trace amount of low temperature synthesized amorphous carbon nanotubes- **D. Nawn**, D. Banerjee and K. K. Chattopadhyay - Poster- Jadavpur September 2012
- 4 NCSDTIRST 2012 - Sol-gel synthesized CuBO₂ Nanocrystals: tuning particle size with synthesis parameter **S. Santra**, N. S. Das and K. K. Chattopadhyay Poster Jadavpur September 2012
- 5 NCSDTIRST 2012 Improvement of field emission properties of amorphous carbon nanotubes by functionalization with barium/strontium carbonate **S. Maity**, A. Jha, N. S. Das, K. K. Chattopadhyay Poster Jadavpur September 2012
- 6 NCSDTIRST 2012 Efficient field emission properties of SnO₂-amorphous carbon nanotube system **D. Banerjee** and K. K. Chattopadhyay Poster Jadavpur September 2012
- 7 NCSDTIRST 2012 Synthesis of polycrystalline CdO nanowire thin film via simple wet chemical route for optical applications **N. S. Das**, S. Santra, G. C. Das and K. K. Chattopadhyay Poster Jadavpur September 2012
- 8 NCSDTIRST 2012 Growth of flower-like TiO₂ nanostructured films on arbitrary substrates **Debabrata Sarkar**, Satyaki Goswami, Chandan Ghosh and Kalyan K. Chattopadhyay Poster Jadavpur September 2012
- 9 NCSDTIRST 2012 Realization of 1-D zinc oxide via ambient conditioned, one pot, aqueous chemical route: Candidate for field emitter cold cathode and photodetector **Soumen Maiti**, Arindam Sen, Uday Narayan Maiti and Kalyan Kumar Chattopadhyay Poster Jadavpur September 2012
- 10 IWo N2012-Cu₄ cluster adsorbed DV(555-777) graphene for O₂ storage-D. Sen, R. Roy and K. K. Chattopadhyay-Poster- Jadavpur December 2012.
- 11 IWo N2012 - Electronic, magnetic and optical properties of Mn doped Monolayer MoS₂ :A first principle study-D. Das, A. Basak, D. Sen, and K. K. Chattopadhyay- Poster- Jadavpur December 2012
- 12 IWoN 2012 -Novel TiO₂ Nanoparticle-coated Titanium dioxide Nanowires: Synthesis and Photoluminescence properties Satyaki Goswami, Debabrata Sarkar, Chandan K. Ghosh and K. K. Chattopadhyay -Poster - Jadavpur December 2012
- 13 IWoN 2012 -Investigation on the I-V characteristics of reduced Graphene Oxides thin films for different reducing agents Priyanka R Midya , Rajarshi Roy, K. K. Chattopadhyay-Poster -Jadavpur December 2012
- 14 IWoN 2012 -Size dependent electron field emission in graphene oxide based thin films G. Sandeep Kumar, Rajarshi Roy and K. K. Chattopadhyay Poster Jadavpur December 2012
- 15 IWoN 2012 -Synthesis and magnetic property of copper ferrite hollow nanospheres **Biplab Kr. Chatterjee**, Abhishek Dey, Chandan Kr Ghosh, K. K. Chattopadhyay-Poster-Jadavpur December 2012
- 16 IWoN 2012 -Synthesis and characterization of BiVO₄ thin films and its Optical and dielectric properties **S. Sarkar**, N. S. Das and K. K. Chattopadhyay-Poster-Jadavpur December 2012

- 17 DAE SSPS2012-Chalcogen Doping at Anionic Site: A Scheme towards More Dispersive Valence Band in CuAlO_2 **Awarded BEST POSTER at DAE SSPS 2012** Nilesh Mazumder, Dipayan Sen and Kalyan Kumar Chattopadhyay Poster IIT Mumbai 2012
- 18 RAM 2013 CuBO_2 : A New Photoconducting Material S. Santra, N. S. Das, K. K. Chattopadhyay Poster Bikaner January 2012
- 19 RAM 2013 Enhanced Field Emission From Polyaniline Coated Amorphous Carbon Nanotubes S. Maity, S. Goswami and K. K. Chattopadhyay Poster Bikaner January 2012
- 20 RAM 2013 Facile Synthesis, Self-assembly Mechanism and Field Emission Property of Copper Phthalocyanine Nanowires U. K. Ghorai, S. Saha, S. Shee and K. K. Chattopadhyay Poster Bikaner January 2012
- 21 ICMS 2013 Photoluminescence and field emission property of ZnO nanoleaf synthesized via plasma enhanced reactive evaporation Diptonil Banerjee Oral Tripura University 2013
- 22 ICMS 2013 Enhancement of crystallinity of polymer (polypyrrole) by addition of amorphous carbon nanotubes in trace amount D. Nawn, D. Banerjee and K. K. Chattopadhyay Poster Tripura University 2013
- 23 ASTEM 2013 Advanced School on High Resolution Transmission Electron Microscopy Nirmalya Sankar Das-Participation-IOP Bhubaneswar 2013
- 24 SETCMP 2013 - One day seminar on Experimental Techniques in Condensed Matter Physics- D. Banerjee, N. S. Das, S. Maiti, D. Sarkar, U. K. Ghorai, S. Saha, S. Santra, N. Majumder, S. Pal, S. Mondal, S. Sarkar, B. Sarkar -Participation-Jadavpur University 2013
- 25 (IWoN-12) 1st International Workshop on Nanomaterials (IWoN): Engineering Photon and Phonon Transport Santanab Majumder, Bitan De, Biplob Kr Chatterjee, Chandan Kr Ghosh Poster Jadavpur University, December 2012
- 27 (IWoN-12) 1st International Workshop on Nanomaterials (IWoN): Engineering Photon and Phonon Transport S. Bhattacharjee, C. K. Ghosh and G. C. Das Poster Jadavpur University, December 2012

3. C. Seminar / Workshop / Conference / Symposium Organized:

- (i) International Workshop on Nanomaterials: Electron and phonon transport, IWoN-12, 14-15th December, 2012
- (ii) Industry-Institute workshop on Nanotechnology for Refractories in Steel making, 26-28 July, 2013

3. E. Orientation Courses / Refreshers Courses Organised:

Recent Development on Nanoscience and Technology, 10th September – 30th September, 2013.
Co-ordinator: Dr. K. K. Chattopadhyay

4. A. Books / Monograph Published:

Books Published:

Rare-earth Doped Nanophosphors by Subhajit Saha, Kalyan Kumar Chattopadhyay (Paperback, 2012), Date of publication 28.5.2012, ISBN-13 – 9783659114373; Publishers -LAP Lambert Academic Publishing AG & Co KG (GERMANY)

4. B. Articles Published in Journals: Annexure – I

5. Collaborative Programmes:

Memorandum of Understanding (MOU) signed through the school:

International Collaboration with:

Ulster University – UK

Mie University – Japan

National Collaboration with

Benaras Hindu University (BHU)

National Institute of Technology, Agartala

Industrial Collaboration with:

BalmerLawrie & Co. Ltd.

6. Major Achievements:

More than 75 research papers have been published during the last one year in standard international journal of repute. Also a number of significant research results have been obtained. Two industry sponsored projects is currently running in the school where the knowledge generated through our research in Nanotechnology will be utilised to solve some of the industrial problems. One faculty member (Dr. K.K. Chattopadhyay) recently awarded with MRSI Medal. M.Tech course in the Nanoscience and Technology is also running successfully.

Annexure –I : List of Papers Published(In Journals)

1. Realization of Delocalized Hole State in Direct Gap Polytype Delafossite upon Chalcogen Doping at Anionic Site, Nilesh Mazumder, Dipayan Sen, Uttam K. Ghorai, Rajarshi Roy, Subhjit Saha, Nirmalya S. Das and Kalyan K. Chattopadhyay, **Journal of Physical Chemistry Letters** (In Press – 2013)
2. Organic nanowires hierarchy over fabric platform for flexible cold cathode, Soumen Maiti, Uday Narayan Maiti, Shreyasi Pal and Kalyan Kumar Chattopadhyay, **Nanotechnology (In Press - 2013)**
3. Improvement of adhesion and continuity of Polypyrrole thin films through surface modification of hydrophobic substrates, Namita Dutta Gupta, Swati Das, Nirmalya Sankar Das, Diptonil Banerjee, Debarata Sarkar and Kalyan Kumar Chattopadhyay, **Journal of Applied Polymer Science (In Press-2013)**
4. Charge compensation assisted enhanced photoluminescence derived from Li-codoped MgAl₂O₄: Eu³⁺ nanophosphors for solid state lighting applications, Subhjit Saha, Swati Das, Uttam Kumar Ghorai, Nilesh Mazumder, Bipin Kumar Gupta and Kalyan Kumar Chattopadhyay, **Dalton Transactions, 2013, 42, 12965**
5. Ni-Zn ferrite-loaded superparamagnetic amorphous carbon nanotubes through a facile route, K. Bhattacharjee, S. Maity, G. C. Das and Kalyan Kumar Chattopadhyay, **Colloid and Polymer Science (In Press-2013)**
6. Controlling the ZnO tetrapod sharpness by restricted zinc oxidation in open air: Low turn-on field emission stabilized by graphene, Soumen Maiti, Uday Narayan Maiti, Bhaskar Chandra Behera, Shreyasi Pal and Kalyan Kumar Chattopadhyay, **Journal of Materials Chemistry C 2013, 1, 4940-4947**
7. Electrical properties of vertically oriented TiO₂ nanowire arrays synthesized by glancing angle deposition technique, A. Mondal, J. C. Dhar, P. Chinnamuthu, N. K. Singh, K. K. Chattopadhyay, S. K. Das, S. C. Das, A. Bhattacharyya, **Electronic Materials Letters(2013), 9, p. 213-217**

8. Controlled surface damage of amorphous and crystalline carbon nanotubes for enhanced field emission, Supratim Maity, Nirmalya Sankar Das, and Kalyan Kumar Chattopadhyay, **Physica Status Solidi (b)** **250**, No. 9, 1919–1925 (2013)
9. Wide band gap p-type nanocrystalline CuBO₂ as a novel UV photocatalyst, S. Santra, N. S. Das and K. K. Chattopadhyay, **Materials Research Bulletin** **48** (2013) 2669–2677
10. Synthesis of SnO₂ functionalized amorphous carbon nanotube for efficient electron field emission application, D. Banerjee, D. Nawn and K. K. Chattopadhyay, **Journal of Alloys and Compounds** **572** (2013) 49–55
11. Enhanced photocurrent from generated photothermal heat in indium nanoparticles embedded TiO₂ film, B. Choudhuri, A. Mondal, J. C. Dhar, N. K. Singh, T. Goswami, and K. K. Chattopadhyay, **Appl. Phys. Lett.** **102**, 233108 (2013)
12. Enhanced Ultraviolet Emission from Mg Doped SnO₂ Nanocrystals at Room Temperature and Its Modulation upon H₂ Annealing, Nilesh Mazumder, Dipayan Sen, Subhajit Saha, Uttam Kumar Ghorai, Nirmalya Sankar Das and Kalyan Kumar Chattopadhyay*, **J. Phys. Chem. C** **2013**, **117**, 6454–6461
13. Synthesis, Characterization and High Natural Sunlight Photocatalytic Performance of Cobalt Doped TiO₂ nanofibers, Debabrata Sarkar, S. Mukherjee, Kalyan K. Chattopadhyay, **Physica E** **50** (2013) 37–43
14. Zinc oxide nanostructure decorated amorphous carbon nanotubes: An improved field emitter, D. Nawn, D. Banerjee and K. K. Chattopadhyay*, **Diamond and Related Materials**, **34** (2013) 50–59
15. Enhanced photoemission from glancing angle deposited SiO_x-TiO₂ axial heterostructure nanowire arrays, J. C. Dhar, A. Mondal, N. K. Singh, and K. K. Chattopadhyay, **J. Appl. Phys.** **113**, 174304 (2013)
16. Single crystalline nanostructures of giant dielectric calcium copper titanate: A convenient route towards materialization of hard to realize multicomponent perovskite nanostructures, Arindam Sen, Uday Narayan Maiti, Soumen Maiti, Kalyan Kumar Chattopadhyay*, **J. Materials Science**, **48** (11), pp. 3967–3974
17. Three dimensional Ag₂O/TiO₂ type-II (p-n) nanoheterojunctions for superior photocatalytic activity, Debabrata Sarkar, Chandan. K. Ghosh, S. Mukherjee, Kalyan K. Chattopadhyay*, **ACS Appl. Mater. Interface** (2013) **5** (2), pp. 331–337.
18. Small Pd cluster adsorbed double vacancy defect graphene sheet for hydrogen storage: A first-principles study, D. Sen, R. Thapa and K. K. Chattopadhyay*, **International Journal of Hydrogen Energy** **38** (2013) 3041–3049.
19. Simple chemical synthesis of porous carbon spheres and its improved field emission by water vapor adsorption, D. Banerjee, D. Sen and K.K. Chattopadhyay*, **Microporous and Mesoporous Materials**, **171** (2013) 201–207.
20. Edge effect enhanced electron field emission in top assembled reduced graphene oxide assisted by amorphous CNT-coated carbon cloth substrate, Rajarshi Roy, Arunava Jha, Diptonil Banerjee, Nirmalya Sankar Das and Kalyan Kumar Chattopadhyay*, **AIP Advance** (2013) **3**, 012115.
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22. Polyaniline/Vanadium oxide composites: An effective control in morphology by varying reactant concentrations, S. Goswami, U.N. Maiti, S. Maiti, M.K. Mitra, K.K. Chattopadhyay*, **Materials Chemistry and Physics** (2013) **138** 319–326.

23. Sol-gel synthesis and characterization of wide band gap p-type nanocrystalline CuBO₂, S. Santra, N. S. Das and K. K. Chattopadhyay*, **Materials Letters**, (2013) **92**, pp. 198-201.
24. Three dimensional ZnO nanostructures realized through polymer mediated aqueous chemical route: Candidate for transparent flexible electronics, SoumenMaiti, Uday Narayan Maiti and Kalyan Kumar Chattopadhyay*, **CrystEngComm** (2012) **14** (23) , pp. 8244-8252.
25. Chemically derived graphene sheets top assembled over multi-walled carbon nanotube thin film by Langmuir Blodgett method for improved dual field emission,Rajarshi Roy, ArunavaJha, Kalyan K. Chattopadhyay*, **Journal of Nanoscience& Nanotechnology** **13** (1) , pp. 452-460
26. Template free synthesis of mesoporousCuOnano architects for field emission applications, Swati Das, SoumenMaiti, SubhajitSaha, NirmalyaSankar Das and Kalyan Kumar Chattopadhyay*, **Journal of Nanoscience& Nanotechnology** (2013) **13**, 1–7.
27. Fabrication of barium/strontium carbonate coated amorphous carbon nanotubes as an improved field emitter, S. Maity, A. Jha, N. S. Das and K. K. Chattopadhyay*, **Applied Physics A** (2013) **110**:493–499.
28. Sol-Gel derived ZnO:Mn nanocrystals: study of structural, Raman, and optical Properties, S. Kumar, S. Chatterjee, K.K. Chattopadhyay and A.K. Ghosh,**Journal of Physical Chemistry C**, **116** (2012) p. 16700 – 16708.
29. Thickness optimized nanocrystallineZnO coated silicon nanowires for cold cathode application, N. S. Das, D. Banerjee and K. K. Chattopadhyay*, **Journal of Materials Science** (2012) **48** (2) , pp. 750-757.
30. Structural and optical properties of glancing angle deposited TiO₂ nanowires array, P.Chinnamuthu, A. Mondal, N. K. Singh, J.C.Dhar, S.K. Das, K. K.Chattopadhyay, **J. Nanoscience and Nanotechnology**. **12**, 6445 (2012)
31. Synthesis of crystalline carbon nanofern-like structure by dc-PECVD and study of its electrical and field emission properties, D. Banerjee and K.K. Chattopadhyay*, **Materials Research Bulletin** (2012) **47** (11) , pp. 3868-3874.
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34. Band gap enhancement of glancing angle deposited TiO₂ nanowire array, P. Chinnamuthu, A. Mondal, N. K.Singh, J. C. Dhar, K. K. Chattopadhyay*, S. Bhattacharya, **Journal of Applied Physics** (2012) **112** (5) , art. no. 054315.
35. Anatase TiO₂ nanoparticles synthesis via simple hydrothermal route: Degradation of Orange II, Methyl Orange and Rhodamine B; R. Thapa, S. Maiti, T. H. Rana, U. N. Maiti, and K. K. Chattopadhyay*, **J. Molecular Catalysis A**, (2012) **363-364**, pp. 223-229.
36. Structural and optical properties of glancing angle deposited TiO₂ nanowires array, P. Chinnamuthu, A. Mondal, N. K. Singh, J. C. Dhar, S. K. Das and K KChattopadhyay*, **Journal of Nanoscience& Nanotechnology** (2012) **12**, pp. 6445-6448
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38. Synthesis and characterization of water soluble functionalized amorphous carbon nanotube - polyvinyl alcohol composite, D. Banerjee, A. Jha and K.K. Chattopadhyay*, **Macromolecular Research** **20** (2012) , pp. 1021-1028
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41. Structural transformation from Mn₃O₄ nanorods to nanoparticles and band gap tuning via Zn doping, A. Jha, R. Thapa, and K.K. Chattopadhyay*, **Materials Research Bulletin**, **47** (3) , pp. 813-819
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43. Morphology control of rutile TiO₂ hierarchical architectures and their excellent field emission properties, Debabrata Sarkar, Chandan. K. Ghosh, Kalyan K. Chattopadhyay * **CrystEngComm**, 2012,**14**, 2683-2690 (TOP 10 DOWNLOADED ARTICLE)
44. Anomaly in structural noncentrosymmetry around TN in bulk and nanoscale BiFeO₃, S. Goswami, Dipten Bhattacharya, G.N Iles, B. Ghosh, A.A. Prytuliak, B. Malard, Gopes C Das, B. Ouladdiaf and T. Chatterjee, (Accepted) **Powder Diffraction**, 2013.
45. Magnetic and dielectric properties of sol-gel derived nanoparticles of double perovskite Y₂NiMnO₆, R.P. Maiti, S. Dutta, M. Mukherjee, M.K. Mitra, D. Chakraborty, **J. Appl. Phys.**, 2012, Vol112, 044311.
46. Studies on Corundum rich zirconia-mullite composite with TiO₂ as additive, D. Chandra, G.C. Das, U. Sengupta and S. Maitra, **Ceramic International** (Accepted), 2013.
47. A mechanistic study of initial stage sintering of sol-gel derived silica nanoparticles, A. Pramanik, K. Bhattacharjee, M.K. Mita, G.C. Das and B. Bhaduri, **Int. J. Mod. Engg.Res.**, 3(2) 2013.
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50. Microbial extraction of cobalt and nickel from lateritic chromite overburden using aspergilluswentii", S. Biswas, R. Dey, P.C. Bandyapadhyay, S. Mukherjee, **Res J Pharm BiolChemSci** ,4,2,2013, 739-750.
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52. Mineralogy of vanadium bearing titaniferrous magnetite ore of Eastern India & its carbothermalbehavior, S.Samanta,S.Biswas,S.Mukherjee,R.Dey, T.K.Baidya, International Journal of Minerals, **Metallurgy and Materials**, Accepted in 2013.

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57. Drug delivery using nanosized layered double hydroxide, an anionic clay J. Chakraborty, M. Chakraborty, S.K. Ghosh, M. K. Mitra **Key Engineering Materials Vol. 571 (2013) pp133-167**
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69. Creep behavior of Mg-Sn & Mg-Sn-Si alloys, P.Poddar, S.Mukherjee, K.L.Sahoo, **Materials Science & Engineering A**, 2012, 1-25.
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MEDIA COMMUNICATION & CULTURE

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Director : Prof. Partha Pratim Basu

Jt. Director: Dr. Dalia Chakrabarti

1. A. Course Offered: (Name of the Course, Duration of Course, No. of Students Enrolled):

1. UGC-approved Certificate Course on 'Radio Production'; 6 months; 30 students
2. Two undergraduate extra-departmental courses: 'Studies in Cultural Processes A' (Semester 3) and 'Studies in Cultural Processes B' (Semester 4); 2 semesters; 9 students
3. PhD; 3 to 5 years; 5 students (including one Junior Research Fellow under the State Fellowship scheme)

B. Number of Faculty Members:

Director: Prof. Partha Pratim Basu, Department of International Relations

Joint Director: Dr. Dalia Chakrabarti, Department of Sociology

No permanent faculty member; courses taught by 9 teachers from Jadavpur University and 17 from outside the University.

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

- Media, consumerism and globalization
- Media in development and modernization
- Community Radio movement in India
- Indian television

- Media policy
- Media and public opinion in India
- New media
- Multimedia reporting and alternative forms of journalism
- Internet and network cultures
- New urban spaces
- Madrasah education in India
- Performing arts and communication
- Children's literatures and cultures
- Child rights and child issues
- New Indian documentaries

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

The following is a list of research projects affiliated to the School:

Principal Investigator (PI): Prof. Nilanjana Gupta

- | | | |
|-------------------------|------------|--------|
| i) Child Radio Reporter | | UNICEF |
| ii) Social Networks | UGC-UPE II | |
| iii) Community Radio | UGC-UPE II | |
| iv) Performance | UGC-UPE II | |
| v) Madrasa | UGC-UPE II | |
| vi) Online Humour | UGC-UPE II | |
| vii) East Bengal Club | UGC-UPE II | |

PI: Prof. Nilanjana Gupta and Co-Principal Investigator: Dr. Dalia Chakrabarti:

- | | |
|-----------------|------------|
| viii) Acropolis | UGC-UPE II |
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PI: Prof. Nilanjana Gupta and Co-Principal Investigator: Abhijit Roy:

- | | |
|--|------------|
| ix) Media and Public Opinion | UGC-UPE II |
| x) New Media for Change: Multimedia stories on under-reported issues | UGC-UPE II |

Principal Investigator: Parthasarathi Bhaumik

- | | |
|-------------------------|------------|
| xi) Calcutta Soundscape | UGC-UPE II |
|-------------------------|------------|

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

Following are lectures delivered/ sessions chaired (related to the School's research interests) by the Director, Joint Director and others members of the School:

Prof. Partha Pratim Basu

1. Delivered two lectures on 'Caste and Politics in India' at Refresher Course organized by School of Women's Studies, Jadavpur University, December 2012.

Dr. Dalia Chakrabarti

1. Lecture on 'My Family: Structures and Processes' at Muralidhar Girls' College, August 25, 2012.

Prof. Nilanjana Gupta

1. Presented a paper titled "Telling Stories: Newspapers in the 1940s", three-day National Workshop, *The Nation Unbound: India in the 1940s*, Indian Institute of Advanced Study, Shimla, May 10-12, 2012
2. Chaired a session, 'Dance as Social Communication', International Conference on Dance, School of Women's Studies, Jadavpur University
3. Delivered a talk on Justice Verma Report, at a discussion organised by Centre for Marxian Studies, Jadavpur University
4. Chaired a session at the national seminar on 'Media for Change: The Asian Neighbourhood' organized by School of Media, Communication and Culture, Jadavpur University, in collaboration with Apeejay Kolkata Literary Festival and the National Library. Bhasha Bhavan Art Gallery, National Library, Kolkata, January 12, 2013
5. Delivered a lecture on 'Amulets' at Refresher Course on Sociology, Jadavpur University
6. Delivered a lecture at Refresher Course in Film Studies, Jadavpur University
7. Delivered two lectures on *Fictional Spaces*, at Refresher Course Department of English, Jadavpur University.

Abhijit Roy

1. 'History of television in India' and 'Ideologies of Television in India', two lectures at the UGC-sponsored Orientation Course, University of North Bengal, Siliguri, May 5-7, 2012.
2. 'Public Television and Citizenship in India', lecture at the Department of Sociology, West Bengal State University, Barasat, May 11, 2012
3. 'Basic Concepts in Radio Studies', lecture at the UGC-sponsored certificate course on 'Radio Production', School of Media, Communication and Culture, Jadavpur University, July 13, 2012.
4. 'Television: History and Popular Culture' and 'Film and Television', two lectures at the film appreciation course, Chalachitra Satabarsha Bhaban, Govt. of West Bengal, Calcutta, July 24, 2012.
5. 'History of Television in India: Landmarks in Doordarshan', 'The Era of Private Channels in India (National)', 'The Era of Private Channels in India (Regional)', 'Types of Channels in Indian Television and their Evolution' and 'Changes over the Last Decade in Indian Television', a total of nine lectures on these topics at the Calcutta Media Institute for the students of the PG Diploma course in Television Management, July 27, August 10 and August 24, 2012.
6. Delivered two lectures on 'Indian Media, State and Social Inequalities', at the UGC-sponsored Refresher Course titled 'State and Social Inequalities: Gender, Class and Caste', School of Women's Studies, Jadavpur University, November 29, 2012.
7. Delivered two lectures on 'Popular Fictional Spaces in Indian Television', at the UGC-sponsored Refresher Course titled 'Fictional Spaces: Texts and Contexts', Department of English, Jadavpur University, December 8, 2012.

Project Fellows

1. 'The Status of Community Radio in India', a talk delivered by Amolina Ray, project fellow of Community Radio, at Community Radio Jnan Tarang (90.4FM), of Krishna Kanta Handiqui State Open University (KKHSOU), Guwahati, March 22, 2013.
- B. Seminar/Workshop/Conference/Symposium Attended:** (Name of the Teacher, Name of the Paper Presented, if any, Name of the Seminar, Place, Duration):

Following are the seminars/workshops/conferences/symposiums attended by the Director, Joint Director and others members of the School:

Prof. Partha Pratim Basu

1. Presented a paper titled "Buddhism and Dalit Emancipation: A Study of Tagore and Ambedkar" at a national seminar on "Vishwakabi and Internationalism" organized by Jadavpur Association of International Relations (supported by the Ministry of Culture, Government of India), on July 28, 2012.
2. Presented a paper titled "Malaviya and the Foundation of the BHU" at national seminar on "Pandit Madan Mohan Malaviya: The Thinker and the Leader" jointly organized by Departments of International Relations and History, November 19, 2012.

Dr. Dalia Chakrabarti

1. 'Sociology of Curriculum', paper presented at the International Conference on 'Sociology in the 21st Century: Constraints and Possibilities' School of Social Sciences, Jawaharlal Nehru University, New Delhi, December 18-20, 2012.

Prof. Nilanjana Gupta

1. Presented a paper titled 'Where are the Borders? Borderlands in South Asia' at National Conference on Borderlands organized by Centre for Latin American Studies, Jadavpur University.

Abhijit Roy

1. Presentation (through Skype video) at the virtual international gathering for cross-border conversation on 'The future of life in cities', organized by the 'On Cities' project of the Knight Center for International Media, University of Miami, October 22, 2012.
7. Delivered a total of 4 lectures on two topics 'The Ideologies of State Television in India' and 'Indian Television after Liberalization', as Resource Person at the UGC-SAP National Workshop on Television Studies, Department of English and Cultural Studies, Panjab University, Chandigarh, November 3 and 4, 2012.
3. Presented a paper titled 'Media for Change: What about Media Education?' at the national seminar on 'Media for Change: The Asian Neighbourhood' organized by School of Media, Communication and Culture, Jadavpur University, in collaboration with Apeejay Kolkata Literary Festival and the National Library. Bhasha Bhavan Art Gallery, National Library, Calcutta, January 12, 2013.
4. Presented a paper titled 'Bordered Bodies: On Manipur', at the international conference on 'Prisms of Displacement: Across the Indian Sub-continent and Mexico-US Borders', organized by the Centre for Studies in Latin American Literatures and Cultures, Department of Comparative Literature, Jadavpur University, February 22, 2013.
5. Presented a paper titled 'Television, Participatory Culture and Questions in Indian Democracy', at the UGC-Sponsored National Seminar on 'Whither Culture Studies: Contexts and Contestations' organized by Department of English, University of Kalyani, March 6, 2013.

Community RadioJU

1. Srabani Roy, Programme Manager, Community RadioJU, attended the third National Sammelan for the operational Community Radio Stations in India organised by The Ministry of Information and Broadcasting at Vigyan Bhawan, New Delhi, February 9-11, 2013.

Project Fellows

1. 'Rethinking Gender and Development in Reality Television Viewing', paper presented by Sriyayee Bhattacharya, project fellow of Media and Public Opinion, at a national seminar on 'Gender and Development' organized by Arya Mahila College, BHU, February 9-10, 2013.
2. 'New Globalisation: Changing Faces of Economy through Social Networking Websites' paper presented by Rianka Roy, project fellow of Social Networks, at TISS, Mumbai in an international seminar on 'Technology, Innovation and Social Change', January 23, 2013.
3. 'The Impact of Community Radio in bringing Gender Empowerment' paper presented by Amolina Ray, project fellow of Community Radio, at Arya Mahila P.G. College, B.H.U, Varanasi in a National Seminar on 'Gender and Development', February 9 -10, 2013.
4. "Creation of New Identities for Black Communities: A Study of Cross-writing as a Tool" paper presented by Mukulika Dattagupta at XIth CLAI Biennial International Conference on The Journey of Comparative Literature: India and Beyond, organized by the Department of Comparative Literature, Jadavpur University, Kolkata in January, 2013.
5. 'Technological Confinement of Digital Citizens versus Liberation of the Machine: Reading Alan Turing in Social Networking Sites' paper presented by Rianka Roy, project fellow of Social Networks, at Jadavpur University at the Conference to Commemorate the Birth Centenary of Alan Turing, Jadavpur University, December 19, 2012.
6. 'Opportunities for Privacy and Surveillance in Social Networking Sites', paper presented by Rianka Roy, project fellow of Social Networks, at the UGC-sponsored seminar on 'New Media: Applications and Opportunities', Department of Mass Communication & Videography, Rabinda Bharati University, March 21, 2013.

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

Organized by the School:

1. Conference to Commemorate the Birth Centenary of Alan Turing was jointly organized by School of Media, Communication and Culture, School of Mobile Computing and Communications, School of Cognitive Sciences, and Centre for Experiments in Social and Behavioural Sciences, Jadavpur University at Jadavpur University on December 18 and 19, 2012.
2. 'First Sandipta Chatterjee Memorial Lecture on 'Ethics and Media' by Sunanda K. Dutta-Ray, Vivekananda Hall, Jadavpur University, February 19, 2013.

Organized by Prof. Partha Pratim Basu

1. National seminar on "Pandit Madan Mohan Malaviya: The Thinker and the Leader", Department of International Relations in collaboration with Department of History, Jadavpur University, 19 November 2012.

Organized by Dr. Dalia Chakrabarti:

1. National Multi-Disciplinary Conference on 'Insecurities' at Darshan Bhavan, Jadavpur University, on March 4, 2013.

Organized by Prof. Nilanjana Gupta

1. Acted as Joint Convener, Alan Turing Centenary Conference, Jadavpur University, December 2012

Organized by 'New media for change: Multimedia stories on under-reported issues' (UPE project)

1. 4-day workshop on 'Camerawork for Multimedia Stories' with Chandan Goswami, renowned cinematographer held during February 23-26, 2013. Students had theoretical as well as hands-on training on various aspects of using camera for multimedia storytelling
2. 4-day workshop on 'Editing for Multimedia Stories' with Tuhinabha Majumdar, renowned editor held during March 6-9, 2013. Students learned theoretical aspects and had practical editing experience for multimedia storytelling
3. Presentation on 'Narrative Journalism' made by Jonathan Shainin, Senior Editor of *The Caravan* magazine on January 11, 2013. The presentation was followed by an interactive session with students.

Organized by Child Radio Reporter (A project in collaboration with the UNICEF):

1. Orientation workshop for the project was conducted by Shuktara Lal and Abhishek Das on August 18 at Vivekananda Hall, Jadavpur University for Community RadioJU.
2. Outdoor Workshop as part of outreach programme for the project was held in collaboration with various schools and Udvass, for Community RadioJU. Run by senior citizens, Udvass is an NGO that provides educational support to children from financially deprived families. The workshop was held at Dhakuria Lake area. Shuktara Lal, a drama therapist, made this workshop quite interesting for the children.
3. Special Workshop was conducted on January 19, 2013 at Vivekananda Hall.

E. Orientation Courses/ Refresher Courses Organized: (Name of the Teacher, Title of the Course, if any, Duration, Place):

_____ Imankalyan Lahiri, Member, Academic Committee, was the co-organizer of a Refresher Course titled 'State and Social Inequalities: Gender, Class and Caste' in the School of Women's Studies, Jadavpur University, 19 November to 10 December 2012.

4. B. Articles Published in Journals: (Name of the Teacher, Name of the Articles, Name of the Journal, Date of Publication, Volume):

Dr. Dalia Chakrabarti:

1. 'Applied Sociology: a Plea for Practicing Sociology in India' in *Jadavpur University Journal of Sociology*, vol. 6, February 2013.

Abhijit Roy

1. 'The Border Within: India and Manipur' in *Beyond Borders* ed. John Hutnyk. Pavement Books, London, July, 2012, pp.153-168.
2. 'A Reflexive Turn in Television Studies? Conjectures from South Asia', *Journal of South Asian History and Culture*, vol.2, issue 4, September, 2012. pp.636-648

5. Collaborative Programmes:

Dr. Dalia Chakrabarti:

1. As Coordinator of Career Oriented Programme in Applied Sociology, organized collaborative programmes with *Vikramshila* and *Parichiti*, both Kolkata-based NGOs, former working in educational sector and latter with domestic workers.

Social Network (UPE project)

2. Conference to Commemorate the Birth Centenary of Alan Turing was jointly organized by School of Media, Communication and Culture, School of Mobile Computing and Communications, School of Cognitive Sciences, and Centre for Experiments in Social and Behavioural Sciences, Jadavpur University at Jadavpur University on December 18 and 19, 2012.

Performance (UPE project)

1. 'Songs from Pakistan', in collaboration with Centre for Marxian Studies on December 10, 2012.
2. 'Birat Jatraa Pala Anusthan', in collaboration with the UGC, UPE-II project 'Pala Gaan' February 25-28, 2013.

New media for change: Multimedia stories on under-reported issues (UPE project)

1. National seminar titled 'Media for Change: The Asian Neighbourhood' organized in collaboration with Kolkata Literary Festival, Maulana Abul Kalam Azad Institute of Asian Studies and the National Library, January 11, 2013.

6. Major Achievements:

1. The School successfully started 10 (ten) research projects under the UGC-UPE scheme.

MOBILE COMPUTING & COMMUNICATION

Phone	: + 91-33-2414-6122
Int.	: 2457-2367
Director	: Prof. Nandini Mukherjee
Jt. Director	: Prof. Samiran Chattopadhyay

1. A. Courses Offered: M. Tech. in Distributed and Mobile Computing

Duration – 2 years

Intake – 15

B. Number of Faculty Members:

Number of posts sanctioned: Three (1 Associate Professor, 2 Assistant Professors). Two contractual positions are sanctioned by the University.

Currently two assistant professors are in position. One assistant professor is working on contractual basis. Additionally, faculty members of various departments (CSE, ETCE, IT etc.) of the university are involved with the teaching activities of the school.

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

- Wireless Sensor and Ad-hoc Networks
- Reliability of Mobile Computing Systems
- Location-based Services
- Mobile Wireless Communication, Mobility management, Call admission control, WiMAX handoff and Call Admission, Smart Antenna – Adaptive antenna, Optimization techniques.
- Distributed Object Computing
- Dependable Computing
- High Performance Computing on Distributed Systems including Grid

B. Major Research Project:

1. "Development of an Integrated Web Portal for Healthcare Management using Sensor Grid Technologies" funded by Department of Science and Technology (NRDMS and NSDI Division), Principal Investigator – Prof. Nandini Mukherjee, Co-Investigator – Dr. Sarbani Roy.

2. "Monitoring Air Pollution Using GIS and Sensor Technology" funded by UGC, Principal Investigator – Prof. Nandini Mukherjee, Co-Investigators – Dr. Sarbani Roy, Dr. Ajanta De Sarkar (BIT Mesra).
3. "Study and Design of Dependable Mobile Computing Systems", funded by UGC, Principal Investigator – Dr. Sarmistha Neogy
4. "Design of a Secure and Trusted Wireless Sensor Network for border and perimeter tracking", funded by UGC under UPE Phase II, Principal Investigator – Dr. Sarmistha Neogy.
5. "Performance based Resource Management and Load balancing in Cloud Environment", funded by UGC under the program "Mobile Computing and Innovative Applications" under UPE - Phase II, Principal Investigator – Sarbani Roy.
6. "FOSS-based Technology for smart handhelds", funded by UGC under UPE Phase II, Principal Investigator – Chandreyee Chowdhury.
7. "Call Admission Control for the Optimization of Resource Utilization for Mobile WiMAX and Integrated WiMAX/WiFi networks", funded by UGC under Mobile and Innovative Applications Programme under University with Potential for Excellence - Phase II scheme of Jadavpur University, Principal Investigator – Prof. Iti Saha Misra.
8. "Designing a SDR based Cognitive Radio Networking test-bed involving multiple WARP boards", funded by UGC under Mobile and Innovative Applications Programme under University with Potential for Excellence - Phase II scheme of Jadavpur University, Principal Investigator – Prof. Iti Saha Misra.

3. A. Invited Lectures Delivered/ Session Chaired:

1. Name of the Teacher: Prof. Nandini Mukherjee
 Type of participation: Invited Lecture
 Name of the Seminar/Conference: National Conference on High Performance Computing and Simulation
 Place: Berhampur, Odisha
 Year: January 18-19, 2013
2. Name of the Teacher: Prof. Iti Saha Misra
 Type of participation: Tutorial Talk on "Cognitive Radio Networks and some related research Challenges"
 Name of the Seminar/Conference: International Conference on Communication, Circuits and Systems (iC3S-2012)
 Place: School of Electronics Engineering, KIIT University, Bhubaneswar, Odisha
 Year: October 5, 2012
3. Name of the Teacher: Prof. Iti Saha Misra
 Type of participation: Session Chair
 Name of the Seminar/Conference: International Conference on Communication, Circuits and Systems (iC3S-2012)
 Place: School of Electronics Engineering, KIIT University, Bhubaneswar, Odisha
 Year: October , 2012
4. Name of the Teacher: Prof. Iti Saha Misra
 Type of participation: Session Chair
 Name of the Seminar/Conference: IEEE CODEC 2012

Place: -

Year: December 2012

5. Name of the Teacher: Dr. Sarbani Roy
Type of participation: Invited lecture on "Internet of Things"
Name of the Seminar/Conference: Winter School on "Recent Advances in Wireless and Mobile Computing and Communications"
Place: School of Mobile Computing and Communication, Jadavpur University
Year: January, 2013
5. Name of the Teacher: Dr. Sarbani Roy
Type of participation: Invited lecture on "Wireless Sensor Networks", in a one day
Name of the Seminar/Conference: Seminar organized by CSE dept of MCKV Institute of Engineering in association with CSI Student Chapter of MCKV Institute of Engineering.
Place: MCKV Institute of Engineering, Howrah
Year:
6. Name of the Teacher: Smt. Chandreyee Chowdhury
Type of participation: Invited lecture on "MANET Reliability"
Name of the Seminar/Conference: Winter School on "Recent Advances in Wireless and Mobile Computing and Communications"
Place: School of Mobile Computing and Communication, Jadavpur University
Year: January, 2013
7. Name of the Teacher: Smt. Chandreyee Chowdhury
Type of participation: Resource person
Name of the Seminar/Conference: UGC Refresher course in "Free Software Technologies"
Place: Computer Science and Engineering Dept., Jadavpur University
Year: November, 2013

B. Seminar/Workshop/Conference/Symposium Attended:

1. Dr. Sarmistha Neogy attended the 14th International Conference on Distributed Computing and Networking, January 3 – 6, 2013, Mumbai, India
2. Smt. Punyasha Chatterjee attended winter school on "Recent Advances in Wireless and Mobile Computing and Communications" at School of Mobile Computing and Communication from 14th to 19th January 2013
3. Smt. Arpita Sarkar attended winter school on "Recent Advances in Wireless and Mobile Computing and Communication" at School of Mobile Computing and Communication, J.U, January 14th -19th, 2013.
4. Smt. Arpita Sarkar attended workshop on "Embedded System Design: Recent Trends and Techniques" at Technology Campus, University of Calcutta, Salt Lake, March 8th -10th, 2013.

C. Seminar/Workshop/Conference/Symposium Organized:

1. A seminar on "Free Software" on 14th September 2012.
2. A 3-day workshop on "Software Freedom in Science and Engineering" from 8th November to 10th November jointly organised with Free Software Mancha, West Bengal.
3. Winter School on "Recent Advances in Wireless and Mobile Computing and Communications" from 14th to 19th January 2013.

D. Orientation Courses/Refresher Courses Attended:

1. Smt. Arpita Sarkar attended UCG Sponsored Refresher Course on "*Free Software Technologies*" organised by Computer Science and Engineering Department, Jadavpur University, November 26th – December 15th, 2012.
2. Smt. Punyasha Chatterjee attended 2 weeks course on Software Engineering : Quality & Design Issues organised by NITTTR, Kolkata.

E. Courses Organized:

1. Title of theCourse:Introduction to Linux and Linux Administration
Duration: 36 hours(one in summer and one in winter)
Place: SMCC, Salt Lake Campus
2. Title of theCourse: Network Administration
Duration: 36 hours(Summer only)
Place: SMCC, Salt Lake Campus
3. Title of theCourse: Web Designing using PHP and MySQL
Duration: 36 hours(one in summer and one in winter)
Place: SMCC, Salt Lake Campus

4. B. Articles Published/Accepted in Journals / Book Chapters:

1. Pampa Sadhukhan, Pradip Kumar Das, Sayantani Saha: Hybrid mobility management schemes integrating mobile IP and SIP for seamless invocation of services in All-IP network. Telecommunication Systems, Volume 52, No.4: 2027-2046 (2013)
2. Pampa Sadhukhan, Pradip Kumar Das, Nandini Mukherjee: A novel layer 3 based movement detection algorithm for improving the performance of mobile IP. Wireless Networks, Volume 19, No.4: 431-442 (2013)
3. S. Biswas, S. Neogy, P. Dey, "Mobility Based Checkpointing and Trust Based Recovery in MANET", International Journal of Wireless and Mobile Networks (IJWMN), ISSN: 0975-3834[Online]; 0975-4679 [Print], DOI : 10.5121/ijwmn.2012.4404, Vol. 4, No.4., August 2012, pp. 53 - 69
4. Subrata Dutta, Nandini Mukherjee, Monideepa Roy, Sarmistha Neogy, "Efficient Path Selection to Propagate Data Message for Optimizing the Energy Dissipation in WSN", accepted for publication by International Journal of Sensor Networks (IJSNet) (Inderscience Publishers).
5. Madhulina Sarkar, Triparna Mondal, Sarbani Roy, Nandini Mukherjee, "Resource requirement prediction using clone detection technique", To be published in Future Generation Computer Systems, Volume 29, Issue 4, June 2013, Pages 936-952, ISSN 0167-739X.
6. Sujoy Mistry, Dibyanshu Jaiswal, Sagar Virani, Arijit Mukherjee, Nandini Mukherjee, "An Architecture for Dynamic Web Service Provisioning Using Peer-to-Peer Networks". In: Distributed Computing and Internet Technology, Hota, Chittaranjan and Srimani, Pradip K. (Eds.), Lecture Notes in Computer Science (Springer Berlin / Heidelberg), Volume 7753 / 2913, 290-301, ISBN 978-3-642-36070-1.
7. Sarbani Roy and Nandini Mukherjee. "Dynamic topology construction of wireless sensor network using computational geometric approach". International Journal of Sensor Networks (Inderscience Publishers), volume 12, number 4, pp. 210-222.

8. Suman Sankar Bhunia, Soumen Das, Sarbani Roy, Nandini Mukherjee, "An approach to manage mobility of sensor nodes in Sensor-Grid infrastructure", Elsevier Procedia Technology, Volume 6, 2012, Pages 754-762, ISSN 2212-0173
9. Sarbani Roy and Nandini Mukherjee (2012). "Topology Construction of 3D Wireless Sensor Network". In Meghanathan, Natarajan and Nagamalai, Dhinakaran and Chaki, Nabendu (Eds.), Advances in Computing and Information Technology (pp. 533-542), Advances in Intelligent Systems and Computing series, vol 176, Springer Berlin Heidelberg. ISBN 978-3-642-31512-1.
10. Subrata Dutta, Nandini Mukherjee, Monideepa Roy, Sarmistha Neogy (2012). "Efficient Path Selection to Propagate Data Message for Optimizing the Energy Dissipation in WSN". In Meghanathan, Natarajan and Nagamalai, Dhinakaran and Chaki, Nabendu (Eds.), Advances in Computing and Information Technology (pp. 533-542), Advances in Intelligent Systems and Computing series, vol 176, Springer Berlin Heidelberg. ISBN 978-3-642-31512-1.
11. Saumini Kar, Ajanta De Sarkar, and Nandini Mukherjee (2012), "An Integrated Framework in Geographic Information System using Wireless Sensor Network", IJCA Proceedings on International Conference on Recent Advances and Future Trends in Information Technology (iRAFIT 2012) pages 13-18, April 2012. Published by Foundation of Computer Science, New York, USA
12. Budhaditya Bhattacharyya, Iti Saha Misra and Salil Kumar Sanyal, Novel Cyclic Prefix Selection to Improve Spectral Efficiency and Signal Strength in OFDM Systems, International Journal on Recent Trends in Engineering and Technology, Vol. 8, No. 2, Jan 2013.
13. Anindita Kundu, Prasun Chowdhury, Iti Saha Misra, Salil K. Sanyal , "QoS Aware Integrated Call Admission and Cognitive Channel Allocation Scheme for a Macro-Femto BWA Network", published in the AICIT Journal of Research Notes in Information Science. (ISSN: 2287-1942), vol. 11, pp. 47-59, Jan 2013.
14. Biswa Binayak Mangaraj, Iti Saha Misra and Salil K. Sanyal, "Application of bacteria foraging algorithm in designing log periodic dipole array for entire UHF TV spectrum" International Journal of RF and Microwave Computer-Aided Engineering, John Wiley and Sons, 19 JUN 2012, DOI: 10.1002/mmce.20661.
15. B. Bhattacharyya, Iti Saha Misra, S.K. Sanyal, "Analysis and Optimization of Error Performance of a WiMAX Transceiver using Novel Adaptive Cyclic Prefix Strategy under AWGN and Rayleigh Fading Scenario", Accepted (in press) Academy Publishers Journal of Networks, July, 2012.
16. V. Sharma, B. Bhattacharyya, Iti Saha Misra, S.K. Sanyal, "Development of a Multiplier based QPSK Modulator Test-bed and Integration with Agilent Vector Signal Analyzer (89600) for Performance Evaluation", International Journal of Computer Applications, October 2012.
17. Tamal Chakraborty, Iti Saha Misra and Salil K. Sanyal, "Proactive QoS Enhancement Technique for Efficient VoIP Performance over WLAN and Cognitive Radio Network," Journal of Networks, Academy Publication, vol. 7, no. 12, pp. 1925-1942, July 2012, doi:10.4304/jnw.7.12.1925-1942.
18. Tamal Chakraborty, Iti Saha Misra and Salil K. Sanyal, "QoS Enhancement Techniques for Efficient VoIP Performance in Cognitive Radio Network," accepted (in press) in International Journal of Computer Information Systems and Industrial Management Applications, July 2012.
19. Tamal Chakraborty, Iti Saha Misra and Salil K. Sanyal, "Simulation Design and Performance Analysis for VoIP in Cognitive Radio Networks," in International Journal of Computer Applications, vol. 62, no. 5, pp. 15-23, January 2013, doi: 10.5120/10076-4688.

20. Prasun Chowdhury, Anindita Kundu, Iti Saha Misra, Salil K Sanyal, "Load Balancing with Reduced Unnecessary Handoff in Energy Efficient Macro/Femto-cell based BWA Networks" International Journal of Wireless & Mobile Networks (IJWMN), Springer, Vol. 4, No. 3, pp. 105-118, June 2012.
21. Dulal Mandal, Iti Saha Misra, " An Inovative DSP Processor Based Heart activity Detection Technique", International Journal of Advanced computer Engineering and Architecture, December 2012 ISSN0: 22489452.
22. Atri Mukhopadhyay, Tamal Chakraborty, Iti Saha Misra, S.K. Sanyal, "Enhancing the QoS of a VoIP Call using an Adaptive Jitter Buffer Playout Algorithm with Variable Window Size", International Journal of Computer Networks & Communications (IJCNC), AIRCC (Springer), June 2012.
23. T. Chakraborty, A. Mukhopadhyay, S. Bhunia, I.S. Misra, S.K. Sanyal, "An Optimization Technique for Improved VoIP Performance over Wireless LAN", Journal of Networks, Academy Publisher, April 2012.
24. Prasun Chowdhury, Iti Saha Misra, S.K. Sanyal, "Cross Layer QoS Support Architecture with Integrated CAC and Scheduling Algorithms for WiMAX BWA Networks", International Journal of Advanced Computer Science and Applications (IJACSA), Vol. 3, No. 1, pp. 76-92, January 2012, Science And Information Organization, New York, USA.
25. Joyashree Bag, Rajanna K.M and Subir Kumar Sarkar, "Design and implementation of a Zig-bee enabled processor for RFID reader suitable for power efficient home/office automation", Euro Journal of Scientific Research, Accepted.
26. Abhishek Basu and Subir Kumar Sarkar, "On the Implementation of Robust Copyright protection Scheme Using visual Attention Model," Information Security Journal: A Global Perspective, Taylor & Francis, Vol: 22, pp 10-20, 2013.
27. Joyashree Bag and Subir Kumar Sarkar, "Development and VLSI implementation of a data security scheme for RFID system using programmable cellular automata" Int. J. Radio Frequency Identification Technology and Applications, Vol. 4, No. 2, 2013 .
28. A Jana, R S Halder, S S Singh, J K Sing and Subir Kumar Sarkar. "Design and Simulation of Hybrid SET-CMOS based Hysteresis Circuits: Schmitt Trigger, with their Realization", International Journal of Computer Application (IJCA), ISBN:973-93-80875-27-5h, 2013.
29. Bibhas Manna, Saheli Sarkhel, Ankush Ghosh, S S Singh and Subir Kumar Sarkar, "Dual Material Gate Nanoscale SON MOSFET: For Better Performance", International Journal of Computer Application (IJCA), ISBN: 973-93-80875-27-15h, 2013.
30. Sukhendu Kanrar, Samiran Chattopadhyay, Nabendu Chaki: A New Link Failure Resilient Priority Based Fair Mutual Exclusion Algorithm for Distributed Systems. Journal of Network and System Management 21(1), 1-24 (2013)
31. Debarshi Kumar Sanyal, Matangini Chattopadhyay, Samiran Chattopadhyay: Recovering a game model from an optimal channel access scheme for WLANs. Telecommunication Systems 52(2), 475-483 (2013)

C. Articles Published/Accepted in International Conferences:

1. S. Biswas, S. Neogy, "Checkpointing and recovery using node mobility among clusters in mobile ad hoc network", Proceedings of the Fourth International conference on Networks and Communicatins, NECOM, (2012), AISC 176, 2012, pp. 447-456, 2012.
2. Subrata Dutta, Nandini Mukherjee, Monideepa Roy and Sarmistha Neogy, "Efficient Path Selection to Propagate Data Message for Optimizing the Energy Dissipation in WSN" in the Proceedings of WiMone-2012, AISC 176, pp. 671 – 683, 2012.

3. S. Biswas, P. Dey, S. Neogy, "Trusted Checkpointing Based on Ant Colony Optimization in MANET", in the Proceedings of 3rd IEEE International Conference on Emerging Applications of Information Technology (EAIT 2012), India, pp. 433-439, ISBN: 978-1-4673-1825-9.
4. Arijita Banerjee, Sarmistha Neogy, Chandreyee Chowdhury, "Reputation based Trust Management System for MANET", in the Proceedings of Third International Conference on Emerging Applications of Information Technology (EAIT 2012), India, pp. 376-381.
5. Munshi Navid Anjum, Chandreyee Chowdhury, Sarmistha Neogy, "Securing Network using Mobile Agents", in the Proceedings of International Conference on Communications, Devices and Intelligent Systems (CODIS) 2012, India, pp. 274-277.
6. Chandreyee Chowdhury, Sarmistha Neogy, "Reputation Model of k-terminal Reliable MANET using Reliable Mobile Agents", in the Proceedings of Second International Workshop on Computing and Networking for Internet of Things (ComNet-IoT 2013), ICDCN 2013, India, pp. 21-26.
7. Pallavi Sanyal, Somasri Das, Sarbani Roy and Nandini Mukherjee, "A Study on Multiple Sink Routing", in the proceedings of IEEE 4th International Conference on Electronics Computer Technology (ICECT), Kanyakumari, India ISBN: 978-1-4673-1849-5, April 6-8, 2012
8. Pallavi Sanyal, Somasri Das, Suman Sankar Bhunia, Sarbani Roy, Nandini Mukherjee, "An Experience of Implementing IPv6 based Data Retrieval System for Wireless Sensor Networks", in the proceedings of International Conference on Recent Advances in Computing and Software Systems (RACSS), April 25-27, 2012, Chennai, India, pp.154-157. Available from IEEE Xplore digital library. ISBN: 978-1-4673-0255
9. Sushan Chakraborty, Madhulina Sarkar, Nandini Mukherjee, "Implementation of execution history in non-relational databases for feedback-guided job modeling", in Proceedings of the CUBE International Information Technology Conference, ACM, Pages 476-482, Pune, India, September 2012.
10. Suman Sankar Bhunia, Dilip Sikder, Sarbani Roy, Nandini Mukherjee (2012), "A Comparative Study on Routing schemes of IP based Wireless Sensor Network", in the proceedings of 9th International Conference on Wireless and Optical Communications Networks (WOCN), September 20-22, 2012, Indore, India, pp.1-5, Available from IEEE Xplore digital library, ISBN: 978-1-4673-1987-4.
11. Suman Sankar Bhunia, Sarbani Roy, Nandini Mukherjee, "On efficient health-care delivery using Sensor-Grid", CSI/IEEE International Conference on Emerging Applications of Information Technology (EAIT), 30 November -1December 2012 Kolkata, India.
12. Suman Sankar Bhunia, Soumen Das, Sarbani Roy, Nandini Mukherjee, "An approach to manage mobility of sensor nodes in Sensor-Grid infrastructure", in the proceedings of 2nd International Conference on Communication, Computing and Security (ICCCS-2012), October 6-8, 2012, Rourkela, India.
13. Suman Sankar Bhunia, Soumen Das, Sarbani Roy, Nandini Mukherjee, "Mobility management in IP based Wireless Sensor Network using TinyOS", 6th International Conference on Sensing Technology (ICST), December 18-21, 2012, Kolkata, India, pp.759-764. Available from IEEE Xplore digital library. ISBN:978-1-4673-2245-4.
14. Monideepa Roy, Pushpendu Kar, Nandini Mukherjee, "A Jini Based Implementation for Best Leader Node Selection in MANETs", Fourth International Conference on Networks and Communications, (NETCOM 2012), 22nd -23rd December, 2012, Chennai, LNEE

15. Debasree Das, Zeenat Rehena, Sarbani Roy, Nandini Mukherjee, "Multiple-sink placement strategies in wireless sensor networks", in the proceedings of fifth International Conference on Communication Systems and Networks (COMSNETS), January 7-10, 2013, pp.1-7. Available from IEEE Xplore digital library.
16. Zeenat Rehena, Sarbani Roy, Nandini Mukherjee, "Efficient Data Forwarding Techniques in Wireless Sensor Networks", In the Proceedings of 3rd IEEE International Advance Computing Conference (IACC-2013), February 22-23, 2013, Ghaziabad, India, Page 449-457, ISBN: 978-1-4673-4527-9
17. Zeenat Rehena, Debasree Das, Sarbani Roy, Nandini Mukherjee, "Handling Area Fault in Multiple-Sink Wireless Sensor Networks", In the Proceedings of 3rd IEEE International Advance Computing Conference (IACC-2013), February 22-23, 2013, Ghaziabad, India, Pages 458-464, ISBN: 978-1-4673-4527-9
18. Shilpi Bose, Chandra Das, Abirlal Chakraborty, Samiran Chattopadhyay: Effectiveness of Different Partition Based Clustering Algorithms for Estimation of Missing Values in Microarray Gene Expression Data. ACITY (2) 2012: 37-47
19. Saswati Mukherjee, Matangini Chattopadhyay, Ayan Lahiri, Samiran Chattopadhyay: An Efficient Binary Playfair Algorithm Using a 4x4 Playfair Key Matrix. CISIM 2012: 314-325

5. Major Achievements:

- i) Prof. Nandini Mukherjee is one of the recipients of NSF/IEEE-TCPP Early Adopter Awards for Curriculum Initiative on Parallel and Distributed Computing in Spring 2012.
- ii) Dr. Sarbani Roy received Fulbright-Nehru Senior Research Fellowship 2012-2013.
- iii) Dr. Sarbani Roy received UGC RAMAN Postdoctoral Fellowship 2012-2013.
- iv) Dr. Sarbani Roy received cLink (with the support of Erasmus Mundus Programme of the European Union) Postdoctoral Fellowship 2012-2013
- v) Prof. Iti Saha Misra obtained fund from IEEE HQ, USA, for conducting a project on "Low Cost Low Bandwidth Remote Virtual Educational Platform for underserved" and successfully completed the project under Special Interest Group for Humanitarian Technology, SIGHT, Acted as the coordinator of the SIGHT project.

NATURAL PRODUCTS STUDIES

Telefax	: +91 33 2414-6046
Int.	: 2457-2485
Director.	: Prof.Pulok K Mukherjee
Jt.Director	: Dr. Tuhinadri Sen

1. A. Courses Offered:

School of Natural Product Studies has been working to promote various aspects on natural product development through their excellent research skill for the benefit of society. Several students pursuing their PhD programme in the field of natural product research with fellowship from different organizations. Following research scholars are working for their PhD with fellowship from different funding agencies/organizations:

1. Dr. Kakali Mukherjee, Research Associate (RA), Indian Council of Medical Research (ICMR), Govt. of India.
2. Dr. Santanu Bhadra, Research Associate RA, Department of Biotechnology (DBT), Govt. of India.

3. Neelesh Nema, Senior Research Fellow (SRF) Council of Scientific and Industrial Research (CSIR), Govt. of India.
4. Souvik Bhattacharya, Junior Research Fellow (JRF), State Fellowship Programme, Govt of West Bengal.
5. Sushil Kumar Chaudhary, Junior Research Fellow JRF, UGC-Rajiv Gandhi National Fellowship, Govt. of India.
6. Manoj K. Dalai, Research Fellow (RF), Quality Improvement Programme-All India Council for Technical Education (QIP-AICTE), Govt. of India.
7. Sk. Milan Ahmed, Junior Research Fellow (JRF), UGC-Moulana Azad National Fellowship, Govt. of India.
8. Rajarshi Biswas, Senior Research Fellow (SRF), State Fellowship Programme, Govt of West Bengal.
9. Mrinmoy Nag, Project Fellow, Ulysses Research Foundation (URF), Kolkata.
10. Debayan Goswami, Research Fellow (RF), UGC-BSR fellowship Scheme science for meritorious students, Govt. of India.
11. Ranjit Harwansh, Junior Research Fellow (JRF), Department of Biotechnology (DBT), Govt. of India.
12. Amit Kar, SRF, National Medicinal Plants Board [NMPB], Govt. of India.
13. Shiv Bahadur, Senior Research Fellow (SRF), National Medicinal Plants Board [NMPB], Govt. of India.
14. Joydev Chanda, Project Fellow, UGC-UPE, Phase II, Govt. of India.

B. No. of Faculty Members:

1. Dr. Pulok K. Mukherjee, Director
2. Dr. Tuhinadri Sen, Joint Director

2. A. Departmental Research Activities: (Broad Areas)

Research Areas: Natural Products Research

The School of Natural Product Studies is moving forward for the betterment of the safety, efficacy and validation of natural products under Jadavpur University with its wider offerings to include:

- Screening of natural products
- Traditional Medicine inspired drug discovery and development
- Evaluation of natural products
- Value added herbal formulation development from the plants which are being used in Indian system of medicine
- Quality control and standardization of natural products' formulation
- Scientific validation of the systems including Ayurveda, Siddha, Unani and Homeopathy
- Phyto-chemical and phyto-pharmacological studies for lead finding in natural products from the great ancient treatise of India
- Herbal therapeutics - pharmacokinetics and utilization of herbal drugs

- Synergy in Herbal medicine
- Evidence based health care claim through traditional medicine

B. Major Research Project:

Ongoing Research Project in Session (2012-2013):

1. Name of the Teacher: Dr. Pulok K. Mukherjee
Name of the Project: Novel Drug Discovery and Development Approaches For The Pharmacological Immune Enhancers In Immune Compromised Individuals
Funding Agency: Dept. of Science & Technology (DST): India-Brazil-South Africa (IBSA) Trilateral Cooperation Program
Sanctioned Date: F. No:INT/IBSA/01-04/2010(i);
2. Name of the Teacher: Dr. Pulok K. Mukherjee
Name of the Project: "Synergistic interaction of anti-bacterial natural products from medicinal plants of North East India: An effort in developing multi drug resistance natural antibiotic leads"
Funding Agency: Department of Biotechnology(DBT) NER Division New Delhi
Sanctioned Date: F. No: BT /153/NE/TBP/2011
3. Name of the Teacher: Dr. Pulok K. Mukherjee
Name of the Project: Evaluation of safety profile of some Anti-diabetic plants used in Indian System of Medicine
Funding Agency: National Medicinal Plants Board [NMPB], Government of India, New Delhi
Sanctioned Date: F. No: Z. 18017/187/CSS/R&D/WB - 01/2009- 10
4. Name of the Teacher: Dr. Pulok K. Mukherjee
Name of the Project: "Development and Evaluation of natural product based formulation"
Funding Agency:Ulysses Research Foundation (URF)
Sanctioned Date: F. No URF/KLGS/I000003 dated 15/07/2011

3. A. Invited Lectures Delivered/Session Chaired:

International:

1. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.:International Forum on Discussion for Pharmacist Education Institute of Health Biosciences
Place:Tokushima, Japan
Duration: 2013
2. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.: 2nd AYUNS International Ayurvedic Conference on Modality of Ayurvedic and Traditional Medicine
Place: Dhaka, Bangladesh
Duration: 2013

National:

1. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.:National Seminar on Herbal Drug Research
Place: Uluberia, Kolkata
Duration: 2013
2. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Lecture
Name of the Seminar/Conference etc.:National Seminar on Indigenous Health & Medicine
System: Indian & South African Perspective
Place: Jadavpur University, Kolkata
Duration: 2012
3. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.:Industrial visit and invited lecture on Scientific Validation
of Natural Products – Development of Phyto pharmaceuticals and Nutraceuticals
Place: Albert David Limited, Kolkata
Duration: 2012
4. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.: 51st National Pharmacy Week
Place: Calcutta Institute of Pharmaceutical Technology & Allied Health Sciences, Uluberia
Duration: 2012
5. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.: HerboTech-2012 on “Approaches of nano technology in
herbal drug development”
Place: Sri Ramachandra University Chennai
Duration: 2012
6. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.: 81st Annual Meeting Society of Biological Chemists
Place: Kolkata
Duration: 2012
7. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.:AICTE, Quality Improvement Program
Place: Mesra, Ranchi
Duration: 2012
8. Name of the Teacher: Dr. Pulok K. Mukherjee
Type of Participation : Invited Speaker
Name of the Seminar/Conference etc.: AICTE- Quality Improvement Program
Place: Jadavpur University, Kolkata
Duration: 2012
9. Name of the Teacher: Dr. Pulok K. Mukherjee

Type of Participation : Chairperson
Name of the Seminar/Conference etc.: AICTE- Quality Improvement Program
Place: Guru Nanak Institute of Pharmaceutical Science & Technology, Kolkata
Duration: 2012

B. Seminar/Workshop/Conference/Symposium Attended:

Dr. Pulok K. Mukherjee

1. Shifting Paradigm for Validation of Traditional Medicine: Need and Reality. **Pulok K. Mukherjee**. "2nd AYUNS International Ayurvedic Conference on Modality of Ayurvedic and Traditional Medicine" at the University of Dhaka, Dhaka, Bangladesh, January 26, 2013.
2. Hyaluronidase, elastase and MMP-1 inhibition activity of standardized antiaging formulation. Neelesh K. Nema, Niladri Maity, Santanu Bhadra, Sushil K. Chaudhary, B. Sarkar, **Pulok K. Mukherjee**. "2nd AYUNS International Ayurvedic Conference on Modality of Ayurvedic and Traditional Medicine" at the University of Dhaka, Dhaka, Bangladesh, January 26, 2013.
3. Evaluation of hypotensive effect of *Acorus calamus* through inhibition of Angiotensin Converting Enzyme (ACE), Sushil K. Chaudhary, Neelesh K. Nema, Joydeb Chanda, B. P. Saha, **Pulok K. Mukherjee**. "2nd AYUNS International Ayurvedic Conference on Modality of Ayurvedic and Traditional Medicine" at the University of Dhaka, Dhaka, Bangladesh, January 26, 2013.
4. Standardization of Traditional Beautifying Formulation-Ubtan and its Anti-Oxidant Activity. Rajarshi Biswas, Amit Kar, Neelesh K. Nema, Sayan Biswas, **Pulok K. Mukherjee**. "2nd AYUNS International Ayurvedic Conference on Modality of Ayurvedic and Traditional Medicine" at the University of Dhaka, Dhaka, Bangladesh, January 26, 2013.
5. Hyaluronidase, Elastase and Matrix Metalloproteinase-1 Inhibitory Activity of Standardized Extract of *Piper betel* Linn. Leaf. Maity N, Nema NK, Chaudhary SK, Sarkar BK, **Mukherjee PK**. "12th Annual Oxford International Conference on the Science of Botanicals (ICSB)" at The University of Mississippi, Oxford, USA, April 15-18, 2013, *Planta Med*; 79 - OP10, DOI: 10.1055/s-0033-1336424.
6. Angiotensin Converting Enzyme (ACE) inhibition activity of standardized extract of the *Ocimum sanctum* L. leaves and its fractions. Chaudhary SK, Nema NK, Maity N, Bahadur S, **Mukherjee PK**. "12th Annual Oxford International Conference on the Science of Botanicals (ICSB)" at The University of Mississippi, Oxford, USA, April 15-18, 2013 (Accepted).
7. "Exploration of the medicinal plants of Ramayana" – A. Pal, PK Debnath and **Pulok K Mukherjee**, 100th Indian Science Congress [2013], Kolkata: Calcutta University, Kolkata, January 3-7, 2013.
8. Matrix metalloproteinase-1 Inhibition Activity of Standardized *Camellia sinensis* L. Extract. Neelesh K. Nema, Niladri Maity, Birendra K. Sarkar, **Pulok K. Mukherjee**. The 4th International Conference on Natural Products for Health and Beauty-"Future Trends in Health Products: Safety and Effectiveness for All" at Chiang Mai, Thailand, November 28-30, 2012; P.B-031, pp-174, ISBN: 978-974-672-745-7.
9. The phospholipid complex of mangiferin from *Mangifera Indica* improved the antioxidant potential as well as its bioavailability. Sauvik Bhattacharyya, Sk. Milan Ahmmed, B. P. Saha, **Pulok K Mukherjee**. The 4th International Conference on Natural Products for Health and Beauty-"Future Trends in Health Products: Safety and Effectiveness for All" at Chiang Mai, Thailand, November 28-30, 2012; O.A-010, pp-128, ISBN: 978-974-672-745-7.
10. Phytochemical standardization of *Cucumis sativus* L. fruit with special reference to Cucurbitacin E. Niladri Maity, Neelesh K. Nema, Birendra K. Sarkar, **Pulok K. Mukherjee**. The 4th International

Conference on Natural Products for Health and Beauty-“Future Trends in Health Products: Safety and Effectiveness for All” at Chiang Mai, Thailand, November 28-30, 2012; P.B-068, pp-394, ISBN: 978-974-672-745-7.

11. Angiotensin Converting Enzyme (ACE) inhibition activity from the essential oil of Indian spice *Coriandrum sativum* L. (Apiaceae). Chaudhary S K, Maity N, Nema N K, Dalai M K, Harwansh R K, Saha B P, **Mukherjee P K**. 3rd Biennial International Conference on New Developments in Drug Discovery from Natural Products and Traditional Medicines at National Institute of Pharmaceutical Education and Research, Mohali, Punjab, November 22- 24, 2012; OP-7.
12. Value added Delivery system of Herbal drugs for Enhancement of its Bioavailability. **Pulok K. Mukherjee**, Neelesh Nema. National Seminar HerboTech 2012 on “Approaches of nano technology in herbal drug development” at Sri Ramachandra University, November 20-22, 2012.
13. Natural Acetyl Cholinesterase Inhibitors for Alzheimer Disease. **Pulok K. Mukherjee**, Santanu Bhadra and Neelesh Nema. 81st Annual Meeting of Society of Biological Chemists (India) on “Chemistry & Biology, Two Weapons Against Disease” at Science City, Kolkata, West Bengal, November 8-11, 2012.
14. Acetylcholinesterase and butyrylcholinesterase inhibitory potential standardized extract of *Elettaria cardamomum* seeds using Linalool as a biomarker. Bhadra S, Dalai MK, Maity N, **Mukherjee PK**. *13th International Congress of Ethnopharmacology “ISE-2012”* Graz, Austria 02-06, September, 2012.
15. Angiotensin Converting Enzyme (ACE) inhibition activity from the essential oil of *Foeniculum vulgare* Mill (Apiaceae). Chaudhary S K, Maity N, Bhadra S, Saha B P, **Mukherjee P K**. *13th International Congress of Ethnopharmacology “ISE-2012”* Graz, Austria 02-06, September, 2012.
16. Assessment of anticholinesterase potential and HPLC standardization of *Cinnamomum tamala* leaves. Dalai MK, Bhadra S, Saha B P, **Mukherjee P K.**, Bandyopadhyay A. *13th International Congress of Ethnopharmacology “ISE-2012”*, Graz, Austria 02-06, September, 2012.
17. Development of RP-HPLC Method for The Estimation of α -Amyrin and Syringic Acid from Marigold Flower. Niladri Maity, Subrata Pandit, Neelesh K. Nema, Birendra K. Sarkar, **Pulok K. Mukherjee**. *International Congress on Natural Product Research (ICNPR-2012)* at New York, USA, July 28-August 01, 2012.

C. Seminar/Workshop/Conference/Symposium Organized During April 2012 to March 2013:
Organizing Secretary for the Golden Jubilee Celebration by Department of Pharmaceutical Technology, Jadavpur University [2013] for commemorating its glorious 50 years of academic excellence since 1963. The main focus of the golden jubilee celebration will include scientific seminar on “Research and development in drugs and pharmaceuticals: An industrial perspective” along with the cultural program by alumni and professionals during February 23-24, 2013.

D. Orientation Courses/Refresher Courses Attended:

Name of the Teacher	Name of the course Duration	Place	
Dr. Pulok K. Mukherjee	AICTE, Quality Improvement Program	Mesra, Ranchi	2012
Dr. Pulok K. Mukherjee	AICTE- Quality Improvement Program	Jadavpur University, Kolkata	2012
Dr. Pulok K. Mukherjee	AICTE- Quality Improvement Program	Guru Nanak Institute of Pharmaceutical Science &	2012

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

(Name of the Teacher-Name of the Book Published-Date of the Publication-Name of the Publisher)

Dr. Pulok K. Mukherjee "Traditional Medicines and Globalization–The Future of Ancient Systems of Medicine" -2013-Maven Publication, Kolkata, ISBN 978-81-926243-0-3

B. **Articles Published in Journals:** (Name of the Teacher, Title of The Paper, Name of the Journal, Volume, Year and Page:)

Dr. Pulok K. Mukherjee The Gallic Acid–Phospholipid Complex Improved the Antioxidant Potential of Gallic Acid by Enhancing Its Bioavailability AAPS PharmSciTech, 2013 DOI: 10.1208/s12249-013-9991-8

Dr. Pulok K. Mukherjee Angiotensin Converting Enzyme inhibition activity from the essential oils of Indian spices Natural Product Communications 2013, 8 (5), 671 - 672

Dr. Pulok K. Mukherjee Matrix Metalloproteinase, Hyaluronidase & Elastase Inhibitory Potential of Standardized extract of *Centella asiatica* (L.) Pharmaceutical Biology, 2013 DOI: 10.3109/13880209.2013.782505

Dr. Pulok K. Mukherjee Anti-herpes virus activities of *Achyranthes aspera*: An Indian ethnomedicine, and its triterpene acid Microbiological Research, 2012, DOI: 10.1016/j.micres.2012.11.002

Dr. Pulok K. Mukherjee Phytochemical and Therapeutic Potential of Cucumber. *Fitoterapia* Elsevier Science DOI: 10.1016/j.fitote. 2012.10.003

Dr. Pulok K. Mukherjee Changing scenario for promotion and development of Ayurveda - way forward. *Journal of Ethnopharmacology* 2012, 143, 424-434. Elsevier Science

Dr. Pulok K. Mukherjee Botanicals as medicinal food and their effects on drug metabolizing enzymes *Food Chem Toxicol.*, 2011, 49(12), 3142-53.

Dr. Pulok K. Mukherjee Standardized *Clitoria ternatea* Leaf Extract as Hyaluronidase, Elastase and Matrix-metalloproteinase-1 Inhibitor *Indian Journal of Pharmacology*, 2012. 2012, 44(5), 584-587. Med Know Publication

Dr. Pulok K. Mukherjee Determination of trace and heavy metals in some commonly used medicinal herbs in Ayurveda *Toxicology and Industrial Health* 2012, Sage Publication DOI: 10.1177/0748233712468015.

Dr. Pulok K. Mukherjee Anti-herpes virus activities of *Achyranthes aspera*: An Indian ethnomedicine, and its triterpene acid Microbiological Research, 2012, DOI: 10.1016/j.micres.2012.11.002

Dr. Pulok K. Mukherjee ACE inhibition activity of standardized extract and fractions of *Terminalia bellerica*. *Oriental Pharmacy & Experimental Medicine* 2012, 12, 273–277. Springer Publication

Dr. Pulok K. Mukherjee Estimation of capsaicin through scanning densitometry and evaluation of different varieties of capsicum in India *Natural Product Research* 2012, 26 (3), 216-222

Dr. Pulok K. Mukherjee Cytochrome P450 Inhibitory Potential of Selected Indian Spices-Possible Food Drug Interaction *Food Research International*, 2012, 45 (1), 69–74

Dr. Pulok K. Mukherjee Cholinesterase inhibition activity of *Marsilea quadrifolia* Linn. an edible leafy vegetable from West Bengal, India *Natural Product Research*, 2012, 26 (16) , 1519-1522

5. **Collaborative Programme:**

The school is working on the development of therapeutic agent through lead botanicals from natural resource and has been working with several projects from DST, UGC, AICTE and others. Several potential collaborations have been developed with reputed institutes/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 Jadavpur University:

Academic Collaboration:

- **Belo Horizonte, Brazil Faculty of Pharmacy – UFMG**, Av. Antônio Carlos, 6627 for Trilateral Cooperation in Science & Technology between India, Brazil & South Africa Project entitled “Novel Drug Discovery and Development approaches for the Pharmacological immune enhancers in immune compromised individuals”, Sanctioned from Department of Science and Technology, Government of India, New Delhi (Vide letter no INT/IBSA/01-04/2010(i); dated 18/05/2011)
- **South African Medical Research Council (MRC), Cape Town-** for Trilateral Cooperation in Science & Technology between India, Brazil & South Africa Project entitled “Novel Drug Discovery and Development approaches for the Pharmacological immune enhancers in immune compromised individuals”, Sanctioned from Department of Science and Technology, Government of India, New Delhi (Vide letter no INT/IBSA/01-04/2010(i); dated 18/05/2011)
- **Tokushima University, Japan** at the Institute of Health Bio Sciences, Faculty of Pharmaceutical Sciences, Tokushima University, Japan on development of natural resources of therapeutics for Allergy including an overview on the development of molecular mechanisms for activities related with the natural health products and dietary supplements.

Industrial Collaboration

- Ulysses Pharmaceuticals Pvt. Ltd, Cubicle No.1, SDF Block No. III, EPIP Pashamylaram, Palancheru (M), Medak Dist. AP-502319 on development of Quality Phytomedicines from natural resources.
- Parker Robison Pvt. Ltd. 1, Nimak Mahal Street, Kidderpore, Kolkata – 700043, for development of anti-ageing formulation from natural resources through tripartite collaboration between the industry, Jadavpur University and Department of Science and Technology, Govt. of India

6. Major Achievements:

- School of Natural Product Studies successfully published more than 14 research paper in peer reviewed journal in session year 2012-2013. Apart from that, more than 30 times lectures were delivered as invited speaker at different national and international conferences and symposium.
- The 12th International Congress of Ethnopharmacology on “Traditional Medicines and Globalization –The Future of Ancient Systems of Medicine” was organized by the School of Natural Product Studies, February 12-13, 2011, Kolkata, India organized by School of Natural Product Studies in association with Association of Pharmaceutical Teachers of India (APTI), Federation of Indian Herbal Industry [FIHI] and Parker Robinson Pvt. Ltd. Kolkata. More than 400 participants from different states of India. This conference mainly highlighted the trends in natural product research with various aspects of scientific validation and evaluation of herbal medicinal products for their promotion and development with an insight to the evaluation of natural products.
- School of Natural Product Studies, Jadavpur University has collaborated with Parker Robinson (P) Ltd for the project entitled “Anti aging & Anti wrinkle Formulation with Matrix Metalloproteinase Inhibitory Activity From Natural resources” supported by Department of Science & Technology,

Ministry of Science and Technology, Government of India [DST- DPRP], New Delhi, through File No- VI-D&P/287/08-09/TDT.

- Associate editor of Journal of Ethnopharmacology, Official Journal of the International Society for Ethnopharmacology, An Interdisciplinary Journal Devoted to Indigenous Drugs, published by Elsevier Science.
- Member of the Programme Advisory Committee (PAC), DST- on Plant Sciences for the Science & Engineering Research Board (SERB), Dept of Science & Technology, Govt of India, New Delhi, 2012.
- Chairman of Consortium Advisory Committees [CAC], ICAR- on the subproject Utilization of Weed Flora of Medicinal Value in Some Important Cropping Systems of Andhra Pradesh; National Agricultural Innovation Project, Indian Council of Agricultural Research, Govt of India, New Delhi, 2012.
- School of Natural Product Studies, Jadavpur University has signed MOU for joint research collaboration with Ulysses Research Foundation (URF) 125 Rash Behari Avenue, Kolkata-29, for the project entitled "development and evaluation of natural product based formulation" vide F. No URF/KLGS/I000003; dated 15/07/2011.

7. **Editor/Editorial Board Members of International/National Peer Reviewed Journals:**

- **Associate Editor, J. Ethnopharmacology**, International journal on botanical research, published by Elsevier Science, the Netherlands.
- **Guest Editor of Drug Information Journal**, special issue on "Natural Health Products", September, 2010 published from, Drug Information Association [DIA], Philadelphia, USA.
- **Member of the editorial board: Journal of Health Research**, an international journal in the field of health bio sciences, published from Chulalongkorn University, Bangkok, Thailand
- **Member of the Editorial Board of International Journal of Chinese Herbal Medicine (CHM)**, an International Journal published by Institute of Medicinal Plant Development (IMPLAD), Chinese Academy of Medical Sciences (CAMS), Beijing, P.R. China.
- **Member of the Editorial Board of J. Complementary and Integrative Medicine**, an International journal published by The Berkeley Electronic Press.
- **Member of the Editorial Board of Phytotherapy Research**, an International journal published by John Wiley & Sons Ltd., Chichester, Sussex, England, U.K.
- **Member of the Editorial Board of J. Oriental Pharmacy and Experimental Medicine [OPEM]**, an International journal published by Korean Institute of Oriental Pharmacy, South Korea.
- **Member of the Editorial Board of J. Natural Remedies [JNR]**, an Indian journal published by Natural Remedies, Bangalore.
- **Member of the Editorial Board of J. Pharmaceutical Research**, an Indian journal published by Krupanidhi College of Pharmacy, Bangalore.
- **Member of the Editorial Board of J. Pharmaceutical Education**, an Indian journal published by Association of Pharmaceutical Teachers of India [APTI].
- **Member of the Editorial Board of Indian Journal of Traditional Knowledge [IJTK]**, a journal published by National Institute of Science Communication & information Resources, CSIR, New Delhi.

- **Guest Editor of Indian Journal of Traditional Knowledge**, special issue on “Traditional knowledge of the Northeast India”, January, 2009 published from, National Institute of Science Communication and Information Resources [NISCAIR], CSIR, New Delhi.
- **Member of the Editorial Board of Medicinal and Aromatic Plant Abstracts [MAPA]**, a journal published by National Institute of Science Communication & information Resources, CSIR, New Delhi.

OCEANOGRAPHIC STUDIES

Phone : + 91-33-2867-1048
 Int. : 2457-2217
 Director. : Prof. Sugata Hazra

Courses Offered :

- M. Phil in Oceanography & Coastal Management (Four Semester Course) **in take 10**
- P.G. Diploma in Remote Sensing GIS (2 Semester Course) **in take 20**
- EDUSAT based Certificate courses on Remote Sensing and GIS with Indian Institute of Remote Sensing, Dehradun (One Semester) **in take 20 X2**
- Ph.D. level coursework
- Subject oriented courses to various Departments and Universities
- Ph.D. (2011-12) Awarded : 1 Submitted : 3 , Ongoing 16

Number of Faculty Members :

Sanctioned : 6 (P2, As.P1, Ast.P 3) Vacant : 3 (Asso.P1, Ast.P 2)
Emeritus Scientist : 2 Visiting Scientist : 2

Awards/ Service to Govt. / Expert Committees etc.

Prof.Sugata .Hazra

- Member of the National task Force for the “Bay of Bengal large Marine Ecosystem’
- Member of the UGC expert committee of the UGC-SAP programme for the , Department of Geology, University of Chennai
- Member of State Fluoride Task force
- Member (invited), State Coastal Management Authority

Prof.A.D.Mukherjee (Emeritus Professor)

- Member, Academic Committee, IGNOU
- Member, Search Committee for selection of Vice Chancellors of the Central University of Assam
- Chairperson, NAAC Peer Team

Dr. Tuhin Ghosh

Awarded **Erasmus Mundus Visiting Fellowship at University College of Dublin (UCD), Ireland**
 on Environmental Policy for Disaster Risk Reduction

Bijan Kumar Saha (Visiting Scientist)

- Chairman, Independent Expert Committee on Polymetallic Nodules Programme, Govt of India
- Chairman, Independent Expert Committee on National Center of Antarctic and Ocean Research, Govt. of India
- Member, Research Advisory Committee, Indian National Centre for Ocean Information Services, Ministry of Earth Sciences, Govt. of India
- Member, Board of Management, OASTC, Andhra University
- Member, Board of Management, OASTC, Tamil University
- Member, Board of Management, OASTC, Mangalore University
- Member, Research Council, Centre for Earth Science Studies, Govt of Kerala
- **Reviewer for UNESCO World Heritage (earth sciences) nomination**

Major Research Projects 2012-13

1. Name of the Project: Bio Optical Studies and Ecological Modelling in case II water of West Bengal Coast towards Hilsa Fishery Forecast (P.I. S.Hazra)
Year of Completion: 2017
Funding Agency: INCOIS, Gov. of India
Amount In Lakh: **69.3056** (Instruments Separate)
2. Name of the Project: Study of Carbon dynamics in Estuarine and near shore waters of Hooghly estuary (P.I. Prof.S.Hazra)
Year of Completion: 2015
Funding Agency: NRSC, Gov. of India
Amount In Lakh: **63.32**
3. Name of the Project: Book Writing " History of Earth Sciences" Volume VI under History of Science in India" (P.I. Prof.A,D.Mukherjee)
Year of Completion: 2014
Funding Agency: Indian Academy of Science
Amount In Lakh: **04**
4. Name of the Project: Book writing project on "Marine Geology of the Andaman Sea" (P.I.B.K.Saha)
Year of Completion: 2015
Funding Agency: Min.Earth.Sc.GOI
Amount In Lakh: **20**
5. Name of the Project: Geo Scientific studies in parts of West Bengal Coast and adjoining offshore- Inundation, vulnerability & coastal hazard preparedness (P.I. B. K.Saha)
Year of Completion: 2015
Funding Agency: Ministry of Earth Sciences
Amount In Lakh: **27**
6. Name of the Project: Sundarban Studies (Joint/SOSJU)
Year of Completion: 2013
Funding Agency: DST PURSE
Amount In Lakh: **6**
7. Name of the Project: 'Assessing Health, Livelihoods, Ecosystem Services and Poverty Alleviation in Populous Deltas (Bangladesh Sundarban)'. (P.I.Tuhin Ghosh)

Year of Completion: 2015
Funding Agency: EU: UK-Bangladesh-India consortium
Amount In Lakh:(GBP 90K)

8. Name of the Project: Schematic Natural Hazards Zonation of Bihar using Geoinformatics' (P.I.Tuhin Ghosh)
Year of Completion: 2013
Funding Agency: **(IGC)**, London School of Economics, **UK**.
Amount In Lakh:(GBP 23.20K)
9. Name of the Project: Environmental Health and Climate Change Adaptation in Sundarbans'. (P.I.Tuhin Ghosh)
Year of Completion: 2014
Funding Agency: In collaboration with *Save the Children-India*, funded by **SIDA** (Swedish International Development Agency)
Amount In Lakh: **6**

Publication:

1. Chanda, A, Akhand, A, Manna, S, Dutta, S, **Hazra, S**, Das, I, Dadhwal, VK (2013): Characterizing spatial and seasonal variability of carbon dioxide and water vapour fluxes above a tropical mixed mangrove forest canopy, India, Journal of Earth System Science, doi: 10.1007/s12040-013-0288-9
2. Chanda, A, Akhand, A, Manna, S, Dutta, S, Das, I & **Hazra, S** (2013) 'Spatial variability of atmosphere-biosphere CO₂ and H₂O exchange in selected sites of Indian Sundarbans during summer', Tropical Ecology, vol. 54, no. 2, pp. 167-178.
3. Akhand, A, Chanda, A, Dutta, S, Manna, S, **Sanyal, P**, **Hazra, S**, Rao, KH & Dadhwal, VK (2012) 'Dual character of Sundarban estuary as a source and sink of CO₂ during summer: an investigation of spatial dynamics', Environmental Monitoring and Assessment, DOI 10.1007/s10661-012-3042-x.
4. Akhand, A, Chanda, A, Dutta, S, **Hazra, S** & **Sanyal, P** 2012, 'Comparative study of heavy metals in selected mangroves of Sundarban ecosystem, India', Journal of Environmental Biology, vol. 33, no. pp. 1045-1049.
5. **Sanyal Pranabes** (2012), 'Climate Change Affecting Wildlife with Special Reference to West Bengal. In. "Coping With Disasters", Ed. Desai Mamata and Sandip Haldar, pp 269-276. Abhijit Publications, New Delhi-110002.
6. Chowdhury Soumyajit, **Pranabes Sanyal**, Joydeep Mukherjee and **Sugata Hazra** (2012). 'Fiddler Crabs: Trophic Interactions in Intertidal Marshes With Special Reference to the Mangrove Ecosystems of Indian Sundarbans'. J. Interacademia, ol. 15(4) : 739-747.
7. Sen S., **Sen G.**, Tewary B.K. Methodological Validation of Quality of Life Questionnaire for Coal Mining Groups-Indian Scenario (2012) Social Indicators Research, 105 (3), pp. 367-386. ISSN: 03038300
8. Dutta D., Sharma S., **Sen G.K.**, Kannan B.A.M., Venkateswarlu S., Gairola R.M., Das J., Viswanathan G. An Artificial Neural Network based approach for estimation of rain intensity from spectral moments of a Doppler Weather Radar (2011) Advances in Space Research, 47 (11), pp. 1949-1957. ISSN: 02731177
9. Mukhopadhyay A.D. (2012) Coping with Disasters: in 'Coping with Disasters Mitigation strategy, Preventive action and Recovery (Ed. M.Das & S.Haldar), P 9-23 , Associate Publishers, New Delhi

10. S.S. Ray, D. Das, **T. Ghosh**, & A. K.Ghosh. (2012). The Levels of Zinc and Molybdenum in Hair and Food Grain in Areas of High and Low Incidence of Esophageal Cancer: A Comparative Study. *Global Journal of Health Science*, Canadian Center of Science and Education Vol. 4, No. 4. pp. 168-175. (ISSN 1916-9736; E-ISSN 1916-9744).
11. **Ghosh, T.** (2012). Sustainable Coastal Tourism: Problems and Management Options. *Journal of Geography and Geology*, Canadian Center of Science and Education, Vol. 4, No. 1, pp. 163-169. (ISSN 1916-9779; E-ISSN 1916-9787)
12. Hajra, R., Mitra, R. and **Ghosh, T.** (2012). Impact of Gangasagar Mela on Sustainability of Sagar Island, West Bengal, India. *International Journal of Research in Chemistry and Environment*, Vol. 2, Issue 1, pp. 140-144 [ISSN 2248-9649].
13. **Ghosh, T.** (2011). Coastal Tourism: Opportunity and Sustainability. *Journal of Sustainable Development*, Canadian Center of Science and Education, Vol. 4, No. 6, pp. 67-71. (ISSN 1913-9063; E-ISSN 1913-9071)
14. Bardhan, S., **Ghosh, T.**, Mondal, S., Roy, A and Mallick, S. (2011). The Holocene Sea level Changes as Evident from Palaeontological Proxy Data: a Case Study from *Glauconome sculpta* (Bivalvia) Along the Eastern Coast of India. Vol. 20, Issue 1, pp. 92-97. *Palaeoworld*, Elsevier. (ISSN: 1871174X)
15. Baruah, Santanu, Baruah, Saurabh, Bora, P. K, Duarah R., Kalita, A., Biswas, R., Gogoi, N, and **Kayal, J. R.**, 2012. Moment Magnitude (MW) and Local Magnitude (ML) Relationship for Earthquakes in Northeast India, *Pure and Appl Geophys*, DOI 10.1007/s00024-012-0465-9.
16. Ghosal, A., Ghosh, Uma and **Kayal, J. R.**, 2012. A detailed b-value and fractal dimension study of the March 1999 Chamoli earthquake (M_s 6.6) aftershock sequence in western Himalaya, *Geomat Nat Haz and Risk*, DOI:10.1080/19475705.2011.627380.
17. **Kayal, J. R.**, Arefiev, S. S., Baruah, S., Hazarika, D., Gogoi, N., Gautam, J. L., Baruah, Santanu, Dorbath, C., Tatevossian, R., 2012. Large and great earthquakes in the Shillong plateau–Assam valley area of Northeast India Region: Pop-up and transverse tectonics, *Tectonophysics*, 532–535 (2012) 186–192.
18. **Kayal, J. R.**, Das, Vishal and Ghosh, Uma, 2012. An Appraisal of the 2001 Bhuj earthquake (Mw 7.7) tectonic model in SCR India: Fractal dimension and b-value mapping, *Pure and Appl. Geophys.*, DOI: 10.1007/s00024-012-0503-7.
19. Roy, Sohini, Ghosh, Uma, **Hazra, S. and Kayal, J. R.**, 2012. Fractal dimension and b-value mapping Before and After the 2004 mega thrust earthquake in the Andaman-Sumatra subduction zone., *Geophysical Monogram Series*, DOI: 10.1029/2011GM001072.
20. Baruah, Santanu, Baruah, Saurabh and **Kayal, J. R.**, 2013. State of Tectonic Stress in Northeast India and Adjoining South Asia Region: An Appraisal, **Bull Seism Soc. Am.**, 103(2A), 894–910, doi: 10.1785/0120110354.
21. Singh, A. P., Ghosh Roy, I. and **Kayal, J. R.**, 2013. Seismic source characteristics in Kachchh and Saurashtra regions of western India: b-value and fractal dimension mapping of aftershock sequences. **Nat Haz.** (submitted).
22. Santanu Barua, Barua, Saurabh, Tatevossian, R. and **Kayal, J. R.**, 2013. The September 2011 Sikkim Himalaya Earthquake Mw 6.9: A Transverse Tectonics at Deeper Depth, *J. Asian earth Sci.* (submitted).
23. **Kayal, J. R.** (and Santanu Baruah, Saurabh Baruah, J L Gautam, S S Arefiev, and R. Tatevossian) 2012. The September 2011 Sikkim deeper Centroid Mw 6.9 Earthquake: Role of Transverse Faults in Eastern Himalaya, **Deep Continental Studies in India**, 21 (2), 13-16

24. **Mukherjee A.D.** , 2013. Introduction to History of Science in India: Chapter 21 & 22 , p 167-186

Books & Monographs: (2012-13)

1. Indian Sundarban Delta : A Vision : WWF, India_New Delhi:2012//awsassets.wwfindia.org
Danda A.A.,Srikanthan G., Ghosh A., Bandyopadhyay J., **Hazra S**
2. Climate Change Adaptation in Coastal Regions of West Bengal : WWF India, New Delhi.: 2012 //awsassets.wwfindia.org

Sugata Hazra

Seminar Presentation/Invited lectures/Visits

1. Organized a National Seminar on Climate Change: Impact, Adaptation and Mitigation with several Govt. and Non Govt. organization, Science City, 2012
2. Organisation of national Seminar on "Remote Sensing and Environment" sponsored by DST,Govt.of West Bengal in progress

Prof.A.D.Mukherjee (Emeritus Professor)

1. Prof. S.Subba Rao memorial lecture on " Prospects of Indian Mineral Resources and Planning" in the south east Asian Econom,is GeologistatAssociation's conference held at Anhra University, February 2013
2. Key note address on "Climate Change" in the International conference on " climate Change" organized by NCE Bengal in collaboration withLiberty Institute of Delhi and the Heartland Institute ,USA, 21 December, 2012
3. UGC expert lecture on "Disaster management" at Vidyasagar University,25th. March,2013
4. Key note address on " Economic and Political thinking of Swami Vivekananda " in the national Seminar on "Swami Vivekanada's economic and Political thoughts',NCE Bengal,19th.April, 2013
5. Invited lecture on " Sir Ashutosh as a Reformer of Education".NCE Bengal lecture commemorating 150th.birth anniversary of Sir Ashutosh, 30.4.2013

Dr.G.K.Sen

1. Nonlinear interaction of Tide in Estuarine Sundarban, 2012, **G.K.Sen**, M.Chatterjee,S. Chakraborty,
Accepted for Oral Presentation in 11th Biennial Conference of Pan Ocean Remote Sensing Conference (PORSEC)-2012 , 05-09 November 2012, Kochi, Kerala.
2. Tidal Variations in the Sundarbans Estuarine System, India , 2012M.Chatterjee,D. Shankar, , **G.K.Sen**, P.Sanyal, D.Sundar, G.S. Michael,
Accepted for Oral Presentation in 11th Biennial Conference of Pan Ocean Remote Sensing Conference (PORSEC)-2012 , 05-09 November 2012, Kochi, Kerala.
3. Variations of Salinity in the Sundarbans Estuarine System, India, **G.K.Sen**, P.Sanyal, D. Sundar, G.S. Michael , M.Chatterjee, D.Shankar,
Accepted for Oral Presentation in 11th Biennial Conference of Pan Ocean Remote Sensing Conference (PORSEC)-2012 , 05-09 November 2012, Kochi, Kerala.

Dr.Tuhin Ghosh

1. (Resource Person) Training programme on 'Incident Response System' in Uttarakhand organized by LBSNAA, sponsored by NDMA, Govt. of India
2. (Invited Speaker) State Level Workshop on *Sharing the Lessons Learnt and Good Practices* organized by Save the Children-India

Visits

- National Oceanographic Centre and University of Southampton, UK. (June-2013)
- Bangladesh University of Engineering & Technology (May-2012 and November-2012)

Prof. S. Hazra

1. Participated in 'Ecosystem for Life : India-Bangladesh Initiative' , organized by the IUCN , at Kathmandu , March 2013
2. Participated in 'Ecosystem for Life : India-Bangladesh Initiative' , organized by the IUCN , at Bangkok , March 2013
3. Participated in India Bangladesh dialogue on Migration , Spawning and anthropogenic interferences on Hilsa fishery in Bangladesh & India, Organized by the IUCN at Kolkata, 2013
4. Delivered invited lecture on 'Environmental Flow: Concept and methodology ' at Sivtosh Mukherjee Science Center, May 2013
5. Delivered invited lecture on Application of Remote Sensing in Disaster Management, and Satellite Oceanography at Academic Staff College, North Bengal University ,March 2013

Prof. Bijan Kumr Saha

Invited lectures

- Geological appraisal of territorial sea of the country towards integrated coastal zone management and its approach. Delivered at national conference on integrated coastal zone management " ICZM-12", Berhampur University
- Integrated coastal zone management and its approach along east coast of India——Need for geological understanding. Delivered at Department of Ocean Engineering and Naval Architecture, IIT (Kharagpur)

STUDIES IN ENVIRONMENTAL RADIATION AND ARCHAEOLOGICAL SCIENCES

Phone : +91-33-2414-6666

Int. : 2457-2527

Director : Prof.

Argha Deb

Jt. Director : Prof. Nupur Dasgupta

1. **A. Courses Offered:** Nil
 - 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. Archaeology based History of Science
 - iv. Study of material culture of Bengal in the ancient and medieval periods with the application of the methodologies of archaeology, history and scientific analyses.
 2. **B. Major Research Projects :**
 Project Title: Real Time Radon Monitoring for Seismic Surveillance
 Funding Agency: UGC(Under UPE Scheme)

Project Title: Study of alpha radioactivity in drinking water and soil in arsenic prone areas of West Bengal and development of radioactive map

Funding Agency: West Bengal Pollution Control Board

3. A. Invited Lectures Delivered and Sessions Chaired:

1. Prof. N. Dasgupta was invited to the 17th Biennial Conference and International Seminar of Bangladesh History Association, held in Khulna, Bangladesh between 22nd and 23rd Nov., 2012.
 - a) Chaired Session on *Samaj, Sanskritik Itihas O Aitihya*.
 - b) Delivered lecture on "Texts and Practices: Alternative Paradigms in Health and Medicine in the 19th and 20th Century Bengal."
2. Prof. N. Dasgupta delivered invited talk on "In Search of the Public and Public Opinion in Ancient India: Beginnings of a Historical Discourse" in UGC – sponsored National Seminar on *History of Public Opinion in India* organised by the New Alipore College Calcutta and Paschim Banga Itihas Samsad on 25th and 26th Sept., 2012
3. Invited to the UGC sponsored State – level Seminar on *Historical Consciousness in Late Nineteenth & Early Twentieth Century Bengal: Some Reflections*, organised by the Khudiram Bose Central College, Calcutta and the Women's Christian College on 22nd and 23rd Feb, 2012. Delivered a paper on "The Professional Bengali Historian and the beginning of a new phase of History writing".

3. B. Seminar/Workshop/Conference/Symposium Attended:

- (i) "19th Paschimbanga Rajjya Bigyan o Prajukti Congress" **State Conference on Rajjya Bigyan and Prajukti Congress**, Organized by W.B Govt's Science & Technology Department along with Saha Institute of Nuclear Physics, Kolkata, West Bengal, during 28th Feb-29th Feb 2012. "Paschim bange paniyo jol e tejoscriotar anusandhan" Dipak Ghosh, Argha Deb, Kanchan Kumar Patra, Jayita Ghosh, Rosalima Sengupta, Sunil Maiti, Alpa Kar and Sadananda Harh.

3. D. Refresher Course Lectures:

- Prof. N. Dasgupta delivered two Lectures for the 23rd UGC Refresher Course held on *India and her Neighbours* by the Department of History, University of Calcutta on 29th December, 2012: "Cultural Links across Asia: India, China and West Asian Experiences in the Evolution of Knowledge and Related Practices".
- Prof. N. Dasgupta delivered two lectures for the 6th UGC Refresher Course organised by the Department of History, Jadavpur University:
- a) "Looking at the Regional, Demographic and Political conceptualisation of India in the Classical Greek Accounts".
 - b) "Popular Element in Polity: Reflections in some early Indian Creative Literature."
- Prof. A. Deb delivered a lecture on "**Nuclear Radiation: Impact on Human Body**" for the UGC-ASC Refresher Course organised by the School of Bio-Science & Engineering, Jadavpur University during 11th June to 30th June, 2012.

4. A. Edited Book:

Exploring the Green Horizon: Aspects of Environmental History, edited jointly with Amit Bhattacharyya and Rup Kumar Barman, Kolkata, Setu Prakashani, Jan 2013. (ISBN: 978 – 93 – 80677 – 38-5)

4. B. Articles Published in Journals etc.

1. Multifractality of radon concentration fluctuation in earthquake related signal Ghosh, D., Deb, A., Dutta, S., Sengupta, R., Samanta, S. ***Fractals* 20 (1) , 2012,33-39**
2. "Prachin Bharate Yuga Vivartaner Dharaye Ancholik Itihash Charcha: Ekti Paryalochana", (Bengali article) Presidential address for the Section on Ancient Indian History at the Conference held in Jan 2012, *Itihas Anusandhan*, number 27, Paschim Banga Itihash Samsad, Jan. 2013, pp. 34 – 57. (ISBN: 978-81-910874-3-7)
3. "Beginnings of Material Science and ceramics Manufacturing in Harappan society: Integrative Knowledge and Uniting Forces of culture", in *Cultural Unity of India*, Sabyasachi Bhattacharya, (ed.), , Kolkata, Jan. 2013, 75 – 107. (ISBN: 978-93-81325-20-9)
4. "Texts and Mentalities: Discourse on body and health in Some Early Indian Treatises", in *Revisiting Early India through Epigraphy and other Texts. Essays in Memory of D.C. Sircar*, Suchandra Ghosh et al, Kolkata, R.N. Bhattacharya, 2013. (ISBN: 9788187661733)"Epigraphs: Signatures of Literary and Durable Visual Communication Mode in Early India", in *The First Horizons*, (ed.), Debarchana Sarkar, Jadavpur University Press, Kolkata, in press.

WATER RESOURCES ENGINEERING

Phone : + 91-33-2414-6161
 Int. : 2457-2485
 Director. : Prof. Asis Mazumdar

1. A. Courses Offered: (Name of the course, Duration of the course, No. of students enrolled)

Programme	Level of Study	Total no. of Students	Year of Commencement
4 Semester M.E. (Water Resources and Hydraulic Engineering)	Postgraduate	18 per year [GATE: 10(Gen)+ 3(SC/ST) Sponsored: 5]	2003 (Approved by AICTE in 2003)
6 Semester M.E. (Water Resources and Hydraulic Engineering)	Postgraduate	18 per year [All Self Sponsored]	2011 (Approved by AICTE in 2010)
Ph.D. (Engineering /Science)	Doctoral	15 (at present)	1987

B. Number of Faculty Members : Five (5) : 2 (Permanent) + 3 (Contractual)

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 insitu 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
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

B. Major Research Project/Consultancy Project:

1. Departmental/Individual: Departmental
 Name of the Project: Energy-efficient, community-based water and wastewater treatment systems for deployment in India (Eco-India), INDIA – EU research project
 Funding Agency: Department of Science & Technology, Govt. of India in collaboration with EU

2. Departmental/Individual: Departmental
Name of the Project: Development of Cost Effective Technology for Recharging in Over-exploited Groundwater Resources in Rural Areas in West Bengal
Funding Agency: Department of Science & Technology (Water Technology Initiative), Govt. of India
3. Departmental/Individual: Departmental
Name of the Project: Hydro-geological Study of Sub-surface Water Flow/Storage Characteristics for Creation of Sustainable Source on Rainfed River for Semi-Arid and Fluoride affected Blocks in Connection with comprehensive Water Security Plan for Damodar & Kangsabati River under Purulia Districts
Funding Agency: Public Health Engineering Department, Govt. of West Bengal
4. Departmental/Individual: Departmental
Name of the Project: School of Water Resources Engineering has also been entrusted by the National River Conservation Directorate under Ministry of Environment & Forest, Govt. of India for evaluation of DPRs for Projects sponsored by National Ganga River Basin Authority (NGRBA) related to National River Conservation Plan for the eastern and north eastern states
Funding Agency: NGRBA, MoEF, Govt. of India
5. Departmental/Individual: Departmental
Name of the Project: Kolkata Metropolitan Development Authority and Kolkata Metropolitan Water & Sanitation Authority have been entrusted to School of Water Resources Engineering for undertaking Third Party Monitoring & Inspection for the project works carried out under National River Conservation Directorate and NGRBA.
Funding Agency: KMDA, KMW&SA under NGRBA
6. Departmental/Individual: Departmental
Name of the Project: Effect of Climate Change on Water Resources of Damodar and Subarnarekha River Basins in Eastern India
Funding Agency: Ministry of Water Resources, Govt. of India
7. Departmental/Individual: Departmental
Name of the Project: Comprehensive Plan of Water Management and Plantation Programme to Project the RCGC as ECO-SYSTEM ICON in Kolkata Metro City
Funding Agency: Royal Calcutta Golf Club, Kolkata
8. Departmental/Individual: Departmental
Name of the Project: Evaluation of Desilting of River Ichamati along International Border with Bangladesh implemented during XIth Plan from Bornaberia (120 km) to B.S.F. Bridge at Kalanchi (140.5 km) in P.S. Gaighata, Dist. North 24-Parganas
Funding Agency: Irrigation & Waterways Directorate, Govt. of West Bengal
9. Departmental/Individual: Departmental
Name of the Project: Project Benefit Assessment after Up-gradation of Sewer System (Part) in the City of Kolkata under JNNURM
Funding Agency: Kolkata Municipal Corporation
10. Departmental/Individual: Departmental
Name of the Project: Hydrodynamic Study for the River Front Development under KMC
Funding Agency: Kolkata Municipal Corporation
11. Departmental/Individual: Departmental

Name of the Project: Hydrogeological studies for groundwater development and management strategies in one block each in Kaimur (Adhaura) and Nawada (Meskor) districts, Bihar
Funding Agency: Tata Consulting Engineers Limited (TCE), Kolkata

12. Departmental/Individual: Departmental

Name of the Project: Analysis of sediment transport mechanism in connection to reservoir life and dam safety under "Energy, Environment and Climate Change"
Funding Agency: University with Potential for Excellence (UPE) – Phase II" , UGC

13. Departmental/Individual: Departmental

Name of the Project: Surge Analysis of Clear Water Rising Main from Water Treatment Plant at Jalukbari to Main Reservoir at Kamakhya Hill Top
Funding Agency: Dia Consultants & Engineers (P) Ltd.

3. A. Invited Lecturers Delivered/Sessions Chaired:

Name of the Teacher: Prof. Asis Mazumdar

Type of Participation: Audit Officers

Name of the Seminar Conference etc: Environmental aspects, policy, legislation and system management in connection to Environmental Systems & Climate Change in the course on "Environmental Audit" Kolkata.

Place: Regional Training Institute, Kolkata

Duration: 11th March to 13th March, 2013

Name of the Teacher: Prof. Arunabha Majumder

Type of Participation: Audit Officers

Name of the Seminar Conference etc: Environmental aspects, policy, legislation and system management in connection to Water Quality & Wastewater Management in the course on "Environmental Audit" Kolkata.

Place: Regional Training Institute, Kolkata

Duration: 11th March to 13th March, 2013

Name of the Teacher: Dr. Pankaj Kumar Roy

Type of Participation: Audit Officers

Name of the Seminar Conference etc: Environmental aspects, policy, legislation and system management in connection to water resources and soil in the course on "Environmental Audit" Kolkata.

Place: Regional Training Institute, Kolkata

Duration: 11th March to 13th March, 2013

B. Seminar/Workshop/Conference/Symposium Attended:

1. Name of the Teacher: P.K.Roy & A.Mazumdar

Name of the Paper Presented (if any): Groundwater recharging structures and natural treatment processes in semi-arid, rock undulating terrain in Purulia district, West Bengal, India
Name of the Seminar: International Conference on Particle Separation, IWApp. 289-291.

Place: Berlin, Germany

Duration: 18-20th June, 2012

2. Name of the Teacher: Subhasish DasRajib DasAsis Mazumdar

Name of the Paper Presented (if any): Vortex flow field past a cylinder under clear water scour regime

Name of the Seminar: International Conference on Applications of Fluid Engineering (CAFÉ-2012)

Place: G. L. Bajaj Inst. of Tech. & Management, Greater Noida, UP

Duration: 20-22 September, 2012

3. Name of the Teacher: Subhasish Das Rajib Das Asis Mazumdar
Name of the Paper Presented (if any): Clear water scour around two eccentric circular and square cylinders
Name of the Seminar: National Conference on Sustainable Development through Innovative Research in Science and Technology sponsored by DST-Purse Programme
Place: Jadavpur University
Duration: 28-29 September, 2012
4. Name of the Teacher: P.K.Roy & A.Mazumdar
Name of the Paper Presented (if any):Hydraulic Transient Analysis of SHP : A MCDM for Optimum Penstock Design
Name of the Seminar: IWMSID 2013
Place: IIT, Bhubaneswar
Duration: 7-9th Feb, 2013
5. Name of the Teacher: Subhasish Das Rajib Das Asis Mazumdar
Name of the Paper Presented (if any):Turbulent Flow Field in Clear Water Equilibrium Scour Hole at Triangular Pier
Name of the Seminar: IWMSID 2013
Place: IIT, Bhubaneswar
Duration: 8-9th Feb, 2013
6. Name of the Teacher: P.K.Roy, & A.Mazumdar,
Name of the Paper Presented (if any):Fuzzy Logic based Blade Angle Control of Kaplan Turbine for a Hydro Power Project
Name of the Seminar: ICERTSD, 2013
Place: BESU, Shibpur
Duration: 7-8th Feb, 2013

D. Orientation Courses/Refresher Courses Attended:

Name of the Teacher: Shri Subhasish Das

Title of the Course: Three Weeks Training Programme on "Remote Sensing and GIS Applications in Natural Resource Management" organized by the National Bureau of Soil Survey & Land Use Planning, ICAR (sponsored by National Natural Resource Management System - ISRO)

Place: NBSS&LUP, ICAR, Regional Centre, Salt Lake, Kolkata - 700091

Duration: 21st November – 11th December, 2012

Name of the Teacher: Dr. Rajib Das

Title of the Course: Three Weeks Training Programme on "Remote Sensing and GIS Applications in Natural Resource Management" organized by the National Bureau of Soil Survey & Land Use Planning, ICAR (sponsored by National Natural Resource Management System - ISRO)

Place: NBSS&LUP, ICAR, Regional Centre, Salt Lake, Kolkata - 700091

Duration: 21st November – 11th December, 2012

4. A. Books/Monographs etc. Published:

Name of the Teacher: Dr. Pankaj Kumar Roy & Prof. Asis Mazumdar
Name of the Book: Published a text book titled "Water Resources Engineering (3rd Edition)": ISBN 9780273785910.
Name of the Publisher: APH Publisher

Name of the Teacher: Dr. Pankaj Kumar Roy & Prof. Asis Mazumdar
Name of the Book: "A Review of Environmental Impact Assessment of a Hydropower Project": ISBN 978-3-659-34074-1.
Name of the Publisher: LAP LAMBERT Academic Publisher, AV Akademikerverlag GmbH & Co. KG, Germany.

4. B. Articles Published in Journals:

International

1. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: P. Adhikary
Name of the Article: Intelligent Identification of Operation Zones of Sanitary Drainage System for High Buildings; The Application of The Fuzzy Logic
Name of the Journal: International Journal of Advanced Scientific and Technical Research
Volume and Page No.: Vol. 6 (2), pp. 521-528
Date of Publication: Dec, 2012
2. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: S. Chakraborty
Name of the Article: Selection of Penstock Material for Small Hydro Power Project – A Fuzzy Logic Approach
Name of the Journal: International Journal of Advanced Scientific and Technical Research
Volume and Page No.: Vol. 6 (2), pp. 141-151
Date of Publication: Dec, 2012
3. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: M. Biswas Roy, N.R. Samal
Name of the Article: Water Quality Monitoring by Multivariate Statistical Methods in the Alpine Lake of Darjeeling Himalaya, India
Name of the Journal: International Journal of Advanced Scientific and Technical Research
Volume and Page No.: Vol. 6 (2), pp. 115-131
Date of Publication: Dec, 2012
4. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: P. Adhikary
Name of the Article: Multi Criteria Decision Analysis of manpower shift scheduling for cost effective Hydro Power Generation
Name of the Journal: Journal of Emerging Trends in Engineering and Development
Volume and Page No.: Vol. 7 (2), pp. 116-127
Date of Publication: Nov, 2012
5. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: S. Pal, A. Majumder,
Name of the Article: Development of Technological Options for Treatability Study of Chrome Tannery Effluent

Name of the Journal: International Journal of Advanced Scientific and Technical Research
Volume and Page No.: Vol. 6 (2), pp. 529-540
Date of Publication: Dec, 2012

6. Name of the Teacher: S. Das, A. Mazumdar
Co-authors: B. Mukherjee
Name of the Article: Comparison of Pipeline Hydraulic Analysis between EPANET and HAMMER Software, India
Name of the Journal: International Journal of Advanced Scientific and Technical Research
Volume and Page No.: Vol. 4 (6), 52-87.
Date of Publication: June, 2012
7. Name of the Teacher: R. Das, S. Das, A. Mazumdar
Co-authors: P. Khwairakpam, S. Sinha Ray,
Name of the Article: Scour hole characteristics around a vertical pier under clear water scour conditions
Name of the Journal: ARPN Journal of Engineering and Applied Sciences
Volume and Page No.: Vol. 7 (6), pp. 649-654.
Date of Publication: June, 2012
8. Name of the Teacher: P. K. Roy, A. Mazumdar
Co-authors: K. Majumdar, M. Pal
Name of the Article: Prediction of Surface Water Availability for Gumti River Basin and its Reservoir at Hydro Power Plant, Tripura, India
Name of the Journal: International Journal of Applied Engineering Research
Volume and Page No.: Vol. 6 (15), pp. 1811-1818.
Date of Publication: Sept, 2012
9. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: K. Majumdar, S. Datta
Name of the Article: Design Criteria of Micro Hydro Power Plant at Gumti River, Tripura, India
Name of the Journal: International Journal of Engineering Studies
Volume and Page No.: Vol. 4 (3), pp. 231-236.
Date of Publication: Sept, 2012
10. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: G. Banerjee, A. Kar, A. Majumdar, M. Biswas Roy
Name of the Article: A Study to ascertain the Optimum Yield from Groundwater Source in the Eastern Part of Kolkata Municipal Corporation Area in West Bengal, India
Name of the Journal: European Journal of Sustainable Development
Volume and Page No.: Vol. 1 (2), pp. 97-112.
Date of Publication: June, 2012
11. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: M. Biswas Roy, M. Majumdar, N.R. Samal
Name of the Article: Impact of Land Use and Aquatic Plants on the Water Quality of the Sub-Tropical Alpine Wetlands in India: A Case Study Using Neuro-Genetic Models
Name of the Journal: Journal of Water Resource and Protection,
Volume and Page No.: Vol. 4, pp. 576-589.

Date of Publication: Aug, 2012

12. Name of the Teacher: P.K. Roy
Co-authors: T.K.Debnath, M.Pal, S.Datta
Name of the Article:A Critical Study on quantity and quality of Municipal Solid Wastes of Agartala, Tripura, India
Name of the Journal: International Journal of Applied Engineering Research
Volume and Page No.: 7(9), pp. 1035-1041
Date of Publication: Oct, 2012
13. Name of the Teacher: S. Das, A. Mazumdar
Co-authors: S. Ghosh
Name of the Article:Flow field past a Triangular Pier due to Sediment Transportation at Clear Water Equilibrium Scour Hole
Name of the Journal: Journal of Emerging Trends in Engineering and Development,
Volume and Page No.: Vol. 7 (2), pp. 380-388.
Date of Publication: Nov, 2012
14. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: M. Biswas Roy,N.R. Samal
Name of the Article: Socio-economic Valuations of Wetland based Occupations of Lower Gangetic Basin through Participatory Approach
Name of the Journal: Environment and Natural Resources Research
Volume and Page No.: Vol. 2(4), pp. 30-44.
Date of Publication: Sept, 2012
15. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: P. Adhikary
Name of the Article: Safe and Efficient Control of Hydro Power Plant by Fuzzy Logic
Name of the Journal: International Journal of Engineering Science & Advanced Technology
Volume and Page No.: Vol. 2(5), pp. 1270-1277.
Date of Publication: Sept-Oct, 2012
16. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: None
Name of the Article: Water Resources in India under Changed Climate Scenario
Name of the Journal: International Journal of Engineering Research & Applications
Volume and Page No.: Vol. 3(1), pp. 954-961.
Date of Publication: Sept-Oct, 2012
17. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: J. Debbarman
Name of the Article: Assessment of Dynamic Groundwater Potential of Agartala Municipality Area
Name of the Journal:Journal of Emerging Trends in Engineering and Development,
Volume and Page No.: Vol. 1 (3), pp. 220-231
Date of Publication: Jan, 2013
18. Name of the Teacher: S. Das,R. Das,A. Mazumdar
Co-authors: None
Name of the Article: Circulation characteristics of horseshoe vortex in the scour region around circular piers

Name of the Journal: Water Science and Engineering (ISSN: 1674-2370)
Volume and Page No.: Vol 6 No. 1, pp 59-77,
Date of Publication: Jan, 2013

19. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: P. Adhikary
Name of the Article: Selection of Hydro-Turbine Blade Material: Application of Fuzzy (MCDA)
Name of the Journal: International Journal of Engineering Research and Applications **IF:0.68**
Volume and Page No.: 3 (1), pp. 426-430
Date of Publication: Jan, 2013
20. Name of the Teacher: D. Roy,
Co-authors: S. Begam, S. Ghosh, S. Jana
Name of the Article: Calibration And Validation Of HEC-HMS Model for A River Basin in Eastern India
Name of the Journal: ARPN Journal of Engineering and Applied Sciences, Asian Research Publishing Network (ARPN)
Volume and Page No.: Vol. 8, No. 1, p.33-49
Date of Publication: Jan, 2013
21. Name of the Teacher: S. Das, R. Das, A. Mazumdar
Co-authors: R. Midya
Name of the Article: A Study of Wake Vortex in the Scour Region around a Circular Pier
Name of the Journal: International Journal of Fluid Mechanics Research (ISSN: 1064-2277)
Volume and Page No.: Vol 40, No. 1, pp 42-59
Date of Publication: Mar, 2013
22. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: P. Adhikary
Name of the Article: Indian SHP Project Planning and Development: A Review of Decision Support System Tools
Name of the Journal: International Journal of Engineering Research & Technology (IJERT)
Volume and Page No.: 2 (Issue 6), pp. 1386-1391
Date of Publication: Mar, 2013
23. Name of the Teacher: P.K. Roy, A. Mazumdar
Co-authors: P. Adhikary, S. Kundu,
Name of the Article: Fuzzy Logic based user friendly Pico-Hydro Power generation for decentralized rural electrification
Name of the Journal: International Journal of Engineering Trends & Technology
Volume and Page No.: 4 (Issue 4), pp. 507-511
Date of Publication: Mar, 2013
24. Name of the Teacher: S. Das, R. Das, A. Mazumdar
Co-authors: —
Name of the Article: Comparison of Characteristics of Horseshoe Vortex at Circular and Square Piers
Name of the Journal: Research Journal of Applied Sciences, Engineering and Technology

Volume and Page No.:Accepted

Date of Publication: Mar, 2013

25. Name of the Teacher: S. Das, A. Mazumdar
Co-authors: B. Mukherjee
Name of the Article: Analysis of hammer head at increased flow demand in pipe networks; A case study
Name of the Journal: International Review of Mechanical Engineering
Volume and Page No.:Accepted
Date of Publication: Mar, 2013
26. Name of the Teacher: S. Das, A. Mazumdar
Co-authors: H. Jaman
Name of the Article: Modification of Hunter's Curve in the Perspective of Water Conservation
Name of the Journal: Journal of Pipeline Systems - Engineering and Practice, ASCE
Volume and Page No.:Accepted
Date of Publication: Mar, 2013

National

1. Name of the Teacher: S. Das,R. Das,A. Mazumdar
Co-authors:P. Khwairakpam
Name of the Article: A Study of Local Scour Around Circular Piers
Name of the Journal: River Behaviour and Control, Journal of River Research Institute, WB
Volume and Page No.: Vol. 31 (2010-2011)pp. 11-22
Date of Publication: May, 2012
2. Name of the Teacher: S. Das,R. Das,A. Mazumdar
Co-authors: None
Name of the Article: A Plan for the Enhancement of Backwater for Irrigation for Sustainable Livelihood of Rural Communities at Magrahat Basin, South 24 Parganas, West Bengal
Name of the Journal: Reason- A Technical Magazine (ISSN-2277-1654)
Volume and Page No.: XI, pp.29-38
Date of Publication: 2012
3. Name of the Teacher: S. Das,R. Das,A. Mazumdar
Co-authors: D. Mondal
Name of the Article: Variation of Bed Shear Stresses in Clear Water Equilibrium Scour Holes at Single Piers
Name of the Journal: Journal of River Research Institute West Bengal (ISSN: 0970-9258)
Volume and Page No.:Vol. 32, pp 1-12
Date of Publication: (2011-2012)

6. Major Achievements:

Prof. (Dr.) Asis Mazumdar

- i. External Member of the Ph.D. Committee of the Department of Civil Engineering, BESUs, West Bengal.
- ii. Expert of Common to all Ph.D Committees of Schools of Bengal Engineering & Science University, Shibpur and Department of Marine Science, University of Calcutta.

- iii. Invited as an External Examiner to conduct Viva-Voce Examination of the M. Tech Theses of the Water Resources & Hydraulic Engineering specialization of the Department of Civil Engineering, IIT Kharagpur on 27th April, 2012. '
- iv. Invited to attend the DST, Govt. of India meeting on 28th April, and 14th June, 2012 for India-EU Water Projects along with EU Partners at IISC, Bangalore and at Andhra University, Visakhapatnam respectively.
- v. Invited to deliver a Key Note Address in the 2nd Workshop on Indian Water Management in 21st Century and Symposium on Sustainable Infrastructure Development during 7th-9th Feb, 2013 at IIT Bhubaneswar.
- vi. Invited to deliver the inaugural Address in the National Seminar on Benchmarking Environmental Initiatives on Environmental Management on 26th March, 2013 in the Department of Business Management, University of Calcutta sponsored by UGC.
- vii. Appointed as an Examiner to examine the dissertation entitled "Eco-hydrology and Biogeochemistry of Mahanadi Estuarine Ecosystem in the NE Coast of Bay of Bengal, Orissa on 17th August, 2012 at Behrampur University, Orissa.
- viii. Acted as a Panel Expert by the Union Public Service Commission for the Engineering Services Examinations to Recruiting Engineering Posts.
- ix. Acted as a Member of Expert Committee regarding setting up of "Waste to Energy" Projects of Siliguri Municipal Corporation.
- x. Member, Arsenic Task Force, West Bengal.
- xi. Member, National Executive Committee, Indian Plumbing Association.
- xii. Member of the Association of Gokhale Girls' School and College.
- xiii. Member of the committee by the Hon'ble Governor, West Bengal for the study of the proposal for installation of 15 MLD capacity Desalination Plant at Digha for Supply of Water to Ramnagar-I & II Block, Dist. Purba Medinipur under Department of Public Health Engineering, Govt. of West Bengal
- xiv. Member of the committee by the Hon'ble Governor, West Bengal for Implementation of West Bengal Piped Water Supply Project (Purulia) funded under JICA under Department of Public Health Engineering, Govt. of West Bengal.
- xv. Member of Arsenic Task Force, KMC.

Prof. Arunabha Majumder

- i. Member, PAC, Water Technology Initiative, DST, Govt. of India
- ii. Member, Arsenic Task Force, West Bengal.
- iii. Member, Fluoride Task Force, West Bengal
- iv. Member, Sanitation Task Force, West Bengal.
- v. Member, PAC, SEED, DST, Govt. of India
- vi. Member, Governing Body of Institute of Ecological Studies and Wetland Management (IESWM)
- vii. Expert member for preparation Sewerage and Sewage Treatment CPHEEO, Ministry of Urban Development, Govt. of India.
- viii. Visited Japan during May-June 2012 in connection with the preparation of Manual on Sewerage and Sewage Treatment.
- ix. Attended national conference on "Arsenic Problem Mitigation: Challenges" at----- Hyderabad organized by Sacci Water on 15-16 January.

- x. Project Monitoring Committee member of India -EU Research Project, DST.
- xi. Keynote address in the National Conference on Water Management, Groundwater, IPHE, Groundwater Centre on 19th January, 2012.
- xii. Member of Arsenic Task Force, KMC.
- xiii. Seminar on "Abatement of Pollution of River Ganga" organized by IPHE (India), Kolkata.
- xiv. CSE Seminar 4-5th March, 2013, Delhi, Wastewater Management, Speech.

Dr. Pankaj Kumar Roy

- i. Invited as an External Expert to conduct the General Viva-Voce Examination for the final year students of Mechanical Engineering branch of Swami Vivekananda Institute of Science & Technology, Sonarpur, Kolkata on 11th May, 2012.
- ii. Invited to attend the DST, Govt. of India meeting on 28th April, 2012 for India-EU Water Projects along with EU Partners at Andhra University, Visakhapatnam.

WOMEN'S STUDIES

Phone : +91-33-2414-6531
 Int. : 2457-2445
 Director. : Prof. Samita Sen
 Jt. Director : Dr. Paromita Chakravarti

- 1. **A. Courses Offered:** (Name of the Course, Duration of Courses, No. of Students Enrolled)
 - i) **Name of the Course:** M. Phil. in Women's Studies
 Duration of the Course: 2 years
 No. of Students: 15
 - ii) **Name of the Course: Extra Departmental Course (ED Course) in Women's Studies** (offered to BA students of Jadavpur University from July 2010)
 Duration of the Course: 6 months (3rd semester) (Teaching period: July-Dec. 2012)
 6 months (4th semester) (Teaching period: Jan- June 2013)
 Number of Students: 7 (3rd semester) + 29 (4th semester)
- B. Number of Faculty / Staff Members:** 1 (Emeritus Professor), 1 (Professor in Women's Studies), 1 (Joint Director, Honorary, Associate Professor), 1 (Assistant Professor in Women's Studies), 1 Visiting Professor, 1 Senior Research Officer, 1 Publication Officer, 1 Senior Technical Assistant, 1 Senior Assistant, 1 Peon.

Staff (Contractual) Employed for the Year 2012-2013: 1 M.Phil Coordinator, 2 Project Coordinators, 1 Assistant Librarian, 1 Programme and Documentation Assistant, 1 Computer Operator, 1 Peon, 1 District Coordinator for the Childline Project, 3 Research Assistants, 1 Project fellow, 4 NET/JRF Fellow, 1 Junior Research Fellow under State Government Departmental Fellowship Scheme

Staff Profile

PROFESSOR SAMITA SEN - Director

Seminars, Workshop Attended /Delivered Lectures/Paper Presented

National :

- Delivered the Keynote Address at the UGC-sponsored National Seminar on *Indian Women: Post-Colonial Context*, organized by the Department of History, Bidhan Chandra College, Asansol, in collaboration with Bangiya Saksharata Prasara Samity.

Invited Lectures

International

- Invited as a keynote speaker to speak on *Domesticity and Women's Work in South Asia: A Case study of Domestic Workers in Contemporary Kolkata* at "International Conference of the International Society for Cultural History", Luneville, France, 2 - 6 July 2012

National

- Seminar, "Impact on Rural Women of Their Choice of Fuel Material for Cooking", Anita Banerjee Memorial Hall, Jadavpur University, 10 April, 2012.
- Workshop, "The Challenges of Institutionalizing Women's Studies", Women's Studies Programme, Jawaharlal Nehru University, 19-20 April 2012.
- Paper presented on "Archives and Feminist Research", Research Centre for Women's Studies, *Feminist Archiving: Possibilities and Challenges*, S.N.D.T Women's University, 13-14 December, 2012.
- Presented a paper on "An Overview of Women and Work in India", National Workshop, *Gender and Labour*, The School of Rural Development, Tata Institute of Social Sciences, Tuljapur, 16-17 December, 2012.
- Presented a paper on "Gender Method Course 007" at a conference organized by Women's Studies Centre, Delhi University, 6-7 March 2013.
- Presented a paper on "The debate that never was: Gender and class in Indian scholarship" at *Feminist Inscriptions in Social Theory* organized by CSSSC.

Other Activities:

National

- Attended a Review Committee Meeting, Women's Studies Curriculum, TISS Campus, Mumbai, 14 January, 2013.
- Attended a roundtable meeting, in view of the growing sexual violence against women-especially in the cities, Indian Council of Social Science Research, 1 February 2013.
- A number of undergraduate women's colleges in Kolkata, for example, Bethune, Lady Brabourne, Basanti Devi have inaugurated women's studies centre under the UGC's Eleventh Plan. The School is in constant and close touch with all these centres. Professor Samita Sen, Director of the School is a member of the following bodies:
- Advisory Committee of the Women's Studies Centre at Bethune College
- Advisory Committee for Women's Studies Centre, Manipur University
- Member, Curriculum Development Committee, Women's Studies, UGC

- Member, Advisory Committee, Women's Studies Centre, Gauhati University
- Member, Advisory Committee, Women's Studies Centre, Nagaland University
- Member, Advisory Committee, Women's Studies Centre, TISS
- Member, Academic Council of RGNIYD, Sriperumbudur, Tamil Nadu
- Member, Executive Committee, IAWS
- Member, External, UGC committee on Capacity Building for Women Managers in Higher Education
- Member, Book Selection Committee, National Library, Calcutta
- Member, Committee on Gender Sensitization against Sexual Harassment, CSSSC
- Member, External, M. Phil Committee, Department of South and South East Asian Studies, Calcutta University
- Member, Calcutta Mahanirvana Research Group
- Member, Expert Committee of the MPhil and PhD programme of Women's Studies conducted by Indira Gandhi National Open University and the Centre for Women in Developing Societies

Publications:

Chapters in Books

- "Feminisms and the Politics of Gender: A History of the Indian Women's Movements" (with Nandita Dhawan) in Samita Sen, Nirmala Banerjee and Nandita Dhawan (eds.) *Mapping the Field: Gender Relations in Contemporary India*, Volumes 1 & 2, Readings in Gender Studies I, Stree, Calcutta, 2011 & 2012
- "A Parliament of Women: Dystopia in Nineteenth-century Bengali imagination" in Barnita Bagchi (ed.) *The Politics of the (Im)Possible: Utopia and Dystopia Reconsidered*, Sage Publications, New Delhi, 2012
- "Crossing Communities: Religious Conversion, Rights in Marriage, and Personal Law" in Flavia Agnes and Shoba Venkatesh Ghosh (eds) *Negotiating Spaces: Legal Domains, Gender Concerns and Community Constructs*, Oxford University Press, New Delhi, 2012.

Research Work Supervised:

PhD (Ongoing)

- Panchali Ray (JRF), Registration: August 2007
Title: *Working Lives: Women at Home and at Work*
- Nandita Dhawan, Registration: August 2007,
Title: *Appropriating Feminism? Mainstreaming of the Hindutva Rhetoric*
- Anindita Ghosh, Registration: August 2007
Title: *Pashchimbanga Panchayate Mahila Janopratidinidhi – Abasthan o Abhigyata*
- Jayeeta Bagchi, Registration: January 2008 (Joint supervisor)
Title: *Sukhalata Rao: Her Works and Her Times*
- Tanusree Kundu, Registration: July 2011 (Joint Supervisor)
Title: *Re-conceptualising Hijra Identity: A Study of Communities in Contemporary South Bengal*
- Srijita Chakraborty, Registration: July 2011
Title: *Women Labourers in the Tea Plantations of Assam, 1859-1931*

Thesis Submitted/ Completed

- Sudarshana Sen who registered in July 2007 and did her PhD on *Gender and Generation: A Study on the Pattern of Responses of Two Generations of Anglo-Indian Women Living During and After 1970s in Kolkata* has received her degree.
- Tumpa Mukherjee who registered in August 2007 and did her PhD on *Women Police and Community Policing: A Comparative Study of Kolkata Police with West Bengal Police (District of North and South 24 Parganas)* has defended her thesis.
- Aparna Bandyopadhyay who registered in December 2007 and did her PhD on *Desire and Defiance: A Study of Bengali Women in Love, 1870 - 1920*, has received her degree.

DR. PAROMITA CHAKRAVARTI - Joint Director (Honorary)

Seminars, Workshop Attended /Delivered Lectures/Paper Presented:

National

- Delivered talk on "Women and Media" at the Film Appreciation Course organized by Chalachitra Shatabarsha Bhavan in July 2012.
- Delivered talk on "Gender in Popular Culture" in workshop on *Positive Discrimination*, organized by Brahmananda Keshab Chandra College.
- Delivered talk at State Level workshop on *Declining Sex Ratio Trends in West Bengal*, 26 September 2012.
- Delivered talk on "Creating Collective Voices at State Level Consultation" on *Strengthening Civil Society: Voices on Urban Poverty in West Bengal*, 8 November 2012.
- Presented *Queer Spaces in Fiction and Film* in Refresher Course entitled "Fictional Spaces: Texts and Contexts" in Department of English, JU, 03-22 December 2012.
- Chaired students'session in international seminar entitled "Feminist Inscriptions in Social Theory" organized by Centre for Studies in Social Sciences, Calcutta, 22-24 February 2013.
- Delivered talk on *Gender Violence and Mental Health* organized by Mon Foundation, 03 March 2013.

Organising Seminars/Conferences/Workshops :

National

- Conducted Gender Awareness and Sensitisation programme in Shyamaprasad College on 21 August 2012.

Publications

Papers Published in Peer Reviewed Journals (international)

- "Reading Intertextualities in Rituparno Ghosh's *The Last Lear*: The Politics of Recanonization" in *The Shakespearean International Yearbook*, Vol. 12: Special Section, Shakespeare in India ed. Tom Bishop and Alexander C.Y. Huang, Special Editor, Sukanta Chaudhuri, Ashgate, UK, 2012, pp.115-129.

Chapters in Books

- "Interrogating 'Bollywood Shakespeare': Reading Rituporno Ghosh's *The Last Lear*" in Craig Dionne and Parmita Kapadia eds *Bollywood Shakespeare* (Palgrave, forthcoming)

- “Fantasies of Transformation: Education, Neoliberal Self-making and Bollywood” in Nandini Gooptu ed. *Enterprise Cultures* (Routledge, forthcoming)

Supervision of Research:

Ph D (In Progress)

- Piku Dasgupta, Registration: July 2011 (Joint Supervisor)
Title: *Surrogate Motherhood in India: Dilemmas of Law and Ethics*
- Priti Ghatani (Joint Supervisor), Registration: July 2011
Title: *The Role of Women in Gorkhaland Movement post 1986*
- Humaira Chowdhury, Registration: May 2012
Title: *Another Side of the Hidden Half: (Un)Veiling the Politics of Agency and Resistance among Contemporary Muslim Women in Urban India*

Thesis Submitted

- Sreerupa Sengupta (SYLFF PhD Fellow), Registration: April 2009
Title: *HIV and AIDS Media Campaigns in India: Exploring Issues of Gender and Rights*

NANDITA DHAWAN -Assistant Professor

Seminars, Workshop Attended /Delivered Lectures/Paper Presented

National

- Presented a paper entitled “Voices of Domestic Labour: Gender and Class Issues in Contemporary Kolkata” at a National Seminar on *Voices from History* organized by the Department of History, University of Calcutta on March 23, 2012.
- Presented a paper entitled “Questioning the ‘Legitimate’ in Marriage: Gender, Class And Sexuality” at a National Conference on *Underlining Gender in Studying Sexuality* organized by Krantijyoti Savitribai Phule Women’s Studies Centre, Pune University, on January 27-28, 2012.
- Presented a paper entitled “Dalit Women Speak Differently: Ambedkar and Beyond” at a National Seminar on *Relevance of B. R. Ambedkar in Modern Times: Feminist Perspective* organized by Sailajananda Falguni Smriti Mahavidyalaya, Khayrasole, West Bengal on January 21-22, 2012.

Organising Seminars/Conferences/Workshops:

- Invited speaker in the Understanding South Asia meet on “The Informal Economy and Informal Workers: Economic and Social Relations in South Asia” organized by Rosa Luxemburg Stiftung in collaboration with Centre for Workers’ Management in Bangalore from 7-9 May, 2012

Other Activities:

- Resource Person for the Refresher Course in Woman Studies, organized in collaboration with UGC – Academic Staff College, Gauhati University, Guwahati, 07-27 February 2012

PANCHALI RAY - NET/JRF Fellow

Seminars, Workshop Attended /Delivered Lectures/Paper Presented

Invited Lectures

National

- Invited to deliver lecture on “‘Care Work’ and the Restructured Labour Market: Feminist Perspectives” at a National Workshop on *Gender and Labour*, Tata Institute of Social Sciences, Tuljapur Campus on December 2012.

HARDIK BRATA BISWAS - M. Phil Coordinator (Contractual)

Seminars, Workshop Attended /Delivered Lectures/Paper Presented

National

- Chaired students' session at the National Students Seminar on *Agency and Resistance* organized by the School of Women's Studies, Jadavpur University in 2012.
- Chaired a session on "Documenting the Everyday" at the two-day National Conference on *Documentary/Documentation* organized by the Department of Film Studies, Jadavpur University, 6- 8 November 2012.

Invited Lectures:

National

- Public Lecture on *Fantastic Couples: Photographs as Performance and Identity* at the STUDIO 21, Kolkata on 26 May 2012.
- Public Lecture on *Masculinity and Rape* in February 2013.

Other Activities:

National

- Taught Girish Karnad's HAYAVADANA at the Department of Comparative Literature, Jadavpur University, M.A. Semester IV (2012). Course name: Literary Transactions
- Collaborating with the India Foundation for the Arts, Bangalore, (<http://www.indiaifa.org/>) since 2008, as Principal Investigator, towards building a Digital Archive at the School of Women's Studies, Jadavpur University. The Project is titled: "Photos of Women/Women in Photos: The Photographic Worlds of Bengali Urban Middle Class Women (Phase-I)". Major responsibilities include writing the project, planning the research and negotiating collections from donors in Kolkata and adjacent districts in West Bengal, coordinating with the archival staff, reports and presentations. Phase-I came to a close in August 2010. Presently planning Phase-II with IFA. The second phase will concentrate on online dissemination of 12,000+ digitized images, a nationally traveling (in cities like New Delhi, Mumbai, Bangalore and Kolkata) and curated exhibition from the archival holdings and a publication on gender, visuals and the specificities of the lives of women in the region with regards to visual cultures.
- Presently developing a site www.oursexualities.org . Now under construction, the website will be dealing with human sexualities, its histories, cultures and resistances in its polymorphous directions.
- Graphic Designer for independent projects and publishing firms.

Publications:

Monographs

- Monograph published by National Level Publishers

Chapters in Books

- "The Obscene Modern and the Pornographic Family: Adventures in Bangla Pornography" in *The Sexual History of the Global South: Sexual Politics in Africa, Asia, and Latin America*. Eds. Saskia Weiringa and Horacio Sivori, Zed Books Ltd, London, 2013, ISBN: 9781780324036
- "Wanton Women and Cheap Prints: Farces, Other Genres, and the Reading Publics in Colonial Calcutta" in Sanjay Srivastava Edited *Sexuality Studies*, Oxford University Press, New Delhi, 2013, ISBN: 978-0-19-808557-7

- “Bangasamaj Samskar, ‘Kaler Kuhak’ o Battalay Chhapaa Meyera” in *Bangalir Battala* (Volume 1) Eds. Adris Biswas and Anil Acharya, Anustup, 2013, ISBN: 978-93-83425-02-1

Edited Books

- “Prahashane Kolikaler Bangamahila 1860–1909” (A Collection of 19th and early 20th century Bangla Farces) Editor Hardik Brata Biswas, Charchapada Publications Private Limited, ISBN: 978-93-80489-06-3

RANJITA BISWAS -Project Coordinator

Seminars, Workshop Attended /Delivered Lectures/Paper Presented

National :

- Presented a paper on “Jealousy in Intimate Relations” in a two-day seminar on *Jealousy* organized by the Centre for Counselling Services and Studies in Self Development, Jadavpur University from 17–18 March 2012.
- Presented a paper on “Sex vs. Sexism: Some Reflections on Sexual Violence” at the National Annual Researchers Workshop, *Underlining Feminist Legacies for Studying Sexuality* organized by Krantijyoti Savitribai Phule Women’s Studies Center, Pune University from 27-28 January 2012 at Pune.

Invited Lectures

National

- Delivered the 3rd Sulekha Dasgupta Memorial Lecture on “Rethinking Justice in Sexual Violence: From Rape to Sexual Assault” organized by the School of Women’s Studies, Jadavpur University on 27.02.13
- Invited to deliver lecture on “Human Rights of Sexually Marginalized Women” in a UGC approved certificate course on *Human Rights* conducted by S. A. Jaipuria College on 11 February 2013 and 18 June 2012.
- Invited to deliver lecture on 20 November 2012 at the UGC sponsored Refresher Course titled, “State and Social Inequalities: Gender, Class and Caste” organized by School of Women’s Studies, Jadavpur University.
- Invited to deliver a lecture as part of the JU-SYLFF lecture series 2012 organized by the JU-SYLFF Association on *Gender and Violence* on 5 April 2012 at Jadavpur University.
- Invited to deliver a lecture on 16 February 2012 at Lady Brabourne College on “Sexual Violence: Family, State and Community” in a Seminar on *Violence against Women* organized by the Women’s Studies Centre, Lady Brabourne College in collaboration with the School of Women’s Studies, Jadavpur University.
- Invited to deliver a lecture on 16 January 2012 in the inaugural session of the UGC sponsored National Seminar on *Women and Literature: Different Faces, Different Voices* organized by Barasat Government College in collaboration with School of Women’s Studies, Jadavpur University

Other Activities:

National

- Invited to interact with students of Lady Brabourne College as part of a Round Table on “Combating Violence” on 25.02.2013.
- Invited as panelist on “Compulsory Marriage and Heteronormativity as site of Gender Violence” in the film festival, *Our lives... to live*, as part of the One Billion Rising Campaign, organized by

Swayam in collaboration with International Association of Women in Radio and Television on 4 January 2013.

- Organized and anchored an interactive workshop with doctors on “Health Issues of Lesbian, Bisexual and Transpersons” on 11 September 2012 at Medical College Calcutta

Abhijit Sen-Publication Officer

Edited / Editorial Assistance for the Following Books/ Occasional Papers:

- Prepared the manuscript of *Nehal the Musician and Other Tales* by Snehalata Sen under the Women Writer Reprint Series.
- Prepared the manuscript of the occasional paper (Shahid Preetilata Waddedar Memorial Lecture X) *The Rattling Chains: Bina Das, A Woman in Revolution*.

Newsletter of the School

- Volume 29: May 2012: 40 pages (Bilingual)
- Volume 30: December 2012: 61 pages (Bilingual)
- Volume 31: March 2013: 25 pages (Bilingual)

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

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

The School of Women’s Studies has taken up research through various action-oriented projects. It has also taken up a project on reprinting Bengali Women Writers as extended research. The research projects undertaken by the School in the academic period April 2012-March 2013 are listed below.

1. CHILDLINE (South 24 Parganas, West Bengal):

Coordinator: Indrani Banerjee

Funded by: Ministry of Women and Child Development, GOI

The School has been working in partnership with the Ministry of Women and Child Development, GOI since 2003. The School of Women’s Studies, Jadavpur University has been acting as the nodal organization for the CHILDLINE 24 Parganas (South) unit. The other partner organizations are *Sabuj Sangha* and CINI Diamond Harbour Unit. The team members of CHILDLINE South 24 Parganas are doing outreach and open-house programme for disseminating the CHILDLINE message to the general people. The CHILDLINE team members provide interventions of shelter, medical, repatriation, rescue, death related services, sponsorships and emotional support and guidance. The team also organizes different awareness programmes on child rights, early marriage, child trafficking etc.

2. Increased Understanding of the Politics and Ideology of Trade Unions in West Bengal and Gujarat (January to December 2012)

Funded by: Rosa Luxemburg Stiftung, Germany

Supervisor: Professor Samita Sen

Research Coordinator: Nandita Dhawan

Senior Research Assistant: Madhurima Mukhopadhyay

The School of Women’s Studies, Jadavpur University has conducted a year-long study on trade unions in the states of West Bengal and Gujarat. We have used the gender lens to explore the changing role and constitution of traditional trade unions in facing the challenges of diverse informalisation of workers. One of the prime objectives of the research has been to assess the

presence of women in politically affiliated trade unions in membership and leadership roles. Have the trade unions been proactive in organizing women workers? Does women's presence in the unions lead to a wider recognition of women's work and thus help trade unions' agenda, policies, strategies, and struggle to be shaped by a gender perspective? We have also studied ways in which informal workers have organised as a response to their marginalisation in the prevailing pattern of labour market. Our aim has been to learn how these challenges have led to the emergence of new kinds of labour collectives to fight for workers rights.

3. Increased understanding of gendering of workers and culture and politics of organization of workers with special reference to auto-rickshaw drivers and beauty workers in West Bengal
(January 2013 to December 2015)

Funded by: Rosa Luxemburg Stiftung, Germany

Supervisor: Professor Samita Sen

Research Coordinator: Nandita Dhawan

The overall aim of the project is to study the gendering of workers and analyse the culture and politics of organisation of workers with special reference to auto-rickshaw drivers and beauty workers in West Bengal. Though both the case studies are in the informal sector, they offer different kinds of contrasts. The research work proposes to increase academic engagement on labour and gender based on our research findings with the following objectives:

- a) To understand the changes in organization, functioning and constitution of traditional trade unions to face the challenges of increasing informalisation of workers
- b) To explore possible alternative forms of labour collectives leading the movement to fight for rights of informal workers
- c) To study how gendering of workers affect the culture and politics of organization of informal workers

We further want to increase the understanding of auto-rickshaw and beauty workers on the occupational hazards faced by them and the need to overcome the risks in their professions. The project proposes activities like awareness generation and advocacy to make use of the research findings.

4. Domesticity and Domestic Labour: Women's Agency and Collectivities in Contemporary West Bengal
(January 2013 to December 2015)

Funded by: Rosa Luxemburg Stiftung, Germany

Supervisor: Professor Samita Sen

Research Coordinator: Nandita Dhawan

The objective of the research work is to generate and analyse data aiming to increase the understanding on female migration for domestic work within/outside the state of West Bengal. The research will have three specific objectives:

- a) It will attempt to study and analyze the phenomenon of the single women migration from villages to join the unorganized informal sector especially as domestic workers both within the state of West Bengal and other metros. A large part of this migration happens in the form of trafficking which further complicates living and working conditions and possibilities of return in case of adverse working and living conditions. It will also foreground the role played by hiring agencies who often double as traffickers.
- b) It will look at the conditions of work of these domestic workers, who form a large part of the informal sector with lack of social security, protective legislations and minimal job guarantees.

These issues become significant in view of the fact that a large part of the workforce is constituted by child domestic workers and the law on child labour, even in its very recent amendment, does not recognize domestic work as hazardous. The Indian government has passed a legislation banning child labour completely below the age of 14 while allowing the employment of children in the age group of 14-18 in non hazardous work. This legal anomaly becomes significant since elsewhere a child gets defined as anyone below 18 years and a recent Bill passed by the central cabinet has proposed to raise the age of consent from 16 to 18. The research hopes to explore the opinions of all stakeholders, including domestic workers, on the present legal tangle concerning the appropriate age for domestic work.

- c) The research work will explore the possibilities of collectivization of this sector and the implications for bargaining power. Several different possibilities must be noted in this respect: (A) The heterogeneity in terms of language and ethnicity faced by women migrants in other distant metros such as Delhi, Mumbai or Bangalore. (B) The additional difficulties faced in organizing adolescent and under-age workers. (C) The different dynamics involved in collectivization among part time live-out workers and full time live-in domestic workers.

5. Increased Understanding of Single Women Migration and their Working Conditions as Domestic Workers in West Bengal

Funded by Rosa Luxemburg Stiftung, Germany

Supervisor: Professor Samita Sen

Research Coordinator: Dr. Ranjita Biswas

Research Assistants: Somdutta Mukherjee

Shenjuti Dutta

The project proposes to connect new trends in women's migration within and from West Bengal to the informalisation of work in the urban sector. The primary focus is on domestic workers, addressing the processes of feminization and juvenilisation in the sector and seeking to link these with trends in organization from both the perspectives of industry and labour. On the last count, one major concern is the complete absence of initiatives for associative politics and collective bargaining in this sector in West Bengal in contrast to many other major cities in the country.

The research has three objectives:

- a) It attempts to study and analyze the phenomenon of the large scale migration of young women singly (unaccompanied by male members of the family) from villages to join the unorganized informal sector especially as domestic workers both within the state of west Bengal and other metros.
- b) It looks at the conditions of work of these domestic helpers, who form a large part of the informal sector with lack of social security, protective legislations and minimal job guarantees.
- c) The research explores the possibilities of collectivization of this sector and the implications for bargaining power.

The research is divided into two phases. The purpose of the first phase which was conducted in the period, January 2012 to December 2012 was to:

- i. Conduct a desk research including literature survey from secondary sources in West Bengal to build an information base on the patterns of single women migration, identified causes and other relevant data.
- ii. Conduct a pilot survey of South 24 Parganas District of West Bengal as a preparation work for the detailed research work for next three years.

- iii. Organize a workshop inviting experts from the field to share the findings, analysis and preparation for the next phase of research study.

6. Gender Audit of Higher Education in West Bengal

Supervisor: Dr. Paromita Chakravarti

Project Fellow: Sreerupa Sengupta

Part of the scheme of 'University with Potential for Excellence – Phase II' and funded by the University Grants Commission, the purpose of the project is to understand and analyse the institutional resistances and subjective perceptions of women students in various institutions of higher education, and the working of glass ceilings for women in academia, as they play out in the state of West Bengal. It seeks to fill a current gap in the body of research, as there is no such recent in-depth study carried out in West Bengal.

The School of Women's Studies carried out a near-similar project inside the campus in 2007. The project entitled *Pathika Samvad* addressed the linkages between women, education and nationalism. The present project aims to carry forward that work, and make a fundamental contribution to our understanding of the workings of higher education institutions in the state of West Bengal with reference to gender, a primary axis of the socially desired goal of equity.

While adding to the existing body of knowledge about gender in India, the project also aims to provide recommendations that will help in formulating appropriate policy for gender inclusion at institutes of higher learning.

3. **A. Invited Lectures Delivered/Session Chaired:** (Name of the Teacher, Type of Participation, Name of the Seminar/ Conference etc., Place, Duration): See 1B (Staff Profile)
- B. Seminar/Workshop/Conference/Symposium Attended:** (Name of the Teacher, Name of the Paper Presented (if any), Name of the Seminar, Place, Duration): See 1B (Staff Profile)
- C. Seminar/Workshop/Conference/Symposium Organized:** (Name of the Teacher, Name of the Paper Presented (if any), Name of the Seminar, Place, Duration)
 - The School of Women's Studies, Jadavpur University organized a lecture entitled *From Women's History to Gender History: Revisiting Haimabati Sen's Memoirs* by Dr. Geraldine Forbes (Distinguished Teaching Professor, State University of New York, Oswego and Fullbright-Nehru Teaching Fellow, Women's Studies Research Centre, University of Calcutta) on 11 April 2012 at Committee Room No. 3, Subarna Jayanti Bhawan, Jadavpur University. The session was chaired by Professor Jasodhara Bagchi.
 - A dissemination workshop was organized with community members, field surveyors and NGO personnel on the findings of the research project, *Increased Understanding of Single Women Migration and Their Working Condition as Domestic Workers in West Bengal* on 6 December 2012.
 - A dissemination workshop under the project, *Increased Understanding of the Politics and Ideology of Trade Unions in West Bengal and Gujarat*, was organized on 10 December 2012.
 - A one-day workshop for police personnel on *NICP (National Initiative of Child Protection)* was organized by CHILDLINE, School of Women's Studies, Jadavpur University on 20 December 2012 at Police Conference Hall, Alipore.
 - As part of the project, *Increased Understanding of the Politics and Ideology of Trade Unions in West Bengal and Gujarat*, an interactive forum with trade union leaders was held on 27

December 2012. Participants from different labour unions met and interacted on various important issues related to labour and gender.

- A one-day workshop for school teachers on *NICP (National Initiative of Child Protection)* was organized by CHILDLINE, School of Women's Studies, Jadavpur University on 3 January 2013 at New Administrative Building, Alipore.
- In the aftermath of the Delhi rape case in December 2012, the students of the School took an initiative to organise an open dialogue on rape along with other students of the University on 11 January 2013. This was in response to growing instances of violence against women in the country and the state. A number of people working to reduce gender-based violence in Kolkata were invited to initiate this public dialogue which saw the participation not only of university staff and students but also the public at large. The striking feature of this event was the leadership taken by the students of the School.
- The School of Women's Studies, Jadavpur University organized IIIrd Sulekha Dasgupta Memorial Lecture entitled *Rethinking Justice in Sexual Violence: From Rape to Sexual Assault* by Dr. Ranjita Biswas, Consultant Psychiatrist, on 27 February 2013 at the Seminar Hall, Department of International Relations, Jadavpur University. The lecture was chaired by Professor Malini Bhattacharya, Former Chairperson, West Bengal Commission for Women, and Former Director, School of Women's Studies, Jadavpur University.
- The School of Women's Studies organized a talk by Professor Susanne Schröter, Department of Anthropology, Goethe-University, Frankfurt on *Issues Concerned with Challenges of Modernity Particularly Regarding Questions of Religious and Non-religious Pluralism, Ethnic and Social Group Representations and Gender Justice* on 6 March 2013 at the seminar room of School of Women's Studies, Jadavpur University.
- The School of Women's Studies, Jadavpur University organized XIII Sukhalata Rao Memorial Lecture entitled *Adhunik Bharatiya Bhasha-Sahitye Puran-Katha o Nari: Ekti Alochana* by Dr. Soma Mukherjee, Assistant Professor of Comparative Literature, Department of English and Other Modern European Languages, Visva-Bharati on 26 March 2013 at Anita Banerjee Memorial Hall, Jadavpur University. The lecture was chaired by Professor Jasodhara Bagchi, Emeritus Professor, School of Women's Studies, Jadavpur University.

E Orientation Courses/ Refresher Course Organized: (Name of the Teachers, Title of the Course (if any), Duration, Place)

The School of Women's Studies has organized the UGC sponsored 10th Refresher Course in *State and Social Inequalities: Gender, Class and Caste* from 19 November to 10 December 2012 at Jadavpur University, Kolkata. The Inaugural Ceremony of the Course was held on 19 November 2012 at the Seminar Hall, Department of International Relations, Jadavpur University. Professor Sanjukta Bhattacharya and Dr. Iman Kalyan Lahiri of the Department of International Relations, Jadavpur University have been the co-ordinators of the course.

4. A Books Monographs etc. Published: (Name of the Teacher, Name of the Book, Name of the Publisher)

Books/Monographs/ Documents

We have a consistent programme of publication. In addition to a legal handbook, the following books and monographs have been brought out in the last academic year.

- Nirmala Banerjee, Samita Sen, Nandita Dhawan (eds.): *Mapping the Field: Gender Relations in Contemporary India* (Vol. II). (Readings in Gender Studies 1). 2012, 594+ [xliv] pages, Rs. 475.00. ISBN 978-93-81345-00-9

- Kavita Panjabi, Paromita Chakravarti (eds.): *Women Contesting Culture: Changing Frames of Gender Politics in India* (Readings in Gender Studies 2). 2012, 381+ [lxxvi] pages, Rs. 500.00. ISBN 978-81-906760-8-3
- 'Women's Empowerment and Education: Panchayats and Women's Self help groups in India' – Video and report of collaborative project between Jadavpur University and McGill University, Canada, (Kolkata, 2012-13). Prepared by Dr Paromita Chakravarti.
- *Services Relating to Domestic Violence in West Bengal: A Guide*. March 2012.

Newsletter

- Volume 29: May 2012: 40 pages
- Volume 30: December 2012: 61 pages
- Volume 31: March 2013: 25 pages

B. Articles Published in Journals: (Name of the Teacher, Name of the Article, Name of the Journal, Date of Publication, Volume): See 1B (Staff Profile)

5. Collaborative Programmes:

- A Blood Donation Camp was organized in association with National Service Scheme (NSS), Jadavpur University and the Association of Voluntary Blood Donors, West Bengal on 5 September 2012 at the TEQIP Building, Jadavpur University.
- A one-day workshop on Child Protection Issues organized by CHILDLINE, School of Women's Studies in collaboration with the Social Welfare Section of the District of South 24 Parganas, Government of West Bengal on 24 September 2012 at Anita Banerjee Memorial Hall, Jadavpur University.
- School of Women's Studies, Jadavpur University, in collaboration with Goethe Institute, Max Mueller Bhavan, Majlis and Tulika Books organized the launch of *dates.sites* [Tulika Books, New Delhi, 2012, 234+ii pages] on 8 October 2012 in Kolkata. *Cinema City*, the parental project, to which this volume belongs, is an inter-disciplinary, circular project of collating, reading, manufacturing, archiving, recycling, re-reading in the realms of art making, documentary practices and discursive exercises. The volume presents a timeline of the city of Bombay/Mumbai through a public institution—cinema. *dates.sites* is a deliberation on the contemporary with the aid of a speculated upon and collated past. Concept and text is by Madhusree Dutta while design and graphics is by Shilpa Gupta and Madhusree Dutta. The book was launched in Kolkata on the day by Swapan Chakravarti, Director General, National Library of India. The programme also included a panel discussion. The panelists were Madhusree Dutta, film-maker and archivist; Rohan Shivkumar, architect; Hardik Brata Biswas, doctoral student, School of Women's Studies, Jadavpur University; Madhujā Mukherjee, assistant professor in Film Studies, Jadavpur University; Ruchir Joshi, film-maker and editor; Sarnath Banerjee, graphic novelist; Sadanand Menon, art-critic and senior journalist; Samita Sen, director, School of Women's Studies, Jadavpur University and Indira Chandrasekhar, Publisher, Tulika Books.
- A day long workshop in collaboration with Apne Aap Worldwide on *Sex Trafficking* on 11 December 2012.
- An interactive session in collaboration with *Sama* - Resource Group for Women and Health, Delhi to share the research findings of the study on *Commercial Surrogacy in India* on 21 December 2012.
- International Dance Alliance and the School of Women's Studies, Jadavpur University jointly organized a two day national seminar on *The Moving Space: Women in Dance* on 3-5 February

2013 at Rabindra Nath Tagore Centre (ICCR), Kolkata and Vivekananda Hall, Subarna Jayanti Bhawan, Jadavpur University. The two day national seminar was inaugurated by Professor Bharati Ray, former Vice President, ICCR, Professor Jasodhara Bagchi, former Chairperson, West Bengal Commission for Women, and Dr. Shanta Sarabjeet Singh, Vice Chairperson, Sangeet Natak Academy on 3 February 2013 at RTC, ICCR, Kolkata. The inauguration ceremony was followed by *Ravanama*, the performance by Smt. Maya Krishna Rao and *Chitrangada*, a Dance Drama by Aishika Chakraborty in collaboration with Dancers' Guild. On 4th and 5th February 2013 the seminar was organized at the Vivekananda Hall, Subarna Jayanti Bhawan, Jadavpur University.

- The School of Women's Studies commemorated the International Women's Day on 30 March 2012. This year we celebrated the International Women's Day in association with the Arts faculty Students Union. Some under graduate students from the Extra Departmental course of Women's Studies approached us and raised a proposal to celebrate the International Women's Day together with the Students Union so that the significance of the event reaches a larger section of the students. We accepted the proposal and gave financial support to the students and the rest was done by them. As a response to the widespread public outrage at violence faced by women on city streets, the under graduate students attending our ED courses organised events not in an auditorium but in the open spaces of the university campus. The School along with the students organized a *Baul* performance, a photography competition, and short story writing for the students. At the post-lunch session plays were performed by the students of Jadavpur University. The enthusiasm shown by the under graduate students towards organising this event is definitely a positive step forward towards creating a gender just society and an indicator of the success of the Women's Studies programme.
- The School of Women's Studies in association with Biplabtirtha Chattagram Smriti Sanstha organized XVth Shaheed Preetilata Waddedar Memorial Lecture by Dr. Aishika Chakraborty, Department of History, Brahmananda Keshabchandra College entitled *Bhadranarir Paye-Khari: Prajatne (C/o) Rabindranath* on 13 March 2013 at Anita Banerjee Memorial Hall, Jadavpur University. The lecture was chaired by Professor Anuradha Chanda, Former Director, School of Women's Studies, Jadavpur University.
- The School has been involved in several bilateral and multilateral research projects with international partners, including both donor agencies and higher education institutions. There have been collaborative research projects with Rosa Luxemburg Stiftung (Germany), Oak Foundation, Indian Foundation for Arts, State Commission for Women, West Bengal and others.
- The Global South SEPHIS e-Magazine, an initiative of the SEPHIS Foundation in The Netherlands, is a platform for scholars, researchers and students based in countries of the Global South to engage in conversations about their many visions of development and history. It is exclusively an electronic magazine. The School of Women's Studies has helped further this initiative, since the latter half of 2008, by dint of the School's director – Professor Samita Sen – being a co-editor of the e-magazine. The e-magazine is physically housed in the School and its production is managed by a team of copy-editors and designers, many of whom are linked to the School. The e-magazine has, from time to time, organized conferences and workshops. In these ventures, the School has given its full support. In February this year, the e-magazine team organized a workshop for doctoral students in India on the theme of comparative social and humanities research titled 'The Comparative Gesture'. Many teaching and non-teaching staff of the School took an active role in ensuring the successful management of this event. The School of Women's

Studies' linkage with the SEPHIS initiative furthers the School's efforts of using a cross-cultural, multi-disciplinary approach to probe relations between genders.

6. Major Achievements:

- **CENTRE OF ADVANCED STUDIES:** This period is particularly significant in the life of the School of Women's Studies, Jadavpur University because the School was informed by the UGC in a letter dated 15 June 2011 about its status being upgraded to that of an advanced centre with a concomitant increase in funds allocation. This was followed up by another letter dated 5 March 2012 that awarded the School with eight teaching, five non-teaching and four research posts. This was in recognition of the contribution by the School in the field of women's studies in the last five years under the XIth Plan period. During the XIth Plan we were able to expand our faculty from one professor to one permanent assistant professor and one permanent associate professor. The present grant of eight teaching posts has greatly enhanced our teaching resources and we are now planning to take up MA course teaching.
- The School is continuing to participate in the rapid developments in the field of Women's Studies in the country. It has introduced a revised M. Phil syllabus; since July 2010 it is offering Extra Departmental (ED Course) to B.A students of Jadavpur University. This year, the ED courses at the School have witnessed a sharp rise in student enrolment, possibly in the wake of a new public focus on women's issues. There has been a huge expansion in PhD enrolment as well as an increase in the number of NET/JRFs in Women's Studies. The School, while still in the process of planning new degree/diploma/certificate courses, is responding to the needs of the emerging Women's Studies Cells/Centres in the city, and the state. It is struggling to meet new demands for Women's Studies research from fresh graduates as well as from the community of college and university teachers. In this burgeoning of the field, expanding to include different segments of the higher education community, the School has attempted to play a leading role. It has diversified its research activity to include areas ranging from single women migration to a gender audit of Higher Education; it has engaged in outreach activities and partnered with both government (e.g. CHILDLINE) and non-government agencies (e.g. RLS) to facilitate advocacy work for the legal, social and political rights of marginalized sections like children and victims of domestic violence.
- One of our major achievements has been the development of the Project-Teaching Interface. The restructuring of the School's M. Phil syllabus in 2006 took full account of the learning from our research projects. We felt that some of our research projects have been successful in modifying methods of enquiry and analysis and have inspired us to look at the future of Women's Studies as a vibrant interdisciplinary field. We, therefore, wanted to extend and incorporate into teaching the new dimensions developing in our research. Some of the projects taken up by the School have inspired us to introduce different core and optional courses in our present syllabus, for instance, 'Gender and Development', 'Rights, Capabilities and Resources', 'Cultural Constructions of Gender', 'Women "Speaking" Lives: Oral Narratives, Writings and Representation', 'Gender and Education', 'Sexualities and Feminism' etc.
- **Data on Single Women Migration:** The School in collaboration with Rosa Luxembur Stiftung, Berlin carried out a pilot study in the district of 24 parganas (South) to gather data on single women migration. There being no official data on single women migration, this study is significant because of the research questions addressed therein. The pilot study became quite popular among the villagers who were curious about the study and eager to participate in the survey if given a chance. The pilot study having been completed successfully provides the grounding for our next phase of research in the coming three years.

- **Data on Labour Unions in West Bengal and Gujarat:** The project, *Increased Understanding of the Politics and Ideology of Trade Unions in West Bengal and Gujarat*, has successfully compiled a database on labour unions in West Bengal and Gujarat, not available before. This data base shall contribute to the field of knowledge on labour and gender which trade unionists, researchers and interested scholars and activists will be able to access. Such a study has not been attempted before at the university level.
- Professor Samita Sen, Director, and Srimati Sarbani Goswami, Research Officer, of the School of Women's Studies are members of the Board of Studies of the Women's Studies and Women's Empowerment Programme of the Netaji Subhas Open University.

Student Achievements

- Kaniska Sarkar, a Ph. D student at the School from 2008 to 2013, has recently been appointed as Assistant Registrar, Jadavpur University. He is an IPS officer who was working with the police for several years. Appointment of students, associated with Women's Studies, at an administrative level in the university provides an opportunity to introduce gender issues within administration.
- Ushashie Chakraborty, who submitted her M. Phil dissertation in 2012, has been active in the media world for a number of years. She has acted in a wide range of films with established directors. Using the critical knowledge she has gained from the M. Phil course at the School of Women's Studies, she has been writing about gender issues in newspaper articles and disseminating the same through talk shows. Ushashie has also published her first book '*Meyeghasa Lekhara*'.
- Lokeshwari Dasgupta an M. Phil student of the current outgoing batch, who is writing her dissertation on the evolution of *kathak*, is an active dancer and teacher. She has conducted workshops and performed all over India and in Germany in 2012-2013. She teaches *kathak* at *Suchanda Sangitalaya*.
- Shenjuti Dutta, who has submitted her M. Phil dissertation in 2012, worked with us in a project titled 'Increased Understanding of Single Women Migration and their Working Condition as Domestic Workers in Contemporary West Bengal' and has now joined as an Assistant Professor at St. Xavier's College, Kolkata.
- Four of the current M. Phil students, in their second year of the programme, are now working in research projects in the capacity of Research Assistants at the School.
 - We have over the years seen our M. Phil students enrolling in the Ph. D programme and going on to teach in various colleges and universities across the nation from TISS, Mumbai, Jadavpur University, and Calcutta University etc.