



Department of Architecture, Jadavpur University



The Department had organized a Two-Day National Seminar on "SMART HABITAT: Cities, Buildings, Products & Services" on 9-10th of October 2015 at Gandhi Bhavan, JU, as part of its golden jubilee celebrations.

An exhibition of products titled ARCHESTRA and launch of a publication as Golden Jubilee Monograph to commemorate the 50 years of Academic journey of the department were also held.

The events were supported by our alumni association JUAAAD & students' body SSAJU, with the latter actively participating in organizing the event.



The program on 9th October 2015 was inaugurated with the auspicious ceremony of lighting the lamp with the former faculty members of the department – Prof. Monideep Chattopadhyay, Prof. Samir Kumar Rakshit, Prof. Samaresh Mukherjee and Prof. Somen Chakraborty doing the honours along-with Pro-Vice Chancellor Prof. A.S. Verma, Dean-FET Prof. Sivaji Bandopadhyay and Controller of Examination Prof. Satyaki Bhattacharya.

ARCHITECTURE DEPARTMENT,
JADAVPUR UNIVERSITY
celebrates
FIVE DECADES OF ACADEMIC JOURNEY
(1965 - 2015)
Coinciding with
60 YEARS OF JADAVPUR UNIVERSITY
(1955-2015)

through:

**ARCH
ESTRA**
EXHIBITION OF PRODUCTS
&
MONOGRAPH SOUVENIR

**NATIONAL SEMINAR ON
SMART HABITAT:
CITIES, BUILDINGS,
PRODUCTS &
SERVICES**

9-10th October, 2015
at Gandhi Bhavan
by Dept. of Architecture, JU

Supported by:

Alumni Association
Jadavpur University
Department
JUAAAD

Students' Society of
Architecture,
Jadavpur
University
SSAJU

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Editorial Board Members:

Prof. Jayita Guha Niyogi
Prof. Shivashish Bose
Dr. Suchandra Bardhan

9th October 2015



INAUGURAL SESSION

Hon'ble VC Sir and Registrar graced the event in the second session.

Pro-VC gave his inaugural address and stressed the importance of deliberating on the topic. Dean-FET and Controller of Examination congratulated the department for planning the program on a grand scale after some severe trying times. Dr. S. Bardhan, HOD, welcomed everyone in the event and briefed the audience about the intent of the Seminar. A Golden Jubilee Monograph was opened by the dignitaries to commemorate the occasion.



A section of audience comprising of alumni and former faculty members.

The key note speaker was Prof. Supriya Chaudhuri. She deliberated on the theme and the 'epithet's used to define smartness of cities. She also introduced the smart apps devised by their team working on UGC-UKIERI Project: Envisioning the Indian City.



The inaugural session was followed by felicitation of the former faculty members – Prof. Monideep Chattopadhyay, Prof. Samir Kumar Rakshit, Prof. Samaresh Mukherji and Prof. Somen Chakraborty, who shared fond memories of their time.



Ar. Chandra Banerjee, President of our Alumni Association. (JUAAAD) introducing an annual award titled 'Prof. Amiya Kumar Banerjee Award' to the topper of B. Arch. 4th Yr. in memory of Prof. Amiya Banerjee, founder Head of this Dept.

Dr. Sanjib Nag and **Dr. Debashish Das** were the joint Organizing Secretaries of the event. Faculties and alumni joined the program in large numbers.



Eminent speakers of First session



Prof. Abir Bandyopadhyay, NIT, Raipur



Prof. Souvanic Roy, IEST, Sibpur



Prof. Sanghamitra Basu, IIT, Kgp.



Ar. Shubhrendu Das, Edifice, Kolkata



Prof. Sanjukta Bhaduri, SPA, New Delhi



The first session on Smart Cities was chaired by Prof. Abir Bandyopadhyay, NIT-Raipur and the speakers were Prof. Sanghamitra Basu from IIT-Kgp, Prof. Souvanic Roy from IEST, Sibpur, Prof. Sanjukta Bhaduri from SPA, New Delhi and Ar. Shubhrendu Das from Edifice, Kolkata. There was enthusiastic participation from the audience.



Day I ended with VC Sir's Dinner at the Guest House of the campus. Former and present faculties along-with past and present students enjoyed the day. Seen in the picture are (L-R) Prof. S. Mukherji, Prof. D.P. Sarkar, Prof. T.K. Bhattacharyya and Prof. S.K. Rakshit sharing a light moment.



The evening came into life through the wonderful performance of the students of the department in the cultural extravaganza that had everything from songs, dance, music performances, extraordinarily choreographed by the students themselves

10th October 2015**Technical Session II:
Smart Buildings**

The second technical session on Smart Buildings was chaired by Prof. Shubhrajit Das and the speakers were Dr. S.P. Gon Choudhury, eminent solar scientist, Ar. Shakuntala Ghosh of Ghosh, Bose & Associates and Ar. Abin Chaudhuri of Abin Design Studio. While Dr. Gon Choudhury explained the potential of solar roof tops as a smart energy solutions for buildings, the architects, who are also the alumni of the dept. showed their way of inducing smartness in buildings through well considered design and planning.



Prof. Shubhrajit Das



Dr. S.P. Gon Choudhury



Ar. Shakuntala Ghosh



Ar. Abin Chaudhuri

Prof. Somen Chakraborty
interacting with the
speakers

Session in progress

10th October 2015**Technical Session III: Smart Products & Services**

Prof. T. K. Bhattacharyya



Ar. Chandra Banerjee



Ar. Vivek Rathore



Dr. Himadri Guha

The third technical session on Smart Products & Services was chaired by Prof. Tapas Kr. Bhattacharyya of our dept. and the speakers were Ar. Chandra Banerjee, former Architect - CPWD, Ar. Vivek Rathore of Salient and Dr. Himadri Guha, eminent Green Building specialist. All the speakers deliberated on the importance of planning and use of smart products & services in buildings with case studies.

The participants at ARCHESTRA, the product exhibition were **Godrej & Boyce Mfg. Co. Ltd.**, who were also the PLATINUM sponsors and **Development Consultants Pvt. Ltd.**, the GOLD partners. Other exhibitors were **Johnson Tiles, Thar Marbles** and **Capacloud**.



- Shapoorji Pallonji
- Armstrong World Indstr
- Sika
- Pidilite
- Advanced Precast
- Saint Gobain
- Mackintosh Burn Ltd.
- Havells
- Smart Power
- Crescent Lite
- Janak Healthcare
- J.S.S. Engineering
- Crescent Lite
- Klystron Electronics
- RDB Builders
- Beauty Furniture
- Mobel Furniture
- Prayas
- Core Construction Co.



Student organizers with teachers & staff

The Two-day National Seminar was finally wrapped up with the Vote of Thanks given by Dr. Sanjib Nag, one of the organizing Secretaries of the Seminar.

Industry-institute interface: Everest Group's UG Thesis Award program

19th November 2015



Award ceremony with Ar. Rajiv Agarwal & Mr. Manoj Mohota of EIL presenting the certificate

As a part of industry-academia interface, M/s Everest India Ltd. has instituted a special recognition consisting of a plaque and award money for the over-all topper of the B. Arch. Final Yr. This year, Ms. Shinjini Bhattacharjee, the topper of 2014 was awarded and her grandfather received the award on her behalf from Ar. Rajiv Agarwal, the guest speaker of the occasion.



Prof. S. Bose conducting the program

This was followed by a presentation by Everest and Ar. Rajiv Agarwal in an engaging talk with the students. Prof. Shivashish Bose coordinated the program.



Presentation from M/s Everest



Presentation by Ar. Rajiv Agarwal

Teachers' activities

Prof. Jayita Guha Niyogi et al published a paper titled 'Methodology for Deciding Route-Specific Appropriate Transit Modes Based on Stakeholders' Utility Values: Applicability in Indian Cities' in the Indian Journal of Transport Management, Volume 39, Number 2, Pg. 60-75.

Prof. Shivashish Bose et al published the following papers:

'Informal Settlements in Kolkata: A Study and Discussion', *Spandrel* (Issue 10, Monsoon 2015), pp.91-100.

'Top Floors of Low-rise Modern Residences in Kolkata: Preliminary Exploration towards a Sustainable Solution', *Current Science* (Vol. 109, No. 9), pp.1581-1589.

'Integrated Drainage Water Management for Environmental Improvement in Kolkata', *Journal of Environmental Science & Engineering* (Vol.56, No.4), pp.487-494.

Dr. Suchandra Bardhan co-chaired two Sessions (Lighting & Architecture and Aspects of Lighting) at the Lux Pacifica-15 & Lighting India International-15 (LP-15 & Lii-15) Conference on 28th Nov. 2015, Hotel ITC Sonar, Kolkata.

Kunal Rakshit of 5th Yr. and **Sulagna De of 3rd Yr.** won the **First position** at The Eastern Interface of '**ARCHUMEN 1516**', an architectural quiz contest organized by Ethos, held at NIT Rourkela on 14th Oct. 2015.

Debmalya Ghosh of 3rd Yr. and **Saheli Ghosh of 3rd Yr.** followed closely as **First Runners-up**.



Two groups from the department comprising of **Komal Shah, Megha Chowdhury & Umang Agarwal of 3rd Yr.** and **Avilash Bardhan & Rinky Haldar of 5th yr.** won special recognition at the '**Transparency 10.0**' – the tenth version of the competition organized by Saint Gobain on the theme of "Social Mass Housing for Smart Cities".

Students' achievements

Students of the Department participated & performed excellently in several national competitions and made the department proud by winning a number of accolades. These are:

- 1. ZoNASA 2015** – Zonal First Runner-up + numerous trophies
- 2. ARCHUMEN '1516** – Regional Champion & First Runner-up; National First Runner-up & Second Runner-up
- 3. TRANSPARENCY 10.0** – Special Recognition received by two groups
- 4. IGBC GREEN BUILDING DESIGN** – National Champion
- 5. URBAN INNOVATION CHALLENGE** – National First Runner-up
- 6. IIA NATCON SDC, 2015** – Jury mention
- 7. URBAN NOMADS** – National First Runner-up

The string of success in this academic session began with Zonal NASA event at NIT, Rourkela where they won several awards.

The ZoNASA Team rejoicing after the win





Both the groups repeated their excellent performance at the national platform as well. **Kunal** and **Sulagna** won the **First Runners-up** position while **Debmalya** and **Saheli** became the **Second Runners-up** at the National Final of 'ARCHUMEN 1516' held at Bengaluru on 6th November 2015.



Avilash Bardhan and **Rinky Haldar** of 5th Yr. won the **IGBC Green Design Competition** on the theme of 'Green Transit Shelters for Construction Workers' and their entry was **awarded the FIRST PRIZE** by the jury at the Green Building Congress held at Gandhinagar on 21st Nov. 2015. The eminent jurors were Ar. Brinda Somaya, Ar. Nimish Patel, Ar. Dhyaneshwar, Ar. Sandeep Vasanth, Mr. Prem C Jain, Mr. Sanjay Goel & Mr. Chandrashekar Hariharan.



GREEN TRANSIT SHELTER FOR CONSTRUCTION WORKERS

1

LOCATION

INDIA, WEST BENGAL
DEVELOPING STATE WITH ABUNDANT LABOUR FORCE

CAPITAL CITY, KOLKATA
SITE IS LOCATED IN NORTH CALCUTTA

EMAMI CITY, JESSORE RD

AREA: 5.25 HECTARES
NO. OF BLOCKS: 23
NO. OF FLOORS: G+1+3
NO. OF FLATS: 1233

OPEN SPACE: 62%
LABOUR FORCE 500

IGBC 2015

DESIGN DRAWINGS OF THE SUSTAINABLE TRANSIT SHELTER

3

GROUND FLOOR PLAN

FIRST FLOOR PLAN

SECTION AA (above)

LEGEND: WARM AIR, COOL AIR, SUNLIGHT, RAINFALL

LEGEND: 1. ROOM, 2. DRINK, 3. COURT

LEGEND: A. EARTH AIR TUNNEL, B. RAIN WATER HARVEST, C. SCREEN WINDOW, D. DIFFUSED NATURAL LIGHT

LEGEND: 1. ROOM, 2. ROOF, 3. 1ST FLOOR, 4. 2ND FLOOR

LEGEND: 1. DETAIL SHOWING CREEPER ON THE WALL, THAT HELPS KEEP THE INTERIOR COOL AND PROVIDES FRESH AIR ALL DAY LONG

IGBC 2015

RESOURCE MANAGEMENT & TECHNICAL INNOVATIONS

4

SECTION SHOWING RESOURCE MANAGEMENT

1. EARTH AIR TUNNEL INTAKE
2. EARTHEN POTS DRIPPING WATER
3. E.A.T. TRENCH SYSTEM
4. PLANTERS GROWING FOOD
5. LOCKERS IN BEDROOM
6. DRINKING CLOSET ON ROOF
7. RAIN WATER HARVESTING
8. KITCHEN GREY WATER
9. HOT AIR, COOL AIR

FIVE STAGE WATER RECYCLING PROCESS

STEP 1: RAINWATER HARVESTING
STEP 2: STORED IN TANK
STEP 3: POTABLE WATER
STEP 4: COOKING PURPOSES
STEP 5: GREY WATER
STEP 6: NO FILTRATION OF GREY WATER
STEP 7: TREATED GREY WATER
STEP 8: USED IN TOILET
STEP 9: BLACK WATER
STEP 10: SEPTIC TANK
STEP 11: SEPTIC TANK RECHARGE
STEP 12: GROUND WATER RECHARGE

ALTERNATE ENERGY RESOURCES: USE SOLAR AND WIND ENERGY TO POWER ELECTRICAL APPLIANCES

RECYCLED MATERIAL ROOF: THREE LAYERS OF WASTE PLASTIC SHEET-CARDBOARD+ TIN CAN SHEETING IS USED TO MAKE ROOF WATERPROOF

RECYCLED WOOD BATTERS: USE OF HOLLOW PIPES ALLOWED

SCREEN & PERGOLA: WASTE PARTS OF COUNCIL COVERS USED AS SCREENS

ELECTRICAL CONDUIT COVERS: WASTE PARTS OF COUNCIL COVERS USED AS SCREENS

COLOUR KEY OF MATERIAL SELECTION: FREE OF COST RECYCLED, OTHER MATERIAL MAYBE USED, CUSTOMISED

IGBC 2015

CLUSTERING OPTIONS & EFFICIENT ASSEMBLY DESIGN

5

CLUSTER TYPE 1
COMMUNITY STYLE CLUSTER
LARGER OPEN SPACES
EXCELLENT VENTILATION
COMFORTABLE SPATIAL EXP.

CLUSTER TYPE 2
VERY COMPACT CLUSTER
SMALLER OPEN SPACES
ADEQUATE VENTILATION
COMPACT SPATIAL EXP.

CLUSTER TYPE 3
RANDOM STYLE CLUSTER
UNPLANNED GROWTH
VERSATILE SPACES

CLUSTER TYPE 4
AXIAL SPACES
PROPER VENTILATION
ROW HOUSE TYPE SPACES

CLUSTERING DATA:
YELLOW BLOCK: KITCHEN
BLUE BLOCK: TOILET
IN EACH CLUSTER:
1 KITCHEN - 2 HOUSE
1 TOILET - 2 HOUSE
IN EACH HOUSE:
1 ROOM - 4 PERSONS
TOTAL = 18-20 PERSONS

DETAIL AT A
GULLY TRAP
REUSED STICK PERGOLA
DETAIL A FOR WATERPROOFING
WOODEN THRESHOLD
5 MM PLY BANNER WALL
JAALI/LOUVRE WINDOW MESH OR PARTICLE BOARD 12-16 MM THICK
SILL LEVEL LVL+1900
FRAMING 50MM HOLLOW TUBES
CARPET FLOOR
VAPOUR BARRIER
BAMBOO BASE
SOIL PACKED TYRES

BUSINESS PITCH:
PROJECT DURATION: MIN 2 YEARS
DAILY SAVING: 20% - RS 100
TOTAL CONTRACTOR PROFIT IN PROJECT: RS 39,50,000 or more

DAILY WAGE: RS X
CONSTRUCTION COST: RS 10,000 (100)
REDUCE WAGE BY RS 5, IN EXCHANGE OF HOUSE. MAKE PROFIT OF 40 LAKHS

REVISED DAILY WAGE: RS X-5 (IN \$ LESS)
CONTRACTOR PROFIT: 24,500 APPROX PER HOUSE

1 HOUSE=20 WORKERS

DISASSEMBLY TIME < 6 HOURS (PLUG AND PLAY SYSTEM)

ROOF REMOVED
WALL REMOVED
COLLAPSIBLE FRAMES
STACKED TOGETHER

IGBC 2015

MATERIAL DATA AND PHASE WISE SETUP DETAILS SHEET

2

WALL: ADVERTISEMENT BANNERS (FLEX BANNERS MAY BE LAYERED AND TIED UP ON FRAME AS A WALL MATERIAL, CHEAP AND AVAILABLE)

ROOF: RECYCLED MATERIAL ROOF (THREE LAYERS OF WASTE PLASTIC SHEET-CARDBOARD+ TIN CAN SHEETING IS USED TO MAKE ROOF WATERPROOF)

FLOOR: COMPOSITE FLOORING (BAMBOO RAFT BASE+RAFFLESHEET SHEET VAPOUR BARRIER FIBRE BOARD/DRYWALL/MD/PLY USED)

FOUNDATION: TYRE FOUNDATION (DISCARDED TYRES POUNDED WITH EARTH AND USED AS A STRONG FOUNDATION BASE)

SCREEN & PERGOLA: WASTE PARTS OF COUNCIL COVERS USED AS SCREENS

ELECTRICAL CONDUIT COVERS: WASTE PARTS OF COUNCIL COVERS USED AS SCREENS

AXONOMETRIC BLOWUP OF MODEL

STEP BY STEP CONSTRUCTION OF A MODULE

STEP 1: TYRE FOUNDATION
STEP 2: PRIMARY STRUCTURE (BAMBOO)
STEP 3: SECONDARY STRUCTURE
STEP 4: EXTERIOR SKIN

IGBC 2015

December 2015

Rajorshi Chatterjee & Sayantani Saha of 4th Yr. won the **First Runner-up** position in the **URBAN INNOVATION CHALLENGE** competition organized by **Municipalika 2015: 13th International Conference & Exhibition** (9, 10 & 11 Dec.'15) on 'Sustainable Habitat & Smart Cities' and received the Award for Excellence from Ms. Vasundhara Raje, Hon'ble Chief Minister, Rajasthan.



The Good Governance India Foundation (GGIF) Municipalika 2015 Urban Innovation Challenge (UIC) sought to identify the next generation of innovative solutions to systemic challenges in the urban areas through the Urban Innovation Challenge.

(Left) Rajorshi & Sayantani receiving the Award from the Hon'ble CM of Rajasthan.

Rajorshi Chatterjee & Sayantani Saha also received **Jury Mention** for their competition entry at the **IIA NATCON Students Design Competition, 2015**.



(Top) Sunandan & Shubhra receiving the award;
(Left) Shubhra Paul, Sunandan Paul & Ronit Biswas among other awardees

Shubhra Paul, Sunandan Paul & Ronit Biswas of 3rd Yr. won the **First Runner-up** position in the design competition '**URBAN NOMADS**' organized by Arvindbhai Patel Institute of Environmental Design, Gujrat.

Upcoming events

The Department is planning to organize a Faculty Development Program for teachers of Institutes imparting education in Architecture on 'Glass Architecture and Design' in collaboration with Glass Academy Foundation in February 2016.