Campus diary

June 2013 http://www.iitb.ac.in/CampusDiary/CD.html

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

IIT BOMBAY - edX PARTNERSHIP

IIT Bombay signed a Memorandum of Understanding (MoU) with edX in Delhi on June 25, 2013. Through this MoU, the institute has entered into a partnership with edX, a not-for-profit company set up by MIT and Harvard, and joined xConsortium of top global universities. The partnership with edX will strengthen the massive Open On-line Courses (MOOCs) that are already gaining rapid popularity.

Using information and communication technologies, IIT Bombay has developed and deployed training programmes, engaging thousands of participants at a time, through national mission projects sponsored by MHRD. Its research programme in education technology aims at evolving cutting edge technologies and appropriate pedagogy to improve quality education and to achieve scale. Collaboration with edX and the partner universities will help IIT Bombay better understand and solve issues in scaling up quality education. Enhancement to the open source edX platform will add to key areas of its research focus and enable technology to be deployed in other areas of education such as vocational training, school education, and faculty empowerment. Some of the regular courses of IIT Bombay will now be available to lakhs of students across the country, and to others globally. Quality education, imparted to its students on campus, can now be accessed by all learners.

SOCIETY FOR INNOVATION AND ENTREPRENEURSHIP (SINE)

SINE is an umbrella for promotion of entrepreneurship at IIT Bombay. It administers a business incubator which provides support for technology-based entrepreneurship thus extend-ing the role of IIT Bombay by facilitating the conversion of research activity into entrepreneurial ventures.

As on date, 46 companies have been incubated. In the year 2012-13, SINE hosted 14 companies, of which four have graduated from the incubator. Of its current companies, two have received investments from Venture Capital firms and Angel Investors. Three of the graduate companies have received second round of investment. The existing companies are from various technologies such as education, cleantech, mechatronics, audio technologies, nano technology, engineering software, geometric simulation for foundries, and marketing solutions for retail network.

With a view to expanding its incubation activity, SINE is focusing on promoting pre-incubation and enabling virtual incubation outside Mumbai. To begin with, virtual incubation in Pune area will be taken up on a pilot basis. SINE has been operationally self-sufficient since inception.

Awards and Distinctions

Prof. Pushpak Bhattacharyya, Department of Computer Science and Engineering, has been elected as Chairman of the Asian Language Resource Committee under the aegis of Asian Federation of Natural Language Processing for the year 2013-14. He will be responsible for activities and events related to language resource development in Asian languages, which is crucial for language technology in Asia.

Prof. Dharamveer Singh, Department of Civil Engineering, has been appointed as Visiting Research Scholar at the Department of Civil Engineering, University of Oklahoma, Norman, USA, May-June 2013.

Prof. Dharamveer Singh, Department of Civil Engineering, has been selected as Reviewer for the International Journal of Solid Waste Technology and Management.

Publications/ Presentations

Department of Humanities and Social Sciences

Dr. Sudha Shastri presented a paper titled "Literary Migrations, Cultural Transformations: From A Midsummer Night's Dream To *Kamdev ka Apna, Vasant Ritu ka Sapna*" at the *International Multidisciplinary Conference on Transcultural Imaginaries*, organised by the Centre for Liberal Arts & Social Sciences and Division of English, Nanyang Technological University, Singapore, June 14-17, 2013.

Prof. Azizuddin Khan presented a paper titled "Impulsivity & Task Condition in Prospective Memory Performance: Converging Evidence from Experimental and Questionnaire Study" at the *5th International Conference in Cognitive Sciences* (*ICCS 2013*), Tehran, Iran, May 17-09, 2013.

Prof. Khan also made a poster presentation on "Time Estimation Deficit in Developmental Dyslexia" at the *International Workshop on Reading and Developmental Dyslexia* held in Basque Centre on Cognition, Brain and Language, Donostia San Sebastian, Spain, May 30 to June 1, 2013.

Mohita, J., and **Khan, A.**, "Eyewitness Identification: Importance of Belief in Memory Accuracy," *Indian Journal of Psychology and Education*, Vol. 3 (1), 1-20.

Department of Civil Engineering

Ghabchi, R., **Singh, D.V**., and Zaman, M., Tian, Q.,"Mechanistic Evaluation of Effect of WMA-Additives on Wettability and Moisture Susceptibility Properties of Asphalt Mixes," ASTM *Journal of Testing and Evaluation* (2013).

Singh, D.V., Zaman, M., and Commuri, S.,"Comparison of Morphological Properties of Different Types of Coarse Aggregates"(paper submitted to *ASCE*), *Air Field and Highway Pavements Conference, 2013,* held at the Transportation and Development Institute, June 9-12, 2013, Los Angeles, California, USA.

Ghabchi, R., **Singh, D.V**., Zaman, M., and Tian, Q.,"A Laboratory Study of Warm Mix Asphalt for Moisture Damage Potential Using Surface Free Energy Method"

(paper submitted to *ASCE*), *Air Field and Highway Pavements Conference*, Transportation and Development Institute, June 9-12, 2013, Los Angeles, California, USA.

Department of Physics

Mr. Harihar Behera and **Prof. Gautam Mukhopadhyay**,"The Effect of Biaxial Strain on the Structural and Electronic Properties of ZnS Monolayer: Full-Potential DFT Calculations," http://arXiv.org/abs/: arXiv.1305.6895v1 [cond-mat.mes-hall] (2013).

Prof. Gautam Mukhopadhyay and Mr. Harihar Behera, "Emerging Two-dimensional Materials: Graphene and its Other Structural Analogues", http://arXiv.org/abs/: arXiv.1306.0809v1 [cond-mat.mtrl-sci] (2013).

Institute Colloquium/ Lectures & Seminars

Dr. Jennifer Smith, Dean of the College of Arts and Sciences, Washington University, US, spoke on "The Role of Climate in Human Migration in the Archaeological Past: Case Studies from Paleolithic Egypt", at an Institute Lecture on June 5, 2013.

Dr. Pawan Malhotra, Staff Research Scientist, International Centre for Genetic Engineering and Biotechnology, New Delhi, delivered a seminar on "Plasmodium falciparum cysteine/serine proteases at asexual blood stages and their role(s) in Hemozoin formation"at the Department of Biosciences and Bioengineering on June 14, 2013.

Prof. Shefali Moitra, formerly Professor of Philosophy, Jadavpur University, gave a seminar on"Rationality and the Subjective/Objective Divide"at the Department of Humanities and Social Sciences on July 3, 2013.

Dr. Sankara Papavinasam, President, CorrMagnet Consulting Inc., Canada, delivered a seminar on "Recent Advancements in the Internal Corrosion Control of Oil Transmission Pipelines"at the Department of Metallurgical Engineering and Materials Science on June 21, 2013.

Centre for Research in Nanotechnology and Science

Dr. K.P. Madhusudanan, former Head of SAIF, CDRI Lucknow, gave a presentation on "Modern Mass Spectrometry for Small Molecules"at the Centre for Research in Nanotechnology and Science on July 2, 2013.

Faculty News

Prof. Sanjeeva Srivastava, Department of Biosciences and Bioengineering, gave an invited lecture on "Proteomics and Systems Level Tools for Identification of Biomarkers: Challenges and Opportunities" at a *Workshop on Clinical Proteomics* held at Madurai, held on June 24-26, 2013.

Prof. T.I. Eldho, Department of Civil Engineering, delivered an invited lecture on "Computer Modeling of Hydrologic Processes for Water Resources Management"at a *National Symposium on Computational Fluid Dynamics application in Water Engineering* organized by IISc Bangalore, Bangaluru, held on June 1, 2013.

Prof. T.I. Eldho, Department of Civil Engineering, organised a 3-day CEP course on "Rainwater Harvesting and Sustainable Water Management" for INGC Engineeris at IIT Bombay, held on April 4-6, 2013.

Prof. S.G. Dani, Department of Mathematics, visited the Institute Mathematique de Luminy, Aix-Marseille University, Marseile, France, on a collaborative research programme from May 9 to June 14, 2013, and gave an invited talk on "Large Subsets of Points with Atypical Behavior, in Number Theory and Dynamics" at the *Ergodic Theory Seminar*, on June 4, 2013.

Prof. Dani also gave invited talks on"Dynamics of the Geodesic Flow on the Modular Surface and Applications in Number Theory" at a *Conference on Statistical Physics and Dynamical Systems* at the University of Strasbourg, France, May 30 - June 1, 2013; "Dynamics and Diophantine Approximation" and "Dynamics and Hyperbolic Geometry" at a *Workshop on Complex Analysis* at the University of Central Rajasthan, Kishangarh, held on 24 June 2013; and "Curiosities about Numbers - From Ancient to Modern Times" at the JECRC University, Jaipur, held on 25 June 2013.

Prof. V.D. Sharma, Department of Mathematics, visited the Courant Institute of Mathematical Sciences (CIMS), USA, during May 13 - June 30, 2013, to carry out a collaborative research on Mixed Hyperbolic-parabolic Systems of PDEs that appear in the Hall MHD.

Prof. J.K. Nayak, Department of Energy Science and Engineering, organised a CEP course on "Solar Thermal Power", at IIT Bombay during 29th April - 1st May 2013. Lectures on various aspects of solar thermal power including its economic viability were delivered during the course. A visit to the Solar Thermal Laboratory of the institute was also arranged. Eighteen participants from various Indian industries and three from academic institutions attended the course. Participants were briefed on the MWe grid-connected Solar Thermal Power Plant being built by IIT Bombay on the campus of Solar Energy Centre of MNRE at Gwalpahari, near Gurgaon.

Prof. P. Ramadevi, Department of Physics, gave three invited lectures on" Physics and Mathematics of Link Homology" in a meeting held at the University of Montreal, June 24-July 5, 2013.

Student News

"State Bank Day" is celebrated on the 1st of July every year. This year, at a function organized on the eve of State Bank Day celebrations, the bank honoured persons who had done innovative work in the field of technology. Among them was **Mr. Samiulla Shaikh,** an M.Tech. student from the Department of Computer Science and Engineering who worked under the guidance of **Prof. Pushpak Bhattacharyya**. Mr. Shaikh was honoured for his contributions to Indian Language Wordnet Development and Word Sense Disambiguation. The award carried a trophy and gift vouchers worth Rs.10,000.

Solar Decathlon Europe 2014 Competition

IIT Bombay and Rachana Sansad's Academy of Architecture recently formed the first team from India to participate in the prestigious Solar Decathlon Europe 2014 competition. It is an 18-month-long challenge culminating in the construction of a life-size 700 sq.ft. solar powered house within IITB campus. The house will then be disassembled and shipped to the competition site at Versailles and re-erected there in merely 10 days – another feat in itself. The re-constructed houses are visited and inspected by organisers, industry, media and the local public over the following 14-day period, typically seeing over 200,000 visitors.

Named "Team Shunya", the students are currently working on the design and technical features of the house. The house is judged on 10 different aspects like Architecture, Engineering, Innovation, etc.; hence, the name "Decathlon". The efforts of the team are streamlined by the able guidance of Prof. Rangan Banerjee, Faculty Advisor, along with regular help and mentoring by professors in various fields. Prof. M.V. Rane, Prof. Monika Jain, Prof. Siddhartha Ghosh, Prof. Suneet Singh, Prof. Chetan Singh Solanki, Prof. Rohit Shinkre (AoA), and Prof. Jatin Prajapati (AoA) are all part of the management committee to see the team through in this ambitious venture.

The students plan to bring about a change in the Indian building industry by demonstrating the affordability of sustainable housing. The number of middle-class homes in India currently stands at 32 million and is expected to grow up to 147 million by the year 2030. The rapid increase in housing infrastructure will pose significant challenges to energy demand-and-supply dynamics. They aspire to formulate and document a design process, which can be replicated to create sustainable homes in a resource-efficient manner.

In addition to engineering and architecture, the participating teams will also be judged on the quantum of awareness and interest that they are able to generate towards the competition and to the broader cause of energy efficiency in buildings. The cost of the project including construction, travel & lodging of team members in France, and all the communication activities, is estimated to be 2 crores; the money has to be raised by the team in the form of corporate and government sponsorships.

The team was selected in December 2012, and will showcase the final product in Versailles during June-July 2014.

Appointments

Prof. Indradev Samajdar, Dept. of Metallurgical Engineering and Materials Science, has been appointed as Head, Centre for Research in Nanotechnology and Science (CRNTS), for a period of three years with effect from May 30, 2013.

Dr. Ravindra D. Gudi, Department of Chemical Engineering, has been appointed as Professor on June 10, 2013.

Dr. Munish Kumar Chandel, CESE, has been appointed as Assistant Prof. on June 6, 2013.

Dr. Lokesh P. Padhye, CESE, has been appointed as Assistant Professor on June 13, 2013.

Retirements (June 30, 2013)

Prof. Emmela P. Rao, Associate Professor, Department of Civil Engg., retired after 42 years of service.

Shri Babu N. Bagade, Senior Superintendent, Material Management Division, retired after 35 years of service.

Shri Chandrakant More, Superintendent, Centre for Research in Nanotechnology and Science, retired after 38 years of service.

Shri Eknath Kedare, Superintendent, Accounts Section, retired after 40 years of service.

Ms. Shanta Sreeraman, Superintendent, Dean (SA) Office, retired after 36 years of service.

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Shri Attukadavil S. Chacko, Superintendent, Hostel 8, retired after 29 years of service.

Ms. Nisha Valavalkar, Junior Superintendent, Central Library, retired after 38 years of service.

Shri Kharksingh D. Singh, Junior Superintendent, NCC, retired after 35 years of service.

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Shri Rajkumar R. Gurda, Junior Technical Supt., Department of Chemical Engg., retired after 32 years of service.

Shri Vasant L. Kshirsagar, Attendant (SG), Dept. of Electrical Engg., retired after 33 years of service.

Shri Narayan Satve, Attendant (SG), IIT Hospital, retired after 34 years of service.

Shri Ankush Waghmare, Helper (SG), Estate Office, retired after 34 years of service.

Shri Sadashiv M. Sonawane, Sr. Watchman, Security Section, retired after 33 years of service.

Ms. Leelabai M. Pawar, Cleaner, Public Health Office, retired after seven years of service

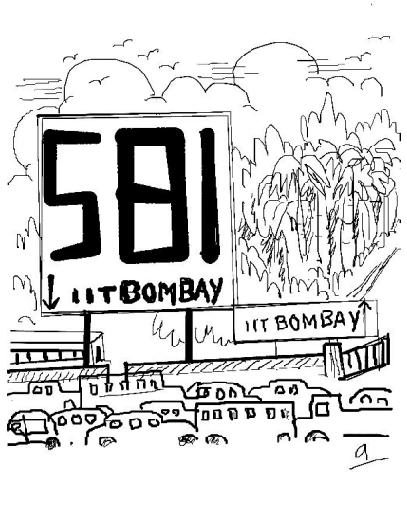
ERRATA

In the March-April-May 2013 issue of the Campus Diary, under 'Appointments', the designation of Dr. Shireesh B. Kedare was wrongly shown. The correct information is as follows:

"**Dr. Shireesh B. Kedare**, Department of Energy Science & Engineering, has been appointed as Professor on May 27, 2013."

Salt'n Pepper

by Dr. Arun Inamdar



In the Wilderness

by Mr. C.P. Joglekar

CEP courses scheduled during July-August, 2013

No.	Course Title	Course Coordinator	Department	Duration
1	Finite Element Method and Applications in Civil Engineering	Prof. T.I. Eldho & Prof. Y.M. Desai	Civil Engg.	July 01 – 05, 2013
2	Proteomics – Principles and Techniques	Prof. Sanjeeva Srivastava	Biosciences & Bioengineering	July 02, 2013
3	Urban Drainage Management: State-of-the-art	Prof. Kapil Gupta	Civil Engg.	July 04 – 06, 2013
4	10th Batch of Executive Programme in Management	Prof. S. Bhargava	SJMSoM	July 06, 2013 to April 27, 2014
5	Systems Engineering Principles	Prof. Ashok Joshi	Aerospace Engg.	July 08 – 10, 2013
6	Integrated Navigation of Flight Vehicles	Prof. H.B. Hablani	Aerospace Engg.	July 08 –12, 2013
7	Water Resources Management Studies using Geospatial	Prof. RAAJ. Ramsankaran & Prof. T.I. Eldho	Civil Engg.	July 08 – 12, 2013
8	Monsoon HCI	Prof. Anirudha Joshi	IDC	July 10 – 24, 2013
9	Product Semantics	Prof. U.A. Athavankar	IDC	July 15 – 20, 2013
10	Taking Product form Decisions using Semantic Creatively	Prof. U.A. Athavankar	IDC	July 23 – 30, 2013
11	IC Design and Fabrication	Prof. V.R. Rao	Electrical Engg.	July 25, 2013
12	EXPO CD	Prof. Ravi Poovaiah	IDC	Aug 28 – 30, 2013

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BOOK POST