

## Infrastructure Development Activities

There was an upsurge in activities to develop campus infrastructure during the previous month.

During April, a beginning was made to enhance ladies hostel accommodation. Demolition work on the C-Type Building No.1, behind hostel 10, started. The vacated space, will make way for an extension to H-10, adding 200 rooms, a much needed requirement.

Another demolition which has started is of the Computer Centre/CAD Centre. The (G+1) storey building will give way to a G+5 storey Block, matching the neighboring KReSIT building. It is likely to house the Computer Centre and the Computer Science & Engineering Department.

The Nano-electronics Centre, the latest entity on campus focusing on research in this cutting edge technology, is to have its own establishment shortly.

For this purpose the Rock Lab in the Earth Sciences building and the southern staircase space of CSRE are being demolished.

The Suman Mashruwala Advanced Micro Engineering Lab, was inaugurated by Mr. Raj Mashruwala (1975 B Tech in Mechanical Engineering), the major donor towards its development, on April 13, 2007, in the presence of Dr. Anil Kakodkar, the Chairman of the Board of Governors of the Institute, Prof Ashok Misra, the Director, faculty and students. The Lab is housed in the independent two-storey building in front of the Thermal Hydraulics Research Facility, and has sophisticated equipments like micro-map, excimer laser, micro particle image velocity analyser, etc. The Lab forms a part of the Mechanical Engineering Department. It will give a boost to MEMS research activities in the Department and the Institute.

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*Director at the renovated Academic Office. Also seen Mr. Raj Mashruwala, Mr. Mashruwala and Prof. Singh, Dean Academic*

## Awards & Distinctions

Prof. S. L. Dhingra, Civil Engineering Dept. has received the 'VISVESHVARAIYA AWARD' in the category "Eminent Professor" in recognition of his contribution to India's development, at 'The India Infratech 2007', a regular international seminar organised by Construction & Building Records (a construction fortnightly) held on 21 April 2007.

Mr. Kaushal Sampat, a senior M.Tech student of the Chemical Engineering Department has won the first prize in the contest to select the "Outstanding Young Chemical Engineers Award" conducted by ICHE-MRC. His topic for the presentation was "Dynamic Modeling and Simulation of Ammonia Synthesis Reactor", a study he has carried out under the guidance of Prof. R. K. Malik.

Shashi Bhushan Arya, a Ph.D. student working under Prof V. S. Raja and Prof A. N. Tiwari, MEMS has been awarded by The Best Poster Presentation Award' on topic "Electrochemical Corrosion Behavior of Ni and Mn Free High Nitrogen Stainless Steels" in International Symposium on ADVANCES IN STAINLESS STEELS 2007 "ISAS 2007" in Chennai.



**(Infrastructure dev. contd.)**



Alumnus Raj Mashruwala inaugurates the Suman Mashruwala Centre. Also seen are Prof. Misra, Prof. Maiti and Dr. Kakodkar

Also present on the occasion were Chairman, Dr. Anil Kakodkar, alumni Ashank Desai and Shailesh J. Mehta.

On April 18, 2007, the renovated premises of the Academic Office, (MB, 2<sup>nd</sup> floor) were inaugurated by the Director, Prof. Ashok Misra. Also present on the occasion were Mr. Raj Mashruwala, Prof. Malik (Dean

Planning) Prof. Singh (Dean AP), Prof. Ravi Hazra, (In-charge, Design Cell) who designed and executed the interiors, Dr. Sahay, Registrar, Prof. Gadre, Chairman PGAPEC, and others. The Director appreciated the new corporate look of the premises and expressed the hope that it will create a new enthusiasm and work culture in the staff.

**Civil Engineering  
Department Workshop**

A one day workshop on 'Proposal on Intelligent Transportation System' was organised by Prof. Tom V Mathew and Prof. K V Krishna Rao of Civil Engineering Dept. jointly with C-DAC Trivandrum on April 13, 2007. About fifteen ITS proposals from IIT Bombay, IIT Madras, CDAC(T) and industry were presented. Prof. Harish Pillai, Prof. Kavi Arya, Prof. Abhiram Ranade, Prof. Bernard Menezes, Prof. Ashwin Gumaste, Prof. SL Dhingra, Prof. KV Krishna Rao, Prof. Tom V. Mathew, Prof. S. Chaudhuri, Prof. Girish Kumar, and Prof. J D Hunt participated in the presentations and deliberations.

**DST Project Sanctioned**

Department of Science and Technology has sanctioned a national integrated project on " Mapping the source region of active Barren Island Volcano and structural configuration of the Andaman subduction zone in the NE Indian Ocean" with a budget out lay of Rs. 97 lakhs. Prof D Chandrasekharam, Dept. Earth Sciences is the Chief Coordinator of the project. IITB, NGRI, PRL and IITM are involved in this project.

**Jindal Stainless Award for  
Letterbox Design**



The contemporary letterbox designed for India Post by Prof. B. K. Chakravarthy, Industrial Design Centre, was awarded a 'special mention' at the stainless innovation awards 2007 presented by Jindal Stainless Ltd. The recognition has been awarded for the innovative use of stainless steel in product design.

The elegant letterbox with stainless steel body has an attractive red beaklike top with an aperture for letters. While the top cover enveloping the body would prevent ingress of rainwater, the slopes at the top of the box would drain out the rainwater.

A flat top for writing, space at the bottom for resting the letter before posting, simple time slider, and a common key to open all letterboxes in one region are its other unique features.

To ensure high quality and durability the letterboxes were manufactured using high-end CNC machines; high quality brush finished stainless steel from Jindal Stainless Ltd.; engineering plastics from GE Plastics for letterbox top and rust proof locks from Godrej.

Apart from creating a strong visual identity for India Post, the elegant letterbox would also encourage industries to advertise on them and generate revenue for India Post.



**"Deja vu"- IIT Bombay  
backed film released**

'Deja vu', a film made by IITians, backed by IIT Bombay and with an IIT theme, was released on Saturday April 14, 2007. The very first show was held at the IIT Bombay Convocation Hall viewed by students, faculty, campus residents and media persons.

Last couple of years, IIT has seen multiple suicides, suicide attempts, drop-outs etc in institutes of higher learning such as the IITs. These extreme actions, by however small a proportion of students, have sparked intense debates and concerns have generally revolved around apparently increased pressure on the student community at the social as well as academic levels, in comparison to previous standards. 'Deja vu' is the outcome of this effort.

The film is produced by Positive Delta Communication (Co-founder Jikku Abraham is an IIT Alumnus). IIT Bombay Advisors were Professor T. Kundu, (Chairman, Cultural Affairs) and Professor P. Gopalan, (Dean, Student Affairs). It was directed by Anshul Singhal, IIT Bombay alumnus and the lead Actor is Ankur Gulati (Aero student).

The first show was at a packed Convocation Hall. Although a serious film with a message, it was well received by the students. The Chief Guest on the occasion Ranjit Kapur (Theater person and writer for films such as 'Jane Bhi do Yaaron', 'Kabhi Haan Kabhi Na', 'Mangal Pandey') was highly impressed with the film. " I thought I would view the film patronisingly", he said, " But after viewing it, I am overwhelmed. It has taught me a things or two". Prof. Ashok Misra, Director IIT Bombay, hoped that the message the film carried would have a positive effect and touch students.



*A Shot from the film 'Deja vu'*

Prof. Kundu, Chairman Cultural, described how the idea of making a film evolved from the PAF of 2006, where 'Deja vu' was an award winning outstanding play. He said he was impressed with the film and commended the 'Deja vu' team and nearly two hundred students who participated one way or another.

'Deja vu' is the story of an IITian who as an individual contemplates his very existence at IIT. He wonders whether the world inside IIT is the same as the world outside. His friends surprise him every time and then one day it becomes too much to handle. Does he succumb to the situation or finds answers in his own heart?

'Deja vu' captures different aspects of not only the students but even professors and the interpersonal relationship that exists between them. It takes you through the emotional lows and highs that any IITian can identify with. Though 'Deja vu' is a film that revolves around IIT and IITians, in essence, it addresses youth in pursuit of answers to self-doubt.

**Cool Summer Fest, 2007**

Research Scholars's forum, IIT Bombay and Sustainable Youth had organized 'Cool Summer Fest, 2007', Symposium cum Technical Festival on Solutions for Global Warming, on 25th March, 2007. It was designed to encourage interdisciplinary innovation to solve environmental problems like Global Warming (GW). The event was sponsored by IRCC, IIT Bombay, ONGC and SINE, IIT Bombay. Competitions like Poster presentation, Field Games, Idea-Research-Innovation and Research Proposal Defense were organized. Prof. S. P. Sukhatme, Ex-director IIT Bombay, Prof. K. K. Issac, Asso. Dean R & D and Mr. Vijay Deshpande from MERC as well as faculty from various departments like CESE, Civil Engineering, Mechanical Engineering, CSRE, CTARA and HSS helped with judging the various competitions and were also involved in the discussion. The Best Performer Trophy was awarded to Dinesh Mantri, Research Scholar from Chemical Engineering.



## IIT R & D Heads Meet

IRCC organised a meeting of the Deans and Associate Deans of Research and Development of all IITs, during 17<sup>th</sup> -18<sup>th</sup> March, 2007 at IIT Bombay. The first such open-ended meeting was attended by the following from various IITs:

Prof. Krithi Ramamritham, IIT Bombay  
 Prof. K. Kurien Issac, IIT Bombay  
 Prof. P.P.Chakrabarti, IIT Kharagpur  
 Prof. T.T.Narendran, IIT Madras  
 Prof. K.Krishnaiah, IIT Madras  
 Prof. V.S.Bisaria, IIT Delhi  
 Prof. Suneet Tuli, IIT Delhi  
 Prof. S.C.Srivatsava, IIT Kanpur  
 Mr. S.Pandey IIT Kanpur  
 Prof. J.B.Barua, IIT Guwahati

All the IIT Deans made presentations regarding the structure of the respective offices and the various procedures and processes in place in each of the IITs for R&D management and administration. Wide ranging discussions ensued in respect of the different mechanisms for promoting research, attracting high class faculty and students, and improving the visibility of IITs' research.

It is proposed to formulate common guidelines for the various R&D processes across all the IITs and a common policy in some areas such as IP policy, purchase procedures, incentives to faculty, project staff salary and structure, terms for faculty on lien / long leave, etc. A comparison study of the various processes in different IITs has been initiated.

Various subcommittees have been formed to formulate the details of the above action items which would be taken up for further appropriate action by all the Deans of Research & Development.

## Energy Day 2007



*From right Dr. Anil Kakodkar, Prof. Rangan Banerjee, Dr. A. Kaupp, Mr. Vinay Deodhar, in a Panel Discussion.*

Energy day was started in the year 2002, as an initiative to build strong Industry-Academic Linkage. It has since then become a regular event showcasing the research work of postgraduate students and research scholars. This year Energy Day was held on March 31, 2007 with about 220 participants, from industry (Suzlon, Enercon, Ratnagiri Gas & Power, Forbes Marshall, Bluestar, Tata Power, Thermax, MSEDCL etc), and academic institutions (School of Energy-University of Pune, Bharati Vidyapeeth, C O E, Pune, Mumbai University etc). There was also a book Exhibition by Tata Energy Research Institute (TERI) on various subjects on Energy & Environment.

Energy Day 2007 was Inaugurated by Prof. Ashok Misra, Director, IIT-Bombay. In his Inaugural address Prof. Misra stressed on the criticality of Energy Consciousness in today's world, and the role we have to play to make India as a role model for practicing energy modesty. The Convener, ESE gave a brief outline of the departmental activities and future plans.

Each final year student presented his or her work to the mixed audience from

industry, research organisations and academicians. The topics ranged from 'Design of Si Concentrator Solar Cell for low concentration, water and hydrogen management, use of updraft gasifier for power generation, synthesis of nano-carbon on porous Si, Low level Concentrator PV Systems, Optimal control of switched reluctance generator etc.'. This was followed by an interactive session, also supported by the poster presentations.

The topic for panel discussion was "Energy and Climate Change". The Panellists were Dr. Anil Kakodkar, Chairman, AEC & Secretary, DAE, Dr A. Kaupp, Manager, Indo-German Energy Efficiency Network (also with BEE), Mr Vinay Deodhar, Director, Clean Tech Solutions, and Convener, Energy Systems Engineering, Prof. Rangan Banerjee was the moderator.

In his opening remarks at the panel discussion, Dr. Anil Kakodkar said that although India's carbon emission (per capita) is quite low today, with the current rapid growth rate it may be 10-12 times higher under BAU scenario by middle of this century. Hence, India is likely to face huge pressure to commit

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## Wind Energy Technology

A three-day training course on Wind Energy Technology was conducted from April 16-18, 2007 at IIT-Bombay, with the objective of looking to the large market and its needs for skilled manpower to design, operate and understand issues regarding wind machines.

Wind Energy has proven to be economically viable and clean source today for generating grid quality electrical power. The Wind power programme in India was initiated towards the end of the Sixth Plan, in 1983-84. India now ranks fourth in the world with over 6000 MW of Wind Power Installed Capacity. The sector is growing at about 30% annual growth rate with huge demands for qualified man-power.

This course was designed for practicing engineers in wind industry, teachers, students, policy makers and scientists who are interested in or are exposed to Wind Energy Technology. The course provided an introduction to

the skills and techniques required for analysis of Wind Machines and exposed the participants to various issues and the methods of selection, siting and operation of Wind Machines.

An enthusiastic group of 51 participants, which included different Wind Turbine Manufacturers (Suzlon, ITC-GE, Vestas, Marut Energy, etc.), Industries (Excel Crop Care, Ramco Wind Farms, Rajpliyam mills, etc.), Teachers and Students from various Engineering Colleges, Energy Development Agencies (MEDA, HAREDA, ANERT-Kerala), Govt Research Institutes (BHEL, NAL, etc.) and Vendors (in the field of controls).

The three day course included sessions conducted by IIT faculty working in related areas. The other speakers included Executive Director, C-WET, Dr M.P. Ramesh who gave an interesting session on Resource Assessment of Wind Energy and Siting issues and Dr. Rajendra Kharul-Senior

Fellow-World Institute of Sustainable Energy (WISE) who spoke about Operation & Maintenance Issues. A session to emphasize that we are living in an environment which is degrading due to uncontrolled human activities and industrialization and was conducted by Prof. Anand Rao-CTARA-IITB on 'Concepts of Clean Development Mechanism (CDM)'. Prof. Shrish Kedare faculty Energy Systems & Engineering, IITB summed up, communicating to the participants the direction of new technological developments in the Wind power sector, its research needs and need for technically trained manpower in this sector.

Participants also had an opportunity to visit the ESE department and other related labs and projects at IITB. The feedback for the course indicated that participants had gained a lot from the course on the technical content point of view, but also needed some more supplements on practical and on-field knowledge.

### Energy Day contd.

for emission reduction, which will pose a two-fold challenge - Development challenge and Global climate challenge. Availability of good-quality energy resources poses serious constraints on the technology mix that India can opt for. Nuclear energy, being the most efficient (energy per unit mass or volume of material mined) and the cleanest seems to be a promising option to tackle this situation.

Dr. A. Kaupp used a plot of Human Development Index (HDI) verses annual per capita electricity use (kWh/ capita) to illustrate the serious consequences of BAU practices. Mr. Vinay Deodhar elaborated the Clean Development Mechanism (CDM), a market based

mechanism, and that it was introduced under Kyoto Protocol - so as to help the Annex-1 countries to achieve their emission reduction targets in an economic way. He said that the developed countries are allowed to invest in emission reduction projects in the developing countries, and claim the emission reduction in their balance sheets.

While giving their concluding remarks, the panelists highlighted that IIT can play a major role in policy formulation and in providing guidance to the government and policy makers on energy usage. The need for more energy engineers and energy managers was emphasized.

### Institute Lecture

Prof. V. S. Sunder, Institute of Mathematical Sciences, Chennai delivered an institute lecture on, "P. R. Halmos : My Teacher- The best in the business" on April 25, 2007. Prof. Sunder received his Ph.D. in Mathematical Sciences under Prof. Halmos in 1996. He received the S. S. Bhatnagar award in 1996.

Prof. Sunder described his teacher, Prof. Halmos including his approach to teaching mathematics, learning, writing mathematics and giving mathematical lectures. Further he elaborated his teacher's illustrious academic career, research and the books he has authored. Prof. Sunder shared his experiences and memories as a student under Prof. Halmos.



## Institute Colloquium

The institute colloquium addressed by Prof. Vijay Govindarajan on Monday, 2nd April, 2007 at P.C. Saxena Auditorium was a most impressive and insightful session.

Prof. Vijay Govindarajan is an Earl C. Daum 1924 Professor of International Business and Director, William F. Ahtmeyer Center for Global Leadership Tuck School of Business, USA.

The session started with a welcome note by Prof. Ashok Misra, Director, IIT Bombay. Prof. Atanu Ghosh, Advisor to the Director and Member of the Institute colloquium Committee introduced the speaker and briefed about the talk.

Prof. Govindarajan chose to speak on a topic of great interest and relevance in today's ever changing competitive business environment - "Strategy and Innovation". His presentation was primarily based on the findings from his recently released book "Ten Rules for Strategic Innovators - from Idea to Execution".

In his talk he emphasized that in an era of almost constant change, the strategic challenges for organizations become:

1. How do we identify the market discontinuities (e.g., fundamental shifts in technology, customers, competitors, lifestyle/demographics, globalization, regulations, etc.) that could transform our industry?
2. How do we analyze the opportunities and risks, as a result of our understanding of market discontinuities?
3. How can we create new growth platforms with a view to exploit the market discontinuities?
6. What are our core competencies and how can we leverage them in the growth platforms?
7. How do we allocate resources to support growth?



*Prof. Govindarajan while delivering Colloquium.*

8. What is your role in shaping the future of your company?

9. What kind of organizational DNA must we have in order to anticipate and respond to changes on a continual basis?

10. How do you execute breakthrough strategies?

The audience was spell bound and fully engrossed in the impressive presentation of Prof. Govindarajan. They enjoyed the last slide most which had a serious message delivered with a great sense of sarcasm and humour.

He stated **The Top 10 Things one Can Do With a Dead Horse** (in descending order) -

10. Whip the horse a little harder.
9. Change the rider.
8. Harness several dead horses together for increased speed.
7. Emulate the best practices of companies riding dead horses.
6. Proclaim that it's cheaper to feed a dead horse.
5. Affirm that "This is the way we have always ridden this horse."
4. Declare that "This horse is not dead."
3. Have the lawyers bring suit against the horse manufacturer.

2. Engage a consultant to study the dead horse.

1. Promote the dead horse to a senior management position.

## Obituary

With profound sorrow we inform of the sad and unexpected demise of Prof. Suresh Dixit of the department of Metallurgical Engineering and Materials Science on 28th March, 2007.

Prof. Suresh Dixit was a distinguished alumnus of this institute from the 1967 B.Tech. batch. He obtained his post graduate as well as doctoral degrees from IIT Bombay while in service as a faculty member of the department of metallurgical engineering. He made significant contributions in the area of mineral processing and extractive metallurgy. He was a brilliant engineer and a meticulous teacher who was held in high esteem by all his students as well as colleagues. He was amongst those few teachers who held teaching above all other personal and professional interests. Prof. Suresh Dixit is survived by two daughters and one son.



## Faculty News

Department of  
Aerospace Engineering

**Prof. J.C. Mandal** attended the ICFD Conference on Numerical Methods for Fluid Dynamics at University of Reading, UK and presented a paper entitled "High Resolution Finite Volume Computations using A Novel Weighted Least-Squares Formulation" authored by Mandal J.C., Subramanian J. And Rao S. during 26-29 March 2007.

Department of Chemistry

**Prof. Sambhu N. Datta**, has participated in the 233rd American Chemical Society National Meeting and Exposition held in Chicago during the period March 25 to 29. The title of his poster presentation was 'Phonon-dressed exciton dynamics in thylakoid membrane and light reaction rate in chloroplast'. The poster was exhibited in Sci-Mix program on March 26 and in General Poster program on March 28.

Department of Civil Engineering

**Prof. Deepankar Choudhury** was invited to deliver a lecture on the topic "Need for revisions in IS codes for earthquake resistant design of geotechnical structures", at Centaur Hotel, New Delhi during the National Workshop on Science and Technology in Disaster Management Earthquake, Landslide and Tsunami, organized by National Disaster Management Authority (NDMA), New Delhi, India on March 3, 2007.

Department of Earth Sciences

**Prof. G. N. Jadhav**, Associate Professor has attended "National Conference on Luminescence and its Applications (NCLA-2007)" held at Bharathiar University, Coimbatore, Tamil Nadu,



*Prof. and Mrs. Gambhir seen at the Senate Meeting with Director. Prof. Y. K. Gambhir, Physics Dept., has been conferred the title of "Professor Emeritus" by the chairman and members of the Senate on April 14, 2007.*

where he orally presented a joint paper entitled; "Comparative studies on natural calcium fluoride (fluorite) with various impurities, using thermoluminescence and electron-spin-resonance", Co-authored with Dr M. P. Chugaonkar of BARC, Trombay, Mumbai and Dr T.K. Gundurao of SAIF, IIT-Bombay, from 18th to 20th January, 2007.

Department of Humanities and  
Social Science

**Prof. Ramasubramanian** was invited to give a talk on "Optics in Siddhanta-tattva-viveka and Planetary Theory" at the International Conference on "A Shared Legacy: Islamic Science East and West", held at the University of Barcelona. This conference was jointly organized by the Barcelona Ciencia, Universitat de Barcelona and IUPHS, and was held between April 11-14, 2007.

**Prof. Malhar Kulkarni** had organised a one day National seminar on "Sanskrit and its relations with Indian Languages" at the Asiatic Society of Mumbai where he presented a paper titled "Constitution direction based development of Lexicography in Modern India" on 21st April 2007. He also presented the following papers

entitled "Lexicographic traditions in India and Sanskrit" in a national seminar on 'Creation of lexical resources for Indian languages' organised by CDAC, Mumbai, 26-28 March 2007 and "Education ethics as reflected in the transmission of shastric texts in India" in a national seminar organised by CASS, University of Pune, from 22-24 March 2007 and "Padaarthas in Sanskrit Grammar with reference to Bhartrhari (in the light of Helaraja)", in a national seminar organised by Dept. of H & SS, IITB, during 16-18 February 2007.

Industrial Design Centre

**Prof. G. V. Sreekumar** presented a paper titled "Malayalam Typography-Challenges ahead" at the National Workshop on Calligraphy and Typography, organized by CDAC, Pune from 19 to 20 April, 2007.

**Prof. Raja Mohanty** presented a paper titled "The Invisible Shades of Disorder" at the 7<sup>th</sup> conference of the European Academy of Design, on the theme "Dancing with Disorder: Design, Discourse and Disaster". The conference was organized by the Faculty of Fine Arts and Design at Izmir University of Economics, Turkey, between 11-13 April 2007.

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Department of Mathematics

**Prof. Sudhir R. Ghorpade**, has been invited on the Editorial Board of the International Journal of Information and Coding Theory (IJICoT), published by Inderscience Publishers, U.K.

SJM School of Management

**Prof. Shishir K. Jha** was invited for a guest lecture titled "Relevance of Creative Commons for the knowledge economy" at the National Workshop on IPR at IIT Kanpur on April 1st, 2007.

**Prof. S. Bhargava** delivered his inaugural address on "Entrepreneurial Management" at the Research Seminar on PATHH at the St. Francis Institute of Management and Research, Mumbai during March 2-3, 2007.

**Prof. S. Narayan Rao** presented two papers one on 'Earnings Management in Indian Firms: Study of Equity Rights Issues' and another on 'Forecasting Volatility of S&P CNX Nifty Index Returns' at 14th Annual Conference of Global Finance Association held on 1-4 April 2007 at Melbourne (Australia). After the conference he visited Melbourne Business School, The University of Melbourne.

**Prof. Atanu Ghosh** participated at AIMA's 3rd National Marketing Summit on "Reinventing the Market Place: Focusing on the Consumer" at The Taj Mahal Palace & Towers, Mumbai held on 20-21 April, 2007.

### Student News

**Prakash V. Shirsat**, M.Tech. Student, CESE, attended the 22<sup>nd</sup> International Conference on Solid Waste Technology and Management organized at

Philadelphia, PA, U.S.A. from March 18 - 21, 2007. He presented a research paper on "Efficacy Assessment of Municipal Solid Waste Management System of Greater Mumbai, India" co-authored with Prof. A.K. Dikshit.

**D. Udayakumar**, Ph.D. scholar from IDC presented a paper titled "Letter similarity in Tamil Letters" at the National Workshop on Calligraphy and Typography, organized by CDAC, Pune from 19 to 20 April, 2007.

**Girish Dalvi**, Ph.D. scholar from IDC presented a paper entitled "Evaluation of Devanagari Typefaces for Onscreen Legibility" at the National Workshop on Calligraphy and Typography, organized by CDAC, Pune from 19 to 20 April, 2007.

**Manish M. Joglekar**, Research Scholar in Mechanical Engineering presented an article entitled "Numerical Investigation of Nonlinear Stiffening Effects in Electrostatic Microactuators using Rayleigh-Ritz Method", co-authored by Prof. D. N. Pawaskar, at the National Conference of Research Scholars in Mechanical Engineering held at IIT Kanpur in March 2007.

An interactive session with a team from Confederation of Indian Industry (CII) - Western Region on "Young Indians" programme was organized for NSS students on April 10, 2007.

### Publications

**Dr. D. N. Phadke**, Asst. Librarian (S.G.) has published a book in regional language Marathi named, "Granthalay Sanganakikaran Aani Aadhunikikaran" (Library Computerization and Modernization) which is recently published by Universal Prakashan Pune.

**Prof. Malhar Kulkarni**, Dept. of H & SS has published a papers titled "On Mahakavyas in Sanskrit", in Feb.2007 & "Approach to study the Sanskrit Mahakavyas", in Dharmabhaskar, in March 2007.

**Prof. Deepankar Choudhury**, Dept. of Civil Engg. has published an international journal paper with his PhD student on topic "Seismic rotational displacement of gravity walls by pseudo-dynamic method: passive case", authored by Deepankar Choudhury and Sanjay Nimbalkar in the Journal 'Soil Dynamics and Earthquake Engineering' (ISSN: 0267-7261), Elsevier, U.K., Vol.27, No.3, pp.242-249.

**Prof. Atanu Ghosh**, SJMSOM has written two articles viz. 'The India Business and Information Technologies (BIT) Survey' (Atanu Ghosh et al.) and 'Impact of Information and Communication Technology on Indian Business Sector Review Report' (Atanu Ghosh & A K Choudhary) with other co-authors, got published in 'The Business and Information Technologies' (BIT) Project - A Global Study of Business Practice, edited by Uday Karmarkar & Vandana Mangal (University of California, Los Angeles, USA) and published by World Scientific in Feb 2007.

### Powai Labs : Launch of 'IMAGE'

Powai Labs, one of the most successful companies launched out of our campus formally launched its globally competitive product called IMAGE ( I Made A Great Emulator) on March 30, 2007. This is FPGA based simulation accelerator used for prototyping the chip. The product is five times cheaper than an equivalent International tool with performance and feature that is better than any tool.

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Powai Labs technology was built within IITB campus from 1998-2002 under the leadership of Prof. Madhav P. Desai of Electrical Department, at our business incubation center in 2002. IITB through SINE (Society for Innovation & Entrepreneurship) holds shares in it. Powai Labs today work with top silicon design companies spread across USA, Europe, Far East. Their tools help in designing indigenous chips for defense in a domestic market. They have filed a USA & Indian patent. It is the first indigenous Electronics Design Automation (EDA) Company of our country and one of the pioneers in Academia-Industry-Government collaboration.

Powai Lab's especially designed electronics education tools are also used in electronics education at technical institutes like IIT, VNIT Nagpur, AC College of Engineering, Karaikudi, JNTU, Hyderabad, VJTI Mumbai etc. Learning material like lectures by eminent professors via video on CD, student exercise books, manuals etc. makes their education package of immense value. They have set-up "National VLSI Faculty Development Centre" (NVFDC) to train faculty from engineering colleges all over India. Eminent professors from top technical institutes like IIT will teach at this centre.

### **Materials Camp for School Children**

Metallurgical Engineering & Materials Science Department along with ASM International had organized a Materials Camp for School Children who were considering engineering studies in the coming year. A letter inviting nominations for two students from a school was sent to all the schools in Mumbai and Navi Mumbai. This year the camp was held during April 9-13,

2007. Thirty-five students participated in the camp.

The objective of holding the Materials camp was to emphasize and familiarize the school children about the importance of materials in all the aspects our life. During the camp the students spent four days in various laboratories in the Department of Metallurgical Engineering and Materials Science. They carried out hands on experiments to see for themselves as to how various materials behave in different situations. They carried out heat treatment, tensile testing, hardness testing, optical metallography, scanning electron metallography, slurry processing of ceramics, electrochemical testing (like testing of stainless steels for sensitization) for corrosion behaviour of metals, electro deposition, electroless deposition, and anodizing of aluminium. Prof. R.O. Dusane, Prof. Om Prakash, Prof. P. Bhargava delivered lectures on Thin films, Superconductors and Ceramics processing.

All the students showed tremendous enthusiasm and were highly fascinated. The valedictory function was presided over by Prof. R. O. Dusane. The students were given mementos and certificates of participation. During the valedictory function President of ASM International, India Section and NACE International also addressed the students.

### **Workshop on Bamboo crafts for IGNOU course material**

A workshop on bamboo crafts was held from 2<sup>nd</sup> April 2007 to 8<sup>th</sup> April 2007 at IDC to develop course material and curriculum for a purposed certificate programme of Indira Gandhi Open University (IGNOU) in bamboo crafts. The workshop was jointly organized by IGNOU and IIT Bombay with support

from Khadi and Village Industries Commission (KVIC) and (NEP).

The workshop was inaugurated by Prof. Ashok Mishra, Director of IIT Bombay which was followed by a screening of a film on bamboo crafts made by well known designer and film maker Sukumar Haobam. Officials from KVIC, Delhi and Mumbai have joined the workshop with bamboo artisans and experts from leading NGOs and institutes like IIT Bombay, IIT Guwahati, NID, Ahmadabad and Kerala Forest Research Institute (KFRI), Kerala. The workshop was organised in a planned way such as training and practice session was conducted on in Bambu Studio for artisans by master craftsman while brainstorming symposium was being organised among experts and officials simultaneously.

Subjects like "Newscope in bamboo crafts", ergonomics, "different treatments for insects and fungus", natural dying process, different techniques in bending, coiling, weaving, painting, pyrography, hot stamping and mould making, design principles, design transfer, use of bamboo in housing and house hold furniture were discussed in the workshop. Two unique craft making techniques like bamboo pen making by Bhimrao Chapale of URAVU, Waynad from Kerala. Tea coaster making with coil technique by crafts women of Chaitanya, a cooperative unit of Mumbai based NGO, YUVA. Mumbai based entrepreneur Kadirus Jayaram had demonstrated its latest machines for splitting bamboo strips. Prof. B. K. Chakravarty of IDC had explained the use of spray painting and finishes. A forest guard Sayed Salim has taught artisans about the different aspect of bamboo plantation. Kiran Kulkarni introduced the craft person to the world of computers and web.

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*Craftsman at Bamboo Workshop.*

IGNOU team headed by its School of engineering and technology director Prof. Dr. Ajit Kumar has shared their experience in recently launched pottery course. Prof. Dr. Kumar also presented the proposed distance education format. An intermediate technology to produce quality goods at a faster pace should be the objectives of the purposed certificate course, Prof. A. G. Rao had

opined. Others who attended include Mr. Sukumar Haobam from Manipur, Scientist Dr. Sithalaxmi from KFRI, Kerala, Dr. Sudhakar of Harita Ecological Institute, Andhra Pradesh, Prof. Avinash Shinde from IIT Guwahati and Prof. R. Sandesh from NID, Dr. Krishna Lala, Poornima Shenoy and Prof. G. Ray.

### **Documentary Shown**

'*Litigating Disaster*' a documentary on the 1984 Bhopal gas tragedy directed by Ilan Ziv was shown in the Department of Humanities & Social Sciences on April 3, 2007.

The film explored how Union Carbide successfully manipulated both the US and the Indian legal systems against each other, to avoid having to defend its record in the Bhopal plant in court.

### **IITB Swimming Club**

At the 'Silver Jubilee Swim Gala 2007' held at the 'Otters Club' on 14<sup>th</sup> & 15<sup>th</sup> April, 2007, Siddharth Rao Deb won the Bronze medal in the 50M Breast stroke event. Siddhant Reddy secured the 5<sup>th</sup> position in the 50 M Breast stroke event.

The Arati Chandrasekhar Swimming Trophy of IIT Bombay for the year 2007, was awarded to Siddharth Rao Deb (Class IV Kendriya Vidyalaya) and Viverdhan Kanoria (B.Tech. 2<sup>nd</sup> Year) for their achievements in swimming.

## **Seminars**

### **Department of Chemical Engineering**

Dr. K. J. Mukherjee, School of Biotechnology, Jawaharlal Nehru University, New Delhi delivered a talk on "Kinetic Modeling of recombinant protein production" on April 2, 2007.

Dr. David Summers, Head, Department of Genetics, University of Cambridge, UK gave a seminar talk on "Quiescent / E. coli/ as factories for recombinant protein expression" on April 2, 2007.  
Department of Chemistry

Prof. S. Ramasesha, Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore spoke on "Chemistry of Correlated Electrons" on April 23, 2007.

### **Department of Civil Engineering**

S. A. Reddi, Dy. Managing Director (Retd.), Gammon India Ltd. delivered a seminar on "Modern Trends in High Rise Buildings" on April 4, 2007 under CEA seminar series 2006-07.

Prof. B.S. Mazumder, Fluid Mechanics Division, Indian Statistical Institute, Kolkata spoke on "Experimental and Theoretical Investigations on Sediment Deposition in Open Channels" on 25th April, 2007.

### **Department of Computer Science & Engineering**

Dr. Kesav V. Nori, Executive Director, Business Systems and Cybernetics Centre, Tata Consultancy Services, Hyderabad gave a seminar talk on "A Purposive Biology of Business" on April 11, 2007.

Prof. Mokshay Madiman, TIFR Mumbai and Yale University delivered a talk on "Information Inequalities:

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Interpretations and Applications" on April 13, 2007.

**Niloy Mitra**, Vienna University of Technology, Postdoctoral scholar, Advisor: Prof. Helmut Pottmann gave a talk on "Symmetry Detection and Symmetrization" on April 23, 2007.

#### Department of Electrical Engineering

**Prof. S.E. Huq**, Central Microstructure Facility, Rutherford Appleton Laboratory, UK delivered a seminar talk on "Microsystems for Biological and Space Applications" on April 25, 2007.

#### Department of Humanities and Social Science

**Dr. Nagarjuna G.**, Science Educationist in Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research in Mumbai, gave a talk titled "Modulation of Modules: Towards an Explanation of the Transition of Implicit Procedural Knowledge into Explicit Declarative Knowledge" in the 'Indian Council of Philosophical Research Periodical Lecture Series' on March 30, 2007.

**Parthasarathi Mondal**, Assistant Professor at the Centre for Development Studies, School of Social Sciences, Tata Institute of Social Sciences, Mumbai delivered a seminar on "Tribal Livelihoods in Tansa Wildlife Sanctuary, Thane" on April 11, 2007.

#### Department of Mathematics

**Professor Pulin K. Bhattacharyya**, Ex-Professor of Department of Mathematics at IIT Delhi spoke on "A Mixed Hybrid Finite Element Method for 4th Order Elliptic Boundary Value Problems with Variable Coefficients" during 30-31 March 2007.

**Prof. V. Srinivas**, TIFR, Mumbai gave a lecture on "An application of p-adic numbers" in a 'Popular Lecture series' on April 9, 2007.

**Prof. Balwant Singh**, IITB delivered a seminar on "Hilbert functions VI" on April 12, 2007.

**Prof. V. S. Sunder**, Institute of Mathematical Sciences, Chennai in 'Distinguished Lecture Series' spoke on a theme "Temperley-Lieb Algebras" on 17, 19, 24 & 26 April, 2007.

**Prof. J. K. Verma**, IITB spoke on "Rings of invariants of finite groups IV" in 'Commutative Algebra Seminar' on April 19, 2007.

**S. M. Bhatwadekar**, IITB spoke on "Quillen's proof of Serre's conjecture (III & IV) in 'Commutative Algebra Seminar' on April 20, 2007.

**S. Shrihari**, Institute of Mathematical Sciences (MatScience), Chennai gave a seminar talk on "Convergence of orbital measures" on April 23, 2007.

#### Industrial Engineering and Operations Research

**Vishnu Narayanan**, Doctoral student in the department of Industrial Engineering and Operations Research, University of California at Berkeley delivered a seminar talk on "Branch-and-Cut methods for Conic Mixed-Integer Programming" on April 11, 2007.

#### Centre for Research in Nanotechnology & Sciences

**Prof. Peter J. Dobson**, Department of Engineering Science, Oxford University delivered a nanotechnological colloquium titled "The journey from Science to Technology" on April 3, 2007.

#### Energy Systems Engineering

**Rahul Walawalkar**, Doctoral Candidate, Department of Engineering and public policy, Carnegie Mellon University, Pittsburgh, PA, USA delivered a seminar on "Economics of Emerging Electric Energy Storage (EES) Applications in New York's Electricity Markets" on April 5, 2007.

#### SJM School of Management

**Dr. Dinesh Abrol**, senior researcher at the National Institute of Science, Technology and Development Studies (NISTADS) Delhi delivered this year's 'The 2007 Sudhir Yardi Memorial Lecture' on the theme, "The Union Budget and the Social Sectors." on March 29, 2007.

#### School of Biosciences and Bioengineering

**Prof. J. Gindhart**, University of Richmond, Virginia spoke on "Motor-Cargo interactions and their role in Intracellular transport: How the right cargo gets delivered to its right destination" on March 30, 2007.

## Salt'n Pepper

Dr. Arun Inamdar





**Appointments**

Dr. M. Vairamani has been appointed as a Visiting Professor in the Department of Chemistry w.e.f. March 20, 2007.

Dr. Mandar M. Inamdar has been appointed as an Assistant Professor in the Department of Civil Engineering w.e.f. March 28, 2007.

Dr. Purushottam Kulkarni, Assistant Professor (Contract), Dept. of Computer Science & Engineering has been appointed as an Assistant Professor in the same Department w.e.f. March 29, 2007.

Dr. Gyeyoung Kim has been appointed as a Visiting Associate Professor in the Department of Electrical Engineering w.e.f. March 29, 2007.

Prof. Krishna C. Saraswat has been appointed as a D. J. Gandhi Distinguished Professor in the Department of Electrical Engineering w.e.f. April 3, 2007.

Dr. Onkar Dabeer has been appointed as an Adjunct Assistant Professor in the Department of Electrical Engineering w.e.f. April 4, 2007.

**Events**

No.	Course Title	Department	Date
1.	Industrial Hydraulics and Servohydraulics	Prof. N. Ramakrishnan Mech. Engg.	May 03 -07, 07
2.	Piping Engineering	Prof. A.S. Moharir Chemical Engg.	May 09 – 22
3.	Tribology in Practice	Prof. H.Hirani Mech.Engg.Dept.	May 21

**Retirements**

(As on 31.5.2007 )

Dr. Hans Huber has been appointed as a Visiting Assistant Professor in the Shailesh J. Mehta School of Management w.e.f. April 5, 2007.

Dwaipayan Dasgupta has been nominated as PG Nominee on Student Gymkhana Executive Committee for the year 2007-08.

Amey Karkare has been nominated as PG Nominee Departmental General Secretaries Committee for the year 2007-08.

1. Shri C. C. Edwin  
Estate Office
2. Dr. S. N. Ghalke  
Chemical Engg. Dept.
3. Shri L. D. Deshmukh  
Elect. Maint. Div.
4. Shri S. U. Raut  
Security Section
5. Shri A. K. Ravindranathan  
Mathematics Dept.
6. Shri M. G. Dabhane  
Genl. Admn.

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