

Research Scholars' Confluence – 2008



Prof. M. M. Sharma delivering the inaugural address at the Confluence.

IIT Bombay organized a Research Scholars' Confluence from October 19-20, 2008, as part of its Golden Jubilee celebrations. The confluence was presided over by Dr. Anil Kakodkar, Chairman, IIT Bombay, and the inaugural address delivered by Prof. M.M. Sharma, former Director, UDCT. The aim of this confluence was to recognize the contributions and achievements of the research scholars over the decades. The confluence showcased the contribution of IIT Bombay towards creating and augmenting the human resource pool for carrying out R&D in academia, government-funded research labs., and

in corporate research endeavors to an invited audience of senior professionals from R&D organizations which utilize our Ph. D.s. Speaking on the occasion Prof. A.Q. Contractor said, "This confluence will not only provide an opportunity to research scholars on campus to interact with research scholars from the past decades and special invitees and enhance their motivation but also seek to alter the perception of IIT Bombay from being considered primarily as an undergraduate teaching institution to an institution focused on research and development."

Prof. S. Biswas, Dean (AP), gave a brief presentation on "Research at IIT Bombay Today". Under the topic *Nostalgia & Inspiration*, eminent alumni shared their experience at IITB and talked about their subsequent careers. In the afternoon session, under the topic *Industry Perspective*, industry heads and IITB alumni spoke on the importance of research in the present scenario. Prof. K.P. Madhavan gave a brief presentation on "Evolution of the Ph.D. Programme at IIT Bombay". This was followed by a panel discussion on *Road Map for the Future*, chaired by Prof. S.P. Sukhatme.

AVENUES. 08 at IIT Bombay



Shailesh J. Mehta School of Management, IIT Bombay, organized its annual International Business Festival AVENUES. 08 on October 18 & 19, 2008, as a Golden Jubilee event. The thrust of the festival was on the role of managers in tapping the country's potential and celebrating the spirit of entrepreneurship of new India. The theme of the event, "Realizing Aspirations", was an attempt to portray how Indians are aspiring to raise the bar in their respective fields to achieve prosperity to themselves and to the nation.

Some of the luminaries who participated in AVENUES. 08 were Rakesh Jhunjhunwala, Investor and Partner, RARE Enterprises; Dr. Swati Piramal, Director, Nicholas Piramal Life Sciences; Dr. Shivathanu Pillai, CEO and MD, Brahmos Aerospace & Chief Controller, Research & Development, DRDO; and Shri A N Roy, DGP, Maharashtra Police. The festival featured a distinguished lecture series, management- and strategy-based competitions, workshops and several other events for business and undergraduate students all over India and abroad. The distinguished lecture series *Alankar* was the flagship event of the festival. With illustrious leaders and legends from different walks of life on a common platform, *Alankar* became a unique melting pot of ideas, values, experiences, success stories, failures, struggles, joyrides, unfriendly terrains, grit, inspiration, leadership, and, above all, a tremendous learning opportunity

for all. AVENUES.08 also featured a unique creativity-based competition, 'Imagine It! India', to encourage creative ideas. In line with its vision of 'realizing aspirations', AVENUES.08 organized a unique energy-based business plan competition aimed at discussing the topic of energy security for the country, which has opened up a vast window of opportunities to the budding entrepreneurs of the country.

Navonmesh, an International Entrepreneurship Convention, was held as part of AVENUES.08. With its plethora of events, the convention inspired and encouraged both the budding and aspiring entrepreneurs to think beyond starting an enterprise – to transform it into a truly global venture. *Baazi*, a business challenge, provided an opportunity to students to step into the roles of entrepreneurs and venture capitalists and experience the challenges akin to the real world through simulation of the negotiation of a VC funding. *Abubhav*, a panel discussion, provided a platform for the audience to personally experience the charisma of successful entrepreneurs and interact with them and learn about their experiences.

AVENUES.08 was an immensely successful International Business Festival which had participation from countries across the globe. This year too, the event brought in a new flavour and a new theme, capturing the pulse and mood of the nation.

Bharat Forge Signs LETTER OF INTENT with IIT Bombay

Bharat Forge, the flagship company of the USD 2.4 billion Kalyani Group and a critical supplier to the automotive and capital goods industry, signed a Letter of Intent (LOI) with the Indian Institute of Technology Bombay (IITB) for starting an M.Tech. programme for its employees.

The LOI aims at fostering collaboration between IITB and BFL to promote academic and research interactions. The two-year full-time M.Tech. (Materials, Manufacturing and Modelling) programme will be specially designed as per the BFL requirement, with a view to developing the research and development capabilities of its available human resource.

The proposed M.Tech. programme is trans-disciplinary in nature and would be first of its kind in the institute. The first batch will commence in July 2009. While in the first year of the programme employees of BFL will be deputed to IITB for classroom training on full-time basis, in the second year the employees would do their project, jointly at BFL and IITB.

MoU with the Tsinghua University, China

A Memoranda of Understanding was signed between IIT Bombay and the Tsinghua University, China, on October 9, 2008, for Academic Collaboration in Engineering Research and Education.

Salt 'n Pepper

by Dr. Arun Inamdar





Awards and Distinctions

*Prof. Papanasamurthy Sunthar gets DuPont Young Professor Grant 2008



Prof. Papanasamurthy Sunthar, Chemical Engineering, receiving the award

Prof. Papanasamurthy Sunthar, Asstt. Professor of Chemical Engineering at the Indian Institute of Technology Bombay, was recognized by DuPont – as one of the 17 young professors from universities in the United States, China, Spain and India – with the annual DuPont Young Professor Grant for original research, on October 3, 2008. This innovative grant program is designed to provide assistance to young research faculty in areas of interest to the DuPont's long-term business. Prof. Sunthar was one of only four faculty members to be selected for this grant outside USA, with one from Spain and two from China.

Prof. Sunthar received a grant for US\$25000 a year for three years for his work on "Microfluidic Drug Encapsulation in Vesicles". His areas of research include the study "Viscoelastic Liquid Drops" aiming to model drop dynamics through a combination of molecular simulations and continuum methods.

The DuPont Young Professors Program provides grants for original research in chemistry, biofuels research, miniaturization applications for electronics and medicine, structure and function of proteins, nano-

composites, studies in earth science and climate change. The programme, which began in 1967, is designed to provide unrestricted start-up assistance to promising young and untenured research faculty working in areas of interest to the long-term business interests of DuPont. The professors are nominated by a member of the DuPont technical staff who agrees to serve as the liaison between the company and the faculty member. The DuPont Fellows Forum, which includes the company's top scientists, selects the award winners each year. Each grant recipient is invited to present a seminar on his or her work to the DuPont research community.

*Prof. Deepankar Choudhury receives Excellent Paper Award from ASCE



Prof. Deepankar Choudhury receiving the Excellent Paper Award for Junior Individual

Prof. Deepankar Choudhury, Department of Civil Engineering, received Excellent Paper Award for Junior Individuals (under 40 years category) 2008 for his research paper titled "Seismic bearing capacity of shallow strip footings embedded in slope" by Deepankar Choudhury and K. S. Subba Rao, 2006, appeared in the *International Journal of Geomechanics*, ASCE, Vol. 6, No. 3, pp. 176-184. The paper for this international award is selected from among the ASCE Journal papers published during last three to four block years and the award is given by the International Association for Computer Methods and Advances in Geomechanics (IACMAG), USA.

The award was presented on October 4, 2008, at Goa, India, during 12IACMAG International Conference.

*The Department of Electrical Engineering received the best research paper award in the circuit design category for the paper titled "Technology-Aware Design (TAD) for Sub-45nm CMOS Technologies" – by A. B. Sachid, M. Srivastava, R. A. Thakker, M. Shojaei Baghini, D. K. Sharma, V. Ramgopal Rao, M. B. Patil – presented at the Intel Asia Academic Forum 2008 held in Taiwan during October 20-22, 2008.

*Prof. Malhar Arvind Kulkarni, Electrical Engineering Department, has been elected to the Regulating Council of the Bhandarkar Oriental Research Institute, Pune.

*Prof. D Chandrasekharam, Department of Earth Sciences, has been elected to the Editorial Board of Journal of Advanced Researches on Geology, published by the Institute of Advanced Scientific Research, Irvine, California, USA.

*Prof. M. C. Deo, Department of Civil Engineering, has been appointed as Editor-in-Chief of a new journal titled: "International Journal of Ocean and Climate Systems" to be published by Multi-Science Publishing Co. Ltd., located in Sussex, UK.

Publications / Presentations

Prof. Malhar Arvind Kulkarni, Electrical Engineering Department, reviewed "Shabdabodhamimsa: An Inquiry into Indian Theories of Verbal Cognition, Part II – Case Termination and Their Significance" written by N.S. Ramanuja Tatacharya, Institute Français de Pondichéry, Rashtriya Sanskrit Sansthan, 56-57, Institutional Area, JanakaPuri, New Delhi- 110058, India – Collection Indolgie-100.2 – 2006, pp.xi + 69 + 940 – in the *Annals of the Bhandarkar Oriental Research Institute, Pune*, Vol. 88, 2007, pp. 249-251.

Prof. Kulkarni reviewed "Index des mots de l'oeuvre de Bhavabhuti," written by Francois Grimal, Institut Francais de Pondichery & Ecole Francais d'Extreme Orient – Collection Indologie- 92 – 2005, pp.viii+ 436 – in the Annals of the Bhandarkar Oriental Research Institute, Pune, Vol. 88, 2007, p. 251-252.

Prof. Kulkarni reviewed "Maharashtra Rajya Gazettier, Maharashtra Rajya Darshinka, Aushadi Vanaspati, Vanasampada, Part III," written by Dr. R.L.Kolhe, Executive Editor, and Dr. A. S. Pathak, Darshanika Section, Ministry of Cultural Affairs, Government of Maharashtra, Mumbai, 2004 – pp. Xxv + 280 – in the Annals of the Bhandarkar Oriental Research Institute, Pune, Vol.88, 2007, p. 252-253.

Prof. Kulkarni presented a paper entitled "The concept of Virama in Shikshaa and Pratishakhyas" in the 3-day National Seminar on Shiksha and Pratishakhya organised by Vaidika Samshodhan Mandal, Pune, September 18-20, 2008. The paper has been accepted for publication.

Prof. Karunamay Subuddhi, Department of Humanities and Social Sciences, published an article entitled: "Development of IT-infrastructure for Rural Connectivity: A Pro-poor Approach to e-Governance for Rural Development in India" in (Chapter 9) a book titled *Comparative Information Technology (Globalisation, Comparative Education and Policy Research)* – Hardcover – edited by Joseph Zajda and Donna Gibbs, Publisher: Springer, 2008 (Forthcoming in December 2008) # ISBN-10: 1402094256 # ISBN-13: 978-1402094255.

Prof. Raja Mohanty, Industrial Design Centre, presented a paper titled "Tribal, Traditional and Urban Art Practices: Contextuality and Transcendence" at the *International Scientific Conference for the Centennial of the Faculty of Fine Arts*, held from October 19 to 22, 2008, at Cairo, Egypt. The paper

attempts to understand how diverse art practices and practitioners in India respond to the creative chaos of the global age and evolve a visual language that is relevant to the times.

Prof. Ranjan K. Panda, Department of Humanities and Social Sciences, published a book titled *Mind, Language and Intentionality*, Bharatiya Kala Prakashan, Delhi, 2008. ISBN: 978-81-8090-213-0, pp. xxii + 322.

Prof. Deepankar Choudhury, Department of Civil Engineering, attended the 12th *International Conference of International Association for Computer Methods and Advances in Geomechanics (12IACMAG)* during October 1-6, 2008, at Goa, India, where he also co-chaired a session on Topic 11: "Earthquake Engineering and Soil Dynamics" on October 4, 2008.

Prof. Chowdhury attended and gave an oral presentation of a technical paper titled "Pushover Analysis of Piles in Stratified Soil" co-authored by Mayukh Mukhopadhyay, Deepankar Choudhury, V. S. Phanikanth and G. R. Reddy – in the *14th World Conference on Earthquake Engineering (14WCEE)* during October 12-17, 2008 at Beijing, China.

Prof. A.K. Dikshit, CESE, was invited by the Royal Norwegian Embassy, New Delhi, to deliver a lecture on "Waste Management: Scientific Soundness Prior to Implementation" in the workshop entitled *Environmental Friendly Strategy for Waste Management in India by Development and Adoption of Sustainable Applications* on October 21, 2008, at Shangri La Hotel, New Delhi. The event was jointly sponsored by the Royal Norwegian Embassy, the Research Council of Norway, and the SINTEF. The workshop had participation from all important research organizations from India and Norway.

Prof. Trupti Mishra, SJMSOM, attended the Lindau Nobel Laureate Meeting in *Economic Sciences 2008*

held from August 20 to 23, 2008, at Lindau, Germany.

Prof. D Chandrasekharam, Department of Earth Sciences, published a textbook entitled *Low Enthalpy Geothermal Resources for Power Generation* (Taylor & Francis, London, 2008, pp. 150). Prof. J. Bunschuh is the co-author of the book.

Seminars/ Colloquia/ Lecture

Dr. Parkriti Tayalia, Harvard University, USA, delivered a seminar on "Spatio-temporal Control for In-vitro Cell Migration and Cancer Vaccine Studies via 2D and 3D Microfabrication" on October 24, 2008.

Prof. J. H. Driver, St. Etienne, France, delivered a seminar on "Boundary Mobilities during Recovery Binary Al-Mn alloys" on October 31, 2008.

Dr. V. B. R. Murthy, A.P. State Biodiversity Board, delivered a seminar on "Carbon Finance and Biological Diversity Act" on October 22, 2008.

Dr. Seshan Srirangarajan, Singapore, delivered a seminar on "Positioning in Wireless Networks and Monitoring Water Supply Distribution Systems using Wireless Sensor Networks" on October 16, 2008.

Faculty News

Prof. Haripriya Gundimeda, Department of Humanities and Social Sciences, gave an expert presentation in a meeting with member-secretaries of State Biodiversity Boards at the Ministry of Environment and Forests in New Delhi on August 27, 2008. He was also invited to give a lecture on *Environmental Accounting for Development Projects – A Few Case Studies* – for the In-service IAS Officers at AMITY, Noida, on September 25, 2008. He also delivered two lectures in the one-week training programme on "Environmental Economics and Accounting" for IFS Officers, sponsored by the Ministry of Environment and Forests on

September 12, 2008, at ASCI, Hyderabad.

Prof. Malhar Arvind Kulkarni, Department of Electrical Engineering, delivered lectures on "Sharada Script" at the Department of Sanskrit, University of Mumbai, on September 4, 11 and 18, 2008, and "Sharada Script" at the Sathye College, VileParle, Mumbai, on September 10, 2008. He also delivered a lecture series at the Department of Sanskrit, University of Hyderabad, Hyderabad, on "Asiddhvat in Panini" from September 12 to 15, 2008.

Prof. Kulkiarni delivered a lecture on "Ancient Indian Theories of Homonymy and Synonymy" in the *National Seminar on Lexicography* at the Department of Sanskrit, University of Hyderabad, Hyderabad, from September 16 to 17, 2008.

Prof. Kulkiarni participated as an expert in a one-day Sanskrit Sammelana organised at M.S. Sangha, Mulund, on September 21, 2008.

Prof. Deepankar Choudhury, Department of Civil Engineering, gave an invited oral presentation on October 14, 2008, at the *Young Researchers Forum of the 14th World Conference on Earthquake Engineering (14WCEE)*, Beijing, China, on the topic "Analytical Solutions for Design of Waterfront Retaining Structures Subjected to Earthquake and Tsunami". His was the only lecture that represented India and its earthquake research at the World Youth Forum.

Prof. R. O. Dusane, Head, Department of Metallurgical Engineering and Materials Science, was invited to join the Indian Delegation to participate in the Joint Canada-India Nanotechnology/Nanobiotechnology Workshop held in Canada under the Partnership

Development Activity (PDA) initiated by DST (GITA) and the Canadian Government. Workshops were held in Waterloo, Montreal, and Edmonton from August 5 to 11, 2008, with the aim of fostering and developing future joint R&D project proposals under the Canada-India Nanotechnology S&T Agreement. The members of both Indian and Canadian sides delivered seminars showcasing the developments in different areas related to nanotechnology/nanobiotechnology in both the countries. The various areas like health-related aspects, sensors and energy in which nanotechnology could make an impact were dealt with at length during these workshops in order to initiate bilateral collaborations among researchers from both the countries.

Prof. Shireesh B. Kedare, Department of Energy Science and Engineering, delivered an invited lecture on "Opportunities in Solar Power in India" under the banner "New Technologies to Face Climate Change: The Importance of Renewable Energies" during the meeting of Indo-Spain Dialogue Forum, Indian Council for World Affairs, New Delhi, on October 16, 2008.

Prof. M. D. Atrey, Department of Mechanical Engineering, was invited to give a talk on "Joule-Thomson Cryocoolers for Thermal Imaging", in *National Seminar on Emerging Technologies of Thermal Imaging* during September 5-6, 2008, at Sathyabama University, Chennai. The talk covered the developmental work carried out in the Refrigeration & Cryogenic Laboratory at IIT Bombay.

News from Alumni

Fourth Annual Basketball Match

The fourth annual basketball match between IITB team and the Alumni team

was played on October 18, 2008. This year the Alumni team had on its side a couple of IITM alumni. Anticipating a stiff fight with the formidable IITB basketball team, which had won the gold medal at the inter-IIT Sports meet in December last, the Alumni team spared no effort to include strong men like Ashwin Doshi, Captain Louis George, Samir Gulve (Coach) in its team. The game was thoroughly enjoyable.



Participants in action during the match

The Alumni team played valiantly. But with all its verve and grit and with players like Captain George, the mainstay and the top scorer, on its side, it could not prevail over the mighty IITB team, which, of course, had to sweat it out for the win.

Screening of "Asterix & Obelix-Mission Cleopatre"



IIT Bombay, in collaboration with the French Ministry of Foreign Affairs, has been conducting a Basic French Communication Course since 2005. As part of this, a French movie (with English subtitles) *Asterix & Obelix - Mission Cleopatre* was screened at the P.C. Saxena Auditorium on November 1, 2008.

Appointments



Dr. (Ms.) Siuli Mukhopadhyay, Assistant Professor, Department of Mathematics, from September 23, 2008, for a period of one year.



Dr. (Ms.) Mrinmoyi Kulkarni, Assistant Professor (contract), Department of Humanities & Social Sciences, from October 7, 2008, for a period of two years.



Dr. Rajakishore Nath, Assistant Professor, Department of Humanities & Social Sciences, from October 7, 2008, for a period of one year.



Prof. S. L. Bapat, Head, Department of Mechanical Engineering, from August 14, 2008.



Dr. Azizuddin Khan, Assistant Professor, Department of Humanities & Social Sciences, from October 7, 2008 for a period of one year.



Dr. S. S. Yadav, Senior Sports Officer, PTI (Gr.I), Students Gymkhana, from October 23, 2008.



Dr. Shashikant Kelkar, Adjunct Professor, Shailesh J. Mehta School of Management, from September 1, 2008, for a period of one year.



Dr. B. B. Appaji, Senior Sports Officer, Students Gymkhana, from October 23, 2008.



Dr. Eric Wambach, Assistant Professor (Contract), Department of Mathematics, from September 2, 2008, for a period of one year.



Dr. S. N. Jha, Senior Sports Officer, Students Gymkhana, from October 23, 2008



Prof. Raghav Varma, Head of the Department Department of Physics. from September 22, 2008, for a period of three years.

Events

CEP Courses			
No.	Course Title	Coordinator/ Department	Date
1	Finite Element Method and Applications in Civil Engineering	Prof. T.I. Eldho/ Prof. Y.M. Desai Civil Engg.	November 17 – 21
2	Computer Aided Engineering (CAE)	Prof. A. Guha/ Prof. A. Sharma Mech. Engg.	November 17 – 21
3	Certificate Programme in Management (For Godrej Industries Ltd., Mumbai)	Prof. S.N. RaoSJMSoM	November 17 – 30
4	Modeling, analysis and Optimization of Industrial Processes	Prof. A. Mehra/ Prof. A. K. Suresh Chem. Engg.	November 26 – 29

Retirements

On 31.10.2008



Shri Ram N. Patil,
Aerospace Engineering



Shri. Ravindra Rajendra Deshpande,
Electrical Engineering Department



Shri Ganesh Mahadeo Joshi,
IDC



Shri Ravindranath G. Kabare,
Civil Engineering Department



Shri Sachin Kumar D. Soni,
Accounts Section



Shri Balkrishna N. Kulkarni,
Security Section

In the Wilderness

*IIT-Bombay campus is richly stacked with flora and fauna, and among its most special holdings are its wild flowers. The campus boasts of more than 60 of the 240 species listed in a book on common Indian wild flowers. Interestingly, some 30-35 species are found in the Hillside Area alone, making this a 'hot-spot' for these flora. Most bloom during the monsoon. Pictured here is the purple variety of the **Supobia**, an ephemeral flower borne on frail grassy stems that grows best in open areas around hills. 'Gregarious by habit', patches of **Supobia** can speckle the slopes of our Temple Hill with a vivid purple during August - September.*

*Courtesy: Prof. Rohit Manchanda
Location: Hill Side, IIT Campus*

