

# **IIT BOMBAY SIGNS MoU WITH** WADHWANI FOUNDATION



Prof. Ashok Misra, Director, HTB, and Dr. Romesh Wadhwani, Founder, Wadhwani Foundation, signing the MoU

n MoU was signed between IIT Bombay and the Wadhwani Foundation to establish the Wadhwani Research Centre for Biosciences and Bioengineering (WRCBB) on September 17, 2008. A notfor-profit organization, Wadhwani Foundation is founded by Dr. Romesh Wadhwani - a distinguished alumnus of IITB from the class of 1979 and an IT entrepreneur in Silicon Valley, California. The Wadhwani Foundation has pledged a sum of \$ 5 million for creation of WRCBB, Dr. Wadhwani had announced this gift to his alma mater at a conference held in New York in July

The faculty of Biosciences and Bioengineering will be affiliated to WRCBB to carry out their research. The objectives of WRCBB are to set new standards for world-class research with high global impact. Through WRCBB, the faculty of Biosciences and Bioengineering will develop partnership with other leading research institutions across the world.

The MoU-signing ceremony at IIT Bombay was attended by faculty and alumni from the Institute. Speaking on the occasion, Dr. Wadhwani said: "A great country needs to be a leader in innovation, fuelled by world-class research. India's economy needs to be driven by innovation, not just low labour costs. Many of the world's best scientists and researchers are Indians but very few of them do their worldclass research in India because of the many obstacles they face - from a lack of focus on research to a lack of

equipment and supplies. So 1 am delighted to have the Wadhwani Foundation provide a \$ 5 million grant to IIT Bombay to establish the Wadhwani Research Center for Biosciences and Bioengineering, attached to the School of Biosciences and Bioengineering".

He further added, "I hope this gift will be a catalyst for accelerating IIT Bombay's progress in becoming a world-class center for research, adding to its well established reputation for teaching and graduating the best engineering students anywhere."

"I would like to thank Dr. Romesh Wadhwani generous for this endowment to establish the Wadhwani Research Centre for Biosciences and Bioengineering at IIT Bombay. This donation will enable us to take the activities of our School of Biosciences & Bioengineering to a significantly higher level, and establish ourselves as one of the world's leading research schools in this area," commented Prof. Ashok



Speaking on the occasion Dr. Romesh Wadhwani(Centre)

Misra, Director of IIT Bombay. "An uncommon feature of this donation is that the funds will be used directly towards research, and not for constructing building. a The endowment will also help us establish strong contacts, through the Wadhwani Foundation. with leading researchers elsewhere in the world. Dr. Romesh Wadhwani is one of our most distinguished alumni. He has donated in the past to the electronics and entrepreneurship programmes at IIT Bombay, and we are immensely grateful

for this new endowment in the bio area. which is one of our main thrust areas. for the years to come," he added.

Prof. Dulal Panda, Head of Bioschool, IITB, said: "The School of Biosciences and Bioengineering aims to world-class create a research environment that will attract highly competitive faculty and research scholars in the areas of biosciences and bioengineering. We welcome the generous donation from Dr. Romesh Wadhwani for supporting research in this area. We will leverage the donation to develop infrastructure for conducting cutting edge research, which will enable us to achieve greater scientific heights. We look forward to having a long-term association with the Wadhwani Foundation."

After the function, the Student Alumni Relationship Cell (SARC) organised a lecture and an interactive session with Dr. Wadhwani where he met with the faculty, research scholars and students of ITT Bombay.

## Rahul Bajaj Technology Innovation Centre



the inauguration

Shri Rahul Bajaj inaugurated the establishment of the "Rahul Bajaj Technology Innovation Centre" at IIT Bombay on September 12, 2008.

The function was held at the Director's conference room with a short presentation covering the activities of the hi-tech ventures incubating at SINE. The presentation was an eye-opener and showcased the vibrant innovative atmosphere at IIT and also the growth that is possible in India.

Shri Rahul Bajaj is a former chairman of the Board of Governors of IITB, and it was during his tenure that SINE, a Technology Business Incubator at IIT Bombay, came of age. It is therefore fitting that Shri Bajaj has provided funds for construction of a Shri Rahul Bajaj along with SINE group at new building, which would house SINE. The building would also house an exhibition hall to showcase the technological developments at IITB.

# **Master Artisans Training in Design Development**

A workshop on "Master Artisans Training in Design Development" was conducted at IDC under the expert



Participants in action at the Workshop

guidance of Prof. A.G. Rao and Prof. R. Sandesh for the benefit of craftsmen and craftswomen from Meghalaya. The workshop organised by Women's Group and Handicraft Multipurpose Cooperative Society Ltd., a reputed NGO at Meghalaya, during August 21-28, 2008, was supported by KVIC. The participants were taught to make products with simple techniques using machines and moulds, and several products were made at the workshop.

## Publications / Presentations

Prof. Malhar Arvind Kulkarni, Department of Electrical Engineering, presented a paper titled "Franz Kielhorn and his Observations on the Kashikavrtti: A Study" in the 11th International Conference on History of Language Sciences organised at University of Potsdam, Potsdam, Germany, during August 28–September 2, 2008. The paper was accepted for publication in the Proceedings of the seminar.

Dr. Ajay V. Deshmukh, Ph.D student, and Prof. Vikram M. Gadre, Department of Electrical Engineering. authored a monograph titled Functional Magnetic Resonance Imaging - Novel Transform Methods. which has been published by Narosa Publishers as a report of the collaborative work done by the authors under the aegis of, and with support from, the Society for Cancer Research and Communication India. Dr. Deshmukh completed his Ph.D. under the supervision of Prof. Gadre in 2006.

Prof. B. Ravi, Department of Mechanical Engineering, presented a technical paper titled "3D Shape Reasoning for Identifying Anatomical Landmarks" at an International Conference on Computer-Aided Design at Orlando, USA, during June 23-27, 2008. The paper was co-authored by K. Subburaj, Research Scholar, and Dr. Manish Agarwal, Orthopaedic Oncologist, Tata Memorial Hospital.



## Awards and Distinctions

Prof. B. Sunoj, Department of Chemistry, has been selected for the National Academy of Sciences India Young Scientist Award in Chemical Sciences for the year 2008.

Prof. (Ms.) Karuna Jain, SJMSoM, has been awarded the Best Teachers Award in Operations Management in recognition of leadership, development, innovation and industry interface of business school, by Dewang Mehta Business School Awards.

## Seminars/ Colloquia/ Lecture

Department of Humanities and Social Sciences

Prof. Aftab Seth delivered a seminar on "India-Japan Relations: Historical and Contemporary" on August 26, 2008.

Department of Metallurgical Engineering and Materials Science

Prof. Peter Hodgson, ARC Federation Fellow, Alfred Deakin Professor, Director of Research Institute for Technology Research and Innovation, Deakin University, Australia, gave a seminar on "Nanostructural Engineering and Microstructure Characterisation of Modern High Strength Steels" on September 16, 2008.

## School of Biosciences and Bioengineering

Dr. Anil K. Patri. Deputy Director, Nanotechnology Characterization Laboratory, SAIC-Frederick, Inc., National Cancer Institute at Frederick, NIH, USA, gave a seminar on "Cancer Nanotechnology: Translational Resources in Nanomedicine" on September 11, 2008.

### **Faculty News**

Prof. Malhar Arvind Kulkarni,
Department of Electrical Engineering,
chaired a session in the 11th International Conference on History of
Language Sciences organised at
University of Potsdam, Potsdam,
Germany, during August 28—September
2, 2008.

Prof. A.K. Dikshit, Center for Environmental Science and Engineering, was invited to deliver talks on "Introduction to Water Pollution" and "Role of Biotechnology in Water Pollution Control" at a One-Day Seminar on Environmental Biotechnology organised by Thadomal Sahani College, Mumbai, on Engineering August 30, 2008. He was also invited as a speaker by the Cooperation Centre for Riverbank Filtration (CCRBF), Haridwar (Uttarakhand), at the Indo-German Workshop on Design and Operation of Riverbank Filtration Schemes organised at Gandhinagar (Gujarat) during September 19-20, 2008, and delivered lecture on "Planning and Design of Radial Collector Wells: Three Case Studies" based on his research and consultancy experience on riverbank filtration.

**Prof. A. W. Date**, Department of Mechanical Engineering, delivered a talk on "Numerical Simulation of Flows with Interfaces" at the 10th Aeronautical Society of India Annual CFD Symposium at Bangalore on August 11, 2008.

Prof. Atanu Ghosh, SJMSOM, delivered talks and shared the experience of "Learning Leadership from the Leaders and Achievers" with the students of FLAME, Pune, on September 9, 2008, and with the students of SJMSOM, IIT Bombay, on September 10, 2008. As a social service to SEWA Trade Facilitation Centre, Ahmedabad, he has agreed to support and advise them in preparing their mid-term strategy for growth.

Prof. B. Ravi, Department of Mechanical Engineering, gave a talk on "Computer-aided Development of Tumour Knee Prosthesis" at Johns Hopkins University at Baltimore; University of Illinois at Urbana-Champaign; Purdue University at West Lafayette; and Drexel University at Philadelphia. He also established research contacts with biomedical groups in these universities.

Prof. Pushpak Bhattacharyya. Computer Science and Engineering. Dept., presented two research papers on "Natural Language Processing" (joint pieces of work respectively with Debasri Chakrabarti and Prof. Vaijayanthi Sarma of HSS Department and with Abbas Ali and Prof. Christian Boitet of Joseph Fourier University, Grenoble, France) at Computational Linguistics the Conference (COLING08) held Manchester, UK, on August 18-22, 2008. Prof. Bhattacharyya also chaired the session on "Resources" in this conference. COLING is one of the two topmost fora for reporting research in the field of Natural Language Processing (NLP).

Prof. D. Chandrasekharam, Dept. of Earth Sciences, and J.Bundschuh authored a textbook Low Enthalpy Geothermal Resources for Power Generation — which describes occurrences of geothermal resources, exploration methods, power generation techniques and its economics. The textbook was published by Taylor and Francis Pub., London, 149 pages, 2008.

Prof. (Ms.) Karuna Jain, SJMSoM, organized a Management Development Programme during September 18-20, 2008, on "R&D Management" which was partially sponsored by DSIR, New Delhi. The programme focused on addressing issues confronting R&D managers with emphasis on market-driven R&D in view of a host of MNCs setting up R&D and technical development centers in India. In general the programme was well received.

Prof. Milind Malshe, Department of Humanities and Social Sciences, gave a special lecture-demonstration on "A Bakhtinian Perspective on Indian Classical Music" at the 12th International Conference on Mikhail Bakhtin held at the University of Western Ontario, Canada, during July 28-August 1, 2008, This was a special two-hour academic session of the Conference organized at Museum London (London Ontario). He chaired a session "Bakhtin and Music" in the conference. He was also invited by A-Channel Morning — a television channel of Canada – for an interview.

During his visit, Prof. Malshe was also invited by th Hindustani Music Study Group, Toronto, to deliver a lecture on the Gharana System, followed by a demonstration.

Prof. Karunamay Subuddhi. Department of Humanities and Social Sciences, participated in the World Forum of Sociology on Sociological Research and Public Debate organized by the International Sociological Association (ISA) at the University of Barcelona, Barcelona, Spain. He presented a paper titled "'Strategic' Global Frames: Structures Communicative Discourses and Green Activism".

# "Khoon Chala" - A Blood Donation Campaign



As part of Mood Indigo 2008, the students of IIT Bombay have started Blood Donation Campaigns with the objective of helping those in need of blood and saving their precious lives. There exists a wide gap between the demand and supply of blood; hundreds of deaths take place every day due shortage of blood in blood banks. It is indeed a great humanitarian drive that the students of IIT Bombay are embarked upon.

The campaign consists of three phases. The first phase, which kickstarted on September 18th and continued till September 24th, was aimed at motivating the institute students to donate blood and be a part of the blood-donation drive. In the second phase, the camp will be held at 18 colleges and other high traffic areas such as malls and shopping complexes across Mumbai. The Mood Indigo team will also stage motivational street plays at the venue to sensitize people towards blood donation. To intensify awareness amongst a large number of people, the team has also produced a short film specifically for this purpose. The third phase consists of a four-day camp during Mood Indigo 2008, to be held during December 20-23, 2008. This would be a Blood Donation-cum-Thailassemia Detection Camp.

# Summer Workshop on Ontology, NLP, Personalization and IE/IR

IIT Bombay conducted a Summer Workshop on Ontology, NLP, Personalization and IE/IR sponsored by HP Labs, Bangalore, during July 16-18, 2008. The workshop faculty consisted of renowned experts in their respective fields.

The participants were students and faculty of academic institutions from all corners of the country, and also researchers from top search engine and NLP industries like Yahoo, Rediff, IBM and MSR. One hundred and thirty participants were selected from approximately 400 applicants from all over India with the following distribution:

Students: 70
Faculty from academic institutes: 23
Professionals: 37

The Workshop addressed the cutting edge technology areas of:

- Ontology (hierarchical knowledge organization)
- Bridge between Text and Ontology
- 3. Semantic Relation Extraction
- Mathematical Aspects of

## **Inaugural Session**



Abhisekh, PhD student, CSE Dept., singing the inaugural song with Anirudh, DD student, ME Dept, on the Keyboard.

Information Retrieval

- 5. Graphical Models
- 6. Web Corpora Processing
- 7. Sentiment Analysis
- 8. Cross-Lingual Search
- 9. Summarization

The workshop was inaugurated with an invocation to Goddess Saraswati sung by Mr. Abhisekh Sankaran, a PhD student of the Computer Science and Engineering Department, ITT Bombay.

Prof. Krithi Ramamritham, Dean R & D, IIT Bombay, underlined the importance of doing interdisciplinary research in today's world which sees immense growth and complexity of knowledge, Dr. Ramanathan Krishnan

Dignitaries on the dais at the inaugural session



(From left to right) Dr. Ramanathan Krishnan, HP Labs Bangalore, Prof. Krithi Ramamritham, Dean R & D, IIT Bombay; Prof. J. Vasi, Dy. Director, IIT Bombay; Prof. Rajeev Sangal, Director, IIIT Hyderabad; Prof. A. Ranade, HoD, CSE Department, IIT Bombay; Prof. Pushpak Bhattacharyya

from HP Labs, who sponsored the workshop, mentioned the importance accorded to this workshop by HP Labs in the context of their multifarious activities in text mining, ontology, etc. The chief guest at the inaugural function Prof. Rajeev Sangal welcomed the workshop as timely and relevant and described the importance of doing research in Natural Language Processing. He mentioned that the NLP researchers in India formed a coherent group, which augurs well for the research area.

## **Technical Sessions**

The technical sessions started with Prof. Mandar Mitra from ISI Kolkata speaking on "Information Retrieval Evaluation". This was followed by Prof. Vasudev Verma from IIIT Hyderabad discussing "Personali-zation in IE/IR". Prof. Sivaji Bandyopadhyaya from Jadavpur University then presented the existing practices in "Automatic Summarization". The topics of "Opinion Analysis" and "Anaphora Resolution"

were discussed by Prof. Sudeshna Sarkar from IIT Kharagpur and Prof. Sobha Nair from Anna University.— K.B. Chandrasekhar Center – respectively.

The second day had Dr. A. Kumaran, Microsoft Research, Bangalore, speak on "Mining Multilingual Named Entities from the Web". This was followed by Prof. Soumen Chakrabarti, ITT Bombay, delivering a talk on "Building Blocks for Semantic Search: Ranking and Indexing in Entity-Relation Graphs." Mr. Adam

Pease, Techknowledge Corporation, California, talked on "Suggested Upper Merged Ontology (SUMO)." The topic of "Large Scale Classification with Detailed Insight Into the Working of Support Vector Machine" was covered by Prof. Chiranjib Bhattacharyya, Bangalore. Dr. Rajat Mohanty, AOL. Bangalore, outlined the "Challenges for Semantic Argument Realization involving Event Composition". The day's proceedings concluded with Dr. Ramanathan Krishnan, HP Labs, Bangalore, speaking on "Personalization, Overview and Challenges".

On the third and last day, Prof. S. Sudarshan, IIT Bombay, delivered a lecture on "Keyword Search on Graph-Data." Structured Prof. Sunita Sarawagi, IIT Bombay, spoke on "Maxmargin Training and Inference on Structured Models for Information Extraction". Prof. Christian Boitet. University Joseph Fourier, Grenoble, discussed "Higher Quality Internal and Outside Multilingualization of Web Sites". Prof. Pushpak Bhattacharyya, IIT Bombay, described his group's work on "Representation and Extraction of Semantic Relations". The concluding lecture of the workshop on "Scalable Techniques for Information Extraction" given Prof. by Ganesh Ramkrishnan, IIT Bombay, and IBM Research Lab.

#### Conclusion

The participants of the workshop were all praise for the very successful event. "The talks by the eminent speakers from various fields were extremely enlightening," they observed. All the facets of the workshop—logistics, technical content, interactions and arrangements—were well appreciated. Almost everybody suggested that such events should be organized annually.

## Appointments

Shri A. V. Subrahmanyam has been appointed as a Research Associate in the Department of Chemistry from August 1, 2008, for a period of six months.

Prof. Abhay Karandikar Department of Electrical Engineering, has been appointed as the Head of the Computer Centre from August 21, 2008.

Prof. K. S. Valdiya has been appointed as a Distinguished Guest Professor in the Department of Earth Sciences from August 27, 2008, for a period of two years.

Prof. K. Ramachandran has been appointed as a Professor in the Industrial Design Centre under the Faculty Exchange Scheme from September 1, 2008, for a period of two years.

Prof. Kishore B. Marathe has been appointed as a Visiting Professor in the Department of Mathematics from September 8, 2008, for a period of six months.

Dr. Jayant Kanitkar has been appointed as a Visiting Professor in the SJM School of Management from September 8, 2008, for a period of three months.

Shri Suresh C. Agrawal has been appointed as a Principal Technical Officer in the Department of Physics from September 11, 2008, for a period of two years.

### Student News

Mr. Dwijotham Krishnamurthy, A B.Tech. student, Department of Computer Science and Engineering, presented a paper entitled "New Closed-Form Upper Bounds on the Partition Function", jointly written by himself, Soumen Chakrabarti, and Subhasis Chaudhuri. The paper has been awarded the Best Machine Learning Student Paper at the annual European Conference on Machine Learning (ECML) held at Antwerp, Belgium, during Spetember 15-19, 2008.

Mr. Sudip Nag, Ph.D Student, Department of Electrical Engineering, has received the Budding Innovator's Award for the year 2008 for his work on "A Silicon Locket for Web Enabled Cardiac Diagnostics" from the National Research Development Corporation, DSIR, Government of India. The award will be presented at a function in New Delhi on October 13, 2008.

Ms. Annapurna Rath, Ph.D. student, Department of Humanities and Social Sciences, participated in the Thirteenth International Conference on Mikhail Bakhtin held at the University of Western Ontario, Canada, during July 28-August 1, 2008, and presented a paper titled "Chronotopes in the Chromosome: A Chronotopic Analysis of Amitav Ghosh's 'The Calcutta Chromosome.' The paper was coauthored by Prof. M.S. Malshe, Department of Humanities and Social Sciences.

# Salt 'n Pepper

by Dr. Arun Inamdar



### RESEARCH SCHOLARS' CONFLUENCE

October 19-20, 2008

As it celebrates the Golden Jubilee, IIT Bombay is seeking to alter the perception from being considered primarily as an undergraduate teaching institution to an institution focused on research and development. The Research Scholars' Confluence is an initiative towards this end with the following goals:

- Recognition of the contribution of Research Scholars over the decades to the research achievements and environment in the Institute.
- Showcase the contribution of IIT Bombay towards creating and augmenting the Human Resources pool for carrying out R&D in academia, government-funded research labs and corporate research endeavors.
- Re-connect with Ph.D. alumni
- · Share views and experiences on a variety of doctoral research-related issues
- Provide an opportunity to research scholars on campus to interact with research scholars from the past decades and special invitees, and enhance their motivation.



## Forthcoming

Shailesh J Mehta School of Management, ITT Bombay, is organizing its annual international Business festival AVENUES.08 on October 18 &19, 2008, This year's event will be a milestone to be featured in the Golden Jubilee Celebrations of HT Bombay. The thrust of the festival is 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" attempts to portray how Indians are aspiring to raise the bar in their respective fields to achieve prosperity for themselves and for the nation. The festival will feature a distinguished lecture series, management and strategy based competitions, workshops and several other events for business and undergraduate students all over India and abroad.

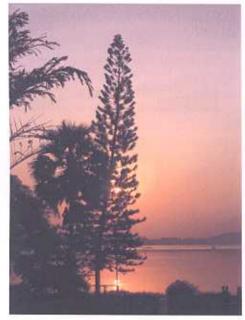
Some of the luminaries participating in AVENUES.08 are Rakesh Jhunjhunwala, Investor and Partner, RARE Enterprises; Mrs. Vinita Bali, Managing Director, Britannia Industries, Dr. Kiran Bedi, Magsaysay award winner and former Cop. Delhi Police; Dr. Swati Piramal, Director, Nicholas Piramal Life Sciences: Dr. Shivathanu Pillai, CEO and MD, Brahmos Aerospace & Chief Controller, Research & Development, DRDO; and Shri A N Roy, DGP, Maharashtra Police, AVENUES.07, organized by the school last year, was an immensely successful International Business Festival which saw participation from countries all over the world including US, Singapore, China, UAE, the Netherlands, etc. The event was actively supported by organizations like CII-Yi, TiE and NEN, among others.

#### Retirements

as on 30.09.2008

- Ms. Nisha V. Gholkar
   Audit Section
- Ms. Alpana U. Athvankar Department of Computer Science and Engineering
- Ms. Neelambari B. Joshi
   Department of Computer Science and Engineering
- Shri, V. Yegnanarayanan Electrical Maintenance Division
- Shri Jamna Prasad Sitaram Sahu Estate Office
- Shri Shankar Bhiva Paradkar Electrical Maintenance Division
- Shri Kisan M. Shirsat Security Section
- Shri Soma Jaisingh Solanki
   Public Health Office

CEP Courses				
1	Environmental Management in Industries	Prof. A. K. Dikshit, CESE	October 13 – 17	
2	Production Management for Excellence	Prof. A. S. Babu, CARE	October 14 – 16	
3	Finance for Engineers(Batch-II)	Prof. S. N. Rao, SJMSoM	from October 18 (Six weekends)	
4	Corrosion & Protection for NPC	Prof. V. S. Raja, Corrosion Sc. & Engineering October 16 – 18		



# In the Wilderness Powai Lake view at Sunset



Courtesy: Shri C. P. Joglekar Location: From IIT Guest House

# CAMPUS

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