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# **Nobel Laureate Visits IITB**



r. Claude Cohen-Tannoudji, Nobel Laureate in Physics (1997), Professor, College de France and École Normale Supérieure, gave a colloquium lecture on "Ultraprecise Atomic Clocks with Laser Cooled Atoms" at the P.C. Saxena Auditorium, IIT Bombay on 4th December 2006.

Claude Cohen-Tannoudji shared the Nobel Prize for Physics in 1997 with Steven Chu and William D. Phillips. They received the award for their development of techniques that use laser light to cool atoms to extremely temperatures. low AL such temperatures the atoms move slowly enough to be examined in detail. He has written 3 books and about 200 theoretical and experimental papers dealing with various problems of atomic physics and quantum optics. One of his books being a popular textbook is believed to be a bible for the students of Quantum Mechanics.

Dr. Claude Cohen-Tannoudji had several interactions with the Research Scholars, Post-doctoral Associates and faculty, especially of the Physics Department. He visited Department of Physics on the 4th where he first met with faculty members and talked on various issues of education and research. He explained the research model in France, where specialised laboratories are operated by devoted scientific staff, while the faculty played the dual role of directing the research in the laboratory on the one hand and participating in the teaching programs in a separate institution.

He was then presented with a poster session showcasing the activities of the Department, He made it a point to visit every poster and took keen interest in the explanations. He then attended an open house discussion with the research scholars of the Department and responded to technical queries on his discoveries but also fielded questions such as: 'whether he had thought about winning the Nobel Prize when he had started physics'. Subsequently he visited several laboratories in the Department.

At the Colloquium, he talked about the novel techniques developed by him and colleagues at the École Normale Supérieure. Speaking on atomic clocks he explained how the techniques pioneered by him have now reduced the possible error in an atomic clock to one second in 300 million years. His other contribution consists of techniques for cooling atoms to extremely low temperatures using a laser, reducing their random thermal motion to almost nothing. This has in turn led to more Nobel winning discoveries, such as the study of an exotic collective phase of atoms called the Bose-Einstein condensate.

### Alumni Day 2006

### Class of 81 raises a crore for IIT Project

Alumni Day was a brief event this year and was held at the PAN IIT premises at Bandra-Kurla Complex for the convenience of alumni on 25th December 2006 afternoon.

Certainly the high point was the announcement of the Class of 81 Alumni Project - its "give-back" to the Institute. Like all prior silver jubilee batches, the Class of 1981 commemorated its legacy towards IIT Bombay with an Alumni Project. The Alumni Project selected by the Class of 1981 is the granting of scholarships to both first-year and finalyear students. Two kinds of scholarships will be granted: Merit-cum-Means scholarship to first-year undergraduate students to help fund their education through IIT, and Entrepreneurial Seed Scholarships to final-year undergraduate students embarking on projects that have the potential of becoming a start-up opportunity for a new technology venture. Almost a crore of Rupees has been received as contributions or pledges.

# IIT Bombay Exhibition at PAN IIT Global Conference 2006



IIT Bombay participated in IIT Alumni Global Conference 2006 held at Bandra-Kurla Complex, Bandra (E), Mumbai-400 051 during 23<sup>rd</sup> -25<sup>rh</sup> December, 2006.

In conjunction with the conference an exhibition showcasing the recent achievements in Science & Technology was also organised.

Dr. A.P.J. Abdul Kalam, President of India inaugurated the exhibition and conference on 23rd December, 2006.

IIT Bombay along with other sister IITs, organisations from both private & public sectors and few NGOs participated in the exhibition. IIT Bombay exhibits included various technology developments and R&D achievements. IIT Bombay stall also displayed Institute-souvenir items for the benefit of the alumni members. The President, several other dignitaries and delegates visited the exhibition.

IIT Bombay stall was cocoordinated and organised by Shri. V. Arumugam, IRCC with the help of his colleagues and Shri. V. P. Belekar, Electrical Engineering Department.

### **Distinguished Service Awards**



Distinguished Service Awards, instituted in 1999, are conferred upon IITB alumni who have made significant contributions to the growth and development of the Institute. The award consists of a memento and an uttaria.

and it usually presented on the Alumni Day. For the year 2006, four alumni were conferred this award, by Prof Ashok Misra, Director, on Alumni Day on December 25, 2006.

- Mr. Milind Yeshwant Gokhale (B.Tech., Civil Engineering, 1981)
- Mr. Balaji N. Srinivasan (B.Tech., Chemical Engineering, 1983)
- Mr. Uday Pandharinath Nadkarni (B.Tech., Electrical Engineering, 1978)
- Mr. Vinay Nagnath Karle (B.Tech., Civil Engineering, 1996)

#### **Awards & Distinctions**

Vegayan Systems, an IIT Bombay incubated company, has been selected as a joint-winner in the prestigious TiE Canaan Partners Entrepreneurial The event was jointly Challenge. sponsored by The IndUS Entrepreneurs (TiE), non-profit organization that entrepreneurship promotes Canaan Partners, a reputed VC firm from US. Along with the award, INSEAD, a world-renowned business school for entrepreneurship, will host the winners at their Singapore campus to run case study workshop to assess the global potential of the winning businesses.

The joint winners were selected from over hundred early-stage start-up companies all over India with two rounds of selection.

Vegayan was founded by Dr. Girish Saraph in November, 2005 in the SINE business incubator. It provides networking tools and integrated solutions that enhance functionality, performance, efficiency, and management of converged networks for service provider and enterprise customers. It enables effective deployment, operation and planning of next-generation network services.

The award ceremony was held at the TiE flagship event, called as "TiE Entrepreneurial Summit" in Mumbai during December 2006 where over 1300 delegates attended the event. This gave the winners an excellent visibility and promising opportunities to take their businesses forward.

Mr. Subhashis Sarkar, Department of Chemical Engineering has been awarded the MH Shukla 2nd Prize, 2006 IIChE for the best technical paper presented in Chemcon-2005. Poster paper presented at the "Twenty First National Symposium on Cryogenics" during 22nd - 24th November, 2006, held at NPL, New Delhi, on the topic entitled "Investigations on Mixed Refrigerant Joule Thomson (MR J-T) Cryocooler" authored by, Mr. Nihar Walimbe, Mechanical Engineering Department, Prof. M.D. Atrey and Prof. K.G. Narayankhedkar, received the second prize consisting of a certificate and cash award.

Central Library, IIT Bombay has been subscribing to a number of e-resources to support our students, research scholars and the faculty in pursuits of their academic and research endeavors. IIT Bombay was declared the best user of following e-resources:

1) Science Direct

- 2) American Society of Civil Engineers (ASCE) Journals
- 3) EBSCO Databases.

The awards were received by Mr. D. Jotwani, Librarian, at the recently held INDEST Workshop and 4th Annual Meet, IIT Delhi, 19-20 December, 2006.

M. Tech thesis entitled "Electrochemical evaluation of corrosion inhibitors for marine diesel engine cooling systems" by Lt Cdr Shishir Dixit, Department of Metallurgical Engineering & Material Science has been adjudged as best thesis of the year 2006 by NACE International India section. The project work was carried out in Corrosion Science and Engineering Program under the supervision of Prof. V.S. Raja

Prof. Madhav N. Kulkarni, Civil Engineering, was presented the "Institute Medal" of the National Research Institute for Astronomy & Geophysics (NRIAG), Egypt, by the President of NRIAG, at Cairo, on 21st December, 2006.

### IIT at India R&D Exhibition



IIT Bombay participated in Second Global Conference and Exhibition on India R&D 2006-"Mind to Market", held at Vigyan Bhawan, New Delhi during 4-6<sup>th</sup> December, 2006.

# **National Psychology Conference**

The XVI National Association of Psychology (NAOP) Conference was hosted by the Department of Humanities and Social Sciences, IIT Bombay, from 14th to 16th December 2006. About 300 delegates participated in this unique event, which saw a gathering of psychologists from fields as diverse as Cognitive Psychology and Organizational Psychology. Scholars and researchers from various parts of the globe engaged in active intellectual discussion and debate for the three days.

Pre-eminent names include Professor James Georgas, President, International Association of Cross-Cultural Psychology; internationally renowed Psychoanalyst Professor Sudhir Kakar; Professor Bruce Overmier, President, International Union of Psychological Sciences; Profess Indira Parikh, Chairperson, Foundation for Liberal and Management Education, Pune; Dr. T.V. Rao, Chairman, T.V. Rao Learning System Pvt. Ltd.; Professor Ramadhar Singh, National University of Singapore; and Professor Carl Ratner, Director, Institute of Cultural Research and Education, Trinidad.

Some of the highlights of the conference included symposia on Cultural considerations in human development research, the concept of mind in Indian Philosophy, Gender and mental health, Visual cognition, and rethinking psychological research on enabling the mind.

Poster paper presented at the "Twenty First National Symposium on Cryogenics" during 22nd - 24th November, 2006, held at NPL, New Delhi, on the topic entitled "Investigations on Mixed Refrigerant Joule Thomson (MR J-T) Cryocooler" authored by, Mr. Nihar Walimbe, Mechanical Engineering Department, Prof. M.D. Atrey and Prof. K.G. Narayankhedkar, received the second prize consisting of a certificate and cash award.

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Some of the highlights of the conference included symposia on Cultural considerations in human development research, the concept of mind in Indian Philosophy, Gender and mental health, Visual cognition, and rethinking psychological research on enabling the mind.

# **Brigadier Bose Memorial Lecture**



The Second Brigadier S.K. Bose Memorial Lecture on the topic "A SystemsView of Engineering Education" was delivered by Professor Emeritus K.P. Madhavan, of Chemical Engineering Department on December 22, 2006.

Prof. Vasi, Dy. Director, welcomed the gathering and commented on IIT during the tenure of Director Brig. Bose, when he was a student. Mr. Ajit Gopaldas, alumnus, introduced the event. Prof. Madhavan, after reminiscences of his association with Brig. Bose as student and young faculty delivered the Colloquium.

The complexity of the education system calls for the use of a Systems approach to analyse the myriad influences which influence the outcomes of the educational process, he said.

The education system could be viewed as a SocioTechnical System represented through a Singerian operational model and a Viable System cybernetic model. The characteristics of the education process are analysed as a knowledge transfer, skill and personality development process to achieve certain desirable outcomes. The outcomes need to be defined precisely and monitored correctly to provide valuable feedback for improvement of the learning process. The learning process should itself be amenable to various innovations learning (structure, content. mechanisms etc) to yield the desired outcomes. Technology assisted learning needs to be incorporated with care in the overall learning process.

For an education system to pursue the path of excellence, an assessment of its performance needs to be done. While the current evaluation is based on external ranking systems, there is need for a robust internal evaluation system which can provide internal feedback for performance improvement resulting in a system adaptive to the changing needs.

# **New Faculty Housing Inaugurated**



The 16 storey state-of-the-art building, providing new apartments to 60 faculty members was inaugurated and occupied in December 2006. The building, which was named "Anantha", is now the tallest building on Campus, and greatly in demand for spectacular view of Powai & Vihar lakes, campus and right up to the Vashi creek eastwards. Also plus points - no mosquitoes and the freshest air in Mumbai!

The faculty housing project was initiated with contributions from class of 77.

# **National Conference on Advances in Energy Research**



Energy Systems Engineering, IIT Bombay organized the first national conference on Advances in Energy Research (AER 2006) during December 4-5, 2006. The aim of the conference was to provide a platform for researchers, academicians and industry to discuss recent research activities and identify future directions for R & D in the energy sector. The conference was inaugurated by Prof. C. Amarnath, Professor in charge SINE, IIT Bombay.

The keynote address was given by Prof. Ajit. Kolar of IIT Madras on "Advanced Coal Technologies in India". In his talk, Prof. Kolar gave an account of the current energy situation in India and stressed the need for developing efficient, economical and environment friendly energy technologies that could also offer employment opportunities. He outlined different options for advanced coal technologies for India and emphasised the need for enhanced research in coal based technologies.

The invited talks were based on topics such as distributed generation, fuel cells, biomass gasification, energy efficiency and energy education. Shri. S.P. Gonchowdhury, Director West Bengal Renewable Energy Department (WBREDA) gave a talk on distributed generation systems. The experiences of WBREDA in operating such systems in the Sunderbans were highlighted. Dr. B. C. Jain, Director, Ankur Scientific Technologies Pvt. Ltd., Baroda, spoke on industrial applications of biomass gasification citing numerous examples of such systems installed by his company. Dr. K.S.Dhathathreyan, Head, Centre for Fuel Cell Technology (CFCT), Chennai presented the latest R & D initiatives in the fuel cell technology alongwith the major challenges in fuel cell research. Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency-India emphasized the need of research in the energy efficiency sector and focused on research challenges in lighting, fans, energy efficient buildings. Prof. U. V. Shenov, Chemical Engineering Department, IIT Bombay explained the importance of a systematic approach to education.

Parallel technical sessions were held involving topics such as Energy systems, thermal, biomass, solar power generation and systems, photovoltaics and wind and renewable energy systems. There were special sessions on fuel cells and hydrogen, energy education and industrial application of renewables. A poster session was also organized. Around 75 papers were presented during the conference. The conference proceedings were published by Macmillan India. The conference was attended by about 200 delegates from academic institutes, industry and government.

An exhibition of energy related services and products were organized as part of the conference. Suzlon Energy Ltd, Oil and Natural Gas Corporation Ltd. (ONGC), Cummins India Ltd., Maharashtra Energy Development Agency (MEDA) and Sanjay marketing company, Mumbai were the main exhibitors.

The concluding session of the conference had a panel discussion on "Energy Research in India". The panelists were Prof. Kirit Parikh, Member Commission: Shri. Planning Subramanian, Secretary MNRE; Dr. Naushad Forbes, CEO, Forbes Marshall and Dr. K. Subramanya, COO, Tata BP Solar and Dr. T. Ramasami, Secretary, (participated via DST conferencing). The panel discussed several issues related to energy R & D in India - funding, administration, vision and direction, manpower,

The Energy Systems Engineering group plans to make this event into an annual conference (the 2<sup>nd</sup> AER is scheduled as an International Conference during December 12 – 14 at IIT Bombay.

# **Faculty Research at IITB**

Industrial Research & Consultancy Centre (IRCC) organised a half-day programme with the objective of appraising interested faculty of the various procedures and processes of R&D Activities at IITB, on November 4, 2006. Around 85 participants attended the programme.

In his introductory remarks Prof. J. Vasi. Deputy Director, IIT Bombay commended and appreciated the efforts of IRCC for organizing such an event and hoped that this meeting would be beneficial to young faculty who are not aware of the procedures and the processes and an update for senior faculty.

Prof. Ramamritham, Dean R&D presented an overview of the structure and functions of IRCC. He talked on the various activities taken up by IRCC and the incentives & initiatives provided by the institute to promote R&D.

number of presentations regarding undertaking projects at IITB followed. The presentation on the life cycle of sponsored projects at IITB gave a view of the various aspects such as Interface between various entities, the steps involved in project proposal submission and its approval and sanction. purchase procedures. recruitment of staff, project related travel, project progress and completion and its closure and the final outcome in the form of publications & IP.

Information on funding agencies and their areas of funding was the subject matter of the next presentation.

Consultancy projects were high lighted next. The salient features of the consultancy rules and the standard terms and conditions under which the project is executed, the process of initiation, implementation and the project progress and its completion & closure were presented.

Prof. A.R. Kulkarni made a presentation on the central instrumentation facilities available in the institute.

In a panel discussion on "Making IITB known for its Research -Enhancing the quality and quantity of Research at IIT Bombay" the panelists expressed the impediments and enhancers for R&D and their experience of working in the institute.

It was generally felt IIT Bombay provides a unique opportunity, by providing immense amount of freedom and flat hierarchy and an atmosphere conducive for free interactions.

However, there are areas that require to be looked into and need changes. Some of the issues hampering R&D: Quality of students, faculty teaching loads, Issues relating to Sustained support staff administrative and technical) to handle paper work and paper chasing and operating & maintaining equipments functional, better amenities such as hostel accommodation and faculty housing. Streamlining and simplification of procedures and processes:

### **Faculty News**

Prof. Prashant S. Phale, School of Biosciences and Bioengineering presented a paper 'Biodegradation of Carbaryl via 1. 2-Dihydroxynaphthalene by Pseudomonas sp.' and chaired a session on 'Enviornmental Biotechnology' the "Third at convention of Biotechnology Research Society of India, and International Conference on Exploring Horizons in Biotechnology: A Global Venture' held at Sardar Patel University, Valalabh Vidvanagar from 2nd - 4th November, He also presented a paper 'Preferential Utilization of Aromatics Over Glucose by Pseudomonas Putida CSV86', at the 47th annual conference of Association of Microbiologist, held at Brakatulha University, Bhopal from 6th -8th December, 2006.

Prof. Raja Mohanty, Industrial Design Centre, gave a talk on 'Experiences in working with tribal and traditional artists' at Bhopal during a seminar on 'Illustrations for Children's Books' organized by Ekalavya and Sir Ratan Tata Trust, on the 15th December, 2006.

Prof. L.M. Bhole, Humanities & Social Sciences, delivered the following lectures:

(Contd. on page 7)

### **Think Policy Conference**

The fifth Annual Think Policy Conference was held on December 22, 2006. It was jointly organised by IIT Bombay, US India Forum and India Public Policy Forum. The Introduction was given by Mr. Ajit Gopaldas, CEO of US India Forum, who spoke on India Public Policy Forum: Catalyst for Policy Implementation. This was followed by a discussion moderated by Prof. Rangan Banerjee. Presentations were made by :K. Subramanya, CEO, Tata BP Solar on "Policies for Wide-

Spread Use of Photovoltaics in India"; Sanjay Bhatia, Director, YASHADA on "Making Indian Utilities Efficient and Effective"; Subhash Kulkarni, Member, MERC on "Citizen-Friendly Policies for Effective Regulation".

The Panel Discussion: "Should Govt.
Be In Business" was moderated Mr.
Ajit Gopaldas, US India Forum. The
Panelists were: S. Hajara, CMD.
Shipping Corporation of India; A.K.
Luke, IAS, Former MD, GSFC/GACL/
SSNNL; G. N. Bajpai, Former
Chairman, SEBI / LIC.

(Contd. from page 6)

An Endowment Lecture on "Economics, Non-Violence, and A Culture Of Peace"on November 28, 2006 as a part of Saint Shree Dnyaneswar and Saint Shree Tukaram Endowment Lecture Series, at the World Peace Center, Maharashtra Institute Of Technology, Pune.

"A Perspective On Interest Rates Policy In India" on December 16, 2006 at the Workshop on Macroeconomic Analysis organized by Dun and Bradstreet Financial Solutions, Mumbai.

A Keynote Address on "Eleventh Plan Approach to Financing Development" on December 23, 2006 at the Plenary Session of the International Conference on Business and Finance organized by ICFAI Business School and Philadelphia University at Hyderabad.

"Foreign Capital Flows" and "A critical Appraisal of Eleventh Plan Approach Paper" on 5th - 12th December, 2006 at NITIE, Mumbai.

Prof. K. Ramasubramanian,
Department of Humanities and Social
Sciences, was invited to give a lecture on
— "Accomodating Others: How does
one achieve this?" — in a Management
Conference organized by SriSIM, New
Delhi, on December 1, 2006.

He participated in a National Seminar on Ancient Astronomy and Cosmology organized by ISERVE, Hyderabad, between 9th -10th December, 2006, and gave a talk on — "History: Does it reveal the Truth?"

He also gave an invited lecture on "Algorithms in Indian Astronomy" — in an Inter-Collegiate Consortium, held at Modern College, Pune on December 13, 2006, organized by the "Outreach Programme" of the University of Pune.

Prof. Atanu Ghosh, SJM School Of Management attended the International Conference on E-Governance (ICEG 2006), held at IIT Delhi on 15th - 17th December 2006. He chaired a session and presented a paper titled "A Study of E-governance in Rural India", co-authored with Ms. Gargi Banerjee.

He was invited by International Business Academy, Bangalore to conduct a seminar on "Leadership" on 1-3 December 2006.

He also shared his experience with the students and faculty of R.V. Institute of Management, Bangalore and Bangalore Management Academy about the innovative way of offering a course on "Leadership and Vision" at SIMSOM.

Prof. V.Ramgopal Rao, Department of Electrical Engineering has been appointed as a Vice-Chair of the IEEE Electron Devices Society (IEEE-EDS) Asia/Pacific Regions/Chapters Subcommittee (AP-SRC) with effect from January 1, 2007. This is a Ex-Officio AdCommember position of the EDS Regions/Chapters Committee with a two-year renewable term. Prof. Rao has also been invited to serve on the IEEE Electron Device Society Membership Committee.

Prof. Narayan Rangaraj, Industrial Engineering and Operations Research, attended the Annual International Conference of Society of Operations Management at IIM-Ahmedabad 20th-23rd December 2006. He presented two papers: one on "Product Variety Management" co-authored with Prof. N. Hemachandra, and the other on "Supply Chain Decisions and Double Marginalization" co-authored with Mr. Gaurav Singla (student/presenter). He also chaired a session on Operations Strategy.

Prof. Jayendran Venkateswaran, Industrial Engineering and Operations Research, attended the Annual International Conference of Society of Operations Management at IIM-Ahmedabad 20th-23rd December 2006. He presented two paper: one on "Stability Of Production-Inventory Control Systems Considering Inventory Shortages" co-authored with Ms. Charru Hasti (student), and the other paper on "Life Period Based Collection And Inspection Model In Closed Loop Supply Chains" co-authored with Mr. Prashant Mittal (student/presenter).

Prof A K Rastogi, Dept. of Civil Engg. presented a paper 'Groundwater rights and water pricing structure' at the 12th National Symposium on Hydrology. held at New Delhi on Nov. 14-15, 2006. The event was jointly organised by the central ground water board and national institute of hydrology. The recommendation proposed by Prof. Rastogi of starting a National Centre of Groundwater Modelling was accepted by the panel. He also presented a paper entitled 'ANN - Inverse Modeling for Parameter Estimation in Porous Media' held at Centre for Water Resources. JNTU, Hyderabad, 5th - 8th December, 2006.

Porf. T.N. Singh, Department of Earth Sciences was invited by Department of Science and Technology, New Delhi as expert committee member in Coordinated Programme on landslide Hazard Mitigation for North Eastern Region on 18th - 20th December, 2006 at Manipur University. He also delivered a key note lecture in the department of Earth Sciences, Manipur University on the topic "Engineering Geological application in landslide investigations" on 18th December, 2006.

Prof. Malhar Kulkarni, Humanities & Social Sciences, presented a paper entitled "mechanism of japa in Indian Tradition" at the 16th National Conference of Psychology held at IITB from 14th - 16th December, 2006. He

(Contd. on page 8)

(Contd. from page 7)
also organised a workshop entitled
"Dhatuparayana" at the
Abhyankarashastri Pathashala, Pune
from 26th - 31st December, 2006.

Prof. Rajkumar S. Pant, Aerospace Engineering Department attended a workshop on Aircraft Design conducted by Dr. Daniel P. Raymer, President. Conceptual Research Corporation USA, held at National Aerospace Laboratories Bangalore from 14th to 16th December 2007. He also delivered an invited talk titled "Life Cycle Cost modeling of military aircraft" on 19th December 2006 at the International Seminar on Trends in Product Life cycle Modeling, Simulation & Synthesis (PLMSS-06), held at Indian Institute of Science, Bangalore.

Prof. Vijay G. Ukadgaonker, Mechanical Engineering Department gave the key note address in the International Conference on Computational Mechanics and Simulation 2006 on "Stresses near Doors and Windows of Boeing 777 Aircraft", held at IIT Guwahati during December 8-10, 2006.

Prof. Atul Sharma, Mechanical Engineering Department delivered a series of Invited Lectures in the AICTE Sponsored Staff Development Programme on "Numerical Computation of Fluid Flow and Heat Transfer" organised by Govt. College of Engg., Karad on 12th - 14th December, 2006.

Prof. V. Jothiprakash, Assistant Professor department of Civil Engineering, presented a paper titled "Monthly Operational Plans of a Reservoir Using Simulation Model" at ASCE-EWRI International Conference, India 2006 An International Perspective on Environmental and Water Resources, held at New Delhi during 18-20 December, 2006.

Prof. J.C. Mandal, Aerospace Engineering Department, delivered an Invited Talk entitled, "Challenges in Developing Higher Order Accurate Schemes for Simulation of Flows with Discontinuities: Issues and Alternatives" at the Second International Congress on Computational Mechanics and Simulation (ICCMS-06), 8-10 December, 2006 at IIT Guwahati. He also chaired a technical session in the same conference.

Prof B.V.S. Viswanadham. Department of Civil Engineering attended Indian Geotechnical Conference 2006 "Geotechnical Engineering-Indian Experience" organised by Indian Geotechnical Society (IGS) Chennai chapter at IIT Madras, Chennai during December 14th - 16th, 2006 and presented an invited lecture "Some Studies on Centrifuge Modelling of Reinforced slopes". He also presented two papers titled: (i) Centrifuge Aided Learning (CAL) for Geotechnical Education and (ii) Studies on the Deformation Behaviour of Reinforced Fly ash slopes in a Geo-centrifuge. The above papers present the recent activities of large beam centrifuge facility at IIT Bombay and were coauthored along with his students.

Prof. Rajendra M. Sonar, presented paper titled: 'Using Hybrid Knowledgebased Approach to Retail Banking' at 41th Annual Convention of Computer Society of India held at Science City, Kolkata, November 23-25, 2006.

Prof. U.K. Anandavardhanan, Department of Mathematics, gave a talk titled "Factorization of Period Integrals" at the International Conference on Number Theory, Harish-Chandra Research Institute, Allahabad, held during December 1-5, 2006.

Prof. Pushpak Bhattacharyya of the Computer Science & Engineering Department delivered a keynote speech titled "Machine Translation of Short Messages"at the User Interface Summit organised by Nokia at Manesar, Gurgaon on 27-28 November, 2006. The summit explored future directions in research and development on mobile telephony. Language Technology with focus on Indian language processing will play an important role in this area. He also gave a talk titled "Semantics in Machine Translation and Information Retrieval" at Microsoft Research at Bangalore on 3rd December, 2006.

Prof. A.K. Dikshit, CESE, presented a talk on "R&D on Water and Waste Technologies at CESE, IIT Bombay and Strategy for Participation in IFUWWT Framework" at the Institut National des Sciences Appliquées de Lyon (INSA-Lyon), France in the Indo-French Unit on Water and Waste Technologies (IFUWWT) seminar held from November 29 to December 2, 2006. He also visited Pollutec Fair 2006 and interacted with major industrial stalls.

He was also invited as a speaker in the 2 day National Workshop on "Occupational Safety, Health and Environmental Issues in Industries" organised by Governmental Polytechnique Mayem, Bicholim; Goa chamber of Commerce and Industries, Panji and Green Triange Society, Goa on November 17-18, 2006. He presented the talk on "Environmental Management System: A Tool for Addressing Environmental Issues in Industries and Beyond" to about one hundred fifty participants from various industries.

Prof. Madhav N. Kulkarni, Civil Engineering presented an invited paper titled "GPS & Deformation Monitoring", and co-chaired the technical session on Geodynamics, at the Eleventh Scientific Meeting/Seminar of the National Research (Contd. on page 9)

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Institute for Astronomy & Geophysics, Egypt, held at Cairo, Egypt, during 17-21 December, 2006.

Dr. B. Krishna Mohan, Principal Research Engineer, CSRE has delivered two lectures at SIES Graduate School of Technology, Navi Mumbai on 21/12/ 2006 on the topics of Image Processing using Mathematical Morphology and Statistical Pattern Classification Techniques.

Dr. Y.S. Rao, Senior Research Scientist, CSRE presented two papers entitled "Monitoring of flood over Gujarat region using Aqua AMSR-E derived surface soil moisture" and "ENVISAT ASAR data analysis for snow cover mapping over Gangotri region" at the Asia-Pacific Remote Sensing symposium, organised by SPIE, held at Goa during 13-17 Nov. 2006.

#### **Publications**

Prof. Karunamay Subuddhi, Department of Humanities and Social Sciences, published a paper entitled: 'e-Governance in Rural India for Poverty Alleviation and Development Administration: An Approach towards Administrative Reforms'in Government: Macro Issues', (edited by R.K. Mitra) & Published by Global of Institute Flexible Systems Management(Gift), New Delhi 2006. The paper was presented in the '4th International Conference on Governance (ICEG2006), organized by International Congress of E-Government, in association with IIT Delhi between 15-17 December, IIT Delhi.

Prof. Malhar Kulkarni, Humanities & Social Sciences published an article entitled "Nana (eka vidyarthyace manogata)" in Dharmabhaskar, December 2006.

#### **Student News**

Ms. Pritee Sharma, Research Scholar in Economics, at the Department of Humanities and Social Sciences, presented her research paper on Agricultural Productivity and Land Quality Linkages in India: A State-wise Analysis, at the Ninth Biennial Conference of International Society for Ecological Economics. The conference was on "Ecological Sustainability and Human Well Being", at the India Habitat Centre, New Delhi, during December 15-18, 2006.

She also presented another research paper on Inter-regional Agricultural Productivity Differences in India: A Metafrontier Production Function Approach at the National Workshop on Regional Disparities and Rural Poverty in India. This workshop was organized by the National Institute of Rural Development, Hyderabad, during December 4-6, 2006.

Ravindra S. Bhide, PhD student, Electrical Engineering Department, presented a paper titled as "Analysis of Parallel Operation of Converters with Interphase Transformer", co-authored by Prof. S. V. Kulkarni at India International Confrence on Power Electronics 2006, Chennai, held on 19-21 December 2006.

#### Seminars

Dr. Bharat Balasubramanian, a Distinguished Alumnus of IIT Bombay (1973 B. Tech., Mechanical) and Global Head Engineering Technologies, DaimlerChrysler, delivered a talk on "MERCEDES BENZ CL CLASS' on 24th December, 2006.

He is a part of the core team that designs and engineers next generation cars at Daimlerchrysler AG in Singelfingen, Germany. He is vicepresident, Mercedes Car Group and also heads the DaimlerChrysler Competence Centre. Department of Electrical Engineering

Dr. Samir Kapoor, Senior Director, Engineering QUALCOMM Inc spoke on "An Overview of FLASH-OFDM and other Mobile Broadband Technologies" on December 21, 2006.

Department of Metallurgical Engineering & Materials Science

Prof. B.C. Muddle, Monash University, Australia spoke on "Design of Nanostructure in Aluminium Alloys" on December 13, 2006.

Department of Physics

Prof. Varsha Kulkarni, Department of Physics and Astronomy, University of South Carolina, USA spoke on "Shadows of Galaxies: Quasar Absorption Lines and Galaxy Evolution" on December 20, 2006.

### **IITB Swimming Club News**

At the Inter School Swimming Meet held at Ozone Club in Goregaon on 9th - 10th December 2006, in the Under - 13 yrs category, Rahul Biswas won a Bronze medal in the 100M Free Style event.

In the Under-9yrs category, Siddharth Rao Deb won a Gold medal in the 50 M Breast stroke and made a New Meet Record; a Gold medal in the 50M Back stroke and a Silver in the 50M Free style event. He also won the overall Under-9 Individual Championship award.

At the GMAAA Lower Age Group Acquatic Championship held on 16 & 17th December 2006 at the GAET Pool, Goregaon, in the Boys Age Group 9 yrs, Siddharth Rao Deb won a Gold medal in the 50M Breast stroke and set a New Meet Record; and Silver medals in the 50M Back stroke and 50M Free Style events. He also won the Runner's Up Individual Championship Trophy.



#### **Appointments**

Dr. Prakash Chandra Ghosh, has been appointed an an Assistant Professor in the Department of Energy Systems Engineering Group from 14th December, 2006.

Dr. P. Sunthar, has been appointed as an Assistant Professor in the Department of Chemical Engineering from 18th December, 2006.

Dr. Mani Bhusan, has been appointed as an Assistant Professor (Contract) in the Department of Chemical Engineering from 26th December, 2006.

Dr. Manoj Kumar Keshari, has been appointed as an Lecturer (Sr. Scale) (Contract) in the Department of Mathematics from 26th December, 2006

Shri V.S. Balasundaram, has been appointed as an Officer on Special Duty (Part-time) in the Placement Office from 26th December, 2006.

#### Retirements (as on 31.1.2007)

- Prof. U.A. Athvankar IDC
- Shri S.G. Chede Administration Section
- Shri R.P. Mahule Met. Engg. & Mat. Sc.
- Shri D. N. Rupwate Civil Engg.

#### **Events**

Institute Colloquia: Prof. Balsubramanian, Director, Institute of Mathematical Sciences, Chennai, on "Applications of Number Theory to Cryptology", on January 16, 2007, at 5.10 pm at Institute Auditorium.

Prof. John Byrne, Director, Centre for Energy and Environmental Policy, University of Delaware, USA will speak on "Challenges to our Technological and Policy Paradigms: The Case of Climate Change" on January 17, 2007 at 4 pm at the Institute Auditorium.

Course Title	Coordinator / Department	Date
Urban Drainage Management: State-of-the-art	Prof. Kapil Gupta Civil Engg.	January 04 - 06
Process Simulation (for Chemtex Global Engineers Pvt. Ltd., Mumbai)	Prof. R.K. Malik Chemical Engg.	January 06 - 07
Cell Culture Technology	Prof. Sarika Mehra Chemical Engg.	January 10 - 12
Process Integration for Pollution Prevention Energy Systems Engg.	Prof. S. Bandyopadhyay	January 19 - 20
Food Processing Industry: Technology and Management (for KVIC, Maharashtra)	Dr. N.G. Shah CTARA	January 22 - 24
Global Positioning System (for Lavasa Corpn. Ltd., Pune)	Prof. M.N. Kulkarni Civil Engg.	January 27 - 31

# CAMPUS

January 2007

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#### BOOK POST