

Campus diary

December 2013 - January 2014

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INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

1MW Solar PV Power Plant inaugurated at IIT Bombay



(In Centre) Prof. Devang Khakhar, Director, IITB & Dr. Satish Agnihotri, Secretary, MNRE

As a part of its 'Green Campus' initiative, **Indian Institute of Technology Bombay (IIT Bombay)**, is installing a 1MWp (1 MW peak PV power) distributed rooftop Solar PV Power Plant on the roofs of its academic buildings. The Solar Power Plant was inaugurated on January 28, 2014, by Dr. Satish Agnihotri, Secretary, Ministry of New & Renewable Energy, Government of India, in the presence of Prof. Devang V. Khakhar, Director, IIT Bombay, at the Institute Campus.

Solar Photovoltaic (PV) technology is growing in importance worldwide as credible technology for supply of electricity for terrestrial applications. IIT Bombay has National Center for Photovoltaic Research and Education (NCPRE) established as part of Jawaharlal Nehru National Solar Mission (JNNSM) to promote

research and education in solar PV. Additionally, IIT Bombay is endeavouring towards making its

campus green. One of the ways towards it is to install PV power plants in academic area of the campus for partial generation of the required electricity during daytime. Applauding the initiative taken by the Institute for harnessing solar energy, Dr. Agnihotri said, *"I commend IIT Bombay for practicing what is generally being preached. The Institute should also start looking at other sources of energy such as Bio-gas and should share its best practices with other institutions as well."*

The 1MWp plant consists of 16 smaller plants each having capacity of approx. 50-100 kWp. With the solar potential of average 5.32 peak sun hours per day and PV power



(L-R) Prof. Devang Khakhar, Director, IITB & Dr. Satish Agnihotri, Secretary, MNRE

system efficiency of 78%, the 1MW_p Solar PV Power Plant is expected to produce average annual energy of approx. 1.4 million kWh for a period of minimum 20 years. The estimated plant capacity factor is 17%.

"The plant will occupy approx. 12,000m² area on the rooftops of 16 academic buildings. The power consumption of 16 academic buildings is of the order of 1500 kW peak while the average consumption is approximately 1000 kW. The Solar PV plant will supply up to 50% of peak load demand of 16 academic buildings. The electrical energy generated by the Solar PV plant will be up to 25% of the total energy requirement of the 16 academic buildings," informed Prof. Chetan Singh Solanki, Associate Professor, Department of Energy Science and Engineering, IIT Bombay.

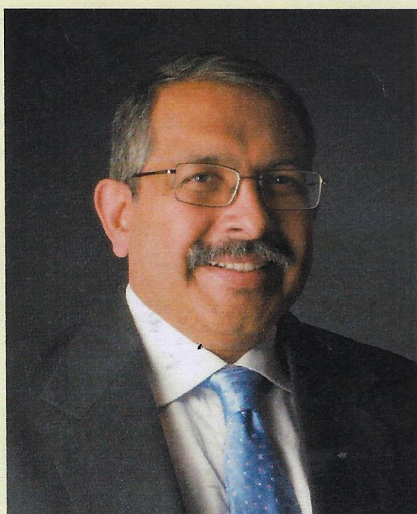
I commend IIT Bombay for practicing what is generally being preached. The Institute should also start looking at other sources of energy such as Bio-gas and should share its best practices with other institutions as well.— Dr Satish Agnihotri, Secretary, MNRE.

The 1MWp plant consists of 16 Nos. of distributed grid-interactive captive power systems. The solar generated AC power is monitored and supplied to local LT distribution grid. The energy generated during day is directly consumed by captive load and no energy storage is required. Each system consists of PV array, Power Control Unit and Balance of Systems. Mahindra EPC is implementing the project in three phases, while due diligence is provided by IIT Bombay academic and technical staff. The first phase

of installation of 300 kWp PV capacity has been completed. **The installation of entire 1MWp is likely to be completed by March 2014.**

"The largest power consumption at IIT Bombay is at our labs during day time and with more sophisticated equipments and labs coming up, our electricity consumption is going to increase. We see a great potential in solar energy to meet our growing requirements. The 1MW plant will enable us to reduce our electricity bills by 5% and it is expected that the investment made in this venture will be paid back in five years. This is not just an initiative to save money or reduce our carbon foot-print, but also an opportunity to understand how these systems function, especially for our students. We are moreover, exploring news ways to harness alternate and clean sources of energy," added Prof. Khakhar.

Prof. Devang V. Khakhar gets a second term as Director of IITB



Prof. Devang V. Khakhar, Director of the Indian Institute of Technology Bombay (IIT Bombay) has been selected by the Ministry of Human Resource Department (MHRD), Government of India to serve as the Director of the Institute for a second term.

Prof. Khakhar's first-term performance was assessed on several parameters such as building the institution as a global brand and research hub, introduction of new academic programmes, faculty retention and development, academic, administrative and financial reforms, and revenue generation, among others. During his tenure, IIT Bombay emerged as the preferred destination for JEE toppers (67 of top 100 rankers in JEE 2013 have joined IIT Bombay), the faculty strength increased from 446 to 575 and several new initiatives were taken by the Institute such as setting up of new centres including the National Centre for Aerospace Innovations and Research, Centre for Climate Change Research, and the Centre for Urban Science and Engineering. Students numbers grew from 5800 to 8800 and significant enhancement in infrastructure was moreover, carried out. Several projects were undertaken to make the campus more green and energy efficient including the 1 MW rooftop Solar PV System, Solar Thermal Water Heaters and Biogas from food waste plant for the hostels.

"It has been a privilege to lead this great Institute and I have benefited greatly from the generous support I have received from the faculty and staff members of IIT Bombay as well as external stakeholders. The Institute has made important progress in the last five years and this has been widely acknowledged in the academic community in India and abroad. There are expectations to further accelerate our progress and it will be my endeavour to facilitate this growth taking inputs from all stakeholders," said Prof. Khakhar.

Alumni Day celebrations at IIT Bombay



(L-R) Mr. Ajay Bhagwat, Mr. Sameer Katdare, Mr. Paresh Vora, Prof. Devang Khakhar, Director, IITB, Mr. Ruyintan E. Mehta, Mr. Dhananjay Saheba, Prof. Ravi Sinha, Dean (ACR) and Dr. Amol Gokhale, Alumni 1988 Batch.

The Indian Institute of Technology Bombay (IIT Bombay), celebrated its annual Alumni Day on December 29, 2013. The Class of 1988 also celebrated their Silver Jubilee Reunion this year, as a part of the function.

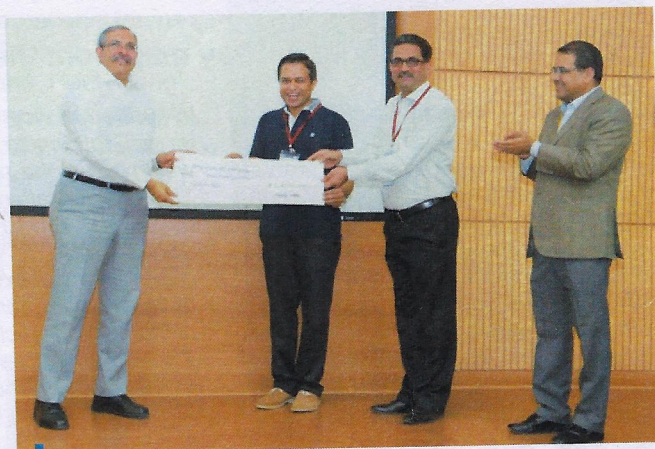
We feel that it is important to support the retired faculty members, who have played a great role in shaping many careers, as well as to attract talented young minds to take up teaching at IIT Bombay. Hence, we have decided to contribute towards the existing projects that are supporting the same goal. We would also like to offer more financial aid to the deserving and needy students at IIT Bombay.—
Mr. Kiran Shesh, Alumni, 1988 batch

The visiting alumni were given a warm welcome by Prof. Ravi Sinha, Dean (Alumni & Corporate Relations), IIT Bombay. In his address, Prof. Devang Khakhar, Director, IIT Bombay informed how the institute is growing from strength to strength. "Today, IIT Bombay is the preferred destination for IIT-JEE toppers. The student strength at the institute has grown over the years and now we have about 3700 undergraduate, 2800 masters and around 2300 PhD students with us. We are planning to set-up a National Centre for Mathematics in collaboration with TIFR. New hostels and residential facilities to accommodate UG, married and post-doctoral students are also in pipeline. The work to establish a Technology Park at IIT Bombay will moreover, commence from early next year." He also thanked the Alumni for their involvement in the activities of the institute and for their invaluable contributions in term of their time, suggestions, financial aid etc.

As a part of the function, **Distinguished Service Awards** were bestowed on six alumni members this year, who have besides being achievers in their own chosen domains have contributed in a notable and sustained manner to the progress of the Institute. The award, instituted in the year 1999, consists of a certificate, memento and an *Uttaria*. **This year, the award was conferred on Mr. Dhananjay Saheba, Mr. Sameer Katdare, Mr. Ruyintan E Mehta, Mr. Ajay Bhagwat, Dr. Amol A. Gokhale and Mr. Paresh Vora, by the Director. The Silver Jubilee Batch decided to fund three existing initiatives as a part of their Legacy**

Project and pledged a sum of Rs 2 crore towards it. (A Legacy Project is a project adopted by the batch celebrating its Silver Jubilee anniversary, for the betterment of the institute and of the people associated with it, as a way of giving back to the *alma mater* and to leave behind a lasting legacy and remembrance of their silver jubilee reunion.)

The projects they have decided to fund include – **Retired Faculty Wellness Fund** (It covers medical coverage for the faculty members who retired prior to 2003, as well as for their spouses); **Financial Aid Program for Students** (it provides unsecured loan program for needy students at low interest rates (to be repaid after graduation) for payment of tuition fee, hostel and mess expenses, laptop purchase, travel for conferences etc.); and **Young Faculty Award or New Faculty Sign-on Bonuses and Faculty Development Fund** (basically to attract and support new faculty members at IIT Bombay. The project gives a joining bonus of Rs 4 lakhs over a period of three years to every new faculty hired at IIT Bombay and some financial aid in the subsequent years as well).



(L-R) Prof. Devang Khakhar, Director, IITB, Mr. Manoj Thakur, Mr. Kiran Shesh, Alumni Batch of 1988 and Prof. Ravi Sinha, Dean (ACR)

According to Mr. Kiran Shesh, a representative of the Silver Jubilee Batch, "We feel that it is important to support the retired faculty members, who have played a great role in shaping many careers, as well as to attract talented young minds to take up teaching at IIT Bombay. Hence, we have decided to contribute towards the existing projects that are supporting the same goal. Also, given the fact that the cost of education and living has increased substantially, we would like to offer more financial aid to the deserving and needy students at IIT Bombay."

Mr. Shanti Mahajan, representing the Golden Jubilee Batch (Class of 1963) and Mr. Avishek Thakkar from the Decennial Batch Batch (Class of 2003) also spoke at the Alumni Day function. Several fun-filled activities were also held during the alumni meet which included departmental tours, hostel visits, cultural performances, student-alumni interactions, musical evenings and so on. More than 500 alumni members and their family members participated in the Alumni Day celebrations this year.

IIT Bombay Alumni of 1964 batch initiate 'FundasClear Scholarship Fund'



(L-R) Mr. Venkatramani Narayan, Mr. Dilip Dahanukar, Mr. Kalyanasundaram Venkateswaran, Retired Faculty, Dr. Anil Kakodkar, Prof. H. S. Pandalai and Prof. Ravi Sinha

The 1964 batch of students of the Indian Institute of Technology Bombay (IIT Bombay), who were probably the first batch of students to be admitted through IIT-JEE exam, celebrated their **Golden Jubilee Reunion** on January 16, 2014 at the Institute Campus.

The function was presided by Dr. Anil Kakodkar, Chairman, Board of Governors, IIT Bombay. A significant number of alumni members, settled in India and abroad turned up for the Golden Jubilee celebrations. The reunion featured networking, knowledge-sharing and thought leadership on various areas.

As a mark of their Golden Jubilee celebrations, the 1964 batch announced a Scholarship fund called "FundasClear Scholarship Fund", under which the needy but meritorious students of IIT Bombay will be provided a one-time financial assistance of Rs 50,000 for purchasing a computer/laptop, software or any other equipment that they may require during their course of study at the

institute. Applauding this initiative by the alumni, Dr. Kakodkar said, *"Such initiatives from the alumni help a long way in promoting higher education among the less privileged."* The scholarship endowment will be administered by the scholarship committee of the Institute.

"The early batches of the Institute, including the 1964 batch had an important role in establishing the reputation of IIT Bombay through their career performance. The Institute continues to reap the benefit of their hard work. Today, IIT Bombay is also gaining recognition as a world-class research institution and we have to thank the early batches for the strong foundation that they have built for us," added Prof. Ravi Sinha, Dean (Alumni & Corporate Relations), IIT Bombay.

A user-friendly railway map from the students of Industrial Design Centre

Commuting by Mumbai Locals can be a daunting experience for not just a first-time traveller but even for a regular commuter going to a newer destination. Rail maps plays a critical role in providing the travel related information, to help commuters navigate and to guide them towards making an informed decision for their journey. Unfortunately, for a city like Mumbai, which perhaps has one of the busiest rapid transit systems in the world – operating more than 2000 train services and carrying more than 7 million passengers daily - there were no well designed and authentic maps available of the railway network. Realizing this, **two first year students of Masters in Visual Communication programme of Industrial Design Centre (IDC), Indian Institute of Technology Bombay, Jaikishan Patel and Snehal Patil have come up with an easy to understand and commuter-friendly, colour-coded railway map for the travellers.**

The map designed by the two students includes connecting routes that link Western, Central, Harbour and Trans Harbour train stations. It also attempts to incorporate the route map of the under-construction Metro Line and Nerul-Uran Railway Link. Speaking about the special features of this Railway Map, Patil said, **"Our map introduces a quick navigation system, which lets the user locate his stations within seconds using the box grid. We have introduced grid system**

in a different way. Its slightly modified in comparison to the traditional grid which has alpha-numeric coordinates. This consideration was from our study of most Indians who are not accustomed to criss-cross alpha numeric grid, excluding those who have travelled abroad, where the use of maps and such grids is common. The newly designed map also includes the shuttle express way which runs from Vasai to Roha."

The pleasant and visually appealing map is also designed to cater to the colour blind population. *"According to statistics, approximately 13,956 people from different regions in India, suffer from colour-blindness. We have tested the map for the same and made changes accordingly. In the map design it is been considered to an extent that people with colour blindness can differentiate among the routes by the tone and thickness of the rail lines. In that way, the map would be still useful in case of B/W print,"* added Patel.

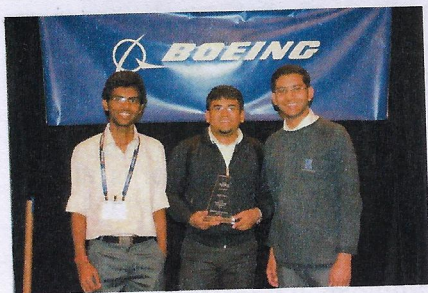
"IDC has always been involved in projects, which focus on benefiting the society. Our dream is implementation. If the maps are not installed on the stations and people are not using them then it's not worth the effort." – Prof. Mandar Rane, IDC

Designing this map had its own share of bottlenecks. Developing a

navigation system was a challenge in itself and the other one was to keep it small and portable, (i.e. to accommodate all the lines in a small size of A5 and ensure it was still legible). According to Prof. Mandar Rane, Associate Professor, Visual Communication, IDC, who acted as a guide to these students, *"IDC has always been involved in projects, which focus on benefiting the society. Our dream is implementation. If the maps are not installed on the stations and people are not using them then it's not worth the effort. This map is useful and the duo have designed it very well. The day we launched it through facebook, it generated a great response. Most of our changes have been done through crowd sourcing and we kept on updating the versions online. We visited the Chief PRO of Central Railways, who was very supportive and is keen on taking it forward. We are now waiting for the approval from DRM to make the map official."*

Students are hoping that You Are Here (YAH) versions of their Maps are installed at all railway stations, which can help commuters to quickly access and seek any information related to rail networks. They have also come-up with a A4 size of the map which can be folded into a 5cms x 7cms leaflet and can be easily carried in a wallet. **The map is currently available in English, Hindi, Marathi and Gujarati version.** The maps can be downloaded from the link <http://mrane.com/railmap.php>

Student team from Innovation Cell (UMIC) at SINE, wins laurels at ASME Student Design Competition



A student team from Umesh Mashruwala Innovation Cell (UMIC) secured second place at the World Finals of ASME (American Society of Mechanical Engineers) Student Design Competition 2013 held in San Diego, California during International Mechanical Engineering Congress and Exposition 2013. The challenge was to design, build and compete with a Remote Inspection Vehicle that can be used to assist the process of disaster mitigation after the accident in a nuclear facility. The vehicle was to be designed such that it can maneuver through the destroyed facility collecting critical

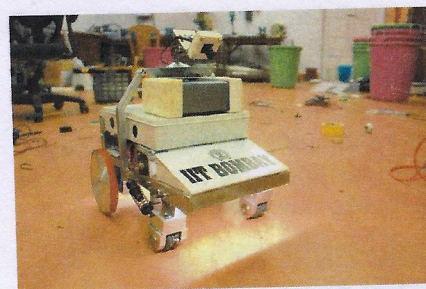
data like disaster readings on display panels, pressing buttons and determining levels of radioactivity at different places in the compound.

After the Fukushima nuclear facility tragedy, the nuclear industry sent out a Request for Proposal for prototypes of a small, remotely controlled inspection vehicle that could be used to determine the level of radioactivity and damage in compromised nuclear plants, thereby protecting humans from the dangers of nuclear contamination. The competition was organized in collaboration with Boeing.

The World Finals this year saw the participation of 25 international teams from United States, Canada, Taiwan, Singapore, Switzerland, Hong Kong, UAE, Lebanon, France, Egypt and Peru. ASME Student Design Competition is a 3-tier competition. The team won the National (held in KL University, Vijayawada) and Asia-Pacific (held in UTP, Ipoh,

Malaysia) rounds of the competition, competing against 30 national and 10 teams from Asia-Pacific countries respective levels.

Umesh Mashruwala Innovation Cell is an engineering culture at IIT Bombay spearheading towards innovation. Located in Society for Innovation and Entrepreneurship (SINE) Lab, students tinker with their ideas, work on projects and solve problems in a unique and innovative way. These ideas and skill-sets, with the support from SINE kick-start the process of techno-entrepreneurship, producing amazing results.



Farmer's Market

A Farmer's Market was held at IIT Bombay on December 7, 2013, where farm fresh and organic fruits and vegetables were made available for purchase to IIT Bombay community. The event was organized by Prof. Ganesh Ramakrishna, Prof. Vishal Sardeshpande, Prof. Saketh Nath and Prof. Krithi Ramamritham, faculty of Computer Science along with Mr. Vishal Godke, who works with organic foods and delivers them from farms to homes.



Several vegetables like Tomatoes, Bitter melon (Karela), Fresh Chili pepper, Gavar, French beans, Brinjals, Red pumpkin, Bottle Gourd (dudhi bhopla), leafy vegetables like Spinach (palak), fenugreek (methi), Amarnath (Lal Math) and fruits such as Sapodilla (Chikoos) and capital lemons, even some cereals like rice and some natural medicinal herbs like amla, mouth fresheners, fresh turmeric powder and home made pickles were sold at the market. Farmer from even far-off areas like Dahanu, Wada, Amravati came together with their produce and sold out everything within few hours. The Market will be now held on every Sunday.

Republic Day celebrations



K. V. Students Marching on the Republic Day Celebration at the Gymkhana ground

The 65th Republic Day was celebrated at IIT Bombay with lot of enthusiasm. The day began with the unfurling of flag by the institute Director, Prof. Devang Khakhar, who also inspected the parade. It was followed by a march past by NCC Cadets, Guides, Cub and Bulbul troupes of Kendriya Vidyalaya, Campus School and Security Staff of IIT Bombay. Cultural programmes were presented by the students of IIT Bombay, Kendriya Vidyalaya and Campus School. Prizes were also distributed to the winners of Drawing & Essay competitions held as a part of Republic Day celebrations.

Awards and Distinctions

Prof. Abhay Karandikar, Department of Electrical Engineering has been selected for the prestigious VASVIK Award 2010 in the category of Electrical and Electronics Sciences and Technology.

Prof. Amit Agrawal, Department of Mechanical Engineering has been selected by the Indian Society of Heat and Mass Transfer for the prestigious K.N. Seetharamu Medal and the Prize for Excellence in Research 2013 in recognition of his research in the area of Heat and Mass Transfer.

Mr. R. Arunkumar and **Prof. V. Jothiprakash**, Department of Civil Engineering, received "The Union Ministry of Water Resources: Department of Irrigation Prize" for their paper "Optimal reservoir operation for

hydropower generation using non-linear programming model" published, in the Journal of Institution of Engineers (India), awarded during 28th Indian Engineering Congress held at Chennai, on December 20, 2013.

Prof. V. Jothiprakash, Civil Engineering Department was awarded "R.J. Garde Research Award" for 2013 by the Indian Society of Hydraulics (ISH) Pune. The award was received during the HYDRO-2013 International Conference held at IIT Madras on December 4, 2013.

Prof. M. S. Agarwal, Department of Electrical Engineering was conferred Life-Time Achievement Award by the Director General, Central Power Research Institute (a Govt. of India Society, under Ministry of Power), at the Second International Conference on Switchgear & Controlgear at the Hotel Marriott, Bhopal on December 13-14, 2013. He was presented a shawl, coconut, gift and a metal plaque citing his 50-year contribution to the practice and development of Switchgear Science, Engineering and Technology in India through teaching, R & D, consultancy and testing. He also presented a paper on 'HVDC Circuit Breakers' in the Conference.

Publications / Presentations

Department of Biosciences and Bioengineering

Sandipan Ray et al., **Sanjeeva Srivastava**, Poster presentation. "Comprehensive analysis of Plasmodium vivax and P. falciparum induced alterations in human; a proteomics approach to decipher disease pathogenesis and identify surrogate protein markers". International Scientific Meeting "Recent Developments in Malaria Parasite Biology" December 2-4, 2013, ICGBE, New Delhi, India ■

Department of Chemistry

The book Theoretical and Computational Aspects of Magnetic Organic Molecules with lead author **Sambhu N. Datta** (IIT Bombay) and co-authors Carl O. Trindle (USA) and Francesc Illas (Spain) has been published by Imperial College Press (London). The distributor is World Scientific Inc. Pte. Ltd. ■

Department of Civil Engineering

Prof. M. Janga Reddy and Vijay P. Singh (2014). Multivariate Modeling of Droughts Using Copulas and Meta-heuristic Methods. Stochastic Environmental Research and Risk Assessment, 28(3), 475-489. ■

Prof. M. Janga Reddy and P. Ganguli. (2013). Spatio-temporal Analysis and Derivation of Copula-based Intensity-Area-Frequency Curves for Droughts in Western Rajasthan (India), Stochastic Environmental Research and Risk Assessment, 27(8), Dec-2014, 1975-1989. ■

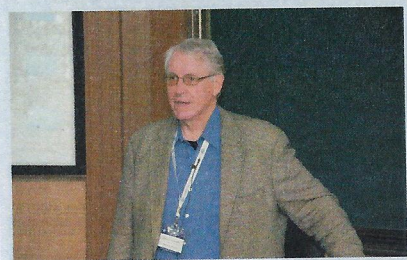
Department of Physics

Tailoring the structural and electronic properties of a graphene-like ZnS monolayer using biaxial strain. by **Harihar Behera** and **Gautam Mukhopadhyay**, J. Phys. D: Appl. Phys. 47, #7, 075302 (5pp) (2014). doi:10.1088/0022-3727/47/7/075302 ■

Institute Colloquium / Lectures & Seminars

Sir David King, FRS, the British Foreign Secretary's Special Representative on Climate Change, and Former Chief Scientific Advisor, UK Government gave a talk on "The Economics of Climate Change" on December 5, 2013. (14)

Dr. Mayank Bawa, delivered a talk on "Anecdotes of a First-Time CS Entrepreneur" at the Department of Computer Science & Engineering on December 5, 2013.



Prof. James Schwaber, Director and Professor, Daniel Baugh Institute for Functional Genomics and Computational Biology, Pennsylvania delivered an Institute Lecture on "What is it to be Conscious?" on December, 20, 2013.

Prof. C.N.R. Rao, F.R.S, National Research Professor, Linus Pauling Research Professor & Honorary President, Jawaharlal Nehru Centre for Advanced Scientific Research Bangalore, delivered a TechniGraphicS Lecture on "Doing Science in India: A story of Agony and Ecstasy", as a part of Technifest 2014, on January 3, 2014.



Prof. M. Ram Murty, Queen's Research Chair Professor of, Mathematics and Philosophy, Queen's University, Canada gave an Institute Colloquium on "Ramanujan and the Zeta Function" on January 8, 2014.

Prof. Jit N. Bajpai, Columbia University, delivered a talk on "Managing the Interplay of Urban Structure, Mobility and Affordability" at the Department of Computer Science & Engineering on January 13, 2014.

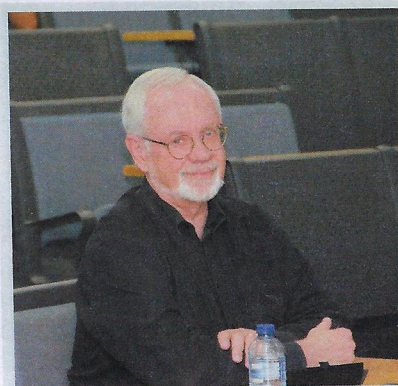
Dr. Nikhil Anand, University of Minnesota, USA, delivered a seminar on "ScareCities: The Politics of Water Infrastructures in Mumbai" at the Department of Humanities and Social Sciences on January 15, 2014.

Prof. Paul Gastin, Ecole Normale Supérieure (ENS) de Cachan, France, delivered a talk on "Specification and Verification of Quantitative Properties via Expressions, Logics, and Automata" at the Department of Computer Science & Engineering on January 15, 2014.

Prof. James J. Cordeiro, State University of New York College at Brockport, New York delivered a seminar on "Is the relationship between Corporate Environmental Performance and Corporate Financial Performance conditional on the level of Corporate Financial Performance?" at the Department of Humanities and Social Sciences on January 20, 2014.

Prof. Arnab Chakraborty, University of Illinois & Visiting Faculty at C-USE, IIT Bombay delivered a talk on "Bridging the Science and Art of Urban Planning: How to Shape the Right Instruments, Institutions and Strategies" at the Department of Computer Science & Engineering on January 22, 2014.

Mr. Prasad Vaidya, delivered a talk on "Building Energy Efficiency and the Role of Utilities" at the Department of Computer Science & Engineering on January 28, 2014.



Prof. Robert G. Griffin, Director, Francis Bitter Magnet Laboratory, Francis Bitter Magnet Laboratory and Department of Chemistry, MIT, Cambridge University, USA delivered an Institute Lecture on "Atomic Resolution Structures of Amyloid Peptides, Proteins and Fibrils" on January 31, 2014.

Faculty News

Prof. Atanu Ghosh, SJMSOM, was invited to deliver an Expert talk on "Ingredients for Productivity Improvement in Manufacturing and Services Industry" at the National Conference on 'Emerging Trends in Productivity' (ETP2014) organised by Department of Production Engineering & Department of Textile of Shri Guru Gobind Singhji Institute of Engineering And Technology Nanded, Maharashtra, on January 10-11, 2014.

He was also invited to deliver a key note address at the National Conference on the theme "Innovations: A Paradigm in Management", organised by Padmashree Dr. D.Y. Patil Institute of Management Studies, Akurdi, Pune on January 18, 2014. Prof. Ghosh spoke on the "Need for Innovation and success stories to emulate".

Second International Conference on Advances in Electrical Engineering (ICAEE), December 19-21, 2013, Dhaka, Bangladesh. Gate Leakage in Hafnium Oxide High-k Metal Gate nMOSFETs, by **Ashutosh Rao** and **Gautam Mukhopadhyay**, to appear in IEEE, Proceedings of the International Conference on Advances in Electrical Engineering.

Prof. P. Ramadevi, Department of Physics, invited speaker for "Advanced School and Discussion Meeting on Knot Theory and its Applications" under ICTS Programs held at IISER Mohali, Chandigarh on December 10-20, 2013.

She was also invited to give a seminar in the "IWM2013-Teachers Training Programme" at Department of Mathematics, Mumbai University, on December 23-28, 2013.

Prof. A.K. Dikshit, CESE delivered an invited talk on "Environmental Concerns in the Reuse and Disposal of Fly Ash" in the National Conference 'Fly Ash Utilization for

Sustainable Environmental Management' on January 16, 2014 organised by SIES Institute of Environmental Management, Mumbai.

Dr. Ambarish Kunwar, Department of Biosciences and Bioengineering delivered an invited talk "Biophysical models of team-work by Molecular motors" for M. Sc. (Physics) students on December 13, 2013 at Central University of Rajasthan, Ajmer, India.

Prof. D. Parthasarathy, Department of Humanities and Social Sciences, was invited to deliver the Indian Council of Cultural Relations Public Lecture on January 24, 2014. The event was sponsored by the National University of Singapore and the High Commission of India, Singapore; it was hosted by the National Library Board, Singapore. The title of the ICCR Public Lecture was "Inequality, Secularisation, and Democratisation of Religion: Recast(e)ing the Secularism Debate in India".

Prof. S.G. Dani, Department of Mathematics, gave a Keynote Address at the Two Day State Level Seminar on "Impact of Indian Mathematics on the World of Mathematics" organised by Department of Mathematics, Patkar-Varde College, Goregaon, Mumbai, during January 10-11, 2014, on "Ancient Indian Mathematics".

Prof. Dani, gave an invited talk in a lecture series on the life and work of Bhaskaracharya, organised by the Vidya Prasarak Mandal, Thane on January 18, 2014 at the Thorale Bajirao Peshave Sabhagruha in Thane College, on "Bhaskaracharya's Lilavati".

Ms Sangita Zope-Chaudhari, Research Scholar supervised by **Prof. (Mrs.) P. Venkatachalam**, CSRE participated and presented their research work "Secure Distribution and Outsourcing of Geospatial Data" at 8th Maharashtra State Inter-University Research Convention "Avishkar 2013-14" held from January 4-6, 2014 and won first prize at Mumbai University under

Teacher pursuing PhD category. She represented Mumbai University at inter university level at NMU, Jalgaon between January 16-18, 2014 and contributed in bagging 'Overall Championship' for Mumbai University.

Student News

Raghavendra Bhalerao, Research Scholar, PhD Student, Centre of Studies in Resource Engineering (CSRE), has been awarded as Best Paper Award at IEEE ICIIIP Conference held at JUIT Shimla.

Appointments

Prof. Monika Jain, Centre for Urban Science and Engg. has been appointed as an Assistant Professor on November 1, 2013.

Dr. Rahul Purwar, Department of Biosciences and Bio engineering has been appointed as Assistant Professor on November 6, 2013.

Prof. K.V. Venkatesh, Dept. of Chemical Engg. has been appointed as Head for a period of three years with effect from November 18, 2013.

Dr. Tanmay Bhandakkar, Department of Mechanical Engineering has been appointed as Assistant Professor on November 18, 2013.

Dr. Mukul Agarwal, Department of Electrical Engineering has been appointed as Visiting Faculty Member (Assistant Professor) for a period of two years with effect from November 22, 2013.

Prof. Venkatesh Rajamanickam, Industrial Design Centre has been appointed as Associate Professor on Nov. 25, 2013.

Dr. Arnab Jana, Centre for Urban Science & Engineering (C-USE) has been appointed as Assistant Professor for a period of three years with effect from November 28, 2013.

Prof. Hira L. Koul, Dept. of Mathematics has been appointed as Distinguished Visiting Prof. on Dec. 2, 2013. The Appointment is for period of two years.

Dr. Uttara Marathe, Department of Biosciences and Bioengineering has been appointed as Post Doctoral Fellow on December 2, 2013. The appointment is for period of two years.

Prof. Sriram Srinivasan, Department of Computer Science & Engineering has been appointed as Adjunct Professor on December 4, 2013. The appointment is for period of two years.

Dr. Ashish Singh, SJM School of Management has been appointed as Assistant Professor on December 9, 2013. The appointment is for period of three years.

Prof. Sharat Chandran, Department of Computer Science & Engineering has been appointed as Professor-in-Charge, Application Software Cell (ASC) on December 16, 2013. The appointment is for period of three years.

Prof. Ratul Dasgupta, Department of Chemical Engineering has been appointed as Assistant Professor on Dec. 17, 2013.



Prof. Aniruddha Sinha, Department of Aerospace Engineering has been appointed as Assistant Professor on December 31, 2013. The appointment is for a period of three years.



Prof. Gautam Mukhopadhyay, Department of Physics has been appointed as an Emeritus Fellow on January 1, 2014.



Dr. Shinjinee Sengupta, Department of Biosciences and Bioengineering has been appointed as Post Doctoral Fellow on January 1, 2014. The appointment is for a period of two years.



Prof. Amit Kumar Das, Department of Civil Engineering has been appointed as Assistant Professor on January 2, 2014. The appointment is for a period of three years.



Prof. J.K. Verma, Department of Mathematics has been appointed as Dean (Faculty Affairs) on January 22, 2014.



Dr. Arindam Sarkar, Department of Chemical Engineering has been appointed as an Assistant Professor on January 24, 2013.



Prof. Ronita Bardhan, Centre for Urban Science & Engineering (C-USE) has been appointed as an Assistant Professor on January 27, 2014.



Prof. Prabhakar Naraga, Department of Earth Sciences has been appointed as an Assistant Professor on January 27, 2014.



Retirements on December 31, 2013

Prof. Kirti Kumar Trivedi, Professor, Industrial Design Centre, retired after 37 years of service.



Prof. Vinaykumar A. Juvekar, Professor, Chemical Engineering, retired after 29 years of service.



Mr. Pandurang A. Raorane, Jr. Technical Superintendent, Electrical Engineering, retired after 36 years of service.



Mr. Daya H. Solanki, Cleaner (SG), Hospital, retired after 36 years of service.



Ms. Annamma Thomas, Superintendent, Accounts Section, retired after 37 years of service.



Mr. P.V. Raghavan, Superintendent, Chemistry Department, retired after 37 years of service.



Mr. Dada B. Bokade, Watchman (SG), Security Section, retired after 35 years of service.



Mr. Gayaprasad Bachulal, Superintendent, Materials Management Division, retired after 31 years of service.



Mr. Parvathy Nayar, Superintendent, Computer Science & Engineering, retired after 36 years of service.



Retirements on January 31, 2014

Ms. Shyamala Parameswaran, Superintendent, Aerospace Engineering, retired after 33 years of service.



Ms. Gracy George, Superintendent, Administration, retired after 38 years of service.



Salt'n Pepper

by Dr. Arun Inamdar

'I'm told he loves living around plants, ... you know, those industrial types!'





In the Wilderness



by Mr. C.P. Joglekar, Deputy Registrar (Admin)

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