

## Institute Milestones



### New State-of-the-art Ion Beam Complex at IIT Kanpur for Micro and Nanoscale Science, Engineering and Technology:

An Ion Beam Complex for Science, Engineering and Technology (IBC-SET), equipped with different types of low energy ion beam facilities ranging from a few keV to a few MeV, is being set-up at IIT Kanpur for carrying out research in interdisciplinary areas leading to technology development and prototype device fabrication. A state of the art focused ion beam system was installed in this complex in 2006. Recently, on 27<sup>th</sup> Sept. 2008, a 1.7 MeV Tandem accelerator equipped with micro beam facility was inaugurated. Prof. V.S. Ramamurthy, Prof. G. K. Mehta, Prof. R. M. Singru, Dr. S. Kailas and other eminent scientists, faculty members of our Institute and other institutions graced the occasion. Prof. S. G. Dhande presided over the function. The main coordinators of this facility are Prof. V. N. Kulkarni, Dr. S. Dhamodaran, Dr. S. Bhattacharjee, Prof. H. C. Verma and Prof. G. K. Mehta. The facility is likely to be used by researchers within and outside the Institute. This facility will enable research in the areas of microfabrication and micromachining (MEMS/NEMS), ion beam synthesis of nano phases and surface engineering, surface and interface studies by RBS/ERDA/PIXE/channeling, defect and damage studies in materials, bio materials; damage studies and 3D mapping and process optimization and system automation.



**Five Star Rating for IITK's Green Building:** The building of the recently established Centre for Environmental Sciences and Engineering was granted a "Five Star" rating certificate by "The Energy and Resources Institute Green Rating for Integrated Habitat Assessment" (TERI Griha) on the basis of its 'green features'. Present at a function held at IITK were Director, Prof. S. G. Dhande, Dean R&D, Prof. K. Muralidhar, Associate Director, TERI Griha, Ms. Mili Majumdar, landscape architect Mr. Shaheer and the Environmental Science Lab Head, Prof. Mukesh Sharma. The environment friendly features include insulated walls, ceiling and window glasses, reflective terrace, rain water harvesting, eco-friendly refrigerant for air conditioning and the use of solar energy for heating and lighting. These energy efficient features reduce the impact of the environment by reducing consumption of electricity and water demand and other requirements.



**New JEE & GATE building:** A new three-storied JEE/GATE building has been completed and was inaugurated on 1<sup>st</sup> July 2008 by the Director, Prof. Sanjay Dhande. It is located near the central workshop. A special feature of this building is that the north and south blocks of this building are orientated at an angle of 22 degrees.





## Support from Donors

**Poonam and Prabhu Goel Chairs:** Dr. Prabhu Goel (BT/EE/1970) has set up two more chairs, “Poonam and Prabhu Goel Chair” which are open to all faculty members in the Institute. Dr. Goel had earlier created one chair in the Department of Computer Science and Engineering. Dr. Goel is a distinguished alumnus of IIT Kanpur and is a well-known entrepreneur. Presently he is the chairman of Signet Solar. He is an active private venture investor, serving on the Board of Directors of several private companies and Synplicity, Inc. (NASD:SYNP). Since 1991 he has invested in over 30 private companies and served on many of their boards. He was Division President and Director of Cadence Design Systems, Inc. (NYSE: CDN) until 1991. Before joining Cadence, Dr. Goel was the CEO/Chairman of Gateway Design Automation Corporation. Prior to Gateway, Dr. Goel held management and technical positions at IBM where he received the IBM Corporate Award for an outstanding innovation. He won the 2003 IEEE Industrial Pioneer Award for his work on design modeling and design verification through Verilog and Verilog-based design. He was the President's Gold Medalist of his batch and received a Ph.D. in Electrical Engineering from Carnegie Mellon University, in 1974.



Prabhu Goel



M. Visvesvaraya

**Sir M. Visvesvaraya Chair for Water Resources:** To honor Sir M. Visvesvaraya, The Ministry of Water Resources of Government of India has instituted a Chair Professorship at IIT Kanpur called “Sir Mokshagundam Visvesvaraya Chair for Water Resources”. Sir M. Visvesvaraya, was born on September 15, 1860 in a village known as Muddenahalli in Chikballapur Taluk, Kolar District. He was one of the foremost civil engineers of the country and his influence is visible in many major engineering projects of pre-independence India. He died on April 12, 1962 at the venerable age of 102 years. The aim of this Faculty Chair is to carry out studies on water resources with special emphasis on the assessment of the effect of climate change on it, and adaptation strategies in respect of planning, design and management of water resource systems of India in general and the Ganga basin in particular.

**Rajnath Singh Scholarship:** To honor his father, Dr. Manoj Singh (BT/ME/1984) has set up the “Sri Rajnath Singh Scholarship” @ Rs. 2,000 pm to be given on the basis of merit to a final year student of Mechanical Engineering. Dr. Manoj Singh is currently the head of market risk management at the Federal Home Loan Mortgage Corporation near Washington, D.C. Prior to this he worked with Lehman Brothers and Bear Stearns and Co. in New York.



Manoj Singh



S. Mishra

**Shri Shrikant Mishra Scholarship:** In honour of her father, Dr. Sobi Pandey has set up the “Shri Shrikant Mishra Scholarship” @ Rs.1,000 pm to be given to a graduating student of any department on the basis of merit. Shri Mishra was born on 22<sup>nd</sup> March 1926 at Sagar, Madhya Pradesh. He did his M.Sc Physics from Sagar University graduating at the top of his class. He taught Physics at the Government Science College, Jabalpur, where he was extremely popular among his students. Dr. Sobi Pandey is a famous eye specialist running Navdrishti Eye Care Centre in Kanpur.

**Best Software Award:** Prof. Pankaj Jalote (BT/EE/1980) has set up the “Best Software Award” which is open to groups of students from any discipline(s) but more particularly from Computer Science and Engineering, Electrical Engineering and Industrial and Management Engineering. Prof. Jalote is a former faculty member of the Department of Computer Science and Engineering at IIT Kanpur. He joined the Department of CSE, IIT Delhi as Microsoft Chair Professor. Currently he is the Director of IIIT Delhi.



Pankaj Jalote



Class-of-1979

**Class-of-1979 Research Fellowships for Outstanding Young Faculty:** The Class-of-1979 has donated two Research Fellowships which are open for outstanding faculty members of any department.



## Alumni News and Events



Kripa Shankar

**New Secretary, Alumni Association, IITK:** Prof. Kripa Shanker (MT/ME/1972, P/IME) has taken over as, Secretary of Alumni Association, IITK from September 2008. Prof. Kripa Shanker was Deputy Director, IITK for two consecutive terms ending 31<sup>st</sup> August 2008. He obtained his B.Sc. in Mechanical Engineering from Banaras Hindu University, M.Tech. in Mechanical Engineering from IITK and M.S. and Ph.D. in Operations Research and Industrial Engineering from Cornell University. He joined the Industrial and Management Engineering department in 1978 at IIT Kanpur as a faculty member, where he has been serving as a Professor since 1987. He received the Gold Medal for standing first in M.E. at BHU, the National Merit Scholarship and the GOI Scholarship for Studies Abroad. He was awarded the ISTE National Award for Outstanding Academic, 2001, and the Distinguished Alumnus Award from BHU in 2007.

**IITK-Delhi Chapter:** The Alumni Association IIT-Kanpur -Delhi Chapter this year again organized an Interaction Session on July 19, 2008 with the young students who joined IIT Kanpur in 2008. The idea of this initiative is to give these youngsters a feel for the IITK culture as seen by the alumni of different batches. The general message conveyed is, “enjoy while you study but do not loose focus”. One of the alumni – Mr. Shyam K. Gupta (BT/CE/1969) announced that his company – Envirotech Instruments Pvt. Ltd would pay the tuition fees of meritorious students of IIT Kanpur hailing from the National Capital Region. The criterion for the choice would be academic performance as well as human values.

**Dr. D. Subbarao, New RBI Governor:** Finance Secretary, Dr. Duvvuri Subbarao (M.Sc-2/PHY/1972), an Indian Administrative Service (IAS) officer is the new governor of the Reserve Bank of India (RBI). Dr. Subbarao, an IIT-Kanpur alumnus, was among the first of its graduates to join the civil services. He topped the civil services exam in 1972 and joined the Andhra Pradesh cadre. He joined the finance ministry in May 2007, before which he worked as secretary of the Prime Minister's Economic Advisory Council. Widely seen as a reformer, he is credited with having authored a turnaround of Andhra Pradesh's finances in the late nineties.



D. Subbarao



## Workshops, Conferences & Institute Lectures

**ChEmference 08:** ChEmference 2008 was a national level conference organized by the postgraduate students of Chemical Engineering at IIT Kanpur on July 5-6<sup>th</sup>, 2008, aiming at motivating and bringing together research scholars to discuss and share their ideas and to come up with innovative solutions to some of the problems plaguing society. It was a wonderful opportunity for the young research scholars to get exposed to the various facets of chemical engineering and to get some idea of the challenges of the field. Mr. Chandra Shekhar Sharma, a research scholar in Chemical Engineering Department was the convener of ChEmference'08



**An Institute Lecture on "Fueling Future Cars":** Dr. A. K. Shukla, Director, Central Electrochemical Research Institute, Karaikudi, Tamil Nadu, delivered an Institute lecture on "Fueling Future Cars" on 4<sup>th</sup> August 2008. The lecture dwelt on the rate of consumption of fossil fuel and its consequent depletion in the near future impacting our energy needs, and emphasized the urgency of the need to find new technologies for transportation based on electrochemical systems.



**Brain Storming Session and Workshop on IITK Archive:** IIT Kanpur recently held a brainstorming session followed by a 2 day workshop on the 'Development of Archives at IIT Kanpur' during 22<sup>nd</sup> to 24<sup>th</sup> September 2008. The action plan outlined during the workshop included a framework, a vision and an effective mission statement. The workshop also attempted to define the various processes of "building collection", "preservation" and "dissemination issues". The session focused mainly on structured discussions between IIT Kanpur participants and experts from various organizations outside IIT Kanpur. The Workshop exclusively aimed at developing a detailed project report. Prof. A. K. Mittal of the IME Department was the organizer of the workshop.

## Distinguished Lecture Series

**Prof. E. C. Subbarao Distinguished Lecture Series:** Dr. Pradip (BT/MME/1977) obtained his Ph.D from University of California at Berkeley. He was elected as the fellow of Indian National Academy of Engineering(FNAE), Fellow, Indian Institute of Metals (FIIM) and Fellow, Institute of Materials, Minerals and Mining (FIMMM) U.K. Dr. Pradip is currently Head of Process Engineering Group at Tata Research Development & Design Centre (TRDDC) Pune. He delivered a lecture entitled "Managing the Resurgence of the Minerals and Metals Industry: Challenges and Innovations" on September 4, 2008. His talk focused on the current resurgence of the metals and minerals industry particularly in view of the booming economic growth of China and India. The challenges faced by the industry in view of the large demands and the technological innovations needed to meet these challenges were also discussed.



## Student Achievements, Activities & News



Shitikanth

**Aditya Birla Scholarship-08:** Shitikanth (BT/CSE, JEE-08/ AIR-1) and Ish Dhand (BT/CSE, JEE-08/ AIR-22) have been awarded the prestigious Aditya Birla Scholarship for the year 2008. The Aditya Birla Scholarship, awards a cash prize of Rs. 65,000 to each recipient. The Aditya Birla Scholars are assessed regularly on qualitative and quantitative parameters to judge their performance on the academic and leadership front. The assessment criteria are the following: the scholar must be in the top 25 percent in his/her class, active participation in a minimum of two forums on campus and the scholar has to write an essay on "Being an Aditya Birla scholar: experience sharing" This assessment forms the basis for determining the continuation of the scholarship for the next academic session.



Ish Dhand

**Design Conclave Award-08:** Prantik Banerjee and M. Arun from the Design Programme participated in the prestigious Design Conclave 2008 organized by the Federation of Indian Chamber of Commerce and Industry (FICCI) on 25-26 September. Prantik Banerjee was awarded the first prize in the category - Design for Global Market, and M. Arun was awarded the second prize (shared) in the category- Design for Recyclable Market.



P. Banerjee



M. Arun



N. K. Peyada

**Best Paper Award:** Naba Kumar Peyada, a Ph. D student in the Dept. of Aerospace Engineering, working under the supervision of Prof. A. K. Ghosh has been awarded the "Student Best Paper Award" for the paper "Parameter Estimation from Real Flight Data using Neural Network Based Method" at a recently concluded International Conference on Mathematical Problems in Engineering, Aerospace and Sciences held during 25<sup>th</sup> to 27<sup>th</sup> June 2008 at Genoa, Italy.



**Indian Innovation Pioneer Challenge 2007-08:** Two IITK students, Prem Prakash, (M.Tech/MME) & Tapendu Mandal (PhD/MME) won the third prize in "Indian Innovation Pioneer Challenge 2007-08". The event was jointly organized by Intel, DST and Indo-US Science and Technology Forum. The prize includes a cash award of Rs. 50, 000. These students have also been awarded the TePP grant of around 10 Lakhs for prototype development using this technology. Their invention is a new, efficient and cheap method for producing nano powders of hydroxyapatite. The invention is capable of bringing a revolutionary change in orthopedic biomedical materials market and in generating significant medical and financial benefits to the users.



# Faculty News

## Faculty Awards and Honours

**The Infosys Mathematics Prize:** Prof. Manindra Agrawal (BT/CSE/1986, DAA) was announced as the first ever winner of the newly set up Infosys Mathematics Prize. The Infosys Mathematics Prize has been jointly instituted by Infosys and IAS earlier this year to encourage and foster an interest in Mathematics. Prof. Agrawal was chosen by a jury of academicians from across the world (details at: <http://www.infosys.com/newsroom/press-releases/2008/infosys-mathematics-prize.asp>). The award carries a cash prize of Rs.10 lakhs and a medal for his work on 'Computational Complexity Theory', a branch of Mathematics concerned with the study of algorithms, especially their efficiency and running times for solving mathematical and related scientific problems. The Institute felicitated Prof. Agrawal for this great accomplishment on 27<sup>th</sup> September 2008



**Shanti Swarup Bhatnagar Prize:** Prof. J. N. Moorthy, Department of Chemistry, has been chosen for this year's Shanti Swarup Bhatnagar Prize in chemical sciences for his contributions in the area of Physical Organic Chemistry towards understanding photoreactivity and organization of organic molecules.

**INAE Young Engineer Award & NASI Young Scientist Award:** Prof. Yogesh Joshi, Department of Chemical Engineering has been selected for the INAE Young Engineer Award 2008. He has also received the NASI Young Scientist Platinum Jubilee Award in Physical Sciences for 2008



## New Faculty Appointments

- ✧ **New Deputy Director at IITK:** Prof. R. K. Thareja, Department of Physics, has taken over as the Deputy Director, IIT Kanpur from Prof. Kripa Shanker who held this position for the last 6 and a half years.
- ✧ **New Head- Mathematics & Statistics:** Prof. Neeraj Misra (MSc2/STAT/1985) has taken over as the new head of the Department of Mathematics and Statistics for a period of three years from Prof. Piyush Chandra (MSc2/PhD/MTH/1971/1976).
- ✧ **New Head-Civil Engineering:** Prof. Onkar Dikshit takes over as Head of the Civil Engineering department for a period of three years. He took over from Prof. C. V. R. Murthy.

- ✧ **Dr. Raj Ganesh S. Pala** joined the Department of Chemical Engineering (Ph.D., University of Utah, 2005).
- ✧ **Dr. Pankaj Wahi** joined the Department of Mechanical Engineering (Ph.D., IISc Bangalore, 2006).
- ✧ **Dr. Kantesh Balani** joined the Department of Materials & Metallurgical Engineering (Ph.D., Florida International University (FIU), 2007).



Prof. R. K. Thareja



Prof. N. Misra



Prof. O. Dikshit



Prof. R.G.S Pala



Prof. P. Wahi



Prof. K. Balani

## Obituary

✧ **Mrs. P. K. Kelkar:** The Institute deeply mourns the sad demise of Mrs. Krishnabai Kelkar, wife of late Dr. P. K. Kelkar, the founder Director of IIT Kanpur, on 13<sup>th</sup> August 2008, in Louisiana, USA. She was 93 years old.

✧ **Mr. Inder K. Khosla:** The Institute deeply mourns the tragic and untimely demise of Shri Inder Kumar Khosla, Member Board of Governors, IIT Kanpur. Shri Khosla died in a road accident on 22<sup>nd</sup> August 2008, near Handiya, while traveling from Varanasi to Allahabad. Shri Khosla was also the Honorary Secretary and Treasurer of the



Kamala Nehru Memorial Hospital Society. As a member of the BOG and as a member of various sub-committees of the Board of this Institute, he extended very valuable services and guidance to the Institute.

✧ **Dr. Rakesh K. Popli:** Dr. Rakesh Popli, who was a faculty member in the department of Physics at IITK during the early eighties, passed away recently. He was known for his pioneering work in the social sector.



The Institute expresses its deepest condolences to the bereaved families of Mrs. P. K. Kelkar, Mr. Inder Kr. Khosla and Dr. Rakesh Popli and prays for the peace of the departed souls.