

# **CONTENTS**

Sl. No.	Contents	Page No.
1.	Director's Report	1
2.	Organization	11
	IIT Council	
	The Board of Governors	
	The Finance Committee	
	The Building & Works Committee	
	The Senate	
3.	The Faculty	37
4.	Academic Programmes	51
5.	Research & Development	70
6.	Alumni Association Activities	85
7.	Central Facilities	88
	P K Kelkar Library	
	Computer Centre	
	Centre for Development of Technical Education	
	Centre for Creative Writing and Publication	
	Staff Development Coordination Centre	
	SC/ST and OBC Cell	
	Rajbhasha Prakoshtha	
	Media Technology Centre	
8.	Finance	125
9.	Facilities to Students	128
10.	Students' Placement	153
11.	Services/Amenities	
	Institute Works Department	
	Stores & Purchase Section	
	Estate Office	
	Campus School	
	Health Centre	
	Visitors' Hostel	
12.	Publication and Outreach Activities	172
	Books & Book - Chapter Published	
	Journals and Conference Papers	
	Seminars Presented	
	Conferences Attended Outside IIT Kanpur	
	Other Activities	

# **Director's Report**

It is indeed a privilege for me to present the Director's Report for the year 2006-07 including the major events and performance of the institute.

It is with enormous sense of pride that I share with you the news that Shri Giriraj Kishore, Former Registrar and Head of 'Centre for Creative Writing and Publication (CCWP)' at IIT Kanpur has been conferred the 'Padma Shree' award this year.

#### **ACADEMIC ACTIVITIES**

The academic year 2006-2007 has had a successful run. The number of graduating students both at the undergraduate (B Tech-306, M Sc (5 year Integrated)-37, B Tech-M Tech Dual Degree (5 year)-41, M Sc (2 year)-85, Total = 469) as well as postgraduate (M Tech-312, M Des-14, MBA-32, PhD-86, Total = 444) level shows a fairly satisfactory trend. The enrollment in the Doctoral programme as well as the publication record of the faculty and students for the academic year 2006-2007 has considerably increased. Faculty members and students published more than 1000 research papers in journals and conference proceedings. Books published by the faculty are listed in the appendix of this report.

An initiative in the area of Environmental Sciences and Engineering has already been undertaken utilizing the MPLADS funds donated by Shri Arun Shourie. The facility being constructed on a plot area of 17,500 square meters is in an advanced stage. The building houses laboratories, seminar and discussion rooms for various disciplines of the environmental sciences. The architecture, in compliance with TERI Griha Certification, incorporates nearly all the features of a Green Building. The proposed Centre seeks to develop futuristic technologies in the area of environment that will confer immediate benefits to the society. Certain urgent concerns including abatement of pollution from industries and process plants, conservation of ground and surface water, control of air pollution, ozone depletion, and health risk assessment due to modern technologies, among others will be addressed.

#### **AWARDS AND HONORS**

The faculty and students of IITK continue to break new grounds in the forefront of research. This has been duly recognized in the form of various awards and honors to the faculty including Fellowships of professional societies, Editorship of international journals, and best paper awards to the students. A representative list of Awards and Honors to our faculty members is included separately in this report.

One of our B. Tech. first year student (who will soon move to second year) Mr. Nirmesh Malviya has been conferred the prestigious **Aditya Birla Scholarship.** Two of our B. Tech. second year students (who will soon move to third year), Mr. Varun Jain and Mr. Subhonmesh Bose have received the **Goldman Sachs Global Leaders Award** and are expected to attend the Global Leadership Institute in the USA.

IIT Kanpur is proud of Professor Sanjay Mittal (Aerospace Engineering) who was conferred the prestigious Shanti Swarup Bhatnagar Award - 2006. Professors Manindra Agarwal (Computer Science & Engineering), N. Sathyamurthy (Chemistry), T.K. Chandrashekhar (Chemistry), Ashutosh Sharma (Chemical Engineering), and V. Chandrashekhar (Chemistry) received Sir J C Bose Fellowship by DST. Professors R.K. Thareja (Physics), Amalendu Chandra (Chemistry), Vinod K. Singh (Chemistry), J.N. Moorthy (Chemistry), and Y.D. Vankar (Chemistry) have been awarded the Ramanna Fellowship of the DST. The Swarnajayanti Fellowship, given by the Government of India, recognizes outstanding young researchers who explore new frontiers in Science & Technology. This Fellowship was awarded to Professor Mahendra K. Verma (Physics). Dr. Avinash Kumar Agarwal (Mechanical Engineering) has been selected for the INAE Young Engineer Award-2005, while Drs. Animagnsu Ghatak and V. Shankar (Chemical Engineering) were chosen for Young Engineers Award of INAE for the year 2006. Dr. Bishakh Bhattacharya, Assistant Professor (Mechanical Engineering) has been conferred the Young Scientist Award for the year 2006 instituted by the Systems Society of India. Dr. Yogesh M. Joshi, Assistant Professor (Chemical Engineering) has been awarded the INSA Medal for Young Scientist (2006). Professors R. N. Biswas and Amit Ray have been honored with the Distinguished Teacher Award of IIT Kanpur for the Year 2006.

#### **RESEARCH & DEVELOPMENT**

The institute has witnessed significant growth in its Research and Development activities in diverse fields of Science and Technology during 2006-07. The faculty, research engineers and scientists of the institute are engaged in executing, at any time, a large number of sponsored and consultancy projects. During the financial year 2006-07, the institute received 138 sponsored and 96 consultancy projects with a research grant of Rs 65.69 crore and Rs 5.40 crore, respectively.

The institute faculty filed about 25 patents in India and overseas last year. Besides the institute has also signed several Memorandums of Understanding with international academic/ research institutions and industries both within the country and outside to strengthen its collaborative research efforts. Some of these organizations include: University of Hyderabad; Zee Interactive Learning Systems Ltd., (ZILS); Vikram Sarabhai Space Centre (VSSC), ISRO, Thiruvananthapuram; Bhabha Atomic Research Centre, Department of Atomic Energy (DAE) Mumbai; Tata Steel, Jamshedpur;

M.Tech innovations Ltd., Pune; Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital; HEG Ltd., Bhopal, Central Pollution control Board, New Delhi; Mahindra & Mahindra Ltd., Mumbai; Hindustan Aeronautics Ltd., Lucknow; Indo Gulf Fertilizers- A Unit of Aditya Birla Nuvo Ltd. Many institutions of international repute have also collaborated with the Institute; L' Ecole National Superieure, D'Arts ET Metilers, France (ENSAM); Her Majesty The Queen in Right of Canada CANMET; Indo-French Centre for the Promotion of Advanced Research (IFCPAR), Centre Franco-Indien Pour La Promotion De. La Recherche Avancee (CEFIPRA); Universiti Teknologi Mara, Shah Alam, Malaysia; Interuniversitair Micro-Electronica Centrum, Belgium; University of Texas Southwestern Medical Center at Dallas, Dallas.

The Institute has also entered a Memorandum of Understanding with Hindustan Aeronautics Limited (HAL) to conduct basic and advanced research and tackle multi-disciplinary problems in aircraft systems technology and its application. This MoU is in recognition of the felt need for Scientific and Engineering research that would enable a truly self-reliant and advanced aircraft systems development programme for the country in the coming years and IIT Kanpur's strong research base in critical areas that would help fulfill such a need. In particular, HAL is keen to utilize the expertise available at IITK in aircraft systems and Line-Replacement Units (LRUs) related technologies.

A project "Brihaspati Phase-2: Development of open source content delivery tools with advanced features" funded by the Ministry of Communication and Information Technology (MCIT) aims to develop the Brihaspati Virtual Classroom tools further with better and modified architecture. The expected outcome of the project involves Web application source codes in different packages written in java; the rpms, zips for installation; jar based distribution; documentation of the architecture and user documentations made available to public via websites of the project; Working LMS installation using developed software; Technology being transferred to industry for commercially supported LMS Solutions.

The institute joins the Centre for Development of Advanced Computing (CDAC) Kolkata, CDAC Noida and CDAC Tiruvananthapuram as a fourth member and serves as the Consortium Leader. The project "Development of English to Indian Languages: Machine Translation (MT) System based on AnglaBharti Technology" is funded by the Department of Information Technology (DIT). The deliverables of the project involve development of a English to Indian Languages Machine Translation System based on AnglaBharti-II Technology, where the user will be able to give a document in English and have it translated in an Indian Language; the MT System will be developed in the Tourism and Health domains with 80-85% accuracy; language pairs involved will be English-Urdu, English-Punjabi, English-Bengali, and English-Malayalam.

A project "Ordered Peptide Assemblies" sponsored by the Department of Science and Technology (DST) sanctioned this year aims to analyze the fundamental role of short peptide motifs from biologically relevant sequences and proposes that they act as focal points in the aggregation process. Towards this goal, novel peptide constructs will be synthesized and their solution-phase aging behavior will be studied with the help of TEM/SEM, AFM and optical microscopic techniques to follow the initial phases of peptide aggregation to develop models for full-length protein aggregates.

The Department of Biotechnology has sanctioned a project titled "Structural and Biochemical Investigations to determine the roles of protein kinases B and G in M. Tuberculosis. The project has the objective of Structural and Biochemical characterization of PknB and its interaction with substrates. The project provides the structural basis for PknB -Substrate Interactions; Structural and Biochemical characterization of PknG and its interaction with substrates. Further, the project would lead to biochemical investigations that would help in identifying and characterizing the autophosphorylated residues in PknG.

The Aeronautics Research & Development Board (ARDB) has sanctioned a project titled "Identification, Analysis and Control of Flow Angularity in Thrust-Vectored Nozzles." The project posits that simple additions of propulsion to flight-control technologies in linear simulations are inadequate. Some integrated airframe-propulsion system concepts have been proposed to develop more robust and agile flying platforms. The study involves a detailed analysis of the accelerated flow field through a curved nozzle which would help in identifying the location of the steepest radial pressure gradient. A closed loop fluidic actuator has been used to reduce the pressure gradients such that the divergence between the geometric and effective thrust-vectoring angle could be reduced.

Under the special drive of DST to compete globally in the field of "Bioinorganic Chemistry," project proposals were invited and were reviewed by National and International Experts. Under this Scheme, a project entitled, "Modeling Oxidoreductase Enzymes of Molybdenum and Tungsten from Hyperthermophilic to Mesophilic Origin" has been sanctioned to IIT Kanpur. This research will try to understand the development of metalloproteins from hyperthermophilic anaerobic primitive environment of the earth to the present day mesophilic aerobic environment. The hyperthermophilic anaerobic tungsten enzymes and mesophilic aerobic molybdenumenzymes will be synthesized in the test tube to understand their involvement in controlling several biogeochemical cycles like, nitrogen, carbon or sulfur cycles. The chemistry, structural features, biochemistry of the synthesized systems will be compared with the isolated native enzymes to develop hybrid systems.

The Department of Atomic Energy (DAE) under the Board of Research in Nuclear Sciences (BRNS) has sanctioned a project titled "Magnetic and superconducting thin film heterostructures for SPINTRONICS" in collaboration with the research scientists from SNBCBS, IISc, IACS, and Pune University. This collaborative research project envisages optimal utilization of thin film heterostructures of doped Mott insulators and multielemental intermetallics. The focus is on understanding the fundamentals of interface magnetism, carrier mediated exchange coupling, and Cooper pair and quasiparticle tunneling in superconductor-ferromagnet-superconductor [FM-SC-FM] and ferromagnet-insulator-ferromagnet [FM-I-FM] junctions. The issues such as the phase shift in the tunneling of the condensate in FM-SC junctions, long range proximity effect in SC-AF-SC sandwiches and spin polarized tunneling in FMinsulator-FM junctions will be addressed through extensive transport measurements over a wide range of temperature and magnetic fields. The immediate and tangible benefits of the project include fundamental understanding of the physics of these contemporary materials, development of expertise and human resource in the technology of heterostructures, creation of infrastructure for preparation and procession of new material systems for SPINTRONICS.

A project entitled "Passive and Active RFID and Location Technology Research" has been sponsored by the Boeing Company, St. Louis, Missouri, USA. The project aims at evaluating different RFID vendors for passive and active systems as well as for real time location systems, on the basis of the quality of their products and the technology employed, highlighting their strengths, weaknesses, advantages, disadvantages, and special features. Also, different types of RFID technologies and algorithms are to be assessed on the basis of their capabilities, accuracies, and reliability. Selected RFID hardware and software will be tested and researched in the laboratory environment to suggest means of the RFID technology and product improvement. The second phase (another three years) of the Boeing project will focus on the deployment of an accurate Real Time Location System (RTLS) in their large aerospace manufacturing plant in St. Louis, Missouri, USA.

Some of the other major sponsored projects undertaken by the institute include: National Facility for Microarray Genetic and Cell Imaging sponsored by DBT; Control of Reactive Distillation System by DST; High Alpha Aero Dynamic Testing by ARDB; Consolidation and Shear Strength Behaviour of Cohesive Soil with the Emphasis on its Intermediate Microfabric by DST; Feasibility Study of Superfinishing Process for Silicon Mirror by BARC; Investigation of Multi-functional Ferroelectric X- Thin Films for Sensor and Actuator Applications by DRDO; Organomettalic Compounds of Ir (III) as Phosphorescent Dopants in Organic Light Emitting Diodes by DRDO; Neuro Fibrillary Tangles in Lafora Disease: Unravelling molecular player of dementia by LSRB; Identification, Analysis and Flow Angularity in Thrust Vectored Nozzles by

ARDB; Image Velocimetry Development for Biomedical & MEMS Application by DST; Star-bust, linear and cross linked macro-molecule metal nano-particle hybrid as efficient recyclable catalysts by DST; Study of Efficiency of Polymers photo-voltaic cells Photo Detector by DRDO and Development of English to Indian Language Machine Translation System based on Anglabharti Technology.

A few major consultancy projects received last year include: Voice Processing funded by GM; Enhancement of Scosta Standard 1.2" by SEMICO; To Develop Membrane Process Based in Order to Recycle Urea Plant Process Condensate after Recovering Gas NH3+CO2 and Urea by ADITYA BIRLA; Field Trial of Biodiesel Fuelled CRDE Vehicle by MAHINDRA; Active Fault Mapping in KACCHH by OYO; Indigenous Development of BOF Process Automation System at RSP by RDCIS; Testing of Choice Application Software by CHIPS and CAD Based Carpet Design by MLA.

#### RESEARCH INFRASTRUCTURE DEVELOPMENT

The Institute is adding several major infrastructural facilities for carrying out multidisciplinary R&D activities. It is in the process of setting up a state of the art "Ion Beam Facility for Micro and Nano Scale Engineering." DST has allocated about Rs. 15.00 Crore to the Institute for setting up 1.7 MV High Current Tandem Accelerator, Microbeam system with end station for protons, helium and heavy ions, Vibration free mounts/tables for object slit and microbeam station, High Resolution Si (Li) Detector for PIXE, Digital Current Integrator and many more facilities, and these will significantly impact the research being carried out. Further, such equipment will prove indispensable for rapid development of emerging technologies which utilize micro and nanostructures. It is ideally suited for cross-disciplinary research and development areas such as "Futuristic manufacturing" and "Study of nano materials and devices."

The institute is setting up a centre for "Printable Electronics and Nanopatterning" to add to the establishment of a Centre for Nanotechnology, which started last year. The Department of Science and Technology (DST) has provided funding of Rs. 9.56 Crore for acquisition of Integrated Jetlab Print Platform with Interferrometric Stage, Nanolithography and Manipulation Scanning Probe Microscope System with accessories like Materials Printer with heated planten, drop visualization and fiducial camera etc. The research deals in Scanning Electron Microscope for Nanomanipulator installation.

The Department of Science and Technology (DST) has a 'Fund for Improvement of Science & Technology (FIST)' scheme to build infrastructure facilities in Universities and Higher Educational Institutions. The grant under this scheme is provided for strengthening infrastructure of the identified department for teaching and research

and is to be spent exclusively for the said purpose. During 2006-07, IIT Kanpur has received FIST grants to add special infrastructure facilities for research purposes. The Department of Biological Sciences and Bioengineering has been provided a total amount of Rs. 220.00 lakh to strengthen the research facilities in areas of Cell Biology and Structural Biology. Similarly, the Department of Physics is sanctioned an amount of Rs. 422.00 lakh as financial support to acquire "Helium Liquefier, Helium Compressor, Cryogen Absorber, Helium Recovery Gas Bag, Acoustic Blanket for Helium Compressor etc." The Department of Aerospace Engineering has been given an approval of Rs.395.00 lakh to acquire "Time Resolved 3D PIV, Multi-channel CTA with Hot Film Probes, Pressure Calibrator, Pressure Transducers and Electrodynamics Tensile Testing Machine etc." The Department of Mechanical Engineering is also sanctioned an amount of Rs. Rs. 935.00 lakh to strengthen research in the areas of "Experimental Stress Analysis, Smart Materials and Control, Fluid Mechanics, Heat Transfer, Energy Conservation, Manufacturing Science."

IIT Kanpur has a Committee for Allocation of Research Equipment (CARE) Scheme providing financial assistance for the purchase of specialized equipment for multidisciplinary research of significant value. The institute CARE support during 2006-07 has been Rs. 227.05 lakh for setting up Shielded Anechoic Chamber in the Department of Electrical Engineering, Precision Ion Beam Milling System in the Department of Materials and Metallurgical engineering, Density Gradient Separation cum Fractionation Facility in the Department of Biological Sciences and Bio Engineering, Encapsulation System for Organic Photovoltaic Devices/Panels in the Department of Electrical Engineering, Cyclic Triaxial Testing System to Evaluate Shear Strength and Liquefaction Potential of Noncohesive Soil in the Department of Civil Engineering, Optical Microscope for Research on Microfluidics and Contact Mechanics on Soft Materials in the Department of Chemical Engineering, Tunable Laser in the Wavelength range of 1480-1640nm in the Laser Technology Programme, and Engine Exhaust Particle Sizer (EEPS) Spectrometer with Rotating Disk Diluter & Software in the Department of Mechanical Engineering.

#### FINANCIAL RESOURCE MOBILIZATION

The Institute has had a satisfactory financial year during 2006-07. The total non-plan grant from MHRD was Rs 68 crore and that for plan funds was Rs 38.60 crore. I am sure that we will be able to cope well, thanks to the able guidance of our Chairman and the support of the alumni and other well-wishers of the Institute.

The last financial year has also been very successful for the fund raising activity at IIT Kanpur. The total amount of donation received was Rs 5.4 crore as compared to Rs 2.6 crore last year. The number of alumni donors doubled this year: about 628 alumni donated during 2006-07 as compared to 295 in 2005-06. Under the Annual Gift

Programme about 380 donors have donated about Rs. 49 lakh as compared to 120 donors contributing Rs. 13 lakh last year.

Seventeen new scholarships and several awards have been instituted for students during the year. Partial travel support to students from the donations enabled 71 students to participate in conferences overseas as compared to 43 last year. Last year, a cash award for publishing journal papers to students was introduced through the donations: 226 students were distributed Rs 26.11 lakh under the Programme.

Last year we started the Summer Undergraduate Research Programme (SURGE) to encourage undergraduate student research. The programme was a great success and this has enthused the institute to operate the programme again this summer with a larger group of students. Also, MoU signed with Ecole Centrale Paris this year for promoting undergraduate research has enabled student exchange in addition to that with Caltech started last year.

Eleven new faculty chairs were created during the year by our illustrious alumni. The donors include Mr. Deepak Devraj (B.Tech/EE/1970), Mr. Ravindra Nath Akhoury (B.Tech/EE/1968), Mr. Kamlesh Dwivedi (BT/EE/1979), Dr. Gurumukh D. Mehta (MT/ME/1969), Mr. Umang Gupta (BT/CHE/1971), Mr. Raj (BT/EE/1975) and Mrs. Neera Singh (BT/CHE/1981), Mr. Kamal Agarwal (BT/CHE/1972), Mr. Prashant Tewari (BT/ME/1979), and Mr. Ranodeb Roy (BT/CSE/1990). In addition, Chevron Chair was made possible due to the efforts of Mr. Jagjeet Singh Bindra (BT/CHE/1969); and a Chair in memory of the late Shri Arun Kumar (BT/EE/1969) has been established, thanks to Mr. Saurabh Srivastava (BT/EE/1968).

Donations from alumni and friends of IITK have also enabled us to start a scheme to provide partial travel support to new faculty during the first three years of their tenure at IITK. During first year of its operation (2006-07), 5 new faculty members of the Institute availed of this support for participation in conferences overseas.

There is enormous potential to improve the quality of education and research at IITK with support and active engagement of our alumni. The Institute is embarking on an ambitious plan towards this goal and I invite each and every alumni and well- wisher of IITK to come and join hands with us in this endeavour.

#### STUDENTS ACTIVITIES

IIT Kanpur continually strives to encourage an equitable balance between academics and extra-curricular activities among its students. Our vision is to create future leaders in their chosen fields and not just technically accomplished individuals. The Institute strongly believes that an abiding social and humane engagement is the hallmark of its students. To translate such belief into reality, the Institute nurtures various social,

cultural and sporting activities pursued by the Students' Gymkhana and other student groups.

A variety of activities are pursued by various clubs coming under the broad ambit of the councils of the gymkhana. They range from clubs like **Prayas**, where students teach children coming from socially disadvantaged and economically deprived backgrounds to the Dramatics club which stages thematically inspired and socially relevant plays. Other technically oriented student groups are engaged throughout the year in pursuing special interests like robotics, electronic aids, animation, aeromodeling and astronomy to name but a few.

The overriding objective of the large-scale events of IITK such as Antaragni, Techkritil, Josh, Udghosh, Megabucks and Umang is to infuse a sense of richness and purpose in the lives of students. Antaragni is the Cultural festival. Techkriti is the science and technology festival. Josh and Udgosh are the sports festivals. Megabuck is a festival to promote the spirit of innovation and incubation. For the first time in Umang, two open air theaters were running parallel sessions with the movies in the auditorium. All these social, cultural and sporting activities play a crucial role in the transformation of a student into a complete person. These festivals have seen vastly improved participation levels, both from within the Institute and also from students from other national and international institutions. The revenues generated for conducting these festivals saw an impressive growth last year which is a tribute to the managerial and logistic skills of our students. A new event called "Alfaaz" was added to the list of festivals in 2007. This event focuses on a variety of literary activities and fills in a long felt need of that section of the campus community with a literary sensibility.

IIT Kanpur came up with a creditable show in the inter IIT sports meet held at IIT Bombay. The team finished fourth in the General championship and had a number of podium performances both in the team and individual events. To strengthen the sports culture, an inter-hall games event called **JOSH** was also organized which witnessed mass participation from the students.

The **Nature Club** organized several Bird Watching expeditions, and to the surprise of many found out rare species of birds in our own Campus. The club also organized tree-labeling Campaigns and started a new activity, called Insect Study, which has now many enthusiastic participants.

In order to improve the communication skills of the students, the Institute has established a Media Technology Center. The TV studio is now being shifted to this center. Several new, digital equipment have been added in this TV studio for post-processing of shows produced by students. A cable TV center as well as the Telephone Center is also located in this Media Technology Center.

The Institute has formed a club for Journalism. The student magazine "Meander" now contains both Hindi and English sections. Campus reportage is covered by both "Spark" and "Eyes" newsletter and the students contribute significantly to these. Another new addition is a newsletter called "Vox Populi." The discussion and debate in the student community is covered by all these publications.

The student counseling service is the most active wing of students. The activities of this service include organizing the orientation programmes for UG as well as PG students; providing specific attention to students having academic, financial or personal problems; following up on the progress of students who need special attention. Overall, the student counseling service, both at the UG and PG levels, enjoys wide appreciation from faculty and students.

A very novel feature has been the opening of Yoga & Naturopathy center at IIT Kanpur, where the emphasis is totally on de-stressing the campus community in general and the students in particular. Several workshops and conferences have also been organized where professional counselors were invited to create awareness about stress management. Regular camps are being organized through the "Art of Living" & "Jeeewan Vidya." These activities not only help in de-stressing the students, but also inculcate in them certain values, which are necessary to make an individual into a good human being and a thinking citizen.

The placement scenario this year has registered a positive upswing with almost 90 percent of registered students receiving job offers through the student placement office. About 700 public and private organizations were invited to interview the students. The response from various national and international business majors is encouraging. Many companies of repute have also registered for the on-campus recruitment programme for the first time. With an improved facilitation and response system in place, it is hoped that IIT Kanpur will see even better placement levels next year.

The Institute is fully geared to meet the infrastructural requirements that an enhancement in student strength is likely to create. As of now, there are a total of 10 halls of residence, eight for boys and two for girls. The total capacity of these halls is close to four thousand. Two new blocks with a capacity of 24 units for SBRA has been constructed. The entire rejuvenation programme was initiated with a generous donation from Mr. N. R. Narayana Murthy, a distinguished alumnus of IIT Kanpur.

# Organisation

Indian Institute of Technology, Kanpur is an autonomous organization incorporated under an Act of Parliament in the year 1961, and is wholly financed by the Government of India, under the administrative control of the Ministry of Human Resource Development. The authorities constituted under the Act and Statutes, which govern and guide the functioning of the Institute in the areas of administration and academic programmes are; the Council of IITs, the Board of Governors assisted by two statutory bodies namely the Finance Committee in the financial matters and the Building and Works Committee in the matters related to construction and repairing of buildings and other major works. The Senate is assisted by Its various standing committees. The compositions of these constituent bodies are as follows:

#### THE COUNCIL OF IITs

#### Chairman

Shri Arjun Singh Minister of Human Resource Development New Delhi – 110 001

#### **Chairmen of the Seven Institutes (Ex-Officio)**

Shri Achyut Kumar Saikia Chairman, Board of Governors IIT Guwahati

Shri Sanjeev Goenka Chairman, Board of Governors IIT Kharagpur

Dr. Anil Kakodkar Chairman, Board of Governors IIT Bombay

Prof. A.E. Muthunayagam Chairman, Board of Governors IIT Madras Prof. M Anandakrishnan Chairman, Board of Governors IIT Kanpur

Prof. V S Ramamurthy Chairman, Board of Governors IIT Delhi

Shri Jaiprakash Gaur Chairman, Board of Governors IIT Roorkee

# **Directors of Institute (Ex-Officio)**

Prof. Damodar Acharaya
Prof. M S Ananth
Prof. Ashok Misra
Prof. S G Dhande
Prof. Surendra Prasad
Prof. Gautam Barua
Prof. S C Saxena
IIT Kharagpur
IIT Madras
IIT Bombay
IIT Kanpur
IIT Delhi
IIT Guwahati
IIT Guwahati

## Other Members (Ex-Officio)

Prof. Sukhdeo Thorat Chairman University Grants Commission New Delhi

Dr. R A Mashelkar Director General Council of Scientific & Industrial Research Anusandhan Bhawan, Rafi Marg New Delhi

Dr. K Kasturirangan Chairman Council of IISc. Bangalore National Institute of Advanced Studies Indian Institute of Science Campus Bangalore Prof. P Balram Director Indian Institute of Science Bangalore Bangalore

#### Three Nominees of the Central Government

Shri Sudeep Banerjee Secretary Ministry of Human Resource Development Dept. of Secondary & Higher Education New Delhi

Shri D Swarup Secretary Ministry of Finance Department of Expenditure North Block, New Delhi

Shri Brajesh Kumar Secretary Ministry of Information Technology Electronic Niketan 6, CGO Complex, New Delhi

Prof. R.A. Yadav Acting Chairman, AICTE IP Estate IG Sports Complex New Delhi

#### Nominees of the Visitor

Prof. C.N.R. Rao
Eminent Scientist
& Chairman, Scientific Advisory Council to the Prime Minister
Linus Pauling Research Professor & Honorary President
CSIR Centre of Excellence in Chemistry,
Chemistry & Physics of Materials Unit
Jawaharlal Nehru Centre for Advanced Scientific Research
PO – Jakkur, Bangalore

Prof. C S Seshadri Director Chennai Mathematical Institute, Chennai Plot H1, SIPCOT IT Park Padur PO Siruseri - 603 103

Prof. Sabyasachi Bhattacharya Director Tata Institute of Fundamental Research Homi Bhabha Road, Mumbai – 400 005

Dr. Kota Harinarayan Chairman Research Council of Central Scientific Instrument Organization Raja Ramanna Fellow National Aero Space Laboratories PO Box 1779, Bangalore – 560 017

Shri Tarun Das Chief Mentor Confederation of Indian Industry Plot No. 249-F, Sector 18, Udyog Vihar Phase IV Gurgaon (Haryana) – 122 015

# Three Members of Parliament (Two from Lok Sabha and one from Rajya Sabha)

Shri Milind Deora Member of Parliament (Lok Sabha) 65, Lodhi Estate New Delhi – 110 003

Shri Ananta Nayak Member of Parliament (Lok Sabha) 180, South Avenue New Delhi - 110 011 Shri B J Panda Member of Parliament (Rajya Sabha) 2, Mahadev Road, New Delhi - 110 001

## Secretary to the Council

Shri Ravi Mathur Joint Secretary (Technical) Government of India Department of Secondary Education & Higher Education Ministry of Human Resource Development Shastri Bhawan New Delhi - 110 001

#### THE BOARD OF GOVERNORS

#### Chairman

Prof. C.N.R. Rao [Upto 11.06.2006]
Linus Pauling Research Professor & Honorary President
CSIR Centre of Excellence in Chemistry
Chemistry & Physics of Materials Unit
Jawaharlal Nehru Centre for Advanced Scientific Research
PO – Jakkur
Bangalore – 560 064

Prof. M Anandakrishnan [From 12.06.2006]
Chairman, Indian Institute of Technology Kanpur
& Chairperson, Madras Institute of Development Studies
79, Second Main Road, Gandhinagar
Adyar, Chennai - 600 020
Tamil Nadu

#### **Members**

#### Four Nominees of the Council of IITs

Prof. G.K. Mehta Nuclear Science Centre, IUAC Aruna Asaf Ali Marg, New Delhi – 110 067 [Upto 07.02.2007]

Prof. S Lele [Upto 07.02.2007]

Rector

Institute of Technology Banaras Hindu University

Varanasi

Shri Anil D Ambani [Upto 07.02.2007]

Chairman & Managing Director Reliance Centre, 3<sup>rd</sup> Floor Walchand Hirachand Marg

Ballard Estate Mumbai

Shri Ravi Mathur

Joint Secretary (Technical)

Government of India

Department of Secondary Education & Higher Education

Ministry of Human Resource Development

Shastri Bhawan

New Delhi - 110 001

Shri M C Gupta [Upto 29.06.2006]

Vice Chancellor

Rajiv Gandhi University of Technology

Airport Bypass Road

Gandhi Nagar

Bhopal

Shri Dilip Mehra [From 05.10.2006]

Principal Secretary

Government of Madhya Pradesh

Dept. of Technical Education and Science & Technology

Mantralay, Vallabh Bhawan

Bhopal - 462 004

Professor S. S. Katiyar

Vice-Chancellor

Chhatrapati Shahuji Maharaj University

Kanpur - 208 024

Shri Aman Kumar Singh
Joint Secretary, Information Technology
& Chief Executive Officer, CHIPS
Government of Chhattisgarh
Department of Commerce & Industry (Information Technology)
Das Bhawan
Mantralaya, Raipur, Chhatisgarh

## **Director (Ex-Officio)**

Professor Sanjay G. Dhande Director Indian Institute of Technology Kanpur Kanpur 208016

#### Two Nominees of the Senate

Professor I D Dhariyal Department of Mathematics & Statistics Indian Institute of Technology Kanpur Kanpur - 208 016

Professor Jitendra Kumar Department of Materials Science Programme Indian Insitute of Technology Kanpur Kanpur - 208 016

#### Secretary

Shri Sanjeev S. Kashalkar Registrar Indian Insitute of Technology Kanpur Kanpur - 208 016

#### THE FINANCE COMMITTEE

#### Chairman

Prof. C.N.R. Rao Chairman, BOG, IIT Kanpur Linus Pauling Research Professor & Honorary President CSIR Centre of Excellence in Chemistry Chemistry & Physics of Materials Unit Jawaharlal Nehru Centre for Advanced Scientific Research PO – Jakkur, Bangalore [Upto 11.06.2006]

Prof. M Anandakrishnan Chairman, BOG Indian Institute of Technology Kanpur & Chairperson, Madras Institute of Development Studies 79, Second Main Road, Gandhinagar Adyar, Chennai - 600 020 Tamil Nadu, India [From 12.06.2006]

#### Members

Shri Ravi Mathur
Joint Secretary (Technical)
Government of India
Department of Secondary Education & Higher Education
Ministry of Human Resource Development
Shastri Bhawan
New Delhi - 110 001

Shri S K Ray
Financial Adviser
Government of India
Department of Education
Ministry of Human Resource Development
Shastri Bhawan
New Delhi - 110 001

Professor I D Dhariyal Department of Mathematics & Statistics Indian Institute of Technology Kanpur Kanpur - 208 016

## **Director (Ex-Officio)**

Professor Sanjay G. Dhande Director Indian Institute of Technology Kanpur Kanpur 208016

## Secretary

Shri Sanjeev S. Kashalkar Registrar Indian Insitute of Technology Kanpur Kanpur - 208 016

#### THE BUILDING & WORKS COMMITTEE

#### Chairman

Professor Sanjay G. Dhande Director Indian Institute of Technology Kanpur Kanpur 208016

## **Members**

Prof. Kripa Shanker Dy. Director Indian Institute of Technology Kanpur Kanpur 208016

Professor Jitendra Kumar Department of Materials Science Programme Indian Insitute of Technology Kanpur Kanpur - 208 016

Shri O P Bhatia Chief Engineer (Northern Zone) CPWD 3 rd Floor Kendriya Bhawan Sector H, Aliganj Lucknow -226 024 Shri D N Agarwal Retd. Chief Engineer (Electrical) CPWD M-21, Greater Kailash-II New Delhi 110048

Shri M D Seth Retd. Engineer-in-Chief, UPRNN Consultant Lucknow -226 001

Shri Subir Saha Director School of Planning & Architecture 4-Block B, Indraprastha Estate New Delhi 110 002

Ms. Seema Raj Director (T) Government of India Ministry of Human Resource Development Shastri Bhawan New Delhi 110 001

## **Secretary**

Shri Sanjeev S. Kashalkar Registrar Indian Insitute of Technology Kanpur Kanpur - 208 016

## **SENATE**

[From 01.04.2006 - 31.03.2007]

#### **Director & Chairman Senate**

Professor Sanjay G. Dhande Director Indian Institute of Technology Kanpur Kanpur 208016

# **Deputy Director**

Prof. Kripa Shanker

## **Members of the Senate**

# **AEROSPACE ENGINEERING (AE)**

Prof. Krishna Kumar

Prof. Vijai Gupta

Prof. Kunal Ghosh

Prof. RK Sullerey

Prof. Dayanand Yadav

Prof. E Rathakrishnan

Prof. C. Venkatesan

Prof. T.K. Sengupta

Prof. Sanjay Mittal

Prof. S Kamle

Prof. K Poddar

# **BIOLOGICAL SCIENCES & BIO-ENGINEERING (BSBE)**

Prof. Pradip Sinha

## **CHEMICAL ENGINEERING (CHE)**

Prof. SK Gupta

Prof. Anil Kumar

Prof. Deepak Kunzru

Prof. JP Gupta

Prof. PK Bhattacharya

Prof. RP Chhabra

Prof. Ashok Khanna

Prof. Ashutosh Sharma

Prof. Goutam Deo [from 28.04.2006]

## **CHEMISTRY (CHM)**

Prof. N Sathyamurthy

Prof. S Sarkar

Prof. BD Gupta

Prof. YD Vankar

Prof. TK Chandrashekar

Prof. V Chandrasekhar

Prof. RN Mukherjee

Prof. Parimal K Bhardwaj

Prof. H Ila

Prof. N.S. Gajbhiye

Prof. P. Gupta Bhaya

Prof. S. Manogaran

Prof. Veejendra K Yadav

Prof. Vinod K Singh

Prof. Amalendu Chandra

Prof. Tapas Chakraborty

Prof. Faiz Ahmed Khan

Prof. S S Manoharan

# **CIVIL ENGINEERING (CE)**

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Prof. PK Basudhar

Prof. Sudhir K Jain

Prof. Sarvesh Chandra

Prof. Bithin Datta

Prof. Vinod Tare

Prof. Ramesh Pratap Singh

Prof. Vinay Kumar Gupta

Prof. S.K. Chakrabarti

Prof. CVR Murty

Prof. Mukesh Sharma

Prof. Onkar Dikshit

Prof. Partha Chakroborty

Prof. Rajiv Sinha

Dr. Bharat Lohani, AP

## **COMPUTER SCIENCE & ENGINEERING (CSE)**

Prof. RMK Sinha

Prof. Somenath Biswas

Prof. HC Karnick

Prof. Pankaj Jalote

Prof. TV Prabhakar

Prof. Sanjeev Kumar Aggarwal

Prof. Sanjeev Saxena

Prof. Rajat Moona

Prof. Manindra Agrawal

Emeritus Fellow from 01.07.06 to 31.07.2008

Prof. Amitabha Mukerjee

Prof. Dheeraj Sanghi

Prof. Phalguni Gupta

Prof. R. K. Ghosh

Prof. Ajai K. Jain

Prof. Shashank K. Mehta

Prof. Sumit Ganguly

## **ELECTRICAL ENGINEERING (EE)**

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Prof. Arindam Ghosh

Prof. M Sachidananda

Prof. S. C. Srivastava

Prof. Anjan Kumar Ghosh

Prof. Prem Kumar Kalra

Prof. Shafi Qurreshi

Prof. Sumana Gupta

Prof. Govind Sharma

Prof. A. K. Dutta

Prof. Utpal Das

Prof. Joseph John

Prof. Pradip Sircar

Prof. Animesh Biswas

Prof. A. K. Chaturvedi

Prof. Baquer Mazhari

Prof. Ravindra Arora

Prof. G. C. Ray Emeritus Fellow from 01.07.06 to 31.07.2008

## **HUMANITIES & SOCIAL SCIENCES (HSS)**

Prof. Lilavati Krishnan

Prof. Binayak Rath

Prof. AK Sharma

Prof. AK Sinha

Prof. KK Saxena

Prof. BH Boruah

Prof. Binay Kumar Pattnaik

Prof. G Neelakantan

Prof. Achla Misri Raina

Prof. Surajit Sinha

Dr. Suchitra Mathur, AP

Prof. Amit Ray

Emeritus Fellow from 01.07.06 to 31.05.2009

# INDUSTRIAL & MANAGEMENT ENGINEERING (IME)

Prof. AK Mittal

Prof. Arun P Sinha

Prof. R R K Sharma

Prof. Jayanta Chatterjee

Prof. NK Sharma

Dr. B V Phani

## MATERIALS & METALLURGICAL ENGINEERING (MME)

Prof. SP Mehrotra (on deputation)

Prof. RC Sharma

Prof. RK Dube

Prof. Brahma Deo

Prof. SC Koria

Prof. Sanjeev Bhargava (on deputation)

Prof. Dipak Mazumdar

Prof. Rajiv Shekhar

Prof. Sandeep Sangal

Prof. R. Balalsubramaniam

Prof. Barada K Mishra (on deputation)

Prof. Deepak Gupta

Prof. Monica Katiyar

Prof. Shant P Gupta Emeritus Fellow from 01.07.06 to 31.07.2008

## MATHEMATICS (MTH)

Prof. RKS Rathore

Prof. Manjul Gupta

Prof. MK Kadalbajoo

Prof. Prawal Sinha

Prof. GP Kapoor

Prof. Peeyush Chandra

Prof. V Raghavendra

Prof. ID Dhariyal

Prof. Shobha Madan

Prof. Debashis Kundu

Prof. Pravir Kumar Dutt

Prof. Neeraj Misra

Dr. P Shunmugraj, ASP

Prof. UB Tewari Emeritus Professor from 01.07.06 to 30.06.2009

## **MECHANICAL ENGINEERING (ME)**

Prof. AK Mallik

Prof. Prashant Kumar

Prof. S G Dhande (on deputation)

Prof. BN Banerjee

Prof. MS Kalra

Prof. VK Jain

Prof. NN Kishore

Prof. Himanshu Hatwal

Prof. PM Dixit

Prof. K Muralidhar

Prof. Gautam Biswas

Prof. Prabhat Munshi

Prof. BP Pundir

Prof. S.K. Chaudhury

Prof. N.S. Vyas

Prof. Vinayak Eswaran

Prof. Kalyanmoy Deb

Prof. P.S. Ghoshdastidar

\*\*Dr. Sameer Khandekar, AP

Prof. Ashok Sengupta Emeritus Fellow from 01.07.06 to 30.06.2009

## MATERIALS SCIENCE PROGRAM (MSP)

Prof. DC Agarwal Emeritus Fellow from 01.07.05 to 30.06.2007

Prof. Jitendra Kumar

# PHYSICS (PHY)

Prof. RK Thareja

Prof. SC Agarwal

Prof. SD Joglekar

Prof. Keshawa Shahi

Prof. Rajendra Prasad

Prof. Debashish Chowdhury

Prof. RC Budhani

Prof. Y.N. Mohapatra

Prof. Avinash Singh

Prof. V.N. Kulkarni

Prof. Deshdeep Sahdev

Prof. Manoj K Harbola

Prof. Satyendra Kumar

Prof. V Ravishankar

Prof. Pankaj Jain

Prof. HC Verma

Dr. Sreerup Raychaudhuri, ASP

# LASER TECHNOLOGY PROGRAM (LTP)

Prof. RK Thareja

LIBRARIAN : Shri Rajeshwar Mishra

**Secretary Senate** : Shri Sanjeev S. Kashalkar

## THREE NOMINEES OF THE CHAIRMAN, BOARD OF GOVERNORS

(From 01.11.2005 to 31.10.2006)

Prof. S K Katiyar

Principal

GSVM Medical College

Kanpur - 208001

Prof. S K Awasthi

Director

Bundelkhand Institute of Engg. & Tech. (B.I.E.T.)

Jhansi - 284128

Prof. Parvez E Deen

Principal

Christ Church College

The Mall

Kanpur - 208001

## **SENATE STANDING COMMITTEES:**

[From 01.10. 2005 to 30.09.2006]

## (1) SENATE EDUCATIONAL POLICY COMMITTEE:

# (a) MEMBERS (EX-OFFICIO):

- 1. Chairman, Senate : Chairman
- 2. Chairman, SPGC Dr. I D Dhariyal
- 3. Chairman, SUGC Dr. Dheeraj Sanghi

# (b) SENATE NOMINEES:

- 1. Dr. P M Dixit ME
- 2. Dr. V Ravi Shankar PHY
- 3. Dr. Vinay Gupta CE

## (c) STUDENTS' SENATE NOMINEES:

Mr. Anand Verma (Y3045) anandv@iitk.ac.in
 Mr. Brajesh Pandey (Y120963) bpandey@iitk.ac.in

## (2) SENATE ELECTIONS COMMITTEE:

#### **SENATE NOMINEES:**

1. Dr. Rahul Varman IME : outgoing Chairman

2. Dr. P K Panigrahi ME 3. Dr. P Sircar EE

# (3) SENATE LIBRARY COMMITTEE:

## (a) LIBRARY:

Librarian

# (b) SENATE NOMINEES:

Dr. P S Ghoshdastidar
 Dr. Vinod K Singh
 Dr. A Khanna
 Dr. C A Tomy

# (c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. Krishna Kumar ΑE 2. Dr. K Subramaniam **BSBE** 3. Dr. R P Chhabra CHE 4. Dr. F A Khan CHM 5. Dr. S K Chakarbarti CE 6. Dr. T V Prabhakar **CSE** 7. Dr. S Umesh EE 8. Dr. Satyaki Roy **HSS** 9. Dr. Jayanta Chatterjee **IME** 10. Dr. S Sivaprakasam LTP 11. Dr. P K Panigrahi ME 12. Dr. RK Dube **MME** 13. Dr. K Shahi **MSP** 

14. Dr. Neeraj Mishra MTHS & STAT.

15. Dr. A Sengupta
16. Dr. V Ravishankar
17. Dr. Bishakh Bhattacharya
NET
PHY
M DES

## (d) STUDENTS' SENATE NOMINEES:

Ms Mansi Tewari (Y2210) mansi@iitk.ac.in
 Mr. Narasimha K V (Y1172) narasimha@iitk.ac.in

## (4) SENATE POST-GRADUATE COMMITTEE:

#### (a) MEMBER (EX-OFFICIO):

1. Dr. Pradip Sircar EE: outgoing Chairman

## (b) SENATE NOMINEE:

1. Dr. D Yadav AE

## (c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

Dr. A Kushari
 Dr. Balaji Prakash
 Dr. Sanjeev Garg
 Dr. R Gurunath

AE
BSBE
CHE
CHM

5. Dr. Rajiv Sinha CE 6. Dr. S N Tripathi **EEMP** 7. Dr. Rajat Moona **CSE** 8. Dr. K S Venkatesh EE 9. Dr. B K Pattnaik **HSS** 10. Dr. Rahul Varman **IME** 11. Dr. Asima Pradhan LTP 12. Dr. Bishakh Bhattacharya ME 13. Dr. Ashish Garg **MME** 14. Dr. J Kumar **MSP** 

15. Dr. G P Kapoor MTHS & STAT.

16. Dr. P Munshi NET17. Dr. V Subrahmanyam PHY18. Dr. Prashant Kumar M DES

## (d) STUDENTS' SENATE NOMINEES:

Mr. Prashant Chaturvedi
 Mr. Parameshwar reddy
 Mr. Sathyaraj V
 Mr. Tony Jacob
 (Y4103029) cprash@iit.ac.in
 (Y4103028) param@iitk.ac.in
 (Y210063) sathya@iitk.ac.in
 (Y3104123) tjacob@iitk.ac.in

## (5) SENATE RULES COMMITTEE:

## (a) MEMBER (EX-OFFICIO):

1. Parliamentarian of the Senate:

2. Dr. Ajai Jain CSE: Upto 30.09.2005

#### (b) SENATE NOMINEES:

Dr. Jitendra Kumar
 Dr. Anjan K Ghosh
 Dr. K K Saxena
 HSS

# (6) SENATE SCHOLARSHIPS & PRIZES COMMITTEE:

#### (a) MEMBERS (EX-OFFICIO):

Head Institute Counselling Service Chairman, APEC Dean of Students' Affairs

## (b) SENATE NOMINEES:

1. Dr. Manoj K Harbola PHY: Outgoing Chairman

2. Dr. S K Choudhury ME 3. Dr. P Munshi ME 4. Dr. Mukesh Sharma CE

# (c) STUDENTS' SENATE NOMINEES:

1. Mr. Niraj Kumar (Y2242) niraj@iitk.ac.in 2. Mr. Uttam Kumar Tripathi (Y2405) uttam@iitk.ac.in 3. Ms Swati Saxena (Y2183) swati@iitk.ac.in

## (7) SENATE STUDENTS' AFFAIRS COMMITTEE:

## (a) MEMBERS (EX-OFFICIO):

Head, Institute Counselling Service

Chairman, APEC

Representative of COW

Dean of Students' Affairs : Chairman, Ex-Officio

## (b) SENATE NOMINEES:

Dr. Bharat Lohani
 Dr. N N Kishore
 Dr. Shobha Madan
 MTHS & STAT

## (c) STUDENTS' SENATE NOMINEES:

Mr. Neeraj Kumar (Y2232) rohan@iitk.ac.in Mr. Narasimha K V (Y1172) narasimha@iitk.ac.in

Mr. Yashodhan Shevade (Y4125050) yshevade@iitk.ac.in Mr. Tony Jacob (Y3104123) tjacob@iitk.ac.in

## (8) SENATE UNDERGRADUATE COMMITTEE:

#### (a) MEMBER (EX-OFFICIO):

1. Dr. Sreerup Raychaudhuri PHY: Outgoing Chairman

#### (b) SENATE NOMINEE:

1. Dr. R K Dube MME

#### (c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. D P Mishra	AE
2. Dr. Ashok Kumar	BSBE
3. Dr. Rajdip Bandopadhyay	CHE
4. Dr. J K Bera	CHM
5. Dr. Bharat Lohani	CE
6. Dr. Purnendu Bose	EEMP
7. Dr. R K Ghosh	CSE
8. Dr. S S K Iyer	EE
9. Dr. Sanjay K singh	HSS
10. Dr. Rohit Varman	IME
11. Dr. Debabrata Goswami	LTP
12. Dr. Ashish Dutta	ME
13. Dr. Monica Katiyar	MME
14. Dr. K Shahi	MSP
15. Dr. D Bahuguna	MATHS & STAT.
16. Dr. P Munshi	NET
17. Dr. S Raychaudhuri	PHY
18. Mr. Satyaki Roy	M DES

# (d) STUDENTS' SENATE NOMINEES:

1. Mr. Saksham Aggarwal	(Y1310) saksham@iitk.ac.in
2. Mr. Vineet Singh	(Y2425) vinsingh@iitk.ac.in
3. Mr. Prateek Bhansali	(Y3228) prateekb@iitk.ac.in
4. Mr. Shubham Gupta	(Y4424) shubhg@iitk.ac.in

# THREE NOMINEES OF THE CHAIRMAN, BOARD OF GOVERNORS (From 01.11.2006 to 31.10.2007)

Prof. G K Rai Department of Ancient History Culture & Archeology Allahabad University Allahabad

Shri N C Agarwal General Manager Hindustan Aeronautics Ltd. (H.A.L.), Indira Nagar Lucknow - 226016

Dr. Masood Ali, Director Indian Institutre of Pulses Research (IIPR) Kanpur-208024

#### **SENATE STANDING COMMITTEES:**

[01.10.2006 TO 30.09.2007]

#### (1) SENATE EDUCATIONAL POLICY COMMITTEE:

# (a) MEMBERS (EX-OFFICIO):

1. Chairman, Senate : Chairman

2. Chairman, SPGC : Prof. I D Dhariyal, MTH & STATS

3. Chairman, SUGC : Prof. Dheeraj Sanghi, CSE

## (b) SENATE NOMINEES:

1. Dr. D Yadav, AE

2. Dr. Aloke Dutta, EE

3. Dr. R C Budhani, PHY

## (c) STUDENTS' SENATE NOMINEES:

Mr. Cherian Varkey Mathew (Y4129) cherian@iitk.ac.in
 Mr. Dhiraj Kumar Mahajan (Y250561) dhiraj@iitk.ac.in

# (2) SENATE ELECTIONS COMMITTEE:

## **SENATE NOMINEES:**

1. Dr. P K Panigrahi, ME

2. Dr. Debasis Kundu, MTH & STAT

3. Dr. B V Phani, IME: Chairman

#### (3) SENATE LIBRARY COMMITTEE:

## (a) LIBRARY:

1. Librarian : Shri Rajeshwar Mishra

## (b) SENATE NOMINEES:

- 1. Dr. Ashok Khanna, CHE
- 2. Dr. PS Ghoshdastidar, ME
- 3. Dr. K Srihari, CHM
- 4. Dr. Sankararamakrishnan, BSBE

## (c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. D Das	ΑE
2. Dr. K Subramaniam	BSBE
3. Dr. Sanjeev Garg	CHE
4. Dr. Jitendra K Bera	CHM
5. Dr. S K Chakarbarti	CE
6. Dr. Purnendu Bose	EEMP

7. Dr. T V Prabhakar CSE: Chairman

8. Dr. S Umesh EE
9. Dr. C A Tomy HSS
10. Dr. S Swami IME
11. Dr. R C Budhani LTP
12. Dr. P K Panigrahi ME
13. Dr. Monika Katiyar MME
14. Dr. Jitendra Kumar MSP

15. Dr. A K Maloo MTH & STAT

16. Dr. M S Kalra
NET
17. Dr. D Chowdhury
PHY
18. Ms. Koumudi Prakash Patil (HSS)
M DES

## (d) STUDENTS' SENATE NOMINEES:

Mr. Rishabh Uppal (Y3290) rishabh@iitk.ac.in Mr. C Saipriyadarshan (Y5149) darshan@iitk.ac.in

## (4) SENATE POST-GRADUATE COMMITTEE:

## (a) MEMBER (EX-OFFICIO):

Dr. Dr. B K Pattnaik HSS: Outgoing Chairman

## (b) SENATE NOMINEE:

1. Dr. Rajiv Sinha, CE

# (c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. S Kamle ΑE 2. Dr. Dhirendra S Katti **BSBE** 3. Dr. Nishith Verma CHE 4. Dr. S Verma **CHM** 5. Dr. Pranab K Mohapatra CE 6. Dr. Avinash Agarwal **EEMP** 7. Dr. Shashank K Mehta **CSE** 8. Dr. K S Venkatesh EE 9. Dr. A Madan **HSS** 10. Dr. Anoop Singh **IME** 11. Dr. Asima Pradhan LTP 12. Dr. Sumit Basu ME 13. Dr. Anish Upadhyaya **MME** 14. Dr. Rajeev Gupta **MSP** MTH & STAT : Chairman 15. Dr. I D Dhariyal **NET** 

16. Dr. P Munshi 17. Dr. V Subrahmanyam PHY 18. Dr. Satyaki Roy (HSS) M DES

# (d) STUDENTS' SENATE NOMINEES:

sathya@iitk.ac.in 1. Mr. V Sathyaraj (Y210063) 2. Mr. Ramesh Kumar Sonkar(Y3104118) rksonkar@iitk.ac.in 3. Mr. Hemant Rao (Y5125010) hemant@iitk.ac.in 4. Mr. Jai Prakash Narayan (Y5101011) jprakash@iitk.ac.in

## (5) SENATE RULES COMMITTEE:

#### (a) MEMBER (EX-OFFICIO):

Parliamentarian of the Senate:

Dr. N Sathyamurthy CHM: Upto 30.09.2006

## (b) SENATE NOMINEES:

1. Dr. D Kunzru, CHE :Chairman

2. Dr. M K Kadalbajoo, MTH & STAT

3. Dr. Kamal Poddar, AE

### (6) SENATE SCHOLARSHIPS & PRIZES COMMITTEE:

### (a) MEMBERS (EX-OFFICIO):

Head Institute Counselling Service : Dr. Goutam Deo, CHE

Chairman, APEC

Dean of Students' Affairs : Dr. Prawal Sinha, MTH & STAT

### (b) SENATE NOMINEES:

- 1. Dr. S K Choudhury, ME
- 2. Dr. Sanjeev K Agrawal, CSE :Chairman
- 3. Dr. Shobha Madan, MTH & STAT
- 4. Dr. Brahma Deo, MME

## (c) STUDENTS' SENATE NOMINEES:

1. Mr. Anirudh Harlalka	(Y3048)	anirudhh@iitk.ac.in
2. Mr. Sumant Singh	(Y3363)	sumant@iitk.ac.in
3. Mr. Shashank Y Rao	(Y5430)	shanks@iitk.ac.in

### (7) SENATE STUDENTS' AFFAIRS COMMITTEE:

### (a) MEMBERS (EX-OFFICIO):

Head Institute Counselling Service : Dr. Goutam Deo, CHE

Chairman, APEC

Representative of COW : Dr. F A Khan, CHM
Dean of Students' Affairs : Chairman, Ex-Officio

#### (b) SENATE NOMINEES:

- 1. Dr. N S Vyas, ME
- 2. Dr. A K Chaturvedi, EE
- 3. Dr. Asima Pradhan, PHY

#### (c) STUDENTS' SENATE NOMINEES:

1. Mr. Anirudh Harlalka	(Y3048) a1	nirudhh@iitk.ac.in
2. Mr. Tony Jacob	(Y3104123)	tjacob@iitk.ac.in
2. Mr. Sumant Singh	(Y3363)	sumant@iitk.ac.in
3. Mr. Abhijit Bagri	(Y2157006)	abagri@iitk.ac.in

## (8) SENATE UNDERGRADUATE COMMITTEE:

## (a) MEMBER (EX-OFFICIO):

Dr. Sreerup Raychaudhuri PHY : Outgoing Chairman

#### (b) SENATE NOMINEE:

1. Dr. Satyendra Kumar, PHY

### (c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. Sanjay Mittal	ΑE
2. Dr. Anupam Pal	BSBE
3. Dr. Rajdip Bandyopadhyay	CHE
4. Dr. M L N Rao	CHM
5. Dr. C V R Murty	CE
6. Dr. Purnendu Bose	EEMP

7. Dr. Dheeraj Sanghi CSE : Chairman

8. Dr. A Biswas EE
9. Dr. M Chandran HSS
10. Dr. Rahul Varman IME
11. Dr. H Wanare LTP
12. Dr. P S Ghoshdastidar ME
13. Dr. Gouthama MME
14. Dr. Kamal K Kar MSP

15. Dr. V Raghavendra MTH & STAT

16. Dr. P Munshi17. Dr. H Wanare18. Dr. B BhattacharyaNETPHYM DES

### (d) STUDENTS' SENATE NOMINEES:

1. Mr. Prateek Bhansali	(Y3228)	prateekb@iitk.ac.in
2. Mr. B Shubham Gupta	(Y4424)	shubg@iitk.ac.in
3. Mr. Varun Khaitan	(Y5495)	varunkh@iitk.ac.in

# The Faculty

There are thirteen departments and five interdisciplinary programmes offering degrees at various levels in the Institute.

The faculty strength of the Institute as on March 31, 2007 was 309. Out of these 16 are shared by two departments on a half time basis. There were also 41 Academic staff comprising of Research Engineers/Scientific Officers/Design Engineers and Library staff, who are treated at par with faculty, on March 31, 2007. 11 faculty members retired/resigned during the period. The Institute also had a number of Visiting Faculty members: 8 Visiting Faculty and 2 Adjunct Faculty joined and 3 left during the year. The Visiting/Adjunct Faculty contribute significantly and they also get an opportunity to know the Institute.

One Research Associate was appointed during the year. The Research Associates stay for a period of six months to two years.

AEROSPACE ENGINEERING DEPARTMENT SANTIONED STRENGTH: 20 EXISTING STRENGTH: 17+1

#### PROFESSOR (Rs.18400-500-22400)

- 1. 3162 Vijay Gupta
- 2. 3159 K Ghosh
- 3. 1798 R K Sullerey
- 4. 4041 Dayanand Yadav
- 5. 4458 E Rathakrishnan
- 6 4694 C Venkatesan
- 7. 4581 T K Sengupta
- 8. 4285 Sudhir Kamle
- 9. 4664 Kamal Poddar
- 10. 4696 Sanjay Mittal

#### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4660 Ashish Tewari
- 2. 4709 A K Ghosh
- 3. 4785 CS Upadhyay

## ASSISTANT PROFESSOR (Rs.12000-420-18300)

1. 4733 D P Mishra

- 2. 4958 Abhijit Kushari
- 3. 4993 Debopam Das
- 4. 5129\* Sivasambu Mahesh

# BIOLOGICAL SCIENCE & BIO-ENGINEERING SANTIONED STRENGTH: 15 EXISTING STRENGTH: 10

#### PROFESSOR (Rs.18400-500-22400)

1. 4959 Pradip Sinha

## ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 5119 Ashok Kumar
- 2. 5005 R Sankararamakrishnan
- 3. 5009 K Subramaniam
- 4. 5020 Subramaniam Ganesh
- 5. 5023 Balaji Prakash

## ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 5103 Dhirendra S Katti
- 2. 5194 Anupam Pal
- 3. 5206 Amitabha Bandyopadhyay
- 4. 5207 (Ms) Jonaki Sen

# CHEMICAL ENGINEERING DEPARTMENT SANTIONED STRENGTH: 32 EXISTING STRENGTH: 19

## PROFESSOR (Rs.18400-500-22400)

- 1. 3113 S K Gupta
- 2. 2432 Anil Kumar
- 3. 3314 Deepak Kunzru
- 4. 3064 J P Gupta
- 5. 3754 PK Bhattacharya
- 6 4244 R P Chhabra
- 7. 4045 Ashok Khanna
- 8. 4562 Ashutosh Sharma
- 9. 4750 Goutam Deo

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. 4794 Nishith Verma

# ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 5011 V Shankar
- 2. 5016 Nitin Kaistha
- 3. 5021 Sanjeev Garg
- 4. 5064 Rajdip Bandyopadhyaya
- 5. 5106 Animangsu Ghatak
- 6. 5114 Yogesh Moreshwar Joshi
- 7. 5175 Jayant K Singh
- 8. 5196 Siddharta Panda
- 9. 5208 Pankaj K Apte

#### CHEMISTRY DEPARTMENT

SANTIONED STRENGTH: 30 EXISTING STRENGTH: 27

#### PROFESSOR (Rs.18400-500-22400)

- 1. 3827 N Sathyamurthy
- 2 3791 S Sarkar
- 3. 3990 B D Gupta
- 4. 4008 Y D Vankar
- 5. 4325 T K Chandrashekar
- 6. 4394 V Chandrasekhar
- 7. 4448 R N Mukherjee
- 8. 4462 PK Bharadwaj
- 9. 4047 N S Gajbhiye
- 10. 3112 P Gupta Bhaya
- 11. 4460 S Manogaran
- 12. 4583 Veejendra K Yadav
- 13. 4596 Vinod K Singh
- 14. 4676 Amalendu Chandra
- 15. 4699 Tapas Chakraborty
- 16. 4759 SS Manoharan
- 17. 4746 Faiz Ahmed Khan

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4760 K Srihari
- 2. 4789 Sandeep Verma
- 3. 4816 J N Moorthy

4.	50/1	Debabrata Goswami	
ASSIS	TANT	PROFESSOR (Rs.12000-420-18300)	
1.	4876	R Gurunath	
2.	5024	Manas Kumar Ghorai	
3.		Jitendra K Bera	
4.		M L N Rao	
5.	5127	Sankar Prasad Rath	
LECTU	JRER		
1.	5091	Anantharaman Ganapathi	
CIVIL	, ENGII	NEERING DEPARTMENT	SANTIONED STRENGTH: 33 EXISTING STRENGTH: 28
PROF	ESSOR	(Rs.18400-500-22400)	
1.	3462	Ashwini Kumar	
2.	4068	P K Basudhar	
3.		Sudhir K Jain	
4.		Sarvesh Chandra	
5		Bithin Datta	
6.		Vinod Tare	
7.		Ramesh P Singh	
8.		V K Gupta	
9.		S K Chakrabarti	
10.		Mukesh Sharma	
11.		C V R Murty	
12.		Onkar Dikshit	
13.		Partha Chakroborty	
14.	4695	Rajiv Sinha	
ASSO	CIATE	PROFESSOR (Rs.16400-450-20000)	
1.	4690	Sudhir Misra	
2.	4798	Rajesh Srivastava	
3.	4784	Soumyen Guha	
4.	4775	Purnendu Bose	
5.	4793	Ashu Jain	
6.	4995	Durgesh C Rai	

### ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 4871 Animesh Das
- 2. 4978 Javed N Malik
- 3. 5026 Bharat Lohani
- 4. 5057 Sachidanand Tripathi
- 5. 5079 Pranab Kumar Mohapatra
- 6. 5152 Amit Prashant
- 7. 5037 Nihar Ranjan Patra
- 8. 5192 Tarun Gupta

# COMPUTER SCIENCE & ENGINEERING SANTIONED STRENGTH: 18 EXISTING STRENGTH: 21 + 2 HT

#### PROFESSOR (Rs.18400-500-22400)

- 1. \*3858 S G Dhande
- 2. \*3541 R M K Sinha
- 3. 3972 Somenath Biswas
- 4. 4297 H C Karnick
- 5. 4540 Pankaj Jalote
- 6. 4370 T V Prabhakar
- 7. 4563 S K Aggarwal
- 8. 4490 Sanjeev Saxena
- 9. 4628 Rajat Moona
- 10 4754 Manindra Agrawal
- 11. 4627 Amitabha Mukerjee
- 12. 4300 Ratan Kumar Ghosh
- 13. 4385 Phalguni Gupta
- 14. 4645 Ajai K Jain
- 15. 4668 Dheeraj Sanghi
- 16. 4762 Sumit Ganguly
- 17. 5010 Shashank K Mehta

#### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4722 Deepak Gupta
- 2 4934 Anil Seth

#### ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 5051 Bhaskaran Raman
- 2. 5112 Mainak Chaudhuri

- 3. 5197 Surender Baswana
- 4. 5222 Peeyush P Kurur

#### **ELECTRICAL ENGINEERING**

## SANTIONED STRENGTH: 53 EXISTING STRENGTH: 30 + 2 HT

## PROFESSOR (Rs.18400-500-22400)

- 1. \*3541 R M K Sinha
- 2. 3927 Avinash Joshi
- 3. 4293 Arindam Ghosh
- 4. 4326 M Sachidananda
- 5. 4495 S C Srivastava
- 6. 4667 Anjan Kumar Ghosh
- 7. 4486 Prem Kumar Kalra
- 8. 4691 Shafi Qureshi
- 9. 3873 (Ms) Sumana Gupta
- 10. 4372 Govind Sharma
- 11. \*4687 Utpal Das
- 12. 4566 A K Dutta
- 13. 3999 Joseph John
- 14. 4652 Animesh Biswas
- 15. 4478 Pradip Sircar
- 16. 4670 Baquer Mazhari
- 17. 4827 A K Chaturvedi

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4489 RK Bansal
- 2. 4745 S Umesh
- 3. 5003 S N Singh
- 4. 4776 Shyama P Das
- 5. 4771 Yatindra N Singh
- 6. 4988 Laxmidhar Behera

# ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 4833 KS Venkatesh
- 2. 4938 K Vasudevan
- 3. 5012 Parthasarathi Sensarma
- 4. 5013 A R Harish
- 5. 5015 (Ms) Nandini Gupta

- 6. 5111 Adrish Banerjee
- 7. 5113 S Sunder Kumar Iyer
- 8. 5130 (Ms) Kameswari Chebrolu
- 9. 5162 Ramprasad Potluri

#### **HUMANITIES & SOCIAL SCIENCES**

SANTIONED STRENGTH: 31 EXISTING STRENGTH: 22+2

## PROFESSOR (Rs.18400-500-22400)

- 1. 3838 (Ms) Lilavati Krishnan
- 2. 3989 Binayak Rath
- 3. 3983 A K Sharma
- 4. 4373 K K Saxena
- 5. 4016 A K Sinha
- 6. 4375 B H Boruah
- 7. 4791 B K Pattnaik
- 8. 4729 G Neelakanthan
- 9. 4488 Surajit Sinha
- 10. 4700 (Ms) Achla M Raina

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4702 (Ms) Shikha Dixit
- 2. 4773 Munmun Jha
- 3. 4774 C A Tomy

## ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 4927 (Ms) Mini Chandran
- 2. 4957 (Ms) Suchitra Mathur
- 3. 5075 P M Prasad
- 4. 5076 T Ravichandran
- 5. 5078 Sanjay Kumar Singh
- 6. 5077 Amman Madan
- 7. 5181 Braj Bhusan
- 8. 5191 Sumit Sarkar
- 9. 5193 Rajesh Kumar
- 10. \*4976 Satyaki Roy

### LECTURER (Rs.10000-325-15200)

1. \*5183 (Ms) Koumudi Prakash Patil

#### INDUSTRIAL & MANAGEMENT ENGINEERING

SANTIONED STRENGTH: 18 EXISTING STRENGTH: 16

### PROFESSOR (Rs.18400-500-22400)

- 1. 3432 A K Mittal
- 2. 3977 N K Sharma
- 3. 4380 T P Bagchi
- 4. 3792 Kripa Shanker
- 5. 4042 Arun P Sinha
- 6. 4525 R R K Sharma
- 7. 4961 Jayanta Chatterjee

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4701 Rahul Varman
- 2. 4830 Sanjeev Swami

### ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 4865 (Ms) Veena Bansal
- 2. 4968 Anoop Singh
- 3. 5018 Rohit Varman
- 4. 5073 Raghu Nandan Sengupta
- 5. 5142 Peevush Mehta
- 6. 5147 B V Phani
- 7. 5182 (Ms) Runa Sarkar

#### MATERIALS & METALLURGICAL ENGINEERING

SANTIONED STRENGTH: 32 EXISTING STRENGTH: 17

#### PROFESSOR (Rs.18400-500-22400)

- 1. 1932 S P Mehrotra
- 2. 3845 R C Sharma
- 3. 3763 R K Dube
- 4. 4182 Brahma Deo
- 5. 4245 S C Koria
- 6. 4524 S Bhargava
- 7. 4382 Dipak Mazumdar
- 8. 4565 Rajiv Shekhar

- 9. 4597 Sandeep Sangal
- 10. 4571 R Balasubramaniam
- 11. 4665 Barada K Mishra
- 12. 4790 Deepak Gupta
- 13. 4796 (Ms) Monica Katiyar

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. 4919 Anish Upadhyaya

### ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 4977 Bikaramjit Basu
- 2. 5034 Ashish Garg
- 3. 5072 Gauthama

### **MATHEMATICS & STATISTICS DEPARTMENT**

SANTIONED STRENGTH: 36 EXISTING STRENGTH: 30

## PROFESSOR (Rs.18400-500-22400)

- 1. 3407 RKS Rathore
- 2. 3772 (Ms) Manjul Gupta
- 3. 3739 M K Kadalbajoo
- 4. 3773 Prawal Sinha
- 5. 3776 G P Kapoor
- 6. 4058 Peeyush Chandra
- 7. 4074 V Raghavendra
- 8. 3824 I D Dhariyal
- 9. 4290 (Ms) Shobha Madan
- 10. 4584 Debasis Kundu
- 11. 4449 Pravir Kumar Dutt
- 12. 4726 Neeraj Misra

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4707 B V Rathish Kumar
- 2. 4782 D Bahuguna
- 3. 4656 P Shunmugaraj
- 4. 4734 Arbind Kumar Lal
- 5. 4803 Alok Kumar Maloo

### ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 4537 (Ms) Aparna Dar
- 2. 4781 (Ms) Mohua Banerjee
- 3. 4822 G Santhanam
- 4. 4832 (Mrs) Rama Rawat
- 5. 4870 S Ghorai
- 6. 4930 Swagato Kumar Ray
- 7. 5029 Joydeep Dutta
- 8. 5036 Shalabh
- 9. 5153 Amit Mitra
- 10. 5121 (Ms) Nandini Nilakantan
- 11. 5189 Parasar Mohanty
- 12. 5200 Anil Kumar Ghosh

#### LECTURER (Rs.10000-325-15200)

1. 5128 Shital Rajeshbhai Patel

#### **MECHANICAL ENGINEERING**

SANTIONED STRENGTH: 42 EXISTING STRENGTH: 31 + 3 HT

# PROFESSOR (Rs.18400-500-22400)

- 1. 2265 A K Mallik
- 2. \*3858 S G Dhande
- 3. 3764 Prashant Kumar
- 4. 3759 B N Banerjee
- 5. 3862 M S Kalra
- 6. 4093 V K Jain
- 7. 4224 N N Kishore
- 8. 4286 Himanshu Hatwal
- 9. 4210 P M Dixit
- 10. 4398 K Muralishar
- 11. 4560 Gautam Biswas
- 12. 4061 Prabhat Munshi
- 13. 4810 B P Pundir
- 14. 4452 S K Choudhury
- 15. 4459 N S Vyas
- 16. 4482 Vinayak Eswaran
- 17. 4650 Kalyanmoy Deb
- 18. 4288 P S Ghoshdastidar

## ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4788 Subrata Sarkar
- 2. 4801 PK Panigrahi
- 3. 4779 Bhaskar Dasgupta
- 4. 4823 V Venkata Reddy

## ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 4890 Bishakh Bhattacharya
- 2. 4931 Avinash Kumar Agarwal
- 3. 4956 Anupam Saxena
- 4. 5014 Sumit Basu
- 5. \*4928 Kamal K Kar
- 6. 5022 Ashish Datta
- 7. 5054 P Venkitanarayanan
- 8. 5074 J Ramkumar
- 9. 5120 Sameer Khandekar
- 10. 5122 Arun Kumar Saha
- 11. 5129\* Sivasambu Mahesh
- 12. 5199 Ishan Sharma

#### **PHYSICS**

## SANTIONED STRENGTH: 38 EXISTING STRENGTH: 32 + 1 HT

### PROFESSOR (Rs.18400-500-22400)

- 1 3980 RK Thareja
- 2. 4019 S D Joglekar
- 3. 4064 Keshawa Shahi
- 4. 4254 Rajendra Prasad
- 5. 4642 Debashish Chowdhury
- 6. 4688 R C Budhani
- 7. 4559 Y N Mohapatra
- 8. 4651 Avinash Singh
- 9. 4315 V N Kulkarni
- 10. 4527 Deshdeep Sahdev
- 11. 4504 V Ravishankar
- 12. 4552 Satyendra Kumar
- 13. 4708 Pankaj Jain
- 14. 4723 H C Verma

#### 15. 4881 M K Harbola

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

- 1. 4653 K P Rajeev
- 2. 4692 Mahendra K Verma
- 3. \*4679 (Ms) Asima Pradhan
- 4. 4831 Sreerup Raychoudhuri

### ASSISTANT PROFESSOR (Rs.12000-420-18300)

- 1. 4755 V Subrahmanyam
- 2. 4797 Gautam Sengupta
- 3. 4893 Harshwardhan Wanare
- 4. 4964 V V Sreedhar
- 5. 5028 (Ms) Sutapa Mukherjee
- 6. 5035 S Sivaprakasam
- 7. 5040 S Anantha Ramakrishna
- 8. 5041 Amit Dutta
- 9. 5046 Anjan Kumar Gupta
- 10. 5102 Zakir Hossain
- 11. 5115 Tapobrata Sarkar
- 12. 5117 Satyajit Banerjee
- 13. 5123 Sudeep Bhattacharjee
- 14. 5167 Rajeev Gupta

#### MATERIALS SCIENCE PROGRAMME

SANTIONED STRENGTH: 06 EXISTING STRENGTH: 01 + 1 HT

PROFESSOR (Rs.18400-500-22400)

1. 3762 Jitendra Kumar

ASSISTANT PROFESSOR (Rs.12000-420-18300)

1. \*4928 Kamal K Kar

#### LASER TECHNOLOGY PROGRAMME

SANTIONED STRENGTH: EXISTING STRENGTH: + 02 HT

PROFESSOR (Rs.18400-500-22400)

1. \*4687 Utpal Das

### ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. \*4679 (Ms) Asima Pradhan

#### NUCLEAR ENGG & TECHNOLOGY PROGRAMME

SANTIONED STRENGTH: EXISTING STRENGTH: --

PROFESSOR (Rs.18400-500-22400) -- --

#### **DESIGN PROGRAMME**

SANTIONED STRENGTH EXISTING STRENGTH: +2 HT

ASSISTANT PROFESSOR (Rs.12000-420-18300)

1. \*4976 Satyaki Roy

### LECTURER (Rs.10000-325-15200)

1. \*5183 (Ms) Koumudi Prakash Patil

While Nuclear Engineering & Technology and Environmental Engineering Management interdisciplinary programmes offer separate postgraduate degrees for administrative purpose these are under the administrative control of Mechanical Engineering and Civil Engineering Departments respectively.

#### LIST OF ACADEMIC STAFF AS ON MARCH 31, 2007

S1 No.	Name & Designation o. (Ms/Shri/Dr)		Department/ Programme			
1.	4983	Alok Gupta, Research Engineer Gr-II	ΑE			
2.	5059	K K Soundra Pandian, Research Engineer Gr-II	ΜE			
3.	4078	Chaturi Singh, Research Engineer Gr-I	NWTF			
4.	4777	Rajeev Gupta, Senior Research Engineer	A E (NWTF)			
5.	4616	Sushmit Sen, Senior Research Engineer	Robotics			
6.	4955	Raghuvir Singh Anand, Senior Research Engineer	ΕE			
7.	4824	Anjali V Kulkarni, Senior Research Engineer				
	Mechatronics					
8.	4921	Aurobinda Chatterjee, Senior Research Engineer	MΕ			

<sup>\*</sup> Half Time

9.	5118	Ajay Misra, Senior Research Engineer	ΑE
10.	4318	Amitabha Roy, Principal Research Engineer	ΕE
11.	3238	Vishal Saxena, Principal Research Engineer	ΕE
12.	4807	Brajesh Chandra, Principal Research Engineer	A E (NWTF)
13.	4056	V Raghuram, Principal Research Engineer	ME
14.	3414	M N Mungole, Senior Research Engineer	MME
15.	5095	Shobhit Das, Chief Engineer	ΑE
16.	4015	A L Bhavsar, Scientific Officer Gr.I	CHEM
17.	4815	K K Bajpai, Senior Scientific Officer	CE
18.	3780	Sanjay Gupta, Chief Scientific Officer	ACMS
19.	3985	Bansi Lal, Chief Scientific Officer	PHY/LTP
20.	4090	Prem Chand, Chief Scientific Officer	EPR/PHY
21.	3782	K V Rao, Chief Scientific Officer	ACMS
22.	2028	HPS Parihar, Computer Engineer Gr.II	CC
23.	4541	B M Shukla, Senior Computer Engineer	CC
24.	4578	Md Aftab Alam, Senior Computer Engineer	CC
25.	4821	Brajesh Pande, Senior Computer Engineer	CC
26.	4820	Gopesh Tewari, Senior Computer Engineer	CC
27.	5019	Soma Sengupta, Senior Computer Engineer	CC
28.	4721	Md K Ahmad, Senior Computer Engineer	CC
29	4920	Anju Tewari, Senior Computer Engineer	CC
30.	3745	R Tewari, Operation Manager	CC
31.	2035	N P Roberts, Principal Computer Engineer	CC
32.	3868	K S Singh, Principal Computer Engineer	CC
33.	2037	YDSArya, Principal Computer Engineer	CC
34.	4817	Navpreet Singh, Principal Computer Engineer	CC
35.	5030	Vipul Mathur, Aircraft Maintenance Engineer	ΑE
36.	0834	Rajeshwar Misra, Librarian	Kelkar Lib
37.	3981	S K Bose, Deputy Librarian	Kelkar Lib
38.	3969	Umed Singh, Assistant Librarian	Kelkar Lib
39.	3974	(Ms) Neelam Prasad, Assistant Librarian	Kelkar Lib
40.	5148	S K Vijaianand, Assistant Librarian	Kelkar Lib
41.	5157	(Ms) Maitrayee Mondal Ghosh, Assistant Librarian	Kelkar Lib

# **Academic Programme**

#### **EDUCATIONAL GOALS**

Education in the Engineering stream should produce trained manpower for maintaining and advancing technological growth. The scope of engineering education should evolve based on the evaluation of technological growth for their usefulness and relevance to the prosperity of the country. The educational strategy in this context should help to develop a knowledge industry and the systems involved in this endeavor should strive for furtherance of knowledge.

The academic goals of the Indian Institute of Technology Kanpur from the viewpoint of its teaching programme are as the following:

To prepare the students for the highest level of excellence in science, and technology and produce competent, creative and imaginative scientists and engineers.

To promote a spirit of free and objective inquiry in different fields amongst the students and motivate them for higher studies and research.

To foster inter-disciplinary approach. To promote the concept of virtual research departments by bringing together faculty and students into activities of mutual interest.

#### **TEACHING PROGRAMMES**

The Institute offers instruction in various disciplines of science and engineering, both at undergraduate (UG) and postgraduate (PG) levels. These programmes are planned and implemented by the Academic Senate of the Institute Micro-management and these programmes is carried out by the Senate Undergraduate Committee (SUGC) and the Senate Post-graduate Committee (SPGC), respectively.

# **Undergraduate Programme**

The four-year undergraduate programme consists of two parts having duration of four semesters each. The first part is the Core programme common to all students, and is carefully planned to give the students a strong base of basic education in mathematics, physics, chemistry, engineering sciences, technical arts, humanities and social sciences. The second part of the undergraduate programme consists of the Professional courses and a project in the chosen branch of specialization. At the Bachelor's level, we have B.Tech. programs in Aerospace, Chemical, Civil, Computer Science, Electrical, Metallurgy and Mechanical Engineering. We also have integrated M.Sc. programs in Physics, Chemistry, Mathematics and Statistics. From July 2005, we have started an integrated M.Sc. program in Economics. The students for these programs are selected through JEE and usually they are of very high quality.

## Two-Year M.Sc. Programme

There are programs for M. Sc. (2 years) in Physics, Chemistry, Mathematics and Statistics, where the students with B.Sc. (Hons.) background are chosen through an all-India examination known as JAM. These programmes have been largely responsible for the scientific manpower in Indian research instituted and universities.

## Postgraduate Programme

The postgraduate programme is intended to prepare students to enter their professions with a perspective and breadth of knowledge related to the principal divisions of their respective fields of specialization through courses and specialized research experience. A postgraduate student is typically enrolled for three or four courses each semester until the student advances to a point where the principal requirements of the programme left to be fulfilled are research and thesis.

# M.Tech. Programme

We have **M.Tech. Programmes** in all the Engineering Branches, mentioned above. In addition, there are M. Tech. Programs in the interdisciplinary areas, such as, Nuclear Engineering, Biological Sciences and Bioengineering, Laser Technology, Environmental Engineering, Materials Science, and Industrial and Management Engineering. The M. Tech. students are chosen through an all-India examination, known as GATE.

#### B.Tech.-M.Tech.

We have also adopted a dual degree (B.Tech.-M. Tech.) program. In this program, the students admitted through JEE, are expected to complete the M.

Tech. Program in five years. At the end of five years, the student is awarded both B.Tech. and M.Tech. Degrees.

# MBA and MDES Programme

We have introduced two interdisciplinary programs, namely, for MBA and Master of Design. For these courses as well, the students are selected through the all-India examinations known as JMET and CEED respectively.

# Doctor of Philosophy (Ph.D.)

The academic programmes leading to the Degree of Doctor of Philosophy (Ph.D.) exists in all the engineering departments and two interdisciplinary programmes, namely, Materials Science and Nuclear Engineering & Technology. The Ph.D. programmes also exist in Chemistry, Mathematics, Physics, Statistics, Economics, English, Philosophy, Psychology and Sociology.

## Ph.D. (Dual Degree)

The Ph.D. programme culminates in research on a selected topic leading to a thesis submitted in partial fulfillment of the requirements for the degree.

The Department of Physics offers a M.Sc.-Ph.D. dual degree program, the admission is through JAM, it also allows their M.Sc. students to continue for a Ph.D. degree.

The M. Tech. and Ph.D. students receive research/ teaching assistantships.

## **D.I.I.T. Programme**

The Institute started a D.IIT programme in Video Communications Systems with effect from first semester 1992-93. The duration of the Course is one year. The DIIT Programme is based on existing PG Course for M.Tech. Programme. This programme is monitored by the Department of Electrical Engineering.

# Research Environment in IIT Kanpur

IIT Kanpur has demonstrated its excellence in research in many areas. To cite a few areas: Finite Element Methods Using Domain Decomposition, Flow Induced Vibrations, Wind Tunnel Testing of Large Scale Prototypes, Computational Chemistry, Nano-materials and Nano-technology, Geometric Optimization of Large Organic Systems, Genomics and Bio-Informatics, Electronic Structure Calculations, Aggregation and Etching, Molecular Dynamics, Thin Film Dynamics, Optical / EM Field Calculations,

Computational Fluid Dynamics and Heat Transfer, Computer Aided Design and Rapid Prototyping, Tomography, Robotics, Multi-Body Dynamics, Geoseismic Prospecting, Stress Analysis and Composite Materials, Vibration and Control, Semiconductor Physics, Photonics, Neural Networks and Genetic Algorithms, Earthquake Engineering, Impurities in Anti-Ferro Magnet, Raman Scattering, Particle Physics, Spin Fluctuation in Quantum Magnets, Quantum Computation and so on.

The most recent initiative of IIT Kanpur has been the Formation of a Strong Research Group in the areas of Nanoscience and Nanotechnology.

# **Curriculum Development and Monitoring Committee (CDMC)**

The Curriculum Development and Monitoring Committee (CDMC) has been formed in order to monitor the curriculum continually. The Committee will solicit a report annually from all Core Course Subcommittees regarding their respective core courses. These reports include all relevant information pertaining to the teaching of the courses, tutorials, laboratories and other aspects. The Committee will work over the period with effect from 01 / 04 / 2007 for a tenure of 2 years

The following is the composition of the CDMC:

(MME)	Chairman
(Physics)	Co Chairman
(CSE)	Member
(ME)	"
(HSS)	"
(ChE)	"
(EE)	"
(AE)	"
(Maths & Stat.)	"
	(Physics) (CSE) (ME) (HSS) (ChE) (EE) (AE)

#### **New Initiatives**

## (a) M.Sc. in Economics

IIT Kanpur has introduced a M Sc (5 year integrated) program in Economics from July 2005. This program is providing a strong ground in basic sciences, engineering as well as in various emerging areas of Economics.

The knowledge of Economics and use of Technology for creation of wealth are necessary preconditions for breaking the chain of poverty and low standard of living in the developing countries. Economics and Technology have always migrated together from one country to another, from Europe to United States, from United States to Japan and from Japan to Asian Tigers. Today India is in the midst of this tremendous migration of global know-how. American and European companies are increasingly carrying out their design and manufacturing work in India.

India has a great tradition in Economics Education and Research. Prof. Amartya Sen, Prof. Jagdish N. Bhagwati are among the finest and best known Economists in the World, and their Hon'ble Prime Minister is himself an eminent economist.

Today's India needs trained mind that perfect blend Technology and Economics. The Integrated MSc program in Economics is a step in that direction. Twenty-five students will be admitted through the Joint Entrance Examination and there will be no prerequisite of Economics as a subject at the higher secondary level. The four streams of Economics are focused. They are Econometrics and quantitative techniques; Industrial economics and business policy; Development infrastructure and public policy and Environment and resource economics. The credit requirement for the graduation is 199 Credit Points. First four semesters would be common with the other branches of BTech and MSc Integrated programmes.

# (b) Environmental Science and Environmental Engineering

The Scope of Environmental Science and Environmental Engineering is inherently interdisciplinary and expanding rapidly. Recognizing the challenges for environmentally sustainable development, IIT Kanpur initiated an interdisciplinary M.Tech. Programme in Environmental Engineering and Management in 1997. This experience has convinced the Institute that there is a pressing need to integrate environmental engineering and science across various disciplines to solve problems that have important societal impact.

A National Advisory Committee (NAC) was constituted by IIT Kanpur to identify the strategies related to the education in Environmental Sciences and Environmental Engineering. The NAC further recommended that in order to

ensure full and unrestricted growth of environmental science and engineering disciplines, a separate initiative be started.

The sustainability of any academic programme and its viability would depend on better and comprehensive integration of the interdisciplinary aspects of such a programme. It is also essential that research should focus on new emerging areas, which can respond to the varying societal environmental concerns. Faculty members drawn from the current EEM program, and Departments such as Chemistry, Chemical Engineering, Civil Engineering, Physics, Biological Sciences and Bio-Engineering and Mechanical Engineering can provide the best combination to initiate a world class teaching and research academic program in Environmental Science and Environmental Engineering, once proper facilities are created.

It is proposed to initiate a new multidisciplinary facility for Environmental Science and Environmental Engineering at IIT Kanpur, with a focus on the following areas:

Green Technologies

Assessment, monitoring and modeling of environmental quality

Pollution control and remediation

Health risk assessments due to modern technologies and products

Ecological modeling,

Atmospheric Sciences – monsoon dynamics, global warning, ozone depletion)

Land reclamation

Water Resources – groundwater as well as surface water

Environmental Geosciences - Earth systems

**Environmental Chemistry** 

To attain these objectives, a comprehensive infrastructure facility including state-of-the-art laboratory will be required. The equipment proposed to be purchased will also be utilized for the on-going research activities in other Departments of the Institute.

## National Programme on Earthquake Engineering Education

IIT Kanpur earnestly believes that every Institute of National Importance has an obligation to render necessary service to the country in a crisis. Our country

is prone to strong earthquakes, and we need to contain the risks this involves. A trained manpower development programme for earthquake risk mitigation, known as NPEEE (National Programme on Earthquake Engineering Education), has been instituted by the Government of India. IIT Kanpur is the nodal agency for the entire gamut of NPEEE activities. The enthusiastic faculty members of the Institute have made enormous contribution in the Earthquake Engineering Education in the country. Their work in the Andaman Islands during the Tsunami calamity deserves deep appreciation.

# Outreach and National Program on Technology Enhanced Learning

Meaningful growth of an Institution depends on the kind of commitment it has made to the society at large. Benefits of academic excellence cannot remain restricted to the boundaries of the academic wall. In an electronic age that has seen walls razed cross states and countries, an institute like IIT Kanpur has a supreme role in providing leadership that addresses societal concerns. As part of our social responsibility, we want to share our expertise with fellow academic institutions across the country and abroad. Towards this goal, we have initiated an Outreach Education Program. Under this scheme, using the VSAT transmission technology, we are providing lecture courses in the area of engineering and biological sciences to the college and university students in the State of Chhattisgarh. IIT Kanpur is promise bound to transmit some advanced courses to the students of newly founded Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Management (PDPMIIITDM), Jabalpur. IIT Kanpur is also participating in a new project, known as Indo-French Cyber University. This will foster international collaboration in the areas of emerging technologies. The program will include transmission of courses between IIT-Kanpur and the Université Pierre et Marie Curie (Paris). The courses will be taught in English to the advanced Master's students in both countries by the French and Indian professors.

IIT Kanpur is also participating in the National Program on Technology Enhanced Learning (NPTEL) sponsored by the Ministry of Human Resource Development. Knowledge grows faster when shared. The NPTEL (National Program on Technology Enhanced Learning) is an initiative of the MHRD to promulgate quality education among the Engineering Colleges of the country through the Video and Web-based learning material in some of the popular

disciplines. In particular, MHRD wants to monitor the standard of Engineering Education in many colleges where well-trained faculty members are not available in many subjects. The task is double-sided in nature. On one hand, the standards of the colleges are to be uplifted, while on the other hand the courses have to be acceptable to the end users. Seven IITs and IISc Bangalore are the major players in this endeavor. The courses prepared at IIT Kanpur, are being transmitted through the educational TV Channel, Eklavya on regular basis. These courses have earned appreciation form a wide range of learners.

#### **ADMISSION**

## Undergraduate

Admissions for all the B.Tech. M.Sc. (5-year integrated) and B.Tech.-M.Tech. (Dual Degree) programmes at IIT Kanpur for the academic session 2006-2007 were made by the Joint Admission Committee for all IITs and IT-BHU.

The Joint Entrance Examination (JEE) -2006 was held on April 10, 2006. The following offers of admission were made from IIT Kanpur:

Department/Disciplines	Total	Total Number of Candidates-Direct Admission					
Programmes	JEE-2006			Preparate 2005	Total		
	Gen	SC	ST	PH	SC	ST	
B.Tech.					-		
Aerospace Engg.	18	04	02	01	-	01	26
BSBE	20	04	01		-		25
Chemical Engg.	30	06	02		-		38
Civil Engg.	42	08	-		02	01	53
Computer Sc. & Engg.	26	05	03	01			35
Electrical Engg.	49	10	05	01			65
Mechanical Engg.	37	07	04	01		01	50

Materials & Met. Engg.	48	08	-		07		63
M.Sc. Integrated							
Chemistry	14	-					14
Mathematics & Scientific Computing	25	03			05		33
Economics	17	-					17
Physics	15	03			01		19
Total	341	58	17	04	15	03	438
B.TechM.Tech. (Dual Degree)							
Aerospace Engg.	06	01	01				08
Chemical Engg.	08	02					10
Civil Engg.	12	02	01		02		17
Computer Sc. & Engg.	21	04	02				27
Electrical Engg.	17	03	02				22
Mechanical Engg.	13	03	01			01	18
Total	77	15	07		02	01	102

# Two-Year M.Sc. Programme

Admissions to the 2-year M.Sc. and M.Sc.-Ph.D. (Dual Degree) programmes were made on the basis of JAM performance. Admission statistics for the M.Sc. (2 year) and M.Sc.-Ph.D. (Dual Degree) Physics programmes during 2006-2007 are as under:

Sl. No.	Department/Group	Numbers of Admission Offered	Actual Number of Students Joined
M.Sc. (2-year)			
1	Chemistry	27	27
2	Mathematics	25	22
3	Physics	19	03
4	Statistics	22	18
Total		93	70
M.Sc. Degree	- Ph. D. (Dual e)		
1	Physics	09	06
Total		09	06

# **Post Graduate**

The number of students admitted to the Postgraduate Programme in the First and Second Semesters 2006-2007 is given below:

### **ENGINEERING**

Donoulus ont / Cuosa	First Sem	ester		Second Semester		
Department / Group	M.Tech.	Ph.D.	Total	M.Tech.	Ph.D.	Total
Aerospace Engg.	21	02	23	-	01	01
B.S.B.E.	13	08	21	-	08	08
Chemical Engg.	21	04	25	10	06	16

Civil Engg.	37	04	41		02	02
Computer Sc. & Engg.	44	03	47		01	01
Design (M.Des.)	08		08		-	-
Electrical Engg.	77	08	85		06	06
Mechanical Engg.	64	08	72		04	04
Materials & Met. Engg.	12	02	14	14	04	18
I.M.E.	12	02	14		01	01
Laser Technology	08	-	08		-	-
Material Science	07	03	10	03	01	04
N.E.T.		-	-	12		12
E.E.M.	10	10	10			-
M.B.A. (IME)	30	30	30			-
Total	364	84	408	39	34	73

# **SCIENCES**

Description of LC constant	First Sem	ester		Second Semester			
Department / Group	M.Tech.	Ph.D.	Total	M.Tech.	Ph.D.	Total	
Chemistry	-	15	15	-	10	10	
Mathematics	-	04	04	-	06	06	
Statistics	-	02	02	-	-	-	
Physics	-	05	05	-	03	03	
M.ScPh.D. Dual Degre in Physics	-	02	02	-	05	05	
H.S.S.	-	08	08	-	05	05	

Total	-	36	36	-	29	29
<b>Grand Total</b>	364	120	444	39	63	102

The total department/programme wise strength of the Post Graduate students during the year 2006-2007 is given below:

# **ENGINEERING**

D 1 1/6	First Sem	ester		Second Semester			
Department / Group	M.Tech.	Ph.D.	Total	M.Tech.	Ph.D.	Total	
Aerospace Engg.	48	35	83	43	35	78	
B.S.B.E.	22	40	62	21	47	68	
Chemical Engg.	48	40	88	58	38	96	
Civil Engg.	88	40	128	70	42	112	
Computer Sc. & Engg.	86	14	100	82	11	93	
Design (M.Des.)	18		18	18		18	
Electrical Engg.	143	57	200	138	59	197	
Mechanical Engg.	136	53	189	125	50	175	
Materials & Met. Engg.	59	25	84	51	28	79	
I.M.E.	26	18	44	25	18	43	
Laser Technology	14		14	12		12	
Material Science	22	11	33	26	12	38	
N.E.T.	09	03	12	19	03	22	
E.E.M.	29	-	29	24	-	24	
M.B.A. (IME)	62	-	62	61	-	61	
Total	810	336	1146	773	343	1116	

# **SCIENCES**

Danashmant / Cuasa	First Sem	ester		Second Semester			
Department / Group	M.Tech.	Ph.D.	Total	M.Tech.	Ph.D.	Total	
Chemistry	-	152	152	-	156	156	
Mathematics & Statistics	-	57	57	-	59	59	
Statistics	-	07	07	-	06	06	
Physics	-	40	40	-	41	41	
M.ScPh.D. Dual Degree in Physics	-	27	27	-	30	30	
H.S.S.	-	47	47	-	50	50	
Total:	-	330	330	-	342	342	
<b>Grand Total</b>	810	666	1476	773	685	1458	

Strength of Undergraduate and Postgraduate Students during 2006 – 2007 – I:

Department /Group	UG (B.Tech M.Sc5 Yr.)	B.Tech M.Tech (Dual Degree).	M.Sc. 2-Yr.	M.Sc Ph.D. Dual Degree	M.Tech.	Ph.D.	M.Sc- Ph.D Dual Degree	Total (UG+PG)
Aerospace	99	32	-	-	43	35		209
B.S.B.E.	74	-	-	-	21	47		142
Chemical	159	51	-	-	58	38		306
Chemistry	61	-	47	-	-	156		264
Civil	205	34	-	-	70	42		351
C.S.E.	154	116	-	-	82	11		363
Economics	33	-	1	-	-	_		33
Design (M.Des.)	_	-	-	-	18	_		18

E.E.	267	90	-	-	138	59		554
H.S.S.	-	-	-	-	-	50		50
Math.	111	-	53	-	-	59		223
Stat.	-	-	42	-	-	06		48
M.E.	201	81	-	-	125	50		457
M.M.E.	218	-	-	-	51	28		297
Physics	68	-	42	17	-	41	30	198
I.M.E.	-	-	-	-	25	18		43
Laser Tech.	-	-	-	-	12	-		12
M.S.P.	-	-	-	-	26	12		38
N.E.T.	-	-	-	-	12	03		15
E.E.M.	-	-	-	-	24	-		24
DIIT (EE)	-	-	-	-	-	-		-
M.B.A. (I.M.E.)	-	-	-	-	61	-		61
Total	1650	404	184	17	766	655	30	3706

# **GRADUATION**

During the year 2006-2007, 913 students completed the requirements for the award of B.Tech., M.Sc., DIIT, MBA, M.Tech., and Ph.D. degrees as detailed below:

B.Tech.	306
M.Sc. (2 yr. & 5 yr.) 85 & 37	122
B.TechM.Tech. (Dual)	41
MBA	32
M.Tech.	312
M.Des.	14
Ph.D.	86
Total:	913

# **COURSES OFFERED**

The following Table gives a picture of the courses offered during 2006-2007 at the undergraduate as wall as postgraduate level:

# UNDERGRADUATE LEVEL

Core Curriculum/	First	Second	Summer	Total
<b>Department Courses</b>	Sem.	Sem.		
Core Courses run by various departments	26	40	07	73
Aerospace Engineering	15	20	03	38
B. S. B. E.	08	11	-	19
Chemical Engineering	20	19	03	42
Civil Engineering	22	22	01	45
Computer Science & Engineering	25	23	03	51
Electrical Engineering	32	34	01	67
Mechanical Engineering	26	24	01	51
Materials & Metallurgical Engineering	14	16	-	30
Chemistry	26	27	03	56
Mathematics	30	30	01	61
Physics	21	27	01	49
Humanities & Social Sciences	17	17	02	36
Industrial & Management Engineering	12	09	-	21
Nuclear Engineering & Technology	-	01	-	01
Materials Science Program	01	03	-	04
Laser Technology Program	02	-	-	02
СРА	02	02	-	04

# POST GRADUATE LEVEL

Core Curriculum/	First Sem.	Second Sem.	Total
<b>Department Courses</b>			
Aerospace Engineering	12	16	28
Chemical Engineering	14	11	25
Civil Engineering	18	18	36
Computer Science & Engineering	15	15	30
Design (M.Des.)	06	05	11
Electrical Engineering	28	23	51
Environmental Engg. & Management	04	06	10
Mechanical Engineering	17	19	36
Materials & Metallurgical Engineering	12	11	23
Chemistry	15	12	27
Mathematics / Statistics	13	13	26
Physics	09	15	24
Humanities & Social Sciences	23	19	42
Industrial & Management Engineering	08	04	12
Materials Science Program	07	07	14
Nuclear Engineering & Technology	04	05	09
Laser Technology Program	03	03	06
Biological Science & Bio Engg.	09	12	21
M.B.A.	20	19	39

## **UNDERGRADUATE**

The following statement shows promotion and detention of B.Tech., M.Sc. (Integrated) and B.Tech.-M.Tech. (Dual Degree), students in the academic year 2006-2007 (upto May, 2007)

S1. No.	Contents	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Total
1	Students strength at the beginning of the session	541	502	479	395	136	2053
2	Students strength at the beginning of the 2 <sup>nd</sup> semester	540	598	477	395	122	2132
3	Students joined in 2 <sup>nd</sup> semester on migration	1	-	-	-	-	-
4	Number of students withdrawn or on leave on medical ground in 1 <sup>st</sup> and 2 <sup>nd</sup> semesters		02	02	01	-	12
5	Number of students graduated	-	NIL	Nil	242	227	469
6	Number of students		04	01	-	-	05
	dismissed due to poor performance in 1st and 2nd semester	02	-	01	01	-	04

The following statement shows promotion and detention of M.Sc.(2-year) and M.Sc.(Dual Degree) students in the academic year 2006-2007(upto May, 2007)

S1. No.	Contents	1st Year	2 <sup>nd</sup> Year	Total
1	Students strength at the beginning of the session	87	89	176
2	Students strength at the beginning of the 2 <sup>nd</sup>	78	83	161

	Sem.			
3	Number of students dismissed in 1st semester	-	-	
	Number of students dismissed in 2 <sup>nd</sup> semester	-	-	
4	Number of students graduated in 1st semester	-	-	
	Number of students graduated in 2 <sup>nd</sup> semester	-	67	67
5	Number of students dismissed in due to continued absence from the programme	-	-	

Following is the department-wise break-up of students who were awarded the degree at XXXIX Convocation held on 01-06-2007. Shri G Madhavan Nair, Chairman ISRO, Govt. of Inida is the Chief Guest at the Convocation:

DEPT	B.Tech.	B.Tech- M.Tech (Dual Degree)	M.Sc. (5YR)	M.Sc. (2YR)	TOTAL	MBA	M.Des	M.Tech	Ph.D.	TOTAL	GRAND UG+PG
AERO ENGG.	27	05	-	-	32	-	-	16	03	19	51
BSBE	-	-	-	-	-	-	-	02	-	02	02
CHEM. ENGG.	39	07	-	-	46	-	-	26	08	34	80
CHEMISTRY	-	-	14	22	36	-	-	-	22	22	58
CIVIL ENGG.	41	-	-	-	41	-	-	34	05	39	80
COMP.Sc.& ENGG.	30	09	-	-	39	-	-	34	03	37	76
DESIGN PROG.		-	-	-		-	14			14	14
ELECT. ENGG.	72	09	-	-	81	-	-	64	05	69	150
ENV.ENGG.&M GMT	-	-	-	-	-	-	-	16	-	16	16
HUMANITIES & SOC. SCs.	-	-	-	-	-	-	-	-	04	04	04
INDUSTRIAL & MGMT. ENGG,	-	-	-	-	-	32	-	03	03	38	38
LASER TECH.	-	-	-	-	-	-	-	05	-	05	05

# Annual Report 2006-2007

MATERIALS &	50	-	-	-	50	-	-	34	08	42	92
MET. ENGG.											
MATERIALS Sc.	-	-	-	-	-	-	-	09	-	09	09
MATHEMATICS	-	-	-	21	21	-	-	-	05	05	26
MATHS & SC	-	-	15	-	15	-	-	-	-	-	15
COMPUTING											
MECHANICAL	47	11	-	-	58	-	-	58	12	70	128
ENGG.											
NUCLEAR ENGG.	-	-	-	-	-	-	-	11	-	11	11
&											
TECHNOLOGY											
PHYSICS	-	-	08	22	30	-	-	-	08	08	38
STATISTICS	-	-	-	20	20	-	-	-		-	20
TOTAL	306	41	37	85	469	32	14	312	86	444	913

# Research and Development

The institute has maintained a healthy growth rate in its Research and Development activities in diverse fields of Science and Technology during the year 2006-07. The faculty members and research engineers/scientists of the institute are engaged in executing, at any time, about 138 sponsored projects and about 96 consultancy projects. The institute received a total research grant of approximately Rs. 65.68 crores rupees for sponsored projects and Rs. 5.62 crores rupees for consultancy projects, respectively.

A Memorandum of Understanding (MoU) has been signed between Hindustan Aeronautics Limited (HAL) and the Indian Institute of Technology, Kanpur on to conduct basic and advanced research and tackles multidisciplinary problems in aircraft systems technology and its application. This MOU is in recognition of the need for Scientific and Engineering research to enable a truly self-reliant and advanced aircraft systems development programme for the country in the coming years and IIT Kanpur's a strong research base in areas of direct relevance to the future programmes of HAL. In particular, HAL would like to use the expertise available at IITK in aircraft systems and Line-Replacement Units (LRUs) related technologies. The broad areas initially identified for carrying out collaborative technology development work are:

- Environmental Control and Hydraulic Systems analysis by FEM and CFD
- Microprocessor based instruments on Active Matrix Liquid Crystal Display,
   Fuel Content Gauge and Air Data Sensors
- Optimization of weight and size of Aerospace equipment.
- Development of Communication equipment
- Tracking algorithms for Radar.
- Data Compression Algorithms
- Open system hardware development
- Optronics, Nanotechnology development

Details of some of the major projects sanctioned during the year 2006-07 are as follows:

#### **National Projects**

 "Brihaspati Phase-2: Development of open source content delivery tools with advanced features" funded by the Ministry of Communication and Information Technology (MCIT) aims to develop the Brihaspati Virtual Classroom tools further with better and modified architecture. The expected outcome of the project involves; Web application source codes in different packages written in java; the rpms, zips for installation; jar based distribution; documentation of the architecture and user documentations made available to public via websites of the project; Working LMS installation using developed software; Technology being transferred to industry for commercially supported LMS Solutions.

- "Development of English to Indian Languages: Machine Translation (MT) System based on AnglaBharti Technology" The institute has joined hands with the Centre for Development of Advanced Computing (CDAC) Kolkata, CDAC Noida and CDAC Tiruvananthapuram as a fourth Institution where IIT Kanpur is chosen as the Consortium Leader. The project is funded by the Department of Information Technology (DIT). The deliverables of the project involves development of a English to Indian Languages Machine Translation System based on AnglaBharti-II Technology, where user will be able to give a document in English; user will be able to get the translated document in other Indian Language of the choice of the user; the MT System will be developed in the Tourism and Health domains with 80-85% accuracy; language pairs involved will be English-Urdu, English-Punjabi, English-Bengali, English-Malayam.
- "Ordered Peptide Assemblies" sponsored by the Department of Science and Technology (DST) is concerned with the understanding of the fundamental role of short peptide motifs from biologically relevant sequences and proposes that they act as focal points of the aggregation process. Towards this goal, novel peptide constructs will be synthesized and their solution-phase aging behavior will be studied with the help of TEM/SEM, AFM and optical microscopic techniques to follow the initial phases of peptide aggregation to develop models for full-length protein aggregates.
- "Structural and Biochemical Investigations to determine the roles of protein kinases B and G in M. Tuberculosis" funded by the Department of Biotechnology has the objective of Structural and Biochemical characterization of PknB and its interaction with substrates. The project provides the structural basis for PknB -Substrate Interactions; Structural and Biochemical characterization of PknG and its interaction with substrates. Moreover, the project looks forward towards biochemical investigations to identify and characterize the autophosphorylated residues in PknG.

- "Identification, Analysis and Control of Flow Angularity in Thrust-Vectored Nozzles" funded by the Aeronautics Research & Development Board (ARDB) has put forth that simple additions of propulsion to flight-control technologies, in linear simulations have been found to be inadequate. Therefore, people have proposed some integrated airframe-propulsion system concepts to develop more robust and agile flying platforms. Thus, the study involves a detailed analysis of the accelerated flow field through a curved nozzle to be carried out, which will help in identifying the location of steepest radial pressure gradient. A closed loop fluidic actuator has been used to reduce the pressure gradients such that the divergence between the geometric and effective thrust-vectoring angle can be reduced.
- "Modeling Oxido-reductase Enzymes of Molybdenum and Tungsten from Hyperthermophilic to Mesophilic Origin" Under the special drive of DST to compete globally in the field of "Bioinorganic Chemistry" project proposals were invited and were reviewed by National and International Experts. Under this Scheme, the said project has bee sanctioned to IIT Kanpur. This research will try to understand the development of metalloproteins from hyperthermophilic anaerobic primitive environment of the earth to the present day mesophilic aerobic environment. The project seeks that the hyperthermophilic anaerobic tungsten enzymes and mesophilic aerobic molybdenumenzymes will be synthesized in test tube to understand their involvement in controlling several biogeochemical cycles like, nitrogen, carbon or sulfur cycles. The chemistry, structural features, biochemistry of the synthesized systems will be compared with the isolated native enzymes and hybrid systems will be developed.
- "Magnetic and superconducting thin film heterostructures SPINTRONICS" funded by he Department of Atomic Energy (DAE) under the Board of Research in Nuclear Sciences (BRNS) has sanctioned a project titled in collaboration with the research scientists from SNBCBS, IISc, IACS and Pune University. This collaborative research project envisages optimal utilization of thin film heterostructures of doped Mott insulators and multielemental intermetallics. The focus is on understanding the fundamentals of interface magnetism, carrier mediated exchange coupling, and Cooper pair and quasiparticle tunneling in superconductor-ferromagnet-superconductor [FM-SC-FM] and ferromagnet-insulator-ferromagnet [FM-I-FM] junctions. The issues such as the phase shift in the tunneling of the condensate in FM-SC junctions, long range proximity effect in SC-AF-SC sandwiches and spin polarized tunneling in FM-insulator-FM junctions will be addresse through extensive transport measurements over a wide range of temperature and

magnetic field. The immediate and tangible benefits of the project are fundamental understanding of the physics of these contemporary materials, development of expertise and human resource in the technology of heterostructures and creation of infrastructure for preparation and procession of new material systems for SPINTRONICS.

- "Identification, Analysis and Control of Flow Angularity in Thrust-vectored nozzles" is funded by Aeronautics Research and Development Board (AR & DB). One of the major problems associated with thrust-vectored nozzles is the development of high-pressure spot at the bending location. This leads to the establishment of radial pressure gradients causing the flow to bend away from its desired direction. Therefore, the effective flow angle and not the geometric vectoring are considered to be the most important control parameter in thrust vectored systems. In the given study, a detailed analysis of the accelerated flow field through a curved nozzle is being carried out, which has helped in identifying the location of steepest radial pressure gradient. A closed loop fluidic actuator has been used to reduce the pressure gradients such that the divergence between the geometric and effective thrust-vectoring angle can be reduced.
- "Microdevices for Process Applications" funded by DST explains that the use microdevices such as micromixers, micro-heat-exchangers microreactors is expected to have a number of advantages over conventional systems for heat and mass transfer, chemical reactions and sensing. These advantages include very fast mixing, high heat and mass transfer rates, high level of safety, ease of scale-up and fast dynamic response. In the proposed study, a microfabrication facility will be established and two specific microdevices will be developed. These include an integrated microfuel processor for producing hydrogen and a biosensor for early cancer detection. Moreover, fundamental studies on hydrodynamics, heat and mass transfer in micro-channels for design of the above two devices will be undertaken. Specifically, these studies will focus on convective flow boiling of miscible fluids in micro-channels, effect of aspect ratio and roughness on single phase heat transfer, passive strategies for enhancing heat and mass transfer, hydrodynamics and mass transfer around immobilized cells and the effect of catalyst coating on single phase hydrodynamics and heat transfer.
- "Study of Efficiency of Polymer Photo-Voltaic Cells & Photo- Detectors using Different Dopants" has been sponsored by DRDO to achieve the state of art efficiency of PVs. The polymer materials used in making photovoltaic cells are new class of materials. Their properties, interactions with other materials and environment are important in making efficient and stable

photovoltaic cells. Besides stability issues, there are three other parameters viz. open circuit voltage (V<sub>OC</sub>), short Circuit (I<sub>SC</sub>) current and Fill Factor (FF) which are to be increased. The experiments are being carried out to obtain the objective. Already results of good device characteristics and solar modules capable of driving small electronic gadgets like digital watch, calculator and LEDs have been fabricated.

- "Identification and Chemical Characterization of Particulate Air Pollution Sources and their Apportionment in Ambient Air of Kanpur City" Pollution control agencies responsible for developing particulate attainment strategies must be able to provide convincing evidence that (a) the relative importance of emission sources is understood and that (b) the control programs proposed are cost effective and can be adopted by the community with confidence. To effectively answer these questions, a project is sponsored to IIT Kanpur by Central Pollution Board, New Delhi. Objectively the project aims to achieve the following: identification and inventorization of emission sources (industry, traffic, power plants, local power generation, small scale industries etc.) in Kanpur city; to measure baseline air pollutants and air toxic levels at different parts of Kanpur, which includes "hot spots" on curbside as well ;to project emission inventories using mathematical models taking into account of vehicle population/ improvements in vehicle technology, fuel quality changes and other activities having impact on ambient air quality thereof; and Application of receptor modeling to PM<sub>10</sub> levels in ambient air to arrive at source apportionments.
- "Feasibility Study of Superfinishing Process For Silicon Mirror" funded by Bhabha Atomic Research Centre (BARC) will be carried out with a view to prepare a Road Map for Developing Superfinishing Technology for Large Single Crystal Silicon Mirrors with sub-nanometer surface finish. The Road Map will high light:
  - a) The 'Grey Areas' where basic research efforts are to be concentrated,
  - b) The 'Gap Areas' where technological inputs in terms of establishing superfinishing technology in the country in terms of Special Purpose Machines, special tooling and comprehensive technology development scheme are clearly identified.

#### **International Projects**

• "Passive and Active RFID and Location Technology Research" sponsored by the Boeing Company, St. Louis, Missouri, USA aims at evaluating different RFID vendors for passive and active systems as well as for real time location systems, on the basis of the quality of their products and the technology employed, highlighting their strengths, weaknesses, advantages, disadvantages, and special features. Also, different types of RFID technologies and algorithms are to be assessed on the basis of their capabilities, accuracies, and reliability. Selected RFID hardware and software will be tested and researched in the laboratory environment to suggest means of the RFID technology and product improvement. The second phase (another three years) of the Boeing project will focus on the deployment of an accurate Real Time Location System (RTLS) in their large aerospace manufacturing plant in St. Louis, Missouri, USA.

- "Environmental Health Assessment: Respiratory Disease in relation to Air Pollution in Kanpur, Uttar Pradesh" The project is built upon results and achievements of the earlier project between IIT Kanpur and Norwegian Institute for Air Resaerch (NILU) on "Indoor and Ambient Air Exposure of PAHs and Fine Particulate to Women and Children: Health Impacts in terms of Morbidity" completed in July 2005. It is a multi-institutional project sponsored by NORAD, Norway. Besides IIT Kanpur and NILU, Central Pollution Control Board, Agra, GSVM Medoical College, Kanpur and UP State Pollution Control Board (SPCB) are participating in the project. The main aim of the project is to build up a methodology for environmental health impact assessment. The specific aims is to accesss population-wide healtheffect of air pollution in the city of Kanpur, to lay further basis for environmental health and air quality monitoring at Kanpur and Agra and to disseminate the findings and sampling procedures for adoption at other sampling locations in India.
- "Neurofibrillary Tangles IN Lafora Disease: Unraveling Molecular Players of Dementia" is funded by Life Sciences Research Board (LSRB). With increasing understanding of the underlying pathology, new therapeutic targets are being identified at an increasing rate and the present proposal aims to characterize one of the regulators of tau phosphorylation. The ongoing investigations using a mouse model for a neurodegenerative disorder called Lafora disease (LD) reveal widespread presence of NFTs in the affected brain. LD, a fatal disorder, is caused by defects in the gene EPM2A encoding a protein phosphatase named laforin. It is therefore proposed to establish the molecular links between laforin and tau proteins using an inducible neuronal cell model. The finding of this project is expected to offer novel drug targets for intervention strategies.

#### Patents Granted to IIT Kanpur Faculty during the financial year 2006-2007

Tubular microwave sintering furnace (1147); Rare-Earth Oxide Dispersed Sintered Stainless Steels (1224); A Process for generating micro and sub-macro patterns on the surfaces or layers of polymers(1519); An Organic/polymer low information content displays (1525); New Duplex adsorption process for fraction of gas mixture (1567); Wide Band Loop Antenna (1594); A low complexity symbol timing estimator for MIMO Modem using two samples per symbol (1857); Conversion of Vegetable Oils to Biodiesel (2114); Conferring nematode resistance in plants (171); Improved Single Phase Phase-Locked-Loop (349); Process for generating miniaturized replicas of a 2D or 3D pattern or an object (522); A novel viscoelastic media used for a nanofinishing of materials through abrasive flow machining process and method of manufacture thereof (591);Two dimensional nano positioned (323);Butt Joint using reinforced adhesives (679); Functionally graded magnetic materials and a method for preparation of the same (680); A novel functionally graded polymer(s)/polymeric nanocomposite(s) [FGP(s)]/FGPNC(s)] having glass transition temperature variation and a process for preparation thereof (681); Carbon nanotube(s) Coated Cutting tool(s) and a method for preparation thereof (735); Functionally Graded Polymer Nanocomposites/Composites having cross linking density variation and their manufacture (736); Functionally graded wide-band polymeric composites for microwave absorbers and method of manufacturing same (737).

Few international patents have also been filed during during the last year 2006-07; Pathogen Resistant Transgenic Plants, Associated Nucleic Acid Molecules and Techniques involving the same (US Patent Application Serial No. 11/783, 916); Process for nitration of macromolecules (PCT) No. 00370

Major Multi-disciplinary Facilities Added During the Financial Year 2006-2007 is:

#### 1. Facilities under the FIST Scheme of DST:

The Department of Science and Technology (DST) has a Fund for Improvement of Science & Technology (FIST) to build infrastructure facilities in Universities and Higher Educational Institutions. The grant under this scheme is provided for strengthening infrastructure of the identified department for teaching and research and is spent exclusively for the said purpose. During 2006-07, IIT Kanpur has received FIST grants to add special infrastructure facilities for research purpose. The Department of Biological Sciences and Bioengineering has been provided a total amount of Rs. 220.00 Lakh to strengthen the research facilities in areas of Cell Biology and Structural Biology. Similarly, the Department of Physics is sanctioned an amount of Rs. 422.00 Lakh as financial support to acquire "Helium Liquefiers, Helium Compressor, Cryogen Absorber, Helium Recovery Gas Bag, Acoustic Blanket fro

Helium Compressor etc." The Department of Aerospace Engineering has been accorded an approval of Rs.395.00 Lakh as financial support to acquire "Time Resolved 3D PIV, Multi-channel CTA with Hot Film Probes, Pressure Callibrator, Pressure Transducers and Electrodynamic Tensile Testing Machine etc." The Department of Mechanical Engineering is sanctioned an amount of Rs. 965.00 Lakh to strengthen research in the areas of "Experimental Stress Analysis, Smart Materials and Control, Fluid Mechanics, Heat Transfer, Energy Conservation, Manufacturing Science" in the Department.

#### 2. Centre for Nanotechnology and Nanosciences:

In continuation of setting up the Centre of Nanoscience and Nanotechnology by the Department of Science and Technology (DST), a unique interdisciplinary proposal is focused upon where development of technologies based on the rapidly developing nanoscience can be developed. The project has been initiated in January 2007 with a current outlay of Rs. 11.50 crores for a period of 5- years.

The project focus is currently in the inter-related areas of: Development of Printable Organic Electronics with Organic-RFID tags as the first demonstrator prototype, and the Development of a versatile focused ion beam tool based on microwave plasma ion beam for applications in patterning and templating of soft-materials and substrates. As a part of this project world class facility for printing circuits with technologies such as ink-jet, nano-stamping and gravure printing methods will be installed. The ability to manipulate and make electrical measurements at a nanoscale is also an integral part. There have been under this project significant progress in the design and fabrication of 'Organic Thin Film Transistors' with different architectures. Both top gate and bottom gate TFTs have been fabricated and tested using existing facilities. Composite and multilayered dielectrics have been employed in the fabrication of Organic Thin Film Transistors. In order to overcome the limitation of using only Ga ions as focused ion beams (FIB), a multi-element FIB is being developed based on compact microwave plasma as ion source. This will be a unique facility globally and open up use of FIB to many more applications than that is possible at present.

#### 3. Facilities under CARE Scheme of IITK:

IIT Kanpur has a Committee for Allocation of Research Equipment (CARE) Scheme providing financial assistance for the purpose of the specialized equipments for multi-disciplinary research of significant value. The institute CARE support during the year 2006-07 has been Rs. 227.05 lakh for setting up Shielded Anechoic Chamber in the Department of Electrical Engineering, Precision Ion Beam Milling System in the Department of Materials and Metallurgical engineering, Density Gradient Separation cum Fractionation Facility in the Department of Biological Sciences and Bio Engineering, Encapsulation System for Organic Photovoltaic Devices/Panels in the

Department of Electrical Engineering, Cyclic Triaxial Testing System to Evaluate Shear Strength and Liquefaction Potential of Noncohesive Soil in the Department of Civil Engineering, Optical Microscope for Research on Microfluidics and Contact Mechanics on Soft Materials in the Department of Chemical Engineering, Tunable Laser in the Wavelength range of 1480-1640nm in the Laser Technology Programme, and Engine Exhaust Particle Sizer (EEPS) Spectrometer with Rotating Disk Diluter & Software in the Department of Mechanical Engineering.

During the year 2006-07, IIT Kanpur has strengthened its relations with many national and international institutes and organizations through research collaborations and signed memorandum of understanding. During the year 2006-07 the following institutes/universities/organizations have joined hands with IIT Kanpur for the purpose of research work in the diverse fields of science and technology. Some of such organizations are:

- University of Texas Southwestern Medical Center at Dallas, Dallas- For Beta Test site agreement for statistical coupling analysis algorithms.
- Pure Energy Vision Inc. (PEVI), Canada-To set up Direct Methanol Fuel Cell (DMFC) Center at IIT Kanpur.
- The Boeing Company (Boeing), St. Louis, Missouri- To use, handling, protection, and safeguarding of Proprietary Information which is disclosed by and between the parties for the purposes exploring advances in the radio frequency identification and how the technology applies to the way Boeing manages its supply chain.
- Interuniversitair Micro-Electronica Centrum, Belgium-For evaluating the confidential information to determine their respective interests in mutual beneficial research collaboration.
- Universiti Teknologi Mara, Shah Alam, Malaysia-The purpose of the International letter of Intent is to establish an academic partnership for carrying out various cooperative programs.
- Bose Corporation, USA-For interacting with the scientists at Bose and short-term summer project on Finite element analysis in structural mechanic.
- Indo-French Centre for the Promotion of Advanced Research (IFCPAR), Centre Franco-Indien Pour La Promotion De. La Recherche Avancee (CEFIPRA) -For carrying out project entitled "Electromagnetic methods: A way to forecast earthquakes."

- Her Majesty The Queen in Right of Canada CANMET- Material Technology Laboratory-To better understand the particular challenges, particularly in corrosion, posed by operating oil and gas pipelines.
- L' Eole national Superieure, D'Arts ET Metilers, France (ENSAM)-To promote scientific and pedagogical cooperation, to exchange students and staff, to share experiences and to organize activities in the field of higher education and research.

Memorandum of Understanding has also been signed with many national institutions like:

Mahindra & Mahindra Ltd., Mumbai; Hindustan Aeronautics Ltd., Lucknow; Indo Gulf Fertilizers- A Unit of Aditya Birla Nuvo Ltd.; Ministry of Rural Development (Monitoring Division), New Delhi; Department of Biotechnology, Ministry of Science & Technology, New Delhi; Indian Air Force; Central Pollution Control Board, New Delhi; Central Mechanical Engineering Research Institute, (CMERI), Durgapur; Intel Technology India (P) Ltd, (Intel); The Directorate of Forensic Science, Ministry of Home Affairs, Govt. of India, New Delhi; Tata Consultancy Services (TCS), Mumbai etc.

List of major sponsored and consultancy projects sanctioned during the financial year 2006-2007 is provided below.

#### Sponsored Projects

#### A. National Projects

- "STRUCTURAL AND BIOCHEMICAL INVESTIGATION TO DETERMINE THE ROLES OF PROTEIN KINASES BANDIGIN TUBERCULOSIS" funded by DBT, Total cost Rs. 1, 32, 43,000.
- "DEVELOPMENT OF PROJECT OF RFID TECHNOLOGIES AND SETTING UP OF PREPARATORY FRAMEWORK OF EPC ACCREDITED AUTO LAB" funded by CDAC, Total cost Rs. 29, 50,000.
- "DEVELOPMENMT OF BETTER MODEL FOR SPEAKER NORMALISATION AND THEIR APPLIACTION IN AUTOMATIC SPEECH RECOGNITION" funded by DST, Total cost Rs. 19, 98,000.
- "EFFECTIVENESS OF FRP BARS IN SEISMIC STRENGTHENING OF RC FRAME WITH BRICK MASONRY IN FILL WALLS", funded by DST, Total cost Rs. 23, 73,018.

- "DEVELOPMENT OF ENGLISH TO INDIAN LANGUAGE MACHINE TRANSLATION SYSTEM BASED ON ANGLABHARTI TECHNOLOGY", funded by DIT, Total cost Rs. 70, 00,000.
- "THERMAL HYDRAULIC TRANSIENT ANALYSIS OF A PROPOSED REACTOR" funded by DAE, Total cost Rs. 14, 87,700.
- "STAR -BURST, LINEAR, AND CROSS LINKED MACRO-MOLECULE METAL NANOPARTICLE HYBRID AS EFFICIENT RECYCLABLE CATALYSTS", funded by DST, Total cost Rs. 50, 00,000.
- "ION BEAM FACILITY FOR MICRO NANOSCALE SCIENCE AND ENGINEERING", funded by DST, Total Rs. 15, 60, 00,000.
- "NATIONAL FACILITY & MICROARRAY GENETIC AND CELL IMAGING, funded by DBT, Total cost Rs. 23, 79,000.
- "MULTI-SCALE ANALYSIS BASED MODELLING OF DAMAGE EVOLUTION IN UNI-DIRECTIONAL COMPOSITE LAMINATES", funded by ARDB, Total cost Rs. 76, 27,000.
- "IMPACT OF ANTHROPOGENIC AEROSOLS ON CLOUD MICROPHYSICS", funded by DST, Total cost Rs. 1, 55, 11,000.
- "DEVELOPMENT OF NOVEL CARBON NANOTUBE REINFORCED HYDROXYA PATITE (HAP), POLYTHER ETHER KETONE (PEEK) NANOCOMPOSITES FOR AEROSPACE APPLICATIONS", funded by DBT, Total cost Rs. 36, 87,000.
- "INVESTIGATION ON DEVELOPING BIO-ACTIVE POLYTHELENE-HAP AL2O3 BIOCOMPOSITES FOR BIO MEDICAL APPLICATION", funded by DBT, Total cost Rs. 38, 47,000.
- "BRIHASPATI PHASE -II: DEVELOPMENT OF OPEN SOURCES CONTENT DELIVERY TOOL WITH ADVANCED FEATURES", funded by MCIT, Total cost Rs. 48, 00,000.
- "SYNTHESIS AND CHARACTERISATION OF CARBON NANOTUBES ON THE SURFACE OF GLASS FIBER AND ITS COMPOSITE IN EPOXY MATRIX", funded by DST, Total cost Rs. 24, 45,329.
- "MODELLING OXIDE REDUCTASE ENZYMES OF MOLYBDENUM NAD TUNGSTEN FROM HYPERTHERMOPHILIC ORIGIN", funded by DST, Total cost Rs. 1, 30, 91,000.

- "MICRODEVICES FOR PROCESS APPLICATION", funded by DST, Total cost Rs. 4, 97, 96,000.
- "CONSOLIDATION AND SHEAR STRENGTH BEHAVIOUR OF COHESIVE SOIL WITH THE EMPHASIS ON ITS INTERMEDIATE MICROFABRIC", funded by DST, Total cost Rs. 35, 28,000.
- "STUDY OF EFFICIENCY OF POLYMERS PHOTO-VOLTAIC CELLS PHOTO DETECTORS USING DIFFERENT DOPANTS", funded by DRDO, Total cost Rs. 67, 00,000.
- "EXPERIMENTAL STUDY OF AERATED LIQUID INJECTION", funded by ARDB, Total cost Rs. 67, 00,000.
- "IMAGE VELOCIMETRY DEVELOPMENT FOR BIOMEDICAL & MEMS APPLICATION", Funded by DST, Total cost Rs. 99, 16,000.
- "FEASIBILITY STUDY OF SUPERFINISHING PROCESS FOR SILICON MIRROR", funded by BARC, Total cost Rs. 55, 93,800.
- "STM/S STUDIES OF STRONGLY CORRELATED TRANSITION METAL OXIDES", funded by DST, Total cost Rs. 37, 15, 800.
- "HIGH ALPHA AERO DYNAMIC TESTING", funded by ARDB, Total cost Rs. 24, 66,500.
- "CRP SPINTRONICS MATERIAL MAGNETIC AND SUPERCONDUCTING THIN FILM HEREROSTRUCTURES FOR SPINTRONICS", funded by DAE, Total cost Rs. 1, 18, 78,000.
- "ORGANIC CHEMISTRY", funded by DST, Total cost Rs. 34, 80,000.
- "CENTRE FOR NANO-TECHNOLOGY (PRINTABLE ELECTRONICS, NANOPATERNING)", funded by DST, Total cost Rs. 11, 80, 00,000.
- "INVESTIGATION OF MULTI-FUNCTIONAL FERROELECTRIC (BIFeO3 X-PbTiO3) X-THIN FILM FOR SENSOR AND ACTUATOR APPLICATIONS", funded by DRDO, Total cost Rs.45, 48, 000.
- "MATHEMATICAL MODELINE OF FLOOD INNUDATION AREA DUE TO TSUNAMI BY USING HIGH RESOLTUION ALTIMETRIC LIDAR DATA UNDER THE GIS ENVIRONMENT", funded by DST, Total cost Rs. 31,59,000.
- "ORGANOMETRIC COMPOUNDS OF IR (III) AS PHOSPHORESCENT DOPANTS IN ORGANIC LIGHT EMITTING DIODES", funded by DRDO, Total cost Rs. 37, 37,500.

- "DEVELOPMENT OF A DUAL GROWTH FACTOR DELIVERY SYSTEM FOR TISSUE ENGINEERING", funded by BT, Total cost Rs. 36, 75,000.
- "THE ROLE OF UBIQUITIN -PROTEASOME DYSFUNCTION IN LAFORA DISEASE (LD): UNDERSTANDING THE MOLECULAR FUNCTIONS OF THE LD GENE PRODUCT MALIN- A PUTATIVE UBIQUITIN LIGASE", funded by BRNS, Total cost Rs. 19, 63,250.
- "USE OF DIA TECHNIQUE STRAIN LOCALIZATION ANALYSIS OF CLAY SPECIMENS WITH CONTROLLED MICROFABRIC UNDER CYCLIC LOADING CONDUCTION", Total cost Rs. 19, 44,000.
- "FUNTIONAL CHARACTERIZATION OF PLANT PARASITIC NEMATODE GENES USING THE RNA-MEDIATED INTERFERENCE (RNAi) TECHNOLOGY", funded by DBT, Total cost Rs. 31, 08,000.
- "ANGLABHARTI CONSORTIA FOR MACHINE TRANSLATION FROM ENGLISH TO INDIAN LANGUAGE", funded by DIT, Total cost Rs. 69, 12,500.
- "IDENTIFICATION, ANALYSIS AND CONTROL OF FLOW ANGULARITY IN THRUST-VECTORED NOZZLES", funded by ARDB, Total cost Rs. 98, 19,500.
- "FINDING EFFICIENT ALGORITHMS FOR IDENTIFYING TESTINS AND GRAPH ISOMORPHISM", funded by DST, Total cost Rs.42, 00,000.
- "ENANTION SELECTIVEC-c, C-o AND C-NB AND FORMATION", funded by DST, Total cost Rs. 29, 04,000.

#### **B.** International Projects

- "IMAGING PHASE SEPARATION IN CMR MATERIALS" funded by AOARD, Total cost Rs. 11, 00,000.
- "NEURO-FIBRILLARY TANGLES IN LAFORA DISEASE: UNRAVELLING MOLECULAR PLAYER OF DEMETIA" funded by, Life Sciences Research Board (LSRB) Total cost Rs.24, 24,001.
- "TERAHERTZ WAVES USING HIGH DENSTIY PLASMA SOURCES, funded by AOARD, Total cost Rs. 11, 25,000.
- "ENVIRONMENTAL HEALTH ASESSMENT", funded by Norwegian Institute of Air Research, Total cost Rs. 45, 58,400.

- "TWINING EUROPEAN ANS SOUTH ASIAN RIVER BASINS TO ENHANCE CAPACITY AND IMPLEMENT ADAPTIVE INTEGRATED WATER RESOURCES MANAGEMENT APPROACHES", funded by EC, Total cost Rs. 76,78,529
- "CACHE-WALKER: A COST EFFECTIVE NON-UNIFORM CACHE ARCHITECTURE FOR MANY CORE PROCESSORS", funded by INTEL, Total cost Rs. 15,75,000.

#### **Consultancy Projects**

- A. National Projects
- "GENERATION OF LONGITUDINAL AND LATERAL DIRECTIONAL AERO-DYNAMIC FORCE COEFFICIENTS OF FAE BOMB WITH RING TAIL CONFIGURATION BY WIND TUNNEL TESTING AT SUB-SONIC AND SUPER SONIC SPEED "funded by HEMRL, Total cost Rs. 9,94,860
- "CONSULTANCY SERVICE REG ARJUN SAHAYAK PROJECT" funded by MDC, Total cost Rs. 8,90,775
- "IMPACT EVALUATION STUDY OF PP/BKVY IN KBK DISTRICTS ORISSA" funded by GOO, Total cost Rs. 5,78,760
- "PRODUCTIONISATION OF SILICON PIN DIODES OF DIFFERENT CONFIGURATIONS FOR APPLICATIONS IN NUCLEAR RADIATION" funded by DRDO, Total cost Rs. 5,00,000
- "MEMBRANE SEPARATION EFFLUENT TREATMENT" funded by TISL, Total cost Rs. 10,00,000
- "DAY AHEAD AUCTION SOTWARE POWER EXCHANGE" funded by NCDEX, Total cost Rs. 5,00,000
- "CARPET WASHING MACHINE" funded by MOT, Total cost Rs. 12,89,000
- "TO DEVELOP MEMBRANE PROCESS BASED IN ORDER TO RECYCLE UREA BASED PROCESS CONDENSATE AFTER RECOVERING GAS NH3+CO2 AND UREA" funded by ADITYA, Total cost Rs. 20,32,608
- "FIELD TRIAL OF BIO-DIESEL FUELLED" funded by MAHINDRA, Total cost Rs. 15,50,000
- "TESTING OF CHOICE APPPLICATION SOFTWARE" funded by CHIPS, Total cost Rs. 18,40,000

- "LIBRARY AUTOMATION S/W DEVELOPMENT" funded by NSI, Total cost Rs. 3,65,000
- "ESTABLISHMNET OF MEASUREMENT SYSTEM FOR DETERMINATION OF VOLT-AMPERE (V-I) CHARACTERISTICS OF SHUNT REACTORS" funded by BHEL, Total cost Rs. 2,20,000
- "VOICE PROCESSING" funded by GM, Total cost Rs. 14,00,000
- "AUTOMATION GEOLOGY & MINING" funded by GEOLOGY, Total cost Rs. 3,00,000
- "ENHANCEMENT OF SCOSTA STANDARD 1.2b", funded by SEMICO, Total cost Rs.18,00,000
- "SYNTHESIS OF FRAGMENTS", funded by NEUROGEN, Total cost Rs. 3,51,000
- "INDIA INFRASTRUCTURE REPORT-2007, funded by MORD, Total cost Rs. 15,00,000
- "VIBRAHAN TESTING OF TUNNELS IN UDHAMPUR KATRA SECHRON", funded by IR, Total cost Rs. 13,46,880
- "INDEGENOUS DEVELOPMENT OF BOF PROCESS AUTOMATION SYSTEM AT RSP", funded by RDCIS, Total cost Rs. 46,42,768
- "VENTILATION AND AERODYNAMICS OF AIRPORT", funded by DMRC, Total cost Rs. 3,95,000

#### **B.** International Projects

- "DEVELOPMENT OF FEA TOOLS AND COURSE FOR BOSE APPLCATIONS" funded by BOSECO, Total cost Rs. 9, 90,000.
- "SMART CARD TECHNOLOGIES" funded by NXPSEM, Total cost Rs. 6, 75,000.
- "ACTIVE FAULT MAPPING IN KACHCH" funded by OYO, Total cost Rs. 13, 44, 187.
- "PASSIVE AND ACTIVE RFID AND LOCATION TECHNOLOGY RESEARCH" funded by Boeing, Total cost Rs. 90, 00,000.

# **Alumni Association Activities**

Alumni Association starts functioning from Outreach 69 and 80 building -the new Alumni and Placement Centre

The Alumni Placement Centre has been inaugurated on 26th December 2006.

The Alumni Association office is also presently functional from the Center. We want to put on record our deep appreciation of 1969 and 1980 batches for providing us this world class facility.

Many new initiatives which have been taken up in the financial year 2005-06:

#### **New Activities:**

## a. ICICI Online Payment Gateway

The ICICI Online Payment Gateway has been set up for the purpose of receiving online proceeds of interalia, reunion registration fees, sale of souvenir items and online remittance facilities. ICICI has provided the Alumni Association two MIDs (merchant ids) one for accepting payment in INR and other in USD.

# b. Wiki integration

Wiki is an interactive website created for both IITK students and alumni so that they can share information, create personal pages and discuss various issues.

#### c. Web casting of the reunions

The events held in the new Alumni center were web cast live and could be accessed by all alumni desirous of watching the events

# d. **Alumni Magazine**

The first issue of the alumni magazine has almost been finalized and its publication is under process

#### e. Music hobby classes

Music hobby classes have been started in the student activity centre from 2<sup>nd</sup> semester of 2006 for talented students of IITK in classical vocals.

# **Ongoing Activities:**

#### Nostalgia

The 'Nostalgia' event jointly organized by AA and the Student's Gymkhana, is held every year for bidding farewell to the students completing their graduation/post graduation. The Class-of-2006 had their penultimate meeting on 20 April 2006.

#### **Reunions:**

# 30 - Year Reunion - Zinc Jubilee Reunion

The first ever 30<sup>th</sup> year reunion was held by the class of 1977 from 24<sup>th</sup> - 25<sup>th</sup> December 2006 with 35 alumni attending the reunion along with their families. The reunion was inaugurated by the Director in the new outreach building and the occasion was web cast live. The reunion was a success, and other batches have been inspired to have their own 30<sup>th</sup> year reunion in the coming years.

#### 35 - Year Reunion:

The 35-year Reunion of the Class – of – 1972 was held on the campus during 27th – 28th December 2006 with 91 alumni from around the globe, participating in the event.

# 25 - Year Reunion - Silver Jubilee Reunions:

The Silver Jubilee Reunion of the Class – of – 82 was held on the campus during 30th – 31st December 2006 with 88 alumni attending the event with their families.

#### **Distinguished Alumni Awards:**

Forty five (45) nominations were received for the Distinguished Alumnus Award 2005 – 2006. After due deliberations, the Committee as per constitution selected the following persons for the Distinguished Alumni Awards: (1) Mr. Ravinder Nath Akhoury (BT/EE/68) (2) Mr. Narendra Kumar Harihar Kale (MT/CSE/76) (3) Prof. Ashutosh Sharma (BT/CHE/82) (4) Dr. Rajiv Desai (BT/ME/82) (5) Mr. Rajeev Chawla (BT/EE/84).

#### Satyendra K. Dubey Memorial Award:

Satyendra K. Dubey Memorial Award was instituted commencing from the year 2005. Ten nominations were received for the year 2006 for this award and

Prof. Ganesh P. Bagaria has been selected for the award by the Board of Governors of the Institute.

## **Distinguished Lectures:**

#### 23rd Kelkar Alumni Lecture

The 23rd Kelkar Alumni Lecture 'Right to Information - A Tool for Holding Government Accountable' was delivered on 25 March 2006 by Mr. Arvind Kejriwal (BT/ME/89/IITKGP) Founder of 'Parivartan'.

# Lectures on 'Be an IITian in the Job Market' series

This lecture series aims at updating IITK students on current job scenarios and inform students of the various job opportunities available to them, the pros and cons of these options, and what they need to do at IITK to prepare themselves for the option of their choice. Speakers are encouraged to relate their personal experiences in the work place and provide tips on dealing with the "real" world.

The second lecture of this series was delivered by Sanjiv Rangrass (BT/MME/82) General Manager Operations ITC Ltd., on August 26, 2006 and the third lecture of the series was delivered by Manoj Tandon (BT/MME/83) Head, Corporate Strategy and Business Planning of Nucleus Software on November 18, 2006.

#### Alumni Newsletter

In the year 2006-07 there were five editions: May, July, September, November, January and March.

We are attempting to improve the content and design with every issue. From the September edition 2006, hard copies of the Newsletter are being printed and sent to those alumni whose email id is not available in the database. AA has received a good response from sponsors and will strive to further enhance the sponsorships.

#### Alumni Database:

Since 1 April 2006, AA has made significant progress in enhancing the coverage of Alumni Database.

# **Central Facilities**

# P. K. KELKAR LIBRARY

P. K. Kelkar Library is housed with all modern amenities, in a magnificent three-storied building covering an area of 5730 square meters. The Library has been rendering essential support to the academic, research and development programme of the Institute. The Library remains open, for 358 days of the year, from 8 a.m. to 12 midnight on all working days; 9 a.m. to 12 midnight on Saturday; 9 a.m. to 5.30 p.m. on Sundays and Gazetted holidays, and for 24 hours during the three examinations each semester.

#### VISION 2010 FOR P. K. KELKAR LIBRARY

A paradigm shift in form and content of Knowledge and Information Management System has necessitated need for a vision document for P. K. Kelkar Library. The document highlighted on the following points:

- i. Addressing to 'Digital Divide'
- ii. Use of standard library software package
- iii. Development of Digital Library

A two-pronged strategic solution to de-stress the existing print collection was considered necessary in that while discipline wise available digital content are to be added; digitization of existing print collection wherever possible should be done. Initiative for Development of Institutional Repositories (IR) in terms of Electronic Theses and Dissertations (ETD) and Faculty/Academic staff publications has already been taken up. On the other hand digital contents in terms of e-books and online journals are also being added to the collection.

Creation of an **Archival Library Building** by shifting to it lesser/least used existing reading material has been suggested. This will help to de-load the existing library building which can be retrofitted to make it earthquake resistant. The existing library building will then be available with requisite innovations as a **Modern Digital Library**. There is a need for separate budgetary provision to achieve these objectives. The vision document was presented before the Senate Library Committee on Aug. 23, 2006 and to the

Institute Advisory Committee in its meeting held on Oct. 26, 2006 as an item no. 4 of its agenda.

#### **NEW ADDITIONS**

A total of 7243 volumes including 2983 books and 4260 bound journals were added to the collection during 2006-2007. The budget of Rs. 100 lacs was fully utilized for procurement of books.

#### SUBSCRIPTION TO PERIODICALS AND BINDING

The periodicals budget for 2006-2007 was Rs. 5.75 crores with an additional special grant of Rs.4 lacs. A grant of Rs. 20 lacs was made available by NBHM. The Library subscribed to 1283 current periodicals for the year 2007. Of these 942 are print versions, whereas 328 are print plus online and 13 are online only. The Library added 4260 bound volumes to its periodicals holdings. Besides, 2470 books and 638 old periodicals were also bound.

Springer's Online Journals Archive (OJA) consisting of 256 titles was procured by pooling funds from IITs/IISc through INDEST.

#### **E-RESOURCES THROUGH INDEST-AICTE**

As a core member to the INDEST, IITK academic community is entitled to access 20 full-text e-resources and to 6 bibliographic databases. The following new services were started during the year 2006-07 through INDEST:

- 1. American Mathematical Society:
  - i. Online access to three journals
  - ii. AMS Books Online
- 1. American Institute of Physics/American Physical Society:
  - Online access to their twenty four titles with complete back files.

#### LIBRARY SERVICES

#### WEEKLY DISPLAYS

The books added to the Library collection are displayed on the first working day of each week and a weekly `List of Additions' is available on the system. The current issues of the journals are also displayed on alternate days thrice a week.

#### **CIRCULATION**

During the year 2006-2007, 45827 publications were circulated for home study. A large number of books and journals from reference, textbook, and general collection areas were also consulted by users within the Library. Circulation facility is also extended to the superannuating faculty and to the institute alumni against a specified deposit.

#### DOCUMENT DELIVERY SERVICES & CONSULTATION FACILITY TO

#### **EXTERNAL USERS**

Inter-Library Loan (ILL) services are extended free to sister IITs, IISc, TIFR, BARC, host of INDEST members and other technical institutions & universities. During 2006-2007, ILL (OUT) requests for 1088 articles/chapters were received and processed from the host of Institutions, whereas ILL (IN) requests for 145 articles/chapters were made to other libraries.

Consultation facility of the library was extended to 798 external users including 214 NICEE programme participants.

#### LIBRARY AUTOMATION

iitKLAS: the software manages the day-to-day functions of the library. It is develoed in D2K with Oracle backend. The AIC module (Academic Information Center) is web based software developed in Java/Jsp for online access to library catalog. The order processing and journal entry programs were implemented. The e-mail alert for new arrivals of books has been introduced. The software for entry and access to the holdings of bound volumes were also implemented. Digital library initiatives help provide accessibility to the online journals from various publishers/aggregators, including INDEST-AICTE Consortium.

#### **DIGITAL LIBRARY INITIATIVES**

The following digital library initiatives were taken during the period:

1. CD Submission of Theses

Submission of theses by PG students direct to the library in CD form started from May 03, 2006.

2. Access to Electronic Theses and Dissertations (ETD)

Our ETD collection consisting of 9309 MTech/MDes and PhD theses as a first subset to **Insititutional Repository (IR)** is accessible on intranet through http://172.28.64.70:8080/dspace/

3. Setting Up Digitization Facility

Provision for digitization facility with a high speed overhead book scanner (Minolta PS7000) and a server with capacity of one TB to host the content has been made available in the library.

4. Launching of 'Faculty/Academic Staff Publications'

'Faculty/Academic Staff Publications' consisting of papers published in conference/journals, lecture notes, delivered lectures/speeches, technical/project reports and the like has been launched as a second subset to the IRs. The work is in progress.

5. Weekly New Arrivals Alert

Effective Nov. 06, 2006, the library has started sending weekly e-mail alerts to the academic staff and students for the books added to the library during the preceding week.

6. Automated Circulation Facility in Reserve Collection.

Automated 'Issue/Return' facility in Reserve Collection, predominently used by undergraduates, is available effective Oct. 14, 2006.

7. CD-ROM Database

Creation of CD-ROMs database for the following categories using WINISIS is in progress:

- i. Accompanying material to books/journals
- ii. Books only on CD-ROM
- iii. Journal only on CD-ROM
- iv. Conference proceedings

# 8. New Library Software Package

Procurement of LSPremia, a web centric software package for libraries from LibSys, and a dedicated server are under process to meet the requirements of in-house library functionalities and services, more so in the context of digital library environment.

#### Research Papers Published in Journals.

- 1. Digitization in Academic Libraries, Information Studies Journal, 12, 1, 35-54, 2006, Anjana Bhatnagar.
- 2. Strategic Cooperation and Consortia Building for Indian Libraries: Models and methods, Library Review, 55, 9, 608-620, 2006, Maitrayee Ghosh, S. C. Biswas, and V. K. J. Jeevan.
- 3. Role of Indian Public Libraries to Increase the Awareness of the Community on HIV/AIDS, The International Information and Library Review, 38, 56-63, 2006, Maitrayee Ghosh.
- 4. Preparing Information Professionals for Leadership in the New Age: The 1st Asia Pacific Conference on Library and Information Education and Practice, Library Hi Tech news, 6, 12-15, 2006, Maitrayee Ghosh.

#### **Research Papers Published in Conference Proceedings**

- 1. Digitisation Initiatives to Destress Library Collection: A case study of ETD at P. K. Kelkar Library, IIT Kanpur, proceedings International Conference on Digital Libraries (ICDL), New Delhi, Dec. 5-8, 379-387, 2006. R. Mishra, S. K. Vijaianand, P. P. Noufal, Rajesh Kumar and Gaurav Shukla.
- 2. E-Learning: a versatile approach in distance education, proceedings International Conference on Digital Libraries (ICDL), New Delhi, Dec. 5-8, 675-688, 2006, Anjana Bhatnagar and M. Anand.
- 3. The Challenging and Critical Role of Information Professionals in Combating AIDS in India, Asia-Pacific, proceedings Conference on Library and Information Education and Pratice, 517-524, 2006, Maitrayee Ghosh.
- 4. Development of ETD at IITK Library using DSpace: Practical Exposures and Experiences, proceedings International Conference on Semantic Web

- and Digital Libraries (ICSD), Bangalore, Feb 21-23, 249-259, 2007, R. Mishra, S. K. Vijaianand, P. P. Noufal and Gaurav Shukla.
- 5. Open Access and Scholarly Communication, EMPI Digital Library National Convention-2007, New Dehli, Mar. 19-20, 326-330, 2007, Ruchi Srivastava and K.L.Mahawar.
- 6. Open Source: A Study on Popular Digital Library Software, EMPI Digital Library National Convention-2007, New Dehli, Mar. 19-20, 387-394, 2007, Ramesh Yernagula.

# Conference Attended Outside IIT Kanpur

- National Conference on Information Manangement in Digital Libraries (NCIMDiL), IIT Kharagpur, August 2-4, 2006, Invited presentation, R. Mishra.
- 2. De-Stressing Print Collection and Digital Library Initiatives at P. K. Kelkar Library, IIT Kanpur, at Library Connect Seminar, Elsevier, Hotel Landmark, Kanpur, Nov. 17, 2006, Invited presentation, R. Mishra.
- 3. UNESCO-DSIR-IIMK International workshop on 'Greenstone' Digital Library software at IIM Kozhikode, Nov. 27-Dec.02, 2006, Participant, P.P. Noufal.
- 4. INDEST-AICTE Workshop & 4th Annual Meet, IIT Delhi, Dec. 19-20, 2006, Invited presentation, R. Mishra.
- 5. Workshop on e-resources Management, Indian Institute of Management, Ahmedabad, Jan. 19-20, 2007, Participant, Ruchi Srivastava.
- 6. SIS-LBSIM National Convention and Conference, Lal Bahadur Shastri Institute of Management, New Delhi, Jan. 27, 2007, Contributed paper, Sunil Kr. Rana and Ramesh Yernagula.
- 7. INDEST-AICTE workshop on E-Journals Management, Mar. 8-11, 2007, IIT Roorkee, Participant, Neelam Prasad.
- 8. Workshop on Networking of IITs and IISc Libraries, IIT Madras, Mar. 23, 2007, Invited presentation, R. Mishra.
- 9. National Conference on 'Future Librarianship in Knowledge Society' Calicut University, Calicut, Mar. 28-29, 2007, Attended, P.P. Noufal.

#### **Awards and Honours**

- 1. 'SciFinder Best User of 2006 Award' with a plaque in recognition of highest usage of the Chemical Abstracts Service database was presented to Mr. R. Mishra on behalf of IITK at the valedictory session of the 4<sup>th</sup> Annual Meet and Workshop of INDEST-AICTE Consortium at IIT Delhi on Dec. 20, 2006.
- 2. ACRC Research Fellowship 2007, Nanyang Technological University, Singapore, Mar. 12-Apr. 23, 2007 awarded to Ms. Maitrayee Ghosh.

# **COMPUTER CENTER**

Computer Center at IIT Kanpur is a central facility that caters to the computing needs of the faculty members and the students for their research and teaching. It also manages Internet and campus LAN infrastructure. It provides several popular applications like email and web access. It currently supports more than 5000 users.

For Central File service, Computer Centre has acquired a file server consisting of HP EFS Gateway with 6 nodes, HP Enterprise Virtual Array 8000 with 33.6 TB Disk space, HP MSL tape library with 4 LTO3 drive with 60 slots, backup server HP DL380 and Backup software HP storage works.

For high performance computing, Computer Center has acquired another SMP server HP Integrity rx8640 with 16 processor (32 core) Itanium 1.6 GHz, 18MB Cache per processor, 128 GB RAM. Computer Centre also has a 48 node cluster from HP and another 96 node cluster from SUN Microsystems. Each node is of HP cluster is a dual Opteron 2.6 GHz CPU with 8GB RAM. Each node of SUN cluster is a dual Opteron 2.4 GHz CPU with 4GB RAM. It runs Linux on all nodes and there is a master node, which runs SUN Grid Engine software to manage access to the cluster.

Computer Center has about 200 PCs running Linux or Window 2000 Operating System. All the PCs in the Center are connected through a 1000 Mbps switched network. About 150 PCs are based on Intel Pentium 4 with Hyper threading 3.4GHz processor with 1GB RAM. Rest PCs are AMD Athlon 5000+ dual core CPU with 2 GB RAM.

Computer Center supports an institute-wide 8000 points, 1000 Mbps fiber optic network that connects all Academic departments, Central library, Student Hostels, R&D hostel, Visitors' Hostel, Lecture halls and all Administrative Sections. This is one of the largest campus networks in an academic institute. Connectivity to faculty residences is provided through ADSL. For other residential users, both inside and outside the campus, dialup service is provided. For Internet access, we have a leased line of 45 Mbps capacity from VSNL and 20 Mbps capacity from Reliance. IIT Kanpur is one of the best connected campuses in India. We also provide wireless access in several important buildings on campus.

Computer Center also has a specialized Virtual Reality Lab, for researchers in visualization and other similar needs. This includes an excellent 3-D projection facility, with a backend graphics engine, and two SGI advanced workstations for development work.

Computer Center provides email and web access facilities to all its users. Faculty members have access to all CC facilities for the life time.

Computer Center operates 24 hours a day, 365 days an year. It has a power back up through a 270 KVA online UPS and a 320 KVA generator set. Air conditioning is provided by the central air conditioning plant and split air conditioners.

#### HARDWARE IN THE COMPUTER CENTER

Computers in the Center have broadly been divided into various categories based on the activity supported by them. The broad categories and servers with configuration in each of the categories are listed below:

#### **Central File Server**

1.	HP Enterprise File server	6 node HP EFS cluster gateway. Each node HP
		DL380 G5 with dual core xeon 2.6 Ghz, 8 GB
		RAM. HP Enterprise Virtual array 8000 with
		33.6 TB Disk space, HP MSL tape library with
		4 LTO3 drive and 60 slots, backup server: HP
		DL380 G5 and Backup software: HP storage
		works.

# Mail File Server

1.	SUN V440	4* 1.28 GHz UltraSparc IIIi processors, 8 GB
		RAM,
		6TB SAN storage with tape backup facility.

# **Compute Servers**

1.	HP SMP Sever	HP Integrity rx8640 with 16 processor (32 core) Itanium 1.6 GHz, 18MB Cache per processor, 128 GB RAM, 4 X 300 GB SCSI Disk.		
2.	HP Cluster	Master nodes (1): HP DL585, AMD Opteron Quad Processor 2.6 GHz, 16 GB RAM, 2X145 GB Disk, 2X300 GB Disk, DVD Rom Drive		
		Compute nodes (48): HP DL145, AMD Opteron Dual Processor 2.6 GHz, 8 GB RAM, 2X145 GB Disk, DVD Rom Drive		
3.	SUN Cluster	Master nodes (2): SUN V40z, AMD Opteron Dual Processor 2.4 GHz, 8 GB RAM, 3X146 GB Disk		
		Compute nodes (96): SUN V20z, AMD Opteron Dual Processor 2.4 GHz, 4 GB RAM, 36 GB Disk.		
4.	HP 9000/ L-3000	4 processors, 2GB RAM, 108GB disk		
5.	IBM RS 6000	4 Processors, 2GB RAM, 108GB disk		
6.	Compaq ES40	4 Processor, 2GB RAM, 108 GB disk		

# **Utility Servers**

2	External web server (www)	Dual-Xeon, 3.06GHz, 4GB RAM
3	Personal webpages - edit (webhome)	Dual-Xeon, 2.8GHz, 4GB RAM
4	Remote access server (access)	Dual-Xeon, 2.0GHz, 1GB RAM
5	Students Gymkhana server (navya)	Dual-Xeon, 2.0GHz, 1GB RAM
6	Web proxy (proxy)	Dual-Xeon, 3.2GHz, 4GB RAM
7	Web proxy (vsnlproxy)	Dual-Xeon, 3.2GHz, 4GB RAM
8	Mailbox server (mailhost)	Dual-Xeon,3.2GHz,4GB RAM
9	Lists server (lists)	P4, 3.6GHz, 2GB RAM
10	Web-based mail service (webmail)	Dual-Xeon, 3.06GHz, 4GB RAM
11	Windows Server 1 (CCNT1)	Dual-Xeon, 2.8GHz, 4GB RAM
12	Windows Server 2 (CCNT4)	Dual-Xeon, 2.8GHz, 4GB RAM
13	FTP server (ftp)	Dual-Xeon, 3.06GHz, 4GB
14	Internal DNS, YP server (nis)	Dual-Xeon, 3.06GHz, 4GB
15	Outgoing mail server (mail2)	Dual-Opteron 2.4 GHz, 8 GB RAM
16	Outgoing mail server (mail3)	Dual-Xeon, 3.2GHz, 4GB RAM
17	MS Exchange Mail Server1	Dual-Xeon, 2.0 GHz, 1GB RAM
18	MS Exchange Mail Server2	Dual-Opteron 2.4 GHz, 8 GB RAM
19	Application Server (aatish)	Dual-Opteron 2.4 GHz, 8 GB RAM
20	Application Server (falaq)	Dual-Opteron 2.4 GHz, 8 GB RAM

# Servers for Office/Library/Digital Library Automation

1. HP L-1000 PA-RISC 8500@360 MHz, 512 MB RAM, 27GB HDD.

2. SUN E-450 (OA, Digital Lib.) Four sparc @ 400 Mhz, 2GB RAM,36 GB HDD one 1000 storage with 12 X 18 GB.

3. Zenith One up (NT server) 2 Pentium-Pro processors, 1 GB RAM, 12 GB HDD.

4. PCs (150) in admin sections Pentiums with varying configurations.
5. Sun E250 (data vault) 2 Spare II Processor, 1 GB RAM, 216 GB

HDD in RAID.

6. Compaq ML 530 server Server for thin clients.

7. Compaq thin clients 125 thin clients for Office Automation.

## **OTHER EQUIPMENT**

Computer Center has two spam filtering hardware from Barracuda Networks.

Computer Center also supports campus networking, and has one main switch, firewall, router, 50 distribution switches, and over 400 access switches.

#### SOFTWARE IN THE CENTER

Database packages- Oracle, Ingress

CAD/CAM and solid modeling package- I-Deas, Autocad

FEM Packages- MSC Nastran, MSC Mark

CFD Packages- Fluent

Tool to solve symbolic mathematical equations- Mathematica, MathCad

Simulation- Arena, Solversuite, Gams, Cplex

Chemical Process modeling - Aspen plus

Statistical Analysis Packages- Statistica, SPSS, SAS

Numerical Libraries - NAG

Graphic Presentation - Tecplot 360, Origin

Deform-3D

Atila, Maple, Adobe Digital video studio, Macromedia Director, Macromedia dream viewer, 3D studio Max 5.1

Catia, Toleran, Chemcad

Autocad 2002, Mechanical desktop, Land Desktop

GE04, Magic RP

Most flavors of Unix operating systems-AIX, Solaris, HP-UX, True64 Unix, Linux

Windows 2000 and Windows NT environments,

Office Suites- Applixware, Staroffice, Office 2000, Mathype

Compilers-NAG Compiler, Fujitsu Fortran Compiler, Visual Studios (C, C++, Pascal, Ada, Fortran-77, Fortran-90, Java, etc.)

Most of the popular Microsoft Products-Front Page, Back Office, Project, etc. Abaqus 6.4

Hypermesh 5 user license.

All the softwares which come with RedHat/Mandrake Linux distributions We have site licenses for Solaris, Sun Forte Compiler suite (C, C++, HPC), NAG libraries, and NAG compilers.

Acrobat 6.0 Win 50 users license.

#### CENTER FOR DEVELOPMENT OF TECHNICAL EDUCATION

The Centre for Development of Technical Education continued its multifaceted activities. Under Quality Improvement Programme (QIP) no one candidate in M.Tech. and 06 in Ph.D. are admitted to various departments. The Curriculum Development Cell (CDC) approved 11 text book writing proposals in addition to the 25 projects which had been sanctioned earlier. The work for both proposals is unde r progress. During the last financial year 07 book writing projects have been completed.

Through the Continuing Education Programme numerous short-term courses, conferences and workshops were organized. A List of all short-term courses and workshops/conferences/seminars is enclosed herewith.

List of Conducted Short Term Courses Under QIP

Sl.	Coordinator (s)	Dept.	Title of the Course	Duration
No.				
1.	Dr. P.K. Kalra	EE	Matlab Simulation	May 16-31,
				2006
2.	Dr. A.K.	ME/	Advances in Materials & Fuel	June 08-12,
	Agarwal	MME	Technologies for Automotive	2006
	Dr. A. Garg		Applications	
3.	Dr. B. Dasgupta	ME	Mathematical Methods in	July 03-15,
			Engineering and Science	2006
4.	Dr. B. Mazhari	EE	Organic Electronics 2006	July 17-21,
	Dr. S S K Iyer			2006

5.	Dr. P.M. Prasad	HSS	Law and Economics	Aug. 14-19,
				2006
6.	Dr. S.N. Singh	EE	Electric Power System Operation and	Aug. 28 -
	Dr. S.C. Srivastava		Control: Modern Trends and Future Challenges	Sept. 01, 2006
7.	Dr. N.N. Kishore	ME	Ultrasonic NDE of composite material	Oct. 03-08, 2006
8.	Dr. Kamal K. Kar	ME	Recent Trends in Nanocomposites	Nov. 06-10, 2006
	Dr. J. Ramkumar,			
10.	Dr. R.P.	ChE	Winter School on Rheology of	Dec. 11-15,
	Chhabra		Complex Fluids	2006
	Dr. V. Shankar			
	Dr. Y. Joshi			

# **Self-financing Courses**

S1.	Coordinator (s)	Dept.	Title of the Short Course Title	Duration
No.				
1.	Dr. Rajiv Shekhar	SIDBI	Linux System and Network Administration	Feb. 15 – June 01, 2006
2.	Dr. Rajiv Shekhar	SIDBI	Oracle Course for IT Professional	March 10 – May 15, 2006
3.	Dr. Sudhir K. Jain	CE	Seismic Design of Buried Pipelines	April 03-07, 2006
4.	Dr. K. Deb	ME	Genetic Algorithms for Engg. Design	April 26-29, 2006
5.	Dr. Manindra Agrawal	CSE	Data Structure and Algorithms	May 08-June 10, 2006

6.	Dr. Onkar Dikshit & Dr. A Chatterjee	СЕ	Summer School on Use of Modern Technologies in Archaeology	June 12 – July 07, 2006
7.	Dr. Rajive Shekhar	SIDBI & MME	Industrial Applications of MATLAB	June 24 – Aug. 06, 2006
8.	Dr. Onkar Dikshit, Dr. A. Chatterjee	CE	Technology & Cultural Heritage Management: Awareness Programme for Decision Makers	Aug. 26-30, 2006
9.	Dr. B V Phani	SIDBI	Introduction to Computer Networks	Sept. 4 - Nov. 20, 2006
10.	Dr. B V Phani	SIDBI	Advance Analytical Chemistry	Sept. 15 - Nov. 15, 2006
11.	Dr. S K Jain	CE	Engineering Response to Hazards of Terrorism	Sept. 25-26, 2006
12.	Dr. CVR Murty	CE	Nonlinear Seismic Analysis of Structures	Oct. 14-18, 2006
13.	Dr. Rajiv Shekhar	MME	Modelling Design of Primary Aluminium Production Processes	Nov. 20-25, 2006
14.	Dr. CVR Murty	CE	Architecture for Earthquake Resistance of Buildings	Nov. 27 - Dec. 1, 2006
15.	Dr. B Deo	MME	Process Engineering Fundamentals of Iron Manufacture	Nov. 28-30, 2006
16.	Dr. B V Phani	SIDBI	Introductory PC Hardware and System Administration	Dec. 15, 2006 - Feb. 15, 2007
17.	Dr. B V Phani	SIDBI	Supply Chain Management	Jan. 08- March 08, 2007
18.	Dr. Sudhir K. Jain	CE	Seismic Design of Bridges	Jan. 15-19, 2007
19.	Dr. B Dasgupta	Robotics	Mathematical Methods in Engineering & Science	Feb. 27 – March 17, 2007
20.	Dr. Rajat Moona	CSE	Smart Card Technologies	March 06-10, 2007

21. Dr.	A K Agarwal	ME	Fundamental of Internal	March 23-27,
			Combustion Engines	2007

# Workshops/Conferences/Seminars

S1.	Coordinator (s)	Dept.	Title of the Conference/	Duration
No.			Workshop/Symposium	
1.	Dr. CVR Murty	СЕ	National Workshop on Natural Disaster Management Policy and Guidelines – Earthquakes	July 17, 2006
2.	Dr. K K Bajpai	CE	Earthquake Engg. Literature Survey Workshop for Post Graduate Students from Engg. Colleges across India	Aug. 21-26, 2006
3.	Dr. P Gupta	CC	Workshop on High Power Computing	Sept. 05-06, 2006
4.	Dr. R P Singh	CE	Integrated Watershed Management	Sept. 4-22, 2006
5.	Dr. Rajat Moona	CSE	Workshop on Smart Card Os and Applications with SCOSTA Case Study	Oct. 03-06, 2006
6.	Dr. P Sen Sharma	EE	National Workshop on Power Electronics	Oct. 30 – Nov. 1, 2006
7.	Dr. Rajive Sinha	CE	Workshop on Our Planet Earth: Under Pressure	Nov. 04, 2006
8.	Dr. S. Ganguly	CSE	Workshop for Algorithms on Data Streams	Nov. 05-09, 2006
9.	Dr. P. Gupta	CSE	3 <sup>rd</sup> International Workshop on Biometrics	Dec. 1-2, 2006
10.	Drs. R Prasad, R C Budhani & S A Ramakrishna	Physics	International Workshop on "Physics of Mesoscopic and Disordered Matenals	Dec. 04-08, 2006
22.	Dr. Phalguni Gupta	CSE	ACM International Collegiate Programming Contest	Dec. 09-10, 2006

11.	Dr. Pradip Sinha	BSBE	European Molecular Biology Workshop (EMBO)	Dec. 16-20, 2006
12.	Dr. Sumit Gnguly	CSE	Workshop for Algorithms on Data Streams	Dec. 18-20, 2006
13.	Dr. A K Mittal	IME	QCFI National Convention	Dec. 20-22, 2006
14.	Drs. S Madan & S K Ray	Maths	Conference on Harmonic and Funcational Analysis	Dec. 22-24, 2006
15.	Dr. Chaturvadi	EE	13 <sup>th</sup> National Conference on Communication NCC-2007	Jan. 26-28, 2007
16.	Drs. K Deb, P Chakroborty and others	ME & CE	INDO-US workshop on Advances in Computation and Analysis of Systems	Feb. 07-09, 2007
17.	Dr. Rahul Varman	IME	One day Case Study Workshop	Feb. 2006
18.	Drs. Neeraj Misra & P Chandra	Maths	Recent Advances in Mathematical Sciences	Feb. 16-18, 2007
19.	Dr. B. Bhattacharya	ME	Workshop on Smart Materials for Design of Intelligent Systems and Industrial Application	March 23-24, 2007

# CENTER FOR CREATIVE WRITING AND PUBLICATION

- 1. Dramatics Workshop (Aug. 8-16, 2006) which culminated in a few public productions by IITK students under the supervision of Mr. Ashok Tewari was sponsored by CCWP.
- 2. Shri Narendra Kumar gave a reading of his Hindi short Stores (Sept 6, 2006).
- 3. Dr. Jake Keen delivered a lecture on "Ancient Technology: Has it any Relevance Today?" on November 11, 2006.
- 4. Shri Narendra Kohli, the eminent Hindi novelist, delivered the following lectures "Shri Krishna in Mahabharat" and "Swami Vivekananda" on 8-9 February 2007.

- 5. Dr. Emily Hipchen of University of Georgia delivered a talk on "Creative Nonfiction, the Fourth Genre" on 17 March 2007.
- 6. Literary festival ALFAAZ (23-25 March 2007) was co-sponsored by CCWP.

# STAFF DEVELOPMENT COORDINATION CENTER

The Staff Development Coordination Centre oversees the smooth progression of all the staff members in their career advancement and develops skills of an individual to satisfy current and future manpower needs of the Institute.

The non-teaching staff is an important component in the Institute and they must be taken along the journey of excellence. This Center committed to design to meet the challenges in terms of high qualities of training of human resources in the Institute. The staff members were whole-heartedly participated in the learning activities to acquire new knowledge, skills, and attitude and change habits. The Center has organized industrial visit at GAIL, Dibiyapur NTPC Unchahar and HAL Kanpur in order to learn/practice new technology and latest modern techniques of management as well as work culture prevailing in esteem organizations.

The following training programmes were organized during the financial year 2006-2007

Sr.	Title of the Training	Duration	No. of	Participants
No			Participants	Profile
1	Human Relation at work	One-weeks April 20-24, 2006	22	Group D
2	Induction Programme	Three-days May 14-16, 2006	16	Group B&C
3	5-S Work place management	Two-days July 21-22, 2006	56	Group C
4	5-S Work place management	Two-Days August02-3, 2006	63	Group B&C

5	5-S Work place	Two-days	24	Group C
	management	Sep. 04-05, 2006		(ministerial)
6	Safety management	Two-days	32	Group B&C
		Oct 07-19, 2006		Indl Visit at GAIL Pata
7	Communication at	Two-days	38	Group B & C
	work	Nov.21-22, 2006		Indl visit at NTPC
8	Computer Proficiency	One-Week	25	Group C
		Dec 03-0, 2006		Ministerial
9	Induction Programme	One-week	17	Group A, B &C
		Feb,9-13, 2007		
10	Office Management	Three-day	36	Group B & C
		March, 5-7 2007		

# SC/ST and OBC CELL

The cell consists of **Prof. Arvind K Sinha** (Deptt. of Humanities & Social Sciences), Liaison Officer (w.e.f. October 20, 2006) and **Shri R R Dohare**, Superintendent & In-charge, Recruitment Section, in addition to their normal duties. Prof. Arvind K Sinha is available in **Room No. 221** (Directorate), Faculty Building at the Institute on **Phone No. 2597950** and Shri R R Dohare is available in **Room No. 224**, 2<sup>nd</sup> Floor, Faculty Building at the Institute on **Phone No. 2597391**.

Earlier, **Prof. N S Gajbhiye** (Deptt. Of Chemistry), was the Liaison Officer for SC/ST & OBC Cell w.e.f. **September 20, 2001 to October 19, 2006.** The services rendered by Prof. N S Gajbhiye as the Liaison Officer were appreciated and acknowledged by the Institute.

# Implementation of reservation orders:

The effective date of implementation of reservation for SCs and STs in the direct recruitment is 5<sup>th</sup> September 1974 in this Institute and the implementation of reservation for OBCs is w.e.f. the year 1995.

# Maintenance of rosters/ Percentage of reservation:

The Board of Governors had approved, in its meeting held on July 27, 1995, maintenance of 120 points vacancy-based roster [for Group A other than exempted posts (Points reserved in favour of OBCs-31, SCs-20, STs-9)] & B posts; and 100 points roster for Group C & D posts (Points reserved in favour of OBCs-27, SCs-21, STs-1) for direct recruitment at the Institute.

On the basis of Judgement passed by the Constitution bench of Supreme Court, the Government of India, Deptt. Of Per. & Trg., issued O.M. 36012/2/96-Estt.(Res.) dated July 02, 1997 vide which the above vacancy-based rosters have been revised into post-based rosters for the different category of employees in direct recruitment. The Board after due consideration accorded its approval, in its 1997/5<sup>th</sup> meeting held on December 05, 1997 for maintenance of post-based rosters.

Further, the Board of Governors of the Institute (in its meeting held in May 2004, vide item no. 2004.2.13) has considered and **approved** the proposal for grouping of staff for the purpose of reservation and separate grouping of technical and non-technical posts. The proposal was as follows – the posts under Group-A, B, C & D would be grouped separately for technical and non-technical posts. However, there would be a single group under Group-D. Under this dispensation, there would be seven groups in all and as for as possible efforts would be made to provide adequate representation of SCs, STs and OBCs to each post under the group. The proposal was approved in the context that grouping of posts would provide greater leverage for purpose of securing adequate representation for SCs, STs and OBCs in the Institute

As per Recruitment & Career Progression Scheme (in operation at present) which is personal promotion scheme (non-vacancy linked promotion scheme), there is **no promotion - based on vacancies**, hence reservation in career advancement is not applicable.

#### **Concessions/ Relaxations:**

- (a) The upper age bar in the Institute (as per RCPS) is as follows: Group C&D Posts 18 to 27 years; Group B Posts 32 years. Relaxation in age is admissible as per Central Govt. Rules. For employees of IITs who are educationally qualified can be considered for direct recruitment across the whole IIT system up to a maximum of 50 years of age. The due relaxation in upper age is made available for SC/ST, OBC, PH and Exservicemen candidates as per Central Govt. Rules. There is no upper age limit for Group-A Officers at the Institute.
- (b) SC/ST and PH candidates are fully exempted from payment of application and registration fees:
- (c) To and fro TA is being paid to the candidates of all categories out of Kanpur to attend the interview [For Group-A: 1st class/AC-III and for Group B, C & D: 2nd class rail fare];
- (d) Experience requirement is relaxable at the discretion of competent authority.
- (e) In addition to relaxation of experience requirement, higher initial pay is given to exceptionally qualified and deserving candidates. During the period of report, higher initial pay was given to the following employee:
- (i) Two additional increments in the pay-scale of Rs.3200-85-4900 given to Shri Vijay Kumar (OBC), Junior Technician, Department of Chemical Engineering.
- (ii) Two additional increments in the pay-scale of Rs.5500-175-9000 given to Shri Rajnish Dhiman (OBC), Technical Assistant, Department of Physics.
- (iii) Two additional increments in the pay-scale of Rs.5500-175-9000 given to Shri Lokesh Malage (SC), Technical Assistant, Department of Chemistry.
- (iv) Two additional increments in the pay-scale of Rs.5500-175-9000 given to Shri Jagdish Prasad (ST), Technical Assistant, Department of M.M.E.

### **Employment notification etc.:**

Advertisement/ Notification is released in the Employment News with details of concessions/ relaxations to SC/ST & OBC candidates and the number of posts reserved available for them. A copy of the Advt. is sent to AIR/ Doordarshan for publicity. The copies of Employment Notices/ Notifications

are sent to recognised SC/ST Welfare Associations for publicity among their members.

During the period of report, the **detail of Advts.** (internal/ external) issued through Recruitment Section is as under:

				No	. of `	Vacai	nices			Published	
Advt.	No.	Name of Post(s)	Pay Scale	SC	ST	OBC	PH	UR	Total	in	
		Executive Engineer (Civil)	10000-15200	1	-	-	-	-	1	All Editions of Dainik Jagran,	
		Executive Engineer (Elect.l)	10000-15200	-	-	-	-	1	1	Dainik Bhaskar,	
		Assistant R & D Officer	8000-13500	-	1	-	-	-	1	Amar Ujala, Times of India &	
		Technical Assistant	5500-9000	1	-	1	-	3	5	Employment News	Employment
		Junior Engineer (Elect.)	5500-9000	1	1	-	-	1	2		
		Junior Engineer (Civil)	5500-9000	1	-	1	-	1	2		
		Tech. Asst. (Horticulture)	5500-9000	-	-	-	-	1	1		
		Sr. Lib. Infor. Assistant	5500-9000	1	-	1	1	1	4		
		Sanitary Inspector	4500-7000	-	1	-	-	-	1		
90	9	Junior Technician	3200-4900	-	-	3	-	1	4		
1/2006	1/ 70	Junior Assistant	3200-4900	1	-	2	1-5C 1-UR	3	8		

	Junior Assistant (Lib.)	3200-4900	1	-	-	1	1	3	
UPP HQ	Security Officer	8000- 13500	-	-	_	-	1	1	Vide ltr. No. RA/Advt.1/ 06-IITK/ 4740 dtd. 12.10.06
AFRO Placement Cell	Asst. Security Officer	5500-9000	-	1	1	-	1	3	Vide ltr. No. RA/Advt.1/ 06-IITK/ 4741 dtd. 13.10.06
Total			6	4	9	4	14	37	

The recruitment for all academic posts of Institute is made through the press/ professional journals/ circulars to educational institutes etc.

### **Inclusion of SC/ST Member:**

One SCT and/or OBC member of comparable status is included in the Selection Committee as a full member. For the period of report, the detail of Selection/ Assessment Committee meetings held through Recruitment Section is given below:

	Total 18 Selection Committee meetings:					
For Selection	16 S/C meeting, wherein SCT/OBC representatives included					
	02 S/C meeting, wherein OBC representatives included					
For Assessment	No assessment committee meeting held during the period					

## Call letters for Interviews/ Appointment letters:

1. To ensure that the interview/ appointment letters are received by the candidates (including reserved category candidates) well in time – the interview/ appointment letters are being sent through UPC & registered/speed post or courier to ensure delivery.

2. Normally for interviews a minimum of three weeks' time and for appointments a minimum of one month's period of interval is being provided.

#### **Reservation of Quarters:**

1. The Institute has been allotting 1<sup>st</sup> in every ten qrs. to SC/ST employees, out of Type-1A, Type-1B Type-1 and Type-II Qrs. & 1<sup>st</sup> in every twenty qrs. in Type-III, and Type-IV Qrs. (only from the pool reserved for allotment to Officers other than faculty).

The available data related to house allotment is given below for the period under reference:

	Houses allotted to							
T 41	SC/ST							
Type of house	As per Reservatio n	As per Seniority	GEN	Total				
Type-IA	-	-	-	-				
Type-1B	2	-	9	11				
Type-I	3	8	28	39				
Type-II	1	-	11	12				
Type-III	-	-	24	24				
Type-IV	-	-	11	11				
Type – V & VI	No reservati	105	105					

2. There is no reservation in the quarters of Type -V & VI (as these quarters are more or less allotted to faculty members and other eligible officers without any discrimination of caste and creed etc.)

## **Complaints/ Grievances:**

No letter received for redressal of grievance of a SC/ST/OBC employee.

Any **Caste falsification** brought to notice is also followed up by the Cell. No new case came in notice.

Apart from the above, the data, as available for showing the representation of SCs/STs & OBCs in other areas, is given below:

#### A. Academic Staff:

Area(s)	SC	ST	OBC	GEN	TOTAL
Appointments	-	-	-	13	13
Retirement	-	-	-	07	07
Deaths	-	-	-	-	-
Resignation	-	-	-	-	-
V/Retirement	-	-	-	01	01
C/Retirement	-	-	-	-	-
SVRS	-	-	-	-	-
Deputationists repatriated	-	-	-	-	-
Termination	-	-	-	-	-
Dismissal	-	-	-	-	-
Total	-	-	-	21	21

#### **B:** Non-Academic:

Area(s)	SC	ST	OBC	GEN	TOTAL
Appointments					
a) On permanent basis	-	-	1	1	2
(Through open Recruitment)					
b) On compassionate grounds	-	-	-	-	-

c) On deputation basis	1	-	-	-	1
d) On contract for 5 yrs	6	2	7	11	26
Total	7	2	8	12	29

Retirement	04+2*	1	1	43	49+2*
Deaths	-	-	-	6	6
Resignation	1	-	8	4	13
V/Retirement	-	-	-	-	-
C/Retirement	-	-	-	-	-
SVRS	-	-	-	-	-
Deputationists repatriated	-	-	1	2	3
Termination	-	-	-	-	-
Dismissal	-	-	-	-	-
Total	05+2*	1	10	55	71+2*

<sup>\*</sup> Cleaners

## Assessment of Group 'A' Officers (Non-Vacancy linked personal promotion)

Pay-scale	SC	ST	OBC	GFN	TOTAL	
From	То			ОВС	GLIV	TOTAL
-	-	-	-	-	-	-

## **Assessment under RCPS**

## Detail of Employees assessed under RCPS during 2006-07

SL No.	Pay Scale		SC	ST	OBC	IJR	Total
321101	Previous	Present	SC	<b>51</b>	OBC		lotai

1	3200-4900	4500-7000	2	2	-	8	12
2	4000-6000	4500-7000	-	-	-	2	2
3	4500-7000	5500-9000	5	-	-	26	31
4	5000-8000	5500-9000	-	1	-	2	3
5	5500-9000	6500-10500	8	-	-	23	31
6	6500-10500	7500-12000	4	-	-	4	8
7	7500-12000	8000-13500	-	-	-	1	1
Total			19	3	-	66	88

The Institute has awarded "fitment" to the employees of Group 'B', 'C' & 'D' under RCPS during 2006-07, as detailed below:-

Detail of Employees awarded "fitment" under RCPS during 2006-07 (Only pay-scale changed w.e.f. the date of joining or 01.5.1998, which ever is later)

SL No.	Pay Scale		SC	ST	ОВС	UR	Total
32110.	Previous	Present					1000
1	2610-3540	2650-4000	-	-	3	1	4
2	3050-4590	3200-4900	2	-	4	4	10
3	4000-6000	4500-7000	3	-	-	3	6
4	4500-7000	5500-9000	4	-	6	8	18
5	5000-8000	5500-9000	6	-	1	8	15
6	5500-9000	6500-10500	2	-	2	5	9
Total			17	-	16	29	62

Detail of Employees awarded "fitment" under RCPS during 2006-07 (only) (Only designation changed w.e.f. the date of joining or 01.5.1998, which ever is later)

SL No.	Pay Scale	SC	ST	ОВС	UR	Total	
SE NO.	Previous	Present			ОВС		Total
1	3200-4900	3200-4900	5	2	5	16	28
2	4500-7000	4500-7000	10	-	-	29	39
3	5000-8000	5000-8000	-	-	-	1	1
4	5500-9000	5500-9000	8	-	2	45	55
5	6500-10500	6500-10500	-	-	-	1	1
6	7500-12000	7500-12000	-	-	-	1	1
Total			23	2	7	93	125

Detail of Employees awarded "fitment" under RCPS during 2006-07 (No change, means the pay-scale & designation become effective w.e.f. 01.5.1998)

SL No.	Pay Scale	SC	ST	OBC	UR	Total		
SE IVO.	Previous	Present			ОВС	OR		
1	3050-4590	3050-4590	-	-	1	2	3	
2	6500-10500	6500-10500	-	1	1	3	5	
3	5500-9000	5500-9000	5	-	12	25	42	
Total		5	1	14	30	50		

Detail of Employees awarded "fitment" under RCPS during 2006-07 (Full Benefit, means pay-scale & designation changed w.e.f. the date of joining or 01.5.1998, which ever is later)

SL No.	Pay Scale		SC	ST	OBC	UR	Total	
SE NO.	Previous	Present		01	ОВС	OK	Total	
1	3050-4590	3200-4900	16	-	20	40	76	
2	4000-6000	4500-7000	3	-	1	3	7	

Total			24	-	25	90	139
5	6500-10500	7500-12000	-	-	-	1	1
4	5000-8000	5500-9000	5	-	2	44	51
3	4500-7000	5500-9000	-	-	2	2	4

In addition to above, the data, as available for showing the **representation of SCs/STs & OBCs related to existing strength** of the employees at the Institute, is given below:

# A. Existing Strength of Academic Staff (Teaching/Non-teaching) as on 01.04.2007:

### **Recruited through DOFA Office**

Academic	SC	ST	OBC	GEN	Total
Teaching	3	-	-	306	309
Non-Teaching	2	-	-	39	41
Total	5	-	-	345	350

## B. Existing Strength of Non-Academic Staff as on 01.04.2007: Recruited through Recruitment Section

Grou p	SC		ST	ST		ОВС		Total
A	5	15.15%	0	0	4	12.12%	24	33
В	55	17.50%	3	0.94%	30	09.38%	231	320
С	47	23.15%	5	2.46%	29	14.29%	122	203
D	52+16*	25.24%	0	0	10	04.85%	144	206+16*
Total	160+16*	20.99%	8	1.05%	73	09.58%	521	762+16*

Group/ Stream/ Mode	SC	SC		,	ОВ	C	GEN	TOTAL
ANR	2	14.29	0	0	3	21.43	9	14
ANU	2	22.22	0	0	0	0	7	9
ATR	1	25.00	0	0	1	25.00	2	4
ATU	0	0	0		0	0	6	6
Total of Group 'A'	5	15.15	0	0	4	12.12	24	33
BNR	3	12.5	1	4.17	5	20.83	15	24
BNU	22	21.36	0	0	0	0	81	103
BTR	16	17.02	1	1.06	25	26.59	52	94
BTU	15	15.15	1	1.01	0	0	83	99
Total of Group 'B'	56	17.5	3	0.94	30	9.38	231	320
CNR	15	25.42	1	1.69	14	23.73	29	59
CNU	10	30.30	1	3.03	0	0	22	33
CTR	12	18.18	2	3.03	15	22.73	37	66
CTU	10	22.22	1	2.22	0	0	34	45
Total of Group 'C'	47	23.15	5	2.46	29	14.29	122	203
DR	6	21.42	0	0	10	35.71	12	28
DU	46	25.84	0	0	0	0	132	178
Total of Group 'D'	52	25.24	0	0	10	4.85	144	206
CLEANERS	16*		0		0		0	16*
TOTAL	160	20.99	8	1.05	73	9.58	521	762

**Abbreviations:** SC-Scheduled Caste, ST-Scheduled Tribes, OBC-Other Backward Class, GEN-General, A, B, C & D - Groups, N - Nontechnical, T-Technical, R- Recruited, U- Upgraded, \* Not counted towards reservation

## B. Existing Strength of Account-II Employees as on 01.04.2007:

### **Recruited Through DORD Office**

Group	SC	ST	OBC	GEN	Total
В	-	-	1	5	6
С	1	-	-	14	15
D	3	1	6	3	13
Total	4	1	7	22	34

## C. Existing Strength of Mess Employees as on 01.04.2007:

## **Recruited through COW Office**

Group	SC	ST	OBC	GEN	Total
В	-	-	1	4	5
С	-	-	1	3	4
D	14+7*	-	34	60	108+7*
Total	14+7*	-	36	67	117+7*

<sup>\*</sup> Cleaners, not counted towards reservation

The data as available for showing the representation of SCs/STs related to the students admitted in the  $1^{\rm st}$  Semester 2006-07 in various programmes/disciplines at the Institute is given below:

Programmes	_	stratio nester		in the 2006-2007				
B.Tech	SC	SC ST GEN Total						
AE	04	03	19	26				
BSBE	04	01	20	25				
ChE	06	02	30	38				
CE	10	01	42	53				
CSE	05	03	27	35				
EE	10	05	50	65				
MME	15	00	48	63				

ME	07	05	38	50
TOTAL	61	20	274	355

Programmes	Registration							
M.Sc. (5 yrs)	SC	SC ST GEN Total						
Chemistry	01	00	14	15				
Economics	00	00	17	17				
Mathematics	08	00	25	33				
Physics	04	00	15	19				
Total	13	00	71	84				

Programmes	Registration			
BT-MT (dual)	SC ST GEN			Total
AE	01	01	06	08
ChE	02	00	08	10
CE	04	01	12	17
CS&E	04	02	21	27
EE	03	02	17	22
ME	03	02	13	18
Total	17	08	77	102

Programmes	Regis	Registration				
M.ScPhD (dual)	SC	SC ST GEN Total				
	01	00	06	07		
Total	01	00	06	07		

Programmes	Registration			
M.Sc. (2 yrs)	SC	Total		
Chemistry	2	2	21	25
Mathematics	4	0	17	21

Statistics	2	0	16	18
Physics	2	0	14	16
Total	10	2	68	80

## Registration Data of M. Tech. / MBA/ M.Des. students of 2006-07-I Semester

Dept	GN	SC	ST	Total
AE	40	07	01	48
CHE	46	02	-	48
CE	85	03	-	88
EE	129	12	02	143
ME	132	04	-	136
MME	56	03	-	59
CSE	84	01	01	86
MSP	20	02	-	22
IME	24	02	-	26
MBA	53	09	-	62
NET	08	01	-	09
LT	13	-	-	13
EEM	24	03	01	28
BSBE	19	02	01	22
DES	18	-	-	18
TOTAL	751	51	06	808

## Registration Data of Ph D students of 2006-07-I Semester

Dept		GN	SC	ST	Total
AE		33	02	-	35
CHE		36	04	-	40
CE		39	01	-	40
EE		51	04	-	55
ME		49	03	01	53
MME		21	04	-	25
CHM		141	11	-	152
MATH		55	-	-	55
PHY	M.Sc. (Dual Degree	39	01	-	40
	PhD	26	01	-	27
HSS		46	01	_	47
CSE		13	01	-	14
MSP		08	03	-	11
STA		07	-	-	07
IME		16	02	-	18
NET		03	-	-	03
BSBE	BSBE		03	01	40
TOTAL	L	619	41	02	662

## RAJBHASHA PRAKOSHTHA

IIT Kanpur is an Institute of National importance where students from all over the country and abroad are admitted for higher education in Science, Engineering, Technology and Humanities disciplines. Therefore, the English language has been adopted as the medium of instruction / syllabus, Research and Academic Activities.

Rajbhasha Prakoshtha was established in the Institute in September 1986. It has got its own office which is equipped with two bilingual personal computers for smooth and efficient working. It is managed by a liaison officer, Assistant Registrar, a senior Stenographer (Hindi) and a Technical Assistant (Translation). The Rajbhasha Prakoshtha is effortive in creating awareness of Hindi among the Institute employees. "Sansthan Rajbhasha Karyanvayan Samiti" consituted by Director monitors and provide guidence to the Rajbhasha Prakoshtha in its planning and performance. The Rajbhasha Prakostha performs various activities like organisation of Hindi Diwas, Hindi workshop and holds meetings for promoting the atmoshphere of Rajbhasha in the Institute round the year.

### The Rajbhasha Prakostha has adopted the following policies.

- 1. Entire correspondence with Group D employees are done in Hindi.
- 2. All Hindi letters are replied in Hindi.
- 3. All routine forms and the heading of Registers have been printed bilingually in most of the departments of the Institute.
- 4. The name plates, office stamps, signboards, letter heads, and envelopes etc, have been made bilingual. 15 LDCs/ UDCs have been trained in Hindi type under the Hindi training programme organised by the Hindi Shikshan Yojana kanpur. Similarly 4 "Stenographers have been trained in Hindi Stenography under the scheme.
- 5. Regular classes of Probodh, praveen & Pragya for the Non Hindi speaking employees have already been started . 11 Non Hindi speaking employees have been trained in Prabodh, Praveen and 8 trained in Pragya.

The act and the Statutes of the Institute have been made bilingual.

The Annual Report of the Institute for the year 2005-2006 and the audit Report 2005-2006 received from Account Section/AG, UP were translated into Hindi and a fair copies typed for submission to the ministry.

The press relesae and invitation cards for the convocation were issued bilingually. All periodical reports were sent to the Ministry and the Nager Rajbhasha Karyanvayan Samiti in time.

In compliance to the directives of Official Language Department, New Delhi, Hindi week was observed by conducting various competitions and on 14 Sept. 2006 Hindi Diwas samaroh was held in the Lecture Hall complex, in which the winner of various competitions were honoured with suitable books awards.

#### Following Competitions were held from 08.09.06 to 14.09.07:

- a) Dictation competition (Fourth class employees)
- b) Dictation Compt.( Non Hindi Speaaking Employees)
- c) Noting Drafting Compt.
- d) Hindi essay competition
- e) Poetry recitation competition

Winner of the above competition were as under:

#### A. Dictation Competition (Fourth Class)

1.	Smt. Pramod Tripati	Ist
2.	Shri Arvind Panday	IInd
3.	Shri Om Prakash	IIIrd
В.	<b>Dictation Competition (Non Hindi Employees)</b>	
1.	Shri Binu S	Ist

1.	Shri Binu S	Ist
2.	Shri Pradeep Kumar	IInd
3.	Shri P. Kadigachalam	IIIrd

### C. Noting and Drafting Competition

1.	Md. N. Khan	Ist
2.	Smt. Madhu Agnihotri	IInd
3.	Shri Ravi Shankar Shukla	IIIrd

#### D. Debate Competetition (Campus School)

1.	Ms. Ratna Pal	Ist
2.	Ms. Suneeta Singh	IInd
3.	Ms. Sarita Nigam	IIIrd

### **E. Poetry Recitation Competistion**

1.	Shri Ram Lakhan	Ist
2.	Shri S.N. Tripathi	IInd
3.	Shri Rajesh Srivastava	IIIrd

During the year 2005-2006 about 112 letters from Directorate, 217 letters from Registrar,s office, 300 letters/ circulars alongwith Hindi translation From Administration Section and 228 letters were issued in Hindi

Rajbhasha Prakoshtha is dedicated for the upliftment of Hindi at the Institute It is always prepared to co-ordinate with each and every department of the Institute in the implementation of the orders and directives received time to time from the Ministry of Human Resource & Development, Govt ot India.

### MEDIA TECHNOLOGY CENTER

The Media Technology Center is an attempt to encourage and cultivate a sense of appreciation and explores the skills involved in the new media for creative expressions. Center aims to provide a meaningful platform for the students of the Indian Institute of Technology Kanpur to foster their creative potentials and merge it with their gradual process of acquiring and exchanging knowledge with technology based education at the Institute.

Media Technology Center successfully completed the first phase of National Program on Technology Enhanced Learning (NPTEL) by producing quality video and web based courseware in six major engineering and science disciplines for supporting technology based education that would have a far reaching impact on larger Education system through television and web media. The Ministry of Human Resource and Development supported the initiative for the last few years.

Students of the Communication Design in the Design Program have a direct relevance to the Center with their academic course work. The resources and expertise are shared to create a range of productions ranging from documentary films to commercial ads.

At the International Ability Film Festival, Chennai two of our design students S.Jayesh Pillai and V S Haveesh Vemuri's short Film - "Chal" was selected to be screened and baggged the third prize. At RGB '07, annual Design Festival held at the National Institute of Design, Ahmedabad our students S.Jayesh Pillai, Prantik Banerjee and Meera Sudhir Mangrulkar got loads of applauds for their film which took the 1st prize in "Camera Buff".

In the long term, Media Technology Center aims to create a digital portal as an archive of supportive materials to serve educational purposes and research references in the field of Engineering, Science and Technology, Humanities and Management studies as well as in the relevant areas of National Heritage and Culture. The relevant information can be utilized for classroom teaching, student references and research aid.

Committed manpower and resources of the Media Technology Center is involved round the year, providing its support in various academic and non-academic events.

## **Finance**

The Ministry of Human Resources & Development (MHRD) has released Rs. 6800.00 lakh as Non-Plan Grant and 3860.00 lakh as Plan Grant in the financial year 2006-2007.

#### **NON-PLAN**

The total receipt under Non-Plan during the financial year 2006-07 from Ministry of Human Resources & Development, Government of India is Rs. 6800.00 lakh. The Institute has also generated its own Internal Receipts of Rs. 1884.76 lakh, which includes Rs. 738.97 lakh as student fees, Rs. 407.04 lakh interest earned on investments/bank balances and Rs. 738.75 lakh as other miscellaneous income.

The Institute has also withdrawn an amount of Rs. 153.65 lakh from Endowment fund account of the Institute for Non Plan activities during the financial year 2006-07.

The total Non Plan expenditure during the financial year 2006-07 comes out to Rs. 8838.71 lakh against the total earnings of Rs. 8838.41 lakh.

#### **PLAN**

A total receipts under Plan during the financial year 2006-07 is Rs. 3860.00 lakh grant-in-aid under Plan from the MHRD, Government of India.

The total expenditure under Plan has been restricted to Rs. 4130.30 lakh. This expenditure includes Rs. 1837.27 lakh on Building & Works and Central AC Facility, Rs. 1289.93 lakh on Non-Consumable purchases including Equipment, Furniture & Fixtures etc., Rs. 686.01 Lakh on Library Books and Periodicals & Journals and 317.09 lakh on other activities (Includes Rs. 265.20 lakh for IET - Noida).

The Institute has also withdrawn an amount of Rs. 265.20 lakh from Endowment fund account of the Institute for Plan activities i.e., Rs. 265.20 lakh for IET – Noida during the financial year 2006-07.

The total Plan expenditure during the financial year 2006-07 comes out to Rs. 4130.30 lakh against the total receipt of Rs. 4125.20 lakh and an unspent balance of Rs. 5.10 lakh in the last financial year.

## INCOME AND EXPENDITURE UNDER MAJOR HEADS

S1.	Particulars	Income	Expenditure
No.		(Rs. In Lakh)	(Rs. In Lakh)
1	Non- Plan	8838.41	8838.71
2	Plan	4125.20	4130.30
	Opening Balance of Plan Grant	5.10	
3	Other Operational		
	Funds		
	GPF/CPF	1138.97	837.89 (Non Plan)*
4	JEE	433.14	384.27 (Non Plan)*
			3.55 (Plan)
5	GATE	353.29	276.81 (Non Plan)*
			2.38 (Plan)
6	GATE (JMET)	11.33	2.47 (Non Plan)*
7	Research &	713.92	281.43 (Non Plan)
	Development		116.18 (Plan)
8	Deans Capital Fund	53.17	27.16 (Non Plan)*
			10.35 (Plan)
9	Hall Management	329.16	340.54 (Non Plan)*
10	Fund Hall Management	70.92	44.49 (Non Plan)*
11	Pension Hall	55.79	57.19 (Non Plan)*
	Management		
12	Student Gymkhana	35.48	19.67 (Non Plan)*

13	Visitors Hostel	56.07	55.91 (Non Plan)*
			0.34 (Plan)
14	Endowment Fund	1115.01	787.38 (Non Plan)
15	GATE (JAM)	13.64	14.17 (Non Plan)*
			0.23 (Plan)

## **Endowment Report**

The total amount of donation rose from 2.5 crore in 2005-06 to Rs. 5.5 crore in 2006-07.

The number of alumni donors to IITK doubled from 295 in 2005-06 to 623 alumni in 2006-07. There has been a four-fold increase in this number in two years from 142 alumni donors in 2004-05.

Eleven new chairs, seventeen new scholarships and several awards have been instituted during the financial year. Partial travel support from the donations enabled 71 students to participate in conferences overseas as compared to 43 last year. During the year, a cash award for publishing journal papers was introduced for the students through the donations: 204 students received a total of Rs. 26.11 lakh under the Programme. Five new faculty members of the Institute availed partial travel support from the donations for participation in conferences overseas.

S.No.	Purpose	2005-06	2006-07
1	Faculty Support (Chairs)	34.3	339.8
2	Student Support (Scholarships etc)	64.9	57.3
3	Annual Gift Programme	12.74	48.6
4	Departments	52.6	14.1
5	Batch funds	94.6	42.4
6	Miscellaneous	5	29.7
	Total	264.14	531.9

## **FACILITIES TO STUDENTS**

#### 1. RESIDENTIAL ACCOMMODATION FOR STUDENTS

#### Hall of Residences:

IIT Kanpur is a residential Institute and thus requires that all students registered for a degree programme in the Institute reside in the Campus itself. Therefore, all students except (i) married students who are allotted alternative accommodation in single bed room apartments (SBRA) and (ii) students who are wards of campus residents, are provided room accommodation in the Halls of Residences with mess and other facilities. Students, who are wards of campus residents, as a special case, are permitted to stay with their parents on the campus.

The Institute has eight Halls of Residence for boys, namely Hall I to Hall-IX, and two for girls (GH) with total capacities of 3550 and 450 for boys and girls respectively. In addition, there is accommodation for 72 students in single bedroom apartments (SBRA).

The Halls have single and double-seated rooms. Presently, most of the senior undergraduate and all post graduate students are given single-seated rooms, while most of first and second year and some third year B. Tech. and M. Sc., (Integrated) students and Ist year M. Sc. (2-Year) are living in double seated rooms. Each Hall has a mess of which every hall resident is a member. The Halls of Residence also have a well subscribed reading room, TV room, TT rooms, PC room, badminton and volley ball courts, canteen, library (with the books on general topics) and several hobby clubs. The affairs of these amenities in each Hall are managed by (i) the respective committee of students for the amenities and (ii) a central Hall Executive Committee (HEC) under the overall guidance and supervision of three wardens (two for Hall-IX). The overall management of the Halls of residence is through the Central Hall Management Council (HMC). The Council of Wardens (COW) looks after the affairs of mess workers.

In addition to students, staffs working in various research projects of the Institute are also provided accommodation in the halls depending upon the availability of the rooms. The boarding and lodging arrangements for the participants of conferences and short-term courses are also made in the Halls of Residence.

#### Single Bed Room Apartments (SBRAs)

Depending on the availability, the accommodation in single bedroom apartments (SBRA) is provided to married students. In exceptional cases bachelors, on specific medical grounds, may also be provided SBRA accommodation. A Married Students Welfare Committee (MSWC) manages the affairs of SBRAs under the supervision of the Warden-in-Charge.

#### 1. FINANCIAL ASSISTANCE TO STUDENTS

All possible efforts are made by the Institute to render financial assistance (i) in the form of scholarships and (ii) short-term loans to needy and deserving students during their stay at the Institute. Short-term loans are given to some students, depending on the requirement of the case, out of the Students' Benefit Fund (SBF) so that their minor financial emergencies are overcome. The details of the financial assistance offered to the students at the Institute are given below:

Loan	Short Term	Long Term
Short Term	20	09
Long Term	18	

#### SCHOLARSHIPS FOR UNDERGRADUATE STUDENTS

Merit-cum-Means scholarships of the value of Rs. 1000/- per month with tuition fee waiver are awarded per semester to students up to 25% of the total strength enrolled in each of the batches of the B. Tech., M. Sc. (Integrated), B. Tech-M. Tech. Dual degree and M. Sc. (2-year) programmes provided that the income of their parents does not exceed Rs. 2,00,000.00 per annum. SC/ST students not in receipt of scholarships from any other source including the State Governments or Directorate of Harijan and Social Welfare are eligible for the Free Basic Mess (scholarships).

In addition, several students of the B. Tech. /M. Sc. (Integrated) and M. Sc. (2-year) programmes are in receipt of the financial assistance through scholarships, stipends and grants from Central and State Governments, Directorate of Education and other organizations. Table-I shows various scholarships awarded to undergraduate students during 2006-07.

TABLE-I (A): Scholarships for B. Tech. / B. Tech.-M. Tech. Dual degree/ M. Sc. (Integrated) 2006-07

Undergraduate Scholarships		Year			
	I	II	III	IV	V
MCM @ Rs. 1000/- p.m. with Freeship	139	81	98	96	10
Freeship	4	12	9	21	
Free Basic mess plus Pocket Allowance @ Rs.250/- p.m.	56	31	37	19	6
Lalit Narain Das Memorial Scholarship				1	
Kinra Scholarships	1	1			
Indian Women's Association-Bonn Scholarships		1	1		
Neeraj Kapoor Memorial Scholarships				1	
Ram Rajendra Malhotra Educational Society Scholarships	3				
Pt. Balajee G. Hardiker Scholarship	1				
Dr. V. Rajaraman Scholarships				2	
Dr. D. R. Bhagat Scholarships			2		
Arakere & Vasudev Nigam Scholarship			1		
Govinda & Indira Srikanth Scholarship			1		
Anil and Reshma Nigam Scholarship			1		
Anurag Bartaria Scholarship		1			
Prof. Netar Lal Kapur Scholarships			1		
Vasudeo Laxman Sahasrabuddhe Vaidya Scholarship				1	
P. D. Murti Memorial Scholarship		1	1		
Nita Goyal & Ashish Gupta Scholarships	1	1	1		
Simran-Mandeep Kainth Memorial Scholarship		1	1		
Dilip Kohli Memorial Scholarship		1			
Mona & Paramjit Singh Scholarship		2			
Baljit & Nirmal Dhindsa Scholarship	1	1			
Dr. Hari Mohan & Pushpa Srivastava Scholarship			1		

Prof. CNR Rao Science-Talent Scholarship	1				
Sri Kalpa Nath Singh Scholarship			2		
N. S. Rajaraman Scholarship	1				
Sri Temasek @ IITK Scholarship		1			
Smt. Jagat Kaur Memorial Scholarship		1			
Sri Jamuna Das & Basanti Gupta Scholarship		1			
Shanti Devi & Onkar Nath Maewal Scholarship			1		
Romesh Chandra Memorial Scholarship				2	
ONGC Scholarship		1	1		
NTS Scholarships	24	27	18	11	5
Punjab Education Board		1			
SBI Scholarships	3	2	2	1	
Post Matric Scholarships (AP)		2			
PNB Scholarships		1			
CSIR Scholarships			1		
Coal India Scholarships		1			
Tata Iron Steel Co. Ltd.	1	1	4	2	
BSNL	2	2	1	2	
Indian Oil Scholarships		1	2		
KVPY Scholarships	5	4	2		
Central Coal fields			1		
Government of Rajasthan				1	
Government of UP		5			
Pratibha Scholarships	7	11		12	
Government of Maharashtra					1
t	•		•	•	

TABLE-I (B): Scholarships for M. Sc. (2-year)/ M. Sc. - Ph. D. Dual degree 2006-07

Undergraduate Scholarships M. Sc. (2-years)		ars)
	I-year	II-year
MCM @ Rs. 1000/- p.m. with Freeship	27	33
Freeship		3
Free Basic Mess Plus Pocket Allowance @ Rs.250/- p.m.	9	10
Dr. R. C. Srivastava Memorial Scholarship		1
ACC Scholarships	2	
Smt. Durga Devi Memorial Scholarship		1

Student's Benefit Fund (SBF) also provides scholarships of the value of Rs. 600/- per month to the needy students. 54 scholarships from the SBF were provided during the year 2006-07.

#### POSTGRADUATE STUDENTS

The amount of teaching/research assistantship or fellowship for M. Tech. students is Rs. 5000/- per month while that for Ph. D. students in engineering disciplines was (a) Rs. 9500/- for first two years and (b) Rs. 10,000/- for subsequent years. The amount of assistantship or fellowship for Ph. D. students in Sciences and Humanities & Social Science was (a) Rs. 8000/- per month for the first two years of their programmes and (b) Rs. 9000/- per month for subsequent years, with stipulation that these students are expected to devote up to eight hours per week towards job(s) assigned to him/her.

#### EDUCATIONAL GRANTS TO POSTGRADUATE STUDENTS

The Institute gives financial assistance to the M. Tech. / Ph. D. students who are in receipt of Institute scholarship in the form of grant for (a) the preparation of thesis, (b) purchase of books and stationary items and (c) charges for photocopying. The amounts of grants given under these heads are summarized in Table-II.

Table-II: Amount of Educational Grants given to Postgraduate Students

S. No.	Items of Expenditure	Ph. D.	M. Tech.
1.	Thesis Preparation Aid	3,000.00	750.00
2.	Purchase of Stationary Items and payment of photocopying charges or purchase of books	5,000.00	1000.00

#### 3. SPECIAL ASSISTANCE TO SC/ST STUDENTS

Rules for admission to undergraduate programme through JEE are relaxed for the SC/ST categories of students. 15% of seats are reserved for the Scheduled Caste (SC) and 7.5% for the Scheduled Tribes (ST) students. A separate merit list is drawn for those SC/ST students, who appear for the Joint Entrance Examination. Cut-off point for calling them for the Counselling and thereafter for the offer of admission is based on the relaxed criteria.

In addition, SC/ST students are also selected from among the list of students who do not qualify for the admission for a one year preparatory course scheme.

All the SC/ST category students get tuition fee waiver irrespective of their parent's income. Concession of free messing (basic menu only) plus pocket allowance of Rs. 250/- per month and room rent exemption are admissible to these SC/ST category students whose parents income does not exceed Rs. 2,00,000/- per annum, in the previous financial year.

While granting any financial assistance other than the teaching/research assistantship or fellowship available to all the students, including SC/ST students, the SC/ST students are given special consideration.

#### 4. AWARDS AND PRIZES TO MERITORIOUS STUDENTS

The students at IIT Kanpur are engaged throughout their programme in various academic, co-curricular and extracurricular activities. The outstanding students are given various awards and prizes for their achievements in their activities. Table-III shows the awards and prizes given during 2006-07. In addition, 7% students in order of merit in each year are given a Certificate of Merit and a cash prize of Rs. 400/- for UG and Rs. 600/- for PG students.

TABLE-III: AWARDS AND PRIZES (2006-07)

	Awards and Prizes	B. Tech./ M. Sc. (Intg.)/Dual degree	M. Sc. (2-Year) / Dual degree
1.	President Gold Medal	2	
2.	Directors Gold Medal	1	
3.	General Proficiency Medal	12	4
4.	Proficiency Medal	16	6
5.	Cadence Gold Medal	1	
6.	Cadence Silver Medal	1	
7.	Prof. Adidam S. R. Sai Memorial Gold Medal	1	
8.	Prof. Adidam Sri Ranga Sai Memorial Medal		
9.	Ratan Swarup Memorial Prize	1	
10.	Banco Foundation Prize (ME)	1	
11.	Dr. Shanker Dayal Sharma Medal	1	
12.	Prof. Vijay Mahajan Gold Medal	1	
13.	Dr. S. D. Bokil Memorial Medal	2	
14.	Sangeeta Pradhan Memorial Medal		1
15.	Batra Gold Medal	2	
16.	IEEE/Pedes'96 Award	1	
17.	Bhagwani Devi Maheshwari Gold Medal	1	
19.	Syngenta Excellence Award	1	1
20.	Tata Consultancy Services Prize	2	
21.	Prof.Bal Deva Upadhayaya Memorial Gold Medal	1	
22.	Mars G. Fontana Prize (MME)	1	
23.	N. Balakrishnan Award	1	
24.	Prof. J. N. Kapur Prizes	2	

25.	Smt. P. K. Subbulakshmi Memorial Award	1	
26.	Gargi, Kritika & Maitreyi Awards	3	
27.	Sridhar Memorial Prize (EE)	1	
28.	Ajai Agarwal Memorial Prize (ME)	1	
29.	Jayesh Memorial Award	4	
30.	Dr. Sangeeta Goel Memorial Award	1	
31.	Notional Prizes (UG)	106	6
32.	Notional Prizes (PG)	49 (M. Tech.)	
33.	O. P. Bajaj Memorial Award	1	
34.	Amit Saxena Memorial Award	1	
35.	Aditya Birla group of Industries Scholarships	6	
36.	Lucent Scholarships	1	
37.	GE Fund Scholarships	2	
38.	INLAKS Scholarship	2	
39.	Goldman Sachs Global Leaders Program	1	
40.	Tata Mellenium Scholarships	6	

#### 5. ACTIVITIES OF STUDENTS' GYMKHANA

As mentioned above, academic activities are only one facet of student's life at IIT Kanpur. Our students actively participate in various extra and co-curricular activities focussed towards the holistic development of their mind and body. The year 2006-2007 also saw a very active calendar in the form of various games and cultural events.

#### **GAMES AND SPORTS ACTIVITIES**

In the arena of sports IIT Kanpur came up with a creditable show in the inter IIT sports meet held at IIT Guwahati. The team finished fourth in the General championship and had a number of podium performances both in the team and individual events. To strengthen the sports culture, an inter-hall games event called JOSH was also organized which witnessed mass participation from the students.

The Nature Club organized several Bird Watching expeditions, and to the surprise of many found out very rare species of birds in our own IIT Campus. The Club also organized tree-labeling Campaigns. The Club also started on a new activity which is Insect Study which has now many enthusiastic participants.

The Tae-kwon-do Club is growing slowly but steadily. The Club has now more than two hundred members who come regularly. The Club is also taking out students to take part in the District Championships where the students performed credibly.

#### Udghosh'06

Udghosh'06, which was organized from 21 st to 24 th September'06, witnessed mass and quality participation from outside colleges. Some of the salient features of the festival were as under:

Total number of outside participants was 527 from various colleges from the country. The size of the IITK contingent was around 130.

All the standard Inter IIT competitive events were organized except for Waterpolo due to the teams not turning up. Participation was scaled up in some events witnessing less colleges over the past years.

Informals such as Chess, Carrom and Slow cycling were also conducted with a huge participation from outside colleges as well as IITK people. The enthusiasm for Chess amongst IITK students was particularly noticeable.

The event was scaled up in terms of quality, mass and security vigilance. Marketing team was made for the first time to fetch sponsorship and we were able to attain success in this front by getting Institute team kits and equipments getting sponsored.

The dedicated team of volunteers of the Security team along with the HECs of different halls and the SIS ensured smooth conduct of the festival.

No untoward incident took place and all of the participants and particularly the IITK students cooperated well to maintain the discipline during the conduct of the festival.

The opening ceremony was done in unique manner by inviting **Brigadier B. K. Sharma (Sena Medal) Station Commander, 62 Inf. BDE** being the Chief Guest and Hon'ble Deputy Director Prof. Kripa Shanker and the Dean of Students Affairs Prof.

Prawal Sinha, amongst the other dignitaries present. The march-past of all the college contingents was escorted by the Pipe Band of **5 th Kumaon Regiment** in an exotic fashion.

As advised by the Dean-Students Affairs, a meeting with the contingent leaders was convened every night to address issues if any. All schedules were made as per the convenience of every team during the event every night ensuring no clashes whatsoever.

IIT Kanpur students excelled in almost every event winning **Gold Medals** in Athletics (Men), Basketball (Men), Badminton (Men and Women), Cricket, Hockey, Football, Tennis, Volleyball, Weightlifting and **Silver Medals** in Basketball (Women), Table Tennis (Women).

IIT Kanpur came well ahead of all the competitors winning the General Championship. **SGSITS - Indor**e, the second in the points tally was given the General Championship of Udghosh'06.

The participants were quite satisfied with the Hospitality of IIT Kanpur and the keenness of the organizing team to sort out their problems at the earliest.

#### **CULTURAL ACTIVITIES**

#### Antaragni'06

Antaragni '06 was conducted from the 2<sup>nd</sup> to 5<sup>th</sup> November 2006. Nearly 80 colleges and 1400 participants from across the country visited the institute to participate in the four day event. In many ways, Antaragni '06 was bigger and better than ever before. Firstly, Antaragni managed to get the highest amount of funds the festival has ever seen in history. This directly translated into better shows, more enthusiasm and more fun. Secondly, Antaragni broke the shell of a traditional cultural festival. It came out with a purpose, a campaign to show the youth a path they could take up which would help in nation building. The idea was drilled through poster campaigns and competitions. The biggest step in this direction was the panel discussion in which Anna Hazare, Madhu Bhaduri and Aruna Roy, among others, discussed and deliberated over the Right to Information Act. We also had an online essay writing contest on the Right to Information Act, which only helped spread the Antaragni fever all over the country like never before. Thirdly, Antaragni got its biggest media coverage with national level television channel MTV coming down to the campus with Nikhil Chinnappa and Ranvijay, two of the most successful VJs Indian television has seen. Fourthly, we had students from places as far as Chennai and Kochi come in, and this contributed to the diversity the festival saw in its participation. The festival

was opened to local colleges for participation after a hiatus of three years, as we tried to expand both inward and outward.

Antaragni '06 kick started on 2<sup>nd</sup> November 2006 at 6 PM when Deputy Director Dr Kripa Shankar, Festival Chairman Dr Satyaki Ray, Dean of Student Affairs Dr Prawal Sinha lighted the inauguration lamp. A mimicry performance by Padma Shree Dr. N. Venumadhav followed the opening ceremony. Astad Deboo, invited all the way from the UK, followed this up with a modern dance performance, the like of which has never been seen in IITK before. This was followed by a fusion music concert by Grammy winner Pdt. Vishwa Mohan Bhatt, an accomplished fusion musician and a captivating performer. Meanwhile, Antaragni flared elsewhere as well. Informal events like Dares, Blind Dates, Treasure Hunts and quizzes were conducted at the Mall every evening. These catered to the crowd perennially present at the SAC. Movie shows were scheduled every night in an elegantly constructed Open Air Theatre, and with the multi-cuisine food court in attendance until the wee hours of the morning, the SAC remained alive 24/4. The day ended with the much talked about discotheque, Calypso, which saw eager, long queues and high energy. This was a regular feature on the first three nights of the festival

Day two at Antaragni saw the fest come into its own, with almost all major events kicking off big time. Dramatics, musicals, dance events, English literary events, Hindi literary events, fine arts events – performers in every sphere came forward to show us what they had. India Haat opened in the SAC grounds, and continued to regale audiences for the next two days. Rithambhara, the fashion show, saw it preliminary round on this day. A salsa workshop, too, was held. This was a first in Antaragni history. Professionals were called in from Lucknow to conduct the workshop from days two to four of the festival. The day ended with Synchronicity, which, to put it simply, rocked. Parikrama, India's biggest rock band, set the stage on fire like only Parikrama can. This year also saw the return of the rock competition as a part of Synchronicity after many years. We had bands come in from as far as Mizoram to participate.

Day three saw new competitive events kick off, with the quizzes also hitting the scene. Prelims for Mridaksh, the personality contest, were held today. Nukkad, the street play competition, was one of the highlights of the day, with the home team showing us once again why it is the best. Rithambhara finals were also held today, with the best fashion design colleges in the country putting up a killer show. Day three saw another Antaragni first – the Karaoke Night. KJ Subz, India's only Karaoke jockey and an IITK alumnus, entertained crowds in the OAT in the evening, adding to the festive cheer in the process. The day ended with another powerhouse professional performance, this time by up and coming Pakistani rock band Bandish.

Day four saw the competitive events wrap up. MTV came to town, and how! Two panel discussions were held left and right – one at the airstrip and another in the lecture hall complex. Both were aired on national television by MTV. MTV DJs Nikhil Chinnappa and Ranvijay roamed the campus all day long, talking to students, and the channel caught the conversations on camera to be shown later on TV. A special performance of the street play was given for the channel's benefit in the SAC. All this meant phenomenal media coverage for the fest. The fest came to a close with Nikhil Chinnappa introducing Euphoria, one of the most successful bands this country has seen, on stage. The gala performance was a fitting end to a larger-than-life four days here at IITK.

#### A few firsts:

- (1) 1400 participants from outside the campus.
- (2) The Salsa workshop.
- (3) The Karaoke Night.
- (4) The rock competition (held after a long time).
- (5) A professional performance on every day of the fest.
- (6) Phenomenal media coverage on national television. The home team put up an exceptional overall performance.

Antaragni '06 was incident free with the security team performing exceptionally well.

#### **FILM FESTIVAL**

#### Umang 07

Students Film Society (SFS) has organized its Annual Film Festival Umang 07 from 11<sup>th</sup> to 14<sup>th</sup> January 2007. There was quality participation from the students in Animation Contest, Director's cut, Treasure hunt and Antakshari. There was active participation by the non IITK students in Director's cut, treasure hunt and Antakshari. In the preparation part of Director's cut in Umang, we organized a film making workshop which was conducted by Ms. Kavita Joshi. It was organized one week before the Umang and there were active participations by the IITK students.

Some of the salient features of Umang 07 are as follows:

➤ The opening ceremony of Umang 07 was done by Honorable Deputy Director Dr. Kripashankar, Dean, Students Affairs Prof. Prawal Sinha and General Secretary, SFS followed by the famous Blockbuster Dilwalwe Dulhaniya Le Jayenge.

- ➤ For the first time in Umang two open air theaters were running in parallel, with the movies in auditorium at the evening slots of 6:00-10:00 PM with the proper arrangements of bonfires, which were enjoyed by both the students as well as the staff community.
- > Total 30 movies were screened in Umang 07. The films spanned all possible genres and themes as were feasible given the timeframe, and were very well appreciated by the entire campus community.
- ➤ The students community of IIT Kanpur and the participants from the outside colleges participated in making their films as a part of Umang (Director's Cut) and the selected films here were also screened. The focus was not only on quantity but also definitely on quality. All films screened were selected after a rigorous and time exhaustive selection process. The effort of IITK students in film making was highly appreciated this time by the judges. The winner of this contest is a team from IITK where as the second prize was shared between another team of IITK and IT BHU.
- All the standard events other then screening movies were carried out like Director's cut, treasure hunt and Antakshari.
- ➤ The animation contests and animation workshops were made a major part of Umang 07 and given major importance. The workshops were well-participated and the animation contests saw a lot of participation.
- ➤ Total number of outside participants was 23 from three colleges NIT Kurushetra, Amity College, Delhi and IT BHU.
- This time the show management team worked in an excellent manner and all the movies were started in time. Another notable feature of the film screenings was their punctuality. Barring one or two, all films were screened at exactly the correct time, and this was highly appreciated.

#### **TECHKRITI**

Techkriti 2007 was successfully conducted from Feb 22<sup>nd</sup> to 25<sup>th</sup> 2007. It saw an over all participation of over 1000 engineering as well as school students from all over the country. The festival was publicized with the name of Techkriti Oh Seven, basically as a publicity campaign and it sure did work off very well.

#### **Events:**

Techkriti aimed to bring in technology fashionably to the youth. The whole idea was to expose people as much as possible to technology in a glamourized way. Over the years, Techkriti had been reduced to a "festival of the geeks". We organized Techkriti Oh Seven with an aim to capitalize on this very image and turn around the negative connotation into a fun, festive, enjoyable one.

With this motive, Techkriti Oh Seven featured a wide host of events ranging from competitive events, to workshops, to exhibitions and displays as well as performing shows, all with an aim to celebrate technology.

Most of the traditional Techkriti competitions were organized. A few events under the broad heading of Pen Drive were added. These were literary in nature. Ham Fest was formally inducted into the festival. This year saw the rejuvenation of Cosmos – the Astronomy Events and Fly High – the Aeromodelling events. Robogames was organized in the SAC area with a viewer arena large enough to accommodate in excess of 300 people at a time. This turned out to be a major attraction in the SAC area. Other events of note were SciMatEx and GetSetGo. Software Corner was "brought out" of labs, and hosted a display stall arena of its own in the CSE Grounds. An open air theater was also functional during the festival.

Techkriti Oh Seven had two professional shows. The first one was by Prof. Prahlad Vadakkepat and his group of students of the National University of Singapore who gave a couple of hours of demonstration of their world famous robots. The show was very interactive and pepped up with inputs from Dr. Vadakkepat. It found admirers in all age groups.

Another professional display was a para-jumping display by the Akash Ganga team of the Indian Air Force over the institute stadium. The Akash Ganga team is world famous for its daredevil acts and it was a treat watching them perform.

As a part of the exposure providing efforts, Techkriti Oh Seven featured a lot of workshops and interactive sessions. We had, on one hand, practical sessions on Telescope Making conducted by personnel from IUCAA Pune, Software defined radio workshop held in Hamfest with the help of specially invited hams, an Astrophotography worksop by Dr. S.P. Gupta of Amit Smriti – a Bhopal based NGO for popularizing astronomy, a Break Free workshop, the second of its kind in IIT Kanpur campus, organized under the aegis of the Break Free movement initiated by Prof. Debashish Chatterjee of IIM Lucknow, as well as a Hacking Workshop by the world famous hack-guru Ankit Fadia. On the other hand we had interactive sessions with very eminent personalities to the likes of Prof. Yash Pal – nationally acclaimed scientist and science administrator, Sri Krishan Chehel – noted memory expert, Prof. Rajesh Gopakumar – acclaimed String Theorist from HRI Allahabad, Mr. Sachin

Bansal – a social entrepreneurship advocate and Prof. Govind Swarup from the Giant Meterwave Radio Telescope national facility at Pune. He expounded on the worldwide search for extra terrestrial life (SETI programme) and the role of GMRT in the same. We also incorporated a number of popular talks by in-house speakers. We had Prof. H.C. Verma talking about Science and Technology in ancient India, Prof. A. K. Mallick on the popular elementary geometry problems and Prof. Sanjay Mittal talking about aerodynamics of kite flight.

#### Marketing and Budgeting:

The marketing for Techkriti 2007 was good. The budget of Techkriti crossed Rs. 20 lacs overall and we got into direct sponsorship deals with 11 companies and associations with two more. An extra effort was taken to accommodate and escort the sponsoring organisations' personnel around the campus during the festival. As a result, the sponsors were happy with the reception they got at IIT Kanpur during the time of the festival. Such continued efforts would ensure that long lasting bonds with these organisations are made possible.

#### **Publicity and Participation**

Publicity material of this year's Techkriti comprised of a main poster and 4 sub posters for the most popular events namely ECDC, Robogames, Endeavour and Software Corner. Apart from this we brought out color posters of 15" X 10" dimension for every event. Techkriti Oh Seven was not only a festival, it was also a design project! A large number of print designs were prepared. A special thanks is due to the design team consisting of a third year undergraduate student and a M. Des first year student is due. The TShirts as well went ahead in "celebrating the spirit of the festival". Two designs were prepared, one was a total black shirt and another was a white shirt with black shoulders and sleeves. Both were equally popular.

It is pertinent to note here that lately a trend is emerging of lifting material from unquoted sources to prepare T-Shirts and Posters. This is alarming. Special care needs to be taken to avoid copyright violations and use of registered images/quotes. Lately a number of creative common concepts have taken off. These can be utilised wisely in designing a very good package without crossing the right side of the law in spirit as well as in letter.

In the same spirit, an effort should be taken to standardise the Techkriti Logo and tagline. This would go a long way in brand building. Registering the logo would also be desirable. These things will pave the way for a better, professional festival. A long

term goal of getting an ISO certification for the festival or else the Science and Technology Council would be desirable in a very proactive way. Not only does such a certification speak volumes about the level of expertise in the festival, it can be very judiciously used to project the right kind of image to the right audience at the right time in making corporate associations.

Participation levels were higher this Techkriti because of early invitations sent to the colleges. This process can be pre-poned even more. Quickly finalising the events and sending across a basic invitation would ensure a lot of participation. Two levels of invitations were sent for Techkriti Oh Seven. The first lot was released in November, informing people about the festival and was sent to over 1000 colleges. The second lot was sent in January to around 500 colleges, based on onsite registrations since the first invitations.

A good internal participation was expected, looking at the response to the Science and Technology Council activities this year. A smoothly functioning council shall ensure better participation. Also, since the council had undertaken a major initiative of sending IITK contingents to other colleges for exposure, the expectations of internal participation were higher. It was reflected to a good extent. Unfortunately, due to a non avoidable clash of a COM200 course's day long workshop organised on the Techkriti weekend on Saturday and Sunday for the second-year students, the festival took a hit. The circumstances in Techkriti Oh Seven were unfavourable in the interest of the institute to reschedule and avert the clash. However, it had to be deal with as prudently as feasible. But it should leave us with a lesson that in the future, care should be taken by the organising team to avoid such clashes as soon as they are evident.

Because the festival relies heavily on the website, it is suggested that the website is ready in summers itself. This year we have reworked the Event Management System of the Techkriti website so that it can accommodate any template. The same was not available earlier on. The event management system is a student project initiated with Techkriti 2005. It should be kept as an ever evolving project so that year after year all its loopholes are gradually cleaned up. This can be used very effectively to manage the festival.

### 6. PHYSICAL ACTIVITIES (CPA)

With the objective of a sound physical health and an all round development of personality of students, several co-curricular and extracurricular physical activities have been integrated as Compulsory Physical Activities (CPA) with the regular curriculum at IIT Kanpur. The streams of activities are:

- 1. Games and Sports
- National Cadet Corps (NCC)
- 3. National Service Scheme (NSS)
- 4. Yoga
- 5. Tae-Kwando

All the 1<sup>st</sup> year students admitted in the B. Tech. /M. Sc. (Integrated) programme are required to exercise their option for one of the above activities at the time of registration under the course PE. The two courses PE 101 and PE 102 constitute Compulsory Physical Activities (CPA) at IIT Kanpur.

Compulsory Physical Activitis (CPA) Programme is a Senate approved programme for 4 year B.Tech, 5-Year Integrated M.Sc., 5-year B.Tech-M.Tech. Dual Degre stuents. This is a two-semester programme run under the Course Number PE-101 & PE-102. In both the courses thee are two components, namely,

- 1. Physical Exercise One Hour per week
- 2. Personality Development Activities Two Hours per week

The Dean of Students' Affairs is the instructor in-charge of these courses. The courses are graded as S (Satisfacotry)/X (Unsatisfactory). The grade will be given after the End semester examination. A minimum of 75% attendance and satisfactory performance in each of the two components will be necessary for passing the courses.

All Students undergo total three hours activities per week. The students have to opt for one of the Personality Development Activities (I) Games & Sports (II) Yoga (III) Tae-kwon-Do (Iv) NSS (V) NCC. The students opting Games & Sports and selected in Trials for Games & Sports will under go three ours of games per week. The remaining students will under go Physical Exercises once a week for an hour out of three hours per week. Reaming two hours will be for one of the personality development activities namely (I) Yoga Yoga (II) Tae-kwon-Do (III) NSS (V) NCC. Minimum attendance requirement must be fulfilled for both the parts (chosen stream and or Physical: Physical exercise not being mandatory for those choosing Games & Sports as their Streams).

# PE-101, FIRST SEMESTER FROM AUGUST 07 TO NOVEMBER 23, 2006

- 1. Physical Exercise: Participation will be one in a week for students opted other than Games Stream. This would run during August-November in the morning. Jogging, Long Distance Run, lightweight training, games and Athletics would be under taken for at-least twelve weeks.
- 2. Personality Development Activities: Participation will be thrice/twice a week (for Games & Sports thrice a week, for other personality Development activities twice a week). Selection trials will be held from August 7 to August 11, 2006 to fill up the seats for different streams.

Students are required to fill up option forms for the streams, which will be collected on the day of REGISTRATION.

Number of seats available under different stream are as follows. These numbers can be changed, if circumstances so require.

(a) NSS (Coordinator: Dr. H.C. Verma)

Total Seats=30

Participation in NSS activities twice a week (Each session of an hours during) for atleast 24 hours in each semester. Seats will be filled on the basis of first come first serve the day of Registration.

(b) YOGA (Coordinator: Dr. K.K. Saxena)

Total Seats=30

Participation in YOGa Exercise twice a (Each session of an hours during) for at-least 24 hours in each semester. Seats will be filled through test/interviews. The coordinator, Yoga, will conduct these test/interviews on the next day of the registration in the Yoga hall, Students Activities Center at 06:00 P.M.

(c) TAE-KWON-DO (Coordinator: Dr. Satyendra Kumar)

Total Seats=50

Participation in Tae-Kwon-Do activities twice a week (Each session of an hours during) for at-least 24 hours in each semester. Seats will be filled on the basis of first come first serve the day on the day of Registration.

(d) NCC (Coordinator: Commanding Officer, NCC) Total Seats=No limit Participation in NCC Parades for at-least 24 hours in each semester. For NCC no trial will be held. Any student can take NCC excepting Foreign Nationals. There is no limit on number of seats.

(e) Games & Sports (Coordinator: Vishram Yadav) Total Seats=196 (154 Boys+42 Girls)

Participation in Games & Sports thrice a week (Each session of an hours during) for atleast 36 hours in each semester. Seats will be filled up through selection Trials. The instructors, games will conduct these selections Trials as program mentioned below.

S. No.	Games & Sports	Boys	Girls	Trial Time 5:00 P.M.	Trial Location
1	Athletics	20	10	07-11, August 06	Main Stadium
2	Badminton	06	04	07-11, August 06	Indoor Gymnasium
3	Basketball	18	12	07-11, August 06	Basketball Court
4	Cricket	18	00	07-11, August 06	Main Stadium
5	Football	22	00	07-11, August 06	Football Ground
6	Hockey	22	00	07-11, August 06	Hockey Ground
7	Table-Tennis	06	04	07-11, August 06	Indoor Gymnasium
8	Tennis	06	03	07-11, August 06	Tennis Court
9	Volleyball	16	00	07-11, August 06	Volleyball Court
10	Wt. Lifting	08	00	07-11, August 06	Indoor Gymnasium
11	Swimming	15	06	07-11, August 06	Swimming Pool

#### ATTENDANCE:

PE-102, Second Semester from January-April 2007

This course will run similarly during January-April in the morning Students will be allowed to join PE-102 only after clearing PE-101.

#### 7. SWIMMING POOL

Institute has a full size (50x20 meters) Swimming Pool for its students, faculty and staff and also for their family members. The membership is open to all on payment of a nominal fee. Arrangements have been made to coach beginners in swimming. To ensure maximum safety of the members, life-guards are engaged. The exact rates for these sessions are fixed and notified by the Swimming Pool Management Committee, for regular memberships as well as guest charges. The Pool has been operating for 7 months in a year, i.e. from

April to October on monthly basis. Pool is operating in the morning as well as evening hours i.e. 5:30 am to 8:15 am and 3:30 pm to 8:00 pm divided into 45 minutes slots with 15 minutes free time in between. Swimmers and non-swimmers are separated.

#### 8. COUNSELLING SERVICE

The Institute Counselling Service, which has an appointed Head, Assistant Counsellors and staff is a volunteering organization made up of students and faculty members who offer help and guidance to students on the academic, emotional and financial fronts. During the session April 2006 - March 2007, the Counselling Service had one PG Coordinator, two UG Coordinators, assisted by 4 PG Assistant Coordinators and 5 UG Assistant Coordinators and a team of nearly 19 PG Student Guides, 25 PG Orientation Team Members and 73 UG Student Guides.

Like every year, the activities of the Counselling Service started in April with the Handing-Over Ceremony. The new team took charge after the ceremony on April 5, 2006 where the old team was presented mementos by the Director.

During the summers, the preparations for welcoming the new batch of students began. A well planned brochure including letters from the Head, Counselling Service; Student Coordinators; President, Students' Gymkhana; etc informing them about the practical details of life at IIT Kanpur and other useful information like the various student activities, academic calendar, the map of the Institute, bus schedule, etc were sent to all the new students before their arrival on the campus. A workshop was organized for the student guides to sensitize them to the problems that the new students might face. A group of 7-8 new students was associated with a student guide and a faculty counsellor who facilitated their smooth settlement in the initial stages.

An Orientation Programme for the new PG students was organized from 24th to 28th July 2006 and for the UG students was organized from 3rd to 6th August 2006. During both the Orientation Programmes, the new students were welcomed to the Institute by the Director, Deputy Director and Head, Counselling and assisted in opening new bank accounts and were guided through all the official processes of making Smart Cards, Health Booklets, CC logins and the final registration. This is the first time the Smart Cards were given to the new students. The Counselling Service also organized a bank presentation where the new students got to know about the various educational loan schemes of the different participating banks. Presentations by the Dean, Academic Affairs, Dean, Students Affairs and Head, Computer Center were also made. The new students were shown around the campus and informed about the various facilities available to them. Apart from this, a meeting of the first-year UG students with a few final year students was also organized in the hostels, so that the new students could gain from the experience and guidance of the final year students.

A Link Structure for the undergraduate students was formed after the commencement of the academic session in August to take care of academically deficient students. The team consisted of 23 Link Students, 13 Senior Link Students and 24 link faculty members. A total of 2 meetings (one in each semester) of the entire link team were held to discuss the issues related to these students. Regular meetings of the link students with the core team members were organized to monitor the academic performance of the students. During the session 2006-07-I, 91 students were on Academic Probation list and 90 students on Warning. Around 95 students came out of the list after this semester. A total of 95 students were on AP and 80 on Warning during the 2006-07-II session. A small decrease in the number of academically deficient students was noted.

On the basis of the undergraduate students' performance up to the first mid semester examination, this year too, several students were recommended the slow paced programme. Meetings were held with these students to suggest semester wise course plans according to their departments. A significant number of students registered for the slow paced programme.

To assist the students having problems in English conversation and comprehension, the Counselling Service organized conversation classes at nominal rates. Over 60 students in the 2006-2007 first semester and over 30 students in 2006-2007 second semester registered for the English conversation and comprehension classes.

A workshop on technical writing and presentation skills was organized in April 2006. More than 250 students participated in it. The Counselling Service also assisted in the conduct of the workshop on "Helping Gifted Minds: Challenges and Opportunities" in October, 2006.

Like every year, Counselling Service organized the appointed of a professional psychiatrist who visited the campus on alternate Saturdays to resolve various psychological problems of the students. A total of 43 students consulted the psychiatrist. In addition to this, psychiatric help was also available outside the campus in cases of emergency through the Counselling Service.

On the financial front, students were provided assistance through SBF scholarships. Around 57 students could avail this facility. Loans were provided to students facing acute financial problems. The SBF scholarship amount was also increased from Rs.600 per month to Rs.800 per month, for the financial year 2007-2008.

The Counselling Automation System (CAS), which was devised last year with the help of Office Automation, was further improved. However, the utility of the CAS was found not to be effective. It was perceived that with time and modification the CAS will provide a good feedback to the Counselling Service with respect to students facing problems.

An Orientation program was also conducted in December, 2006 for the new post graduate students joining the Institute for the 2006-2007 second semester. As in the previous Orientation, students were assisted in opening new bank accounts and were guided through all the official processes of making Smart Cards, Health Booklets, CC logins and the final registration. During this Orientation program the students were also required to undertake a Health check-up, which was coordinated with the Institute Health Centre.

In February-March, the new coordinators both for the UG and PG students were selected and interviews were held for selecting the new assistant coordinators and student guides for the next session. In April, the new team will take charge.

### 10. FACULTY IN-CHARGES STUDENTS'S AFFAIRS

Dean, Students Affairs	Dr. Prawal Sinha	From 29-08.2005
Head, Counselling Service	Dr. Onkar Dixit	Upto 04-05-2006
	Dr. Goutam Deo	From 05-05-2006
Chairman, Council of Wardens	Dr. F.A. Khan	From 01.02.2006
Vice-Chairman, Council of Wardens	Dr. A.K. Chaturvedi	From 01.02.2006

### Counsellors, Students' Gymkhana

Chief Counsellor	Dr. Prawal Sinha
Cultural Counsellor	Dr. (Mrs) Suchitra Mathur
Games Counsellor	Dr. P Shunmugaraj
Films Counsellor	Dr. Partha Chakraborty
Science & Technology Counsellor	Dr. Rajat Moona
Treasurer	Dr. N.K. Sharma
Chairman Students Benefit Fund	Dr. Goutam Deo
Chairman Students' Placement Committee	Dr. Vinod Tare/Dr. Rajiv Sinha
Faculty Advisor, NSS	Dr. H. C. Verma

Chairman, Swimming Pool Management Committee	Dr. Ashish Garg
Faculty Advisor, Yoga	Dr. K.K. Saxena
Faculty Advisor, Tae-kwon-do	Dr. Satyendra Kumar

### 11. WARDENS

### HALL OF RESIDENCE No. I

Dr. R.K. Sullerey, Warden-in-Charge

Dr. R Gurunath, Warden

Dr. V.N. Kulkarni, Warden

#### HALL OF RESIDENCE No. II

Dr. Aloke Dutta, Warden-in-Charge (upto 21.12.06)

Dr. Avinash Agarwal (From 22.12.2006), Warden

Dr. Aslhish Garg, Warden

Dr. Jayant K Singh, Warden

### HALL OF RESIDENCE No. III

Dr. P. S. Ghoshdastidar, Warden-in-Charge

Dr. Bikramjit Basu, Warden

Dr. Amman Madan, Warden, (upto 24.1.07)

Dr. Abhijit Kusheri (from 25.1.07)

#### HALL OF RESIDENCE No. IV

Dr. Partha Chkraboty, Warden-in-Charge

Dr. Sanjay Kumar Singh, Warden

Dr. Anish Upadhyay, Warden

### HALL OF RESIDENCE No. V

Dr. Ajai Jain, Warden-in-Charge

Dr. S.N. Tripathi, Warden

Dr. P.M. Prasad. Warden

### HALL OF RESIDENCE No. VI

Dr. C.A. Tomy, Warden-in-Charge

Dr. Y.N. Singh, Warden

Dr. Suchitra Mathur

### HALL OF RESIDENCE No. VII

Dr. N.K. Sharma, Warden-in-Charge

Dr. Sameer Khandekar, Warden

Dr. Amit Mitra, Warden

### HALL OF RESIDENCE No. VIII

Dr. S.N. Singh, Warden-in-Charge

Dr. Pranab Mohaparta, Warden

Dr. Venkitanarayan P

### HALL OF RESIDENCE No. IX

Dr. Sudhir Kamle, Warden-in-charge

Dr. A.K. Saha, Warden

### HALL OF RESIDENCE- GH

Dr. Brahma Deo, Warden-in-Charge

Dr. Shikha Dixit ,Warden

Dr. Asima Pradhan ,Warden

#### **SBRA**

Dr. Goutam Deo, Warden-in-Charge

Mr. Brijesh Pandey, Convener

#### 12. STUDENTS' GYMKHANA EXECUTIVE

The philosophy followed at this Institute is to involve students at various decision-making levels. The President, Students' Gymkhana and the Convener, Students' Senate are special invitees to the Senate. Students' Senate also sends its nominees for various standing committees of the senate namely EPC, SPGC, SUGC, SSAC, SLC,

SSPC and various other users committees. The following list gives the names of students holding various posts of the executive wing of students' Gymkhana.

### President

Mr. Anirudh Halalka (upto Feb. 2007) Mr. Arvind Kothari (From March 2007.)

### Convenor, Students Senate

Mr. Tony Jacob (Upto Feb. 2007) Mr. Chirag Mittal (From March 2007)

### **General Secretary (Cultural)**

Mr. Nishant Singh (Upto Feb. 2007) Mr. Sumeet Kale (From March 2007)

### **General Secretary (Games)**

Mr. Sandeep Shinde (Upto Feb. 2007) Mr. Rohit Kumar Bishnoi (From March 2007.)

### General Secretary (Films)

Mr. Atul Kumar Ramuka (Upto Feb. 2007) Mr. Vaibhav Singhal (From March 2007)

### General Secretary (Science & Technology)

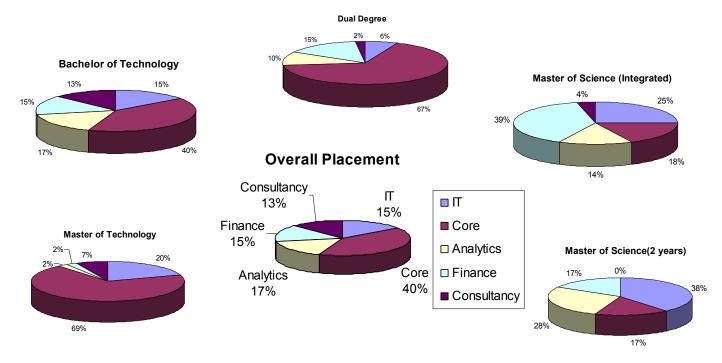
Mr. Saumya Jain Feb. 2007) Mr. K. Ashwin (From March 2007)

### STUDENTS' PLACEMENT

The Students' Placement Office moved into the new premises in the "Outreach Building" in January 2006 and continues to play a vital role in assisting the students in their career planning and placement. Several counseling sessions and workshops were held to help students prepare for the final interviews.

In this academic year, the Pre-Placement Talks were held during the 7<sup>th</sup> semester and the final placements were scheduled after the end semester exams. Multiple companies interviewed every day. The PPT's started from 24<sup>th</sup> August and 58 companies gave their presentations. The final Placements began from 5<sup>th</sup> December and continued till April end for the undergraduate students. The process is still on for the post graduate students.

Invitation letters for participating in the Campus Recruitment Programme 2006-07 were sent to over 500 Organizations. A total of 130 companies visited the campus and recruited 672 students out of the 730 students who had registered with the SPO (see Table 1). The placement statistics for our B.Tech students crossed 96 % mark this year while the same for the M.Tech. students is about 89 % till date. The MBA and Dual Degree Programme have had 100% placement. The overall placement for 2006-07 has been 92%. With the objective of providing uniform opportunity to all students registered for placement, the policy of "one job per student" still continues. The average salary this year for the overall batch is Rs.6.00 lakhs per annum.



The Student's Placement Office put in place an automation procedure for placement this year which included the registration process by the students, application to different companies as well as communicating all student data to the companies. A software package developed by Eatbits (a company founded by IITK alumni) was used for this purpose. Further, the internship process has also been automated using a software package developed by a few of our own students which is currently being upgraded to include additional features.

This year's recruitment saw a rise in companies in the consulting, financial and civil engineering sectors visiting the campus. Several companies have offered overseas posting. Amongst the new organizations that visited this year are Lehman Brothers Japan, Deustche Bank, Deloitte Consulting, Ernst & Young, Halliburton, Rio Tinto Australia, HSBC, Credit Suisse, Kotak Mahindra Bank Ltd., ICICI Prudential Life Insurance, DLF Ltd., Jones Lang LeSalle., GMR Projects, IDEB Projects Ltd., and Engineers India Ltd.

Table 1: PLACEMENT DATA FOR THE YEAR 2006-07

B.Tech	Total registered	IT	Core	Analytics	Finance	Consultancy	Total placed	Percent placement
AE	20	6	5	3	1	4	19	95
CE	43	4	20	9	0	9	42	98
CHE	35	5	13	7	5	5	35	100
CSE	33	7	13	0	10	3	33	100
EE	58	5	27	8	11	5	56	97
ME	47	4	18	11	6	4	43	91
MME	46	10	14	7	8	5	44	96
Sub-total	282	41	110	45	41	35	272	96
Dual								
AE	5	1	2	1	1	0	5	100
CHE	5	1	1	1	2	0	5	100
CSE	13	0	11	0	2	0	13	100
EE	11	1	7	2	1	0	11	100
ME	14	0	11	1	1	1	14	100
Sub-total	48	3	32	5	7	1	48	100
M.Tech								
AE	17	5	10	0	0	1	16	94

BSBE	5	2	0	1	1	0	4	80
CE	34	6	17	0	0	7	30	88
CHE	24	4	17	2	0	0	23	96
CSE	32	2	28	1	1	0	32	100
EE	50	11	33	0	0	1	45	90
EEM	13	1	6	0	0	2	9	69
IME	12	2	4	1	3	1	11	92
LT	2	1	0	0	0	0	1	50
MBA	32	18	1	0	7	6	32	100
M.Des	10	3	6	0	0	0	6	90
ME	63	4	51	0	0	1	56	89
MME	13	5	4	0	0	0	9	69
MSP	10	3	1	1	0	2	7	70
NET	7	4	1	0	0	2	7	100
Sub-total	324	<b>71</b>	176	6	12	23	288	89
M.Sc Int.								
CHM	9	2	3	0	3	1	9	100
MTH	15	2	1	4	8	0	15	100
PHY	4	3	1	0	0	0	4	100
Sub-total	28	7	5	4	11	1	28	100
M.Sc 2yrs								
CHM	6	1	1	0	0	0	2	33
MTH	34	10	5	10	5	0	30	88
PHY	8	3	0	0	1	0	4	50
Sub-total	48	14	6	10	6	0	36	75
TOTAL	730	136	329	70	77	60	672	92

The Students' Placement Office also coordinated the Summer Internship Programme for the pre-final year students of all the engineering departments. Internships were offered to 95 students through SPO. It is planned to coordinate the summer internship programme in a more organized manner from next year trough a centralised system. The SPO thanks all functionaries of the institute and units which helped in the placement process during the academic year 2006-07.

## **Services / Amenities**

### INSTITUTE WORKS DEPARTMENT

Institute Works Department (IWD) is primarily responsible for the maintenance of capital assets for providing the following utility services to the resident community:

Civil, Electrical and Air-conditioning maintenance services
Water supply and sewage disposal
Power Distribution
Estate Management
Sanitation and upkeep
Horticulture Development & Maintenance
Furniture repairs
Roads

In addition to above, IWD also executes development projects from concept to commissioning. It comprises of the following units for facilitating operation & maintenance of services and construction activity:

S1. No.	Unit	Responsibility	Unit-in-charge
1.	Civil Division-I	Maintenance, up-gradation and development works. Water supply, furniture, roads.	Executive Engineer
2.	Civil Division- II	Maintenance & development Works	Executive Engineer

3.	Electrical &	Electrical maintenance	Sr. Electrical
	Air- conditioning Division	Domestic / Central AC maintenance	Engineer / Superintending Engineer
4.	Horticulture	Development & maintenance	Executive Engineer
5.	Estate	Estate management & sanitation	Estate Officer

During the financial year 2006-07, IWD has undertaken the following major development works

### A- CIVIL WORKS:

S1. No	Name of work	Value of work	Date of Start	Date of completio	Work Status
		(Rs. in Lacs)		n	
1	Construction of Centre for Environmental Sciences and Engineering Building	437.39	05.05.06	04.06.07	In progress
2	Construction of Hall of Residences for Boys NoIX (PhII)	157.53	01.09.06	31.05.07	In progress
3	Construction of Centre for Environmental Sciences and Engineering Building	70.10	20.01.07	19.05.07	In progress

	(SH: External Development)				
4	Construction of Hall of Residences for Boys NoIX (PhIII)	432.35	01.01.07	31.12.07	In progress
5	Construction of New Lecture Hall Complex (PhII).	133.62	28.01.06	15.05.07	In progress
6	P/F CC paverson the road footpath SAC crossing to Academic Gate No. I both side) SAC crossing to Park 67 (one side) & Park 67 to Main Gate (one side)	10.60	30.09.06	29.12.06	Complete
7	Drilling of one deep tubewell at IIT Kanpur	13.76	14.10.06	13.12.06	Complete
8	Making of diversion of road with new security post and raising of road level near railway crossing at main entrance of IIT Kanpur	14.90	18.05.06	17.07.06	Complete
9	Carrying out minor maintenance civil work in Hall of Residences	15.06	06.07.06	05.07.07	Complete
10	Minor maintenance civil work in Academic Area	25.36	21.08.06	20.08.07	Complete

11	Providing CC road from Pradhan Gate Nankari to Hall of Residence No. VIII	25.43	28.08.06	27.12.06	Complete
12	Minor maintenance civil work in South side of main drive	26.47	27.08.06	26.08.07	Complete
13	Minor maintenance civil work in North side of main drive	27.91	21.08.06	20.08.07	In progress
14	P/F wire mesh window shutter and modification of cup board and internal white washing / painting of Hall-IV (block E, F, G, H & common area)	28.69	22.07.06	21.12.06	Complete
15	Resurfacing of Runway, Apron and Taxiway of Airstrip at IIT Kanpur	53.54	12.05.06	11.07.06	Complete
16	Construction of JEE / GATE office building at IIT Kanpur	261.66	01.01.07	31.12.07	In progress
17	Construction of lab space for unmanned helicopter vehicles and other research activities	278.57	01.01.07	30.10.07	In progress

18	Construction of Pseudo	453.77	23.10.06	22.10.07	In progress
	Dynamic Test Facility &				
	Mexxanine Floor in				
	Metallurgical Engg. Lab				

### B. ELECTRICAL:

1	Alumni & Student Career Center	26.67	24.10.05	15.11.06	Completed
2	Providing & laying HDPE pipe for single mode fiber cable for networking in Acad. Bldg & hostel.	24.60	17.12.05	16.08.06	Complete
3	Construction of 4 Nos. block of hall of residence NoIX	77.23	10.12.05	8.12.06	Complete
4	Construction of lecture hall complex.	16.56	5.05.06	30.03.07	In progress
5	Supply & laying of 100 pair jelly fill telephone cable for hall-II, III, V & newly const hall-IX.	15.72	20.06.06	19.10.06	Complete
6	Construction of Nanoscience lab	12.74	16.06.06	15.03.07	In progress
7	Providing external power	21.52	12.07.06	25.08.06	Complete

	supply at hall-IX				
8	Construction of Hall of Residence NoIX (PhII)	26.40	17.09.06	16.06.07	In progress
9	Construction of a facility for environmental Sc. & Engg Bldg.	83.97	4.10.06	3.08.07	In progress
10	Construction of Pseudo Dynamic Test Facility Engg Lab.	19.41	24.01.07	23.11.07	Complete
11	Providing external power supply & tel cable for nanosc. Bldg.	26.66	11.02.07	10.05.07	Complete
12	Providing external power supply for AC plant & main switchroom panel, telephone cable & laying HDPE pipe for networking in Environmental Sc Bldg.	23.02	14.02.07	13.06.07	In progress
13	Construction of 4 Nos. block of hall of residence NoIX (PhIII )	69.57	17.03.07	16.03.08	In progress
14	Construction of helicopter lab	45.14	26.03.07	25.10.07	In progress

15	Construction of JEE/GATE office bldg	54.04	26.03.07	25.02.08	In progress
16	Supply & installation of 1 No. Passenger lift I/c dismantling of old lifts in ACES Bldg.	11.00	22.03.07	21.09.07	In progress

### C- AIR-CONDITIONING

1	Alumni & Student Career Centre	26.13	17.11.05	28.11.06	Complete
2	Construction of lecture hall complex.	24.22	8.06.07	7.03.07	In progress
3	Construction of a facility for environmental Sc. & Engg Bldg.	57.93	22.09.07	21.07.07	In progress
4	Providing external chilled water pipe line for new lecture hall complex (Ph II)	10.62	4.10.06	28.02.07	Complete
5	Construction of Nanoscience laboratories.	30.99	29.09.06	28.03.07	Complete

6	Conversion of pilot plant	62.47	25.01.07	24.07.07	In progress
	building into Nanoscience				
	bldg. (SH: Clean room				
	accessories etc.)				
	·				

Following new major projects have been taken up in the current year:

1. Construction of new Core Labs.

Following new major projects are under planning:

- 1. Construction of Management Building.
- 2. Construction of building for Design Program.

### STORES & PURCHASE SECTION

The Store and Purchase Section is an Important service unit to cater to the needs of departments/units for purpose of various equipment, chemicals, glassware. hardware, consumables, stationery etc. and all medicines/pharmaceutical products, Industrial gases etc. for research and general purpose. The procurements are from both indigenous and foreign source.

The Section handles customs clearance of all foreign consignments and matters relating to Import Licenses/Duty Exemption Certificates and other certificates from Government of India. The re-export of consignments to the suppliers for repairs/replacements is also done through this section.

During the financial year 2006-2007 the Purchase Section places 1648 orders valued Rs.59,13,22,451=01 which includes import order numbering 397 costing Rs.41,68,61,114=69 The purchase orders and their values under various categories are as follows.

Sr. No	Category	No. of P.O.	Amount( in Rs.)
(1)	Import :-		
(A)	Institute fund		
a	Consumable	36	15,55,294=70
b	Non consumable	60	6,56,05,615=43
(B)	Project fund		

a	Consumable	120	1,62,65,353=77
b	Non consumable	180	33,34,34,850=79
	Total Import (A&B)	396	41,68,61,114=69
(2)	Indigenous :-		
(A)	Institute fund		
a	Consumable	244	1,09,61,114=44
b	Non consumable	381	6,07,08,349=71
(B)	Project fund		
a	Consumable	199	1,30,54,793=59
b	Non consumable	426	8,97,37,078=58
	Total Indigenous (A&B)	1250	17,44,61,336=32
	Total Value (1&2)	1646	59,13,22,451=01

Central stores procures highly technical items as and when required by the different departments to maintain the pace with science and technology development. It stocks some items of consumable in nature like stationary, hardware, and liveries etc. The Central store has two units, namely Purchase unit and Receipt/Issue Unit. This section is headed by a professionally competent Assistant Registrar (Materials) and he is also assisted by a professionally competent team of 19 personnel.

The store also handles disposal of unusable and scrap materials. Clearance of parcels and dispatch of rejected materials to both local and foreign firms for repairs/replacement is also done by this section. It assists the department in areas like transportation, procurements of furniture etc.

Stores Accounts maintain the expenditure details under working expenses and stationery grants sanctioned to Department/Section etc.

We have been successful in computerizing the transactions both in Stores, Purchase & Import Section. We are processing all Indents through the software developed by Automation Division and each & every function of Store & Purchase has been automated in this financial year. We can generate reports as our requirements as and when needed. We have full connectivity in Central Store through LAN/WAN for complete automation. Maximum correspondence is done by e-mail where it is available keeping in view the speedy action for the procurement. Store and Purchase is now connected with main frame Computer of Computer Center. Full communication with every net user is now possible in campus from Store and Purchase Section. We are also planning to provide the web based postal, so that department can send electronic indent directly to Central Store and check the status of this indent/sanction sheet on the monitor.

### **ESTATE OFFICE**

The Institute has a sprawling area of 960 acres having total population around ten thousand. Being a residential campus with 1034 houses in various categories far away from the heart of the city, the Institute had to create its own infrastructure and civic amenities such as sanitation, water supply, sewage disposal and shopping complexes and such facilities, which are required for day-to-day living.

The Estate Office is entrusted with various kinds of activities including house allotment, commercial shops management, tendering process of unserviceable materials, eviction of unauthorized occupants, realization of license fee/electric charges from shopkeepers & house allotee's, estate management and civic amenities.

The Institute has various types of residential accommodation, i.e. Type- IA, IB, I, II, III, IV and V out of which type III & above are allotted to Faculty members, Scientists, Research Engineers, group A officers and rest are allotted to other staff. We have mainly four shopping complexes at various locations i.e. one in the heart of campus called as main shopping complex and other at Type-II complex, third one at security crossing & fourth one at Type-I area consisting of various kinds of 98 shops, which fulfill the basic needs of the residents.

Besides the above shopping complexes, we have 9 hostels for students' accommodation out of which seven are for boys and two are for girls. Every hostel has a barbershop, washer man shop, tailoring shop which mainly fulfills the immediate needs of the students. As per demand, we have already started the operation of the PCOs in most of the hostels.

A new state-of-art building of Biological Sciences and Bio-Engineering department has been completed and is in operation with approximately 64,000 sq. feet area. Also the construction of twelve residences for visiting faculty completed and is used for providing accommodation.

Looking from the hygienic point of view in the campus, the Estate Office has been coordinating and monitoring the cleaning, sweeping & up-keeping work of the campus, which has been appreciated by the campus community. Private contractors under supervision of the office attend the above job.

Further a cable T.V. Network is also being operated round the clock by the Institute to provide entertainment to the entire campus community.

Besides, the Estate Office is managing all types of activities related to the estate successfully and cautiously by way of taking all the precautions to solve all types of problems. During the financial year 2006-07, the office has realized about Rs. 82,88,966.00 from the different sources.

### CAMPUS SCHOOL

Since its inception in the year 1964, the Campus School imparts the best possible elementary education to the wards of its faculty, employees & some wards of the community helpers serving on the campus such as post office, bank, police out post etc. Its infra structure is very strong. It follows CBSE pattern of education with an emphasis on moral education, computer & personality development.

### Physical Panorama

- 1. School Strength:
- (a) Students on roll = 372
- (b) Teachers = 24 and the Principal
- ( c ) Supporting staff = 15
- 2. Infra structure :The school is well equipped with :
- (a) Open shelf library. (b) Computer room.
- (c) Music room & Dance room. (d) Art room (e) Science room
- (f) P.T. room for indoor games and a big play ground for Basket ball, Kho-kho, Cricket, Foot ball, Swings etc.
- 3. P.T.A. Meeting:.
- (a) During this session Open P.T.A. meetings were held on Sept.23, 2006 and 24.2.2007.
- (b) Two parent representatives Dr. Sanjeev Saxena and Mr. Shitla Prasad Tripathi were unanimously elected in the last meeting as members of the School Management Committee.

As a community school , suggestions and observations of the parents / well wishers, if considered healthy for betterment of the educational environment , is always welcome. Safety & security , parental care of the students, democratic setup, self ? discipline and transparency in activities make it different from other educational

### institutions.

#### 4. Activities:

Students are always given wide range of exposure necessary for all round development of personality.

( I ) Different festivals & functions such as Janamashtami, Gandhi Jayanti , Eid ,X-mas , etc were organised in the morning assembly to acquaint the kids with the socio cultural heritage of our country .

Different activities & competitions are arranged and organised throughout the session.

- (II) School competitions viz: Fancy dress, Poetry Recitation, Hand writing, Essay Writing, Debate competition, Art competition and Maggie Quiz Competition etc.
- (III) Inter school competition: During Wild Life Week Celebrations organised by Zoological Garden Authorities of Kanpur, our kids did well and brought many laurels to the School.
- a. Sac Race II b. Frog race I

Sub Junior - I

c. Debate - I d. Quiz Junior - II

Sub Junioy - I Sub junior - I

e. Group Dance f. Group Song -- Junior - II (upto VIII) Junior - II (upto VIII)

Sub junior - I

- g. Mono acting ---- h. Casio III Junior
- ( IV ) Class IV & V students visited Water Park under guidance of Mr. Vikas Victor, PTI, Mrs. P.Srivastava and Mrs. N.Agnihotri . Students of grd. I to V visited Nursery , P.O; Bank e.t.c.
- ( V ) Students participated in All India camel Contest and Navneet Colouring contest and bagged 12 and 40 prizes respectively.

Following mega events were celebrated:

- 1. Independence Day: Aug. 15, 2006. Main programmes were held in the Institute Stadium.
- 2. Republic Day: Jan. 26, 2007 Fruit distribution after a short programme in the school.
- 3. Annual Sports Meet: Dec.16, 2006 Chief Guest: Prof. Prawal Sinha, Dean of Students Affairs, IIT / K
- 4. Teacher's Day: Sept. 05, 2006

Chief Guest: Prof. Joseph John, Chairman, SMC

5. Annual Concert: March 01,2007

Chief Guest: Prof. Kripa Shanker, Dy. Director, IIT / K

As ever, the said events were celebrated with great zeal & enthusiasm and were appreciated and applauded by all.

7. An educational tour of Lucknow for our teachers was arranged and organised on Feb. 03, 2007. The Institute administration was kind enough to approve & encourage the tour.

### SPECIAL EVENTS

- 1. Number of evening co-curricular activities is increased and the response is quite encouraging one. Energy & vitality of the kids are channelised in proper and positive direction under supervision of four qualified teachers in the area of Inter-active English , Games & sports and Dance & Music. About 70 students registered their participation in these activities so far.
- 2. Following staff members retired from their services:
- 1. Mrs. S.Narang, Teacher (S.G.) by virtue of superannuation
- $2.\ Mr.\ Phirtoo\ Ram$  , attendant , ( S.G. ) by virtue of superannuation.
- I put on record their sincere, valuable and exemplary services rendered to the school. We wish them very happy, prosperous & peaceful long life.
- 3. Two of our colleagues Mr. Ram Lakhan & Mr. Ram Swaroop, Teachers,
- SG were honoured by the Director for their long and satisfactory services to the Institute on the eve of Republic Day .Congrats!
- 5. We welcome Mrs. Ruchira Dutta, a new teacher in the fold of our school family who has developed a rapport with the kids. We are confident that her experience, devotion & dedication in the profession would help in upholding the school educational environment.

### **HEALTH CENTRE**

Health Centre had been established with the objective of addressing health needs of the Institute Community. Health Centre provides services round the clock to meet out this objective. Health Centre is manned by 9 Medical Officers and a Medical Advisor of the Institute. Apart from Medical Officers, it is equipped with a Pathology & Biochemistry lab, X-Ray Unit, Dressing Unit, Pharmacy and Nursing Station.

The details of the Health Centre services provided for the period with effect from 01.04.2006 to 31.03.2007 are as follows:

Sl.No.	Particulars	Number
1.	Number of patients treated in OPD	59233
2.	Number of students treated	11554
3.	Number of patients treated in Indoor	966
4.	Number of patients treated in Homeopathy	3786
5.	Number of Surgical Operations (Minor)	35
	Number of Tubectomy	1
	Number of D&C	3
6.	Number of Deliveries	4
7.	Number of Plastering	95
8.	Number of Surgical Dressing	6212
9.	Number of Injections	96000
	Number of Tetvac	630
	No. of cut T-350	22
10.	Number of Hematology and Biochemistry Tests	38756
11.	Number of Family Planning Operations (Tubectomy)	1
12.	Number of E.C.G.	535
13.	Number of Babies attended in Well baby Clinic	870
14.	Number of X-Ray done	2528

15.	Number of babies attended - National Pulse Polio Programme	592
16.	Number of Anti Rabies Injections	280

The data for well baby clinic is as follows:

Sl.No.	Particulars	Numbers
1.	No. of Triple Antigen	528
2.	No. of Polio	697
3.	No. of measles	128
4.	No. of Heptatis B	154

Immunization are done round the year in the Health Centre for protection against Typhoid, Cholera, Tuberculosis, Diphtheria, Pertussis Tetanus, Polio and Measles. Facilities for maternity management, Family Planning Counseling and Tubectomy operations are also available.

### VISITORS' HOSTEL

Housed in an imposing double storeyed building and located at a central place, Visitors' Hostel provides boarding and lodging facilities for the Institute guests and Visitors, newly appointed faculty, staff members, delegates and participants attending various conferences, seminars, symposia and workshops. The Visitors' Hostel has some extension and allied facilities on the campus and in Chittaranjan Park Colony New Delhi also for the benefit of the Institute Visitors. The Visitors' Hostel and the allied facilities are operated as a non-profit activity to mainly support the academic and research activity on the campus with a homely atmosphere and ambience traditionally acclaimed for its environs of hygiene and food of homely relish and richness. The following are the various activities undertaken by the team managing the affairs of the Visitors' hostel and the allied facilities.

The Visitors' Hostel management team is also overseeing the upkeep and services at Visiting Faculty Apartment, VH service Apartment at Chittaranjan park Colony, New Delhi and Outreach 60 & 80 building.

**Accommodation:** Visitors' Hostel has been equipped with 70 Standard rooms of which 40 are AC and 30 are Non-AC. Further there are 15 Deluxe rooms of which 10

are AC and 5 are Non-AC. It can accommodate a maximum of 170 guests at a time on twin sharing basis. All the rooms have attached bathrooms with modern amenities.

Recently four type V houses of 18 room capacity have been added to accommodate the guests during peak demand for accommodation on the campus.

**Dining Facility**: Visitors' Hostel has 2 air-conditioned dining halls with capacity of 30 and 70 guests. One of the dining halls has a sitting room attached with it.

**Conferencing Facilities:** VH has one Meeting Lounge (capacity 16). A Pioneer Batch Continuing Education Center Building is also attached with Visitors' Hostel. It has:

- one conference room (capacity 20)
- one meeting room (capacity 12)
- two classrooms (capacity 64 and 36 respectively) and
- a waiting lounge (capacity 35).
- a small pantry.

#### **Additional Facilities:**

- All the rooms, PBCEC, Dining Halls and Meeting Lounge have been provided with computer network connectivity. All the Deluxe AC rooms have a PC also.
- Wi-fi connectivity has been provided in New Dining Hall, PBCEC and the Meeting Lounge.
- All the rooms have cable connections. Currently 10 deluxe rooms and 40 standard AC rooms have been equipped with Color TV facility.
- All the deluxe AC rooms have a small pantry and a small refrigerator.

#### **Renovation Work:**

- 30 Standard rooms have been renovated and the toilets have been provided with all the modern fittings and fixtures.
- Acoustic treatment has been done in all the conference and meeting rooms of PBCEC.

Certain new facilities are on the anvil for ensuring more comfortable stay of the visitors such as renovation and air-conditioning of rest of the rooms, provision of colour TVs, acceptance of credit cards, user-friendly web-page development etc..

An increase in facilities and services and a more professional approach has led to increased occupancy rate, thus achieving more financial viability in terms of operational expenditure.

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- 247. Influence of Process Parameters of Electroless Nickel-Phosphorous Coating on Carbon fibers, 28-30<sup>th</sup> August 2006, Anna University, College of Engineering, Chennai, Proceedings on International Conference on Advances in Materials processing and Characterization-AMPC(2006), Vol.2, pp.128-132, Prabhat Agnihotri, Ariful Rahaman, Niranjana Patra, J.Ramkumar, S. Basu, Kamal K. Kar and D.Sathiyamoorthy.
- 248. Experimental and Numerical Investigations of Jet Impingement Cooling of Flat Plate for Controlling the Non-Tail Pipe Emissions from Heavy Duty Diesel Engines, ASME-Internal Combustion Engines Division, Spring Technical Conference 2006, May 7-10, 2006, Aachen, Germany. Sandeep Kumar Goyal, Avinash Kumar Agarwal.
- 249. Combustion Characteristics of Rice Bran Oil Derived Biodiesel in a Transportation Diesel Engine, ASME-Internal Combustion Engines Division,

- Spring Technical Conference 2006, May 7-10, 2006, Aachen, Germany. Shailendra Sinha, Avinash Kumar Agarwal.
- 250. Preliminary Investigation into Comparative Performance of Titanium Based Coatings for Automotive Applications Using Biodiesel Blend and Diesel, ASME-Internal Combustion Engines Division, Spring Technical Conference 2006, May 7-10, 2006, Aachen, Germany. Mritunjay Kumar Shukla, Avinash Kumar Agarwal, Ashish Garg.
- 251. Determination of optimum process parameters for wrinkle free products in deep drawing process, Proceedings of AMPT 2006, July 30 Aug 03, 2006, Las Vegas, U.S.A., pp., Anupam Agrawal, N.V. Reddy and P.M. Dixit.
- 252. On the temperature analysis of superfinishing alloy steel using flexible magnetic abrasive grinding (FMAG), American Society for Precision Engineering (ASPE), 21st Annual Meeting, Oct. 15 to Oct. 20, 2006, Dhirendra Kumar Singh, V.K. Jain, and V.Raghuram.
- 253. Nano-finishing Techniques and Pulsating Magnetic Abrasive Finishing, International Conference on Machining Science and Technology- 2006 (ICOMAST-2006), held during 28th 30th August, 2006 at Melaka, Malaysia 2006, V.K.Jain.
- 254. Surface degradation studies in polymer dielectrics with nano-sized fillers, IEEE 8th International Conference on Properties and Applications of Dielectric Materials (IEEE Cat. No. 06CH37773), 2006, p 4, P. Maity S. Basu, V. Parameswaran and N. Gupta.
- 255. Analysis of electro mechanical deformation, Proceedings of the Second Int Conf. on Computational Mechanics and Simulation, Guwahati, India, 2006, S.N. Khaderi and S. Basu.
- 256. Micromechanical analysis of asphalt concrete. Proceedings of the Second Int Conf. on Computational Mechanics and Simulation, Guwahati, India, 2006, K.Mitra, A.Das and S.Basu
- 257. Characterisation of deformation behaviour of glassy polymers using Molecular Dynamics simulations, Proceedings of the Second Int Conf. on Computational Mechanics and Simulation, Guwahati, India, 2006, D. Mahajan and S.Basu.
- 258. Atomistically informed continuum analysis of carbon nanotubes, Proceedings of the Second Int Conf. on Computational Mechanics and Simulation, Guwahati, India, 2006, P. Agnihotri Kar K.K. and S. Basu.
- 259. Joining Materials with Glass Fiber Reinforced Plastics- an Experimental Study, 19 Austrasian Biennial Conference on the Mechanics of Structures and Materials Nov. 29 to Dec., 2006, University of Canterbury, Chritchurch, New Zealand, Rajeev Kumar and Prashant Kumar.
- 260. Molecular Nonlinearities with low power femtosecond lasers, Amit Nag and Debabrata Goswami, 2<sup>nd</sup> Discussion meeting on Spectroscopy and Dynamics

- of Molecules & Clusters, The International Centre, Dona Paula, Goa, India, Mar.30-Apr.1 (2006), D. Goswami.
- 261. Chirp Enhanced TPA Cross Section in Liquids: Towards Adiabatic Quantum Computing, Debabrata Goswami, International Symposium on Quantum Optics, Physical Research Labs, Ahmedabad, 24-27 July (2006), D. Goswami.
- 262. Ultrafast Laser Phase Induced Enhancement in Two-Photon Molecular Absorption Cross Section for Microscopy, Debabrata Goswami, Wellcome Trust Senior Fellows Meeting, Wellcome Trust, 215 Euston Road, London, UK, 25-26 October (2006), D. Goswami.
- 263. Adiabatic Quantum Computation and Coherent Control, Debabrata Goswami, 7th Asian International Seminar on Atomic and Molecular Physics, Indian Institute of Technology, Chennai, 4–7 December (2006), D. Goswami.
- 264. Study of Optical and Electrical Properties of Imidazolin-5-one Molecules for Optoelectronic Applications, Proceedings of ASID 2006, 8-12 October 2006, New Delhi, pp.244-247, V. Jain, G. Bhattacharjya, Arun Tej, C.K. Suman, R. Gurunath, B. Mazhari and S.S.K. Iyer.
- 265. Synthesis, Solid and Solution Phase Structure, and Reactivity of Meso-hydroxylated Heme Incorporating Dimethylphenylphosphine as Axial Ligand, Abstracts of Papers in the 9th CRSI National Symposium in Chemistry (NSC-9) held on University of Delhi from Feb. 1-4, 2007, Sudip Kumar Ghosh, Ranjan Patra and Sankar Prasad Rath.
- 266. Adaptive nearest neighbor classifier. Proceedings of 6th International Conference on Advances in Pattern Recognition. World Scientific, Singapore, 2007,281-284, Ghosh, A.K., Pal,P.
- 267. De-scalping of the brain in echo planar DT-MRI, Proc.Intl.Soc.Mag. Reson. Med. 14,2006, Rathore, R.K.S.,Purwar, A., Gupta, R.K.,Sarma, M.K., Bayu, G.,Singh, A.,Rathore, D.K.,Saksena, S.,Trivedi, R.,Mishra, A.,Haris, M.,Mohan, P.
- 268. A comparison of fiber tracking by different numerical integration methods. Proc. Intl. Soc. Mag. Reson. Med. 14, 2006, Rathore, R.K.S., Gatene Bayu, Gupta, R.K., Rathore, D.K., Purwar, A., Trivedi, R., Saksena, S., Sarma, M.K., Singh, A.
- 269. A.Voxel-wise exact T1 estimation for accurate quantitation of perfusion indices using fast 3D-SPGR in intracranial mass lesion. Proc. Intl. Soc.Mag. Reson. Med. 14,2006, Rathore, R.K.S., Singh, A.,Gupta, R.K., Mohan, P., Haris, M., Bayu, G., Rathore, D.K., Purwar, A., Sarma, M.K.
- 270. Relative cerebral blood volume is a measure of angiogenesis in brain tuberculoma and its therapeutic implications. Proc. Intl. Soc. Mag. Reson. Med. 14, 2006, Rathore, R.K.S., Bihari, S., Gupta, R.K., Haris, M., Husain, M., Mohan, P., Prasad, K.N., Rastogi, M., Rathore, D., Srivastava, C., Tripathi, M.

- 271. A DTI analysis Tool. Proc. Euro. Soc. Mag. Reson. Med. 2006, Rathore, R.K.S., Purwar, A., Rathore, D.K., Gupta, R.K.
- 272. Another Newtonian-Raphson method for 1zH MRS data. Proc. Euro. Soc. Mag. Reson. Med. 2006, Rathore, R.K.S., Sarma, M.K., Gupta, R.K., Purwar, A., Rathore, D.K., Bayu, G., Singh, A.
- 273. Elastic instabilities in the vortex state of 2H-NbSe<sub>2</sub>, Shyam Mohan, Jaivardhan Sinha, S. S. Banerjee, Proceedings of DAE Solid State Physics Symposium 51, 667 (2006)
- 274. Magneto-optical study of giant magnetic field distribution produced by an intense, femtosecond laser pulse, Jaivardhan Sinha, Shyam Mohan, S. S. Banerjee, S. Kahaly and G. Ravindra Kumar, Proceedings, of DAE Solid State Physics Symposium 51, 943 (2006)
- 275. Distribution of noise across the peak effect regime, S. S. Banerjee, Shyam Mohan, Jaivardhan Sinha, A. D. Thakur, S. Ramakrishnan, A. K. Grover, A. K. Sood, Proceedings of DAE Solid State Physics Symposium 51, 665 (2006)
- 276. Microwave driven plasma ion sources for focused ion beam applications, Proceedings of DAE-BRNS, Indian Particle Accelerator Conference-2006, pp.223-224, Bhabha Atomic Research Center and Tata Institute of Fundamental Research, Mumbai, India, November 1-4, 2006, Jose V. Mathew, Abhishek Chowdhury, Sudeep Bhattacharjee.
- 277. Effect of magnetic field gradient on power absorption in compact microwave plasma sources, Proceedings of DAE-BRNS, Indian Particle Accelerator Conference-2006, pp. 231-232, Bhabha Atomic Research Center and Tata Institute of Fundamental Research, Mumbai, India, November 1-4 206, Indranuj Dey, Md. Shamim, Sudeep Bhattacharjee.
- 278. Ion beam facilities at IIT Kanpur for micro and nanoscale science and engineering Proceedings of DAE-BRNS, Indian Particle Accelerator Conference 2006, pp. 127-128, Bhabha Atomic Research Centre and Tata Institute of Fundamental Research, Mumbai, India, November 1-4, 2006, Vishwas N. Kulkarni, S. Bhattacharjee, H. C. Verma, and G. K. Mehta.
- 279. Model for Wideband Nonlinear Amplifier, Conference Proceedings of Recent Advancements in Microwave Techniques and Applications, Jaipur, India, pp. 387-390, October 6-8, 2006, Mehta Kalpesh B, A. R. Harish, Meenakshi Singh, and Sudeep Bhattacharjee, A.
- 280. High Frequency Wideband Chaos using solid state amplifier Proceedings of IEEE International Symposium on Microwaves, Bangalore, India, pp 239-245, Dec 15-17, 2006, A. R. Harish, Mehta Kalpesh B. Meenakshi Singh, and Sudeep Bhattacharjee.
- 281. Focused Ion Beam Studies using a microwave driven plasma source, International Workshop on the physics of mesoscopic and disordered

- materials (MESODIS 2006), pp. 201, Indian Institute of Technology-Kanpur, India, December 04-08, 2006, Jose V. Mathew, Indranuj Dey, and Sudeep Bhattacharjee.
- 282. Power absorption in compact Microwave Plasma sources, Proceedings of the 21st National Symposium on Plasma Science and Technology, pp 27, Malaviya National Institute of Technology, Jaipur, India, December 19-22, 2006, Indranuj Dey, Md. Shamim, Sudeep Bhattacharjee.
- 283. Focused ion beam studies using an intense microwave driven plasma source Proceedings of the 21<sup>st</sup> National Symposium on Plasma Science and Technology, pp 31, Malaviya National Institute of Technology, Jaipur, India, December 19-32, 2006, Jose V. Mathew, Abhishek Chowdhury, Sudeep Bhattacharjee.
- 284. Observation of plasma steady state in the power off phase of high power short pulse X-band microwave discharge, Proceedings of the 21st National Symposium on Plasma Science and Technology, pp 56, Malaviya National Institute of Technology, Jaipur, India, December 19-22, 2006, Sudeep Bhattacharjee and Indranuj Dey.
- 285. Traffic phenomena in biology: from molecular motors to organisms, (Plenary lecture delivered by D. Chowdhury), Proc. of the international conference Traffic and Granular Flow 05, (Berlin, October 2005) eds. A. Schadschneider, T. Poschel, R. Kuhne, M. Schreckenberg and D.E. Wolf (Springer, 2006), D. Chowdhury, a. Schadschneider and K. Nishinari.
- 286. Critical behaviour of random fibers with mixed weibull distribution, Physical Review E, 75, 2007, 011109, Uma Divakaran and Amit Dutta.
- 287. Effect of Discontinuity in threshold distribution on the critical behaviour of a random fiber model.. Physical Review E, 75, 2007,011117, Uma Divakaran and Amit Dutta.
- 288. Effect of ling-range connections on an infinite randomness fixed point associated with the quantum phase transitions in a transverse Ising model, Physical Review B, 75, 2007,052405, Amit Dutta and R. Loganayagam.
- 289. Hybridization of 4f states in heavy-fermion compounds YbRh<sub>2</sub>Si<sub>2</sub> and YbIr<sub>2</sub>Si<sub>2</sub>, S. L. Molodtsov, S. Danzenbacher, Yu. Kucherenko, C. Laubschat, D. V. Vyalikh, Z. Hossain, C. Geibel, X. J. Zhou, W. L. Yang, N. Mannella, Z. Hussain, Z.-X Shen, M. Shi, L. Patthey, Journal of Magnetism and Magnetic Materials, Vol. 310, No. 2, Suppl. Part 1, March 2007, p-443-445. (Proceeding ICM06)
- 290. Low- Temperature properties of the heavy fermion system YbIr<sub>2</sub>Si<sub>2</sub> , Z.Hossain, C. Geibel, T. Radu, Y. Tokiwa, F. Weickert, C. Krellner, H. Jeevan, P. Gegenwart, F. Steglich, Physica B: Condensed Matter, Vol. 378-380, May 01, 2006, p 74-75. (Proceedings: SCES05)

- 291. Crossover from divalent to valence fluctuating state of Eu in EuCu<sub>2</sub> (Ge<sub>1-x</sub> Si<sub>x</sub>)<sub>2</sub> probed by <sup>63,65</sup> Cu-NMR, M. Baenitz, A. A. Gippius, A. K. Rajarajan, E. N. Morozova, Z. Hossain, C. Geibel, F. Steglich, Physica B, Vol. 378-380, 1 May 2006, P-683-5 (Proceedings: SCES05)
- 292. Magnetisation dynamics of YbIr<sub>2</sub> Si<sub>2</sub>, A. Hiess, O. Stockert, M. M. Koza, Z. Hossain, C. Geibel, Physica B: Condensed Matter, Vol. 378-380, May 01, 2006, P-748-749 (Proceedings: SCES05)
- 293. Low-temperature high-field magnetization of YbRh<sub>2</sub> Si<sub>2</sub> and YbIr<sub>2</sub>Si<sub>2</sub> under hydrostatic pressure, Y. Tokiwa, P. Gegenwart, Z. Hossain, J. Ferstl, G. Sparn, C. Geibel, F. Steglich, Physica B: Condensed Matter, Vol. 378-380, May 01, 2006, P- 746-747 (Proceedings: SCES 05)
- 294. Temperature and pressure-induced valence transition in EuCo<sub>2</sub>Ge<sub>2</sub> , G. Dionicio, H. Wilhelm, Z. Hossain, C. Geibel, Physica B: Condensed Matter, Vol. 378-380, May 01, 2006, p-724-725 (Proceedings: SCES 05)
- 295. Angular power spectrum of CMB anisotropy from WMAP, Tarun Souradeep, Rajib Saha, Pankaj Jain, New Astron . Rev. 50, 854-860 (2006)
- 296. Proton electromagnetic form factors at large momentum transfer, P. Jain, S. Mitra,, Pramana 66, 703-708 (2006)
- 297. Organized an International workshop on the Physics of Mesoscopic and Disordered Systems (Mesodis) December 04-08, 2006 (R. Prasad)
- 298. Recovery of intrinsic fluorescence of tissue mimicking model media and human breast tissues form spatially solved fluorescence and simultaneous evaluation of optical transport parameters Proc. SPIE Vol. 6091 p. 12-21, Optical Biopsy VI, (Feb 2006), V.L.N. Sridhar Raja, Sharad Gupta, Asima Pradhan.
- 299. Depth Resolved Fluorescence Measurements from Tissue Mimicking Model Media-A Spatially Resolved Fluorescence Technique National Laser Symposium, held at Vellore, Jan.2006, V.L.N. Sridhar Raja, Kalpana Mandal and Asima Pradhan.
- 300. A study of the Dependence of image quality on Refractive index of scatterer in polarimetric imaging through Turbid Media National Laser Symposium, held at Vellore, Jan.2006, Prashant Shukla, R. Sumathi, Sangeeta Chakrabarti and Asima Pradhan.
- 301. Dependence of image quality of state of polarization in polydisperse turbid media Photonics 2006, Prashant Shukla, Yashasvi Purwar, Asima Pradhan.
- 302. Spatially resolved fluorescence technique for depth resolved intrinsic Fluorescence measurements from two layered phantom National Laser Symposium, 2006, Rohit b. Patel, M. Anil Kumar, Prashant Shukla and Asima Pradhan.

- 303. Monitoring Biochemical Changes in Normal and Cancerous Cervical Tissues Using Intrinsic Fluorescence, National Laser Symposium, 2006, Md. Ejaz A Lodhi, Prashant Shukla, Anjali Saini, Meena Pal, Monika Mishra Nidhi Agarwal, Asha Agarwal and Asima Pradhan.
- 304. Recent developments in Rayleigh Benard Convection, in the Proceedings of the National Conference on Nonlinear Systems and Dynamcis-2006 (Chenai), Ed. M. Lakshmanan, R. Sahadevan, p. 137, 2006, M. K. Verma.
- 305. Energy Fluxes and Shell-to-shell Transfers in MHD Turbulence, in Lecture Notes in Computational Science and Engineering, proceedings of the Cyprus International Symposium on complex Effects in Large Eddy Simulations (CY-LES 2005), 2006, D. Carati, O. Debliquy, B. Knaepen, B. Teaca, M. K. Verma.
- 306. Energy Fluxes and Shell-to Shell Transfers in Forced Magnetohydrodynamic Turbulence, to appear in the Proceedings of MHD Summer 2005, Brussels, 2005, D. Carati, O. Debliquy, B. Knaepen, B. Teaca, M. K. Verma.
- 307. Mode-to-mode energy transfers and Patters in Convection, in the Proceedings of National Conference on Nonlinear Systems and Dynamics-2005 (Aligarh), M. K. Verma, K. Kumar, B. Kamble.
- 308. Negative refractive index of metamaterials at optical frequencies., Proc. MRS fall Meeting 2006, Symposium R (27th to 30th Nov. 2006, Boston) S. A. Ramakrishna, and S.Chakrabarti
- 309. Synthesis, Photophysical and Electroluminescent Properties of Arylenevinylenes-co pryrrolenevinylenes Derived from Divinylaryl Bridged Bispyrroles, Macromolecules, 40, 2657-2665, 2007, Anand K. Biswas, Ashish, A. K. Tripathi, Y.N. Mohapatra, and A. Ajayaghosh.
- 310. Trapping phenomena in intrinsic hydrogenated amorphous silicon like materials studied using current transient spectroscopies, Journal of Non-Crystalline Solids 352,1130–1133, 2006, Vibha Tripathi, Y.N. Mohapatra , P. Roca i Cabarrocas.
- 311. Electrical Characterization of Solution Processed MEHPPV/CNPPV Hetrostructure, 9<sup>th</sup> Asian Symposium on Information Display, New Delhi, 2006, pp219, D.C. Tripathi, D.K.Sinha, C.K.Suman and Y.N.Mohapatra.
- 312. Dielectric Properties of sol-gel-derived calcium copper titanate and calcium barium copper titanate thin films, Defence Sceicne Journal, 57,55, 2007, A. Dixit, D. Maurya, D.P. Singh, D.C. Agarwal and Y.N. Mohapatra.
- 313. A Laser heated pedestal growth of crystalline LiNbO<sub>3</sub> crystal directly from the congruent mixture of Li<sub>2</sub>CO<sub>3</sub> and Nb<sub>2</sub>O<sub>5</sub>, Sasmita Kumari Patro, Satyendra Singh Thakur, Pradeep Kumar, Bansi Lal and Joseph John, Proceedings of Sixth DAE-BRNS National Laser Symposium (NLS-6), p82-83, December 5-8, 2006 (Raja Ramanna Center for Advanced Technology, Indore, India).

- 314. Laser heated pedestal growth of the organic optical material 3-methoxy 4-hydroxy benzaldehyde, Shivani Singh and Bansi Lal, Proceedings of Sixth DAE-BRNS National Laser Symposium (NLS-6), p80-81, December 5-8, 2006 (Raja Ramanna Center for Advanced Technology, Indore, India).
- 315. Synthesis of the Nano-scaled Terbium Alumunium Garnet for Photonic Devices, Humyra Shabir and Bansi Lal, Proceddings International Workshop on the Physics of Mesoscopic and Disordered Materials, p135-6, 04-08 December, 2006 (Department of Physics, Indian Institute of Technology Kanpur, India).
- 316. Laser Heated Pedestal Growth of Organic Photonic Materials, Pradeep Kumar, Shivani Singh and Bansi Lal, Proceedings International Conference on Lasers and Nanomaterials, PL-10, November 30-December 2, 2006 (Department of Physics, University of Calcutta, Kolkata, India)

## CONFERENCES ATTENDED OUTSIDE IIT KANPUR

- 1. 3<sup>rd</sup> AIAA Flow Control Conference, San Francisco, California, June 2006, R.K. Sullerev.
- 2. 30<sup>th</sup> Indian Social Science Congress, December 26-31, 2006, Alagappa Chittier Research Center, Karaikudi, TN; Chairman: of a Session; Presented: a paper, K. Ghosh.
- 3. Workshop on Science Education, Homi Bhaba Center for Science Education, TIFR, Mumbai, Mar 22-24, 2007, Chairman: of a Session; presented an Invited paper, K. Ghosh.
- 4. Session Chairman for Helicopter Development at International Conference and Seminar during Aero India-2007, Bangalore, Feb. 2007, C. Venkatesan.
- 5. Organized and chaired the session on Asymptotic Methods in Boundary and Shear Layers at the International Conf. Boundary and Interior Layers, BAIL-2006 held at Univ. of Goettingen, Germany July 2006, Tapan K. Sengupta.
- 6. High-accuracy high Performance Computing- Current status and future directions: Invited talk as a panelist at International HPC-Users' Conference, IISc Bangalore, 2 March, 2007, Tapan K. Sengupta.
- 7. 7th World Congress on Computational Mechanics, WCCM06, Hyatt Regency Century Plaza Hotel, Los Angeles, California, July 16-22, (2006), Sanjay Mittal.
- 8. Indo-German Winter Academy, Digha December 10-13 (2006), Sanjay Mittal.
- 9. Aerospace Technologists Meet February 1-2, IIT Madras, Chennai (2007), Sanjay Mittal.

- 10. International High Performance Computing (HPC) Users Conference on Leadership Computing for Science and Industry 28 February -2 March, IIT Delhi and IISC Bangalore (2007), Sanjay Mittal.
- 11. 14<sup>th</sup> International Conference on Finite Elements in Flow Problems Santa Fe, New Mexico USA March 26-28 (2007), Sanjay Mittal.
- 12. International Conference on Computational Methods (ICCM07) Hiroshima Japan, 406 Apr (2007), Sanjay Mittal.
- 13. AIAA Atmospheric Flight Mechanics Conference and Exhibit, Keystone, Colorado, 21st 24th Aug. 2006, Speaker, S.K. Gupta
- 14. Workshop on Colloids and Materials Chemistry, Regional Research Laboratory (RRL), Bhubaneshwar, January, 2007, R. Bandyopadhyaya.
- 15. First Indo-UK Nanotechnology Conference, British Council and S. N. Bose National Centre for Basic Sciences, Calcutta, November, 2006, R. Bandyopadhyaya.
- 16. Nanotechnology Workshop, IIT Madras, October, 2006, R. Bandyopadhyaya.
- 17. ODH of Propane over several V<sub>2</sub>O<sub>5</sub>/TiO<sub>2</sub>-SiO<sub>2</sub> and V<sub>2</sub>O<sub>5</sub>/TiO<sub>2</sub> Catalysts: Understanding the Structure-Reactivity Relationship AICHE 2006 Annual Meeting, San Francisco, Nov-2006, D. Shee and G. Deo.
- 18. Structure-activity relationships in vanadia-ceria catalysts during ethane oxidation to ethylene by operando Raman-GC analyses Second International Congress on Operando Spectroscopy, Toledo, Spain, April-2006, M. V. Martínez-Huerta, G. Deo, J.L.G. Fierro, I. E. Wachs, M. A. Bañares.
- 19. Transesterification, modeling and simulation of batch kinetics of non-edible vegetable oils for biodiesel production. Annual AIChE meeting, San Francisco, USA. November, 2006, S. Garg.
- 20. Presented an invited paper in Conference on Assembly, Organization and Propulsion in Complex Systems, 22<sup>nd</sup>-24<sup>th</sup> February, 2007. Indian Institute of Technology, Madras, A. Ghatak.
- 21. National Conference on Latest Developments in Oil and Gas Sectors, Institution of Engineers (India), Delhi State Chapter, Sept. 2006. Delivered an Invited Sir P.C. Roy Memorial Lecture on Manpower Needs of Oil and Gas Industry, J.P. Gupta.
- 22. Engineers' Day Symposium, Institution of Engineers (India) Qatar Chapter, Doha, Qatar, Sept. 15, 2006. Delivered an invited talk on 'Role of Engineers in Natural Disaster Mitigation and Management', J.P. Gupta.
- 23. International Workshop on Dangerous Goods Management and Emergency Response, Taiwan, October 2006. Delivered a talk on Chemical Emergency Management National Incident Management System, J.P. Gupta.

- 24. First Joint Symposium of Industry Academy, Gyeongju, Korea, December 2006. Delivered an Invited talk on 'Inherently Safer Design Concepts and Applications', J.P. Gupta.
- 25. Petrotech2007, January 15-19, 2007, New Delhi. Participated as an attendee, J.P. Gupta.
- 26. 56th Canadian Chemical Engineering Conference, Sherbrooke, Quebec, Canada, October, 2006. A paper titled Security Risk Assessment Techniques for Chemical Process Industries, authored by S. Bajpai and J. P. Gupta. (It was presented by my student Mr. S. Bajpai).
- 27. CAMURE-6 and ISMR-5 at NCL, Pune, 14th -17th Jan, 2007, Ashok Khanna.
- 28. 19th International Symposium on Chemical Reaction Engg., Potsdam, Germany, Sep 3-6, 2006, D. Kunzru.
- 29. Attended the Asian Society for Information Display (ASID) 2006 International Conference, New Delhi, Oct 8-12, 2006, S. Panda.
- 30. Attended the International Workshop on Micro/Nano Systems Technology for Bio-Implants and Bio Applications, Kolkata, Dec 28-30, 2006, S. Panda.
- 31. Invited to the Center of Excellence in Nanoelectronics, IIT Bombay, for exploring collaborative work, March 5, 2007, S. Panda.
- 32. IIT-K Reach symposium 2007, Poster presented, V. Shankar.
- 33. Self-organized Large Area Meso-patterning of Polymers, BRNS-DAE Theme Meeting on Self-assembly Routes for Nanotech Materials, BARC, Mumbai, April 2006, A. Sharma.
- 34. Surface instability of thin films, International Workshop on Wave Dynamics and Stability of Thin Film Flow Systems, IIT Madras, Chennai, September 2006, A. Sharma.
- 35. Fabrication by Elastic Contact Lithography, RPG Life Science Professor M M Sharma Medal and CHEMCON Distinguished Lecture, CHEMCON, Annual Indian Chemical Engineering Congress, Ankleshwar, December 2006, A. Sharma.
- 36. Soft patterning for MEMS structures, International workshop on MEMS and Micro/Nano Systems Technology, Kolkata, December 2006, A. Sharma.
- 37. Self-organized patterning by Elastic Contact Lithography, Annual AIChE Meeting, Alpha Chi Sigma Symposium honoring Darsh Wasan, San Francisco, November 2006, A. Sharma.
- 38. Self-organized patterning of soft solids, National Workshop on Nanomaterials and Nanotechnology, University of Lucknow (Materials Research Society of India), Lucknow, March 2007, A. Sharma.
- 39. Self-organized materials and interfaces, Recent Developments in Nanomaterials, Banaras Hindu University, March 2007, A. Sharma.

- 40. Self-organized manufacturing, National Review and Coordination Meeting on Nanoscience and Nanotechnology, Hyderabad, February 2007, A. Sharma.
- 41. IIT-K Reach Symposium 2007, Poster presented, J.K. Singh.
- 42. Attended 86th Annual Meeting of the Transportation Research Board, Washington D.C., USA. Presented a paper at the conference.
- 43. Attended 2<sup>nd</sup> National Frontiers of Engineering Symposium, New Delhi. Chaired the session on Transport, Chakraborty, P.
- 44. Combined Regional Workshop of WWTM and IHWTM in ARRPET, Shahid Raya Hotel, Bali, Indonesia, June 5-6, 2006, Chaired Session, S. Guha.
- 45. Annual Review Workshop of ARRPET II, AIT, Bangkok, Nov 5-7, 2006, Chaired WWTM Sessions, S. Guha.
- 46. International Conference on Civil Engineering in New Millennium, CENEM 2007, Jan 11-14, 2007, Bengal Engineering and Science University, Shibpur, Howrah, West Bengal, India. Invited Paper Presented and Chaired Session, S. Guha.
- 47. Attended 15<sup>th</sup> US National Congress of Theoretical and Applied Mechanics, Boulder, Colorado, USA, 25-30 June, 2006, Kumar Ashwini. [Contributed paper]
- 48. Attended 14th International Conference on Composite Engineering, Boulder, Colorado, USA, July 2-8, 2006, Kumar Ashwini. [[Invited paper]]
- 49. Attended 2<sup>nd</sup> International Congress on Computational Mechanics and Simulation, IIT Guwahati, India, 8-10 December, 2006, Kumar Ashwini. [Keynote speaker, Session chairman]
- 50. Attended Map World Forum 2007, Hyderabad, 24-28 January 2007, Panelist, invited speaker and presented research paper, Lohani, B.
- 51. Attended ISPRS International Symposium on Geospatial Databases for sustainable development, Goa, 27-30 September 2006, Presented research paper, Lohani B.
- 52. Attended ISPRS Commission VI symposium, 27-30 June 2007, Tokyo, Presented a research paper, Lohani B.
- 53. CATCON software competition, 27-30 June 2007, Tokyo, Participated in software competition with Limulator, , Lohani, B.
- Joint Asia Oceania Geosciences Society (AOGS) 3<sup>rd</sup> meeting 10–14 July 2006, Suntec Singapore International Convention & Exhibition Centre, Singapore, Malik, J.N.
- 55. 100th Anniversary 1906 San Francisco Earthquake conference at San Francisco, April 18-22, 2006, Malik, J.N.
- 56. Attended 100<sup>th</sup> Anniversary Earthquake Conference Commemorating the 1906 San Francisco Earthquake during 18-22, 2006 at San Francisco, USA

- contributing paper entitled Implications of the 2004 Great Sumatra Earthquake and Tsunami for Risk Reduction in India, Jain S. K.
- 57. Attended First European Conference on Earthquake Engineering and Seismology during September 3-8, 2006 in Geneva, Switzerland, Jain S. K.
- 58. Attend meeting Board of Directors of International Association for Earthquake Engineering, Jain S. K.
- 59. Attend Editorial Board Meeting of the journal Earthquake Engineering and Structural Dynamics' Wiley. , Jain S. K.
- 60. World Seismic Safety Initiative (WSSI) during 3-4 December in Singapore for attending Annual meeting of the Board of Directors, Jain S. K.
- 61. International Disaster Management Symposium :: Culture of Prevention, 18 January 2007, Kobe, JAPAN, Murty, C.V.R.
- 62. 8<sup>th</sup> US National Conference on Earthquake Engineering, 19-21 April 2006, San Francisco, USA, , Murty, C.V.R.
- 63. 13th World Conference on Earthquake Engineering, 1-6 August 2006, Vancouver, CANADA, Murty, C.V.R.
- 64. 3<sup>rd</sup> Indo-German Workshop and Theme Meeting on Seismic Safety of Structures, Risk Assessment and Disaster Mitigation, 12-13 March 2007, BARC, Bombay, Murty, C.V.R.
- 65. International Roundtable on Lessons from Natural Disasters, Policy Issues and Mitigation Strategies, 8–12 January 2007, Vellore, India, Murty, C.V.R.
- 66. Engineers's Day Celebration, 14 September 2006, Institution of Engineers (India), Indore Chapter, Murty, C.V.R.
- 67. Indo-US National Frontiers of Engineering Symposium, 1-3 April 2006, Agra, India, Murty, C.V.R.
- 68. International Conference on 'Deltas: Depositional systems and stratigraphic development, Brunei Darussalam, January 13-18, 2006 (Invited lecture), Sinha R.
- 69. Fluvial conference on IGCP518 and IAG Working Group on Large Rivers. Shanghai and Nanjing, 9-16, October, 2006 (Invited lecture), Sinha R.
- 70. International conference on 'Changing Scenario in Paleobotany and allied subjects', Birbal Sahni Institute of Paleobotany Lucknow, November 15-17, 2006, Sinha R. (Keynote lecture)
- 71. American Geophysical Union Fall Meeting, San Francisco, December 11-15, 2006, contributed paper, Dey, S. and S. N. Tripathi, Aerosol and cloud forcing in the Indo-Gangetic plain.
- 72. American Geophysical Union Fall Meeting, San Francisco, December 11-15, 2006, contributed paper, Tripathi, S. N., Srivastava, A. and Dey, S., Surface and Aircraft Measurements of Aerosol Black Carbon at a Typical Location in Gangetic Basin, Northern India.

- 73. Formal Methods Update 2006, IIT Guwahati, July 2006, delivered two talks on Quantitative and Stochastic Games, Anil Seth.
- 74. ICTP-ITU-URSI School on Wireless Networking for Scientific Applications in Developing Countries, February 20-21, 2007, ICTP, Trieste, Italy, Bhaskaran Raman.
- 75. WIreless Systems: Advanced Research and Development (WISARD 2007), a workshop in COMSWARE 2007, January 7-8, 2007, Bangalore, India, Bhaskaran Raman.
- 76. The First ACM International Workshop on Wireless Network Testbeds, Experimental evaluation and Characterization (WiNTECH 2006), A MOBICOM 2006 Workshop, September 2006, Los Angeles, USA, Bhaskaran Raman.
- 77. 12th Annual International Conference on Mobile Computing and Networking (MOBICOM), September 2006, Los Angeles, USA, Bhaskaran Raman.
- 78. 25th Annual Conference on Computer Communications (IEEE INFOCOM), Barcelona, Spain, April 2006, Bhaskaran Raman.
- 79. 2nd International Conference on Global E-Security (ICGeS 2006), April 2006, London, UK, Dheeraj Sanghi.
- 80. IPv6 Global summit, April 2006, Bangalore, Dheeraj Sanghi.
- 81. International Conference on Advanced Technologies and Electronic TRnsactions, Jul. 2006, Kathmandu, Nepal, Dheeraj Sanghi.
- 82. NASSCOM Annual HR Summit, July 2006, Chennai, Dheeraj Sanghi.
- 83. 8th International Symposium on Systems and Information Security(SSI 2006), November 2006, Sao Paulo, Brazil, Dheeraj Sanghi.
- 84. 12th Asia Pacific Software Engineering Conference, December 2006, Bangalore, Dheeraj Sanghi.
- 85. Conference on Computational Complexity 2006, Prague.
- 86. SPIE 'Defense and Security Symposium', Florida, USA, 2006, Phalguni Gupta.
- 87. 23rd International Biometric Conference, Montreal, Canada, 2006, Phalguni Gupta.
- 88. International Conference on Distributed Computing and Networking (ICDCN), Guwahati, India, December 2006, Phalguni Gupta.
- 89. International Conference on Computing: Theory and Applications (ICCTA), Kolkata, India, January 2007, Phalguni Gupta.
- 90. The 31st International Symposium on Mathematical Foundations of Computer Science. Presented a contributed lecture, Piyush Kurur.
- 91. The 2006 International Conference on Artificial Intelligence, Las Vegas, Nevada, USA, June 26-29, 2006, R. M. K. Sinha.

- 92. The 2006 International Conference on Machine Learning; Models, Technologies and Applications, Las Vegas, Nevada, USA, June 26-29, 2006, R. M. K. Sinha.
- 93. International Workshop on Internationalization, World Wide Web Consortium, R. M. K. Sinha.
- 94. Invited Panelist at Symposium on Modeling and Shallow Parsing of Indian Languages (MSPIL-06), IIT Bombay on April 2-4, 2006, presented Invited paper on 'Machine Translation of Hinglish', R. M. K. Sinha.
- 95. Intel Workshop on Multicore curriculum, May 2006, Portland, Oregon, Sanjeev Kumar Aggarwal.
- 96. Cluster and Grid Computing, May 2006, Singapore, Sanjeev Kumar Aggarwal.
- 97. Conference on use of Grids in Health care, August 2006, Delhi, Sanjeev Kumar Aggarwal.
- 98. Intel Multicore Development Workshop, September 2006, Jaipur, Sanjeev Kumar Aggarwal.
- 99. Intel Developers Forum, October 2006, Bangalore, Sanjeev Kumar Aggarwal.
- 100. Intel Asia Academic Forum, November 2006, Malaysia, Sanjeev Kumar Aggarwal.
- 101. Asia Pacific Software Engineering Conference, December 2006, Bangalore, Sanjeev Kumar Aggarwal.
- 102. TRDDC Silver Jubilee Research Workshop, December 2006, Pune, Sanjeev Kumar Aggarwal.
- 103. High Performance Computing, December 2006, Bangalore, Sanjeev Kumar Aggarwal.
- 104. Microsoft Annual Research Seminar Techvista, January 2007, Bangalore, Sanjeev Kumar Aggarwal.
- 105. High Performance Computing USers Conference, February 2007, Delhi, Sanjeev Kumar Aggarwal.
- 106. European Symposium on Algorithms (ESA), September 11-15, Zurich, Switzerland, paper presentation, Sumit Ganguli.
- 107. ACM Symposium on Principles of Database Systems (PODS), June 26-28, Chicago, USA, paper presentation, Sumit Ganguli.
- 108. 12<sup>th</sup> International computing and combinatorics Conference (COCOON 2006), August 15-18, 2006, Taipei, Taiwan (Republic of China), paper presentation, Shashank K. Mehta.
- 109. 17th International Symposium on Algorithms and Computation (ISSAC 2006), December 18-20, 2006, Kolkata, paper presentation, Shashank K. Mehta.
- 110. Sixth Working IEEE/IFIP Conference on Software Architecture, WICSA 2007, Mumbai, Jan 2007, a key note address on A Knowledge Management Perspective of Software Architecture, Prabhakar T.V. .

- 111. Conference Mumbai February, 2007, invited talk on The Management of Architecture Knowledge IT Enterprise Architecture Practitioners, Prabhakar T.V.
- 112. 9th Asian Symposium on Information Display (ASID), New Delhi, India,11th October 2006, Paper presentation, P. K. Kalra.
- 113. Symposium on Computational Neuroscience and Imaging, Lucknow, India, 17th -20th December, 2006, Paper presentation, P. K. Kalra.
- 114. Elitex-2007, New Delhi, India, January, 2007, Poster Presentation, P. K. Kalra.
- 115. Twentieth International Joint Conference on Artificial Intelligence (IJCAI 07), International Institute of Information Technology, Hyderabad, India, 6th 12th January 2007, Workshop Lectures, P. K. Kalra.
- 116. International Conference on Wireless Sensor Networks (WCSN), Indian Institute of Information Technology, Allahabad, India, December 2007, P. K. Kalra.
- 117. International Conference on Neural Biology and Neural Informatics, (NBNI-2006), Kyoto, Japan, July 23-24, 2006, Paper presentation, P. K. Kalra.
- 118. International Conference on Advanced Power System Operation Control and Management (APSCOM-2006), Hong Kong, 30<sup>th</sup> October 2<sup>nd</sup> November, 2006 (chaired a session and presented paper), S. C. Srivastava.
- 119. 14<sup>th</sup> National Power Systems Conference (NPSC), IIT Roorkee, 27-30 December, 2006.(delivered a key note lecture), S. C. Srivastava.
- 120. Chaired the technical session on Reluctance and Special Drives in IEEE International Conference on Industrial Technology (ICIT 2006), Dec. 15-17, 2006, Mumbai, S. P. Das.
- 121. IEEE Power India Conference Delhi, April 10-12, 2006, S.N.Singh (Session Chairman)
- 122. International Conference on Energy, Efficiency and Environment, UPTU Lucknow, June 10-11, 2006, S.N. Singh (Organizing committee member, Technical Committee Chairman, Session Chairman)
- 123. IEEE Power Engineering Society, General Meeting, Montreal, Canada, June 18-22, 2006, S.N.Singh (Panelist, paper presenter)
- 124. National Seminar on Voltage Stability (SVC'06), Arulmigu Kalasalingam College of Engineering, Tamil Nadu, October 13-14, 2006, S.N. Singh. (Keynote Speaker)
- 125. Workshop on Laboratory Teaching in Electrical Engineering (LTEE-06), KNIT Sultanpur, India, November 24-26, 2006, S.N. Singh (Guest of Honor, Valedictory session).
- 126. AICTE Sponsored National Conference on Advances in Electrical Engineering, MITS Gwalior, Indian, November 29-30, 2006, S.N. Singh (Keynote Speaker, Inaugural Session)

- 127. Presented a contributed paper entitled A Utility Friendly High Power Induction Motor Drive with Direct Torque and Flux Control, in IEEE International Conference on Industrial Technology (ICIT 2006), Mumbai, 15-17 Dec. 2006, pp. 1983-1988, S. P. Das
- 128. IEEE SoSE Conference, San Antonio, Texas, USA, April, 2007, presenting contributed paper, L. Behera.
- 129. IEEE Int. Symposium on Intelligent Control (ISIC), Munich, Germany, 2006, presenting contributed paper, L. Behera.
- 130. International Conference on Information Technology IEEE-ICIT 2006, December 15-17, 2006, Mumbai, India. Chaired two sessions, P. Sensarma.
- 131. Conference on Advances in Control and Optimization of Dynamic Systems. IISc Bangalore, January 2007. Presented contributed paper, chaired session, R. Potluri.
- 132. 2006 IEEE 8th International Conference on Properties and Applications of Dielectric Materials, Bali, Indonesia: Presented two papers, Chaired a session, N. Gupta.
- 133. National Power Systems Conference (NPSC 06), IIT Rorkee, Dec 2006: Presented a paper, Chaired a session, N. Gupta.
- 134. 2006 International Conference on Information Display, Organised by Asian Society for Information Display (ASID) in Oct. 2006, in New Delhi, S. Gupta.
- 135. 2006 IEEE Information Theory Workshop held at Chengdu, China, R. K. Bansal.
- 136. International Joint Conference on Artificial Intelligence, Hyderabad for presenting contributed paper, S. Umesh.
- 137. 12<sup>th</sup> National Conference on Communications, NCC 2006 at IIT Delhi, A. K. Chaturvedi.
- 138. IEEE International Conference on Communications, ICC 2006 at Istanbul, A. K. Chaturvedi.
- 139. WINS, Goa, April 2006. Invited speaker, A. K. Chaturvedi.
- 140. 12<sup>th</sup> National Conference on Communications, NCC 2006 at IIT Delhi, A. Banerjee.
- 141. IEEE Wireless Communications and Networking Conference (WCNC), Hong Kong, March 2007, A. Banerjee.
- 142. The 2006 International Conference on Artificial Intelligence, Las Vegas, Nevada, USA, June 26-29, 2006, R. M. K. Sinha.
- 143. The 2006 International Conference on Machine Learning; Models, Technologies and Applications, Las Vegas, Nevada, USA, June 26-29, 2006, R. M. K. Sinha.
- 144. Invited Panelist at Symposium on Modeling and Shallow Parsing of Indian Languages (MSPIL-06), IIT Bombay on April 2-4, 2006. Presented Invited paper on 'Machine Translation of Hinglish', R. M. K. Sinha.

- 145. WISARD, Bangalore, Jan 2007. Panelist in discussion, K. Chebrolu.
- 146. WINS, Goa, April 2006. Invited participant, K. Chebrolu.
- 147. The 9<sup>th</sup> Asian Symposium on Information Display at New Delhi from 8<sup>th</sup> to 12<sup>th</sup> October, 2006. Was member of program committee; Chaired two tutorial sessions (by Prof. Harm Tolner and Prof. Y.N. Mohapatra); Made a poster presentation.
- 148. Made a poster presentation and chaired two tutorial (Prof. Harm Tolner and Prof. Y.N. Mohapatra) Sessions in the 9th Asian Symposium on Information Display at New Delhi from 8th to 12th Oct 2006, S. K. Iyer.
- 149. A Coordinated Approach to Shipment Planning and Scheduling Decisions in Supply Chains with Multiple Supply Modes, 10<sup>th</sup> Annual International Conference of the Society of Operations Management (SOM) held from December 21-23, 2006 at Indian Institute of Management Ahmedabad, India, P. Mehta.
- 150. International Corporate Responsibility 2006, HongKong, September 22-24, R. Sarkar.
- 151. Green Competitiveness for Sustainable Development, IMT, Ghaziabad, October, 2006, R. Sarkar.
- 152. Ninth Biennial Conference of the International Society for Ecological Economics, Delhi, Dec15-19, 2006, R. Sarkar.
- 153. Conference on Sustainable Energy and Environment : Technology and Policy Options, Bangkok, 21-23 November 2006, Anoop Singh.
- 154. IAEE International Conference, (7-10 June, 2006), Potsdam/Berlin, Germany, Anoop Singh.
- 155. Conference on Better Air Quality, Indonesia, 13-15 December, 2006, Anoop Singh.
- 156. INFRATRAIN Autumn School Trends in Infrastructure Modeling and Policy to be organized by TU Berlin's WIP from 2 7 October 2006, Anoop Singh.
- 157. Knowledge Management Strategies for Continuous Process Industries. Institute of Oil & Petrochemical Management, Mamudabad, Iran, May 2006, J. Chatterjee.
- 158. Marketing of Services, Mazandran University of Science & Technology, Iran, May 2006, J. Chatterjee.
- 159. Managing Innovation for Success in a Manufacturing DBE. National Knowledge Commission and PHDCCI Conference on Innovation & Faster Growth, PHDCCI, Delhi-Lucknow, India, November 2006, J. Chatterjee.
- 160. Developing a Village Knowledge Centres Network. Panchayati Raj Seminar, Barhalgunge, Gorakhpur, India, December 2006, J. Chatterjee and M. D. Singh.

- 161. A Strategic Approach to User Participation in Agricultural Knowledge Management the Agropedia Model'. KM-NAIP Seminar, Indian Council for Agricultural Research, Delhi, India January 2007, J. Chatterjee and M. D. Singh.
- 162. Global Marketing Leadership. National Seminar on Young Leaders in the Making Expectations and Imperatives, Lucknow, March 2007, J. Chatterjee.
- 163. OPAALS Workshop, London School of Economics, U.K., June 2006, J. Chatterjee.
- 164. Open Knowledge Space, OPAALS, Workshop, Tampere University of Technology, Finland, October 2006, J. Chatterjee.
- 165. Language, Semantics and SBVR Workshop, OPAALS, University of Kassel, Germany, March 2007, J. Chatterjee.
- 166. Labour standadrs and globalisation. 23rd March 2007, Dept. of HSS, IIT Bombay, Rahul Varman.
- 167. Institutional Aspects in Artisanal Clusters. Kraft Tech: National seminar on the 'Confluence of technology with handicrafts', 31st March 2007, Design Programme, IIT Kanpur, Rahul Varman.
- 168. Socio-technical frame work of Business ecosystems for competitiveness of Craft clusters': National seminar on the 'Confluence of technology with handicrafts', 31st March 2007, Design Programme, IIT Kanpur, J. Chatterjee.
- 169. Ubiquitous Middleman Syndrome; Trust is the key: National seminar on the 'Confluence of technology with handicrafts', 31st March 2007, Design Programme, IIT Kanpur, B. V. Phani.
- 170. Winter Research Conference on Microstructure of International Financial Markets, Indian School of Business, December 17-19, 2006, B. V. Phani.
- 171. ICQRIT 2006 New Delhi Dec02-04,2006, Ashok K Mittal.
- 172. ORSI 2006 Kolkatta Jan05-07, 2007, Ashok K Mittal.
- 173. National workshop on Marketing Intelligence VIT Vellore Feb 19-20, 2007, Ashok K Mittal.
- 174. Research and Relevance :LUMS Lahore Pakistan Jan 16-17, 2007, Ashok K Mittal.
- 175. RAOTA 2006 Delhi Oct27-28, 2006, Ashok K Mittal.
- 176. NCIITE Dayanand Girls College Kanpur Feb 26-27, 2007, Ashok K Mittal.
- 177. Brainstorming on UK India Collaboration to identify the barriers to the transfer of low Carbon energy technologies TERI New Delhi 13 Sept 2006, Ashok K Mittal.
- 178. Second National conference on Management Science and Practice IIT Madras March 9-11, 2007, Ashok K Mittal.
- 179. KCCQC -2006 BHEL Haridwar Oct 2006, Ashok K Mittal.
- 180. The 7<sup>th</sup> Asia Pacific Industrial Engineering and Management Systems Conference, Bangkok, 17-20 December 2006, Session Chair, Kripa Shanker.

- 181. Workshop on Immediate Energy Saving via Microwave Usage in Major Materials Technologies organized by National Academy of Engineering and Penn State University, University Park, USA (June 8-10, 2006) and presented an invited lecture on Microwave Sintering of W-Ni-Fe Alloys, A. Upadhyaya.
- 182. International Conference on Powder Metallurgy (PM2TEC2006) held at San Diego, CA, USA (June 18-21, 2006) and presented the contributed paper titled Sintering and Heat-Treatment Studies on SH737 and 4300 Steels, M. Das, S.K. Sinha and A. Upadhyaya.
- 183. Effect of Powder Characteristics and Processing Parameters on the Shrinkage behaviour of Copper Compacts, Powder Metallurgy World Congress (PM2006), 24-28 September, 2006, Busan, South Korea, B. Padmavathi and A. Upadhyaya.
- 184. Effect of Sintering Temperature on Grain Boundary Character Distribution in Pure Nickel, S.K. Sinha, Powder Metallurgy World Congress (PM2006), 24-28 September, 2006, Busan, South Korea, S. K. Sinha, P. P. Bhattacharjee, and A. Upadhyaya.
- 185. Processing and Characterization of Cr-Cu Alloys through Liquid Phase Sintering for Vacuum Circuit Breakers Powder Metallurgy World Congress (PM2006), 24-28 September, 2006, Busan, South Korea, K. S. Nalwa, S. K. Sinha, and A. Upadhyaya.
- 186. Minerals, Metals, Metallurgy, 6<sup>th</sup> International Trade Fair & Conference, 11-14 September, 2006, New Delhi, A. Upadhyaya.
- 187. Papers from Dr. Upadhyaya's group were presented in the 60<sup>th</sup> Annual Technical Meeting of the IIM, Jamshedpur, 15-16 November, 2006.
- 188. A Comparative Study of Deformation and Recrystallization Textures in P/M Processed Pure Ni and Ni-5 at.% W Alloy Substrate Tapes for Coated Superconductor Applications, 60<sup>th</sup> Annual Technical Meeting of the IIM, Jamshedpur, 15-16 November, 2006, P.P. Bhattacharjee, R.K. Ray, and A. Upadhyaya.
- 189. Optimization of Mechanical Properties of Low Alloy P/M Steel through the Control of Microstructure and Pore Morphology, 60<sup>th</sup> Annual Technical Meeting of the IIM, Jamshedpur, 15-16 November, 2006, S.K. Sinha and A. Upadhyaya.
- 190. Corrosion Behaviour of Sintered Aluminide Reinforced 434L Stainless Steel, 60th Annual Technical Meeting of the IIM, Jamshedpur, 15-16 November, 2006, G. Joshi, S. Balaji, and A. Upadhyaya.
- 191. Phase Evolution and Sinter-Bonding Mechanism of Ternary Boride (Fe,Mo,Cr,B) based Cermets Sintered at Various Temperatures, 60<sup>th</sup> Annual Technical Meeting of the IIM, Jamshedpur, 15-16 November, 2006, Jain, B. Palanisamy, and A. Upadhyaya.

- 192. Fabrication of Al-Si Alloy and 2024 Al Alloys by Sprayforming, 60<sup>th</sup> Annual Technical Meeting of the IIM, Jamshedpur, 15-16 November, 2006, S. Tandon, P. Dash, and A. Upadhyaya.
- 193. Corrosion Behaviour of Sintered Aluminide Reinforced 316L Stainless Steel, 60th Annual Technical Meeting of the IIM, Jamshedpur, 15-16 November, 2006, P. Vijay, S. Balaji, and A. Upadhyaya.
- 194. Effect of Heating Rate on the Sintering Response and Microstructural Evolution in Tungsten Heavy Alloys, National Workshop on Powder Metallurgy of Refractory and Hard Metals- Processing & Prospects (MPRM-2006), December 8-9, 2006 at Tiruchirrapalli, Mondal and A. Upadhyaya.
- 195. Sinterbonding of Boride-Based Cermets on to Steel Substrate, International Conference on Recent Advances in Materials & Processing (RAMP2006) held between December 15-16, 2006 at Coimbatore, P. Barath and A. Upadhyaya.
- 196. Supersolidus Liquid Phase Sintering of Intermetallic Dispersed Stainless Steel Composites, International Conference on Recent Advances in Materials & Processing (RAMP2006) held between December 15-16, 2006 at Coimbatore, S. Balaji and A. Upadhyaya.
- 197. PTFE-Cu Composites through Mechanical Alloying, M. Ananthraman, International Conference on Recent Advances in Materials & Processing (RAMP2006) held between December 15-16, 2006 at Coimbatore, Upadhyaya, K.K. Kar.
- 198. Conference on Advances in Space Science and Technology (CASST'2007) held between January 29-31, 2007 at IISc Bangalore and presented a paper titled Materials Processing for Communication Satellites, E. R. Tagore, A. Upadhyaya, and A.V. Pathak.
- 199. Sprayforming of Al-Si and 2024 Al Alloys,International Conference Powder Metallurgy for Automotive & Engineering Industry PM-2007 and 33<sup>rd</sup> Annual Technical Meeting of PMAI held in Noida between 9-11 February 2007, S. Tandon, P. Dash, A. Upadhyaya.
- 200. P/M Processing of Cu-Pb Alloys for Bearing Applications, International Conference Powder Metallurgy for Automotive & Engineering Industry PM-2007 and 33<sup>rd</sup> Annual Technical Meeting of PMAI held in Noida between 9-11 February 2007, P. Dash and A. Upadhyaya.
- 201. Pressureless Sintering of MoSi<sub>2</sub>-SiC Composites for Aerospace Applications, International Conference Powder Metallurgy for Automotive & Engineering Industry PM-2007 and 33<sup>rd</sup> Annual Technical Meeting of PMAI held in Noida between 9-11 February 2007, P. Vijay, A. Mondal, A. Upadhyaya.
- 202. Effect of YAG Addition on Electrochemical Response of Sintered Stainless Steels, International Conference Powder Metallurgy for Automotive & Engineering Industry PM-2007 and 33rd Annual Technical Meeting of PMAI

- held in Noida between 9-11 February 2007, S. Balaji, G. Joshi, and A. Upadhyaya.
- 203. Challenges in the Processing of Al-Alloys via P/M Route, International Conference Powder Metallurgy for Automotive & Engineering Industry PM-2007 and 33<sup>rd</sup> Annual Technical Meeting of PMAI held in Noida between 9-11 February 2007, Padmavathi, A. Upadhyaya.
- 204. Activated Sintering of Stainless Steels, International Symposium on Advances in Stainless Steels (ISAS2007) held between April 9-11, 2007 at Chennai, A. Upadhyaya.
- 205. Reactive Surface-Bonding of Boride based Cermets on Ferrous Alloys, International Symposium on Advances in Stainless Steels (ISAS2007) held between April 9-11, 2007 at Chennai, P. Barath and A. Upadhyaya.
- 206. Sintering and Electrochemical Characterization of Aluminide Dispersed Stainless Steels, International Symposium on Advances in Stainless Steels (ISAS2007) held between April 9-11, 2007 at Chennai, S. Balaji and A. Upadhyaya.
- 207. Investigation of Magnetic Behaviour of Mechanical Activation Derived Multiferroic BiFeO<sub>3</sub>, Ashish Garg, Thota Harikishan, Brajesh Pandey, and Harish Chandra Verma, accepted for Oral Presentation at MRS Spring Meeting, San Francisco, 9-13 April 2007.
- 208. Sol-gel Synthesis and Characterization of Multiferroic BiFeO<sub>3</sub>-PbTiO<sub>3</sub> Thin Films, Soumya Kar, Anju Dixit, Ashish Garg, and D. C. Agrawal, accepted for Oral Presentation at MRS Spring Meeting, San Francisco, 9-13 April 2007.
- 209. Organic Field Effect Transistor Using Sol-gel Processed Ferroelectric Gates, Sambit Pattnaik, Vijayraj Singh, Ashish Garg and Monica Katiyar, accepted for Poster Presentation at MRS Spring Meeting, San Francisco, 9-13 April 2007.
- 210. Multiferroic Sm-doped BiFeO<sub>3</sub> Ceramics synthesized by Solid-State-Reaction Method, 4th International Conference and Exhibition on Emerging Solutions through Powder Metallurgy in Automotive and Emerging Industry, 9-11 February, New Delhi, India, Kanwar Singh Nalwa, Ashish Garg and Anish Upadhayaya.
- 211. Synthesis and Characterization of Multiferroic BiFeO<sub>3</sub> Thin Films Prepared by Chemical Solution Deposition Method, XIVth National Seminar on Ferroelectrics Dielectrics & Workshop on Advances in Multifunctional Materials, 18-21 Dec 2006, IIT Kharagpur (India), Won Best Poster Award, Vijayraj Singh, Anju Dixit, and Ashish Garg.
- 212. Multiferroic Bismuth Ferrite Synthesized by Mechanical Activation, XIVth National Seminar on Ferroelectrics Dielectrics & Workshop on Advances in Multifunctional Materials, 18-21 Dec 2006, IIT Kharagpur (India), T. Harikishan and Ashish Garg.

- 213. Characterization of Multiferroic BiFeO<sub>3</sub> Ceramics synthesized by Solid-State-Reaction Method, XIVth National Seminar on Ferroelectrics Dielectrics & Workshop on Advances in Multifunctional Materials, 18-21 Dec 2006, IIT Kharagpur (India), Won Best Poster Award, Kanwar Singh, Ashish Garg and Anish Upadhayaya.
- 214. Synthesis and Characterization of Solution Processed BiFeO<sub>3</sub>-PbTiO<sub>3</sub> Thin Films, XIVth National Seminar on Ferroelectrics Dielectrics & Workshop on Advances in Multifunctional Materials, 18-21 Dec 2006, IIT Kharagpur (India), S. Kar, A. Dixit, A. Garg and D.C. Agrawal.
- 215. Influence of Milling Parameters on Dry Mechano-chemical Synthesis of Nanocrystalline Hydroxyapatite, 8th International Conference on Nanostructured Materials, August 20st-25th, 2006, Indian Institute of Science, Bangalore (India), T. Mondal, B.K. Mishra and Ashish Garg.
- 216. Novel Low Temperature Chemical Synthesis of Ferroelectric Bismuth Titanate Nanoparticles, 8th International Conference on Nanostructured Materials, August 20st-25th, 2006, Indian Institute of Science, Bangalore (India), P. Prakash, M.K. Roy, A. Garg and H.C. Verma.
- 217. Effect of Processing on the Electrochemical Behavior of Ni-Al<sub>2</sub>O<sub>3</sub> Composites (ORAL), Eighth International Symposium on Advances in Electrochemical Science and Technology, 27-30 November 2006, Goa, S. Pal and R. Balasubramaniam
- 218. Studies on Corrosion Prevention of Rail Steels (POSTER), Eighth International Symposium on Advances in Electrochemical Science and Technology, 27-30 November 2006, Goa, Bijayani Panda and R. Balasubramaniam.
- 219. Corrosion of Rare Earth Based Magnetostrictive Alloys in Marine Environment (POSTER), Eighth International Symposium on Advances in Electrochemical Science and Technology, 27-30 November 2006, Goa, Deepika Sachdeva and R. Balasubramaniam.
- 220. Use of Scanning Electron Microscopy for Study of Degradation of Materials (Invited paper), National Conference on Advanced Analytical Techniques for Material Characterization, 27Nov-01Dec, DMSRDE, Kanpur, R Balasubramaniam.
- 221. Scientific Materials, Equipments and Techniques in Conservation: the Delhi Iron Pillar Example (Keynote Lecture), National Conference on Materials, Equipments and Techniques for Conservation of Cultural Property Present, past and future, 14 –16 December, 2006, Regional Conservation Laboratory, Mysore, R Balasubramaniam.
- 222. The Story of Indian Wootz Steel (INVITED), International Conference on History of Indian Science and Technology, Benaras Hindu University, Varanasi, 23-26 January 2007, Varanasi R Balasubramaniam.

- 223. Guns of Mehrangarh (INVITED) International Conference on Conservation of Arms and Armour, Mehrangarh Fort, 28Feb-01Mar 2007, Jodhpur, R. Balasubramaniam and Ruth Rhynas Brown.
- 224. The Saga of Indian Cannons (PLENARY LECTURE), National Conference on History of Science, organized by National Commission for the History of Sciences, Indian National Science Academy, New Delhi, 26-28 March 2007. New Delhi, R Balasubramaniam.
- 225. Preliminary Investigation into Comparative Performance of Titanium based Coatings for Automotive Applications using Biodiesel Blend and Diesel, Proceedings of Internal Combustion Engines Division, Spring Technical Conference 2006, ICES 2006-1974, May 7-10, 2006, Aachen, German, Mritunjay Kumar Shukla, Avinash Kumar Agarwal, Ashish Garg.
- 226. A Detailed Comparative Study of Ferroelectric Lanthanide Doped Bismuth Titanate Films Prepared by Chemical Solution Deposition and Pulsed-Laser-Ablation, TMS Annual Meeting 2006, San Antonio (USA), 12-16 March 2006, Garg, X. Hu and Z.H. Barber.
- 227. Comparative Wear Performance of Titanium Based Coatings for Automotive Applications Using Exhaust Gas Recirculation, International Conference on Superhard Coatings, Ein-Gedi, Israel, 27Feb.-1 March 2006, Avinash Kumar Agarwal, Ashish Garg, Dhananjay Kumar Srivastava, and Mritunjay Kumar Shukla.
- 228. Catalogue and Technical Analysis of Forge Welded Cannons in Deccani Forts (INVITED), National Conference on History of Science, organized by National Commission for the History of Sciences, Indian National Science Academy, New Delhi, 26-28 March 2007. New Delhi, R. Balasubramaniam and S. Jaikishan.
- 229. R. Balasubramaniam and Shivprasad Khened, Rustless Wonder, One India One People, Volume 9/10, May 2006, pp. 25-38,
- 230. Spark Plasma sintering and characterisation of ZrO<sub>2</sub>-ZrB<sub>2</sub> Nanoceramic composites at 8<sup>th</sup> International Conference on Nanostructured materials (NANO-06)at IISc, Bangalore, August, 2006, Bikramjit Basu.
- 231. Sintering, microstructure development and cell adhesion properties of bulk HAp-Ti and HAp-mullite bioceramic composites at the workshop on 'Biomaterials and Biomedical Devices' held at Central Glass and Ceramic Research Institute (CGCRI), Calcutta, India in December 12-13, 2006, Bikramjit Basu.

- 232. Does Spark plasma sintering always offer ceramics and ceramic composites with better properties? at the satellite Conference on Materials Behaviour: Far from Equilibrium (MBFE 2006) held at Bhabha Atomic Research Centre, Mumbai, India, during December 14-16, 2006, Bikramjit Basu.
- 233. Spark Plasma Sintered WC-ZrO<sub>2</sub> Nanocomposites: Microstructure and Mechanical Properties during 31st International Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, which will be held in Daytona Beach, Florida on January 21-26, 2007, Bikramjit Basu.
- 234. Synthesis, Phase Stability, Microstructure, Mechanical and In-Vitro Properties of HAp-Mullite Novel Composites for Biomedical Applications during 31st International Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, which will be held in Daytona Beach, Florida on January 21-26, 2007, Bikramjit Basu.
- 235. Hydroxyapatite-Alumina-High Density Polyethylene Composites for Biomedical Applications: Processing and Characterization during 31st International Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, which will be held in Daytona Beach, Florida on January 21-26, 2007, Bikramjit Basu.
- 236. Densification and Properties of TiB2 with MoSi2 Binder during 31st International Cocoa Beach Conference & Exposition on Advanced Ceramics & Composites, which will be held in Daytona Beach, Florida on January 21-26, 2007, Bikramjit Basu.
- 237. Correlation between Dihedral Angles at Triple Junctions and Grain Boundary Misorientation Angles in Polycrystals, National Conference on Electron Microscopy and XXXVIII Annual Meeting of Electron Microscope Society of India (EMSI), April 19-21, 2006 (awarded as the best student presentation in Materials Sciences), V. Rajinikanth, Veeranjaneyulu Daggubati and Sandeep Sangal
- 238. Grain Boundary Characterization of AISI 316L Stainless Steel using EBSD', National Conference on Electron Microscopy and XXXVIII Annual Meeting of Electron Microscope Society of India (EMSI), April 19-21, 2006, V. Rajinikanth, Veeranjaneyulu Daggubati and Sandeep Sangal
- 239. Asian Vehicle Emission Control Conference (AVECC)-2006, Jaipur, India, 20-22 September, 2006, Keynote Paper, B.P.Pundir.
- 240. Better Air Quality (BAQ) 2006, CAI Asia, Yogyakarta, Indonesia, 11-15 December, 2006, Invited Paper, B.P.Pundir.
- 241. SAE Fuels and Emissions Conference, Capetown, South Africa, January, 23-25, 2007, Contributed Paper, B.P.Pundir.
- 242. Indo-US workshop on Sensors and Actuators for Bio-MEMS application, IIT-Kharagpur, December, 2006, Bishakh Bhattacharya.

- 243. Response of a hard Duffing oscillator to harmonic excitation numerical and experimental investigation, an invited lecture in International conference on vibration problems, held at BESUS, February 1 –3, 2007, A.K. Mallik.
- 244. Optical Society of America annual meeting held at Rochester New York in October 2006, K. Muralidhar.
- 245. 33<sup>rd</sup> National and 3<sup>rd</sup> International Conference on Fluid Mechanics and Fluid Power, December 7-9, 2006, held at IIT Bombay, India, K. Muralidhar.
- 246. Eleventh Asian Congress of Fluid Mechanics (11ACFM), Kuala Lumpur, Malaysia, May 22-25, 2006, Invited Talk, Large-Eddy Simulation of Flows Concerning Impinging Jets and Bluff Body Wakes, G. Biswas.
- 247. Eleventh Asian Congress of Fluid Mechanics (11ACFM), Kuala Lumpur, Malaysia, May 22-25, 2006, Chaired a Session on Computational Fluid Mechanics and Flow Visualization, G. Biswas.
- 248. National Conference on CFD Applications in Power and Industry Sectors organized by the Corporate R&D of BHEL, Hyderabad, November 17-18, 2006, Invited Talk on Mathematical Modeling of Turbulence, G. Biswas.
- 249. Thirty third National and 3rd International Conference on Fluid Mechanics and Fluid Power, IIT Bombay, December 7-9, 2006, Contributed Paper, Numerical Study of Natural Convection in the Spallation Target Module of an Accelerator Driven Sub-Critical System, K. Arul Prakash, B. V. Rathish Kumar and G. Biswas
- 250. Thirty third National and 3rd International Conference on Fluid Mechanics and Fluid Power, paper number 1417, IIT Bombay, December 7-9, 2006, Contributed Paper, A Comparison of VOF and CLSVOF Method for Predicting Surface Tension Dominated Two-Phase Flows, G. Tomar, G. Biswas and A. Sharma.
- 251. Thirty third National and 3rd International Conference on Fluid Mechanics and Fluid Power, IIT Bombay, December 7-9, 2006, Contributed Paper, Large Eddy Simulation of Flow Past Square Cylinder with Fine Grid, M. K. Radle, E.G. Tulapurkara and G. Biswas.
- 252. Modeling of Free Surface Flows and Bubble Formation in Film Boiling, Invited Talk, National Workshop: CFD Approach on Fluid Flow, Heat and Mass Transfer, IIT Roorkee, April 12-13, 2007, G. Tomar and G. Biswas
- 253. Micro miniaturization A Recent Trend, Guest lecture at Annamalai University, October 2006. J. Ramkumar.
- 254. Non Destructive Evaluation of Advance materials, National workshop on Advance materials, at PEC, Chandigarh, 11-22<sup>nd</sup>, December 2006, J.Ramkumar.
- 255. Developments in conductive polymers, Workshop on Advances in materials and material selection in Design, at HBTI Kanpur, March 10-11<sup>th</sup>, 2007, J.Ramkumar.

- 256. Development of IPMC, 2<sup>nd</sup> National workshop on Smart materials for design of intelligent systems and industrial applications, at IIT Kanpur 23-24<sup>th</sup> March, 2007, J. Ramkumar.
- 257. Titanium and its machinability, National workshop on machining and machinability of advanced materials (NWMMAM-2007) at CMERI Durgapur, March 29-30, 2007, J.Ramkumar.
- 258. 33<sup>rd</sup> National and 3<sup>rd</sup> International Conference on Fluid Mechanics and Fluid Power, IIT Bombay, Mumbai, December 7-9, 2006. Type of participations: Both as an author and chair of a session. A.K. Saha
- 259. Numerical Methods for Fluid Dynamics (ICFD 07), 9<sup>th</sup> International Conference, the University of Reading, U.K., 26-29th March, Contributed Paper. S. Sarkar
- 260. Session Chair and Organizer for SAE World Congress 2007, PFL-20: CI Engine Performance for Use with Alternative Fuels Session, to be held in Detroit, USA April 2007, A.K.Agarwal.
- 261. National Conference on Design, Dynamics and Manufacturing (NCDDM) 2007, Sant Longowal Institute of Engineering and Technology, Longowal Dist Sangrur, Punjab, March 16-17, 2007, Delivered the Invited Lecture Modeling of Metal Forming Processes using Finite Element Method: Issues and Challenges, Chaired a Session Member of the Panel for Panel Discussion. Chief Guest at the Valedictory Function, P.M. Dixit.
- 262. NAMRC conference, May 2006, Milwaike, USA, N.V.Reddy.
- 263. Second Japan-India Joint seminar on Micro/nano Manufacturing Science, December 2006, IIT Kanpur, N.V.Reddy
- 264. National Conference on Design, Dynamics and Manufacturing (NCDDM-2007) March 16-17, 2007, SLIET, Longowal, N.V.Reddy.
- 265. Nano-finishing Techniques and Pulsating Magnetic Abrasive Brush during International Conference on Machining Science and Technology-2006 (ICOMAST-2006) held at Melaka, Malaysia, 28th 30th August, 2006, V.K.Jain.
- 266. Second International Conference on Computational Mechanics and Simulation, 8-10 December 2006, IIT Guwahati, India, S.Basu.
- 267. Joining Materials with Glass Fiber Reinforced Plastics- an Experimental Study, 19 Austrasian Biennial Conference on the Mechanics of Structures and Materials Nov. 29 to Dec., 2006, University of Canterbury, Chritchurch, New Zealand, Rajeev Kumar and Prashant Kumar.
- 268. First Mid-Year Meeting of the CRSI held at IIT Madras July 12 and 13, 2006 and presented a poster on Synthesis and Characterization of NHC-Stabilized Zinc aryloxide and Zinc Hydroxyaryloxide, G. Anantharaman and K. Elango.

- 269. First Mid-Year Meeting of the CRSI held at IIT Madras Feb 12 and 13, 2007 and presented a poster on Synthesis and Characterization of NHC-Stabilized Zinc aryloxide and Zinc Hydroxyaryloxide, K. Elango and G. Anantharaman.
- 270. 37th International Conference on Coordination Chemistry (37th ICCC) at Capetown on August-2006. Oral Presentation on the topic Modulation of the Ru-Ru Single Bond by Axial Donors in Diruthenium Paddlewheel Complexes, J. K. Bera.
- 271. Indo-Japan Joint Workshop on New Frontiers of Molecular Spectroscopy, held in Kobe, Japan, September 24-26, 2006, A. Chandra.
- 272. Materials Modeling at Different Length Scales, held at BARC, Trombay, Mumbai, October 12-14, 2006, A. Chandra.
- 273. Theoretical Chemistry Symposium 2006, held at Trichy, December 11-13, 2006, A. Chandra.
- 274. National Symposium on Computational Chemistry, held at Thiruvananthapuram, December 15, 2006, A. Chandra.
- 275. Symposium on Trends in Computational Materials Science, held in Bangalore, February 15-17, 2007, A. Chandra.
- 276. Structure and Dynamics of molecules & Clusters 2007, held at Corbett National Park, February 23-25, 2007, A. Chandra.
- 277. HPC User Forum Conference, held in New Delhi, February 28-March 01, 2007, A. Chandra.
- 278. 37th ICCC, Cape Town August 13-18th 2006. Lecture on August 17th 2006, V. Chandrasekhar.
- 279. International Conference in Emerging Trends in Chemical Sciences on the occasion of 150<sup>th</sup> anniversary of University of Mumbai. Mumbai. Jan 24<sup>th</sup> 2007, V. Chandrasekhar.
- 280. CRSI-RSC meeting. New Delhi. Feb 1 2007, V. Chandrasekhar.
- 281. IITK REACH Symposium, Parwanoo, Himachal Pradesh , March , V. Chandrasekhar.
- 282. Thermans 2006, 6-10 Feb 2006, Jaipur, Thermal, Structural and Electrical Studies of Nanostructured PZT Synthesized by Low Temperature Technique, Invited Oral, N. S. Gajbhiye.
- 283. Int. Conf. on Nanoscience and Technology 2006, 16-18 March, New Delhi, Characterization of Nanostructured PZT Prepared by Chemical Routes; N. S. Gajbhiye, P. K. Pandey, Lyci George and Abhishek Kumar,
- 284. Int. Conf. Nanoscience & Technology, March 16-18, 2006, New Delhi Synthesis Characterization & Magnetic Interactions of e-Fe<sub>3</sub>N-CrN Nanorods, Invited Talk.

- 285. National Seminar on Advances in Electroceramics 2006, ARDE, Pune, 10-11 April 2006, Dielectric Properties of Nanostructured PZT, Invited talk, N. S. Gajbhiye.
- 286. 11<sup>th</sup> Asian Symp. Information Display, Oct. 8-11, 2006, New Delhi, Oral talk, N. S. Gajbhiye.
- 287. Int. Conf. NanoMaterials Electronics, Nov. 27-29, 2006, C-Met-Pune. Oral talk, N. S. Gajbhiye.
- 288. Int. Symp. on Materials Chemistry, Dec. 4-8, 2006, BARC-Mumbai, Invited talk, N. S. Gajbhiye.
- 289. Int. Conf. on the Physics of Mesoscopic and Disordered Materials, December 4-8, 2006, IIT-Kanpur. Oral Talk, N. S. Gajbhiye.
- 290. Indian Science Congress, Annamalai University, Chidambaram, Jan. 3-7, 2007, Coordinator & Special Invited Lecture on the theme 'Nanotechnology', N. S. Gajbhiye.
- 291. Int. Conf. on Modern trends in Chemistry, University of Mumbai, January 23-25, 2007. Chairman of the session & Oral Talk, N. S. Gajbhiye.
- 292. Int. Indo-US Workshop on Advanced Oxides and Nanostructured Materials, February 19-22, 2007, IHC-New Delhi. Invited Talk, N. S. Gajbhiye.
- 293. 2nd Discussion meeting on Spectroscopy and Dynamics of Molecules & Clusters, The International Centre, Dona Paula, Goa, India, Mar.30-Apr.1 (2006), D. Goswami.
- 294. International Symposium on Quantum Optics, Physical Research Labs, Ahmedabad, 24-27 July (2006), D. Goswami.
- 295. Wellcome Trust Senior Fellows Meeting, Wellcome Trust, 215 Euston Road, London, UK, 25-26 October (2006), D. Goswami.
- 296. 7th Asian International Seminar on Atomic and Molecular Physics, Indian Institute of Technology, Chennai, 4–7 December (2006), D. Goswami.
- 297. 2007 Reach Symposium, Hotel Timber Trail Heights, Parwanoo, HP, March 7-9 (2007), D. Goswami.
- 298. The first symposium of the Indian peptide society at Hyderabad February 21-23 2007, R. Gurunath.
- 299. CRSI: Delhi University, B. D. Gupta.
- 300. Plenary lecture at Second International conference on Heterocyclic Chemistry Conference at Jaipur: 16-19 December, 2006, F. A. Khan.
- 301. Invited lecture at International Conference on Structure and Dynamics 2006, Dept of Chemistry, University of Calcutta: 14-16 December, 2006, F. A. Khan.
- 302. Invited Talk on Rational Approaches to Engineering Organic Molecular Photobehavior and Organization, First India-Taiwan Conference on the Frontiers of Organic Chemistry, Hsinchu, Taiwan, January 07-11, 2007, J. N. Moorthy.

- 303. Invited Lecture: R. N. Mukherjee, Modeling Hydrolytic Enzymes. Phosphate Ester Hydrolysis by Phenoxo-bridged Dinickel(II) and Ethyl Acetate Hydrolysis by Hydroxo-bridged Dicopper(II) Complexes, R. N. Mukherjee.
- 304. The 3rd Asian Biological Inorganic Chemistry Conference (AsBIC-III), Nanjing,
- 305. China (October 31 November 3, 2006), R. N. Mukherjee.
- 306. Session Lecture: A. K. Sharma, A. Mukherjee, F. Lloret, and R. N. Mukherjee, Linear Homo- and Heterotrinuclear and Homodinuclear Complexes with Phenolate-/Acetate-Bridging. Structures and Magnetism International Conference on Coordination Chemistry (ICCC37), Cape Town, South Africa (August 13 18, 2006)
- 307. Biocompatibility of water soluble multiwalled carbon nanotube on the growth of Escherichia-coli in relevance to its use in carrier systems for the delivery of therapeutic molecules, Humboldt Kolleg, Palampur, March 24, 2006, S. Sarkar.
- 308. On the Aspect of Modeling Molybdoenzymes, Chemistry Department, University of Ulm, 7th July, 2006 Germany, S. Sarkar.
- 309. The enzyme behind the fishy smell and more, Chemistry Department, University of Kiel, 12th July, 2006 Germany, S. Sarkar.
- 310. The wet side of carbon nanotube, Chemistry Department, University of Bremen, 14th July, 2006 Germany, S. Sarkar.
- 311. Modeling Copper Trafficking Proteins, Oxidative Stress and "Ostwald's Rule of Stages, Inorganic Chemistry Department, IACS, Kolkata, 17<sup>th</sup> September, 2006, S. Sarkar.
- 312. Carbon nanotube and its diverse use , Biotechnology Department, Heritage Institute of Technology, Kolkata, 9<sup>th</sup> November,2006, S. Sarkar.
- 313. Modeling Copper Trafficking Proteins, Oxidative Stress and "Ostwald's Rule of Stages, School of Chemistry, University of Hyderabad, 9th January, 2007, S. Sarkar.
- 314. Evolutionary Bioinorganic Chemistry, School of Chemistry, University of Hyderabad, 11<sup>th</sup> January, 2007, S. Sarkar.
- 315. Water soluble carbon nanotube and drug delivery, Discovery Laboratory, Dr. Reddy's Laboratory, 12<sup>th</sup> January, Hyderabad, 2007, S. Sarkar.
- 316. Water soluble multiwall carbon nanotube from candle soot and its drug delivery: A study on the growth of Escherichia-coli, Physics Department, Chandigargh, March 30, 2007, S. Sarkar.
- 317. Modeling Copper Trafficking Proteins and New Perspective on Oxidative Stress, presented in the International conference on oxidative stress and aging, Kuwait University, 18-21 March, 2007, S. Sarkar.
- 318. Modeling Molybdoenzymes, Chemistry Department, University of Gorakhpur, 28th March, 2007, S. Sarkar.

- 319. Frontiers in Chemistry workshop, Department of Chemistry, Government Model Science College, Jabalpur, Sep. 15-16, 2006, N. Sathyamurthy.
- 320. IUPAC Discussion Meeting on Hydrogen Bond, Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, Sep. 18, 2006, N. Sathyamurthy.
- 321. National Symposium on, Advances in Chemistry and Environmental Impact, Department of Chemistry, North-Eastern Hill University, Shillong, November 2-3, 2006, N. Sathyamurthy.
- 322. 7<sup>th</sup> Asian International Seminar on Atomic and Molecular Physics, Indian Institute of Technology Madras, Chennai, December 4-7, 2006, N. Sathyamurthy.
- 323. Theoretical Chemistry Symposium 2006, Bharathidasan University, Tiruchirappalli, Dec. 11-13, 2006, N. Sathyamurthy.
- 324. Indian National Science Congress, Annamalai University, Annamalainagar, Jan. 5-7, 2007, N. Sathyamurthy.
- 325. Discussion meeting on Spectroscopy and Dynamics of Molecules and Clusters, Corbett National Park, Uttaranchal, Feb. 23-25, 2007, N. Sathyamurthy.
- 326. Reach2007, Timber Trails, Himachal Pradesh, March 7-10, 2007, N. Sathyamurthy.
- 327. Spectroscopy and Dynamics of Molecules and Clusters IV, Corbet National Park, Uttarkhand, India, February 2007, K. Srihari.
- 328. Theoretical Chemistry Symposium X, Tiruchirapalli, December 2006, K. Srihari.
- 329. IITK-REACH Symposium, Parwanoo, March 2007, K. Srihari.
- 330. Delivered a lecture at the International Carbohydrate Symposium at Whistler, BC, Canada (July 22-28, 2006) on July 25, 2006, Y.D. Vankar.
- 331. Delivered a lecture at MS University Baroda, in a National Seminar on Chemistry Research on October 16, 17 2006, Y.D. Vankar.
- 332. Delivered a lecture at Syngenta Research & Technology Centre inauguration meeting on December 1, 2006 at Santa Monica Site, Goa, Y.D. Vankar.
- 333. International Conference in Coordination Chemistry, Cape Town, South Africa, August 13-19, 2006, S. Verma.
- 334. Annual conference of Bharat Ganita Parisad, Lucknow: Invited talk, "Role of operator spaces in Harmonic Analysis", also chaired a session, Tewari, U.B.
- 335. Projective Modules and Complete Intersections, December 28-30, 2006, Tata Institute of Fundamental Research, Mumbai, A.K. Maloo.
- 336. International Conference on Modern Stochastic Theory: Theory and Applications, Department of Probability Theory and Mathematical Statistics, Kyiv National Taras Shevchenko University, Kiev , Ukraine in June, 2006,

- contributed paper: 'Consistent estimation of regression coefficients in measurement error model under exact linear restrictions' Shalabh.
- 337. Fourth International Workshop on Total Least Squares and Errors-in-Variables Modeling held at Katholieke University, Leuven, Belgium in 2006, contributed paper On the estimation of linear ultra structural model when error variances are known, Shalabh.
- 338. Third Autumn Symposium of the Research Training Group "Statistical Modelling" held at University of Dortmund, Germany in November 2006, contributed paper Parametric estimation in measurement error models , Shalabh.
- 339. International Conference on Complex Systems (ICCS06), Boston, USA, June 25-30, 2006, contributed paper Stability of simulation of highly uneven curves and surfaces using fractal interpolation Kapoor, G.P.
- 340. Recent advances in optimization, theory and applications, Department of Mathematics, University of Delhi, 27-28, Sharma, P.
- 341. ICM 2006 at Madrid, Spain, Madan, S.
- 342. International conference MAFEL 2006, at BRUNEL University, U.K. (June 12-16,2006) Contributed paper Rathish, B.V.K.
- 343. International Conference on Logic, Navya and Applications: A Homage to Bimal Krishna Matilal , January 3-6, 2007, Kolkata, M. Banerjee.
- 344. SIAM Conference on Analysis of Partial Differential Equations, July 10-12, 2006 at Boston, Massachusetts,, Contributed paper, Ritesh, K.
- 345. National conference on Differential equations, Perier university, Salem, Sept. 28-29, 2006, Invited Talk Non Linear Elliptic Equations: An Overview, V. Raghavendra
- 346. International Conference on Bioinformatics and Computational Biology (BIOCOMP' 06) held at LAS VEGAS, NV, USA during June 26-30, 2006, contributed paper, Prawal Sinha
- 347. International Conference on Mathematical Modeling and Computer Simulation, held at Jaipur, India, during Dec. 12-15, 2006 contributed paper,. Prawal Sinha
- 348. ICAPM-2006, May28 Jun4, Marrakech, Morrocco, contributed paper,B.V. Rathish Kumar
- 349. 2nd IMT-GT Regional Conference on Mathematics, Statistics and Applications, Universiti Sains Malaysia, Penang, Malaysia (June 2006), contributed paper, Bhupendra Gupta
- 350. Fourteenth International conference of the Forum for Interdisciplinary Mathematics at IIT Madras during 6-8 January 2007, contributed paper,Vikas Gupta

- 351. The Fourteenth International Conference of the Forum for Interdisciplinary Mathematics 2007, IIT Madras, 06-08 January 2007, Contributed Paper Ramesh, V.P.
- 352. International Conference on Logic, Navya and Applications: A Homage to Bimal Krishna Matilal, January 3-6, 2007, Banerjee, M.
- 353. International Conference organized by International Indian Statistical Association (IISA) at the Cochin University of Science and Technology, Cochin, 2007, Contributed Paper Mitra, A., Prasad, A., Kundu, D.
- 354. Annual conference of Indian Mathematical Society held at Rani Durgavati University, Jabalpur, December 26-29, 2006 Invited Talk, Santhanam, G.
- 355. Annual conference of Bharati Ganita Parisad, Lucknow, Nov. 2006. Invited talk "On some work of Lennart Carleson, Abel Prize 2006" Madan, S.
- 356. IITK REACH Symposium held at Kalka, India during March 7-10, 2007, Poster presentation, Anurag Prasad
- 357. National Symposium on Combinatorics, Number Theory and Geometry,15-20 January, 2007 held at Mumbai University Invited talk "Sharp Upper Bound for the first eigenvalue of closed hypersurfaces in rank-1 symmetric Spaces" Santhanam, G.
- 358. ESMRMB 23<sup>rd</sup> Scientific meeting, Warsaw, Poland, 21-23 September 2006, Contributed Paper -Purwar, A
- 359. 38<sup>th</sup> International Conference on Combinatorics, Graph Theory and Computing held in Florida Atlantic University, March 5 9, 2007, Contributed Paper On the existence of constrained labeling for locally finite graphs, B. Bhattacharyya.
- 360. International Conference on Bioinformatics and Computational Biology (BIOCOMP' 06) held at LAS VEGAS, NV, USA during June 26-30, 2006 contributed paper Mucus Transport in the lung due to cough: Turbulent flow models with viscoelastic effects, Prawal Sinha
- 361. 14th Annual conference of Intl. Soc. Mag. Resonance in Med., Seattle, USA, May 7 -14, 2006, Contributed Paper Rathore, R.K.S.
- 362. International Indian Statistical Association Conference, held at Cochin University of Science and Technology, Jan 02-05, 2007, invited talk: On Hybrid Censored Weibull Distribution, D. Kundu
- 363. Oral and Poster Presentation: Crossover in pinning regimes of the vortex solid and the peak effect at the 11<sup>th</sup> International workshop on Vortex Matter at Wroclaw, Poland, July 3<sup>rd</sup> 8<sup>th</sup>, 2006. (Satyajit Banerjee)
- 364. Chaired a session: At the 11<sup>th</sup> International workshop on Vortex Matter at Wroclaw, Poland, July 3<sup>rd</sup> -8<sup>th</sup>, 2006. (Satyajit Banerjee)
- 365. Poster presentation: Pinning regimes in the vortex solid and the crossover between them in single crystals of 2H-NbSe<sub>2</sub> at the 8<sup>th</sup> International Conference

- on Materials and Mechanisms of Superconductivity and High Temperature Superconductors, Dresden, July 9th -14th, 2006. (Satyajit Banerjee)
- 366. Invited talk: Instabilities in Superconductors, National conference on Emerging trends in engineering materials, Thapar Institute of Engineering and Technology, Patiala, Punjab, Feb 1-3, 2007 (Satyajit Banerjee)
- **367.** Chaired a session: At the National conference on Emerging trends in engineering materials, Thapar Institute of Engineering and Technolgy, Patiala, Punjab, Feb1-3, 2007. (Satyajit Banerjee)
- 368. Invited Oral Presentation: Theme Meeting on High Current Ion sources (HCIS 06), Variable Energy Cyclotron Center, Department of Atomic Energy, Kolkata, April 06-07, 2006 (Sudeep Bhattacharjee)
- 369. Invited Oral Presentation: Plasma Science Society of India-Institute for Plasma Research (PSSI-IPR) workshop on National Fusion Programme: ITER and Beyond, Institute for Plasma Research, Gandhinagar, November 08-10, 2006. (Sudeep Bhattacharjee)
- 370. Contributed Papers: Indian Particle Accelerator Conference-2006, Bhabha Atomic Research Center and Tata Institute of Fundamental Research, Mumbai, November 1-4, 2006 (Sudeep Bhattacharjee)
- **371.** Contributed Papers: 21st National Symposium on Plasma Science and Technology, Malaviya National Institute of Technology, Jaipur, December 19 22, 2006 (Sudeep Bhattacharjee)
- 372. Invited talk at the National Workshop "Modeling infectious Diseases: from cell to society" Institute of Mathematical Sciences, Chennai, September 4-6, 2006. (D Chowdhury)
- 373. Invited talk at the International workshop "Frontiers of Nanobiotechnology' Allahabad University, December 1, 2006.(D Chowdhury)
- 374. Statphys-Kolkata VI (International Conference on Statistical Physics), Radisson Resort, Raichak, West Bengal, India, Invited Speaker. (Amit Dutta)
- 375. Materials and Mechanism of superconductivity-M2S-HTSC-VIII, July 09 to July 14, 2006 Dresden, Germany (Poster presentation) (Z. Hossain)
- 376. 8<sup>th</sup> Prague Colloquium of F-electron systems, Prague, Czech Republic, 8-11 September, 2006 (Oral presentation). (Z. Hossain)
- 377. DAE particle physics symposium at IIT Kharagpur, December 11-15, 2006. (Pankaj Jain)
- 378. International workshop in Theoretical High Energy Physics , IIT Roorkee, March 15-20, 2007, Plenary Talk, Composite structure and causality. (S. D. Joglekar)
- 379. First Mexican Encounter on Space-time Microstructure, Patzcuaro, Mexico, November 06-10, 2006, Invited Talk, Regularizations of Field Theory, non-local Regularization (S. D. Joglekar)

- 380. Workshop on Electronic structure of solids, Lonavala, February 07-10, 2007, chaired a session (R. Prasad)
- 381. Workshop an computational materials science, Bangalore, February 15-17, 2007. Gave an invited talk, chaired a session. (R. Prasad)
- 382. Reach Symposium, Kalka, March 07-10, 2007, Gave an invited talk, (R. Prasad)
- 383. Workshop an musicales modeling of materials, BARC, October 12-14, 2006. Gave an invited talk, (R. Prasad)
- 384. Workshop an magnetic materials, Kolkata January 08-10, 2007 Gave an invited talk, (R. Prasad)
- 385. German Physical Society March Meeting, Dresden, 27-31, March 2006, Presentation: U-controlled Frustration in the Triangular-Lattice Antiferromagnet (Avinash Singh)
- 386. Dynamo Using Energy Fluxes, in Nonlinear Cosmology: Turbulence and Fields, held at ICTP in 9 May-12 May 2005. (M. K. Verma)
- 387. Mode-to-mode Energy Transfers and Patterns in Convection, in National Conference on Nonlinear Systems and Dynamics, Aligarh, 2005. (M. K. Verma)
- 388. Multicolored Coherent Population Trapping, International Symposium on Quantum Optics-2006 (ISQO-06), July 24-27, 2006, Physical Research Laboratory, Ahmedabad. (H.Wanare)
- 389. Multicolored Atomic Coherence, Sixth DAE- BRNS National Laser Symposium (NLS-6), December 05-08, 2006, Raja Ramanna Center for advanced Technology, Indore. (H.Wanare)
- 390. Conference cum Seminar on the \*Emerging Trends in Physics\* September 20-23, 2006 held at Khalsa College, Delhi University Talk title: Signatures of spin glass freezing in NiO nanoparticles (Dr. K.P. Rajeev)
- 391. Plasmonic properties of checkerboards of negative ε and μ, 9th International conference on near-field optics, nanophotonics and related techniques, Lausanne, Switzerland, 10-15 Sept. 2006 (Poster presented by Prof. O.J.F. Martin in our absence), S.A. Ramakrishna, S. Chakrabarti and S. Guenneau.
- 392. Bianisotropy of symmetric split ring resonators at optical frequencies., 9th International conference on near-field optics, nanophotonics and related techniques, Lausanne, Switzerland, 10-15 Sept. 2006, S.A. Ramakrishna and S. Chakrabarti.
- 393. Negative refractive index of metamaterials at optical frequencies., MRS fall Meeting 2006, Symposium R (27th to 30th Nov. 2006, Boston) (Invited Lecture), S. A. Ramakrishna, and S. Chakrabarti.
- 394. Understanding boundary induced phase transitions in asymmetric simple exclusion processes through boundary layer analysis –Interantioanl conference "StatPhys VI", Kolkata from 5th-9th January (2007), Sutapa Mukherjee

- 395. Boundary layer analysis for asymmetric simple exclusion processes Colloquium at BHU on 19th March (2007) Sutapa Mukherjee
- 396. International Conference on 9<sup>th</sup> Asian Symposium on Information Display (ASID'06), October 2006, held at New Delhi on "OLED Fundamentals" (Tutorial) Y. N. Mohapatra

## SEMINAR PRESENTED

- 1. Rotor blade dynamics and rotor/ fuselage dynamics at Regional Center for Military Airworthiness (RCMA) Chandigarh, 3BRD, Airforce, Sept. 2006, C. Venkatesan.
- 2. Helicopter Dynamics at Department of Aerospace Engineering, Punjab Engineering College, Sept. 2006, C. Venkatesan.
- 3. Spatio-temporal wave dynamics and signal propagation in fluid dynamical system- at Technischen Universitat Wien, at Vienna, 21 July, 2006, Tapan K. Sengupta.
- 4. Excitation of shear layer instability in flow past a cylinder at low Reynolds Numbers, 11th Asian Congress of Fluid Mechanics (ACFM) 22-26 May, Malaysia, 2006, S.Mittal.
- 5. Shape Optimization for Fluid Flow Problems, 11th Asian Congress of Fluid Mechanics (ACFM) 22-26 May, Malaysia, D.N. Srinath and S.Mittal.
- 6. Vortex Induced Oscillations at Low Reynolds Numbers: Effect of Blockage, 11<sup>th</sup> Asian Congress of Fluid Mechanics (ACFM) 22-26, May Malaysia, 2006, T.K. Prasanth S. Behara and S. Mittal.
- 7. Effect of blockage on Vortex induced Vibrations at Low Reynolds Numbers, in 7th World Congress on Computational Mechanics (WCCM), Hyatt Regency Century Plaza Hotel, Los Angeles, California, USA July 16-22, 2006, S.Mittal, T.K. Prasanth and S. Behara.
- 8. Finite Element Methods in Fluid Flows Annual Convention, Indian National Academy of Engineering, INSA New Delhi December 8-9, 2006, Sanjay Mittal.
- 9. Shape Optimization for low Reynolds Number Flows, 14<sup>th</sup> International Conference on finite Elements in Flow Problems, FEF07, Santa Fe New Mexico, USA March 26-28, 2007, D.N. Srinath and S Mittal.
- 10. Finite Element Methods in Fluid Flows invited lecture at Civil Engineering, Chuo University, Tokyo April 2, 2007, Sanjay Mittal.
- 11. Finite Element Methods in Fluid Flows, Aerospace Technologists Meet February 1-2, IIT Madras, Chennai, 2007, Sanjay Mittal.
- 12. Aerodynamics of Wraparound Fins for Artillery Rockets, ARDE, Pune, S.K. Gupta.

- 13. Parameter Estimation Using Conventional & Unconventional Methods, DRDL, Hyderabad, S.K. Gupta.
- 14. Emissions in Gas Turbine Combustors: Effects of Spray Characteristics, Workshop on Modeling Diagnostics and Control of Pollutant Formation and Emission in Combustion, under the auspices of the Combustion Institute (Indian Section), Jadavpur University, Kolkata, Jan. 14-15, 2006, Kushari A.
- **15.** Computation of solid-fluid coexistence conditions by thermodynamic integration, Chemical Engineering Department, IIT Kanpur, April 21, 2006, P. A. Apte.
- 16. Colloidal and multiphase systems for nanomaterials, Invited talk in the Workshop on Colloids and Materials Chemistry, Regional Research Laboratory (RRL), Bhubaneshwar, January, 2007, R. Bandyopadhyaya.
- 17. Structure and Dynamics in Multiphase Systems for Nanomaterials Synthesis and Applications, Invited talk in the First Indo-UK Nanotechnology Conference, British Council and S. N. Bose National Centre for Basic Sciences, Calcutta, November, 2006, R. Bandyopadhyaya.
- 18. Nanostructured composites, short-term course on Recent Trends in Nanocomposites, Invited talk in short term course on Advanced Materials, IIT Kanpur, November, 2006, R. Bandyopadhyaya.
- 19. The world of nanoparticles and nanocomposites, Invited talk in the Nanotechnology Workshop, IIT Madras, October, 2006, R. Bandyopadhyaya.
- 20. From molecules to materials: Surfactants as building block, contributing talk in National Chemical Laboratory, Pune, April, 2006, R. Bandyopadhyaya.
- 21. Gene expression profiling and gene network analysis, Indo-US workshop on Computational Optimization and Analysis of Systems, IIT Kanpur. Jauray, 2007, G. S. Sikarwar, R. Verma and S Garg.
- 22. From clustering expression data to gene network reconstruction: array informatics using mathematical programming, CSJM University, February 2007, S Garg.
- 23. Textured Functional Materials, IIT Kanpur Reach Symposium 2007, A. Ghatak.
- 24. Chinese Petroleum Corporation, Kaohsiung, Taiwan, July, 2006, J. P. Gupta.
- 25. Gujarat State Petroleum Corporation, Gandhinagar, March 2007, J. P. Gupta.
- 26. Hung Kuang University, Taichung, Taiwan, July 2006, J. P. Gupta.
- 27. National Cheng Kung University, Tainan, Taiwan, J. P. Gupta.
- 28. Aging dynamics in soft glasses, Indian Institute of Technology Bombay, November 2006, Y.M. Joshi.
- 29. Aging dynamics in soft glasses, Raman Research Institute, Bangalore, November 2006, Y.M. Joshi.
- 30. Aging dynamics in soft glasses, Université du Maine, France, February 2007, Y.M. Joshi.

- 31. Stability of viscoelastic shear flows past deformable solids, Workshop on Applied mechanics and mathematics, Department of Mechanical Engg, IIT Kanpur (March 2007), V. Shankar.
- 32. Self-organized meso fabrication with polymers, Central Glass and Ceramic research Institute (Kolkata); May 2006, A. Sharma.
- 33. University of Erlangen-Nuernberg; October 2006, A. Sharma.
- 34. National Institute of Standards and Technology (NIST, Maryland); July 2006, A. Sharma.
- 35. Presented Models of Vehicular Traffic: An Engineering Perspective; IIT Delhi, October 2006, Chakraborty, P.
- 36. Presented Optimization Problems in Transportation: Some Examples; IIT Kharagpur, January 2007, Chakraborty, P.
- 37. Presented Models of Vehicular Traffic: An Engineering Perspective; University of North Carolina at Charlotte, USA, January, 2007, Chakraborty, P.
- 38. Determination of Microbial Ecology by Deconvolution of PLFA-FAME Signature of Mixed Culture, IIT Bombay, April 4, 2007, S. Guha.
- 39. Presented Remote Sensing and its applications, GPG Girls College, Kanpur, 19 January 2007 (Invited presentation), Lohani, B.
- 40. Presented Research avenues unfolded by LiDAR technology, Map World Forum 2007 Hyderabad, 24 January 2007 (Invited presentation), Lohani, B.
- 41. Search for Evidence of Past Earthquakes Similar to the 2004 Event: Paleoseismological Surveys in Andaman Islands and Rakhine Coast, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract U52A-06, 2006, Satake, K, Y Okamura, M Shishikura, T Aung, H Kayanne, Y Ikeda, T Echigo, J N Malik, S Basir, G Chakrabortty, W Swe, T Swe, S Tun, H Saw.
- 42. Active fault influence on the evolution of drainage and landscape: Evidence from frontal areas along Northwestern Himalaya, India. 3rd AOGS annual meeting at Singapore, July 2006. p. 950/1202, 2006, Malik, J. N.
- 43. Probable occurrence of Paleo-tsunami deposit: Evidence from preliminary trench investigations around Port Blair, South Andaman, India. 3rd AOGS annual meeting at Singapore, July 2006, p. 932/1202, 2006, Malik, J. N.
- 44. Transient Uplift Since the 2004 Sumatra-Andaman Earthquake and Deformation Cycle in the Andaman Islands. 3rd AOGS annual meeting at Singapore, July 2006, p. 925/1202, 2006, Shishikur, M., Satake, K., Ikeda, Y., Kayanne, H., Echigo, T., Kamataki, T., and Malik J. N.
- 45. Coseismic Land-level changes caused by 26 December, 2004 Sumatra earthquake and evidence of paleotsunami deposits (?) in Andaman and Nicobar Islands, India. 100th Anniversary 1906 San Francisco Earthquake conference at San Francisco, April, 2006, 2006, Malik, J. N., and Murty, C. V. R..

- 46. Attended INAE National Seminar on Engineering Response to Hazards of Terrorism at IIT Kanpur during 25-26 September 2006, S. K. Jain.
- 47. Keynote Speaker, International Disaster Management Symposium :: Culture of Prevention, 18 January 2007, Kobe, JAPAN
- 48. Special Presentation, World Housing Encyclopedia Initiatives in World Housing Earthquake Safety, Special Session on Housing Safety in Developing Countries, 8th US National Conference on Earthquake Engineering, 19-21 April 2006, San Francisco, USA
- 49. Luncheon Speaker, Future of World Housing Encyclopedia, Business Luncheon of the Earthquake Engineering Research Institute, USA, during the 8<sup>th</sup> US National Conference on Earthquake Engineering, 19-21 April 2006, San Francisco, USA
- 50. Presenter, Dependence of Ductility and Energy Dissipation on Limiting Strain States in Seismic Design of RC Columns, during the 13th World Conference on Earthquake Engineering, 1-6 August 2006, Vancouver, CANADA
- 51. Speaker, Seismic Design of Steel Plate Shear Walls in Steel Frames, 3<sup>rd</sup> Indo-German Workshop and Theme Meeting on Seismic Safety of Structures, Risk Assessment and Disaster Mitigation, 12-13 March 2007, BARC, Bombay
- 52. Invited Speaker, International Roundtable on Lessons from Natural Disasters, Policy Issues and Mitigation Strategies, 8–12 January 2007, Vellore, India
- 53. Invited Speaker & Chief Guest, Role of Engineers in Disaster Management, Engineers's Day Celebration, 14 September 2006, Institution of Engineers (India), Indore Chapter
- 54. Invited lecture on 'River interlinking: impact on earth systems', Regional meeting of the North Indian Chapter of the Geological Society of India at BSIP, Lucknow on 17th July, 2006, Rajiv Sinha.
- 55. Keynote lecture on 'Calcretes in Ganga Plains: a proxy for paleoprecipitation and paleovegetation (MIS 3-5)', International conference on 'Changing Scenario in Paleobotany and allied subjects', Birbal Sahni Institute of Paleobotany Lucknow, November 15-17, 2006. Rajiv Sinha.
- 56. Invited lecture on 'Active tectonics and alluvial rivers: concepts, methods and examples' SERC School on 'Crustal Deformation and Tectonic Geomorphology: Module 3, Wadia Institute of Himalayan Geology Dehradun, 6-20th Feb. 2007, Rajiv Sinha.
- 57. Atmospheric Nucleation of Aerosols, Center for Climate System Modeling, The University of Tokyo, July 28, 2006, Tripathi, S.N.
- 58. Atmospheric Pollution, Dept. of Chemical Engineering, Institute of Technology, Banaras Hindu University, Varanasi, November 06, 2006, Tripathi, S.N.

- 59. 2-day workshop on Embedded Wireless Sensors, as part of ICTP-ITU-URSI School on Wireless Networking for Scientific Applications in Developing Countries, ICTP, Trieste, Italy, February 20-21, 2007, Bhaskaran Raman.
- 60. Bhaskaran Raman, an Introduction to WiFi (IEEE 802.11), iSync Communication Technology Workshop, 25 August 2006, Punjab Engineering College, India, Bhaskaran Raman.
- 61. IPv6 Tutorial (A full-day tutorial), at Punjab Engineering College, Chandigarh in August 2006, at MNNIT Jaipur in September 2006, Dheeraj Sanghi.
- 62. Transcrypt: An Encrypting File System at more than 10 colleges in India, Dheeraj Sanghi.
- 63. An Introduction to IPv6, at more than 10 colleges in India, Dheeraj Sanghi.
- 64. Why should CSE students go for MTech/PhD, at more than 30 colleges in India, Dheeraj Sanghi.
- 65. Digital Gangetic Plain, at Microsoft Wireless Summit, Goa, April 2006, Dheeraj Sanghi.
- 66. Simplifying Active Memory Clusters by Leveraging Directory Protocol Threads, Workshop on Chip-multiprocessors held in conjunction with the 13th International Conference on High-Performance Computing, December 2006, Mainak Chaudhuri.
- 67. Simplifying Active Memory Clusters by Leveraging Directory Protocol Threads, Invited speaker, Indian Institute of Technology, Kharagpur, October 2006, Mainak Chaudhuri.
- 68. Integrated Memory Controllers with Parallel Coherence Streams, Workshop on Cutting-edge Computing held in conjunction with the 13th International Conference on High-Performance Computing, December 2006, Mainak Chaudhuri.
- 69. Integrated Memory Controllers with Parallel Coherence Streams, Invited speaker, Indian Institute of Science, Bangalore, December 2006, Mainak Chaudhuri.
- 70. Modelling Embryogenesis, Invited talk, Workshop on Bioinformatics, IET, Kanpur, February 23-24, 2007, Mainak Chaudhuri.
- 71. Determinant Versus Permanent, Seminar given at ICM Madrid, UCSD, CalTech, UCLA, Berkeley, Stanford, Manindra Agrawal.
- 72. Primality Tests Based on Fermat's Little Theorem, Invited talk given at 7th ICDCN, Guwahati, Manindra Agrawal.
- 73. Finite Rings and Integer Lattices, Series of talks given at Bellairs Institute, Barbados, Manindra Agrawal.
- 74. A Short History of PRIMES is in P, Talk at ICALP, Venice, Manindra Agrawal.

- 75. Multimodal Biometrics System- A Step towards Individual Security, National Workshop on Security held at B C Roy Engineering College, Durgapur, India, November 2006, Phalguni Gupta.
- 76. Information Technology for Individual Security A Step towards National Security, IETE Seminar held at IIT Kanpur, November 2006, Phalguni Gupta.
- 77. Mobile IP and routing issues, M-COMP 2006 National Conference on Mobile Computing, September 22-23, 2006, Organised by IEEE Kerala Section, Ratan Kumar Ghosh.
- 78. Multicore curriculum development in India at Intel Workshop on Multicore curriculum, May 2006, Portland, Oregon, Sanjeev Kumar Aggarwal.
- 79. Multicore curriculum at IIT Kanpur at (i) Intel Multicore Development Workshop, Jaipur Sep 2006 (ii) Intel Asia Academic Forum, Malaysia, Nov 2006 (iii) Intel Developers Forum, Bangalore, Oct 2006 (iv) Intel Multicore workshop for Teachers, Bangalore, Dec 2006, Sanjeev Kumar Aggarwal.
- 80. Presentation on Fingerprint Separation, 11th April 2007, Hyderabad, India, P. K. Kalra.
- 81. Invited Talk on Fingerprint separation, 1st December, 2006, 3rd International Workshop on Biometrics, IIT Kanpur, India, P. K. Kalra.
- 82. Invited presentation on Conceptualization of Power exchange in India Solutions and challenges, 22 Feb. 2007, National regional load dispatch center (NRLDC), New Delhi, India, P. K. Kalra.
- 83. Delivered a key note lecture on 27th Dec. 2006 on Indian Power And Energy Sector Development: Present Scenario & Few Challenges in the 14th National Power Systems Conference (NPSC), IIT Roorkee, 27-30 December, 2006, S. C. Srivasatava.
- 84. Delivered an invited lecture on 'Secure Operation of Power System in Electricity MarketsPower System Restructuring' at Asian Institute of Technology Bangkok, Thailand on 4th November 2006, S. C. Srivasatava.
- 85. Delivered an invited lecture on 'Strengthening Industry-Academia Collaboration' during Technology Summit Meet of Crompton Greaves of India Ltd. at Mumbai on 8th Feb. 2007, S. C. Srivasatava.
- 86. Delivered an invited lecture Introduction to Power Electronics in AICTE sponsored Staff Development Programme on Recent Trends and Applications in Power Electronics and Drives, U.C.E. Burla, Sambalpur, June 19- July 1, 2006, S.P.Das.
- 87. Delivered an invited lecture Multi-level Converters in AICTE sponsored Staff Development Programme on Recent Trends and Applications in Power Electronics and Drives, U.C.E. Burla, Sambalpur, June 19- July 1, 2006, S.P.Das.
- 88. Delivered an invited lecture DC and AC Variable Speed Drives in AICTE sponsored Staff Development Programme on Recent Trends and Applications in

- Power Electronics and Drives, U.C.E. Burla, Sambalpur, June 19- July 1, 2006, S.P.Das.
- 89. Delivered an invited lecture Unified Power Quality Conditioner for Power Distribution Systems in AICTE sponsored Staff Development Programme on Recent Trends and Applications in Power Electronics and Drives, U.C.E. Burla, Sambalpur, June 19- July 1, 2006, S.P.Das.
- 90. Delivered an invited lecture Modern Trends in Power Electronics in PSIT, Bhauti, Kanpur, Nov. 2006, S.P.Das.
- 91. Delivered the seminar entitled Matrix Converter-fed High Performance Synchronous Motor Drive System in GE John F. Welch Technology Center, Bangalore, December 19, 2006, S.P.Das.
- 92. Extended course on High Voltage Engineering, UPTech, Kanpur, July, 2006, N. Gupta.
- 93. Basics of High Voltage Engineering, KCNIT, Banda, 2006, N. Gupta.
- 94. Three-day Workshop on Rotating Machinery Insulation, BHEL, Bhopal, Jan 2007, N. Gupta.
- 95. On Universal Compression, Shannon's Entropy and Individual Sequences on February 11, 2006 in TECHNEX (Students' Technical Fesival held at BHU-IT, Varanasi), R. K. Bansal
- 96. Introduction to Continuous Speech Recognition, National Conference on Communication, (IIT, Kanpur), Jan. 2007, S. Umesh.
- 97. Spread Spectrum for Mobile Communications, National Workshop on Mobile Communications at Ujjain Engineering College jointly organized with SGSITS, Indore, 16th to 18th March 2007, A. K. Chaturvedi.
- 98. Visual Surveillance Technology, Workshop on use of Signal and Image Processing and its Application to Display Technology, May 6, 2006, IIT Bombay, K. S. Venkatesh.
- 99. Video Surveillance for Counterterrorism, INAE Seminar on Engineering Response to Hazards of Terrorism, 25-26 September. 2006, IIT Kanpur, K. S. Venkatesh.
- 100. Automation of Video Surveillance: Some Recent Advances. One day Workshop on Intelligent Assistive Systems for Health Care Applications, Jan 30<sup>th</sup> 2007, IIT Kanpur, K. S. Venkatesh.
- 101. All-optical packet switching: architectural and design issues, ADCAN Lab, Dept. of Computer Science, Chonbuk National University, Jeonju, South Korea, 04 December 2006, Y. N. Singh.
- 102. Issues in design and development of learning maangement system, Indian-ASEAN seminar of Elearning, 6-7 November 2006, Hyderabad, Y. N. Singh.
- 103. Optical communications: transmitters and receivers, Short course on Optical Communications, NIT Raipur, 14 July 2006, Y. N. Singh.

- 104. Optical networks: Introduction, Short course on Optical Communications, NIT Raipur, 14 July 2006, Y. N. Singh.
- 105. All Optical Packet Switching: Architectures and issues, Invited talk in TIFAC-CORE@DCE, Delhi College of Engineering, Delhi, 23 April 2006, Y. N. Singh.
- 106. Evolution Does Not Lead To Cyborg, Workshop on Intelligent Assistive Systems for Healthcare Applications, January 30, 2007, Indian Institute of Technology, Kanpur, G. C. Ray.
- 107. Activities at Department of Electrical Engineering, I.I.T. Kanpur, Presented at International Crossroads, Institut National des Telecommunications, Evry, France, January 26, 2007, S. Qureshi.
- 108. RFID: Identification using radio frequency, IETE, Kanpur Chapter, 25<sup>th</sup> March 2007, A.R. Harish.
- 109. All-optical packet switching: architectural and design issues, <u>ADCAN Lab</u>, Dept. of Computer Science, Chonbuk National University, Jeonju, South Korea, 04 December 2006, Y.N. Singh.
- 110. Issues in design and development of learning mangement system, Indian-ASEAN seminar of Elearning, 6-7 November 2006, Hyderabad, Y.N. Singh.
- 111. Optical communications: transmitters and receivers, Short course on Optical Communications, NIT Raipur, 14 July 2006, Y.N. Singh.
- 112. Optical networks: Introduction, Short course on Optical Communications, NIT Raipur, 14 July 2006, Y.N. Singh.
- 113. All Optical Packet Switching: Architectures and issues, Invited talk in TIFAC-CORE@DCE, Delhi College of Engineering, Delhi, 23 April 2006, Y.N. Singh.
- 114. Design of Optically Actuated MEMS components, School of Electrical and Electronics Eng., Nanyang Technological University, Singapore, June 2006, Anjan K. Ghosh.
- 115. Emerging Market Structure in the Indian Power Sector Understanding implications of the Electricity Act 2003, Electric Power System Operation and Control: Modern Trends and Future Challenges, IIT, Kanpur, 28 August 1 Sept., 2006, Anoop Singh.
- 116. Humans, Corporations and the 21st Century: Resources or Liabilities? All India Management Seminar on Leveraging Human Potential in Emerging Global Opportunities, 23<sup>rd</sup> Sep., 2006, Institute of Productivity Management, Kanpur, Varman, Rahul.
- 117. Political Economy of Globalisation, Seminar on Global Opportunities and Challenges of 21st Century. 4th Nov. 2006, National Institute of Management & Computer Technology, Kanpur, Varman, Rahul.

- 118. A Decision-Making Framework for IT Outsourcing using the Analytic Hierarchy Process, Annual conference of International Academy of Business and Economics, Las Vegas, Nevada, 15-18 Oct 2006, Bansal, Veena.
- 119. Evaluating Effectiveness of Computing Facilities in Academic Institutes, International Conference on Software and Data Technologies, Portugal, Sep 11-14, 2006, Bansal, Veena.
- 120. Invited lecture on Software Project Management at Bharti Vidya Pheeth for their faculty, New Delhi, Dec 2006, Bansal, Veena.
- 121. Innovation for Strategy Creation and Implementation, invited seminar at Iran Oil Company, Iran, 10 June 2006, Arun P Sinha.
- 122. Location Decisions -A case of IIT location in Andhra Pradesh, Invited Lecture, Osmania University, Hyderabad Feb 12, 2007, Ashok K Mittal.
- 123. Text Mining for patents, Invited Lecture, National Workshop on Marketing Intelligence VIT Vellore Feb 19-20, 2007, Ashok K Mittal.
- 124. Intellectual Property Rights and Information Technology, Key note Lecture National conference on Innovation in Information Technology in Education, Kanpur Feb 26- 27,2007, Ashok K Mittal.
- 125. Research and Relevance: Potential Contribution of A Science and engineering School In Pakistan (Panelist), LUMS Lahore Pakistan January 16-17,2006, Ashok K Mittal.
- 126. Role of Optimization in Indian Industries (Panelist) RAOTA -2006 Delhi Oct 27-28, 2006, Ashok K Mittal.
- 127. Indo- US workshop on Computational Optimization and Application (Panelist) IIT Kanpur Feb 6-9,2007, Ashok K Mittal.
- 128. Two lectures each on Transport Phenomena in Porous Media and Measurements in Turbulent Flow, delivered at Department of Mechanical Engineering, Jadavpur University, Kolkata on 12<sup>th</sup> and 13<sup>th</sup> January 2007, K.Muralidhar.
- 129. Curious consequences of simple sequences an invited lecture in CYLPS programme of CSIR at CMERI, Durgapur, and in the summer programme in Civil Engg. Dept. at IIT Kanpur, 2006, A.K. Mallik.
- 130. Delivered 4 lectures on chaotic dynamics and two popular lectures in Indian Academy of Science sponsored summer school held at IIIT, Hyderabad, 2006. A.K.Mallik.
- 131. From natural numbers to numbers and curves in nature, lecture delivered at Physics Dept. IIT Kanpur in the Horizon series. 2006, A.K.Mallik.
- 132. Eight lectures on nonlinear ordinary differential equations delivered at SERC school on Nonlinear Dynamics held at IACS, Kolkata, during December, 2006, A.K.Mallik.

- 133. From natural numbers to numbers and curves in nature, lecture delivered at Mechanical Engineering Department, BESUS, February 3, 2007, A.K.Mallik.
- 134. Optimization problems in elementary geometry lecture delivered at Techkriti festival at IIT Kanpur, February 23, 2007, A.K.Mallik.
- 135. Interplay between Theory and Experiment lecture delivered at REACH Symposium (of IIT Kanpur) held at Timber Trail Heights, March 7, 2007, A.K.Mallik.
- 136. Academics as Career Option Keynote address in the NCRSME, held at IIT Kanpur, March 24, 2007, A.K.Mallik.
- 137. Optimization problems in elementary geometry lecture delivered in Department of Mathematics, IIT Kanpur, March 28, 2007, A.K. Mallik.
- 138. Fabrication and characterization of Thermoplastic nano composites, 2<sup>nd</sup> INDO-JAPAN Joint Seminar On MICRO/NANO MANUFACTURING SCIENCE, IIT Kanpur, India, 2006, J. Ramkumar.
- 139. Robot Motion Planning: An Overview, Jadavpur University, 25 September, 2006, Bhaskar Dasgupta
- 140. Characteristics of Two-Dimensional Wake Past a Normal Flat Plate, 33<sup>rd</sup> National and 3<sup>rd</sup> International Conference on Fluid Mechanics and Fluid Power, IIT Bombay, Mumbai, December 7-9, 2006, A.K.Saha.
- 141. PVDF based Smart sensor for sensing slips in Manipulators, IGKAR, August, 2006, Bishakh Bhattacharya.
- 142. Piezoelectric Smart Materials in Advanced Composites, HBTI, Kanpur, March 2007, Bishakh Bhattacharya.
- 143. Global Institute of Technology, Jaipur, 2007, A.K.Agarwal.
- 144. Malviya National Institute of Technology, Jaipur, 2006, A.K.Agarwal
- 145. Beauty of Materials, 10<sup>th</sup> March, 2007, Harcourt Butler Technological Institute Kanpur, India, Kamal K. Kar.
- 146. Overview of Carbon Nanotube and CNT based Composites, 2nd National Workshop on Smart Materials for the Design of Intelligent Systems, 24<sup>th</sup> March, 2007, Indian Institute of Technology Kanpur, India, Kamal K. Kar.
- 147. Recent Trends in Metal Forming, TATA STEEL, July 2006. N.V.Reddy.
- 148. Chaired a session in ICOMAST-2006 held at Melaka (Malaysia) on Unconventional Machining, V.K.Jain.
- 149. Chief Guest at National Seminar on Advanced manufacturing Technologies held at MNNIT Allahabad and presented a Key Note Lecture on Evolution of Advanced Machining Processes held during March, 2007, V.K.Jain.
- 150. Issues in modelling of the mechanical behaviour of polymeric systems, HBTI, Kanpur, S.Basu.

- 151. Given an invited seminar titled Molecular Metal Silicates, Phosphonates and Hydroxides at Department of Chemistry, IIT Bombay on Dec. 8, 2006, Ganapathi Anantharaman.
- 152. Modulation of the Ru-Ru Single Bond by Axial Donors in Diruthenium Paddlewheel Complexes; 37th International Conference on Coordination Chemistry (37th ICCC) at Capetown on August-2006, J.K. Bera.
- 153. Chemistry at Axial Sites of the [Ru<sub>2</sub>(CO)<sub>4</sub>]<sup>2+</sup> Core, National Symposium on Current Trends in Chemistry at University of Kalyani on 31<sup>st</sup> January 2007, J.K. Bera.
- 154. Interaction of M-M Bond Orbitals with C-H Bond: Route to Agostic and Cyclometallated Complexes; Modern Trends in Inorganic Chemistry-XI (MTIC-XI) at IITD on December-2005, J.K. Bera.
- 155. Ligand-Centered Reduction Steps in  $[M_2(pyNP)_2]^{n+}$  Units (M = Mo, Re, Ru, Rh,);  $3^{rd}$  Singapore-India Collaborative and Cooperative Chemistry Symposium ( $3^{rd}$  SInCCC) at IITK on December-2004, J.K. Bera.
- 156. Ligand-Centered Reduction Steps in  $[M_2(pyNP)_2]^{n+}$  Units (M = Mo, Re, Ru,); at IITG on December-2004, J.K. Bera.
- 157. Intra and intermolecular vibrations and hydrogen bonds in aqueous systems: A quantum simulation study, Indian Association for the Cultivation of Science, November 27, 2006, A. Chandra.
- 158. Hydrogen bonds and vibrational spectra of clusters, fluids and inrerfaces, IIT Kharagpur, January 04, 2007, A. Chandra.
- 159. Multi-site Coordination ligands Supported on Stannoxane cores 37th ICCC, Cape Town August 13-18th 2006. Lecture on August 17th 2006, V Chandraskehar.
- 160. Inorganic and Organometallic Polymers and Dendrimers. Refresher course at BHU, October 5 2006, V Chandraskehar.
- 161. Multiple bonds between main-group elements. Refresher course at BHU, October 5 2006, V Chandraskehar.
- 162. A lecture on NMR. VSSD College, Kanpur. !0th October 2006, V Chandraskehar.
- 163. Playing With Tin Drums: A Story of Organostannoxanes. IIT Bombay 19<sup>th</sup> October 2006, V Chandraskehar.
- 164. Organometallic and Transition Metal Assemblies based on Stannoxane Phosphonates. International Conference in Emerging Trends in Chemical Sciences on the occasion of 150th anniversary of University of Mumbai, Mumbai. Jan 24th 2007, V Chandraskehar.
- 165. Nanodimensional organostannoxane assemblies. 1st Indo-UK Joint symposium on Chemical Sciences.CRSI-RSC meeting. New Delhi. Feb 1 2007, V Chandraskehar.

- 166. Supramolecular and Self-Assembly Materials. IITK REACH Symposium. March 7-10, 2007. Timber Trail Hights, Parwanoo, Himachal Pradesh, V Chandraskehar.
- 167. Towards Higher Resolution Microscopy through Sensitive Two-Photon Absorption Measurements, Debabrata Goswami, First Asian Spectroscopy Conference, Indian Institute of Science, Bangalore, Jan 29 Feb 2 (2007), D Goswami.
- 168. Shedding a little Light on the Vision of Quantum Computing, Debabrata Goswami, Indo-US Shared Vision Workshop on Soft, Quantum and Nano Computing, Dayalbag Educational Institute, Agra, February 22 (2007), D Goswami.
- 169. On the Evolution of Coherence in Adiabatic Single-Pulse versus Phase-Locked Multi-Pulse Control, Debabrata Goswami, Spectroscopy and Dynamics of Molecules and Clusters, Corbett National Park, Uttaranchal, 23-25 February (2007), D Goswami.
- 170. Implementing Adiabatic Quantum Computing, Debabrata Goswami, Symposium on Quantum Information, School of Physical Sciences, JNU, Delhi, March 16-17 (2007), D Goswami.
- 171. Molecules to Materials: Design, Synthesis, spectral characterization and possible applications of Imidazolin-5-ones, IIT Madras, June 2006, R. Gurunath.
- 172. Degradation of N,N dimethylformamide by a paracoccus species.- Kanpur University, 19th February 2007, R. Gurunath.
- 173. Strategies and Problems in the synthesis of selenium containing peptides, The First Indian Peptide Society Symposium, Hyderabad 23 Feb 2007, R. Gurunath.
- 174. Department of Chemistry, Devi Ahilya University, Indore March 15, 2007, B D Gupta.
- 175. Invited lecture at Institut fuer Chemie und Biochemie, Freie Universitaet Berlin, Organische Chemie, Takustr. 3, D-14195 Berlin, Germany: (June 9, 2006), F.A. Khan.
- 176. Invited lecture at Institut für Chemie, Abteilung Organische Chemie, Universität Rostock, Albert-Einstein-Str. 3a, 18059 Rostock, Germany: (June 16, 2006), F.A. Khan.
- 177. Invited lecture at Institute of Organic Chemistry, University of Tuebingen, Auf der Morgenstelle 18, 72076 Tuebingen, Germany: (June 20, 2006), F.A. Khan.
- 178. Invited lecture at Institute of Organic Chemistry, University of Hanover, Schneiderberg 1B, D-30167 Hanover, Germany: (June 27, 2006), F.A. Khan.
- 179. Invited lecture at Dept of Organic Chemistry, Dortmund University, Otto-Hahn-Strasse 6, D-44227 Dortmund, Germany: (June 28, 2006), F.A. Khan.
- 180. Invited talk on Supramolecular Chemistry, NCCT-2006 (National Convention of Chemistry Teachers), Kottayam, October 28-30, 2006, J. N. Moorthy.

- 181. Coordination Chemistry of Pyridine Amide Ligands: Structures and Properties, Department of Chemistry, Stanford University, USA (April 18, 2006), R. N. Mukherjee.
- 182. Synthesis, Structure and Reactivity of Iron and Vanadium Complexes of Mesohydroxy Octaethylporphyrin, Presented on 7<sup>th</sup> March, 2007 in the department of Chemistry and Chemical Technology, Vidyasagar University, West Bengal, S. P. Rath.
- 183. Noncovalent Interactions, Tata Institute of Fundamental Research, Mumbai October 11, 2006, N. Sathyamurthy.
- 184. Invited talk on September 19, 2006 at Lilly, Indianapolis, U.S.A., V. K. Singh.
- 185. Invited Lecture at CHUL Research Center, September 22, 2006, Quebec city, Canada, V. K. Singh.
- 186. Invited lecture at a Symposium Current Trend in Chemistry held during March 24-25, 2007 at BHU, Varanasi, V. K. Singh.
- 187. Quantum routes to energy flow: lessons from Classical mechanics?, Goa, India, April 2006, K. Srihari.
- 188. Does Vibrational Energy Flow fill the Molecular State Space?, Theoretical Chemistry Symposium, Trichy, India, December 2006, K. Srihari.
- 189. Molecular Vibrations, IITK-REACH Symposium, Parwanoo, India, March 2007, K. Srihari.
- 190. Postmodern Rate Theories? CHEMFEST, IITK, March 2007, K. Srihari.
- 191. Department of Chemistry, IIT Delhi, 5th April, 2006, Y.D. Vankar.
- 192. Department of Chemistry, Universität Konstanz, Konstanz, Germany, May 8, 2006 under INSA-DFG exchange programme. Delivered a lecture titled Synthetic endeavors towards glycosidase inhibitors and glycosamino acids, Y.D. Vankar.
- 193. Department of Organic Chemistry, Universtät Tubebingen, Germany, May 10, 2006, Y.D. Vankar.
- 194. Department of Organic Chemistry, Universität Mainz, Germany, May 12, 2006, Y.D. Vankar.
- 195. Department of Organic Chemistry, Universität Stuttgart, May 15, 2006, Y.D. Vankar.
- 196. Department of Organic Chemistry, Universität Potsdam, May 17, 2006, Y.D. Vankar.
- 197. Department of Organic Chemistry, Freie Universität, Berlin, May 19, 2006, Y.D. Vankar.
- 198. Department of Chemistry, Universität Dresden, May 22, 2006, Y.D. Vankar.
- 199. Indian Institute of Chemical Biology, Kolkata, June 14, 2006, Y.D. Vankar.
- 200. Apotex Pharma Chem Inc., Brantford, Ontario, Canada, July 31, 2006, Y.D. Vankar.

- 201. School of Chemistry, University of Hyderabad, Hyderabad (October 2006), Y.D. Vankar.
- 202. Department of Chemistry, IIT Guwahati, Guwahati (January 17, 2007), Y.D. Vankar.
- 203. Delivered two lectures at Government Model College, Jabalpur on September 16, 2006: 1. Modern reagents in organic synthesis 2. Carbohydrates: Much more than mere source of energy, sponsored by the Indian Academy of Sciences, Y.D. Vankar.
- 204. Self-assembling triskelion peptide elements. Current Trends in Chemistry, Banaras Hindu University, March 24-25, 2007, S. Verma.
- 205. Gyrotactic Bioconvection simulations, Engineering Mechanics Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, Ghorai, S.
- 206. Isometric multipliers of vector-valued function spaces, University of Lucknow, Aug.19,2006, Tewari, U.B.
- 207. Completely bounded multipliers on Fourier Algebra, Conference on Harmonic Analysis ,Dec. 22-24,2006 at IIT Kanpur, Tewari, U.B.
- 208. Improved estimation of parameters in linear regression models, at Deutsches Zentrum fur Luff-und Raumfahrt e.V. (DLR), Institute of Spce Simulation, Koln, Germany in August 2006, Shalabh.
- 209. Consistent estimation of regression coefficients in replicated ultra structural mode, at Department of Mathematics and Computer Science, University of Kassel, Kassel, Germany in November, 2006, Shalabh.
- 210. Current trends in differential equations, Lectures series delivered in the orientation programme of the inverts institute of engineering technology, Bareilly, Sept. 1-2, 2006, Bahuguna, D.
- 211. Perfusion Quantitation Using fast 3D-SPGR DCE-MRI in CME on Clinical Application of newer MRI techniques in neurosciences February 2007, S. G. P. G. I.of Medical Sciences, Lucknow Rathore, R. K. S.
- 212. Image Processing for DTI and Tractography' in CEP on Imaging Techniques In Life Sciences, February 2007, Institute of Nuclear Medicine & Allied Sciences, Delhi Rathore, R. K. S.
- 213. Adaptive smoothing in nonparametric classification, University of Calcutta, 31st December, 2006, Ghosh, A.K.
- 214. Adaptive nearest neighbor classifier. Indian Statistical Institute, 4<sup>th</sup> January, 2007, Ghosh, A.K.
- 215. Overview of Finite Difference Methods for Partial Differential Equations (02 lectures) at University of Pune, October 2006, Kadalbajoo, M.K.
- 216. Uniformly Convergent Difference Methods for solving Burgers' Equation, IIT Bombay, October 2006, Kadalbajoo, M.K.

- 217. An overview of Finite Difference Methods for PDE's (02 lectures) IIT Madras, December 2006, Kadalbajoo, M.K.
- 218. Finite Volume Methods for PDE's IIT Madras, December 2006, Kadalbajoo, M.K.
- 219. Finite Volume Methods for Hyperbolic Conservation Laws, M.S. University, Baroda, January 2007, Kadalbajoo, M.K.
- 220. On sequence spaces in the department of mathematics, University of Addis Ababa, Ethiopia on Dec. 7, 2006, Gupta, M.
- 221. Banach spaces of entire sequences and their Kothe duals, Gupta, M., Pradhan, S.
- 222. Consistent Estimation of Regression Coefficients I Measurement Error Model under Exact Linear Restrictions in 4<sup>th</sup> International Workshop on TLS and Errors-in-Variables modeling, Aug. 21-23,2006.Garg, G.
- 223. Voxel wise exact T Estimation for Accurate Quantitation of Perfusion Indices using Fast 30-SPGR in Intracranial Mass Lesion, ISRM 14<sup>th</sup> Scientific Meeting & Exhibition Scattle, Washington, USA from 6-12, Singh, A.
- 224. Banach spaces and their applications in analysis at Miami University, Ohio from May 22-May 28,2006, Acharya, L.R.
- 225. A DTI Analysis tool and another Newton-Raphson method for in vivo 'H MRS Data, ESMRMB 23<sup>rd</sup> Scientific meeting, Warsaw, Poland, 21-23 September 2006, Purwar, A.
- 226. De-scalping of the brain in echo planar DT-MRI, ISMRM 14<sup>th</sup> Scientific meeting & Exhibition, Scattle, Washington, USA, Sarma, M.K.
- 227. Higher Order Finite Difference Methods for Second Order Singularly Perturbed Delay Differential Equations SIAM conference on computational science and engineering during 17th-23th Feb.2007, Ramesh, V.P.
- 228. On Double Diffusive natural convention in wavy porous enclosure under the influence of soret and dufour effect, ICAPM-2006, May28-Jun4, Marrakech, Morrocco, B.V. Rathish Kumar et al
- 229. Unusually Stabilized WEBS-FEA of generalized Stokes Equations based on static condensation of quadratic Bubbles, MAFELAP 2006, June 12-16, Brunel University, London, B.V. Rathish Kumar, V.V.V.S.Kumar, P.C.Das
- 230. Parallel mesh division algorithm for general linear two point boundary value problems, Int. Symposium on parallel computing in electrical engineering, PARALEC'06, pp.412-420, 2006, Rajesh Bawa, B.V. Rathish Kumar, Tanu Gupta,
- 231. Numerical simulation of thermal hydraulics in ADSS Model, EUA4#19-EUAXevent, 2006, IAC-CNR, ROMA,ITALY, B.V.Rathish Kumar, Arul Praksh, G. Biswas,
- 232. Strong Law for the Largest Nearest-Neighbor Link on Exponentially Distributed Points, 2nd IMT-GT Regional Conference on Mathematics, Statistics and Applications, Universiti Sains Malaysia, Penang, Malaysia (June 2006) Bhupendra Gupta & Srikant K. Iyer.

- 233. A parameter free numerical method for solving singularly perturbed turning point problem having two boundary layers on a non-uniform mesh in the Fourteenth International conference of the Forum for Interdisciplinary Mathematics-CMASM-2007-FIM XIV at IIT Madras during 6-8 January 2007 Vikas Gupta & M.K. Kadalbajoo.
- 234. Instabilities in superconductors and mapping megagauss magnetic fields associated with laser plasma interactions. S. N. Bose National Center for Basic Sciences, Kilkata, 30th March, 2007, Satyajit Banerjee
- 235. Intense microwave plasmas for focused ion beams, Variable Energy Cyclotron Center, Kolkata, April 06, 2006, Sudeep Bhattachargee
- 236. Intense microwave plasmas for ion source application", Institute for Plasma Research, Gandhinagar, November 08, 2006, Sudeep Bhattacharjee
- 237. Traffic of interacting molecular motors: effects of single motor mechanochemistry, Max-Planck Institute for Cell Biology and Genetics, Dresden, Germany, May, 2006, D Chowdhury.
- 238. Interacting self-propelled particles: from molecules to vehicles, Harish-Chandra Research Institute, Allahabad, December 11, 2006, D Chowdhury.
- 239. Molecular Machines, Physics Department, Banaras Hindu University, Varanasi, February 08, 2007, D Chowdhury.
- 240. "Traffic of molecular motors on filamentary tracks" Physics Department, Banaras Hindu University, Varanasi, February 09, 2007, D Chowdhury.
- 241. "Molecular motor traffic on intra-cellular filamentary tracks" Forschungszentrum, Julich, Germany, March 08, 2007, D Chowdhury.
- 242. Effect of long-range connections on an infinite randomness fixed point, Statphys-Kolkata VI, Raichak, 5th January, 2007, Amit Dutta
- 243. Long-range connections, contact processes and disorder correlation, Department of Physics, Indian Institute of Technology Kanpur, 23<sup>rd</sup> February, 2007, Amit Dutta
- 244. Long-range connections and contact processes, S. N. Bose National Center for Basic Sciences, Kolkata, 6th March, 2007, Amit Dutta
- 245. Heavey fermion behaviour in YbIr<sub>2</sub>Si<sub>2</sub> and Quadurupolar order in YbRu<sub>2</sub>Ge<sub>2</sub>, University of Koln, Germany, 11 October 2006, Z. Hossain.
- 246. Physics Colloquium: Crystal Field Effect, Magnetism and Superconductivity of Pr-Compounds, Max-Planck Institute for Chemical Physics of Solids, Dresden, Germany, 16 November 2006, Z. Hossain.
- 247. Invited talk "Current Status of Ultra High Energy Cosmic Ray's at DAE particle physics symposium at IIT Kharagpur, December 11-15, 2006, Pankaj Jain.
- 248. Composite structure and causality, Institute of Physics, Bhubaneswar, March 08, 2007, S.D. Joglekar.

- 249. Spin Fluctuations in the Triangular-Lattice Antiferromagnet Institute of Physics, Humboldt University, Berlin, 26 April 2006, Avinash Singh.
- 250. Spin Dynamics in the Diluted Ferromagnetic Kondo Lattice Model Institute of Physics, Humboldt University, Berlin, 17 May 2006, Avinash Singh.
- 251. Clustering Induced Suppression of Ferromagnetism in Diluted Magnets Institute of Physics, University of Regensburg, 12 Sep. 2006, Avinash Singh.
- 252. Spin Dynamics in Diluted Magnetic Semiconductors Indian Institute of Technology Roorkee, 31 Oct. 2006, Avinash Singh.
- 253. Correlation Effects in a Band Ferromagnet—Goldstone-mode Preserving Investigation with Self-Energy and Vertex Corrections Indian Institute of Technology Roorkee, 2 Nov. 2006, Avinash Singh.
- 254. Recent Developments in Rayleigh Benard Convection, National Conference on Nonlinear Systems and Dynamics-2006, Chennai, 2006, M. K. Verma.
- 255. Dynamo Using Turbulent Energy Fluxes, in International Solar Workshop on Transient Phenomena on the Sun and Interplanetary Medium, Nainital, 2005, M. K. Verma.
- 256. Negative refractive index and optical anti-matter., Institut Fresnel, Universite Aix Marseille. I, France, 05 May 2006, S. A. Ramakrishna.
- 257. The time of sojourn for a wave traversing a material medium., Institut Fresnel, Universite Aix Marseille . I, France, 19 May 2006, S. A. Ramakrishna.
- 258. Negative refractive index and optical anti-matter., Department of Applied Mathematics, University of Liverpool, Liverpool, UK, 24 May 2006, S. A. Ramakrishna.
- 259. Delay times for pulses in plasmas and negative index media., The Blackett Laboratory, Imperial College London, 26 May 2006, S A Ramakrishna.
- 260. Colloquium on Negative refractive index and optical anti-matter., Nanophotonics and Metrology Laboratory, Ecole Polytechnique de Lausanne, Switzerland, 12 June 2006, S A Ramakrishna.
- 261. Delay times for pulses in plasmas and negative index media., Department of Physics, University of Geneva, Switzerland, 22 June 2006, S A Ramakrishna.
- 262. Seminar on Manipulating light with negative refraction. Institute of Microtechnology, University of Neuchatel, Switzerland, 12 July 2006, S A Ramakrishna.
- 263. Colloquium on Physics of Negative refractive index materials., Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, 21 Dec. 2006, S A Ramakrishna.
- 264. Negative refractive index on metamaterials at Optical frequencies., Raman Research Institute, Bangalore, 22 Dec. 2006, S A Ramakrishna.
- 265. Colloquium on Metamaterials and negative refractive index., Birla Institute of Technology and Science, Pilani, 06 March 2007, S A Ramakrishna.

266. Embedded Nanoscale Heterostructures for Photoelectronic Applications, Indo-Japanese NanoSc Mfg, 19 December 2006 IIT Kanpur India, Y. N. Mohapatra.

## **OTHER ACTIVITIES**

## (A) TECHNOLOGY DEVELOPED

- 1. On-going developmental work on synthesis and trial of silver particle embedded granular activated carbon (GAC) filter as antibacterial agent in drinking water filtration and purification systems, in collaboration with Filtrex Technologies Pvt. Ltd., Bangalore, R. Bandyopadhyaya.
- 2. On-going developmental work on synthesis and tuning of superparamagnetic iron-oxide nanoparticle suspension, to be used as enhanced contrast agent for MRI diagnosis of disease, in collaboration with SGPGI, Lucknow, R. Bandyopadhyaya.
- 3. Developed A method for generating small scale structures via pattern miniaturization using hydrogel. (Applied for Patent), A. Ghatak.
- 4. Developed A method for generating small scale structures via pattern miniaturization using hydrogel. (Applied for Patent), A. Ghatak and A. Sharma.
- 5. A Pilot Plant for the technology developed in ARRPET project is running at Vapi, Gujarat since June 2006. Funding for construction, operation and maintenance of the pilot plant has been provided by Vapi Waste & Effluent Management Co. Ltd., S. Guha.
- 6. Wake-on-WLAN technology for remote switch on/off (see WWW'06 publication for details), Bhaskaran Raman.
- 7. The BriMon system for Railway Bridge Monitoring, Bhaskaran Raman.
- 8. SIMRAN Technology, B.M. Shukla.
- 9. Train Partition Notification Technology, B.M. Shukla.
- 10. Track Detection, B.M. Shukla.
- 11. Smart Card projects: Department of CSE is involved in the specification and development of the operating systems for smart cards. A major success story is the development of SCOSTA operating system for the smart cards. This operating system has been adopted for the use in Driving Licenses, Vehicle Registration Certificates and Multi-purpose National Id card, all based on the smart cards. Lately, a standard has been developed for the smart cards to be used in the electronic passport. In addition to these, various applications have been developed around the smart cards. These include the personalization system for the driving licenses and vehicle registration system (jointly with NIC),

personalization system for the national ID card (jointly with the NIC), multipurpose Identity card IIT Kanpur including applications such as attendance, library, club memberships etc. Department received another big project form the Ministry of Communication and Information Technology on the standardization and development of readers for the smart cards. The department will be developing hand held readers which can be deployed in the field for working with the smart cards such as those listed above, Rajat Moona.

- 12. The department is involved in the development of postal bag tracking along with CDAC Noida through a project funded by the Ministry of Communication and Information technology. In this project, the RFID based technologies are to be developed for automatic tracking of the speed post articles across various transit mail offices. In the pilot project, the mail that flows between Delhi and Bombay will be tracked, Rajat Moona.
- 13. Low power MOSFET based inverter; Status: packaging in progress, P. Sensarma.
- 14. IGBT gate drivers with inherent short-circuit protection scheme and isolation (2 kV) for Voltage Source Inverters; Status: beta testing in progress, , P. Sensarma.
- 15. Removal of Scratches, Blotches and color fading in old Motion picture films, Ready for Transfer, S. Gupta.
- 16. True Zoom, Multiview Image Format. Some more Development Needed, K. S. Venkatesh.
- 17. Anthropological Security: Ready for Transfer, K. S. Venkatesh.
- 18. Laser Pointer Based HCI: Ready for Transfer, K. S. Venkatesh.
- 19. Laser Assisted Visual Metrology Applications: Under Development, , K. S. Venkatesh.
- 20. Wake-on-WLAN (Remotely wakes up wireless LAN devices and hences helps save considerable power), Further development needed, K. Chebrolu.
- 21. BriMon (Structural health monitoring tool for bridges), Further development needed, K. Chebrolu.
- 22. Pain Monitor. Tested on many patients by Dr. Gautam Das, Specialist on pain management, G. C. Ray.
- 23. A working prototype developed for the measurement of Laser Range finder based Angle of Attack and Tracking Position of Rail axles for the Indian Railways as part of the project on "Trackside Bogie Monitoring System". Further development required before technology transfer, J. John.
- 24. UHF RFID tag antenna, prototypes are undergoing testing at the partnering organization, A. R. Harish.
- 25. Visibility Measurement of Fog, under the TMRS-Fog Vision Instrumentation.
- 26. Powder Metallurgical Processing of SILVAR composites for thermal management application in communication satellites developed in collaboration with Mr. A. Pathak and his team at Space Application Center (SAC), Ahmedabad. This project

- was undertaken under the aegis of ISRO-IITK Space Technology Cell, A. Upadhyaya.
- 27. Low temperature Synthesis of Nd-doped Bismuth Titanate Nanoparticles, Ashish Garg.
- 28. Mathematical modeling and computational analysis of large-dof robot manipulators: B. Dasgupta
- 29. Development of Foil Air Bearing for Air Cycle Machine. Technology transferred to HAL, Lucknow. The product is at the phase of manufacturing and testing, S.Sarkar
- 30. Developed an autonomous robot with a sensor probe for detecting surface features inside a closed conduit, the technology will be delivered to the Naval Armament Board, Bishakh Bhattacharya.
- 31. Developed a novel turn-indicator using Shape Memory Alloy with auto-shut off mechanism for General Motors, Bishakh Bhattacharya.
- 32. Straight Vegetable Oil (SVO) for direct use in compression ignition engines, A.K. Agarwal.
- 33. Fabricated solar photovoltaic cells with imidazolin-5-ones. These are biodegradable and currently being optimized, R Gurunath.

## (B) SOFTWARE DEVELOPED

- 1. Title of the software, Ready for Transfer/further development needed, S. Guha.
- 2. Limulator, Available for download at http://home.iitk.ac.in/~blohani/download.htm, further being developed to make it more comprehensive, B. Lohani.
- 3. LAS-Converter, Available for download at http://home.iitk.ac.in/~blohani/download.htm, further will be developed on the basis of feedback on present version, B. Lohani.
- 4. Horoscope Program, B. M. Shukla.
- 5. On Line Project Management, B. M. Shukla.
- 6. STD & PIN Code Dictionary, B. M. Shukla.
- 7. Address Book Software for Motorola C650 Model, B. M. Shukla.
- 8. HP iPAQ 6315 based way point logger cum way point arrival notification system.
- 9. Multi Lingual Web based Transliteration Software, B. M. Shukla.
- 10. Multi Lingual Web based Transliteration Software, B. M. Shukla.
- 11. On Line Web Based Library Automation System, B. M. Shukla.
- 12. Pickpacket v2: Network Monitoring Tool, More improvement one over the last year's version (Ready to be transferred.), Dheeraj Sanghi.

- 13. Fingerprint Separation s/w and GUI Interface, Ready for Transfer, P. K. Kalra.
- 14. Audio separation s/w and GUI Interface, Ready for Transfer, P. K. Kalra.
- 15. Image compression s/w and GUI Interface, Ready for Transfer, P. K. Kalra.
- 16. Day Ahead Auction Software for Power Exchange, Ready for Transfer, P. K. Kalra.
- 17. Brihaspati, Y. N. Singh.
- 18. Platform for measuring 802.11 Link performance, Ready for transfer, Ilamparidhi, Rajesh Kumar, and A.R. Harish Radio wave propagation prediction using ray tracing for indoor wireless application, K. Chebrolu.
- 19. RF breakdown power prediction in transmission lines, Kalpesh Mehta and A.R. Harish.
- 20. Generalized scattering matrix method for analysis microwave circuits, Kalpesh Mehta and A.R. Harish.
- 21. Indoor location sensing using RFID, Arunabh Chattopadhyay and A.R. Harish.
- 22. Advanced optical microscopy (3D imaging) (developed in house), Sandeep Sangal.
- 23. "Yantrika", an integrated software package for analysis, design, planning and control of large-dof robot manipulators, almost ready for transfer (trial version already delivered, to IGCAR, Kalpakkam, B.Dasgupta.
- 24. Developed a software for Shape Control of Space Antenna Structure to be delivered to ISRO, Satellite Centre Ahmedabad. Bishakh Bhattacharya.
- 25. Developed a LES code for complex geometry, S.Sarkar.

#### (B) INDUSTRIES VISITED

- 1. DRDL, Hyderabad, Expert Member on Missile Parameter Estimation, S.K. Gupta.
- 2. HEMRL, Pune, Expert Aerodynamics for FAE Bomb Design, S.K. Gupta.
- 3. Hindustan College of Engg., Chennai, Member Panel DST, S.K. Gupta.
- 4. Visited Indo-Gulf Fertilizers (Jagdishpur, UP) to discuss and finalize sponsored consultancy project of cost Rs. 21 Lakhs on "to develop membrane process based scheme in order to recycle urea plant process condensate after recovering Gases (Ammonia and CO<sub>2</sub>) and Urea". Starting Date: November 2006, P.K. Bhattacharya.
- 5. Visited twice to Transpek-Silox, Vadodara (a multi-national company manufacturing inorganic chemicals) to discuss and finalize sponsored consultancy project of cost Rs. 10 Lakhs on "to develop a scheme for recycling of TSIL biologically treated effluent (300 m³/day) in order to recover water as well as for any discharge to municipal drainage, adhering pollution norms", P.K. Bhattacharya.
- 6. Chinese Petroleum Corporation, July, 2006 to deliver a seminar and to discuss possible collaboration, J. P. Gupta.

- 7. Visited College of Engineering, Thiruvananthapuram (Kerala) during March 16-18, 2007 as NBA expert for accreditation of their M.Tech Structural Engineering Programme, Chakrabarti, S.K.
- 8. Visit to IRC as a member of the committee on Transport Planning, Traffic Engineering and Road Safety, Chakraborty, P.
- 9. Visit to SVNIT Surat to help them develop an M.Tech. program in Transportation, Chakraborty, P.
- 10. DTRL-DRDO, Invited for discussion on DTRL projects, 15 February 2007, Lohani, B
- 11. Shell Technology India Private Limited, Bangalore; 30<sup>th</sup> March, 2007. To discuss mutual R7D activities in the area of earth sciences, Sinha, R.
- 12. TCS Bangalore, CDRI Lucknow, e-Logistics, Chennai, IIIT Jabalpur BIET Jhansi, NBRI Lucknow, RDSO Lucknow, B.M. Shukla.
- 13. IBM, Bangalore; Intel, Bangalore; IIT, Kharagpur; IISc, Bangalore; Cornell University, Ithaca, NY, USA, Mainak Chaudhuri.
- 14. IITG, UCSD, CalTech, UCLA, Berkeley, Stanford, CWI, University of ULM, Bellairs Institute, Manindra Agrawal.
- 15. TVS Motor Company Limited, Chennai, India, Discussion on project proposal titled "Engine Testing", P. K. Kalra.
- 16. Bajaj (Automobiles unit), Pune, India, Discussion on project proposal titled "Engine Testing", P. K. Kalra.
- 17. Mahindra & Mahindra, (Automobiles unit), Nasik, India., Discussion on project proposal titled "Engine Testing", P. K. Kalra.
- 18. NCDEX, Mumbai, India, Conceptualizations of Power exchange, P. K. Kalra.
- 19. Visited Institute of Engineering Tribhuvan University Nepal, 8-9 Jan. 2006, S. C., Srivastava.
- 20. Visited Hong Kong Polytechnic Univ. Hong Kong during 1-2 Nov. 2006, S. C., Srivastava.
- 21. Visited Asian Institute of Technology Thailand during 3-4 Nov. 2006, S. C., Srivastava.
- 22. Visited Crompton Greaves of India Ltd. ,Kunjur Works, Mumbai for research collaboration in December 2006, S. C. Srivastava.
- 23. BHEL, Bhopal, Sensarma P.
- 24. Visited Indira Gandhi Center for Atomic Research. Discussed problems of mutual interest, R. Potluri, September 2006.
- 25. Industrial visit to study distributed control systems in the following industry: Alumina Refinery plant of HINDALCO Renukut, 1 day, R. Potluri., Captive Power plant of HINDALCO, Renusagar, 1 day, R. Potluri., NTPC Shaktinagar, 1 day, R. Potluri, October 03 05, 2006.
- 26. Crompton Greaves, Mumbai, to discuss research possibility, N. Gupta.

- 27. BHEL, to discuss possibility of research collaboration, N. Gupta.
- 28. CPRI, Bangalore, to establish collobaration, N. Gupta.
- 29. ZEE Broadcasting Corporation, Collaboration activity, S. Gupta.
- 30. City University of New York for Research Collaboration (Dec.8 Dec.25<sup>th</sup> 2006), S. Umesh.
- 31. Visit to RDSO, Lucknow in connection with the field trials and interactions with railway engineers on the Trackside Bogie Monitoring System project under the Technology Mission on Railway Safety. One visit per month from April 2006 to March 2007, J. John.
- 32. Visited NTU Singapore during December 03 16, 2006 for exploring possible technical collaboration. Delivered two lectures on Fractal Antennas and Chaos at Microwave Frequencies, A.R. Harish.
- 33. Visited the Div. of Communication Engineering, School of EEE, Nanyang Technological University, Singapore as TCT Fellow during May 06-June 06, Anjan K. Ghosh.
- 34. Visiting the Telecomm Systems Program ,School of electrical and computer engineering,University of Oklahoma,Tulas as a visiting Professor from July 06-Aug08, Anjan K. Ghosh.
- 35. Mazandran University of Science & Technology, Iran, J. Chatterjee.
- 36. Tampere University of Technology, Finland, J. Chatterjee.
- 37. London School, of Economics, U.K., J. Chatterjee.
- 38. Curtin University of Technology, Sydney Campus, Australia, J. Chatterjee.
- 39. International Management Institute, New Delhi, India, J. Chatterjee.
- 40. Management Development Institute, Gurgoan, India, J. Chatterjee.
- 41. National Knowledge Commission, New Delhi, India, J. Chatterjee.
- 42. Indian Council of Agriculture Research, New Delhi, India, J. Chatterjee.
- 43. Centre for Management of Innovation and Technology, New Delhi, India, J. Chatterjee.
- 44. University of a Kassel, Germany, J. Chatterjee.
- 45. Indian Institute of Management, Kolkata, India, J. Chatterjee.
- 46. Bankers' Institute of Rural Development, Lucknow, India, J. Chatterjee.
- 47. ICRISAT, Hyderabad, India, J. Chatterjee.
- 48. Innovation Management Institute, Helsinki, Finland, J. Chatterjee.
- 49. I I M Khozhikode, Kerala, India, B.V.Phani.
- 50. Invited as Visiting Faculty by Department of Psychology, Osmania University, Hyderabad to give lectures on Multivariate Statistical Methods, February 26-March 03, 2007, Narendra K. Sharma.
- 51. Tubular Microwave Sintering Furnace with Inert and Reducing Gas Flushing for Sintering Metallic Samples (filed, 2006), Upadhyaya and G. Swaminathan.

- 52. Rare-Earth Oxide Dispersed Sintered Stainless Steels (REO-Steels),(filed, 2006), Upadhyaya, R. Balasubramaniam, and J. Shankar.
- 53. Process for drilling contoured deep hole in super alloys using STED to enhance cooling in turbine blades, (Applied for, January 2007), V. K. Jain, D. S. Bilgi, A. V. Kulkarni, A. Chavan, R. Shekhar.
- 54. Low temperature Synthesis of Nd-doped Bismuth Titanate Nanoparticles, Indian Patent Application No. 804/DEL/2007, Prem Prakash, Ashish Garg, Mukesh Kumar Roy and Harish Chandra Verma.
- 55. Synthesis of Nanocrystalline Iron Carbides by Reaction Milling in a Dual Drive Planetary Mill, (2006), D. Chaira, S. Sangal, B.K. Mishra.
- 56. Visited Dept. of Mechanical Science and Engineering, Nagoya University, Japan For teaching and research from 1st May 2006 to 31st March 2007, A. Dutta
- 57. ISRO Satellite Centre, 1-3 Jan 2007 for discussion on projects, B. Dasgupta.
- 58. Visited University of Verona, Italy on an Indo-Italian Joint Project on development of shear sensors for robotic manipulators in September 2006, period 2 weeks. Bishakh Bhattacharya.
- 59. Visited University of Illinois at Urbana Champaign and University of California at Irvine on an Indo-US project on development of micro-gripper manipulator using IPMC, period 10 Days, Bishakh Bhattacharya.
- 60. Visited Mahindra and Mahindra Ltd, Nashik, June 2006, A.K. Agarwal.
- 61. Visited TATA STEEL, July 5-6, 2006, December 4-5, 2006, N.V. Reddy.
- 62. Visited Northwestern University under Indo-US center on Advanced Manufacturing (May-June, 2006), N.V. Reddy.
- 63. Visited University of Electrocommunications, Tokyo, University of Shizouka, Hamamatsu, Suzuki Motors, Iwata, Hamamatsu Photonics, Hamamatsu, October 2006, N.V. Reddy.
- 64. Visit to Indian Institute of Science for Research data collection in 17-23, August 2006, R. Gurunath.

### (D) PATENTS

- 1. Profile measurement machine (filed for patent), C. Venkatesan.
- 2. Micro- and sub-micro patterning of soft solids and articles formed thereof, Indian patent (2787/DEL/2005) and PCT/IN/0600108 filed on March 28th, 2006 (A. Sharma, M. Gonuguntala, S Subramanian and R. Mukherjee).
- 3. Pressureless Room Temperature Micro- and Sub-micro Patterning of polymer Films Coated on Planar or Curved Surfaces Using Patterned Flexible Foils as

- Stamp and Articles Formed Thereby, Indian Patent 1519/DEL/2006 filed on June 28th, 2006 (A. Sharma, Rabibrata Mukherjee, Danish Faruqui and Ganesh Patil).
- 4. Generation of Submicron to Macroscopic Patterns and Objects by Successive Miniaturization Using Shrinkable Materials and Articles Formed Thereby, Indian Patent 522/DEL/2007 filed on March 09, 2007 (A. Ghatak, A. Sharma, A. L. Das, R. Mukherjee, V. Katiyer, M. Kulkarni).
- 5. Liquid-solid radially cross-flow multi-stage fluidized bed contactor, IPA No.830/DEL/2007, N. Verma.
- 6. Compiling memory dereferencing instructions from software to hardware in an electronic design, US Patent Grant No. 7,203,912, Rajat Moona.
- 7. Repartitioning performance estimation in a hardware-software system, US Patent Grant No. 6,856,951, Rajat Moona.
- 8. Area optimization of hardware for algorithms by optimizing sizes of variables of the algorithm, US Patent publication no. 20060020574, Rajat Moona.
- 9. Indian Patent titled "Improved Single Phase Phase-Locked-Loop" filed on Feb 20, 2007, Application No. 349/DEL/2007, P. Sensarma.
- 10. A low complexity symbol timing estimator for MIMO Modem using two samples per symbol (Pending award of patent), A. K. Chaturvedi and Ketan Rajawat.
- 11. Power Supply for Personal Computers, in place of the Conventional SMPS and UPS. (Pending award of patent), K. S. Venkatesh.
- 12. 933/DEL/2006"Organic photovoltaic cells with thin films of carbon nano-tubes p-n junctions"31-03-2006.Co-inventor:Arun Tej Mallajosyula, S.K.Iyer.
- 13. Dielectric Resonator, Publication No. :US2006/0097826 A1, Publication Date: May 11, 2006, Kumar Vaibhav Srivastava, Vishwa V. Mishra and Animesh Biswas, Appeared in : <a href="http://www.uspto.gov/patft/">http://www.uspto.gov/patft/</a>.
- 14. Wide Band Loop Antenna, Patent Application No. 1594/DEL/2006 Dated: 07-07-2006, A.R. Harish and Ravi Kumar Joshi.
- 15. Curved deep hole drilling using Shaped Tube Electro Drilling (Applied) V.K.Jain
- 16. Pulsating flexible magnetic abrasive brush for super finishing, V.K.Jain.
- 17. Magnetorheological abrasive flow finishing process and device therefore V.K.Jain.
- 18. New media for AFM machining- Indian Patent (filed), J. Ramkumar.
- 19. Joining of Dissimilar Pipes thro adhesive joining-Indian Patent (filed) J. Ramkumar.
- 20. Novel Technique for Ceramic Ball finishing thro MFP- Indian Patent (filed) J.Ramkumar.
- 21. Functionally graded wide-band polymeric composites for microwave absorbers and method of manufacturing same, RFE.NO.:- 737/DEL/2007, Dated 28th March 2007, India (2007), Kamal K. Kar, Ahankari Sandeep Sureshrao and Animesh Biswas.

- 22. Functionally graded polymer nanocomposites/composites having crosslinking density variation and their manufacture, RFE.NO.:- 736/DEL/2007, Dated 28th March 2007, India (2007), Kamal K. Kar and Ahankari Sandeep Sureshrao.
- 23. Carbon nanotube(s) coated cutting tool(s) and a method for preparation thereof, RFE.NO.:- 735/DEL/2007, Dated 30th March 2007, India (2007), Kamal K. Kar and Ariful Rahman.
- 24. A novel functionally graded polymer(s)/polymeric nanocomposite(s) [fgp(s)]/fgpnc(s)] having glass transition temperature variation and a process for preparation thereof, RFE.NO.:- 681/DEL/2007, Dated 28th March 2007, India (2007), Kamal K. Kar and Ahankari Sandeep Sureshrao.
- 25. Functionally graded magnetic materials and a method for preparation of the same, RFE.NO.:- 680/DEL/2007, Dated 28th March 2007, India (2007), Kamal K. Kar and Ahankari Sandeep Sureshrao.
- 26. A novel viscoelastic media used for nano-finishing of materials through abrasive flow machining process and a method of manufacture thereof, RFE.NO.:-591/DEL/2007 Dated 19<sup>TH</sup> March 2007, India (2007), Kamal K. Kar, J. Ramkumar and Piyushkumar B. Tailor.
- 27. Imidazolin-5-ones for photovoltaic applications –patent filed in February 2007, R. Gurunath.

## (E) AWARDS AND HONOURS

- 1. C-Chairman, Organizing Committee, First Indo-US Frontiers of Engineering Symposium (FIE) March 1-5, 2006 Jaypee Palace Hotel and Convention Center, Agra, Sanjay Mittal.
- 2. Member, International Organizing Committee of ICCM07 & Session Chairman, International Conference on Computational Methods, Hisoshima JAPAN 4-6 Apr 2007), Sanjay Mittal.
- 3. Shanti Swarup Bhatnagar Prize in Engineering Sciences CSIR 2006, Sanjay Mittal.
- 4. Fellow Indian Academic Sciences since 2007, Sanjay Mittal.
- 5. Member Steering Committee Second Indo-US Frontiers of Engineering Symposium (FOE) 2008, Sanjay Mittal.
- 6. Member, Organizing Committee, REACH Symposium, IIT Kanpur March 7-10 Hotel Timber Trail Heights, Sanjay Mittal.
- 7. Associate Editor, International Journal of Aerospace Egnineering Hindawi, Publishing Corporation since 2007, Sanjay Mittal.
- 8. INAE Young Engineer Award, A. Ghatak.
- 9. Invited to join the Editorial Board of 'International Journal of Oil, Gas and Coal Technology', Inter-Science publishers, J.P. Gupta.

- 10. Associate of Indian Academy of Sciences (2006-2009), Y.M. Joshi.
- 11. Indian National Science Academy Medal for Young Scientist (2006), Y.M. Joshi.
- 12. Distinguished Alumnus Award, Indian Institute of Technology, Kanpur (2007). A. Sharma.
- 13. Elected Fellow, National Academy of Sciences, India (2006), A. Sharma.
- 14. J. C. Bose National Fellowship, Department of Science & Technology (2006-2010), A. Sharma.
- 15. Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation (2006), A. Sharma.
- 16. RPG Life Science Padma Vibhushan Professor M M Sharma Medal and Chemcon Distinguished Speaker Award of the Indian Institute of Chemical Engineers (2006), A. Sharma.
- 17. Member of Editorial Advisory Board, Canadian Journal of Chemical Engineering (2006-2007), A. Sharma.
- 18. Member of Editorial Board, Indian Chemical Engineer (Journal of the Indian Institute of Chemical Engineers; 2006-), A. Sharma.
- 19. INAE Young Engineer Award for the year 2006. Awarded by the Indian National Academy of Engineering for engineers below the age of 35, V. Shankar.
- 20. Department of Atomic Energy BRNS Young Scientist Award, 2006, J.K. Singh.
- 21. Received IRC-Pt. Jawaharlal Nehru Birth Centenary Award 2005 from the Indian Roads Congress in the 67<sup>th</sup> IRC Annual Session, held at Panchkula, November 20, 2006, Das.
- 22. Best Poster presentation award at Map World Forum 2007 to paper 3D visualization of LiDAR data, Coauthored with Ghosh, S., Lohani B.
- 23. Fellow, Institution of Surveyors India, Lohani B.
- 24. Fellow, Indian National Academy of Engineering, Elected in September 2006, C.V.R. Murty.
- 25. S. S. Merh Award from Geological Society of India for contributions in Quaternary Geology, 2006, Rajiv Sinha.
- 26. Anil Seth, PC member FSTTCS 2006.
- 27. The poster "Wake-on-WLAN" under the guidance of Kameswari Chebrolu and Bhaskaran Ramana won the best poster award mongst 24 entries from PhD and M. Tech students of IITs, IISc and other premier institutes at the Microsoft Techvista 2007, Nilesh Mishra.
- 28. IBM Faculty Award, 2006, Mainak Chaudhuri.
- 29. Godel Prize for 2006, Manindra Agrawal.
- 30. Fulkerson Prize for 2006, Manindra Agrawal.
- 31. J C Bose Fellowship, Mainindra Agrawal.
- 32. IBM Faculty Award, 2006, Prabhakar T.V.
- 33. Awarded the Fulkerson Prize for the year 2006, Neeraj Kayal and Nitin Saxena.

- 34. Awarded the Gödel Prize for the year 2006, Neeraj Kayal and Nitin Saxena.
- 35. Best Presentation Award in IRISS 2007, Barna Saha.
- 36. The Best Poster/Demo Award at WISARD 2007, Nilesh Mishra, Raj Kumar, Phani Kumar Valiveti and Hemanth Haridas.
- 37. Project "Autopilot Development for Mini UAV: Hardware Software Co-Design" under the guidance of Prof. Rajat Moona won the FIRST PRIZE in the AES All-India Student Project Contest 2006 conducted by the IEEE-India AES/Com/LEO Societies Chapter, Mohit Mangal (CSE), Mohit Mundhra (CSE), Gaurav Gupta (EE) and Shobhit Niranjan (EE).
- 38. Outstanding Ph.D Student award of IBM India Research Lab for the year 2006, Piyush Kurur.
- 39. Program Chair, APSEC 2006, Pankaj Jalote.
- 40. General Chair, RE07, Pankaj Jalote.
- 41. Member International Program Committee Machine Translation Summit 2007 Copenhagen, Denmark, R.M.K. Sinha.
- 42. Member national Technical Advisory Committee of Centre for Development of Advanced Computing (CDAC), R.M.K. Sinha.
- 43. Member Working Group on "Technology Development for Indian Languages (TDIL)", MCIT, Govt. of India, R.M.K. Sinha.
- 44. Member PRSG on OCR and OHR Consortia, MCIT, Govt. of India, R.M.K. Sinha.
- 45. Member PRSG on English to IL MT Consortia, MCIT, Govt. of India, R.M.K. Sinha.
- 46. Member IASTED International Technical committee, R.M.K. Sinha.
- 47. Finance chair, APSEC 2006, Sanjeev Kumar Aggarwal.
- 48. Finance Chair, RE07, Sanjeev Kumar Aggarwal.
- 49. Editorial Board of International Journal of Theoretical and Applied Computer Sciences, Sanjeev Kumar Aggarwal.
- 50. Program Committee member for the International Conference on Computing : Theory and Application (ICCTA' 07), March 5-7 2007, Kolkata, India, Shashank K. Mehta.
- 51. Elected Fellow, Institute of Electrical and Electronics Engineers (IEEE) for contributions to education in power electronic applications to transmission and distribution systems, A. Ghosh.
- 52. The Brij Mohan Lal Memorial Prize, Institute of Engineers, Kolkata, India, P.K. Kalra.
- 53. The Sir Arthur Cotton Memorial Prize, Institute of Engineers, P.K. Kalra.
- 54. Vice Chairperson, Technical Activities of IEEE India Council for the year 2006, S. C. Srivastava.
- 55. Invited to join as Member of the State Advisory Committee of the U.P. Electricity Regulatory Commission, S. C. Srivastava.

- 56. Member, Governing Council of Central Power Research Institute, Bangalore, S. C. Srivastava.
- 57. Member, Working Sub-group on 'Technology Advancement and R&D in Power' for XI plan, constituted by Ministry of Power, Government of India, S. C. Srivastava.
- 58. Vice Chairperson, Technical Activities of IEEE India Council for the year 2007, S. C. Srivastava.
- 59. Re-nominated as Member of the State Advisory Committee of the U.P. Electricity Regulatory Commission for 2007-09, S. C. Srivastava.
- 60. Elected Humboldt Fellow, S.N.Singh.
- 61. Elected Fellow of The Institution of Engineers (India)- (FIE), S.N.Singh.
- 62. Alexander von Humboldt Research Fellow (May 2004-July 2005), S. Umesh.
- 63. Member International Program Committee Machine Translation Summit 2007 Copenhagen, Denmark, R. M. K. Sinha.
- 64. Member national Technical Advisory Committee of Centre for Development of Advanced Computing (CDAC) , R. M. K. Sinha.
- 65. Member Working Group on "Technology Development for Indian Languages (TDIL)", MCIT, Govt. of India, R. M. K. Sinha.
- 66. Member PRSG on OCR and OHR Consortia, MCIT, Govt. of India, R. M. K. Sinha.
- 67. Member PRSG on English to IL MT Consortia, MCIT, Govt. of India, R. M. K. Sinha.
- 68. Member IASTED International Technical committee, , R. M. K. Sinha.
- 69. Senior member I.E.E.E, S. S. K. Iyer.
- 70. Tan-Chin-Tuan Fellowship from Nanyang Technological University, Singapore, Anjan K. Ghosh.
- 71. Biography included in the book titled, "2000 outstanding intellectuals of the 21 st century" edited by Sara Rains, International Biographical Centre, St. Thomas Place, Ely, Cambridgeshire, CB7 4GG ENGLAND, 2007, Fourth Edition, p. 526, Prof. RRK Sharma.
- 72. The AMERICAN MEDAL OF HONOR (received medal number 9 out of 100), American Biographical Institute Inc., 5126 Bur Oak Circle, PO Box 31226, North Carolina, 27622, USA. Web: <a href="www.abiworldwide.com">www.abiworldwide.com</a>, Prof. RRK Sharma.
- 73. Nominated as 2006 Man of The Year, American Biographical Institute Inc., 5126 Bur Oak Circle, PO Box 31226, North Carolina, 27622, USA. Web: <a href="https://www.abiworldwide.com">www.abiworldwide.com</a>, Prof. RRK Sharma.
- 74. Biographee, Marquis, Who's Who in Asia, 890 Mountain Ave, Suite 300, New Providence, NJ 07974, United States of America, Prof. RRK Sharma.
- 75. Biographee, Marquis, Who's Who in Science and Engineering, 890 Mountain Ave, Suite 300, New Providence, NJ 07974, United States of America.

- 76. International Advisory Council, International Conference on Operations and Quantitative Methods VII, Jaipur India, Aug 3-5, 2006, Prof. R.R.K. Sharma.
- 77. Honorary Appointment to Research Council of International Biographical Centre, St. Thomas Place, Ely, Cambridgeshire, CB7 4GG ENGLAND, Prof. R.R.K. Sharma.
- 78. Invited to Join the Editorial Board of AIMS International Journal of Management, http://www.aims-international.org/aijm/editorial.htm, Prof. R.R.K. Sharma.
- 79. Consulting editor E-Social Sciences; Dr. Varman, Rahul.
- 80. Associate Editor of International Journal of Technology, Knowledge and Society, The university press, common grounds, Victoria, Australia, Dr. Veena Bansal.
- 81. President Operational Research Society of India, Prof. Ashok K Mittal.
- 82. Vice President and Director Quality Circle Forum of India Hyderabad, Prof. Ashok K Mittal.
- 83. Fellow, Indian National Academy of Engineering, K. Shanker.
- 84. Dr. B. Basu has been appointed as Foreign Member on Editorial board, Journal of Korean Ceramic Society, South Korea.
- 85. Dr. B. Basu has been appointed as a Member of International Advisory Panel, College of Biomedical Engineering and Applied Sciences, Kathmandu, Nepal.
- 86. Dr. B. Basu has been appointed as a Member of Editorial board, Trends in Biomaterials and Artificial Organ, only Indian Journal in the area of Biomaterials, Society of Biomaterials and Artificial Organs, India.
- 87. Dr. Ashish Garg, Ramanna Fellowship, Department of Science and Technology, Government of India (2006)
- 88. Fellow, Indian Academy of Engineering, 2006, K. Muralidhar.
- 89. Fellow of the American Society of Mechanical Engineers (ASME) Dr.G.Biswas
- 90. Best Paper Award in a conference the details of which are given below:, A.K.Saha
- 91. (A.K.Saha, G.I. Mahmood, Sumanta Acharya, The Role of Leading-Edge Contouring on End-Wall Flow and Heat Transfer: Computations and Experiments, Proceedings of the ASME IGTI 2006, Barcelona, Spain, May 8-11, 2006).
- 92. Young Scientist Award, 2006, Systems Society of India, Bishakh Bhattacharya.
- 93. Ramanna Fellowship, Department of Science and Technology, Government of India, 2006, A. Chandra.
- 94. Lalit Kapoor Chair Professor, V. Chandrasekhar.
- 95. Member of Advisory Board and Session Chair for the "Lecture delivered by Lov Grover" at the Indo-US Shared Vision Workshop on Soft, Quantum and Nano Computing, Dayalbagh Educational Institute, Agra, February 22 (2007), D. Goswami.
- 96. J.C. Bose Fellow, Department of Science and Technology, New Delhi 2006, N. Sathyamurthy

- 97. Ramanna Fellowship by the Department of Science and Technology, New Delhi, Y D Vankar
- 98. Edited a special issue on 'Carbohydrate Chemistry', edited by Y. D. Vankar;
- 99. Proc. Indian National Science Academy, 2005, Y D Vankar

#### (F) CONTINUING EDUCATION ACTIVITIES

- 1. Acted as the resource person at SSGM College of Engineering, Shegaon, Maharastra for AICTE sponsored First Course on CFD, 30 31 March, 2007. (30 participants from other engineering college and industry), Tapan K. Sengupta.
- 2. Structure-Rheology and Processing of Polymer Nanocomposites, QIP course on, "Recent Trends in Nanocomposites," Indian Institute of Technology-Kanpur, November 2006, Y. M. Joshi.
- 3. Organized a SERC-DST school on Rheology of complex fluids at IIT-Kanpur in December 2006, Y. M. Joshi.
- 4. Organized a 3<sup>rd</sup> National Symposium on Rheology of complex fluids at IIT-Kanpur in December 2006, Y. M. Joshi.
- 5. Future of the past: Use of modern technologies in archaeology, IIIT Jabalpur sponsored, IIT Kanpur, 12 June to 7 July 2006 (Major resource person), Lohani, B.
- 6. Seismic Design of Bridges" (Self Sponsored) at IIT Kanpur during 15-19 January, 2007 (52 participants), C V R Murty with Professors Durgesh C Rai and Sudhir K. Jain.
- 7. Organised and/or conducted with Professors Durgesh C Rai and Sudhir K. Jain, continuing education programs for teachers of engineering colleges and polytechnics on "Seismic Design of Buried Pipelines" at IIT Kanpur in April 2006, (24 participants), on "Nonlinear Seismic Analysis of Structures" at IIT Kanpur in October 2006.
- 8. Organised and/or conducted with Professor Persi Engineer (Sarvajanik College of Engineering and Technology, Surat) and Ar. Amit Bose (Designers and Planners Combine, New Delhi), continuing education program for teachers of colleges of architecture, and professional architects and planners, on "Architecture for Earthquake Resistance of Buildings" at SCET, Surat in November-December 2006.
- 9. Five lectures delivered at the Winter School on Modeling of Planetary Atmospheres organised by Physical Research Laboratory, Ahemdabad, Tripathi, S.N.
- 10. Participation in High Level Industry Academia Interaction Programme during Summer: No, Tripathi, S.N.
- 11. Organized the Third International Workshop on Biometrics held on December 2006 at IIT Kanpur, Phalguni Gupta.

- 12. Organized a Workshop on High Performance Computing held in July 2006 at IIT Kanpur, Phalguni Gupta.
- 13. Convened the National Workshop on Power Electronics, NWPE 2006, at IIT Kanpur, from October 30-November 1, 2006. 90 participants, P. Sensarma.
- 14. Lecture module (8 hours) delivered at BHEL, Bhopal on "Power Electronic Converters", November 9-10, 2006. 20 participants, P. Sensarma.
- 15. Co-organized a short term course under QIP scheme of AICTE on 'Electric Power System Operation and Control: Modern Trends and Future Challenges' during 28th August 1st September 2006, at IIT Kanpur, Coordinators: S.N. Singh and S.C. Srivastava.
- 16. Mar 14-15, 2006. Organized "Workshop on Recent Advancesin Controls & Sensors" at IITK. Speakers included faculty of IIT Kanpur and scientists from ISRO. Audience included faculty & students from NITs, IITs, and engineering colleges, and engineers and researchers from industry, R. Potluri.
- 17. Coordinator of Quality Improvement Program Course on Electric Power System Operation and Control: Modern Trends and Future Challenges at IIT Kanpur, August 28- September 1, 2006, S.N.Singh.
- 18. Organizing Member of Winter School on Speech & Audio Processing (WISSAP'06 07), Bangalore. Self Sponsored (70 from Academia, 30 from Industry), S. Umesh.
- 19. Organization, Coordination, and main Instruction of Avionics Course For HAL candidates, K. S. Venkatesh.
- 20. Short course on "Introduction to VLSI Design" at HBTI, Kanpur from 19<sup>th</sup> to 21<sup>st</sup> Jan., 2006. Gave one hour inaugural talk on "VLSI Processing" on 19<sup>th</sup> Jan., 2006. Attendance was from academia (~40 participants), S. S. K. Iyer
- 21. Short course on "Energy Management" at MNNIT, Allahabad from 27<sup>th</sup> to 31<sup>st</sup> March, 2006. Gave three one-hour lectures on "Organic Solar Cells" on 28<sup>th</sup> March, 2006. Attendance was from academia and industry (~80 attendees), S. S. K. Iyer
- 22. Short course under Instruction Enhanced Programme under the Special Manpower Development Programme II of MCIT, on "Digital IC Design" from 3<sup>rd</sup> to 14<sup>th</sup> July, 2006 at IIT Kanpur. Attendance (~25) was from academia from participating institutes of MCIT. S. Qureshi, S. S. K. Iyer, B. Mazhari, A. Dutta, A. Joshi
- 23. QIP short course on "Organic Electronics" from 17th to 21st July, 2006 at IIT Kanpur. Helped in organization as well as presented four one-hour lectures. Attendance (27 nos.) was from academic institutions, S. S. K. Iyer, B. Mazhari
- 24. Tutorial on "Organic Electronics Technology, Devices, Circuits and Applications" at the 20<sup>th</sup> International Conference on VLSI Design at Bangalore on 6<sup>th</sup> January, 2007. Helped organize the six hour tutorial and also conducted it for three hours. Number of participants was 25 from both academia and industry.

- 25. QIP Short Course on Advances in Materials and Fuel Technologies for Automotive Applications, 8-12<sup>th</sup> June 2006, IIT Kanpur
- 26. Offered a certificate course on Supply Chain Management through SIIC, IIT Kanpur. Mehta, P.
- 27. Accounting for Managers, Ordinance Factory Kanpur, B.V.Phani.
- 28. Quantitative Analysis of in VIVO Magnetic Resonance Imaging Data for Diagnostics of Vascular Diseases supported by CFD Simulation, Indo-Swiss project supported by Department of Science and Technology, New Delhi, (2006-2008), K.Muralidhar.
- 29. Recent Trends in Nano Composites, November 6<sup>th</sup>-10<sup>th</sup> 2006 at IIT Kanpur. J. Ramkumar.
- 30. Short term course, Mathematical Methods in Science and Engineering, QIP-sponsored, 3-15 July 2006, B. Dasgupta.
- 31. Short term course, Mathematical Methods in Science and Engineering, Self-sponsored, 27 February 17 March 2007, B. Dasgupta.
- 32. Coordinator for the 2<sup>nd</sup> National Workshop on Smart Materials for the Design of Intelligent Systems and Industrial Application, 23-25 March 2007, Bishakh Bhattacharya.
- 33. Recent trends in Nano Composites, QIP, Kanpur, November 06-10, 2007, Number attended from academic: 35, Industry/others:10, Kamal K. Kar and J. Ramkumar.
- 34. Fundamentals of IC Engines, One week sponsored course offered to RDSO engineers (15 participants), March 2007, A.K.Agarwal.

# (G) PARTICIPATION IN HIGH LEVEL INDUSTRY ACADEMIA INDUSTRY INTERACTION PROGRAMME DURING SUMMER

- 1. Summer consultant to Chevron Refining, Richmond, CA, USA, D. Kunzru.
- 2. Conceptualized and organized the first meeting of Expert group on Coordinated programme on Research and Development in Airborne Altimetric LiDAR Technology at IIT Kanpur on 14 June 2006, Lohani, B.

## (H) ANY OTHER IMPORTANT ACTIVITY NOT SPECIFIED IN ABOVE COLUMNS

- 1. Sustained activity in spreading literacy and Primary Education through an NGO called Shiksha Sopan, K. Ghosh.
- 2. Member, Organising Committee for 1-st US-Asian Demonstration and Assessment of Micro-Aerial and Unmanned Ground Vehicle Technology, C. Venkatesan.
- 3. Assumed Charge as Coordinator, Structures Panel of Aeronautics R&D Board, DRDO, C. Venkatesan.
- 4. Consultant to Delhi-Metro Railways Corporation for the proposed link between New Delhi Rail station to Airport, Tapan K. Sengupta.
- 5. Visited BIT-Sindri as Member National Board of Accreditation (NBA) set-up by AICTE, P.K. Bhattacharya.
- 6. Attended meeting in Krishi Bhawan as Member, Advisory Board, National Sugar Institute, Kanpur (From September 2006), P.K. Bhattacharya.
- 7. Reviewed for Journals, Canadian Journal of Chemical Engineering, Chemical Engineering Journal, Industrial Engineering Chemistry & Research, Journal of Hazardous Materials, Journal of Membrane Science, Water Research, P.K. Bhattacharya.
- 8. Member- Selection Committees, IIT-Delhi (New Delhi), IIT-Kharagpur, P.K. Bhattacharya.
- 9. Project Evaluated, DST, P.K. Bhattacharya.
- 10. Thesis Examiner, IIT-Kharagpur, University of Kerala, Aligarh University, P.K. Bhattacharva.
- 11. Review of manuscripts of Catalysis Today, Applied Catalysts General A, International Journal of Chemical Reaction Engineering and Catalysis Communication, G. Deo.
- 12. Appointed Director General, Gujarat Energy Research and Management Institute, Gandhinagar to set up a new University in Petroleum Technology and Management, J. P. Gupta.
- 13. Member- Selection Committees, IIT-Gowahati (Nov. 2006), IIT-Roorkee (Feb. 2007), Ashok Khanna.
- 14. Reviewed research paper manuscripts for (a) Chemical Engineering Science (b) Journal of Chemical Thermodynamics & (c) Industrial Engineering Chemistry Research, Ashok Khanna.
- 15. Structural design of Modern Hangar with Annexe at Bareilly (U.P.), Chakrabarti, S.K.
- 16. Proof-checking of the design of POT/PTFE bearings for H.L. Bridge at Katonjha over river Bagmati in Muzaffarpur (Bihar), Chakrabarti, S.K.
- 17. Rectification of the defective construction of the Swimming Pool under construction at Saifai (Etawah) (U.P.) (Sponsored by : U.P. Rajkiya Nirman Nigam Ltd.; Sanctioned Amount : Rs. 1.4 lakh) , Chakrabarti, S.K.

- 18. Developed (along with Dr. A. Das, CE, IITK) Web-based NPTEL course on Transportation Engineering, Chakraborty, P.
- 19. Principal Investigator of the Wastewater Treatment and Management (WWTM) project of Asian Regional Research Programme in Environmental Technology II (ARRPET II). The project consists of five National Research Institutes (NRIs) from Thailand, Vietnam and India. More information is available at <a href="http://www.arrpet.ait.ac.th/wwtm/team.html">http://www.arrpet.ait.ac.th/wwtm/team.html</a>, S. Guha.
- 20. Center for Advanced Studies Visiting Fellow, Institute of Technology, Banaras Hindu University, Tripathi, S.N.
- 21. Member of Cloud Steering Committee, Department of Science and Technology CTCZ Experiment, Tripathi, S.N.
- 22. Member, Core Committee, Mars Orbiter, Appointed by Director, Physical Research Laboratory, Department of Space, Ahemdabad, Tripathi, S.N.
- 23. Member of Task Team and Steering Review Committee of the Space Borne Lidar Project, Vikram Sarabhai Space Centre, Thiruvananthapuram, Tripathi, S.N.
- 24. Participated in the 2<sup>nd</sup> National Frontiers of Science (NatFOS) Symposium held during 3-4 December, 2006 at INSA, New Delhi, Tripathi, S.N.
- 25. NPTEL Video Course on Power System Operation and Control, S.N. Singh.
- 26. Organized the 13<sup>th</sup> National Conference on Communications at IIT Kanpur during 26<sup>th</sup> to 28<sup>th</sup> January, 2007, A.K. Chaturvedi.
- 27. Electronic Fabrication (ELFAB) module at 4-i Laboratory, S. Sensarma.
- 28. The High Voltage laboratory was enhanced with modern detection equipment: Partial discharge detector, high resolution high speed Basler camera, Picoammeter, photon counter, etc. N. Gupta.
- 29. Developed a DSP Laboratory based on Texas Instruments TMS320C6711/C6713 processors, A.Banerjee.
- 30. Expansion and Upgradation of VLSI / EDA Laboratory for Teaching, Research and Conducting of Courses for Participants from Colleges and Industry, WL-211, S. Qureshi
- 31. Setting up of Oganic Characterization Lab' in WL-125, B. Mazhari & S. S. K. Iyer.
- 32. Participated in Class 1000 Room Functioning, SAMTEL Centre for Display Technology, S.S.K.Iyer.
- 33. Member, Organizing Committee, National Workshop on Intellectual Property Rights, 31st March to 1st April 2007, IIT Kanpur, B.V.Phani.
- 34. Created a Web-based Course on Fluid Mechanics for the sophomore students (open to all, under the auspices of NPTEL, an consortium of the Ministry of Human Resource and Development) [URL

- :[http://www.nptel.iitm.ac.in/courses/Webcourse-contents/IIT-KANPUR/30Oct/FLUID-MECHANICS/ui/Course\_home-1.htm]], G.Biswas.
- 35. Expert Member, Technical Committee for Evaluation of Vehicle Emission Factors Development, Central Pollution Control Board, New Delhi, B.P.Pundir
- 36. Expert Member, Standing Committee on Emission Standards for Off- Highway RIC Engines, Central Control Pollution Control Board, New Delhi, B.P.Pundir
- 37. Consultant on EU 'Quantify' Project being conducted by European Union-Central Institute of Road Transport, Pune on Emission Inventory from Transport Vehicles in India, B.P. Pundir
- 38. Guest Editor in Vasundhara Devi, G. Jayaraman, S. Leela, and A. Sengupta (Editors). Nonlinear Analysis A Comprehensive Survey of Theory and Applications in honour of Professor V Lakshmikantham's 85<sup>th</sup> birth anniversary in 2008. To be published by Elsevier, A.Sengupta.
- 39. Plenary 1-hr Lecture in World Congress of Nonlinear Analysts (WCNA)-2008, July 2008, A.Sengupta.
- 40. Involved with Organizational activities of Indo-Japan seminar on Advanced Manufacturing, N.V.Reddy.
- 41. Sponsored projects on Tele-ophthalmology, Ministry of Health and Family Welfare, Rs.10 lakhs, duration one year, Harish Karnick.
- 42. Project on Open Philosophies of Associative Autopoietic digitaL ecosystemS (OPAALS) sponsored by European Commission, Prabhakar T.V.
- 43. Project on Voice Processing sponsored by General Motors, Prabhakar T.V.
- 44. Rajat Moona established a "Storage Lab" with collaboration and funding from TCS Lucknow. The lab facilities include a HP NAS Server with 500GB storage and a EMC SAN Server with 1.5TB storage. In addition to this the lab uses various new technologies related to the storage such as iSCSI initiator and iSCSI target. Several research works are also being carried out in the lab including research on the state-of-art in storage such as object oriented storage servers, security and availability of data etc.
- 45. The department has become the nodal centre in supporting the courses related to multi-core programming and architecture in the country. The project is funded by Intel Corporation. We have developed course ware on "Program Optimization for Multi-core Architecture". The course ware is being distributed to other engineering colleges. We are participating in workshops being organized by Intel to propagate this technology, and for conducting teacher's training programmes. Intel has established a laboratory having multi-core desktops and servers to support this activity. The laboratory also has all the Intel multi-core related software.
- 46. Reviewed Ph.D. theses each for Banaras Hindu University and Indian Institute of Science, R. Gurunath.

- 47. Reviewed manuscripts for journals Peptide Research and Current Science, R. Gurunath.
- 48. Executive member and co-editor of the Indian peptide society newsletter, R. Gurunath.
- 49. A special Issue on 'Coordination Polymers', Edited by J. N. Moorthy and J. J. Vittal; J. Mol. Struct. (An Elsevier Journal) 2006, Vol. No. 796.
- 50. Organizer, International Conference on Quantum Computing: Back Action 2006 held during March 06-12, 2006. Funded through Indo-US, Max-Planck (Garshing) and MIT (USA), D Goswami.
- 51. Organized (with Prof. T. Chakraborty, IACS, Kolkata) the fourth International discussion meeting on Spectroscopy and Dynamics of Molecules and Clusters, held from February 23-25, 2007 at the Corbett National Park, India, K. Srihari.