

Annual Report 2005-06

Director's Report

It is indeed a privilege for me to present the Director's Report for the year 2005-06 including the major events and performance of the institute.

It is with enormous sense of pride that I share with you the news that Professor CNR Rao, Chairman, Board of Governors of IIT Kanpur, has been bestowed with 'Chevalier de la Legion d' honneur' (Knight of the Legion of Honour), the highest civilian award of France. Professor Rao has also been conferred the distinction of being chosen the Chemistry Pioneer of 2005 by the American Institute of Chemists.

ACADEMIC ACTIVITIES

The academic year 2005-2006 has had a successful run. The number of graduating students both at the undergraduate (B Tech-329, B Tech-M Tech Dual Degree (5 year)-21, M Sc (5 year Integrated)-35, M Sc (2 year)-75, Total = 460) as well as postgraduate (MBA-48, M Des-17, M Tech-369, Ph D-42, Total = 476) level shows a fairly satisfactory trend. The enrolment in the Doctoral programme as well as the publication record of the faculty members and students for the academic year 2005-2006 have shown considerable increase.. Faculty members and students published more than 1000 research papers in journals and conference proceedings.

An initiative in the area of Environmental Sciences and Engineering is being undertaken utilizing the MPLADS funds given by Shri Arun Shourie. The construction of the building has already started on a plot of 17,500 square meters. The building will house laboratories, seminar and discussion rooms for various disciplines of the environmental sciences. The architecture incorporates most of the features of a Green Building in compliance with TERI Griha Certification. The proposed Centre will be involved in developing futuristic technologies in the area of environment that will confer immediate benefits to the society. Certain urgent environment concerns will be addressed including the abatement of pollution from industries and process plants, conservation of groundwater and surface water, abatement of air pollution, ozone depletion, health risk assessment due to modern technologies, etc.

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 as an addendum to the report.

I am happy to share with you the good news that three of our B.Tech first year students (who will soon move to second year) Ms. Shraddha Katiyar, Mr. Utkarsh Upadhyay and Mr. Peeyush Srivastava have been conferred the prestigious Aditya Birla Award. Two of our B.Tech second year students (who will soon move to third year), Mr. Mohit Bansal and Mr. Sameer Behere, have received **Inlaks award**. Mr. Gopesh Mittal, B. Tech. student in the second year of Electrical Engineering (who will soon move to third year), has received the **Goldman Sachs Global Leaders Award**. He has been selected to attend the Global Leadership Institute in July 2006 at New York, USA. Two PhD students of the Department of Computer Science and Engineering, Mr. Neeraj Kayal and Mr. Nitin Saxena, have been awarded the **Goedel Prize** for the year 2006 jointly with their thesis supervisor Dr. Manindra Agrawal, for their paper "PRIMES is in P, Annals of Mathematics 160, 1-13 (2004)". Geraud Se'nizergues, Klaus-Joern Lange, and Peter Shor nominated the paper for the prize. The award is given jointly by EATCS and ACM. Our hearty congratulations to the students for bringing in laurels to the institute.

IIT Kanpur is proud of Professor Kalyanmoy Deb (Mechanical Engineering) who was conferred the prestigious **Shanti Swarup Bhatnagar Award** for 2005. Prof. N Sathyamurty (Chemistry), Prof. T K Chandrashekar (Chemistry), and Prof. Ashutosh Sharma (Chemical Engineering) received **Sir J. C. Bose fellowships** of DST. Prof. Arindam Ghosh has been awarded the **Fellowship of The Institute of Electrical and Electronics Engineers (IEEE)**, USA. Prof. N. Sathyamurty (Chemistry) has been awarded the **Fellowship of the Third World Academy of Sciences (FTWAS)**. Professor Kalyanmoy Deb (Mechanical Engineering) and Prof. S. K. Gupta (Chemical Engineering) have been selected for the **Fellowship of the Indian Academy of Sciences (2005)**. Prof. Sanjay Mittal (Aerospace Engineering) has been selected for the **Fellowship of Indian National Academy of Engineering (INAE)**. The **Swarnajayanti Fellowship**, given by the Government of India, recognizes outstanding young researchers who explore new frontiers in science and technology. Dr. P. K. Panigrahi of Mechanical Engineering and Dr. Sandeep Verma of Chemistry department have been recipients of this **Fellowship** in 2005. Prof. Harish Karnick and Late Prof. J. L.

Batra have been honored with the **Distinguished Teacher Award** of IIT Kanpur for 2005.

RESEARCH & DEVELOPMENT

The institute has witnessed significant growth in its Research and Development activities in diverse fields of Science and Technology during the year 2005-06. The faculty members and research engineers/ scientists of the institute are engaged in executing, at any time, about 500 sponsored projects and about 350 consultancy projects. Last year, the institute received a total research grant of approximately 550 million rupees for sponsored projects and 41 million rupees for consultancy projects, respectively.

The institute faculty has filed about 14 patents in India and overseas last year. The institute has also signed several Memorandums of Understanding with international academic/ research institutions and industries, within India and abroad, to strengthen its collaborative research efforts. Some of these organizations are: Vikram Sarabhai Space Centre (VSSC), ISRO, Altera International Limited, Hong- Kong, Cornell University (Cornell), The California Institute of Technology (Caltech), Honda R&D Co. Ltd. Recently the Institute has collaborated with Intel Technology India Pvt. Ltd., (Intel), National Yunlin University of Science & Technology, Taiwan, Neurogen Corporation, USA etc.

Over the past few years, the institute has embarked proactively on taking up collaborative product oriented R&D projects involving joint participation of industries, R&D laboratories and government organizations. Setting up of the Samtel Centre for Display Technologies (SCDT) has been one of the most successful efforts in this direction. The SCDT has proposed to develop a prototype of a commercially viable full colour Organic Light Emitting Diode (OLED) display jointly with Samtel Industries. The Prototype Development Unit (PDU), as tripartite collaboration between IIT Kanpur, Samtel and DST, with a mandate to make a prototype of an OLED display came into being in June 2005. The mandate represents a complete display solution in a product form for a cutting edge technology. It is a tripartite collaboration between academia (IIT), industry (Samtel) and the government (Dept. of Science and Technology) and aims towards development of a product that has immediate commercial relevance; interestingly, the targeted user who has been intimately co-opted in the development cycle provides the required personnel right at the start. The project has a band of engineers deployed by Samtel Colour Ltd in SCDT, IIT Kanpur, who are jointly responsible for the execution of this project, along with IIT Kanpur faculty members over a period of three years at an approximate cost of Rs. 16

Crore. In the last one year, a Class 1000 clean room has been established in IIT Kanpur and perhaps it is among the very few in the academic institutions of the country. All major equipment has been installed, in accordance with the plan to produce the first prototype display before the end of the year. Moreover, the center has carried forward its research agenda in developing other applications of organic semiconductors such as Organic Solar Cells, Organic Thin Film Transistors and has even achieved significant scientific milestones in their development.

A project funded by the Ministry of Communication and Information Technology (MCIT) aims to develop large area MgO coatings for 42-inch size TV sets based on plasma display panels (PDP). The MgO coating is a key component that determines the voltage and lifetime as well as the cost of the PDP displays. This is a closely guarded technology, which is of significant economic advantage to the country. The project aims to develop the technology indigenously using reactive magnetron sputtering.

IIT Kanpur is one of the eight Institutes chosen by the Department of Science and Technology (DST) for creating a state-of-the-art Nano Science and Technology Unit. The unit has taken up a project, which has a committed funding of about Rs. 12 Crore. It has installed several characterization facilities such as Focused Ion Beam, e-beam Patterning, Maskless Lithography, Micro-Raman, SPMs, NSOM, Laser Ablation, Surface Profilers, Spin Coating, Nano-positioners, etc. The research work carried out by a core team of about 20 faculty members from across the departments will achieve its target using resources on magnetic materials, nano-structuring of soft materials and surfaces for optoelectronics and bulk-nano applications including optical coatings, super hydrophobic coatings, smart adhesives, nano-fluidics, super-batteries and capacitors, carbon MEMS and sensors.

The Institute is also setting up a Centre for Nanotechnology somewhat similar to the SCDT and looks forward to building on and extending its achievements in organic electronics. The Centre is ambitious towards making electronics printable through the use of a variety of nanotechnologies. A sum of Rs 12.15 Crore has been sanctioned by the Department of Science and Technology (DST) for this effort including development of a unique multiple source Focused Ion Beam. It will lead to demonstration of printable radio-frequency identification tags as a prototype demonstrator of this rapidly emerging class of applications.

The Technology Mission on Rail Safety (TMRS) started in the year 2005 and all the projects have successfully completed a year after the incubation of about 6 months. In various projects like Track Side Bogie, Derailment Detection Devices, On-Board

Diagnostics, Sensors for Hot Boxes & Hot Wheels, the laboratory tests were conducted successfully on the prototype. The prototypes are kept on the field for testing and validation. The projects have reached a stage, where various industrial partners are getting involved to jointly develop commercial scale models to be commissioned on the trains for the field trials.

Environmental Friendly Coach Toilet Discharge System was made with the help of the industry partner and was kept under testing within the institute. Material compositions for the rail and track are finalized in the projects like Wheels & Axles of Improved Metallurgy, Corrosion Prevention of Rails, and Improved Rail Fastenings. In all these projects, laboratory scale model were fabricated using the new compositions and also they were tested successfully. A major achievement has been in the Satellite Imaging for Rail Navigation (SIMRAN) project under this mission. More than 9500 stations have been covered under this project with over 5300 GPS locations on the track. Ten different hardware devices have been developed and are being tested rigorously on various routes of the Indian Railways.

IIT Kanpur has also received a grant from Swiss National Science Foundation (SNSF) under the Swiss program on Research Partnership with Developing Countries. SNSF had invited Joint Research Projects from the Developing Countries (besides India) on all areas of Science and Engineering. IITK-ETH proposal won the research contract after a three-tier scrutiny process involving a large number of proposals. This project in partnership with ETH Zurich aims at developing Low Cost and Flexible Solar Cells for the Developing Countries.

The institute has received grants for 'Design and Development of an Autonomous Mini Helicopter' from the Department of Science and Technology. This project is multi-disciplinary and has two major components. The first part involves structural design and the development of a mini helicopter, test bed for performance measurements, control law design and validation. The second part includes design and development of Avionic packages such as sensing and actuation, communication, navigation, automatic flight control and ground control, for autonomous flight of a mini helicopter, flight testing of autonomous helicopter and expanding the utility by making the vehicle perform the intelligent tasks. The autonomous helicopter will be developed for a few kilograms of weight (6 to 8 kg.). However, it will have the full functionality of a real life helicopter. It is envisaged that the technology developed will be useful for several civilian applications including the mapping of terrain, forestry, seed and pesticide spraying, law enforcement etc.

Under a National Mission on Power Electronics Technology (NAMPET) of MCIT, IIT Kanpur has been chosen as one of the major participating institutes for creating a Centre of Excellence on Power Electronics Technologies. CDAC Trivandrum is identified as the nodal agency. The ministry is funding the setting up of a NAMPET research lab in the Electrical Engineering Department of the Institute to undertake projects of national importance in the area of Power Electronics and its applications. The vision is to realize production of reliable and deployable technologies in the area of Power Electronics, not only through theoretical analysis, but also through demonstrable hardware prototypes.

Indo-US Science & Technology Forum has provided funding to sponsor a Joint Center for "Advanced and Futuristic Manufacturing" in the next two years. The center will be established under a collaborative venture between IIT Kanpur, IIT Kharagpur (India) and the University of Illinois at Urbana Champagne, Illinois, University of California, Irvine, North Western University, Evanston (USA). The Indo-US S&T Forum has evinced interest in establishing the Centre at IIT Kanpur with a view to fostering collaboration through exchange visits and also execution of joint projects in the following areas of Micro fabrication, Micro devices/MEMS, and Bio-micro fluidics and Self Assembly.

Some of the other major sponsored projects undertaken by the institute include: Non-neuronal cell mediated neuroprotection in neuro-degenerative disease Amyotrophic lateral Sclerosis (ALS) sponsored by DBT; Ruralnet (Digital Genetic II) by MLA; Confirmation Dynamics of Biomolecules in Suoer Sonic Jet Expansion Infrared-Ultraviolet Double Resonance Spectroscopy by DAE; Experimental Investigation of the Characteristics of Exhaust Flow Field and Noise Field from a Detonation Tube by ISRO; High Speed Coarse WDM Waveguide Photodiodes by Quantum well Intermixing by DST; Drop-wise condensation on an inclined surface exposed to a vapour flux funded by DAE; Corrosion Resistant Coatings for Rare Earth-Iron Alloys and Compound funded by DRDO; Data Compression Techniques & Its Applications to E-Learning/Education sponsored by DIT; National Facility for Core Archival & Analysis by DST; Inertial MEMS Unit (IMO) for Automotive Application; Infrastructure Development for Indo-French Cyber University by MHRD; and, New Methodologies for Image and Video Compression by MCIT.

A few major consultancy projects received last year include Synthesis of Fragment funded by NRGN; Reactor and Slurry Bubble Column Hydrodynamics funded by CHEVRON, Prediction of Aerodynamics Parameter Aerodynamic load and Stability Characteristic of FAE Bombs by HEMRL; Evaluation and Importance of TUNDISH performance at Hospit funded by MUKAND; Hierarchical Access Methods by

INFOSYS: Push over Analysis of Retrofitting Option for MSO Building at Delhi funded by PWD; Stack and Ambient Quality Sampling in Singrauli Area by CPCB, Distributed/ Parallel optimization Capability Development funded by GE; Consultancy on Design of Base -Isolated Hospital by MES; and, Hydraulic Model Study for Bridge to be built over River Ganga funded by NHAI.

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 centre for Micro Beam facilities. Focused Ion Beam equipment, Nova Nano Lab600 manufactured by FEI Netherlands, has been installed in the Nuclear Physics Lab of the Physics Department. This facility has been partly funded (Rs. 4.5 crore) by DST under a NSTI Project, and has a support of about Rs. 2 Crore from the institute. This state of the art system combines high resolution (<10nm) patterning and imaging capability. An ion column produces Ga ions of energy, which can be varied from 5 KV to 30 KV and can be focused down to 5 nm with beam current density exceeding several amperes per square centimeter. This makes it a powerful tool for rapidly fabricating a micro size prototyping device or for producing novel nanostructures to explore new science at nano level. This equipment promises to be an indispensable tool for rapid development of emerging technologies, which utilize micro and nano-structures. It is ideally suited for cross-disciplinary research and development areas such as "Futuristic Manufacturing" and "study of nano materials and devices".

Under the IRHPA (Intensification of Research in High Priority Areas) scheme, the Department of Science and Technology is providing a grant of Rs.15.60 Crore for the purchase of a Tandem accelerator with a dome voltage of 1.7 MV and with a capability of producing high current (up to 70 microAmp) ion beams of several elemental species, besides a nuclear microprobe facility and other accessories. The focus of the project is to effectively address the frontline issues in micro beam analysis, materials synthesis and modification, micro-machining, proton and heavy ion beam writing, MEMS and NEMS fabrication, Materials Science and Biosciences applications.

The Department of Chemistry has received a grant of Rs. 2.75 Crore for setting up a "500 MHz Nuclear Magnetic Resonance (NMR) Spectrometer" facility in the department. Under the CARE scheme, the Institute supported Rs. 149.23 lakhs for setting up a Scanning Mobility Particle Sizer (SMPS) for Gas-Borne Nanoparticulate Systems in the Civil Engineering Department. Reciprocating Wear and Friction Tester Facility in ACMS, Augmentation of ESI-Q-ToF with Atmospheric Pressure Chemical

Ionization (APCI) and Photoionization (APPI) Interfaces facility in the Chemistry Department, Servo-Hydraulic Actuators for Load Application at Structural Engineering Laboratory in the Civil Engineering Department, Hot-Isostatic Pressing Facility for Processing Advanced Materials in the Mechanical Engineering Department. Polarized Confocal Imaging of the Cervical Epithelial Tissue for Neoplasia (early cancer) Detection in the Physics Department.

FINANCIAL RESOURCE MOBILIZATION

The Institute had a satisfactory financial year during 2005-06. The total non-plan grant(s) from MHRD was Rs 68 crore and that from the total plan funds was Rs 34.5 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 fund raising at IITK. The total number of donors this year was about 550 as compared to about 200 last year and the total amount of donation received was Rs 2.6 crore as compared to Rs 1.9 crore last year. Even though the total amount received through batch donations dropped this year to Rs 0.95 crore (from Rs 1.8 crore last year) the other donations (scholarships, chairs, etc) increased from Rs 0.72 crore to Rs 1.69 crore. The recently launched Annual Gift Programme has been well received. About 120 donors have donated a total of Rs.12.74 lakhs with a median donation of Rs.4, 500/- and an average donation of Rs.10, 500.

During this year, a new programme was initiated to extend partial travel support to students from the donations and the endowments. 49 students were awarded partial travel support for participation in conferences overseas. 43 students were able to avail this support.

Several new chairs have been created for outstanding faculty members of the institute by our alumni. The donors include Mr. Lalit M. Kapoor (B.Tech/CHE/1971), Mr. Deepak Devraj (B.Tech/EE/1970) and Mr. Ravindra Nath Akhoury (B.Tech/EE/1968). Several new scholarships and awards have also been instituted for students.

The Sachchidanand Memorial Fund to support needy students at IITK received a good response from the donors. The corpus of the fund now stands at Rs 12 lakhs. The Pioneer Batch (1965 graduates) has contributed about \$10,000 towards this fund.

This year we started the Summer Undergraduate Research Programme (SURGE) to encourage undergraduate student research. An MOU with California Institute of Technology (Caltech) has enabled student exchange with Caltech. 10 IITK students and 11 NIT students are working at IITK this summer under the programme. 3 Caltech students will join later this summer. 3 IITK students are currently doing summer research at Caltech.

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 and I invite each and every alumni and well wishers of IITK to come and join hands with us in this endeavour.

STUDENT ACTIVITIES

IIT Kanpur has always striven to encourage an equitable balance between academics and extra curricular engagements among its students. The intention 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. This feeling is nurtured by the institute in the support it provides to various social, cultural and sporting activities pursued by the Student 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 motivated plays. Other technically oriented student groups are engaged throughout the year in pursuing special interests like robotics, electronic aids, animation, aeromodelling and astronomy to name but a few.

Large scale events like **Antaragni** (Cultural Festival), **Udghosh** (Sports Festival), **Techkriti** (Science and Technology Festival), **Megabucks** (Business Club), **Umang** (Film Festival) are also organized by the students where there is an emphasis on outside participation to facilitate a dynamic and broadly networked spectrum of social and professional discourses. The Gymkhana Festivals have seen vastly improved participation levels, both from within the institute and also from students from other Indian and International Institutes. The participation from the industry and the student community for the conduct of these well-organized festivals witnessed an impressive growth this year. Certain new initiatives taken this year include **Index**, an Industrial Exhibition organized as part of Techkriti. It is designed to provide a

platform for student-industry interface. Initiatives were taken by the Umang organizing team to contact various film personalities and embassies for the procurement of films and the screening of these on the campus. The efforts bore fruit when Ms. Shonali Bose, Dr. B. Pain, Mr. Sudhir Mishra, Mr. Atul Tiwari, and Ms. Kavita Joshi participated in Umang 2006. Ms. Kavita Joshi also conducted a five-day long filmmaking workshop on the campus.

In the arena of sports, IIT Kanpur came up with a creditable performance in the inter IIT sports meet held at IIT Roorkee. IIT Kanpur team performed better than what it did the previous year. IIT Kanpur secured the sixth position in the overall (men) with 8 points and the second position in the overall (women) with 22 points. To strengthen the sports culture, an inter-hall games event called **Josh** was also organized which witnessed mass participation from the students. In order to encourage sports activities among the students, the institute has given twenty sports scholarships of Rs. 500/- each for outstanding performance and leadership abilities in sports.

Other activities like nature trails, trekking, and the students are taking up mountaineering actively. The NCC unit of IIT Kanpur, in addition to maintaining a commendable track record in the group, also organized a para-sailing camp in the Institute this year. Student interests in hobbies like Photography and Music are also being actively encouraged and the Institute is doing all it can in providing the enthusiasts of these and other clubs with the requisite funding and equipment.

The general interest student magazine **Meander** is initiating discussion and debate in the student community. These journalistic endeavors by the students have been successful in cultivating a broader awareness in the student community about important issues. It facilitates an active personal engagement in the system of redressal and also acts as a sounding board for student opinion.

The placement scenario this year has registered a positive upswing with almost 90% of the B. Tech. and 80% of the M. Tech. students registered with the student placement office receiving offers. Invitations have been sent out to nearly 700 public and private organizations and the response from various National and International business majors has been encouraging. Many companies of repute also registered for the on-campus recruitment program for the first time. With an improved facilitation and response system in place, it is hoped that the institute will see even better participation from the industry next year for placement as well as for industrial training programs for the students.

Hostel infrastructure has seen a marked improvement with the renovation of facilities in the respective halls. The construction of Hall-9 is under way. We are happy to note that the sanctioned increase in strength is not going to pose a constraint as the infrastructure plans of the institute have been steadily keeping pace with the proposed increase.

KEY ISSUES

Ever since its inception, IIT Kanpur has taken the lead in technical education and training. It has established itself as one of the top technological institutions in the world especially for undergraduate teaching. In 2009 the institute will be celebrating its golden jubilee year. It is time for us to introspect and assess our strengths and weaknesses and initiate innovative measures to sustain our glorious legacy even while continually reaching for new heights in the globally competitive requirements of technical education.

The institute is currently finalizing its vision document laying down specific objectives and goals to be achieved in the coming future. The institute is trying to strengthen its postgraduate education and also to attain a leadership position in research and development. It is proposed to set up review committees for both undergraduate and postgraduate programmes to suggest changes in the curricula in line with the new technological and societal needs.

Research in an institute of technology can be carried out only with the cooperation of industry. These are times when the road from “knowledge to wealth” can be traversed jointly by academia, industry and government. Our experience of **Samtel Centre and Railway Technology Mission** has shown that a new paradigm of research and development can be fostered in this country. As India becomes a major power in the world, this approach to technology development will become a key ingredient in our process of economic growth. IIT Kanpur wishes to strengthen the environment of technology development through such tripartite research activities.

The Institute has strengthened its relations with international institutions and organizations to foster collaborative research activities, exchange of faculty and students. It has already signed MOU with several leading universities from the USA, Canada, Europe, Taiwan, Japan and other parts of the world. This will provide opportunities for working jointly on cutting edge technologies and also for complementing mutually the strength of the institutions involved in their academic and research standards.

Organisation

The 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 control of the Ministry of Human Resource Development, Government of India. 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 the Finance Committee in financial matters, and the Building and Works Committee in matters related to construction and repair of buildings and major works. Its various Standing Committees assist the Senate. The composition of these constituent bodies is as follows:

THE IITS COUNCIL

Chairman

Shri Arjun Singh
Minister of Human Resource Development
New Delhi - 110001

Chairmen of the Seven Institutes (Ex-officio)

Shri Sanjeev Goenka
Chairman, Board of Governors, IIT Kharagpur
RPG Group of Companies
Coal Ltd. 463, Dr AB Road
Mumbai - 400025

Shri Rahul Bajaj
Chairman, Board of Governors, IIT Bombay
Mumbai

Dr. K Kasturirangan
Chairman, Board of Governors, IIT Madras
Member, ISRO, Bangalore

Prof. C N R Rao
Chairman, BOG, IIT Kanpur
Linus Pauling Research Professor & Honorary President

Jawaharlal Nehru Centre for Advanced Scientific Research
P O Jakkur
Bangalore - 560064

Prof. M G K Menon
Chairman, Board of Governors, IIT Delhi
Hauz Khas
New Delhi - 110016

Shri Achyut Kumar Saikia
Chairman, Board of Governors, IIT Guwahati
Guwahati

Shri S K Joshi
Chairman, Board of Governors, IIT Roorkee
Roorkee

Directors of Institute (Ex-Officio)

Prof. S K Dube

Prof. Ashok Misra

Prof. M S Ananth

Prof. S G Dhande

Prof. D P Kothari

Prof. Gautam Barua

Prof. Prem Vrat

Kharagpur

Bombay

Madras

Kanpur

Delhi

Guwahati

Roorkee

Other Members (Ex-Officio)

Prof. Arun S Nigavekar

Chairperson (Officiating)

University Grants Commission

Bahadurshah Zafar Marg

New Delhi - 110006

Dr R A Mashelkar

Director General

Council of Scientific & Industrial Research

Anusandhan Bhawan, Rafi Marg

New Delhi

Dr Raja Ramanna
Chairman, Council of IISc Bangalore
National Institute of Advance Studies
Indian Institute of Science
Bangalore - 560012

Prof. Goverdhan Mehta (upto 30.6.2005)
Director
Indian Institute of Science
Bangalore - 560012

Prof. P. Balaram (from 01.07.2005)
Director
Indian Institute of Science
Bangalore -560012

Nominees of the Central Government

Shri V. S. Pandey (upto 28.10.2004)
Joint Secretary
Ministry of Human Resource Development
Government of India
Department of Secondary Education and Higher Education
Shastri Bhawan
New Delhi - 110001

Shri Ravi Mathur (upto 29.10.2004)
Joint Secretary
Ministry of Human Resource Development
Government of India
Department of Secondary Education and Higher Education
Shastri Bhawan
New Delhi - 110001

Shri S K Ray
Financial Advisor
Government of India
Ministry of Human Resource Development
Department of Education
Shastri Bhawan
New Delhi - 110001

Shri S K Tripathi
Secretary
Department of Secondary Education & Higher Education
Government of India
Ministry of Human Resource Development
Shastri Bhawan
New Delhi - 110001

Shri D C Gupta
Secretary
Department of Expenditure
Ministry of Finance
Government of India
Yojana Bhawan
New Delhi

Shri K K Jaswal
Secretary
Department of Information Technology
Government of India

Nominee of All-India Council for Technical Education

Prof. R Natarajan (upto 15.05.2005)
Chairman
AICTE

Prof. Damodar Acharya (from 16.05.2005)
Chairman
AICTE

Nominees of the Visitor

Shri N R Narayan Murty
Chairman
Infosys Technologies Ltd.
Bangalore

Dr R Chidambaram
Principal Scientific Adviser to the GOI
New Delhi

Prof. P V Indiresan
Former Director
IIT Madras

Shri L M Thapar
Chairman
Ballarpur Industries

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

Shri Prithviraj D Chavan
Member of Parliament (Lok Sabha)
C-12, Humayun Road
New Delhi - 110003

Shri M A Kharabela Swain
Member of Parliament (Lok Sabha)
166, North Avenue
New Delhi - 110001

Shri B J Panda
Member of Parliament (Rajya Sabha)
295, Gulmohar
New Delhi

Secretary

Shri Ravi Mathur
Jt. Secretary (Technical)
Ministry of Human Resource Development
Government of India
Department of Secondary Education and Higher Education
Shastri Bhawan
New Delhi - 110001

THE BOARD OF GOVERNORS

Chairman

Prof. C N R Rao
Linus Pauling Research Professor & Honorary President
CSIR Centre of Excellence in Chemistry
Chemistry & Physics of Materials Unit
Jawaharlal Nehru Centre for Advanced Scientific Research
P.O. Jakkur
Bangalore - 560 064

Members

Four Nominees of the Council of IITs

Prof. G K Mehta
Nuclear Science Centre
Aruna Asaf Ali Marg
New Delhi - 110 067

Prof. S Lele
Rector
Institute of Technology
Banaras Hindu University
Varanasi - 221 005

Shri Anil D Ambani
Chairman & Managing Director
Reliance Centre, 3rd Floor
Walchand Hirachand Marg
Ballard Estate
Mumbai - 400 038

Shri Ravi Mathur
Joint Secretary (Technical)
Government of India
Ministry of Human Resource Development
Department of Secondary Education & Higher Education
Shastri Bhawan
New Delhi -110 042

Shri M C Gupta
Vice Chancellor
Rajiv Gandhi University of Technology
Airport Bypass Road
Gandhi Nagar
Bhopal - 462 036

Prof. S S Katiyar
Vice Chancellor
Chhatrapati Shahuji Maharaj University
Kanpur - 208 024

Shri Aman Kumar Singh, IAS
Joint Secretary (Information Technology) & CEO, CHIPS
Government of Chhatisgarh
Department of Commerce & Industry
(Information & Technology)
Das Bhawan
Mantralaya, Raipur
Chhatisgarh

(from 17.04.2005)

Director (Ex-Officio)

Prof. Sanjay G Dhande

Two Nominees of the Senate

Prof.V Bansal
Department of Materials & Metallurgical Engineering
IIT Kanpur

(upto 31.12.2005)

Prof. Binayak Rath
Department of Humanities & Social Sciences
IIT Kanpur

(upto 31.12.2005)

Prof. I D Dhariyal
Department of Mathematics
IIT Kanpur

(from 01.01.2006)

Prof. Jitendra Kumar
Materials Science Programme
IIT Kanpur

(from 01.01.2006)

Secretary

Dr. Vikram Singh
Registrar &
Secretary, Board of Governors
IIT Kanpur

(upto 02.06.2005)

Capt. B Jha
Actg. Registrar &
Secretary, Board of Governors
IIT Kanpur

(from 03.06.2005 to 29.07.2005)

Prof. Kripa Shanker
Dy. Director
Actg. Registrar &
Secretary, Board of Governors
IIT Kanpur

(from 29.07.2005 to 11.11. 2005)

Shri S S Kashalkar
Registrar &
Secretary, Board of Governors
IIT Kanpur

(from 11.11.2005)

THE FINANCE COMMITTEE

Chairman

Prof. C N R Rao
Chairman
Linus Pauling Research Professor at
CSIR Centre of Excellence in Chemistry &
Honorary President
Jawaharlal Nehru Centre for Advanced Scientific Research
P.O. - Jakkur
Bangalore - 560 064

Members

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

Prof. G K Mehta
DAE-BRNS Sr. Scientist
Nuclear Science Centre
Aruna Asaf Ali Marg
New Delhi - 110 067

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

Prof. Binayak Rath
Department of Humanities & Social Sciences
IIT Kanpur

(upto 31.12.2005)

Prof. I D Dhariyal
Department of Mathematics
IIT Kanpur

(from 01.01.2006)

Director (Ex-Officio)

Dr. Sanjay G Dhande

Secretary

Dr. Vikram Singh
Registrar &
Secretary, Finance Committee
IIT Kanpur

(upto 02.06.2005)

Capt. B Jha
Actg. Registrar &
Secretary, Finance Committee
IIT Kanpur

(from 03.06.2005 to 29.07.2005)

Prof. Kripa Shanker
Dy. Director
Actg. Registrar &
Secretary, Finance Committee
IIT Kanpur

(from 29.07.2005 to 11.11. 2005)

Shri S S Kashalkar
Registrar &
Secretary, Finance Committee
IIT Kanpur

(from 11.11.2005)

THE BUILDING & WORKS COMMITTEE

Chairman

Prof. Sanjay G Dhande
Director
IIT Kanpur

Members

Prof. Kripa Shanker
Dy. Director
Indian Institute of Technology Kanpur
Kanpur - 208 016

(from 26.7. 2005)

Shri S P Singh
Chief Engineer (Northern Zone)
Central Works Department
Uttaranchal - 2, Sector H
CGO Complex, 3rd Floor
Lucknow (upto 25..7. 2005)

Shri O P Bhatia
Chief Engineer (Northern Zone) CPWD
3rd Floor Kendriya Bhawan
Sector H, Aliganj
Lucknow -226 024 (from 26.7. 2005)

Shri D N Agarwal
Retd. Chief Engineer (Electrical) CPWD
M-21, Greater Kailash-II
New Delhi - 110048 (from 26.7. 2005)

Shri M D Seth
Retd. Engineer-in-Chief, UPRNN
Consultant
9/29, Rana Pratap Marg
Lucknow -226 001 (from26.7. 2005)

Shri Subir Saha
Director
School of Planning & Architecture
4-Block B, Indraprastha Estate
New Delhi - 110 002 (from 26..7. 2005)

Ms. Irina Garg
Director (T)
Government of India
Ministry of Human Resource Development
Department of Secondary & Higher Education
Shastri Bhawan
New Delhi -110 001 (from26.7. 2005)

Prof.V Bansal
Dept. of Materials & Metallurgical Engg.
IIT Kanpur (upto 31.12.2005)

Prof.Jitendra Kumar
Materials Science Programme
IIT Kanur (from 01.01.2006)

Secretary

Dr. Vikram Singh
Registrar &
Secretary, Building & Works Committee
IIT Kanpur (up to 03.06.2005)

Capt. B Jha
Actg. Registrar &
Secretary, Building & Works Committee
IIT Kanpur (from 03.06.2005 to 29.07.2005)

Prof. Kripa Shanker
Dy. Director
Actg. Registrar &
Secretary, Building & Works Committee
IIT Kanpur (from 29.07.2005 to 11.11. 2005)

Shri S S Kashalkar
Registrar &
Secretary, Building & Works Committee
IIT Kanpur (from 11.11.2005)

SENATE
[From 01.04.2005 to 31.03.2006]

Director & Chairman Senate:

Prof. Sanjay Govind Dhande

Deputy Director:

Prof. Kripa Shankar

Members of the Senate :

AEROSPACE ENGINEERING (AE):

Prof. NGR Iyengar [upto 30.06.2005]
Prof. Krishna Kumar
Prof. Vijai Gupta
Prof. Kunal Ghosh
Prof. RK Sullery
Prof. Dayanand Yadav
Prof. E Rathakrishnan
Prof. C. Venkatesan
Prof. T.K. Sengupta
Prof. Sanjay Mittal
Prof. Sudhir Kamle
Prof. Kamal 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. DP Rao [upto 30.06.2005]
Prof. PK Bhattacharya
Prof. RP Chhabra
Prof. Ashok Khanna
Prof. Ashutosh Sharma

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. (Ms) H Ila
Prof. N.S. Gajbhiye
Prof. P. Gupta Bhaya
Prof. Amalendu Chandra
Prof. Veejendra K Yadav
Prof. Vinod K Singh
Prof. S. Manogaran
Prof. Tapas Chakraborty [from 15.12.2005]
Prof. Faiz Ahmed Khan [from 15.12.2005]
Prof. S S Manoharan [from 15.12.2005]

CIVIL ENGINEERING (CE):

Prof. Ashwini Kumar
Prof. B.R. Marwah [upto 30.06.2005]
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. Onkar Dikshit [from 15.12.2005]
Prof. Partha Chakraborty [from 15.12.2005]
Prof. Rajiv Sinha [from 15.12.2005]

COMPUTER SCIENCE & ENGINEERING (CSE):

Prof. RMK Sinha
Prof. Somnath Biswas
Prof. HC Karnick
Prof. Pankaj Jalote
Prof. TV Prabhakar
Prof. Sanjeev Kumar Aggarwal
Prof. Sanjeev Saxena
Prof. Rajat Moona
Prof. Manindra Agrawal
Prof. Amitabha Mukherjee
Prof. Dheeraj Sanghi
Prof. Phalguni Gupta
Prof. R.K. Ghosh
Prof. Ajai K Jain
Prof. Shashank K Mehta [from 15.12.2005]
Prof. Sumit Ganguly [from 15.12.2005]

ELECTRICAL ENGINEERING (EE):

Dr. V Sinha [upto 30.06.2005]
Prof. S Kar
Prof. Avinash Joshi
Prof. Ravindra Arora
Prof. GC Ray
Prof. Arindam Ghosh
Prof. M Sachidananda
Prof. SC Srivastava
Prof. Anjan Kumar Ghosh
Prof. Prem Kumar Kalra
Prof. Shafi Qureshi
Prof. Sumana Gupta
Prof. Utpal Das
Prof. Govind Sharma
Prof. Alope K Dutta
Prof. Joseph John
Prof. Pradip Sircar
Prof. Animesh Biswas
Prof. A K Chaturvedi [from 15.12.2005]

Prof. Baquer Mazhari [from 15.12.2005]
Dr. S Sunder Kumar Iyer [from 01.12.2005]

HUMANITIES & SOCIAL SCIENCES (HSS):

Prof. TVS Ramamohan Rao
Prof. (Ms) Lilavati Krishnan
Prof. Binayak Rath
Prof. AK Sharma
Prof. KK Saxena
Prof. AK Sinha
Prof. Amit Ray
Prof. BH Boruah
Prof. Binay Kumar Pattnaik
Prof. G. Neelakantan
Prof. Achla Misri Raina [from 15.12.2005]
Prof. Surajit Sinha [from 15.12.2005]
Dr. Munmun Jha [upto 30.11.2005]
Dr. Sanjay Kumar Singh [from 01.12.2005]

INDUSTRIAL & MANAGEMENT ENGINEERING (IME):

Prof. AK Mittal
Prof. Tapan P Bagchi
Prof. Arun P Sinha
Prof. R.R.K. Sharma
Prof. Jayanta Chatterjee
Prof. NK Sharma
Dr. Rahul Varman [upto 30.09.2005]

MATERIALS & METALLURGICAL ENGINEERING (MME):

Prof. SP Mehrotra
Prof. RK Ray [upto 30.06.2005]
Prof. RC Sharma
Prof. Shant P Gupta
Prof. RK Dube

Prof. Brahma Deo
Prof. SC Koria
Prof. Sanjeev Bhargava
Prof. Dipak Mazumdar
Prof. Virendra Bansal
Prof. Sandeep Sangal
Prof. Rajiv Shekhar
Prof. Barada K Mishra
Prof. R. Balalsubramaniam
Prof. Deepak Gupta [from 15.12.2005]
Prof. Monica Katiyar [from 15.12.2005]

MATHEMATICS (MTH):

Prof. UB Tewari
Prof. MR Sridharan
Prof. PC Joshi [upto 30.06.2005]
Prof. (Ms) Prabha Sharma [upto 30.06.2005]
Prof. RKS Rathore
Prof. (Ms) Manjul Gupta
Prof. MK Kadalbajoo
Prof. Prawal Sinha
Prof. GP Kapoor
Prof. Peeyush Chandra
Prof. V Raghavendra
Prof. ID Dhariyal
Prof. (Ms) Shobha Madan
Prof. Debashis Kundu
Prof. Pravir Kumar Dutt
Prof. Neeraj Misra [from 15.12.2005]

MECHANICAL ENGINEERING (ME):

Prof. Amitabha Ghosh
Prof. SN Bandyopadhyay [upto 30.06.2005]
Prof. AK Mallik
Prof. Ashok Sengupta
Prof. Prashant Kumar
Prof. BN Banerjee

Prof. MS Kalra
Prof. SG Dhande
Prof. VK Jain
Prof. NN Kishore
Prof. Himanshu Hatwal
Prof. PM Dixit
Prof. Keshav Kant Saxena [upto 30.06.2005]
Prof. K Muralidhar
Prof. Gautam Biswas
Prof. Prabhat Munshi
Prof. BP Pundir
Prof. S.K. Chaudhury
Prof. N.S. Vyas
Prof. V. Eswaran
Prof. Kalyanmoy Deb
Prof. P.S. Ghoshdastidar
Dr. P.K. Panigraphi [from 01.10.2005]
Dr. Avinash Kumar Agarwal [from 01.12.2005]

MATERIALS SCIENCE PROGRAMME (MSP):

Prof. DC Agarwal
Prof. Jitendra Kumar
Prof. KN Rai [upto 30.06.2005]

PHYSICS (PHY):

Prof. SC Agarwal
Prof. K. Banerjee
Prof. AK Majumdar
Prof. SD Joglekar
Prof. Keshawa Shahi
Prof. Vijai A Singh
Prof. Rajendra Prasad
Prof. Debashish Chowdhury
Prof. RC Budhani
Prof. Y.N. Mohapatra
Prof. Avinash Singh
Prof. Deshdeep Sahdev
Prof. V.N. Kulkarni

Prof. Manoj K Harbola
Prof. Satyendra Kumar
Prof. V Ravishankar
Prof. Pankaj Jain
Prof. H C Verma
Dr. S. Raychaudhuri [from 01.10.2005]

LASER TECHNOLOGY PROGRAMME (LTP):

Prof. RK Thareja

LIBRARIAN : Shri Rajeshwar Mishra [from 01.03.2005]
Secretary, Senate : Dr. Vikram Singh [from 05.02.2005 to 03.06.2005]
Capt. Bijoy Jha [from 03.06.2005 to 29.07.2005]
Prof. Kripa Shanker [from 29.07.2005 to 11.11.2005]
Shri Sanjeev S Kashalkar [from 11.11.2005]

**THREE NOMINEES OF THE CHAIRMAN, BOARD OF GOVERNORS
(Upto 31.10.2005):**

1. Prof. S K Katiyar
Principal
G S V M Medical College
Swaroop Nagar
Kanpur-208001
2. Prof. S K Awasthi
Director
Bundelkhand Institute of Engineering & Technology (B.I.E.T.),
Jhansi-284128
3. Prof. Parvez Deen
Principal
Christ Church College,
The Mall
Kanpur-208001

**THREE NOMINEES OF THE CHAIRMAN, BOARD OF GOVERNORS
(Upto 31.10.2006):**

1. Prof. S K Katiyar
Principal
G S V M Medical College
Swaroop Nagar
Kanpur-208001

4. Prof. S K Awasthi
Director
Bundelkhand Institute of Engineering & Technology (B.I.E.T.),
Jhansi-284128

5. Prof. Parvez Deen
Principal
Christ Church College,
The Mall
Kanpur-208001

**SENATE STANDING COMMITTEES:
[upto 30.09.2005]**

(1) SENATE EDUCATIONAL POLICY COMMITTEE:

(a) MEMBERS (EX-OFFICIO) :

- | | | |
|---------------------|---|-----------------------|
| 1. Chairman, Senate | : | Chairman (Ex-Officio) |
| 2. Chairman, SPGC | : | |
| 3. Chairman, SUGC | : | |

(b) SENATE NOMINEES:

- | | |
|---------------------------|------------|
| 1. Dr. I D Dhariyal, MTH | |
| 2. Dr. P Gupta Bhaya, CHM | |
| 3. Dr. S Mittal, AE | : Convenor |

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Brajesh Pandey, Y120963

2. Mr. Saksham Agrawal, Y1310

(2) SENATE ELECTIONS COMMITTEE:

SENATE NOMINEES:

1. Dr. V Eswaran, ME : Outgoing Chairperson
2. Dr. R Varman, IME : Chairman
3. Dr. A Biswas, EE

(3) SENATE LIBRARY COMMITTEE:

(a) LIBRARY:

Librarian : Dr. Bhooshan Lal [upto 28.02.2005]
: Shri Rajeshwar Mishra [from 01.03.2005]

(b) SENATE NOMINEES:

1. Dr. D Chowdhury, PHY
2. Dr. J John, EE
3. Dr. P M Dixit, ME
4. Dr. P Shunmugraj, MTH

(c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. D P Mishra AE
2. Dr. K Subramaniam BSBE
3. Dr. D P Rao CHE
4. Dr. Faiz Ahmed Khan CHM : Chairman
5. Dr. Rajiv Sinha CE
6. Dr. T V Prabhakar CSE
7. Dr. Nandini Gupta EE
8. Dr. K K Saxena HSS
9. Dr. Jayanta Chatterjee IME
10. Dr. S Sivaprakasam LTP
11. Dr. A. Sengupta ME
12. Dr. R K Dube MME
13. Dr. D C Agrawal MSP

14. Dr. Neeraj Mishra	MATH
15. Dr. A. Sengupta	NET
16. Dr. R Prasad	PHY
17. Dr. Bisakh Bhattacharya	M Des

(d) STUDENTS' SENATE NOMINEES:

1. Mr. K V Narasimha Rao, (Y1172)
2. Mr. Rohit Garg, (Y2327)

(4) SENATE POST-GRADUATE COMMITTEE:

(a) MEMBER (EX-OFFICIO):

Dr. R K Sullerey, AE : Outgoing Chairman

(b) SENATE NOMINEE:

1. Dr. Pradip Sircar, EE : Chairman

(c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. D Yadav	AE
2. Dr. Balaji Prakash	BSBE
3. Dr. Sanjeev Garg	CHE
4. Dr. R Gurunath	CHM
5. Dr. Durgesh C Rai	CE
6. Dr. Sachchida Nand Tripathi	EEMP
7. Dr. Rajat Moona	CSE
8. Dr. L Behera	EE
9. Dr. G Neelakantan	HSS
10. Dr. Sanjeev Swami	IME
11. Dr. Harshwardhan Wanare	LTP
12. Dr. Subrata Sarkar	ME
13. Dr. Bikramjit Basu	MME
14. Dr. K N Rai	MSP
15. Dr. D Kundu	MATH
16. Dr. M S Kalra	NET
17. Dr. P Jain	PHY
18. Dr. Prashant Kumar	M DES

(d) STUDENTS' SENATE NOMINEES:

1. Mr. Ambarish Kunwar, (Y110961)
2. Mr. Brajesh Pandey, (Y120963)
3. Mr. Sathyaraj V, (Y210063)
4. Mr. Ramesh Kumar Sonkar, (Y3104118)

(5) SENATE RULES COMMITTEE:

(a) MEMBER (EX-OFFICIO):

Parliamentarian of the Senate : Dr. Ajai Jain CSE
[from 01.10.2004 to 30.09.2005]

(b) SENATE NOMINEES:

1. Dr. Y N Mohapatra, PHY: Chairman
2. Dr. S Gupta, EE
3. Dr. R Shekhar, MME

(6) SENATE SCHOLARSHIPS & PRIZES COMMITTEE:

(a) MEMBERS (EX-OFFICIO):

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

(b) SENATE NOMINEES:

1. Dr. Purnendu Boase, CE : Outgoing Chairman
2. Dr. Manoj Kumar Harbola, PHY: Chairman
3. Dr. B H Boruah, HSS
3. Dr. P S Ghoshdastidar, ME

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Brajesh Pandey, (Y120963)
2. Mr. Sandeep Gupta, (Y1316)

3. Mr. Chetan Swarup, (Y1111)

(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:

1. Dr. P Gupta, CSE
2. Dr. S Qureshi, EE
3. Dr. A Raina, HSS

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Udai Singh Pawar, (Y0362)
2. Mr. Ambarish Kunwar, (Y110961)
3. Mr. Joe Verghese Yeldho, (Y220062)
4. Mr. K V Narasimha Rao, (Y1172)

(8) SENATE UNDERGRADUATE COMMITTEE:

(a) MEMBER (EX-OFFICIO):

Dr. C S Upadhyay, AE: Outgoing Chairman

(b) SENATE NOMINEE:

1. Dr. Alope Dutta, EE

(c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

- | | |
|------------------------|------|
| 1. Dr. E Rathakrishnan | AE |
| 2. Dr. Sandeep Kumar | BSBE |

3. Dr. Nitin Kaistha	CHE
4. Dr. J K Bera	CHM
5. Dr. Bharat Lohani	CE
6. Dr. Purnendu Bose	EEMP
7. Dr. Deepak Gupta	CSE
8. Dr. A R Harish	EE
9. Mr. Satyaki Roy	HSS
10. Dr. A P Sinha	IME
11. Dr. Asima Pradhan	LTP
12. Dr. S K Choudhury	ME
13. Dr. Anish Upadhyaya	MME
14. Dr. Jitendra Kumar	MSP
15. Dr. M Gupta	MATH
16. Dr. A Sengupta	NET
17. Dr. S Raychaudhuri	PHY: Chairman
18. Mr. Satyaki Roy	DES

(d) STUDENTS' SENATE NOMINEES:

1. Mr. Vineet Singh, (Y2425)
2. Mr. T V Avinaash Chandra, (Y1372)
3. Mr. Akash Gupta, (Y2035)
4. Mr. Rajiv Ranjan, (Y1278)

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
3. Chairman, SUGC

(b) SENATE NOMINEES:

1. Dr. P M Dixit ME

2. Dr. V Ravi Shankar PHY: Convenor
3. Dr. Vinay Gupta CE

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Anand Verma (Y3045)
2. Mr. Brajesh Pandey (Y120963)

(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 : Shri Rajeshwar Mishra

(b) SENATE NOMINEES:

1. Dr. P S Ghoshdastidar ME
2. Dr. Vinod K Singh CHM
3. Dr. A Khanna CHE
4. Dr. C A Tomy HSS

(c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. D.P.Mishra AE
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: Chairman
10. Dr. S Sivaprakasam	LTP
11. Dr. P K Panigrahi	ME
12. Dr. R K Dube	MME
13. Dr. K Shahi	MSP
14. Dr. Neeraj Mishra	MTHS & STAT.
15. Dr. A Sengupta	NET
16. Dr. V Ravishankar	PHY
17. Dr. Bishakh Bhattacharya	M DES

(d) STUDENTS' SENATE NOMINEES :

Ms Mansi Tewari, (Y2210)
Mr. Narasimha K V, (Y1172)

(4) SENATE POST-GRADUATE COMMITTEE:

(a) MEMBER (EX-OFFICIO):

Dr. Pradip Sircar EE: outgoing Chairman

(b) SENATE NOMINEE:

1. Dr. D Yadav AE

(c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. A Kushari	AE
2. Dr. Balaji Prakash	BSBE
3. Dr. Sanjeev Garg	CHE
4. Dr. R Gurunath	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: Chairman
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	NET
17. Dr. V Subrahmanyam	PHY
18. Dr. Prashant Kumar	M DES

(d) STUDENTS' SENATE NOMINEES:

1. Mr. Prashant Chaturvedi	(Y4103029)
2. Mr. Parameshwar reddy	(Y4103028)
3. Mr. Sathyaraj V	(Y210063)
4. Mr. Tony Jacob	(Y3104123)

(5) SENATE RULES COMMITTEE:

(a) MEMBER (EX-OFFICIO):

Parliamentarian of the Senate:

Dr. Ajai Jain	CSE	[upto 30.09.2005]
Dr. Sarvesh Chandra,	CE	[from 01.10.2005 to 28.02.2006]
Dr. N Sathyamurthy,	CHM	[from 01.03.2006]

(b) SENATE NOMINEES:

1. Dr. Jitednra Kumar	MSP	: Chairman
2. Dr. Anjan K Ghosh	EE	
3. Dr. K K Saxena	HSS	

(6) SENATE SCHOLARSHIPS & PRIZES COMMITTEE:

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 : Chairman
3. Dr. P Munshi ME
4. Dr. Mukesh Sharma CE

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Niraj Kumar, (Y2242)
2. Mr. Uttam Kumar Tripathi (Y2405)
3. Ms Swati Saxena (Y2183)

(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:

1. Dr. Bharat Lohani CE
2. Dr. N N Kishore ME
3. Dr. Shobha Madan MTHS & STAT

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Neeraj Kumar (Y2232)
2. Mr. Narasimha K V (Y1172)
3. Mr. Yashodhan Shevade (Y4125050)
4. Mr. Tony Jacob (Y3104123)

(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. Dn bK Shahi	MSP	
15. Dr. D Bahuguna	MATHS & STAT.	
16. Dr. P Munshi	NET	
17. Dr. S Raychaudhuri	PHY	Chairman
18. Mr. Satyaki Roy	M DES	

(d) STUDENTS' SENATE NOMINEES:

1. Mr. Saksham Aggarwal	(Y1310)
2. Mr. Vineet Singh	(Y2425)
3. Mr. Prateek Bhansali	(Y3228)
4. Mr. Shubham Gupta	(Y4424)

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, 2006 was 305. Out of these 20 are shared by two departments on a half time (HT) basis. There were also 43 Research Engineers/Scientific Officers and Design Engineers, who are treated at par with faculty, on March 31, 2006. 13-faculty members retired/resigned/ expired during the period. The Institute also had a number of Visiting Faculty members: 9 Visiting Faculty and 1 Adjunct Faculty joined and 5 left during the year. The Visiting/Adjunct Faculty contributes significantly and they also get an opportunity to know the Institute.

During the year, the Institute was able to attract a number of distinguished personalities from the academic and research fields to serve as Distinguished Honorary Professors in the Institute. In addition a number of Emeritus Professor and Emeritus Fellows continue to serve the Institute. The Institute acknowledges their contributions to the growth of the Institute.

Two Research Associates were appointed during the year. The Research Associates stay for a period of six months to two years.

DISTNIGUISHED HONARARY PROFESSORS

Professor T. V. Ramakrishnan	(Physics)
Professor G. K.Mehta	(Physics)
Professor Shiv G. Kapoor	(Mechanical Engineering)
Professor Komal Ehmann	(Mechanical Engineering)
Professor Marc Madau	(Chemical Engineering)
Professor Nasser Munjee	(Industrial & Management Engineering)
Professor Ranga Kamunduri	(Mechanical Engineering)
Professor D. D. Bhawalkar	(Laser Technology Programme)
Professor D. Roth	(Design Programme)
Professor Ranjit Makkuni	(Design Programme)

EMERITUS PROFESSORS

Professor N G R Iyengar	(AE)	(up to 30.06.2005)
-------------------------	------	--------------------

Professor Amitabha Ghosh (ME)
Professor A K Majumdar (Phy.) (up to 31.01.2006)

EMERITUS FELLOWS

Professor S. Kar (Electrical Engineering)
Professor T V S Ramamohan Rao (Humanities & Social Sciences)
Professor D C Agrawal (Material Science Programme)

AEROSPACE ENGINEERING DEPARTMENT

SANCTIONED STRENGTH: 20
EXISTING STRENGTH : 18+1HT

PROFESSOR (Rs.18400-500-22400)

1. 3161 Krishna Kumar
2. 3162 Vijay Gupta
3. 3159 K Ghosh
4. 1798 R K Sullerey
5. 4041 Dayanand Yadav
6. 4458 E Rathakrishnan
7. 4694 C Venkatesan
8. 4581 T K Sengupta
9. 4285 Sudhir Kamle
10. 4664 Kamal Poddar
11. 4696 Sanjay Mittal

ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. 1830 V K Gupta
2. 4660 Ashish Tewari
3. 4709 A K Ghosh
4. 4785 C S Upadhyay

ASSISTANT PROFESSOR (Rs.12000-420-18300)

1. 4733 D P Mishra

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

VISITING FACULTY

73012 Dr. T.G. Pai

BIOLOGICAL SCIENCE & BIO-ENGINEERING

SANCTIONED STRENGTH: --

EXISTING STRENGTH : 07+1HT

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. *4876 R Gurunath
2. 5103 Dharendra S Katti

VISITING FACULTY

1. 73057 Sanjive Sur (Fulbright Scholar) (From 01.07.2005)

CHEMICAL ENGINEERING DEPARTMENT

SANCTIONED STRENGTH: 32

EXISTING STRENGTH : 17

PROFESSOR (Rs.18400-500-22400)

1. 3113 S K Gupta
2. 2432 Anil Kumar
3. 3314 Deepak Kunzru
4. 3604 Dr. D P Rao (up to 30.6.2005)
5. 3064 J P Gupta
6. 3754 P K Bhattacharya
7. 4244 R P Chhabra
8. 4045 Ashok Khanna
9. 4562 Ashutosh Sharma

ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. 4750 Goutam Deo
2. 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 (from 05.12.2005)

VISITING PROFESSOR

1. 73039 G N Mathur

CHEMISTRY DEPARTMENT

SANCTIONED STRENGTH: 30

EXISTING STRENGTH : 27+1HT

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 P K Bharadwaj
9. 4724 (Ms) H Ila
10. 4047 N S Gajbhiye
11. 3112 P Gupta Bhaya
12. 4460 S Manogaran
13. 4583 Veejendra K Yadav
14. 4596 Vinod K Singh
15. 4676 Amalendu Chandra
16. 4699 Tapas Chakraborty
17. 4746 Faiz Ahmed Khan
18. 4759 S S Manoharan

ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. 4760 K Srihari
2. 4789 Sandeep Verma
3. 4816 J N Moorthy
4. 5071 Debabrata Goswami

ASSISTANT PROFESSOR (Rs.12000-420-18300)

1. *4876 R Gurunath
2. 5024 Manas Kumar Ghorai
3. 5038 Jitendra K Bera

4. 5056 M L N Rao
5. 5127 Sankar Prasad Rath

LECTURER (Rs.10000-325-15200)

1. 5091 Anantharaman Ganapathi

CIVIL ENGINEERING DEPARTMENT

SANCTIONED STRENGTH: 33
EXISTING STRENGTH : 27

PROFESSOR (Rs.18400-500-22400)

1. 3462 Ashwini Kumar
2. 4068 P K Basudhar
3. 4209 Sudhir K Jain
4. 4399 Sarvesh Chandra
5. 4546 Bithin Datta
6. 4295 Vinod Tare
7. 4303 Ramesh P Singh
8. 4586 V K Gupta
9. 4464 S K Chakrabarti
10. 4799 Mukesh Sharma
11. 4657 C V R Murty
12. 4662 Onkar Dikshit
13. 4663 Partha Chakroborty
14. 4695 Rajiv Sinha

ASSOCIATE 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. 5037 Nihar Ranjan Patra
5. 5057 Sachidanand Tripathi
6. 5079 Pranab Kumar Mohapatra
7. 5152 Amit Prashant (From 10.05.2005)

VISITING FACULTY

1. 73025 Sukhvarsh Jerath (up to 20.07.2005)

COMPUTER SCIENCE & ENGINEERING

SANCTIONED STRENGTH: 18
EXISTING STRENGTH : 20 + 2HT

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. 5081 Pabitra Mitra
3. 5112 Mainak Chaudhuri

VISITING FACULTY

1. 73046 Rajiv Kumar (from 06.06.2005)
2. ----- Sharad Seth (Prabhu Goel Chair) (from 01.01.2006)
3. 73073 Peeyush P Kurur (from 08.02.2006)

ADJUNCT FACULTY

1. 72969 Pravin Bhagwat (up to 30.04.2005)

ELECTRICAL ENGINEERING

SANCTIONED STRENGTH: 53
EXISTING STRENGTH : 30 + 2 HT

PROFESSOR (Rs.18400-500-22400)

1. *3541 R M K Sinha
2. 3927 Avinash Joshi
4. 4046 K.R. Srivathsan (up to 31.12.2005)
5. 3199 Ravindra Arora
6. 4292 G C Ray
7. 4293 Arindam Ghosh
8. 4326 M Sachidananda
9. 4495 S C Srivastava
10. 4667 Anjan Kumar Ghosh
11. 4486 Prem Kumar Kalra

12. 4691 Shafi Qureshi
13. 3873 (Ms) Sumana Gupta
14. 4372 Govind Sharma
15. *4687 Utpal Das
16. 4566 A K Dutta
17. 3999 Joseph John
18. 4652 Animesh Biswas
19. 4478 Pradip Sircar
20. 4670 Baquer Mazhari
21. 4827 A K Chaturvedi

ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. 4489 R K 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 K S 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 Kameswari Chebrolu
9. 5162 Ramprasad Potluri

(from 25.07.2005)

HUMANITIES & SOCIAL SCIENCES

SANCTIONED STRENGTH: 31
EXISTING STRENGTH : 21 +2HT

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. 3837 Amit Ray
7. 4375 B H Boruah
8. 4791 B K Pattnaik
9. 4729 G Neelakanthan
10. 4488 Surajit Sinha
11. 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 (from 23.01.2006)

LECTURER (Rs.10000-325-15200)

1. *4976 Satyaki Roy
2. *5183 (Ms) Koumudi Prakash Patil (from 13.02.2006)

VISITING FACULTY

1. 73069 Srinivasa Rao (from 30.12.2005)
2. 73074 Kumar Ravi Priya (from 30.03.2006)
3. 73010 V R Manoj (up to 04.12.2005)

INDUSTRIAL & MANAGEMENT ENGINEERING

SANCTIONED STRENGTH: 18

EXISTING STRENGTH : 17

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. 5031 Parthasarathy Ramachandran
5. 5073 Raghu Nandan Sengupta
6. 5142 Peeyush Mehta
7. 5147 B V Phani
8. 5182 Runa Sarkar (from 12.07.2005)

ADJUNCT FACULTY

1. AF-5 K M Abraham (up to 24.10.2005)

MATERIALS & METALLURGICAL ENGINEERING

SANCTIONED STRENGTH: 32

EXISTING STRENGTH : 18

PROFESSOR (Rs.18400-500-22400)

1. 1932 S P Mehrotra
2. 3845 R C Sharma
3. 3846 Shant P. Gupta
4. 3763 R K Dube
5. 4182 Brahma Deo
6. 4245 S C Koria
7. 4524 S Bhargava
8. 4382 Dipak Mazumdar
9. 3195 Virendra Bansal
10. 4565 Rajiv Shekhar
11. 4597 Sandeep Sangal
12. 4571 R Balasubramaniam
13. 4665 Barada K Mishra
14. 4790 Deepak Gupta
15. 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
4. 5116 Rajesh Prasad (up to 21.07.2005)

MATHEMATICS & STATISTICS DEPARTMENT

SANCTIONED STRENGTH: 36
EXISTING STRENGTH : 29

PROFESSOR (Rs.18400-500-22400)

1. 2078 U B Tewari
2. 3419 M R Sridharan
3. 3407 R K S Rathore
4. 3772 (Ms) Manjul Gupta

5. 3739 M K Kadalbajoo
6. 3773 Prawal Sinha
7. 3776 G P Kapoor
8. 4058 Peeyush Chandra
9. 4074 V Raghavendra
10. 3824 I D Dhariyal
11. 4290 (Ms) Shobha Madan
12. 4584 Debasis Kundu
13. 4449 Pravir Kumar Dutt
14. 4726 Neeraj Misra

ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. 1642 Ashwini Kumar
2. 4707 B V Rathish Kumar
3. 4782 D Bahuguna
4. 4656 P Shunmugaraj
5. 4734 Arbind Kumar Lal
6. 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 (from 11.05.2005)
10. 5121 (Ms) Nandini Nilakantan

LECTURER (Rs.10000-325-15200)

1. 5128 Shital Rajeshbhai Patel

VISITING FACULTY

1. 73037 Sangita Kulathinal
2. 73045 Sharmistha Mitra (from 11.05.2005)

MECHANICAL ENGINEERING

SANCTIONED STRENGTH: 42
EXISTING STRENGTH : 30 + 4 HT

PROFESSOR (Rs.18400-500-22400)

1. 2265 A K Mallik
2. *3665 Ashok Sengupta
3. *3858 S G Dhande
4. 3764 Prashant Kumar
5. 3759 B N Banerjee
6. 3862 M S Kalra
7. 4093 V K Jain
8. 4224 N N Kishore
9. 4286 Himanshu Hatwal
10. 4210 P M Dixit
11. 4398 K Muralishar
12. 4560 Gautam Biswas
13. 4061 Prabhat Munshi
14. 4810 B P Pundir
15. 4452 S K Choudhury
16. 4459 N S Vyas
17. 4482 Vinayak Eswaran
18. 4650 Kalyanmoy Deb
19. 4288 P S Ghoshdastidar

ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. 4788 Subrata Sarkar
2. 4801 P K Panigrahi
3. 4779 Bhaskar Dasgupta
4. 4823 N 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

VISITING FACULTY

1. 73029 M P Sharma

PHYSICS

SANCTIONED STRENGTH: 38
EXISTING STRENGTH : 33 + 1 HT

PROFESSOR (Rs.18400-500-22400)

1. 3498 S C Agarwal
2. 3980 R K Thareja
3. 4019 S D Joglekar
4. 4064 Keshawa Shahi
5. 4184 Vijay A Singh (up to 15.12.2005)
6. 4254 Rajendra Prasad
7. 4642 Debashish Chowdhury
8. 4688 R C Budhani
9. 4559 Y N Mohapatra
10. 4651 Avinash Singh
11. 4315 V N Kulkarni
12. 4527 Deshdeep Sahdev
13. 4504 V Ravishankar
14. 4552 Satyendra Kumar

15. 4708 Pankaj Jain
16. 4723 H C Verma
17. 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

(from 27.09.2005)

ADJUNCT FACULTY

1. AF-2 Rajesh Gopakumar

MATERIALS SCIENCE PROGRAMME

PROFESSOR (Rs.18400-500-22400)

1. 3762 Jitendra Kumar

ASSISTANT PROFESSOR (Rs.12000-420-18300)

1. *4928 Kamal K Kar

ADJUNCT FACULTY

1. AF-4 A Ajaya Ghosh

LASER TECHNOLOGY PROGRAMME

PROFESSOR (Rs.18400-500-22400)

1. *4687 Utpal Das

ASSOCIATE PROFESSOR (Rs.16400-450-20000)

1. *4679 (Ms) Asima Pradhan

NUCLEAR ENGG & TECHNOLOGY PROGRAMME

PROFESSOR (Rs.18400-500-22400)

1. *3665 Ashok Sengupta

DESIGN PROGRAMME

1. *4976 Satyaki Roy
2. *5183 (Ms) Koumudi Prakash Patil (from 13.02.2006)

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.

*** Half Time**

LIST OF ACADEMIC STAFF AS ON MARCH 31, 2006

S.No	P F No.	Name & Designation (Ms/Shri/Dr)	Department/ Programme
1.	4078	Chaturi Singh, Research Engineer Gr-I	NWTF

2.	4983	Alok Gupta, Research Engineer Gr-II	A E
3.	5059	K K Soundra Pandian, Research Engineer Gr-II	M E
4.	4777	Rajeev Gupta, Senior Research Engineer	NWTF
5.	4616	Sushmit Sen, Senior Research Engineer	Robotics
6.	4818	R P Gupta, Senior Research Engineer (up to 23.09.2005)	EE
7.	4955	Raghuvir Singh Anand, Senior Research Engineer	E E
8.	4824	Anjali V Kulkarni, Senior Research Engineer	Mechatronics
9.	4921	Aurobinda Chatterjee, Senior Research Engineer	M E
10.	5118	Ajay Misra, Senior Research Engineer	A E
11.	4318	Amitabha Roy, Principal Research Engineer	E E
12.	3238	Vishal Saxena, Principal Research Engineer	E E
13.	4807	Brajesh Chandra, Principal Research Engineer	NWTF
14.	4056	V Raghuram, Principal Research Engineer	M E
15.	3414	M N Mungole, Principal Research Engineer	MME
16.	4086	J Narayan, Chief Research Engineer	EE
17.	4015	A L Bhavsar, Scientific Officer Gr.I	CHEM
18.	4815	K K Bajpai, Senior Scientific Officer	C E
19.	3780	Sanjay Gupta, Chief Scientific Officer	ACMS
20.	3985	Bansi Lal, Chief Scientific Officer	PHY/LTP
21.	4090	Prem Chand, Chief Scientific Officer	EPR/PHY
22.	4257	Leela Iyengar, Chief Scientific Officer	Chemistry
23.	3782	K V Rao, Chief Scientific Officer	ACMS
24.	2028	H P S Parihar, Computer Engineer Gr.II	C C
25.	4541	B M Shukla, Senior Computer Engineer	C C
26.	4578	Md Aftab Alam, Senior Computer Engineer	C C
27.	4720	(Mrs) Shikha M Jalote, Senior Computer Engineer (up to 01.07.2005)	
28.	4821	Brajesh Pande, Senior Computer Engineer	C C
29.	4820	Gopesh Tewari, Senior Computer Engineer	C C
30.	5019	Soma Sengupta, Senior Computer Engineer	C C
31.	4721	Md K Ahmad, Senior Computer Engineer	C C
32.	4920	Anju Tewari, Senior Computer Engineer	C C
33.	3745	R Tewari, Operation Manager	C C
34.	2035	N P Roberts, Principal Computer Engineer	C C
35.	3868	K S Singh, Principal Computer Engineer	C C
36.	2037	Y D S Arya, Principal Computer Engineer	C C
37.	4817	Navpreet Singh, Principal Computer Engineer	C C

38.	0834	Rajeshwar Misra, Librarian	Kelkar Lib
39.	3981	S K Bose, Deputy Librarian	Kelkar Lib
40.	3969	Umed Singh, Assistant Librarian	Kelkar Lib
41.	3974	(Ms) Neelam Prasad, Assistant Librarian	Kelkar Lib
42.	5148	S K Vijaianand, Assistant Librarian	Kelkar Lib.
43	5157	Maitrayee Mondal Ghosh, Assistant Librarian	Kelkar Lib.

AWARDS AND HONOURS

AWARDS AND HONORS

- Prof. CNR Rao, has received the Dan David Science Prize for 2005 in Materials Science. He shares the award with George Whitesides of Harvard University and Robert Langer of Massachusetts Institute of Technology. Prof. Rao, one of the world's foremost solid state and Materials Chemists, was honored for his stellar contributions to the development of the field for well over five decades. The awards ceremony was held on May 23, 2005.
- Professor CNR Rao, Chairman, Board of Governors of IIT Kanpur, has been awarded the highest civilian award of France: Professor Rao has been conferred the title 'Chevalier de la Legion d' honneur' (Knight of the Legion of Honour). Also the American Institute of Chemists has named Professor Rao the Chemistry Pioneer of 2005.
- Dr. Kalyanmoy Deb, Professor in the Department of Mechanical Engineering, has received the Shanti Swarup Bhatnagar award for the year 2005.
- Dr. Arindam Ghosh in the Department of Electrical Engineering has been elected an IEEE Fellow for his "contributions to education in power electronic applications to transmission and distribution systems".
- Dr. N Sathyamurty and Dr. T K Chandrashekar, Professors in the Department of Chemistry, and Dr. Ashutosh Sharma, Professor in the Department of Chemical Engineering, have been selected for the award of J C Bose Fellowships.

- Dr. N. Sathyamurthy, Professor in the Department of Chemistry, has been elected a Fellow of the Third World Academy of Sciences (FTWAS) in recognition of his outstanding research contributions.
- Dr. Kalyanmoy Deb, Professor in the Department of Mechanical Engineering, has been elected a Fellow of the Indian Academy of Sciences.
- Dr. S. K. Gupta, Professor in the Department of Chemical Engineering, has been elected a Fellow of the Indian Academy of Sciences.
- Dr. Sanjay Mittal, Professor in the Department of Aerospace Engineering, has become a Fellow of the Indian National Academy of Engineering (INAE).
- Dr. Deepak Mazumdar, Professor in the MME Department, has been elected a Fellow of the Indian Institute of Metals.
- Dr. S. N. Singh, Associate Professor in the Electrical Engineering Department, received the Alexander von Humboldt Fellowship for the year 2005.
- Dr. Shalabh, Assistant Professor in Mathematics & Statistics Department, received the Alexander von Humboldt Fellowship for the year 2005.
- Drs. PK Panigrahi of Mechanical Engineering and Sandeep Verma of Chemistry have been awarded the prestigious Swarnajayanti Fellowships for the year 2005. These fellowships are for scientists, in the age group of 30 to 40, carrying out outstanding research in science and technology.
- Dr. Avinash Kumar Agarwal, Assistant Professor in the Department Mechanical Engineering has been selected for the INAE Young Engineer Award-2005.
- Dr. Yogesh M. Joshi, Assistant Professor in the Department of Chemical Engineering, has received the INSA Medal, Young Scientist award of the Indian National Science Academy (INSA) for 2006.
- Dr. Ashu Jain, Associate Professor in Department of Civil Engineering, has been elected a Fellow of the Indian Water Resources Society.

- Dr. S. K. Singh, Assistant Professor in the Department of Humanities and Social Sciences, received the 'Manas Chatterji Award for Excellence in Research in Regional Science, during the Regional Science Association International (RSAI) Symposium held at the Indian Institute of Management Bangalore during Jan. 6-8, 2006.
- Drs. Amalendu Chandra and Sandeep Verma in the Department of Chemistry have been chosen for the Award of bronze medals in the Chemical Research Society of India (CRSI) called "CRSI Medals" for this year.
- Dr. Bikramjit Basu, Assistant Professor in the Department of Materials & Metallurgical Engineering, has been invited to join the editorial board of Society's Journal Trends in Biomaterials and Artificial Organs Organization, Thiruvananthapuram.
- Dr. Anish Upadhyay, Assistant Professor in the Department of MME, has been invited to serve for two years on the Editorial Board of the "Transactions of the Indian Ceramic Society," the quality journal of the Indian Ceramic Society.
- Dr. VK Jain, Professor in the Department of Mechanical Engineering, has been invited to serve on the editorial Board of the "International Journal of Nano-manufacturing." The publisher of the journal is Inderscience Publishers, UK.
- Dr. V K Jain, Professor in the Department of Mechanical Engineering, has been appointed a member of the Editorial Board of the IJAMT - "International Journal of Advanced Manufacturing Technology" being published by Springer Verlag (U.K.).
- Dr. N G R Iyengar, Professor in the Department of Aerospace Engineering, has been invited to join the Editorial Board of "International Journal of Structural Stability and Dynamics" (IJSSD).
- Dr. Ashutosh Sharma, Professor in the Department of Chemical Engineering, has been invited to serve on the International Advisory Board of the Canadian Journal of Chemical Engineering (CJChE) for two years beginning January 2006. CJChE is an International Journal of high repute.
- Dr. Ashutosh Sharma, Professor in the Department of Chemical Engineering, has been invited to join the Editorial Board of Indian Chemical Engineer (ICE).

- Dr. Ashish Dutta, Assistant Professor in the Department of Mechanical Engineering, has become a member of the Editorial Consultant Board of the International Journal of Advanced Robotics Systems.
- Dr. K Bikramjit Basu, Assistant Professor in the Department of Materials & Metallurgical Engineering, has been invited by the Korean Ceramic Society to serve as one of the Foreign Editors for its Journal.
- Dr. Ashu Jain, Assistant Professor in the Department of Civil Engineering, has been elected a Fellow of the Indian Water Resources Society.
- Dr. K K Saxena, Professor in the Department of Humanities and Social Sciences, has been unanimously elected the Chairman of the Senate Nominations Committee for the calendar year 2006 i.e., upto 31.12.2006.
- Dr. Jitendra Kumar, Professor in the Materials Science Programme, has been nominated the Guest Editor of the Special issue of the "International Journal of Nanotechnology", published by Interscience Enterprises Ltd., Geneva, Switzerland. The special issue will be on "Nanotechnology in India."
- Dr. R Balasubramaniam, Professor in the Department of Materials & Metallurgical Engineering, has been recently invited to serve on the –
 - Editorial Board of Journal of South Asian Archaeology and
 - Editorial Advisory Board of the Transactions of the Indian Institute of Metals.
- Dr. Joydeep Dutta, Assistant Professor in the Department of Mathematics & Statistics, has been invited to join the Editorial Board of a new journal entitled "International Journal of Modern Mathematics." The Journal is being published by the Dixie W Publishing Albama, USA.
- Dr. S.C. Srivastava, Professor in the Department of Electrical Engineering, has been nominated Member of the Governing Council of Central Power Research Institute, Bangalore. He also has been elected the Vice Chairperson, Technical Committee of the IEEE India Council.

- Dr Manindra Agrawal, Professor in the Department of Computer Science and Engineering, and his PhD students Neeraj Kayal and Nitin Saxena have been awarded the Goedel Prize for the year 2006 for their paper "PRIMES is in P, Annals of Mathematics 160, 1-13 (2004)". Geraud Se'nizergues, Klaus-Joern Lange, and Peter Shor nominated the paper for the prize. The award is given jointly by EATCS and ACM.
- Dr. S.N. Tripathi of the Civil Engineering Department has been appointed by DST as a Member of the Cloud and Aerosols steering Committee for the proposed mega CTCZ experiment of DST's Indian Climate Research Program
- Prof. P.K. Bhattacharya obtained a Patent (India-189310) on "Process for the Recovery of Inorganic Chemicals from Kraft Black Liquor".
- Dr Bishakh Bhattacharya obtained a US Patent on Vibration Damping using Magnetostrictive Actuators and Sensors jointly with Professor Geof Tomlinson and Dr. Jem Rongong, United States (Patent number 688439).
- Dr. D. Goswami and Mr. M. Sinha of Chemistry Department obtained a US Patent (US2004/0208613 A1) on "System and Method for Improved Coherent Pulsed Communication System having Spectrally Shaped Pulses".
- Dr. S. S. Manoharan, Professor in the Department of Chemistry, has received a US Patent (Patent No. US 679341 B2 dated 21st September 2004) for his work on "Magneto Resistive CRO2 Polymer Composite Blend".
- An Indian patent of Dr. S. S. Manoharan, Ranjan Kumar Sahu, Manju Lata Rao, M. Qureshi, and J. Prasanna, from the Department of Chemistry, on "A novel method to prepare Gamma Iron oxide" has been accepted in April 2006.

Young Engineer Award:

Dr. Avinash Kumar Agarwal, ME has been selected for the INAE Young Engineer Award-2005. This award of the Indian National Academy of Engineers will be presented to Dr. Agarwal on December 10 at the Annual Convention of the Academy.

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 and 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. The Senate Undergraduate Committee (SUGC) and the Senate Post-graduate Committee (SPGC) carry out micro-management and implementation of these programmes, 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 Engg, Biological Sciences and Bio-Engg, Chemical Engg, Civil Engg, Computer Science & Engg, Electrical Engg, Materials and Metallurgical Engg. and Mechanical Engg. 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 institutes 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 Aerospace Engg, Biological Sciences and Bio-Engg, Chemical Engg, Civil Engg, Computer Science & Engg, Electrical Engg, Materials and Metallurgical Engg. Mechanical Engg and Industrial and Management Engineering. There are M. Tech. Programs in the interdisciplinary areas, such as, Nuclear Engineering, Laser Technology, Environmental Engineering, and Materials Science. The M. Tech. students are chosen through an all-India examination, known as GATE.

B.Tech.-M.Tech. Dual Degree Programme

We also have 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

Recently, we have introduced two more 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, which allows the M.Sc. students to continue for a Ph.D.

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, Geo-seismic 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 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 between September 2004 and August 2006

The following is the composition of the CDMC:

Prof. R K Dube	MME	Chairman
Prof. R K Thareja	PHY	Co Chairman
Prof. Harish Karnick	CSE	Member
Prof. A K Mallik	ME	Member
Prof. L Krishnan	HSS	Member
Prof. Ashutosh Sharma	ChE	Member
Prof. Joseph John	EE	Member
Prof. Balaji Prakash	BSBE	Member
Prof. D Kundu	MTH	Member

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 will provide a strong grounding in basic sciences, engineering as well as in various emerging areas of economics.

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, Mechanical Engineering etc. 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 warming, 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 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 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 (PDPMIITDM), 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. (Duall Degree) programmes at IIT Kanpur for the academic session 2005-2006 were made by the Joint Admission Committee for all IITs and IT-BHU.

The Joint Entrance Examination (JEE) was held on May 22, 2005. In the Northern Zone (B): IIT Kanpur, Candidates had registered.

The following offers of admission were made from IIT Kanpur:

Department/Disciplines Programmes	Total Number of Candidates-Direct Admission						
	JEE-2005				Preparatory Course-2004		Total
	Gen	SC	ST	PH	SC	ST	
B.Tech.							
Aerospace Engg.	19	04	01	00	00	00	24
BSBE	21	04	00	00	02	01	28
Chemical Engg.	32	06	00	00	00	0	40
Civil Engg.	42	06	00	00	06	00	54
Computer Sc. & Engg.	26	05	03	01	00	00	35
Electrical Engg.	50	10	05	00	00	00	65
Mechanical Engg.	38	07	03	00	00	02	50
Materials & Met. Engg.	48	01	00	00	08	01	58
M.Sc. Integrated							
Chemistry	15	00	00	00	00	00	15
Mathematics & Scientific Computing	26	00	00	00	00	00	26
Economics	19	00	00	00	00	00	19
Physics	15	01	00	00	00	00	16
Total	351	44	12	01	16	06	430
B.Tech.-M.Tech. (Dual Degree)							
Aerospace Engg.	06	01	00	00	00	00	07
Chemical Engg.	09	02	00	00	00	00	11
Civil Engg.	12	00	00	00	02	00	14
Computer Sc. & Engg.	21	04	02	00	00	00	27
Electrical Engg.	17	03	01	00	00	00	21
Mechanical Engg.	13	03	00	00	00	00	16
Total	78	13	03	00	02	00	96

Two-Year M.Sc. Programme

Admissions to the 2-year M.Sc. and M.Sc.-Ph.D. (Dual Degree) programmes were made, as usual, on the basis of written test and interview, the department/discipline wise admissions were made only in the 1st Semester. Admission statistics for the M.Sc. (2 year) and M.Sc.-Ph.D. (Dual Degree) Physics programmes during 2005-2006 are as under:

Sl. No.	Department/Group	Numbers of Admission Offered	Actual Number of Students Joined
M.Sc. (2-year)			
1	Chemistry	24	21
2	Mathematics	26	23
3	Physics	23	16
4	Statistics	22	20
Total		95	80
M.Sc. - Ph. D. (Dual Degree)			
1	Physics	10	10
Total		10	10

Post Graduate Programme

The number of students admitted to the Postgraduate Programme in the First and Second Semesters 2005-2006 is given below:

ENGINEERING

Department/ Group	First Semester			Second Semester		
	M.Tech.	Ph.D.	Total	M.Tech.	Ph.D.	Total
Aerospace Engg.	25	05	30	-	01	01
B.S.B.E.	08	08	16	-	-	-
Chemical Engg.	24	09	33	-	04	04
Civil Engg.	47	09	56	-	02	02
Computer Sc. & Engg.	35	02	37	-	-	-
Design (M.Des.)	10	-	10	-	-	-
Electrical Engg.	67	09	76	-	06	06
Mechanical Engg.	78	05	83	-	06	06
Materials & Met. Engg.	16	03	19	11	02	13
I.M.E.	16	04	20	-	03	03
Laser Technology	07	-	07	-	-	-
Material Science	12	01	13	-	-	-
N.E.T.	01	-	01	06	-	06
E.E.M.	15	-	15	-	-	-
M.B.A. (IME)	36	-	36	-	-	-
Total	397	55	452	17	24	41

SCIENCES

Department/ Group	First Semester			Second Semester		
	M.Tech.	Ph.D.	Total	M.Tech.	Ph.D.	Total
Chemistry	-	17	17	-	11	11
Mathematics	-	06	06	-	-	-
Statistics	-	-	-	-	-	-
Physics	-	12	12	-	04	04
M.Sc.-Ph.D. Dual Degree in Physics	-	-	-	-	03	03
H.S.S.	-	03	03	-	05	05
Total	-	38	38	-	23	23
Grand Total	397	93	490	17	47	64

The total department/programme wise strength of the Post Graduate students during the year 2005-2006 is given below:

ENGINEERING

Department/ Group	First Semester			Second Semester		
	M.Tech.	Ph.D.	Total	M.Tech.	Ph.D.	Total
Aerospace Engg.	43	36	79	41	36	77
B.S.B.E.	17	31	48	14	31	45
Chemical Engg.	55	35	90	51	39	90
Civil Engg.	95	47	142	77	46	123
Computer Sc. & Engg.	87	12	99	84	12	96
Design (M.Des.)	22	-	22	22	-	22
Electrical Engg.	151	49	200	141	51	192
Mechanical Engg.	145	48	193	129	50	179
Materials & Met. Engg.	67	31	98	66	31	97
I.M.E.	25	16	41	22	18	40
Laser Technology	11	-	11	10	-	10
Material Science	26	11	37	19	10	29
N.E.T.	15	03	18	20	03	23
E.E.M.	36	-	36	32	-	32
M.B.A. (IME)	83	-	83	79	-	79
Total	878	319	1197	807	327	1134

SCIENCES

Department/ Group	First Semester			Second Semester		
	M.Tech.	Ph.D.	Total	M.Tech.	Ph.D.	Total
Chemistry	-	154	154	-	158	158
Mathematics & Statistics	-	58	58	-	54	54
Statistics	-	05	05	-	05	05
Physics	-	60	60	-	45	45
M.Sc.-Ph.D. Dual Degree in Physics	-	15	15	-	23	23
H.S.S.	-	46	46	-	46	46
Total:	-	338	338	-	331	331
Grand Total	878		1535	789	658	1465

Strength of Undergraduate and Postgraduate Students during 2005 - 2006 - I:

Department /Group	UG (B.Tech M.Sc.-5 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	96	26	00	00	43	36		201
B.S.B.E.	50	00	00	00	17	31		98
Chemical	166	44	00	00	55	39		304
Chemistry	56	00	45	00	-	154		255
Civil	189	22	00	00	95	47		353
C.S.E.	158	76	00	00	87	12		333
Economics	16	00			-	-		16
Design (M.Des.)	00	102	00	00	22	-		124
E.E.	282	79	00	00	151	49		561
H.S.S.	00	00	00	00	-	46		46
Math.	96	00	46	00	-	58		200
Stat.	00	00	40	00	-	05		45
M.E.	206	75	00	00	145	48		474
M.M.E.	200	00	00	00	67	31		298
Physics	63	00	47	15	-	60	16	201
I.M.E.	00	00	00	00	25	16		41

Laser Tech.	00	00	00	00	11	-		11
M.S.P.	00	00	00	00	26	11		37
N.E.T.	00	00	00	00	15	03		18
E.E.M.	00	00	00	00	36	-		36
DIIT (EE)	00	00	00	00	-	-		00
M.B.A. (I.M.E.)	00	00	00	00	83	-		83
Total	1578	424	178	15	878	646	16	3735

GRADUATION

During the year 2005-2006, 937 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.	329
M.Sc. (2 yr. & 5 yr.) 75 & 35	110
B.Tech.-M.Tech. (Dual)	22
MBA	48
M.Tech.	369
Ph.D.	42
M.Des.	17
Total:	937

COURSES OFFERED

The following Table gives a picture of the courses offered during 2005-2006 at the undergraduate as well as postgraduate level:

UNDERGRADUATE LEVEL

Core Curriculum/ Department Courses	First Sem.	Second Sem.	Summer	Total
Core Courses run by various departments	26	40	09	75
Aerospace Engineering	16	22	06	44
B. S. B. E.	06	05	00	11
Chemical Engineering	19	19	04	42
Civil Engineering	18	21	01	40
Computer Science & Engineering	23	25	01	49
Electrical Engineering	32	33	01	66
Mechanical Engineering	27	28	01	56

Materials & Metallurgical Engineering	15	13	01	29
Chemistry	20	25	01	46
Mathematics	34	42	00	76
Physics	25	22	01	48
Humanities & Social Sciences	12	14	01	27
Industrial & Management Engineering	07	07	01	14
Nuclear Engineering & Technology	01	02	00	03
Materials Science Program	02	02	00	04
Laser Technology Program	00	00	00	00

POST GRADUATE LEVEL

Core Curriculum / Department Courses	First Sem.	Second Sem.	Total
Aerospace Engineering	14	15	29
Chemical Engineering	13	12	25
Civil Engineering	18	18	36
Computer Science & Engineering	16	20	36
Design (M.Des.)	07	04	11
Electrical Engineering	26	28	54
Environmental Engg. & Management	04	05	09
Mechanical Engineering	22	20	42
Materials & Metallurgical Engineering	10	11	21
Chemistry	14	11	25
Mathematics / Statistics	09	12	21
Physics	08	14	22
Humanities & Social Sciences	15	19	34
Industrial & Management Engineering	07	06	13
Materials Science Program	07	07	14
Nuclear Engineering & Technology	04	05	09
Laser Technology Program	03	03	06
Biological Science & Bio Engg.	11	09	20
M.B.A.	19	17	36

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 2005-2006 (upto May, 2006)

Sl. No.	Contents	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year	Total
1	Students strength at the beginning of the session	506	482	396	399	142	1925
2	Students strength at the beginning of the 2 nd semester	506	479	395	400	152	1932
3	Students joined in 2 nd semester on migration	000	000	000	000	000	000
4	Number of students withdrawn or on leave on medical ground in 1 st and 2 nd semesters	09	06	02	03	000	17
5	Number of students graduated	000	000	000	255	131	386
6	Number of students dismissed due to poor performance in 1 st and 2 nd semester	00	11	03	06	06	26
		03	04	03	05	06	21

The following statement shows promotion and detention of M.Sc.(2-year) and M.Sc.(Dual Degree) students in the academic year 2005-2006(upto May, 2006)

Sl. No.	Contents	1 st Year	2 nd Year	Total
1	Students strength at the beginning of the session	90	103	193
2	Students strength at the beginning of the 2 nd Sem.	90	98	188
3	Number of students dismissed in 1 st semester	00	05	05
	Number of students dismissed in 2 nd semester	03	06	09
4	Number of students graduated in 1 st semester	00	04	04
	Number of students graduated in 2 nd semester	00	71	71
5	Number of students dismissed in due to continued absence from the programme	00	00	00

Following is the department-wise break-up of students who were awarded the degree at XXXVIII Convocation held on 05-06-2006. Shri Kapil Sibal, Honorable Minister of

Science & Technology and Ocean Development, Government of India was the Chief Guest at the Convocation:

Department/ Discipline	B.Tech.	BT- MT	M.Sc. 5-Yr.	M.Sc. 2-Yr.	M.Des	MBA	M.Tech.	Ph.D.	TOTAL (UG + PG)
Aerospace Engg.	22	01	-	-	-	-	27	01	51
Bio. Science. & Bio. Engg	-	-	-	-	-	-	12	-	12
Chemical Engg.	41	01	-	-	-	-	31	06	79
Civil Engg.	38	-	-	-	-	-	39	01	78
Comp. Sc. & Engg.	40	05	-	-	-	-	57	-	102
Electrical Engg.	81	06	-	-	-	-	82	03	172
EEM	-	-	-	-	-	-	10	-	10
IME	-	-	-	-	-	48	13	-	61
Mechanical Engg.	57	09	-	-	-	-	53	05	124
MME	50	-	-	-	-	-	27	01	78
Materials Science	-	-	-	-	-	-	07	01	08
Nuclear Tech. Prog.	-	-	-	-	-	-	06	-	06
Laser Tech. Prog.	-	-	-	-	-	-	05	-	05
Chemistry	-	-	06	23	-	-	-	12	41
Mathematics	-	-	-	14	-	-	-	03	17
Maths. & Sci. Comp.	-	-	14	-	-	-	-	-	14
Physics	-	-	15	23	-	-	-	06	44
Statistics	-	-	35	15	-	-	-	-	15
HSS	-	-	-	-	-	-	-	03	03
M.DES	-	-	-	-	17	-	-	-	17
TOTAL	329	22	35	75	17	48	369	42	937

Research and Development

The Institute has maintained a healthy growth rate in research and development over the years. During the financial year April 2005 to March 2006, 121 sponsored projects with funding commitment of Rs. 55.68 crores and 94 consultancy projects with funding commitment of Rs. 4.08 crores have been sanctioned.

In continuation of the previous year's achievement of IIT Kanpur being chosen by the Department of Science and Technology (DST) as one of the nodal agencies under the National Program on Nanosciences and Nanotechnology to establish a Center for Nanosciences, it has moved one step forward in setting up a Centre for Nanotechnology and looks forward to building on and extending its achievements in organic electronics. The Centre is ambitious towards making electronics printable through the use of a variety of nanotechnologies.

An initiative in setting up a centre of Environmental Sciences and Engineering is being undertaken utilizing the MPLADS funds given by Shri Arun Shourie. The construction of a facility has already started on a plot area of 17,500 square meters. The building will house laboratories, seminar and discussion rooms for various disciplines of the environmental sciences. The architecture incorporates most of the features of a Green Building in compliance with TERI Griha Certification. The proposed Centre will be involved in developing futuristic technologies in the area of environment that will confer immediate benefits to the society. Certain urgent concerns will be addressed including the abatement of pollution from industries and process plants, conservation of groundwater and surface water, abatement of air pollution, ozone depletion, health risk assessment due to modern technologies, etc.

Details of some of the major projects sanctioned during the year 2005-06 are as follows:

National Projects

- **“Development of Prototype Full Colour Organic Emitting Diode (OLED) Displays”** funded by DST for the setting up of Samtel Centre for Display Technologies (SCDT). SCDT aims to develop a prototype of a commercially viable full colour Organic Light Emitting Diode (OLED) display jointly with Samtel Industries. The project is undertaken with a mandate to make a prototype of an OLED display it represents a complete display solution in a product form for a cutting edge technology. The study aims towards

development of a product that has immediate commercial relevance and interestingly the targeted user has been intimately co-opted in the development cycle that has provided the personnel right at the start. Moreover, the center has carried forward its research agenda in developing other applications of organic semiconductors such as Organic Solar Cells, Organic Thin Film Transistors and has even achieved significant scientific milestones in their development.

- “Development of Magnesium Oxide Coatings by Sputtering for Plasma Display panels” funded by the Ministry of Communication and Information Technology (MCIT) aims to develop large area MgO coatings for 42 inch size TV sets based on plasma display panels (PDP). The MgO coating is a key component with limited information in public domain that determines the voltage and lifetime as well as the cost of the PDP displays. This is a closely guarded technology, which is of significant economic advantage to our country. The project aims to develop the technology indigenously using reactive magnetron sputtering.
- **“Unit on Nano-Science & Technology”** IIT Kanpur is one of the eight Institutes chosen by the Department of Science and Technology (DST) for creating a state-of-the-art Nano Science and Technology Unit. The unit has taken up a project, which has a committed funding of about Rs. 12 Crore. It has installed several characterization facilities such as Focused Ion Beam, e-beam Patterning, Maskless Lithography, Micro-Raman, SPMs, NSOM, Laser Ablation, Surface Profilers, Spin Coating, Nano-positioners, etc. The research work carried out by a core team of about 20 faculty members from across the departments will achieve its target using resources on magnetic materials, nano-structuring of soft materials and surfaces for optoelectronics and bulk-nano applications including optical coatings, super hydrophobic coatings, smart adhesives, nano-fluidics, super-batteries and capacitors, carbon MEMS and sensors. The Department of Science and Technology (DST) have also sanctioned a sum of Rs 12.15 Crore for setting up Centre for Nanotechnology including development of a unique multiple source Focused Ion Beam. It will lead to demonstration of printable radio-frequency identification tags as a prototype demonstrator of this rapidly emerging class of applications.
- **“Technology Mission on Railway Safety (TMRS)”** The Technology Mission on Rail Safety (TMRS) started in the year 2005 and all the projects have successfully completed a year after the incubation of about 6 months. In

various projects like Track Side Bogie, Derailment Detection Devices, On-Board Diagnostics, Sensors for Hot Boxes & Hot Wheels, the laboratory tests were conducted successfully on the prototype. The prototypes are kept on the field for testing and validation. The projects have reached a stage, where various industrial partners are getting involved to jointly develop commercial scale models to be commissioned on the trains for the field trials. Environmental Friendly Coach Toilet Discharge System was made with the help of the industry partner and was kept under testing within the institute. Material compositions for the rail and track are finalized in the projects like Wheels & Axles of Improved Metallurgy, Corrosion Prevention of Rails, and Improved Rail Fastenings. In all these projects, every lab scale model was fabricated using the new compositions and also they were tested successfully. A major achievement has been in the Satellite Imaging for Rail Navigation (SIMRAN) project under this mission. More than 9500 stations have been covered under this project with over 5300 GPS locations on the track. Ten different hardware devices have been developed and are being tested rigorously on various routes of the Indian Railways.

- **“Design and Development of Autonomous Mini Helicopter”** funded by the Department of Science and Technology. This project is multi-disciplinary and has two major components. The first part involves structural design and the development of a mini helicopter, test bed for performance measurements, control law design and validation. The second part includes design and development of Avionic packages such as sensing and actuation, communication, navigation, automatic flight control and ground control, for autonomous flight of a mini helicopter, flight testing of autonomous helicopter and expanding the utility by making the vehicle perform the intelligent tasks. Even though the autonomous helicopter will be developed for a few kilograms of weight (6 to 8 kg.), it will have the full functionality of a real life helicopter. It is envisaged that the technology developed will be useful for several civilian applications including the mapping of terrain, forestry, seed and pesticide spraying, law enforcement etc.
- **“National Mission on Power Electronics Technology (NAMPET)”** IIT Kanpur has been chosen as one of the major participating institutes for creating a Centre of Excellence on Power Electronics Technologies. CDAC Trivandrum is identified as the nodal agency. The ministry is funding the setting up of a NAMPET research lab in the Electrical Engineering Department of the Institute to undertake projects of national importance in the area of Power Electronics and its applications. The vision is to realize production of

reliable and deployable technologies in the area of Power Electronics, not only through theoretical analysis, but also through demonstrable hardware prototypes.

- **“Non-neuronal cell mediated neuroprotection in the neurodegenerative disease, Amyotrophic lateral Sclerosis (ALS)”** funded by Department of Biotechnology, India, aims to elucidate that the normal spinal cord glia will be able to provide neuroprotection to mutant SOD1 expressing motor neurons, hence a cell replacement therapeutic strategy, to identify that the protective factor is secreted by the normal glia, to evaluate the impairment of metabotropic glutamate receptor system in the mutant SOD1 expressing astrocytes, to determine a pharmacological intervention strategy by modulation of the metabotropic glutamate receptor system with specific agonist/antagonist treatment to revert the mutant SOD1 expressing astrocytes to normalcy.
- **“Rural Net (Digital Gangetic Plains-II)”** funded by Media Lab Asia, a Section 25 Company of Department of Information Technology, Ministry of Communications and Information Technology, Govt. of India. The main objective of this project is to explore the use of IEEE 802.11 (WiFi) as a low cost wireless access technology for rural internet connectivity, specifically for Indian villages. From the prototype network built in the form of testbed, and the applications, the need is to understand the various technical, operational, and cost issues involved with using off-the-shelf-802.11 equipment for such use. The project further seeks to develop a robust, cost effective, high-performance, and spectrally efficient solution for **(a)** point-to-multipoint solutions and **(b)** mesh networks for rural Internetworking.
- **“Experimental Investigation of the characteristics of exhaust flow field and noise field from pulse detonation tube: Cold study”** funded by Indian Space Research Organization (ISRO) aims to study the characteristics of the flow field from a single tube pulsed detonation engine through flow visualization and to study the noise field associated with the flow. The general loud noise is the major concern in the future Pulsed Detonation Engine development. The study investigates the cause of noise production and the level of noise associated with the flow. Measure for suppressing noise can be taken if only the sources can be identified. The project looks forward towards building a shock tube for generation of supersonic impulsive flow, flow visualization system for high-speed unsteady flow, sound measurement system, develop optical flow diagnostic tools in future.

- **“Drop-wise condensation on an inclined surface exposed to a vapor flux.”** funded by Department of Atomic Energy (DAE). The research investigates local feature such as advancing and receding angles, drop profiles, contact, coalescence and agglomeration mechanisms, and increase in drop size from nanometer scales to the range of millimeters. The physical phenomena will be studied via experiments with an applicable analytical model to explain the observed phenomena. Experiments will be conducted in metal vapor and steam; the mathematical model will be applicable to steam as well as metal vapor.
- **“Data Compression Techniques and its application to E-Learning/Education”** funded by Department of Information Technology. The project looks forward towards developing a group of data compression techniques that can be applied to images, scan, documents and videos; and hence creating a system that adapts itself to the quality of services (QoS) offered by the Internet (Network) connection instead of expecting a specific QoS on the Network.
- **“National Facility for Core Archival and Analysis”** sponsored by Department of Science and Technology. Apart from more than 300 meters of core already available at IIT Kanpur, many of the sub-projects required drilling and coring which is an expensive and time consuming process. It is absolutely essential that the cores collected are preserved, logged, and made available for further studies to the researchers across the country. The major objectives of this project involves; setting up of core archival and analysis facility at Kanpur; development of Core inventory and Database; manpower development for core raising, logging and inventory.
- **“Inertial MEMS Unit (IMU) for Automotive Applications”** sponsored by Tata Consultancy Services (TCS) is an initiative to design, develop and the testing of Inertial MEMS sensors unit for automotive acceleration, vibration and rotational measurements. The focus is on Accelerometers and Gyroscopes which are time integrated to give measurements on position and orientation. This will serve as an illustrative prototype for further design and application activities that are being planned through the CAR and NPSM programs.

International Projects

- **“Development of Low Cost and Flexible Solar Cells for the Developing Countries”** IIT Kanpur has also received a grant from Swiss National Science Foundation (SNSF) under the Swiss program on Research Partnership with Developing Countries. SNSF had invited Joint Research Projects from the Developing Countries (besides India) on all areas of Science and Engineering. IITK-ETH proposal won the research contract after a three-tier scrutiny process involving a large number of proposals. This project is in partnership with ETH Zurich.
- **“Advanced and Futuristic Manufacturing”** Indo-US Science & Technology Forum has provided funding to sponsor this Joint Center in the next two years. The center will be established under a collaborative venture between IIT Kanpur, IIT Kharagpur (India) and the University of Illinois at Urbana Champagne, Illinois, University of California, Irvine, North Western University, Evanston (USA). The Indo-US S&T Forum has evinced interest in establishing the Centre at IIT Kanpur with a view to fostering collaboration through exchange visits and also execution of joint projects in the following areas of Micofabrication, Micro devices/MEMS, and Bio-microfluidics and Self Assembly.
- **“Monolithic Reactors on Multiphase Reactions”** The objective behind the study is to investigate the hydrogenation of model compounds alpha-methyl styrene, 2-butyne-1,4-diol, 1-octene) on nickel/alumina catalyst deposited on cordierite monoliths . Specifically, the study will investigate the following aspects:(i) flow visualization in single capillaries using air and water; (ii) effect of preparation method on the thickness and porosity of the alumina washcoat; (iii) effect of preparation method on nickel loading and dispersion;(iv) reaction studies in a single monolith channel;(v) determination of mass transfer coefficients by cold flow studies in large diameter monoliths; and (vi) modelling of the monolith reactor.

Patents Granted to IIT Kanpur Faculty during the financial year 2005-2006

An improved organic light emitting diode for emission and a process for fabrication thereof (1532); An abrasive flow finishing device, an abrasive flow finishing process and Magnetorheo (1991); Transfer of power to contact-less Smart Cards with light from the reader (2190); A method of Varying threshold voltage in MOSFETs (2056) An

Architecture for Rearrangeably Non Blocking all Optical Cross Connect Wavelength Switching system (2513); Recuperative Liquified Petroleum Gas (LPG) Vortex Burner System (3197); A process for preparation of nanoparticles of higher molecular weight of polyethylene, polystyrene (3161); A nickel coated carbon fiber reinforced polymer composites nad a method for the preparation thereof (3125); A method for preparation of nanoparticles coated carbon fiber (3063); A carbon nanotubes coated long fiber and a process for preparation thereof (3061); A functionally graded elastomer nanocomposites (FGENCs) and a process for preparation thereof (3125). An international patent has also been filed by the Institute on Dielectric Resonator (US 2248).

Major Multi-disciplinary Facilities Added During the Financial Year 2005-2006 are:

1. Focused Ion Beam Facility:

Focused Ion Beam equipment, Nova Nano Lab600 manufactured by FEI Netherlands, has been installed in the Nuclear Physics Lab of Physics Department. This state of art system combines high resolution (<10nm) patterning and imaging capability. An ion column produces Ga ions of energy which can be varied from 5 kV to 30 KV and can be focused down to 5 nm with beam current density exceeding several Amperes per square centimeter. This makes it a powerful tool to rapidly fabricate a micro size device for prototyping or for producing novel nanostructures to explore new science at nanolevel. This equipment is going to be an indispensable tool 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".

2. Tandem Accelerator:

Under the scheme of Intensification of Research in High Priority Areas (IRHPA) sponsored by the Department of Science and Technology for the purchase of a Tandem accelerator with a dome voltage of 1.7 MV and with a capability of producing high current (up to 70microAMP) ion beam of several elemental species, besides a nuclear microprobe facility and other accessories. The focus is to effectively address the frontline issues in micro beam analysis, materials synthesis and modification, micromachining, proton and heavy ion beam writing, MEMS and NEMS fabrication, Material Science and Biosciences applications.

3. 500 MHz Nuclear Magnetic Resonance (NMR) Spectrometer:

The Department of Chemistry has received a grant of Rs. 2.75 Crore for setting up a "500 MHz Nuclear Magnetic Resonance (NMR) Spectrometer. Under the CARE scheme, the Institute supported Rs. 149.23 lakh for setting up a Scanning Mobility Particle Sizer (SMPS) for Gas-Borne Nanoparticulate Systems in Civil Engineering Department, Reciprocating Wear and Friction Tester Facility in ACMS, Augmentation of ESI-Q-ToF with Atmospheric Pressure Chemical Ionization (APCI) and Photo ionization (APPI) Interfaces in the Chemistry Department, Servo-Hydraulic Actuators for Load Application at Structural Engineering Laboratory in the Civil Eng. Department, Hot Isostatic Pressing Facility for Processing Advanced Materials in the Mech. Eng. Department and Polarized Confocal Imaging of the Cervical Epithelial for Neo plasia (early cancer) Detection in Physics Department.

In recent past, IIT Kanpur has strengthened its relations with many international institutes and organizations through research collaborations and signed Memorandum of Understanding. Some of such organizations are:

- Altera International Limited, Hong-Kong-Setting up a joint FGPA-SOPC lab at IITK
- Honda R&D Co. Japan-Combining global and local search methods adaptively in single and multi-objective evolutionary algorithms.
- Philips Austria GMBH Styria- Investigation and evaluation of the feasibility of a business relationship between Philips and IITK in contact & contact less smart card chips etc.
- Cornell University (Cornell) -For carrying out various cooperative activities including exchange program and collaborative research initiatives.
- National Yunlin University of Science & Technology, Taiwan-Promote cooperation for the purpose of carrying out various cooperative activities including exchange programme and collaborative research initiatives.
- Neurogen Corporation, USA- Synthesizing certain chemicals for Neurogen.
- University of Texas Medical Branch at Galveston- To establish an exchange programme and collaboration in areas of interest and benefit to both institutions.
- Environmental and Water Resources Institute (EWRI) of the American Society of Civil Engineers (ASCE), USA- Conducting conference involving an international perspective on environmental and water resources.
- Victoria Link Limited (VLL) on behalf of Victoria University of Wellington (VUW) New Zealand and National Information Center of Earthquake

Engineering (NICEEE) Software Licensing agreement- To improve earthquake engineering education in Indian Colleges of Architecture and Civil Engineering.

- Rensselaer Polytechnic Institute, New York- For exchange of Professors, research personnel and /or students for teaching and research programs.
- Psychiatric Genomics, Inc. Gaithersburg- Includes all data, materials, technical and economic information, marketing strategies, trade secret, know-how, ideas, discoveries etc.
- University of Texas Southwestern Medical Center at Dallas, Dallas- For Beta Test site agreement for statistical coupling analysis algorithms.

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

University of Hyderabad, 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; Aryabhata Research Institute of Observational Sciences (ARIES), Nainital; HEG Ltd., Bhopal, Central Pollution control Board, New Delhi etc.

List of major sponsored and consultancy projects sanctioned during the financial year 2005-2006 is provided below.

Sponsored Projects

A. National Projects

- "Development of magnesium oxide coatings by sputtering for plasma display panels" funded by MCIT, Total cost Rs. 1,74,83,000.
- "National facility for the core archival and analysis" funded by DST, Total cost Rs. 26, 52,000.
- "Long term monitoring of black carbon" funded by ISRO, Total cost Rs. 25, 97,000.
- "Assessment of heavy metals through dietary and inhalation routes to population around a coal-based power plant-risk characterization using bio-

markers/physiologically based pharmacokinetic (PBPK)" funded by MEF, Total cost Rs. 26,22,000.

- "Out-of-plan behaviour of masonry walls using shake table: an experimental study" funded by MHRD, Total cost Rs. 36, 00000.
- "500 MHZ Nuclear Magnetic Resonance (NMR) Spectrometer Facility At Department Of Chemistry" funded by DST, Total cost Rs. 2, 75, 00000.
- "National Mission On Power Electronics Technology" funded by CDAC, Total cost Rs. 68, 33000.
- "Research Facilities In The Intelligent Sensors Lab" funded by DST, Total cost Rs. 195, 00,000.
- "Special Manpower Development Programme For Vlsi Design And Related Software" funded by MCIT, Total cost Rs. 90, 27,500.
- "Drop-Wise Condensation On An Inclined Surface Exposed To A Vapor Flux" funded by DAE, Total cost Rs. 33, 11,000.
- "Investigation Of Corrosion Resistant Coating For Rare Earth-Iron Alloys And Compound" funded by DRDO, Total cost Rs. 33, 00,300.
- "Acquisition Of Stem With Eds Facility" funded by DST, Total cost Rs. 155, 00,000.
- "Development Of Prototype Full Colour Organic Light Emitting Diode (OLED) Display" funded by DST, Total cost Rs. 15, 75, 00000.
- "IISTEM-WHORL-SIIC" funded by IISTEM, Total cost Rs. 125, 00,000.
- "Confirmational Dynamics Of Biomolecules In Super Sonic-Jet Expansion: Infrared-Ultraviolet Double Resonance Spectroscopy" funded by DAE, Total cost Rs. 24, 99,175.
- "Restoration And Storage Of Film And Video Archived Material" funded by ZEE, Total cost Rs. 16,07,700.

- "Inorganic Seaffolds For Multi-Metal Architectures" funded by DST, Total cost Rs. 23, 98,800.
- "Experimental Investigation Of The Characteristic Of Exhaust Floe Field And Noise Field From A Detonation Tube" funded by ISRO, Total cost Rs. 24, 15,000.
- "Biodiesel: Process And Pilot Plant Development" funded by KVIC, Total cost Rs. 17, 00,000.
- "High Speed Coarse Wdm Waveguide Photodiodes By Qauntum Well Intermixing" funded by DST, Total cost Rs. 24, 00,000.
- "Experiments In Active Control Of Bluff Body Drag Using A Schlieren Velocimetry Technique" funded by DRDO, Total cost Rs. 14, 95,000.
- "Cancer Growth And Kanpur Theorems" funded by DRDO, Total cost Rs. 14, 82,000.
- "Thermally Stable Support Material Using Chemical Routes (Sol-Gel And Percursor) For The Synthesis Of Support Vanadium Oxide Catalysts And Its Application For The Oxideative Dehydrogenation Of Ethane" funded by DST, Total cost Rs. 23,66,400.
- "Electromagnetic Methods: Away To Forecast Earthquakes" funded by MLA, Total cost Rs. 12, 20,000.
- "Generation Of Transgenic Line Of Caenorhabditis Elegans That Express Gfp Reporter Under The Control Of The Regulatory Elements Of Human Cytochrome Puso Genes" funded by ASTRAZ , Total cost Rs. 10,30,000.
- "Data Compression Techniques & Its Applications To E-Learning/Education" funded by DIT, Total cost Rs. 48, 96,000.
- "Elastic And Fructure Characterization Of Functionally Graded Composite" funded by DRDO, Total cost Rs. 14, 70,588.
- "Adhesion And Friction At Soft Interfaces" funded by DST, Total cost Rs. 23, 64,000.

- “Development Of Oxides Based Nano-Materials For Electro-Optical Application” funded by DRDO, Total cost Rs. 28, 54,000.
- “Polymerization Of Nylon-6in Semi-Batch Reactor” funded by DST, Total cost Rs. 23, 92,380.
- “Ruralnet (Digital Genetic Ii)” funded by MLA, Total cost Rs. 33, 78,000.
- “Digital Ecosystem For Agriculture & Rural Livelihood” funded by MLA, Total cost Rs. 45, 93,600.
- “Digital Ecosystem For Agriculture & Rural Livelihood (DIGITAL MANDI PHASE-II)” funded by MLA, Total cost Rs. 45, 93,600.

B. International Projects

- “Asthma And Airway Inflammation Impact Of Helminthsom Asthma” funded by UTMB, Total cost Rs. 10, 86,000.
- “Workflow Petri Near And Eclipse” funded by IBM, Total cost Rs. 2, 00,000.
- “Low Cost and Flexible Solar Cells for the Developing Countries” funded by Swiss National Science Foundation (SNSF), Total cost Rs.2, 07,000.
- “Advanced & Futuristic Manufacturing (Indo-US Centre for Advanced & Futuristic Manufacturing)” funded by INDO-US, Total cost Rs. 63, 78,188.

Consultancy Projects

A. National Projects

- “Air Quality Assessment Emission Inventory And Sources Apportionment Studies In City Of Kanpur” funded by CPCB, Total cost Rs. 1, 83, 26,868.
- “Robust And Reliable Optimal Designs With Multiple Objectives” funded by GM, Total cost Rs. 6,07,500.

- “Advanced System Servers Development-NBRI” funded by NBRI Total cost Rs. 1, 66,000.
- “Detailed Seismic Analysis For Munger Bridge” funded by RITES Total cost Rs. 9,36,700.
- “Detailed Earthquake Analysis For Bogibil Bridge” funded by RITES, Total cost Rs. 9, 36,700.
- “Interactive Knowledge Information Network” funded by FCI, Total cost Rs. 11,90,000.
- “Aerodynamic Characterisation Of Lattice Fin For Aircraft Bombs” funded by ARDE, Total cost Rs. 2,65,000.
- “Speciality Nanonstructured Coatings For Corrosion Mitigation” funded by HTSPL, Total cost Rs. 8,10,000.
- “Fluid Mechanics And Heat Transfer Aimolation Of Multi-Phase Floe And Transport Of Fly Ash Through An Electrostatic Precipitator” funded by MWIPL, Total cost Rs. 11, 20,000.
- “Optimising Performance Of Tank Degasser At Hospet” funded by MUKAND, Total cost Rs. 6,20,000.
- “Hydraulic Model Study For Bridge To Be Built Over River Ganga At BAXAR”, funded by NHAI, Total cost Rs. 11, 58,760.
- “Consultancy On Design Of Base-Isoltaed Hospital In Shimla”, funded by MES, Total cost Rs. 12, 12,200.
- “Bharani: An Implementation Of Sectorized Wifi Mac”, funded by ZAZU, Total cost Rs. 5, 90,000.
- “Design Fabrication And Characterization Of Liquid Atomizers” funded by DRDO, Total cost Rs. 9, 40,872.
- “Distributed/Parallel Optimization Capability Development”, funded by GE, Total cost Rs. 9, 43, 674.

- “Stack And Ambient Quality Sampling In Singrauli Area” funded by CPCB, Total cost Rs. 5, 93,988.

B. International Projects

- “Scheduling, Operations Reasearch Marketing Macro Movie Decision Supprot Devices”, funded by EWW, Total cost Rs. 8,21,250.
- “Monolithic Reactors for Multiphax Reactor” Funded By Chevron, Total cost Rs. 2, 25, 00,000.
- “Slurry Bubble Coloumn Hydrodynamics” funded by CHEVRON, Total cost Rs. 45, 00,000.
- “Synthesis of Fragment” funded by NRGN, Total cost Rs. 58, 50,000.
- “Exposure Assessment of Lead” funded by UNU, Total cost Rs. 8,37,000.

Alumni Association Activities

In January 2006, AA adopted a new constitution for Alumni Association, which provides, *interalia*, a Board of Directors with a global representation. AA elected a new board of directors, in accordance with the new constitution, during March 2006.

The Silver Jubilee Reunion of the Class - of - 81 was held during 30 -31 December 2005 and the 35 Year Reunion of the Class-of-1971 was held during 2 - 3 January 2006 on the campus in around 145 alumni of both the classes from round the globe, most of them with their families, participated in the event.

45 nominations were received for the Distinguished Alumnus Award 2005 - 2006. After due deliberations in its meeting held on 29 November 2005, the DAA Committee recommended the following persons, which were later approved by the Board of Governors, IIT Kanpur, for the Distinguished Alumni Awards: (1) Mr. Abhay K. Bhushan (BT/EE/65) (2) Mr. Pawan Kumar (BT/CE/69) (3) Prof. Vijay Mahajan (BT/ChE/70) (4) Mr. Pradeep Jotwani (BT/ME/75) (5) Dr. Ambuj Goyal (BT/EE/78) (6) Prof. Umesh Mishra (BT/EE/79) (7) Prof. Rajiv Motwani (BT/CSE/83).

Eighteen nominations were received for the Satyendra K. Dubey Memorial Award instituted by the Institute commencing from this year. The SKD award committee recommended the name of Mr. Arvind Kejriwal for the award for his campaign for bringing transparency in the working of government & public institutions and for his role in the Right to Information bill. The Board of Governors of the Institute accepted the recommendation and accordingly Mr. Kejriwal received the award on March 25, 2006 along with the DAA awardees.

The 23rd Kelkar Lecture was delivered today by Mr Arvind Kejriwal, Founder of a NGO called Parivartan, on "Right to Information- a tool for holding Government accountable". "Parivartan" [Change] was started to fight for the right to information and to bring transparency in the working of government & public institutions.

Four editions of the Newsletter were published during 2005 - 2006. The last three editions of the Newsletter, issued in softcopy form, were sponsored editions. AA collected Rs. 20,000/- from the sponsors for each of these editions.

Since 1 April 2005, AA made significant progress in improving the coverage of Alumni Database. By the end of the year Alumni Association had email addresses of 45.67% alumni and postal addresses of 54.81% alumni. Alumni Association Chapters in cities namely Kanpur, Delhi, Kolkata, Mumbai, Ahemdabad organized their get-togethers.

The ground breaking ceremony for the Alumni and Student Career Center was held on 15 August 2005. The site for the Center is located in between the Students Activity Centre & the Visitors' Hostel. The Center, when completed, will serve as a Convention Centre, the Alumni Association Office, and the Student Placement Center. It will have a Convention Hall/Auditorium, a Hall of Fame, Media Center, Conference Room, Office space, a Business Center, Placement Library, Networking Room and Student-Faculty Interaction Area, etc. The Networking Room will have facilities for video conferences, seminars, lectures, discussions etc. The building will have a total floor area of 1700 sq. meters. The construction cost of the centre has been estimated at Rs. 3.0 crores. The cost of construction of the building will be met from donations from the Alumni who graduated in 1969 and 1980 and the Institute. Some of the employers of these Alumni have also contributed towards the cost of the building. It is expected that the Alumni Office will shift to the Center by the end of this year.

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. With the growth in the collection, the Library is bursting at its seams. 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.

NEW ADDITIONS

A total of 7685 volumes including 3717 books and 3968 bound journals were added to the collection during 2005-2006. The budget of Rs. 100 lacs was fully utilized for procurement of books.

SUBSCRIPTION TO PERIODICALS AND BINDING

The periodicals budget for 2005-2006 continued to be Rs. 5.5 crores with additional grant of Rs.17.7 lacs made available by NBHM. The Library subscribed to 1569 current periodicals for the year 2006. Of these 610 are print versions, whereas 941 are print plus on-line and 18 are on-line only. The Library added 3968 bound volumes to its periodicals holdings. Besides, 3773 books and 1115 old periodicals were also bound.

Scopus, an abstracting & indexing database, designed to cover not only scientific and technical, but also social sciences and humanities literature, has been subscribed for 3 years, 2005 to 2007.

INDEST AICTE online E-Resources

As a core member to the INDEST, IITK academic community is entitled to access 4581 current journals through 17 full-text e-resources, besides access to 7 bibliographic databases.

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 published. The current issues of the journals are also displayed, as usual, on alternate days thrice a week.

CIRCULATION

During the year 2005-2006, 53367 publications were circulated for home study. As usual, users within the Library consulted a large number of books and journals from reference, textbook, and general collection areas. Circulation facility is also extended to the superannuating faculty against a token deposit.

DOCUMENT DELIVERY SERVICES & EXTERNAL USER MEMBERSHIP

Inter-Library Loan (ILL) services are extended free to sister IITs, IISc, TIFR, BARC, host of INDEST members and other technical institutions & universities. During 2005-2006, ILL (OUT) requests for 568 articles/chapters were received and processed from the host of Institutions, whereas ILL (IN) requests for 65 articles/chapters were made to other libraries.

Individual and institutional membership of the Library was made available to 1062 external users.

ON-LINE CATALOGUE TO PERIODICALS HOLDINGS

An on-line catalogue to back volumes of journals has been created. It is updated annually and can be accessed through the library home page.

DATABASE FOR CD-ROMs UNDER PROCESS

A database for CD-ROMs, received in the Library as accompanying material to books, journals, archival volumes of on-line databases, conference proceedings, books only on CD-ROM etc. using WINISIS software is under process.

LIBRARY AUTOMATION

The User Services module of the IIT Kanpur Library Automation System (iitKLAS) has been re-engineered and available on Web-based platform. The Catalogue search, current contents, journal subscription queries can be accessed through web. The new version of circulation Module, in Oracle 6i / Reports 6i, is in the process of development. Digital library initiatives help provide accessibility to the on-line journals from various publishers/Vendors, including INDEST, the MHRD Consortia. Our Library is also accessible to outside community through web: <http://library.iitk.ac.in/> but with limited services.

Digital Library Initiatives

Library has taken Digital library initiatives with an emphasis on digitization programme for library collection in the phased manner. The Library has opened on October 11, 2005 a project with R&D entitled "Digitization of the existing PK Kelkar Library Collections", with an initial grant of Rs. 26.84 lakhs from the Institute.

Library is in process of setting a facility for digitization. Library has purchased a High speed Overhead Book Scanner (Minolta PS7000) with accompanying H/W, S/W, IT infrastructure etc. to digitize the collection. A dedicated high end server for hosting our ETD has been acquired for the benefit of academic community. The library has installed and configured latest version of DSpace, an OAI-PMH compliant S/W with all prerequisites.

Electronic Theses and Dissertations (ETD)

In the First phase of digitization, existing collection of 9000 M.Tech & Ph. D theses, one of the important Institutional Repositories (IR), has been taken for retrospective electronic conversion. The scanning has been done with the support of DLI, Mega Scanning Center, IIT Allahabad.

The theses digitized at IIT Allahabad are getting ready for uploading to the Server. Beginning second semester 2005-06, M.Tech & Ph. D students have submitted electronic theses to the library in CD format. These are also being processed for uploading to the server.

COMPUTER CENTER

Computer Center at IIT Kanpur is a central facility that caters to the computing needs of the faculty members and the students in 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 high performance computing, Computer Center has a SUN cluster with 2 master nodes and 96 compute nodes. Each compute node is a dual Opteron 2.4GHz CPU with 4GB RAM, and 218GB disk. It deploys SUN Grid Engine software to manage access to the cluster. Another HP cluster with one master node and 48 compute nodes is under installation. The nodes here are dual Opteron 2.6GHz CPU with 8GB RAM, and 290GB disk.

Computer Center has about 150 PCs running Linux or Window 2000 Operating System. All the computers in the Center are connected through a 1Gbit switched network. About half the PCs are based on Intel Pentium 4 2.0 GHz processor with 256MB RAM, and the other half are based on Intel Pentium 4 with Hyper threading, 3.4GHz processor with 1GB RAM.

At the heart of these servers in the Centre, is 6TB SAN storage and a central file server from SUN, which provide storage to the users for programs, data, and emails.

Computer Center supports an institute wide, over 6000 points, 100 Mbit, 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 34Mbit capacity from VSNL, and an additional 2Mbit from ERNET. 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 lifetime.

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

HARDWARE IN THE COMPUTER CENTER

Computers in the Center have broadly been divided in 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. SUN V440 4* 1.28 GHz UltraSparc IIIi processors, 8 GB RAM, 6TB SAN storage with tape backup facility.

Compute Servers

1.	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.
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.	HP 9000/ L-3000	4 processors, 2GB RAM, 108GB disk
4.	IBM RS 6000	4 Processors, 2GB RAM, 108GB disk
5.	Compaq ES40	4 Processor, 2GB RAM, 108 GB disk

Utility Servers

1	Internal web server (web)	Dual-Xeon, 2.0 GHz, 1GB RAM
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 GBHDD in RAID.
6. Compaq ML 530 server Server for thin clients.
7. Compaq thin clients 125 thin clients for Office Automation.

OTHER EQUIPMENTS

Computer Center has two spam filtering hardware from Barracuda Networks.

Computer Center also supports campus networking, and has one main switch, firewall, router, 45 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, 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

All the softwares, which come with RedHat/Mandrake Linux distributions

Anti Virus-Norton, Symantec Antivirus for mail gateway

Institute has taken site licenses for Solaris, Sun Forte Compiler suite (C, C++, HPC), NAG libraries, and NAG compilers. Also CC has 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), 06 candidates in M.Tech, and 07 in Ph.D. were admitted to various departments. The Curriculum Development Cell (CDC) approved 15 textbook writing proposals during 2005-06 in addition to the 20 projects, which had been sanctioned earlier. The work for both proposals is under progress. During the last financial year 06 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 given below.

List of Short Term Courses conducted under QIP

Sl. No.	Coordinator (s)	Title of the Course	Duration
1.	Drs. L Behera & others (EE)	Intelligent Sensors and Control	May 04-10, 2005
2.	Dr. Kameswari Chebrolu (EE)	Fundamentals of Wired & Wireless Networks	May 09-13, 2005
3.	Dr. Veena Bansal (IME)	Software Project Management	July 1-7, 2005
4.	Dr. Binayak Rath (HSS)	Environmental Economics & Environmental Impact Assessment	July 11-17, 2005
5.	Drs. P Chakroborty (CE)	Pavement and Traffic Engineering	Oct. 04-07, 2005
6.	Drs. P M Prasad (HSS)	Law and Economics	Oct. 09-16, 2005
7.	Dr. J Ramkumar (ME)	Recent Trends in Advanced Composites	Oct 10-14, 2005
8.	Dr. P K Mohapatra (CE)	Unsteady Flow in Open Channels	Oct. 23-31, 2005
9.	Dr. V K Jain (ME)	Micro Machining	Oct. 25-29, 2005
10.	Dr. Bansi Lal (LTP)	Development in and	Jan. 09-14,

		Applications of "All Solid State Lasers"	2005
11.	Dr. D Mazhari (EE)	Overview of VLSI Design	Dec. 20-24, 2005

Self-financing Courses Conducted

Sl. No.	Coordinator (s) & Dept.	Title of the Short Term Course	Duration
1.	Dr. Rajiv Shekhar (SIDBI)	Course on "Computer Networking"	Feb. 05- Apr.05, 2005
2.	Dr. R. Sinha (CE)	Crustal Deformation and Tectonil Geomorphology	Mar. 27 - April 16, 2005
3.	Dr. G Ramanathan (CY)	Bio-informatics and Datamising	April 04-08, 2005
4.	Dr. B K Mishra (MME)	Introduction to Discrete Element Method	April 22-24, 2005
5.	Dr. Ashish Dutta (ME)	Robotics and Automation	May 03-07, 2005
6.	Dr. S K Aggarwal (CSE)	Data Structure and Algorithms	May 09-10, 2005
7.	Dr. V K Jain (ME)	Sponsored Course on Advanced Machining Processes	May 09-13, 2005
8.	Dr. Rajiv Shekar (SIDBI)	Oracle 9I Data Base Administration	May 15-July 15, 2005
9.	Dr. G C Ray (EE)	Design of DSP Based Workstation	May 16-21, 2005
10.	Dr. Rajive Shekar (SIDBI)	English Communication Skills for Business	July 15-Sept. 15, 2005
11.	Dr. K Deb (ME)	Genetic Algorithms for Engineering Design	July 20-22, 2005
12.	Dr. D C Rai (CE)	Seismic Evaluation & Strengthening of Buildings	Aug. 08-12, 2005
13.	Mr. Khaleeq Ahmad (CC)	Advanced Workshop on Oracle9i DBA	Aug. 15 -26, 2005
14.	Dr. NGR Iyengar (AE)	HAL Training Programme	Aug. 15 -

			Nov. 15, 2005
15	Dr. Rajiv Shekhar (SIDBI)	Computer Networking	Sept. 15 - Nov. 15, 2005
16	Dr. D C Rai (CE)	Seismic Design of Masonry Buildings	Oct. 03-07, 2005
17	Dr. Rajiv Shekhar (SIDBI)	Internet Marketing	Oct. 15-16, 2005
18	Dr. Bharat Lohani (CE)	LiDAR Data Processing	Oct. 17-20, 2005
19	Dr. Rajiv Shekhar (SIDBI)	Advance Analytical Chemistry	Oct. 18 - Dec.18, 2005
20	Dr. CVR Murty (CE)	Architecture for Earthquake Resistance of Buildings to be held at Surat	Oct. 24-28, 2005
21	Dr. Rajive Shekhar (SIDBI)	Mechatronics	Dec. 1, 2005 - Feb. 1, 2006
22	Dr. D P Mishra (AE)	Non-conventional Sources of Energy	Dec. 05-09, 2005
23	Dr. D Mazumdar (MME)	Modeling in Metals Processing Concepts, Theory & Applications	Dec. 06-09, 2005
24	Dr. S S K Iyer (EE)	Solar Cells Short Course 2005	Dec. 30, 2005
25	Dr. Sudhir K. Jain (CE)	e-course on Seismic Design of Liquid Storage Tanks	Jan. 16 - Feb. 06, 2006
26	Dr. D Choudhury (PY)	Common Trends..... Biological Sciences	Feb. 08-10, 2006
27	Dr. T V Prabhakar (CSE) Dr. J Chatterjee (ME)	Knowledge Management	Feb. 17-18, 2006
28	Dr. J P Gupta (ChE)	Hazard Analysis in Chemical Industries	March 21-23, 2006

Workshops/Conferences/Seminars organized during 2005-06

Sl. No.	Coordinator (s) & Dept.	Title of the Conference/ Workshop/Symposium	Duration
1.	Dr. D Sanghi (CC) Mr. N Singh	Ipv6 Workshop	April 01-02, 2005
2.	Dr. M Chaudhuri (CSE)	The 4 th Annual Inter Research Institute Student Seminar in Computer Science	April 01-02, 2005
3.	Dr. P Mitra (CSE) Dr. P Gupta (CSE)	Workshop on Recent Advances in Biometric System	April 15-16, 2005
4.	Dr. Anoop Singh (IME) Dr. A K Mittal (IME)	International Conference on "Power Market Development in India"	April 19-21, 2005
5.	Dr. CVR Murty (CE)	Workshop on Seismic Design of Steel Structures	May 16-20, 2005
6.	Dr. H C Verma (PY)	Workshop on Physics Teaching Methodologies at Senior Secondary Level	June 02-06, 2005
7.	Dr. S K Jain (CE)	Summer Camp	June 06 - July 5, 2005
8.	Dr. Mukesh Sharma (CE)	Symposium on "Indoor and Ambient Air Exposure of PAHs and Fine Particulate to Woman and Children"	June 24-25, 2005
9.	Dr. B Mazhari (EE)	Workshop Organic Optoelectronics and Displays	July 11-15, 2005
10.	Dr. S Gupta (ACMS)	Lab-view and Virtual Instrumentation	July 25-29, 2005
11.	Dr. K K Bajpai (CE)	Review Workshop for Resource Material in Earthquake Engg. For teachers from various Colleges	Aug. 01-05, 2005
12.	Dr. K K Bajpai (CE)	Earthquake Engg. Review Workshop for Post Graduate Students	Aug. 29 - Sept.03, 2005
13.	Dr. S Sen (Robotics)	Embedded Workshop	Sept. 08-09, 2005

14.	Dr. T Sarkar (PY) Dr. G Sengupta (PY)	National String Theory Workshop-2005	Oct. 09-16, 2005
15.	Dr. Dheeraj Sanghi (CSE)	National Workshop on System Administration	Oct. 21-22, 2005
16.	Dr. R Prasad, (PY) Dr. D Chowdhury (PY) Dr. S Raychaudhuri (PY)	Symposium on Physics 2005: 100 Years after Einstein's Revolution	Nov. 04-06, 2005
17.	Dr. Satyaki Roy (MTC)	Cinematography K Editing Techniques	Nov. 07-11, 2005
18.	Dr. S Kar (EE) Dr. Sundar Iyer (EE) Dr. P Kalra (EE) Dr. A Ghosh (EE)	International Workshop on RFID and Wireless Sensors	Nov. 11-13, 2005
19.	Dr. B V R Kumar (Math) Dr. S Ghorai (MATHS)	Workshop on Winter School on Scientific Computing	Nov. 19-21, 2005
20.	Dr. A K Mittal (IME) Dr. Veena Bansal (IME)	Symposium on Role of Patent Literature in Technology Development	Dec. 1-2, 2005
21.	Dr. S S Manoharan (CY)	National Symposium on Current Trends in Materials Characterization	Dec. 05-07, 2005
22.	Dr. D P Mishra (AE)	Non-conventional Sources of Energy	Dec. 05-09, 2005
23.	Dr. Gautam Biswas (ME)	Winter Academy 2005 to be held at Jamshedpur	Dec. 06-11, 2005
24.	Dr. Kripa Shanker (IME)	Workshop on Mechanics, Machines and Manufacturing	Dec. 09-10, 2005
25.	Dr. G P Kapoor (MATHS)	Mathematics Alumni Convention and International Symposium on Interdisciplinary Thrust Areas	Dec. 12-13, 2005
26.	Drs. Amitabha Mukerjee & Achla Raina	International Conference on natural Language Processing (ICON 2005)	Dec. 18-21, 2005
27.	Drs. S Khandekar & A K Saha	Workshop on Fuel Cells Power Device of the Future	Feb. 03-04, 2006
28.	Drs. S K Jain & CVR Murty	INAE Conference on Terrorism Hazard	Feb. 16-17, 2006
29.	Drs. M. Agrawal & D. Sanghi	Workshop on IITK Hackers' 2006	Feb. 24-26, 2006
30.	Dr. D. Goswami	Workshop on Quantum	March 06-12,

		Computing	2006
31.	Dr. Dipak Mazumdar	Sponsored Workshop on Modelling of Ladles Fitted with Dual Plugs"	March 24-25, 2006
32.	Dr. Ramprasad Potluri	Recent Advances in Controls & Sensors	March 25-26, 2006

CENTER FOR CREATIVE WRITING AND PUBLICATION

The Center organized the following activities during April 2005 to March 2006.

- A poetry recitation session by students of IIT Kanpur, coordinated by Mr. Vipin Kumar Pathak, Cultural Secretary, Students Gymkhana, IIT Kanpur, April 2005,
- A seminar on "System and Structure in Panini's Grammar", by Prof. R. N. Sharma, Department of Hawaiian and Indo-Pacific Languages, University of Hawaii, April 2005,
- A seminar of "Meditation and Self Development" by Mr. Subodh Gupta, April 2005.
- A workshop on "E-Learning and Creative Communication", by Mr. Gaurav Chadha (NIIT) and S. M. Nafay Kumail (Head, Infopro), April 2005,.
- A ten day theatre workshop by Prof. Surya Mohan Kulshrestha leading to a play named Holi, August 2005, (jointly with Dramatics Club, Students Gymkhana).
- Address by Dr. Narendra Kohli, Hindi novelist and satirist, August 2005
- A seminar by Dr. Narendra Kohli, Hindi novelist and satirist, on "The Relationship between Society and Literature", August 2005.
- Creative writing contest for all, jointly with Hindi Sahitya Sabha, September 2005.
- Hindi debate contest for students jointly with Hindi Sahitya Sabha, September 2005.
- A poetry recitation session by students, staff and faculty, and noted Hindi poet Mr. Dharam Pal Awasthi, and prize distribution ceremony, jointly with Hindi Sahitya Sabha and Raj Bhasha Prakostha, September.
- A seminar on "Einstein: His Ideas and Opinions on Human", by Prof. Sitaram Alladi in October 2005.
- A seminar on "Why Success at IIT does not Translate into Success in Professional Life for Many IITians: Observations and Recommendations from

US Business Leaders", by Mr. Ravi Verma, CEO, Telecommand Software and Services, Rocklin, USA, in January, 2005

- A Film Talk on "From Words to Images" by Atul Tiwari, Script writer, January, 2006 (Jointly with Students' Film Society).
- A seminar on "Some Reflections on Human Resource Development in India" by Prof. B. D. Misra, ex-IIT Kanpur Professor (sociology), January 2006.
- A seminar on "How Can we Make a Difference?" by Varun Vidyarthi, Manvodaya, Lucknow, February 2006.
- A talk by Dr. Abdul Bismillah, the award-winning author of novels such as "Jhini Jhini Bini Chaderiya", entitled "Meri Rachna Prakriya" focusing on the creative process that resulted in his insightful novel on the weaver community in Varanasi, Feb., 2006.

STAFF DEVELOPMENT COORDINATION CENTER

The Staff Development Coordination Center 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, attitude and change habits. The Center has organized industrial visit of staff members in order to 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 2005-2006,

S NO	Title of the Training Programme	Duration and Date	No. of Participants	Participants Profile
1	Induction Training Programme	One weeks April 4-8, 2005	16	Group AB&C
2	Effective Office Management	Three-days May 2-4, 2005	23	Group B&C

3	Safety at Workplace	Three-days June13-15,2005	28	Group B&C (technical)
4	Supervisory Development Programme for TAs	Four-days July 21-24,2005	20	Group B&C Technical
5	Human Relation Skills	Three-days Aug 16-18,2005	15	Group D
6	Energy Management	Three-days Sept 13-15,2005	28	Group B & C
7	Stress management	Three-days Oct 5-7,2005	26	Group B & C
8	Inter Personal Skills	Two-days Nov 21-22,2005	25	Group B & C
9	Pre Assessment Training	Four days 30-12-05to 2-1-06	66	Group B & C
10	Computer Profficiency	Two Weeks Feb 7-16,2006	24	Mechanics& Asstt Care Takers

SC/ST and OBC CELL

At present, **Prof. NS Gajbhiye** (Deptt. of Chemistry), is the Liaison Officer for SC/ST & OBC w.e.f. **September 20, 2001**. He is available in **Room No. 221** (Directorate), Faculty Building at the Institute on **Phone No. 2597950**.

Implementation of reservation orders:

The effective date of implementation of reservation for SCs and STs for direct recruitment is **5th September 1974** in this Institute.

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 Judgment 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 1997/5th 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) considered and **approved** the proposal for grouping of staff for the purposes 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 far 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 Ex-servicemen 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. (c) To and fro TA is being paid to the candidates of all categories out of Kanpur to attend the test and interview [For Group-A: 1st class 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) One additional increment in the pay-scale of Rs.4500-125-7000 was given to Shri Ubale Deepak Raghuvir (SC), Technical Assistant, Department of Chemical Engineering.
 - (ii) Five additional increments in the pay-scale of Rs.4500-125-7000 were given to Shri Anjaneer Kumar (OBC), Technical Assistant, - Computer Centre.
 - (iii) Two additional increments in the pay-scale of Rs.4500-125-7000 were given to Shri Anil Kumar Verma (SC), Technical Assistant, Department of Materials and Metallurgical Engineering
 - (ii) Two additional increments in the pay-scale of Rs.4500-125-7000 were given to Shri R Prasath Babu (OBC), Technical Assistant, Department of Materials and Metallurgical Engineering.

- (iii) Three additional increments in the pay-scale of Rs.4500-125-7000 were given to Shri Ram Krishna (OBC), Technical Assistant, - Aadvance Centre for Material Science.
- (iv) One additional increment in the pay-scale of Rs.4500-125-7000 was given to Shri Lekhraj Singh (OBC), Technical Assistant, Department of Electrical Engineering.
- (v) One additional increment in the pay-scale of Rs.5500-175-9000 was given to Shri Manoj Kumar (SC), Superintendent, Administration.
- (vi) One additional increment in the pay scale of Rs.3050-75-3950-80-4590 was given to Shri A. Kannan (SC), Mechanic, - C.G.B.S.
- (vii) Four additional increments in the pay-scale of Rs.4500-125-7000 were given to Shri A Pugazhenthithi (OBC), Technical Assistant, Department of Civil Engineering.
- (viii) Three additional increments in the pay scale of Rs.3200-85-4900 were given to Shri Hari Singh (SC), Laboratory Assistant, Department of Civil Engineering.
- (ix) Two additional increments in the pay scale of Rs.3200-85-4900 were given to Shri Subhash Maskawade (OBC), Laboratory Assistant, Department of Civil Engineering.
- (x) Two additional increments in the pay-scale of Rs.3050-75-3950-80-4590 were given to Shri Atul Kumar Gangwar (OBC), Mechanic, Department of Civil Engineering.

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 recognized SC/ST Welfare Associations for publicity among their members.

Details of Advertisements (Internal/ external) issued through Recruitment Section are as under:

Advt. No.	Name of Post(s)	Pay Scale	No. of Vacancies				Total	Published in
			S C	S T	O BC	UR		
1/2005	Assistant Registrar	8000-13500	-	-	-	2	2	Circulated within the Institute vide letter No. RA/Rect.4/2005/IITK / 2632 dated 19.05.05
2/2005	Assist. R & D Officer	8000-13500	-	1	-	-	1	All Editions of Dainik Jagran, Amar Ujala, and Employment News
	Assistant Engineer (C)	6500-10500	1	-	-	1	2	
	Assistant Engineer (E)	6500-10500	-	-	1	-	1	
	Superintendent	5500-9000	1	-	-	-	1	
	Tech. Assistant (Lib)	5000-8000	1	-	1	2	4	
	Tech. Assistant	4500-7000	2	-	1	4	7	
	Lab. Assistant	3200-4900	1	-	1	1	3	
	Mechanic	3050-4590	-	-	1	1	2	
	Assistant Care Taker	3050-4590	-	-	1	1	2	
	Asst. Care Taker (Lib)	3050-4590	1	-	-	2	3	
Lower Division Clerk	3050-4590	2	-	2	4	8		
3/2005	Registrar	16400-22400	-	-	-	1	1	All editions of Hindustan Times, Times of India, Hindu and Employment News

4/200 5	Superintendent	5500-9000	1	-	2	4	7	Circulated within the Institute vide letter No. RA/Rect.4/2005/IITK / 2885 dated 28.06.05
5/500 5	Nursery Teacher (Consolidated pay)	5000/-	-	-	-	2	2	Kanpur editions of Dainik Jagran & Amar Ujala
Total			10	1	10	25	46	

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:

A SC/ST member of comparable status is included in the Selection Committees as a full member. For the period of report, the detail of Selection/ Assessment Committee meetings held through Recruitment Section is given below:

For Selection	Total 29 Selection Committee meetings: 14 S/C meetings, wherein SC/OBC representatives included 10 S/C meetings, wherein OBC representatives included 01 S/C meeting, wherein ST/OBC representatives included 02 S/C meetings, wherein SC representatives included 01 S/C meeting, wherein ST representatives included 01 S/C meeting, wherein no SC/ST/OBC representatives included as there was no candidate from SC/ST/OBC categories
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 and registered post 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 one in every ten qrs. to SC/ST employees, out of Type-IA, Type-I and Type-II Qrs. One 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:

Type of house	Houses allotted to			
	SC/ST		GEN	Total
	As per Reservation	As per Seniority		
Type-IA (Single room)	-	-	-	-
Type-1A (Double room)	01	01	08	10
Type-I	02	01	23	26
Type-II	01	02	09	12
Type-III	-	-	-	-
Type-IV	-	-	-	-

2. There is no reservation in the quarters of Type -V (as these Qrs 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 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	01	-	-	11	11
Retirement	-	-	-	7	7
Deaths	-	-	-	-	-
Resignation	-	-	-	1	1
V/Retirement	-	-	-	-	-
C/Retirement	-	-	-	-	-
Termination	-	-	-	-	-
Dismissal	-	-	-	-	-

B: Non-Academic:

Area(s)	SC	ST	OBC	GEN	TOTAL
<u>Appointments</u>					
a) On permanent basis (Through open Recruitment)	-	-	-	1	1
b) On compassionate grounds	1	-	1	-	2
c) On deputation basis	-	-	1	-	1
d) On contract for 3 yrs	7	1	9	10	27
Total	8	1	11	11	31

Retirement	13+1*	-	1	58	72+1*
Deaths	-	-	-	3	3
Resignation	2	1	-	5	8
V/Retirement	-	-	-	1	1
C/Retirement	-	-	-	-	-
SVRS	2	-	-	11	13
Deputationists repatriated	-	-	-	4	4
Termination	-	1	-	-	1
Dismissal	-	-	-	-	-
Total	17+1*	2	1	82	102+1*

• **Cleaners**

Assessment (Non-Vacancy linked personal promotion)

Pay-scale		SC	ST	OBC	GEN	TOTAL
From	To					
-	-	-	-	-	-	-

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:

Existing Strength of Academic Staff (Teaching/Non-teaching) as on 01.04.2006:

Recruited through DOFA

Office

Academic	SC	ST	OBC	GEN	Total
Teaching	3	-	-	322	325
Non-Teaching	1	-	1	41	43
Total	4	-	1	363	368

Existing Strength of Non-Academic Staff as on 01.04.2006:

Recruited through Recruitment Section

Group	SC		ST		OBC		GEN	Total
A	5	13.15%	-	-	4	10.52%	29	38
B	34	16.34%	2	0.96%	19	09.13%	153	208
C	64	19.63%	5	1.53%	39	11.96%	218	326
D	57+18*	24.89%	-	-	11	04.80%	161	229+18*
Total	160+18*	19.97%	7	0.87%	73	09.11%	561	801+18*

* Cleaners not counted towards reservation.

Existing Strength of Account-II Employees as on 01.04.2006:

Recruited Through DORD Office

Group	SC	ST	OBC	GEN	Total
B	-	-	1	5	6
C	1	-	-	15	16
D	3	1	6	3	13
Total	4	1	7	23	35

Existing Strength of Mess Employees as on 01.04.2006:**Recruited through COW Office**

Group	SC	ST	OBC	GEN	Total
B	-	-	1	4	5
C	-	-	1	4	5
D	14+7*	-	36	63	113+7*
Total	14+7*	-	38	71	123+7*

* Cleaners, not counted towards reservation

E- The data as available for showing the **representation of SCs/STs related to the students admitted in the 1st Semester 2005-06** in various programmes/ discipline at the Institute is given below:

Programmes	Registration Data in the 2005-2006 I Semester			
	SC	ST	GEN	TOTAL
B-TEch				
Aero. Engg.	5	1	18	24
BSBE	8	1	19	28
Chem. Engg.	8	2	30	40
Civil Engg.	12	0	40	52
Comp. Sc & Engg	10	5	20	35
Elect. Engg.	13	6	46	65
MME	7	0	46	53
Mech. Engg.	10	4	35	49
Total	73	19	254	346

Programmes	Registration Data in the 2005-2006 I Semester			
	SC	ST	GEN	Total
M.Sc (5yrs. Integrated)				
Chemistry	0	0	13	13
Economics	0	0	16	16
Mathematics	0	0	22	22
Physics	1	0	14	15
Total	1	0	65	66

Prgrammes	Registration Data in the 2005-2006 I Semester			
	SC	ST	GEN	Total
B-Tech-M-Tech (Dual Degree)				
Aero. Engg.	1	0	6	7
Chem. Engg.	2	0	9	11
Civil Engg	2	0	10	12
Comp. Sc & Engg	4	2	21	27
Elect. Engg.	3	1	17	21
Mech. Engg.	3	0	13	16
Total	15	3	76	94

Prgrammes	Registration Data in the 2005-2006 I Semester			
	SC	ST	GEN	Total
M.Sc-Ph. D (Dual Degree)				
Physics	2	0	8	10
Total	2	0	8	10

Prgrammes	Registration Data in the 2005-2006 I Semester			
	SC	ST	GEN	Total
M.Sc (2 yrs.)				
Chemistry	3	0	18	21
Mathematics	4	0	19	23
Statistics	1	0	19	20
Physics	3	0	13	16
Total	11	0	69	80

Registration Data of M. Tech. / MBA / M.Des. students of 2005-06-I Semester

Dept	SC	ST	GN	Total
AE	07	00	36	43
CHE	04	00	51	55
CE	05	00	90	95

EE	08	00	143	151
ME	08	00	137	145
MME	05	00	62	67
CSE	03	01	83	87
MSP	01	01	24	26
IME	03	00	22	25
MBA	13	00	70	83
NET	00	00	15	15
LT	00	00	11	11
EEM	03	01	32	36
BSBE	02	00	15	17
DES	02	00	20	22
TOTAL	64	3	811	878

Registration Data of Ph D students of 2005-06-I Semester

Dept	SC	ST	GN	Total
AE	03	00	33	36
CHE	04	00	31	35
CE	01	00	46	47
EE	03	00	45	48
ME	02	01	45	48
MME	05	00	26	31
CHM	10	00	146	156
MATH	00	00	58	58
PHY	02	00	58	60
M Sc.- PhD (Dual)	01	00	14	15
HSS	01	00	44	45
CSE	00	00	12	12
MSP	02	00	09	11
STA	00	00	05	05
IME	02	00	14	16
NET	00	00	03	03
BSBE	03	01	24	28
TOTAL	39	2	613	654

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 guidance 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 atmoshpere 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
4. printed bilingually in most of the departments of the Institute.
5. The nameplates, office stamps, signboards, letterheads, and envelopes havebeen made bilingual. 13 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.
6. Regular classes of Probodh, praveen & Pragya for the Non Hindi speakingemployees have already been started. 9 Non Hindi speaking employees have been trained in Prabodh, Praveen and 6 trained in Pragya.

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

The Annual Report of the Institute for the year 2004-2005 and the audit Report 2004-2005 received from Account Section/AG, UP were translated into Hindi for submission to the ministry.

The press release 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 28.09.05 Hindi Diwas samaroh was held in the Lecture Hall complex, in which the winner of various competitions were honoured with suitable cash awards.

Following competitions were held on 22.09.05 to 28.09.05 to:

- a) Dictation competition (Fourth-class employees)
- b) Hindi slogan/ vocabulary competition
- c) Hindi essay competition
- d) Debate competition
- e) Poetry recitation competition

Winner of the above competition were as under:

A. Dictation competition

1. Shri Arvind Kumar Pandey Ist
2. Shri Kamlesh Kumar Diwadi IInd
3. Smt. Pramod Kumar Tripathi IIIrd

B. Hindi slogan/ vocabulary competition

1. Shri Binu S Ist
2. Shri S. Biswas IInd
3. Shri Namdeo B. Murkhe IIIrd

C. Hindi essay competition

1. Shri K.K.Tewari Ist
2. M. Yavar Hossain IInd
3. Shri Radha Saran IIIrd

D. Debate competition (Campus School)

- | | |
|-------------------|-------|
| 1. Priya joshi | Ist |
| 2. Sourav Mishra | IInd |
| 3. Pratibha Singh | IIIrd |

Opportunity School

- | | |
|------------|-------|
| 1. Shalni | Ist |
| 2. Manisha | IInd |
| 3. Pinki | IIIrd |

E. Poetry recitation competition

- | | |
|---------------------------|-------|
| 1. Shri Ram Lakhan | Ist |
| 2. Smt. Rekha Shrivastava | IInd |
| 3. Shri Somnath Danayak | IIIrd |

During the year 2005-2006 about 90 letters from Directorate, 83 letters from Registrar,s office, 260 letters/ circulars alongwith Hindi translation from Administration Section and 155 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 of 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.

One of the major on going projects of the center involves faculty across the Institute in production of quality video based courseware to generate resources and aids for supporting the engineering, sciences and technology based education that can reach out to the larger Education system through various communication media. The Ministry of Human Resource and

Development is supporting the initiative under the auspicious of National Program on Technology Enhanced Learning (NPTEL). 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. Recently an up-linking facility from ISRO through its initiative of EDUSAT has been setup in the Media Technology Center. The relevant information / knowledge can be disseminated using this facility and utilized for classroom teaching, student references and research aid.

Students of the Media Communication in the Design Program have an academic relevance to the resources of the center. This year students have exhibited their ample creative talents by producing social ad campaigns, documentary films and music albums. From the semester 2006-07 the resources would be used even by the undergraduate students opting for elective courses such as Topics in Motion Pictures and Video Production Theory and Practice.

Committed manpower and resources of the Media Technology Center is round the year involved in 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 3450.00 lakh as Plan Grant in the financial year 2005-2006.

NON-PLAN

The total receipt under Non-Plan during the financial year 2005-06 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. 1463.89 lakh, which includes Rs. 750.39 lakh as student fees, Rs. 454.44 lakh interest earned on investments/bank balances and Rs. 259.06 lakh as other miscellaneous income.

The Institute has also withdrawn an amount of Rs. 400.00 lakh from Endowment fund account of the Institute for Non Plan activities during the financial year 2005-06.

The total Non Plan expenditure during the financial year 2005-06 comes out to Rs. 8663.09 lakh against the total earnings of Rs. 8663.89 lakh.

PLAN

A total receipts under Plan during the financial year 2005-06 is Rs. 3450.00 lakh grant-in-aid under Plan from the MHRD, Government of India.

The total expenditure under Plan has been restricted to Rs. 3447.33 lakh. This expenditure includes Rs. 988.98 lakh on Building & Works, Rs. 151.86 lakh for Non-Consumable purchases including Equipment, Furniture & Fixtures etc., Rs. 400.16 Lakh on Library Books and Periodicals & Journals.

INCOME AND EXPENDITURE UNDER MAJOR HEADS

Sl. No.	Particulars	Income (Rs. In Lakh)	Expenditure (Rs. In Lakh)
1	Non- Plan	8663.89	8663.09
2	Plan	3450.00	3447.33
3	Other Operational Funds GPF/CPF	1002.08	766.33 (Non Plan)

4	JEE	351.07	269.22 (Non Plan) 6.43 (Plan)
5	GATE	173.76	100.02 (Non Plan) 7.15 (Plan)
6	GATE (JMET)	9.91	5.62 (Non Plan)
7	Research & Development	575.17	366.78 (Non Plan) 38.85 (Plan)
8	Deans Capital Fund	51.04	14.67 (Non Plan) 9.96 (Plan)
9	Hall Management	300.98	277.92 (Non Plan)
10	Fund Hall Management	72.29	54.50 (Non Plan)
11	Pension Hall Management	53.66	86.43 (Non Plan)
12	Student Gymkhana	17.85	20.64 (Non Plan)
13	Visitors Hostel	56.44	50.33 (Non Plan) 0.80 (Plan)
14	Endowment Fund	1139.91	619.73 (Non Plan)
15	GATE (JAM)	24.10	16.64 (Non Plan)

Endowment Report

The financial year 2005-06 has been very successful for fund raising at IITK. The total number of donors this year was about 550 as compared to about 200 last year and total amount of donation received was Rs 2.6 crores as compared to Rs 1.9 crore last year. Even though the total amount received through batch donations dropped this year to Rs 0.95 crore (from Rs 1.8 crores last year) the other donations (scholarships, chairs, etc) increased from Rs 0.72 crore to Rs 1.69 crores.

A summary of donations received during the financial years 2004-05 and 2005-06 are given below:

Sl. No.	Purpose	2004-05 Amt.(Rs.)	2005-06 Amt.(Rs.)
1	Batch Funds	11,869,183.02	9,460,429.00
2	Chairs	875,601.00	3,431,057.11
3	Scholarships and Awards	557,268.65	4,392,218.09
4	Lecture Series	2,218,855.00	670,968.93

5	Department Activities	2,743,856.00	4,589,987.90
6	Alumni Activities	740,136.00	453,400.10
7	Student Support	145,000.00	1,230,178.25
8	Travel Grant	200,000.00	865,882.90
9	Construction		45,038.44
10	Annual Gift Program		1,273,588.00
	Total	19,349,899.67	26,412,748.72

FACILITIES TO STUDENTS

RESIDENTIAL ACCOMMODATION FOR STUDENTS

Hall of Residence:

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 VIII, and two for girls (GH) with total capacities of 3433 and 350 for boys and girls respectively. In addition, there is accommodation for 60 students in single bedroom apartments (SBRA). The construction of hall of Residence No.9 has started and 120 rooms will be ready by the end of July 2006.

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, PC room, TV room, TT rooms, 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. 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 A-L&W Blocks) 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.

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:

Short Term	-	3 Nos.
Long Term	-	6 Nos.

SCHOLARSHIPS

Undergraduate Students

Merit-cum-Means (MCM) scholarships of the value of Rs.1000/- p.m. 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 p.a. 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 MCM Scholarships.

In addition, several students of the B. Tech. /M. Sc. (Integrated) and M. Sc. (2-yrs) 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 2005-2006.

TABLE I (A): SCHOLARSHIPS FOR B.TECH./M. Sc. (Integrated) 2005-06

Undergraduate Scholarships	B. Tech./M .Sc. (Intg.)				
	I	II	III	IV	V
MCM @ Rs. 1000/- p.m. with Freeship	99	63	81	94	31
Freeship	29	30	13	24	11
Free Basic mess plus Pocket Allowance @ Rs.250/-p.m. (For SC/ST)	28	30	13	24	11
NTS Scholarships	31	27	14	11	9
SBI Scholarships	6	2	2	--	1
Lalit Narain Das Memorial Scholarships	--	--	--	1	--
Kinra Scholarships	1	1	--	--	--
IWA Bonn Scholarships	--	1	--	1	--
Neeraj Kapoor Memorial Scholarships	--	--	--	1	--
RRMES Scholarships	3	--	--	--	--
Pt.Balajee G Hardiker Scholarships	1	--	--	--	--
Post Matric Scholarships (A P)	--	--	1	--	--
PNB Scholarships	--	1	--	--	--
CSIR Scholarships	--	--	--	1	--
Coal India Scholarships	1	--	--	--	--
Dr. V.Rajaraman Scholarships (2) Rs. 1000/- p.m.	--	--	--	2	--
Tata Iron Steel Co. Ltd. (TISCO)	1	4	2	--	--
BSNL	2	1	2	--	--
Indian Oil Scholarships	--	2	--	--	--
KVPY Scholarships	6	4	3	2	5
Govt .of UP	--	--	1	--	--
Dr. D. R. Bhagat Scholarship Rs. 2000/- pm for 10 Months	--	--	1	--	--
A. K. Vasudev Scholarship Rs. 2000/- pm for 10 Months	--	--	1	--	--
Govinda & Indira Srikanth Scholarship Rs.2000/-pm for 10 Months	--	--	1	--	--
Anil and Reshma Nigam Scholarship Rs. 2000/- pm for 10 Months	--	--	1	--	--
Anurag Bartaria Scholarship Rs. 500/- pm for 9 Months					
Pratibha Scholarship (Govt. of Andhra Pradesh)	11	--	12	1	--
Govt. of Maharashtra	--	--	--	1	--

TABLE 1 (B): SCHOLARSHIPS FOR M. Sc. (2-years) 2005-06

Undergraduate Scholarships	M. Sc. (2-year)	
	I-Year	II-Year
MCM @ Rs. 1000/- p.m. with Freeship	20	--
Freeship	--	4
Free Basic Mess Plus Pocket Allowance @ Rs.250/- p.m.	4	6
Dr. R. C. Srivastava Memorial Scholarships	--	1

Student's Benefit Fund (SBF) also provides scholarships of the value of Rs.600/- p.m. to the needy students. 54 scholarships from the SBF were provided during the year 2005-2006.

Postgraduate Students

The amount of teaching/research assistantship or fellowship for M. Tech. students is Rs. 5000/- p.m. 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 Physics, Chemistry, Mathematics and Humanities and Social Sciences was (a) Rs. 8000/- p.m. for the first two years of their programmes and (b) Rs. 9000/- p.m. for subsequent years, with stipulation that these students will put-in additional hours of work in departments.

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

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 Counseling and thereafter for the offer of admission is based on the relaxed criterion.

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/- p.m. and room rent exemption are admissible to these SC/ST category students whose parents income does not exceed Rs. 2,00,000/- p. a., in the previous financial year.

MCM scholarship of Rs.1000/- p.m. with free tuition fee is awarded to those registered SC/ST students who are not in receipt of scholarships from any other source including the State Directorate of Harijan and Social Welfare, and whose parents'/ guardians' income in the year preceding the award does not exceed Rs. 2,00,000/- per 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.

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 2005-2006. In addition, 7% students in order of merit in each year are given a Certificate of Merit and a Notional prize of Rs. 400/- for UG students and Rs. 600/- for PG Students.

TABLE III: AWARDS AND PRIZES (2005-06)

Sl. No.	Awards and Prizes	B. Tech. /M. Sc.	M. Sc. (2-Year)
---------	-------------------	------------------	-----------------

		(Integrated)	
1.	President Gold Medal	2	--
2.	Directors Gold Medal	1	--
3.	General Proficiency Prize (Silver Medal)	12	4
4.	Proficiency Prize (Best Project)	16	4
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 Rs. 400/-	1	--
10.	Banco Foundation Prize (ME) Rs. 500/-	1	--
11.	Mars G. Fontana Prize (MME) Rs. 400/-	1	--
12.	Sridhar Memorial Prize (EE) Rs. 600/-	1	--
13.	Ajai Agarwal Memorial Prize (ME) Rs. 1000/- Share	1	--
14.	Tata Consultancy Services Prize Rs. 5000/- each Dept. share	2	--
15.	Jayesh Memorial Award Rs. 30000/-	3	--
16.	Aditya Birla Scholarship of Rs. 65000/- each student.	5	--
17.	Dr. Sangeeta Goel Memorial Award	1	--
18.	Dr. S. D. Bokil Memorial Medal	2	--
19.	Notional Prizes (UG)	99	10
20.	Notional Prizes (PG)	41	--
21.	O. P. Bajaj Memorial Award	1	--
22.	Amit Saxena Memorial Award	1	--
23.	Sports Scholarships	19	1
24.	Batra Gold Medal	2	--
25.	Bhagwani Devi Maheshwari Gold Medal	1	--

ACTIVITIES OF STUDENTS GYMKHANA

IIT Kanpur has always strived to encourage an equitable balance between academics and extra curricular engagements in the student body. The intention is to create future leaders in their chosen fields and not just technically accomplished individuals. The Institute strongly believes that a deep seated and abiding social and humane engagement is the hallmark of its students. This feeling is fostered by the

institute in the support it provides to various social, cultural and sporting activities pursued by the Student Gymkhana and other student groups. The year 2005-2006 also saw a very active calendar in the form of various games and cultural events.

Games and Sports Activities at IIT Kanpur

IIT Kanpur has a very vibrant sports atmosphere. There are sports events all over the year at both, the hostel level and at the Institute level. The Games and Sports Council conducts all sports activities at the Institute level and actively helps in the conduction of the events in the various hostels. There are dedicated institute teams for each sport in addition to clubs that augment the sports culture in their own way.

IIT Kanpur boasts about some of the very best facilities of any Institute in the country. There is a full grass cricket ground, athletics track, two volleyball courts, basketball courts, an indoor setup for Badminton, TT and weightlifting and fully Floodlit Hockey and Football grounds. In addition to these great playgrounds, there is also an Olympic size swimming pool, replete with a diving board set-up, five regularly maintained tennis grounds, two concrete and three clay courts and an indoor gymnasium. The maintenance and addition of new facilities is entrusted to the Physical Education Section, a separate department devoted to sports activities, which boasts some very highly qualified coaches.

The Games and Sports Council comprises of the teams for various sports and a clubs related to sports. The past one-year has been very successful for the Council. The Institute teams practice regularly in preparation for the Inter IIT Sports Meet, conducted every year in December. They play practice matches against local clubs, both at home and away, and other teams that come over to IIT Kanpur during **IIT Sports Meet**, The IIT Kanpur sports festival. Some of our teams have developed very well in the past one-year. The football team hasn't lost a single match at home in the past one year against in all competition.

The Games and Sports Council, Students' Gymkhana, IIT Kanpur, undertook many activities in its calendar year.

Inter IIT Sports Meet '05 : 41st Inter IIT Sports Meet '05 was held at IIT Roorkee from December 12th to December 18th, 2005. IIT Kanpur participated in all sporting events except Basketball (women) and Tennis (women).

Performance of IIT Kanpur was better as compared to the last year but was not up to the mark of expectations. IIT Kanpur secured 6th position in the overall (men) with 8 points and 2nd position in the overall (women) with 22 points.

JOSH : Josh 2006 saw a very large participation, with over 40 teams in all the sports and over 100 teams for night Phatta. All the events went peacefully.

Clubs:

1) Adventure Sports Club:

Year 2005-2006 was a year of new accomplishments in the field of adventure for IIT Kanpur. A new dimension was added to the Adventure Sports Club of IIT Kanpur by introducing High Altitude Mountain Cycling as one of its activities. Three major activities and a lot of minors ones were organized during this year.

First activity in the lot was a trek to Guicha La (5000 metres) in Sikkim Himalayas. It was the first time that Adventure Sports Club went for a trek to the Eastern part of the country. Earlier trekking was confined to the northern states: Uttaranchal and Himachal Pradesh. 16 people took part in this high altitude trek.

Second major activity was organized in October 2005 during mid semester recess. 19 students from IIT Kanpur went for a trek to Khatling Glacier (3500 m) in the Garhwal Himalayas in Uttaranchal. The group was complete in the sense that it included participation from most of the hostels: undergraduates, postgraduates and girls. The trail went along river Bhilangana that originates at Khatling Glacier. Contrasting features like dense forests, steep climbs and descents, plain open grasslands and landslides marked terrain. Though the group could not reach 'zero-point' due to lack of days but the trek was an overall success.

March 2006 was the month of adventure as 45 students went for various adventure activities to the mountains. High Altitude Mountain cycling expedition was organized during this period.

Cycling expedition was organized to induce a spirit of real adventure and leadership among the members. A rigorous selection procedure was carried out to select 14 students for the cycling expedition. More than 50 students attended the conditioning camp held everyday in the Main Stadium from 0545 - 0700 hrs. It conditioned the students physically and mentally so that they could handle any kind of situation on the expedition. Various selection steps involved a cross country race (6 km.), cycling

trip to bithoor (40 km) and a cycling trip to Nawabganj (140 km). The rigorous selection process proved to be a success when ALL members were able to reach the WORLD'S HIGHEST VILLAGE (connected by motorable road) called KIBBER (4550 m) on mountain bicycles.

A Basic skiing course was also organized for the new students (1st and 2nd yearites) to introduce them to the spirit of adventure. 25 students took part in the activity. Boarding and lodging was arranged at the DMAS dormitories at Manali and Solang Nalla. For the first time, such a large team was assembled by the club. In fact, there was increased participation by first and second years, and an unprecedented number of girls (six). The team was predominantly composed of first-timers, with two members having prior trekking experience. Hopefully, many of these first timers and first and second years would continue to be part of other adventure club expeditions.

A basic rock climbing course at Nainital was also organized. 6 people took part in the activity.

2) Tae kwondo Club:

The Tae Kwondo club was very active in past one year. The activities during the year 2005-06 were distributed over four sessions.

Summer Term (May05' to July06')

Semester-1 (August 05' to Nov05')

Winter Term (December05')

Semester-2 (January06' to Aprit06')

Summer term

During this term around thirty students registered for the summer course paying a membership fee of Rs.150 each for the three months. In the term we had special emphasis on self-defense in real life situations. The students also gave a Belt Promotion test in June. The test was held at district level and students of our club did every well to hold positions in the test.

Semester-1 (August 05' to Nov05')

In the first semester of the academic year 05-06' around forty students registered paying a fees of Rs.200 each for a period of four months. During this session we emphasized on comprehensive Tae kwondo training. During this term members participated in two belt promotion tests one in August and other is October. The number of students participating in the two tests was about 20 and 13 respectively. The performance of club members at the district level was very appreciable as they secured top positions in the belt test.

Winter Term (December05')

In the winter term around thirty students registered paying a fee of Rs.50 each for the period of one month. Students participated in a belt promotion test held in mid of December

Semester-2 (January06' to April06')

Around forty students registered in this semester as well paying a fee of Rs.200 each for the period of four months. This semester witnessed a lot of activities.

TaeKwondo was added as a sport in Josh06'. The event had different competitions aimed at different skills ranging from strength and fitness to core TaeKwondo skills and different kind of participants from campus kids to male and female students of IITK. These competitions were open to all the members and non-members of TaeKwondo club. This made it a very successful and popular competition. Apart from this competition the other major activity held in this term was the District Level Belt Promotion test conducted in our campus in the month of Feb. This featured the participants from all the Tae Kwondo schools in the Kanpur city and obviously the students of our club and C.P.A. Our performance in this test was great yet again.

Among the greatest achievements during this session is that three members of our club successfully passed the Black Belt test. This was a zonal level test held in Lucknow.

Still the second district level belt promotion test of this semester is about to be held in april06'. The members are preparing for the same.

3) Bridge Club:

It has been just over an year since the Bridge Club came into existence. The club has shown rapid growth in terms of popularity and now boasts a membership of over 60 students spanning over the entire student community. The club has taken umpteen initiatives to inculcate the bridge culture among the students. These range from conventional methods like workshops and tournaments to innovatively devised ones like posting of notes, organizing online quizzes and training sessions in small groups.

The Bridge Club came up with its own website in the domain of the Sports Council. It was used as a platform to provide information to students (members and nonmembers) regarding bridge playing. Notes were posted and online quizzes were conducted to enhance concepts and conventions.

4) Nature Club:

Nature club has organized trips inside the campus as well as outside the campus this year.

- 1) There were in all five trips taken for the bird watching in and around the campus covering the areas airstrip, agricultural fields after airstrip near the academic area and the canal behind hall 8. The numbers of participants were around eight to ten in the trips.
- 2) There was a tree watching trip in which the academic area was covered and the aero department road. The numbers of participants were around eleven.
- 3) There was a trip to Mirzapur during the Dusherra recess. There in all twenty people went.

Antaragni Report

Antaragni was conducted from the 20th to 23rd October 2005. Nearly 50 colleges and 1000 participants from across the country visited the institute to participate in the four day event. In many ways, Antaragni zero five (as was dubbed by the media) was bigger and better. First, 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. Second, Antaragni broke the shell of a traditional cultural festival. It came out with a purpose, a campaign to show the youth tomorrow a path they could take up which would help in nation building. The idea was drilled through poster campaigns and competitions. The biggest bang was the panel discussion in which Dr Arun Shourie, Mr. Bindeshwara Pathak, Gopal Sutwala amongst others discussed and deliberated over the issue of "The role of Youth in Nation Building". The Director, Dr S G Dhande, moderated the discussion. Third, Antaragni got its biggest media coverage with a national level television channel Sahara Samay becoming its main sponsors. Fourth, the enthusiasm across the country grew leaps and bounds forcing the organizing team to stop registrations even before the last date.

Informals events like Dares etc were conducted in the Mall which kept catering to the crowd who was too lazy to leave the SAC. There were two movies late night for the insomniacs in the open air grounds.

The Second day at Antaragni started with all the big competitive events starting up for which the best colleges from across the country had come down to IIT Kanpur. Dramatics topped the list with fierce competitions. Darpan-The Stage Play saw unprecedented participation with nukkad being the biggest show case of the day.

Englis Literary competitions, Hindi Literary Competitions, Quiz Events, Dance Events, Fine Arts Events all kick started the second day.

Second day was also host to the Kavi Sammelan. Poets of national stature like Dr Ashok Chakravarthy, Vishnu Saxena, Pradeep Chaubey, Ashish Anal and Sarvesh Asthana took to the stage with an audience rolling with laughter and craving for more. Kavi Sammelan was a pioneer event this Antaragni and is sure to now become an integral part in subsequent years.

India Haat, the folk showcase of the country, also started off on the second day with performances from Goa and Mizoram state drawing a huge number of junta. India Haat was very well appreciated with the special lok geet from MP desrerving a special mention. India Haat was extended to three days day due to the demand of the over enthusiastic crowd.

Discotheque continued to be a popular destination for shaking that extra leg with the late night movies provided students with a place to relax and wring out the weariness of the day.

On the third day, a dandia night was introduced this year before the people could hit the floor one final time. Specialist Gujrati music, colourful costumes was the high point of the discotheque on the third and final day of the Discotheque.

The major attraction of the third Day was Mridaksh, the personality contest. Three preliminary competitions had already been conducted and the finals were held in the packed auditorium. Rishi Srivastav, an alumnus had flown in from Singapore to host the event.

The final extravaganza of the day was the Rock Night. Three bands, namely the Sceptre from the Hard Rock Genre, Them Clones for a moderate rock performance and Alter Ego, a newbie had been brought in to a crowd of over 3000 people, hysterical and head banging their way into the night.

The final day of Antaragni finished off all the competitions with winners and others all craving for more. Skit Competitions and Radio Play (a pioneer event) topped the list.

Dance finals were conducted in the auditorium with a surprisingly excellent talent giving judges a hard time twitching numbers to give away the final prizes. The folk dance saw some of the highest energy performances.

The Mall area was abuzz with the innovative and first time ad-mad event with some crazy ideas coming up to sell a soft drink. India Haat's final extension day satisfied crowds salivating for more rich heritage after the last two days of showcase.

The fashion show, conducted in the open air for the first time, was a major gala event with three NIFD's fighting for crown of ramp champions which finally fell on the Kolkata team for their innovative theme and costumes.

The grand finale of Antaragni, the KK performance broke all records of all Antaragni's . The crowd was much over the expected guess of 5000. The two and half hour sizzling performance with professional sound setup was a fitting ending to the four days of thrill and excitement which came down upon the sober campus of IIT Kanpur during the fall of 2005.

The home team performed exceptionally well but they were not eligible for the grand prize. The next best team was IIT Delhi based on cumulative score who were awarded the Antaragni trophy. Patna Womens College deserve a special mention as they bagged the third spot with only around 20 people.

Antaragni was incident free with the security performing exceptionally well.

Techkriti 2006 Report

Techkriti 2006 was successfully conducted from Feb 23rd to 26th, 2006. It saw an overall participation of over 700 students from all over the country. The theme of the festival was kept India 2050, in lieu of the upcoming trends and seeking India as the forerunners in the field of technology.

Events: New events introduced this time were Turbulence- Fly high and Pushpak-the glider making competition, Get Set Go and Ham Fest also became the part of the festival. Apart from these events, Cosmos-the astronomy figure in the festival and Ind-ex were also rejuvenated. Along with these the regular events of the festival were conducted. Takneek seems to have helped in improving the participations of IITK junta in the festival , with more IITK participants in events like ECDC, Robotics, IOPC and Pushpak.

The professional show had a team of aeromodellers coming to put up an aero show along with other elite features including a Sun workshop and grooming workshop by Raymonds.

The festival was conducted smoothly without any major glitches. It received extensive media coverage with daily reports published in all major newspapers. Satisfying care was taken of all the participants, sponsors, guests and campus community. All the workshops, lectures and events received huge response and participation.

Umang

This time we had a totally different picture of Umang before us. We wanted to call personalities from the field of cinema and wanted to make Umang a bigger festival than what it was earlier. Initiatives were taken to contact various cinema personalities and embassies for the screening of films in our campus and also the procurement of films. The efforts bore fruit when Ms. Shonali Bose, Dr. B. Pain, Sudhir Mishra and Atul Tiwari agreed to visit Umang 2006. Alongwith them Ms. Kavita Joshi also agreed to conduct a 5 day long film making workshop in our campus. The salient features of Umang 2006 are as follows:

Students' Film Society successfully organized its annual film festival Umang 2006 from January 6, 2006 till January 15, 2006. The festival saw several new amendments and achievements.

Key Achievements of Umang'06: for the very first time in the history of the IIT Kanpur film festival, some of the key features in the festival are as following:

- 3 Kanpur premiers - *Amu (IV time in India)*, *Hazaaron Khwaishein Aisi (which later went on to win the filmfare award for Best Story and Best Debutant Actor)*, *Bose:The Forgotten Hero*
- A diverse films' selection focussing the post 80s cinema; covering an overall 30 films including 10 Bollywood films, 8 Hollywood films, 4 foreign language films (Korean, French, Iranian and Greek), 2 regional language films (Malayalam and Tamil) and 6 documentaries from Films For Freedom.
- Celebrities in the festival

Shonali Bose - Director of *Amu*

Dr. B. Pain - Executive Producer of *Amu*, NASA scientist; inducted in US Space and Technology Hall of Fame

Sudhir Mishra - Director of *Hazaaron Khwaishein Aisi*, *Chameli*, *Calcutta Mail*.

Atul Tiwari - Script Writer of *Bose-The Forgotten Hero*, Dialogue Writer of *Mission Kashmir*

Kavita Joshi - Film instructor, documentary film maker.

Capt. Laxmi Sahgal - Commander of Rani of Jhansi Regiment in Azad Hind Fauj of Netaji Subhash Chandra Bose .

- Sponsorship - Marketed the festival for the first time. We received sponsorship from Coke and Sona Jewellers and media partnership from Hindustan Times.
- Intercollegiate Film Festival Status- 3 Outside teams: *MCRC Jamia Millia Islami (Delhi)*, *Amity School of Communication (Delhi)* and *Jaipuria Institute of*

Management (Noida). Jamia Millian Islamia bagged the first prize in Director's Cut.

- A newly structured Final of Film Making Contest - judges from the film industry and overall new structure.

In addition several other events were there in Umang'06 as:

- Opening Show: Safar – A Journey of Indian Cinema
- Panel Discussion – Media and Globalisation ; Panelists were Shonali Bose, Dr. B. Pain and Sudhir Mishra.
- Open House Discussions with the film makers
- Film Talk by Atul Tiwari – From Words to Images.
- A 5-day long film making workshop by Kavita Joshi.
- Antakshari, Film Quiz and Treasure Hunt.

Thus, with a new look and content, Umang 2006 happened to be a great cinematic experience for the students.

6. PE-Course for First Year Students:

Compulsory Physical Activities (CPA) Programme is a senate approved programme for 4 year B. Tech., 5 Year Integrated M.Sc.-5 year B.Tech-M.Tech. Dual Degree students. This is a two-semester Programme run under the Course Number PE-101 and PE-102. In both the courses there 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 (Satisfactory) / X (Unsatisfactory). The grade will be given after the End semesters 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 hours of games per week. The remaining Students will under go Physical Exercises once a week for an hour out of three hours per week. Remaining two hours will be for one of the personality

Development Activities namely. (I) Yoga (II) Tae-Kwon-Do (III) NSS (IV) 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 08 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 July 31 to August 04. 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

Numbers 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 duration) for at least 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 Exercises twice a week (each session of hours duration) for at-least 24 hours in each semester. Seats will be filled up 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 duration) 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= 194 (152 Boys+42 Girls).

Participation in Games & Sports thrice a week (each session of an hours duration) for at least 36 hours in each semester. Seats will be filled up through selection Trials. The instructors, Games will conduct these selections Trials as programme mentioned below:

S. N.	Games & Sports	Boys	Girls	Trial Time 5:00 P:M	Trial Location
1	Athletics	20	10	31 July-01 August 06	Main Stadium
2	Badminton	06	04	31 July-01 August 06	Indoor Gymnasium
3	Basketball	18	12	31 July-01 August 06	Basketball Court
4	Cricket	18	00	31 July-01 August 06	Main Stadium
5	Football	22	00	31 July-01 August 06	Football Ground
6	Hockey	22	00	31 July-01 August 06	Hockey Ground
7	Table-Tennis	06	04	31 July-01 August 06	Indoor Gymnasium
8	Tennis	06	03	31 July-01 August 06	Tennis Court
9	Volleyball	16	00	31 July-01 August 06	Volleyball Court
10	Wt. Lifting	08	00	31 July-01 August 06	Indoor Gymnasium
11	Swimming	15	06	31 July-01 August 06	Swimming Pool

Note:

- (a) Activities under particular game/sports may not run if less than three Students opting it. The seats will be filled up only on the basis of Students performance to be judged by the instructors during the trials.
- (b) No change over will be allowed from one stream to the other stream or one game to another game.
- (c) Streams (including sub-streams under Games & Sports) will be finalized within 5 days of the Registration and final list will be put on the day.
- (d) Students failing to get seat in the opted stream shall join NCC straightway without any loss of time.

PE-102, SECOND SEMESTER FROM JANUARY- APRIL

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

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, lifeguards 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.

Faculty Incharges Students's Affairs

Dean, Students Affairs	Dr. S.G. Dhande	Upto 24-08.2005
	Dr. Prawal Sinha	From 25-08.2005
Head, Counselling Service	Dr. Onkar Dikshit	From 28-04-2003
Chairman, Council of Wardens	Dr. M.K.Harbola	Upto 31.01.2006
	Dr. F.A. Khan	From 01.02.2006
Vice-Chairman, Council of Wardens	Dr. F.A. Khan	Upto 31.01.2006
	Dr. A.K. Chaturvedi	From 01.02.2006

Counsellors, Students' Gymkhana

Chief Counsellor	Dr. S.G. Dhande (upto 24.8.2005)
	Dr. Prawal Sinha (from 25.8.2005)
Cultural Counsellor	Dr. A.K. Sharma
Games Counsellor	Dr. P. Shunmugaraj
Films Counsellor	Dr (Mrs) Suchitra Mathur
Science & Technology Counsellor	Dr. Pankaj Jalote
Treasurer	Dr. N K Sharma
Chairman Students Benefit Fund	Dr. Onkar Dikshit
Chairman Students' Placement Committee	Dr. Vinod Tare
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

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. Alope Dutta , Warden-in-Charge
 Dr. Ashish Garg, Warden
 Dr. Avinash Agarwal, Warden

Hall of Residence No. III

Dr. P. S. Ghoshdastidar, Warden-in-Charge
 Dr. Bikramjit Basu
 Dr. Amman Madan, Warden

Hall of Residence No. IV

Dr. Partha Chakraborty, 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, Warden

Hall of Residence No. VII

Dr. A. K. Chaturvedi, Warden-in-Charge
(upto 27.10.05)
Dr. N. K. Sharma, Warden-in-Charge
(from 28.10.05)
Dr. Sameer Khandekar
Dr. S. Manoharan, Warden

Hall of Residence No. VIII

Dr. V.Ravi Shanker, Warden-in-Charge
Dr. A.R.Harish, Warden

Hall of Residence- GH

Dr..Brahma Deo, Warden-in-Charge
Dr. Achla Raina ,Warden
Dr. Asima Pradhan, Warden

SBRA

Dr. Onkar Dikshit, Warden-in-Charge
Mr. Suresh A , Convener

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. Neeraj Kumar (From February 2005 to March 2006)

Convener, Students Senate

Mr. Yashodhan Shevade (From Feb2005 to March 2006)

General Secretary (Cultural)

Mr. Vipin Pathak (From Feb 2005 to March 2006)

General Secretary (Games)

Mr. Harendra Verma (From Feb2005 to March 2006)

General Secretary (Films)

Mr. Abhinav Biyani (from February2005)

General Secretary (Science & Technology)

Mr. Varun Garg (From February2005 to March 2006)

STUDENTS' PLACEMENT

The Students' Placement Office continues to play a vital role in assisting the students in career planning and employment. It was actively engaged in disseminating information of job opportunities and prospects with the employers in both the Public and Private Sectors. Students Placement Office has been arranging campus interviews and organizing Paid Summer Internships for students.

Invitation letters were sent to about 750 Industrial Organizations, both in Public and Private Sectors, for visiting our campus for recruitment of students. About 132 organizations participated in the On-Campus-Recruitment-Programme during the academic year 2005-06 either by sending their top ranking executives to the campus or by calling the students to their Head Office for the interviews.

This year some organizations like Lehman Brothers, Google, Amazon, Cisco, Ittiam, Morgan Stanley, Sandisk, British Telecom, Cypress, Sterlite Optical, Telecommand, Mechwell, CapitalOne, Synogy, Sarnoff, Shell India, Global Analytics, Godrej Industries, Pacificmind, Accenture, KLA Tencor, NT5 Soft, ICF, TCE, Halcrow, Riskraft, Financial Technology, Mu Sigma, Unitech, Tejas, Altair, Newgene, Etihad, Trans Market, Bentley, Syngenta Biosciences, Symphony, IOCL R&D Center etc. have recruited for the first time through the On-Campus-Recruitment-Program. The employment scenario during this year has improved to a great extent in comparison with the last two years.

A total number of 637 offers of appointments have been made till 30.06.2006 to the students by various employers through Students Placement Office. A total of 82.73% of the students registered with SPO have received job offers so far. The placement for B.Tech. Students have crossed 92% mark this year where as for M.Tech. Students, it was about 82%.

With the objective of close monitoring and uniform opportunity to all the students registered for the placement, the policy was "one job per student". With regard to the IN-Plant-Training Programme during summer vacation for the prefinal year students, the Students Placement Office offered assistance to students of all the engineering departments. About 45 paid summer training seats were offered to our students. Statement showing the number of students registered for availing placement assistance and those who received job offers through Students Placement Office are given in Tables I to III. Overall placement profile is depicted in Figure I.

Table I: Jobs Offered to Students Graduating in the B.Tech, B.Tech-M.Tech Dual Degree and M.Tech Programme - 2005-2006

Branch	B Tech		Dual Degree		M Tech	
	Eligible#	Placed	Eligible#	Placed	Eligible#	Placed
AE	21	21	3	3	16	12
BSBE					5	1
CHE	42	40	5	3	21	13
CE	33	28			32	28
CSE	38	37	13	12	46	46
EE	65	64	11	9	59	58
EEM					16	14
IME					9	9
LT					1	1
M Des					9	9
ME	49	48	13	9	56	55
MME	36	32			24	21
MSP					6	2
NET					10	9
TOTAL	284	270	45	36	309	267
Percentage	95.07		80.00		86.40	

Table II: Jobs Offered to Students Graduating in the M.Sc Integrated, M.Sc II Year and MBA Programme - 2005-2006

Branch	M Sc (5 Years)		M Sc (2 Years)		MBA	
	Eligible#	Placed	Eligible#	Placed	Eligible#	Placed
Chem	9	6	10	1		
Maths	14	13	29	27		
Physics	7	2	19	1		
IME					46	46
TOTAL	30	21	58	29	46	46
Percentage	70.00		50.00		100	

Table III: Placement Scenario at a Glance-2005-2006

Degree	Eligible#	Placed	Percentage
B Tech	284	270	95.07
Dual	45	36	80.00
M Tech	309	267	86.40
M Sc (5)	30	21	68.97
M Sc (2)	58	29	31.03
MBA	46	46	100.00
TOTAL	772	669	86.65

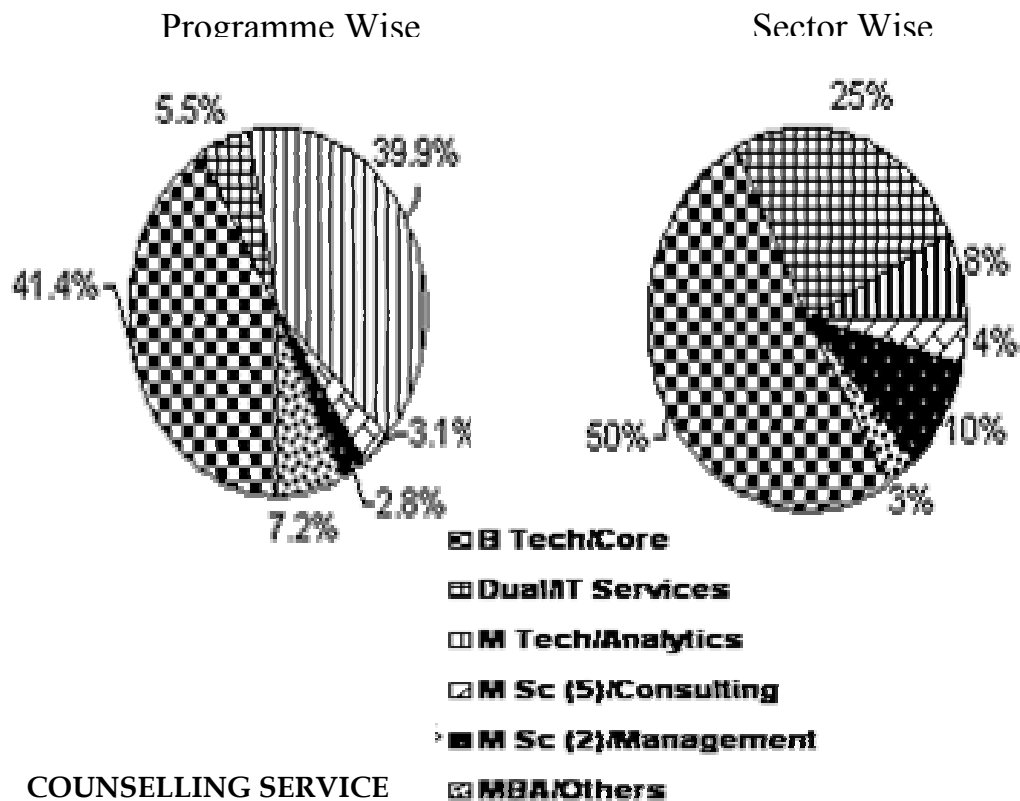


Figure I: Overall Placement Profile

Counselling Service is an organization made up of student volunteers, faculty members and staff who offer help and guidance to students on the academic, emotional and financial fronts. During the session April 2005-March 2006, the Counselling Service had two UG coordinators, two PG Coordinators, assisted by 5 UG assistant coordinators and 4 PG assistant coordinators and a team of nearly 72 UG student guides and 37 PG student guides.

Like every year, the activities of the Counselling Service started during the summer with the preparation for welcoming the new batch of students. A well planned brochure including letters from the Head, Counselling service, Student Coordinators, President, Students' Gymkhana informing them about the practical details of life at IIT Kanpur and other useful information like the bus schedule, academic calendar and the map of the Institute 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 assigned to them 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.

A common Orientation Programme for the new UG and PG students (for 5 days) was organized during which they were shown around the campus and informed about the various facilities available to them. They were assisted in opening up new bank accounts and were guided through all the official processes of making I-Cards, health booklets, cc logins and the final registration. 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. Lectures by the Head, Computer Center were also included.

A Link structure was also formed after the commencement of the academic session in August to take care of academically deficient students. The team consisted of 21 link students and 14 link faculty members associated with every department. Regular meetings were organized to monitor their academic performance. A total of 6 meetings (3 in each semester) were held to discuss the issues related to these students. During the session 2005-06 (I), 58 students were on Academic Probation list and 76 students on Warning. Around 57 students came out of the list after this semester. A total of 140 students were on AP/ Warning during the 2005-06 II session.

Like the previous year, this year too certain students were recommended the slow paced programme, on the basis of their performance up to the first mid semester

examination. Meetings were held with these students to suggest semester wise course plans according to their departments.

To assist the students having problems in English conversation and comprehension, the Counselling Service organized conversational classes at nominal rates.

Like every year, Counselling Service appointed a professional psychiatrist who visited the campus on alternate Saturdays to resolve various psychological problems of the students and an assistant counsellor to support the various activities of the service. A total of 115 students consulted the psychiatrist. In addition to this, psychiatric help was also available outside the campus in cases of emergency through the Counselling service. A proactive initiative by the assistant counsellor motivated students to come forth for guidance in personal and emotional issues. A total of 90 students met her during the period from December 2005- April 2006.

On the financial front, students were provided assistance through SBF scholarships. Around 54 students could avail this facility. Loans were provided to students facing acute financial problems.

A Counselling Automation System (CAS) was devised with the help of Office Automation. In this system, the course instructor can give online feedback about academically deficient students. Different authorized people in the Counselling Services can access these feedbacks, which will be helpful for monitoring. The CAS is to be operational in the coming semester.

In February 2006, the new coordinators both for UG and PG were selected and interviews were held for selecting the new assistant coordinators and student guides for the next session. New faculty counsellors were also appointed as per the choice of the student guides. The new team took charge after the handing over ceremony on April 5, 2006 where the old team was presented mementos by the Director.

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:

S. No.	Unit	Responsibility	Unit-in-charge
1.	Civil Division-I	Development Works	Executive Engineer
2.	Civil Division-II	Maintenance & up-gradation works. Water supply, furniture, roads.	Executive Engineer
3.	Electrical Division	Electrical maintenance Domestic / Central AC maintenance	Sr. Electrical Engineer/ Superintending Engineer
4.	Horticulture	Development & Maintenance	Horticulture Officer
5.	Estate	Estate Management & Sanitation	Estate Officer

During the financial year 2005-06, IWD has undertaken the following major development works

A- CIVIL WORKS :

Sl. No.	Name of Work	Value of work (Lakhs)	Date of Start	Date of completion	Work Status
1	Remodeling and Extension of Environmental Engg. Lab (WL)	38.81	07.05.05	13.01.06	Completed
2	Construction of 24 units Single Bed room Apartments (SBRA) at IIT Kanpur	111.57	09.06.05	08.03.06	Completed
3	Construction of RCC boundary wall towards ALIMCO	8.72	05.06.05	04.10.05	Completed
4	Construction of store room and model working room in NWTF	15.24	26.06.05	25.10.05	Completed
5	Repairing of brick path P/L CC pavement over existing dry brick pitching in H. No. 365 to 390 & 3043 to 3074	6.13	16.06.05	15.10.05	Completed
6	Construction of boundary wall and security room for director's Residence building	6.79	16.06.05	15.07.05	Completed

7	Construction of Hall for extension of air-conditioning plant	5.74	17.06.05	16.08.05	Completed
8	P/F wire mesh shutter & modification of cupboard shutter & internal white washing / painting of Hall of Residence No. IB (A, B, C & D)	20.10	04.08.05	03.12.05	Completed
9	Construction of RCC boundary wall from Pradhan gate Nankari to Barasirohi	65.72	09.09.05	07.04.06	Completed
10	Renovation of canteen of Hall No. 5 construction of new kitchen and storeroom.	5.64	23.09.05	22.11.05	Completed
11	Construction of stage platform at Auditorium ground	5.58	07.10.05	06.12.05	Completed
12	Extension of ladies change room at swimming pool.	5.47	24.10.05	23.01.06	Completed
13	Civil work for proposed Transportation Engg. Lab in Central workshop.	5.61	17.11.05	16.02.06	Completed
14	Replacement of tiles of swimming pool at IIT Kanpur.	28.88	03.12.05	25.03.06	Completed

15	Re-construction of mess courtyard coal shade, store room, Slough room and dustbin in Hall-IV.	6.03	14.12.05	13.03.06	Completed
16	Renovation of toilet / bathroom of "G" Block of Hall of Residence No. III.	8.67	12.01.06	11.04.06	Completed
17	Conversion of pilot plant building into Nano-science building	47.72	13.02.06	12.08.06	In Progress
18	Renovation of toilet / bathroom of GT1, GT2 & GT3 of Hall of Residence No. II	8.93	12.02.06	11.05.06	Completed
19	Construction of Hall of Residence No.-IX	394.47	24.11.05	23.11.06	In Progress
20	Construction of Lecture Hall Complex.	133.62	28.01.06	27.10.06	In Progress
21	Construction of Alumni & Student Career Centre.	187.85	03.09.05	02.06.06 (extend to 2 June to 25 July i.e 52 days)	In Progress
22	Construction of Telephone Exchange Building	7.28	27.09.05	28.01.06	Completed
B - ELECTRICAL					
23	Installation of capacitor bank at SS No.5 & old AC	15.52	17.12.05	16.04.06	Completed

	Plant.				
24	Rewiring of dinning hall and kitchen at Hall-IV.	6.05	11.6.05	10.09.05	Completed
25	Modification of electrical installation of WL 115, 116 & 117.	9.54	12.6.05	11.11.05	Completed
26	Providing power supply to compressor unit and shifting old existing MCC panel with accessories at AC Plant. (new)	22.01	6.06.05	5.12.05	Completed
27	Provision of 2nd source of power supply 11kV for SS No.VI from SS No.III	43.11	16.06.05	15.12.05	Completed
28	Construction of 24 units SBRA qtr.	10.79	12.06.05	11.03.06	Completed
29	Renovation of HT panel at SS No.1	35.32	11.5.05	10.08.05	Completed
30	Construction of alumni building	26.67	24.10.05	23.07.06	In Progress
31	Modification / strengthening of 2nd source of power supply from SS No.2 to central library.	9.96	16.10.05	15.02.06	Completed
32	Providing addl. source of power supply from switch room of old	6.78	17.11.05	16.02.06	Completed

	RA hostel to new RA hostel.				
33	Construction of 4 Nos. blocks of hall of residence for Boys No.IX.	77.23	10.12.05	9.12.06	In Progress
34	Providing & laying of HDPE pipe for single mode fiber cable for networking in Acad. Bldg. & hostel.	24.60	17.12.05	16.06.06 (applied for extension)	In Progress
35	Providing street light fitting on poles along the newly constructed boundary wall from pradhan gate to Hall-VIII.	6.53	28.12.05	27.04.06	Completed
C - AIR - CONDITIONING					
36	Installation of 400 TR capacity screw chiller at new AC plant.	55.52	6.06.05	5.12.05	Completed
37	Construction of Aumni & Student Career Centre Bldg.	26.14	17.11.05	16.08.06	In Progress
38	Supply & fixing of new 92 TR condenser with unit No. 5 & 7 of old central AC plant.	6.57	5.03.06	4.07.06	In Progress
39	Providing & installation of water softening	6.50			LOI placed

plant for new 400 TR screw chiller.				
-------------------------------------	--	--	--	--

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

1. Construction of Centre for Environmental Science & Engineering

Following new major projects are under planning :

1. New Core Lab. Building
2. JEE / GATE Building
3. Building for Helicopter project.
4. Building for Management / Design Program.

STORES & PURCHASE SECTION

The Stores and Purchase Section is an important service unit catering 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 sources.

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 2005-2006 the Purchase Section places 1815 orders valued Rs.45,36,94,512=75 which includes import order numbering 427 costing Rs.31,40,15,223=75 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	46	35,20,814=36

b	Non consumable	77	12,16,42,163=45
(B)	Project fund		
a	Consumable	115	1,07,31,599=84
b	Non consumable	189	17,81,20,646=10
	Total Import (A&B)	427	31,40,15,223=75
(2)	Indigenous :-		
(A)	Institute fund		
a	Consumable	258	1,10,28,875=09
b	Non consumable	450	4,01,42,034=21
(B)	Project fund		
a	Consumable	174	1,44,23,048=16
b	Non consumable	506	7,40,85,331=54
	Total Indigenous (A&B)	1388	13,96,79,289=00
	Total Value (1&2)	1815	45,36,94,512=75

Central stores procure 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.

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 allottee'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 officers and rest is 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 & forth 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 been 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 completed and in operation with approximately 64,000 sq. feet area. Also the construction of twelve residences for visiting faculty completed and used for accommodation.

Looking from the hygienic point of view in the campus, the Estate Office has been operating cleaning, sweeping & up-keeping work in 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 24 hours round the clock by the Institute to provide entertainment to the entire campus community.

Besides, the Estate Office is managing all the activities related to the estate very successfully and cautiously by way of taking all the precautions to solve all types of problems satisfactory. During the financial year 2004-05, the office has realized about **Rs. 71, 32,736.00** from the different sources.

CAMPUS SCHOOL

Campus School catering to give education to the wards of faculty & staff, is imparting the best possible pre & post education. Child is always at the centre of concern. Activities of the school are geared to make all round development of a child. Its infrastructure is strong to provide curricular & co-curricular activities to the students. There are 378 students served by a team of highly qualified & dedicated 25 teachers, 15 supporting staff & the Principal. There are special teachers for P.T., Art, Science, Computer and Dance.

The school wishes to give a holistic approach to the children in the morning assembly. Various programme/events/functions/competitions like fancy dress, handwriting, quiz, poetry recitation, art, excursion, cricket match, etc. were held thorough out the year. Also skits were organized on the occasions of Raksha Bandhan Janmashtami, Gandhi Jayanti and Teacher's Day.

Newly introduced Best Teacher's award was given to Mrs. S. Narang and Mrs. S. Hora. The Chief Guest on behalf of the Institute Administration presented a small gift to all the teachers as a token of recognition of their services. Evening co-curricular activities like cricket for boys and kho-kho for girls in class I to V are arranged.

Major Events / Functions:

Inter - School cultural Competition: Folk Song and Folk dance:

Wild Life Week celebrations: Different competitions were organised by the Director Zoological Garden, Kanpur. Our students participated in different - events such as: Races, Art, Essay writing, Quiz, Group song and Group Dance etc. Our students brought many laurels to the school.

Campus School and Hindi Cell of the Institute jointly arranged & organized 'Kaavya Sandhaya' on March 29, 2006 in Lecture Hall complex. Campus community enjoyed, appreciated & applauded the programme.

Annual Concert (Feb. 27, 2006) events were celebrated with great zeal & enthusiasm and were appreciated and applauded by everyone.

Independence Day and Republic Day were celebrated with great zeal and enthusiasm as usual. The kids presented very colourful cultural programmes on both the occasions, which were applauded by the audience.

HEALTH CENTRE

Health Centre had been established with the objective of addressing primary health needs of the Institute Community. It provides emergency services round the clock to meet its goal. Health Centre is manned by one Chief Medical Officer and eight Medical Officers and a Medical Advisor. The H.C is equipped with a Pathology & Biochemistry Lab, X-Ray Unit, Dressing Unit, Pharmacy and 32 inpatient beds.

The details of the Health Centre services provided for the period with effect from 1.4.2005 to 31.03.2006 are as follows:

S. No.	Annual Performance	Number
1	Number of Patients treated in OPD	61322
2	Number of Student treated	11221
3	Number of Patients treated in Indoors	1043
4	Number of Patients treated in Homeopathy OPD	4661
5	Number of Surgical Operation (Minor)	53
6	Number of Deliveries	24
7	Number of Plastering	78
8	Number of Surgical Dressing	6631
9	Number of Injections	21626
10	Number of Pathology Test and Bio Chemistry Test	35422
11	Number of Family Planning Operation (Tubectomy)	Nil
12	Number of E.C.G.	609
13	Number of Babies attended in Well Baby Clinic	904
14	Number of X-Ray done	1787
15	Number of babies attended National Pulse Polio Programme	854
16	Number of Anti Rabies Injections	350

Immunization is done round the year on each Saturday in the Health Centre for protection against Typhoid, Cholera, Tuberculosis, Diphtheria, Pertussis Tetanus, Polio and Measles etc.

VISITORS' HOSTEL

Housed in an imposing doubled storied building and located at a central place, the Visitors' Hostel provides boarding and lodging facilities for the guest, newly appointed faculty/staff members and delegates/participants attending various conferences, seminars symposia and workshop.

The Visitors' Hostel can accommodate 170 persons in 70 single rooms (twin bed) and 15 double rooms. 40 single rooms and 10 double rooms are air-conditioned. All the rooms have attached bath rooms (W.C.). It has 2 air-conditioning dining halls. One of the dining halls attached sitting rooms with (W.C.) facility attached with this. It also has an air-conditioned conference room.

Facilities and services have further been improved at a professional level, which has increased occupancy rate and messing thus increase in revenue.

A Pioneer batch Continuing Education Center Building is also attached with Visitors' Hostel. This has two air-conditioned conference room, 2 classrooms and a waiting lounge. This also has a penrty.

Publications and Outreach Activities

BOOKS AND BOOK-CHAPTERS PUBLISHED

1. Combustion, Proceedings of the National Seminar, Allied Publishers, New Delhi, 2005, Ed. D.P. Mishra
2. Effect of Elastic Supports on the Critical Value of Reynolds Number past a Cylinder, in Sixth IUTAM Symposium on Laminar-Turbulent Transition, Fluid Mechanics and its applications, Vol. 78, Ram Govindarajan, editor, 249-254, Springer, 2006, S. Mittal and S. Singh.
3. Pattern searching in protein and DNA sequences. In Statistical Advances in Biosciences and Bioinformatics (Ed.M.Pandey), Allied Publishers Pvt.Ltd., New Delhi pp 106-113, 2006, R. Sankaramakrishnan.
4. Oxidative Dehydrogenation (ODH) of Alkanes over Metal Oxide Catalysts, Metal Oxides: Chemistry and Applications, CRC Press, Baton Rouge, FL, USA, 2006, G. Deo, M. Cherian and T.V.M. Rao.
5. Inherently Safer Design, Chapter published in the 3rd Edition of F P Lees' Loss Prevention in the Industries, Chief Editor: M. Sam Mannan, Butterworth-Heinemann, London, 2005, J.P. Gupta and D.C. Hendershot.
6. Self-assembled Inorganic Architectures, Jitendra K. Bera, JohnBacsa and Kim R. Dunbar Encyclopedia of Inorganic Chemistry, Second Edition (Ed. R. Bruce King), John Wiley & Sons, Inc., 2005.
7. Single Experimental Setup for High Sensitive Absorption Coefficient and Optical Nonlinearities Measurements, Chapter 5, New Research on Lasers and Electro-Optics (ISBN: 1-60021-112-7), Nova Publishers, NJ USA 2006, Debabrata Goswami.
8. Analysis of Flow in a Stenosed Artery by using Transfer Matrix Method, Chapter 9, Mathematical Biology: Recent trends, Peeyush Chandra and B. V. Rathis Kumar (Eds.), Anamaya Publishers, New Delhi, India, ISBN 1904798497, 2006, Mohapatra, P. K., Chaudhry, M. H., Kassem, A. A. and Moloo, J.
9. Murty C V R, Greene M, Jain S K, Prasad N P, Mehta V, Earthquake Rebuilding in Gujarat, India, An EERI Recovery Reconnaissance Report, Earthquake Engineering Research Institute, Oakland, USA, ISBN 1-932884-05-X, 2005, 120p.
10. An Integrated Approach to Software Engineering, Springer, New York, Third Edition, Oct 2005, Pankaj Jalote (Indian Edition published by Narosa Publishing House, New Delhi, Aug 2005
11. On to Action : Building a Digital Ecosystem for Knowledge Diffusion in Rural India in Suliman Hawamdeh (ed), Knowledge Management, World Scientific

- Publishing Co.Pte.Ltd., Singapore, Part VI, Section 1, Page 401 to 416, 2005, Chatterjee, Jayanta and Prabhakar, TV.
12. Kheti - A Multilingual Multimedia Thesaurus for Indian Agriculture, Volume I, Media Lab Asia, 2006, Chatterjee, Jayanta and Prabhakar TV
 13. Virtual Instrumentation using LabVIEW, Tata McGraw-Hill, New Delhi, 2005, Sanjay Gupta and Joseph John
 14. Physics and Technology of High-K Gate Dielectrics -III, ECST, Vol. 1, Issue-XX, The Electrochemical Society Proceedings Series, Pennington, NJ 2006, S. Kar, S. De Gendt, M. Houssa, D. Landheer, D. Misra, and W. Tsai, Editors.
 15. Against the Current (Vol. II) - Fixing Tariffs Finance and Competition for Power Sector in India, Manohar Publications, New Delhi 2006, Joel Ruet, P.K. Kalra
 16. Salient features in the capacitance characteristics of ultrathin high-K devices, in Physics and Technology of High-K Gate Dielectrics - III, S. Kar, S. De Gendt, M. Houssa, D. Landheer, D. Misra, and W. Tsai, Editors, ECST, Vol. 1, Issue-XX, The Electrochemical Society Proceedings Series, Pennington, NJ 2005, 12 pages, S. Kar, D. Reddy, and S. Rawat.
 17. Determination of the channel doping density in MOS devices with high-K gate dielectrics, in Physics and Technology of High-K Gate Dielectrics - III, S. Kar, S. De Gendt, M. Houssa, D. Landheer, D. Misra, and W. Tsai, Editors, ECST, Vol. 1, Issue-XX, The Electrochemical Society Proceedings Series, Pennington, NJ 2005, 12 pages, D. Reddy, and S. Kar.
 18. From Hard Poetics to Situated Reading: A Cognitive-empirical Study of Imagery and Graded Figurative Language, Cognition and Literary Interpretation in Practice (Eds., Veivo, H., Pettersson, B., & Polvinen, M.). Helsinki University Press, Finland, pp. 219-236, 2005, Das, L. & Bhushan, B.
 19. Virtue-Metaphysics and Consciousness, Chapter VIII of Conceptions of Virtue: East and West, edited by Chong Kim-Chong and Yuli Liu (Singapore: Marshall Cavendish, 2006, B.H. Boruah.
 20. Literature and the Limits of Language, in Franson Manjali (ed.) Post-Structuralism and Cultural Theory: The Linguistic Turn and Beyond (New Delhi: Allied Publishers, 2006, B.H. Boruah.
 21. Distant Flutter of a Butterfly: The Last Temptation in India published in Scandalizing Jesus: The Last Temptation Fifty Years On. Ed. Darren J. N. Middleton. New York: Continuum, 2005, Mini Chandran.
 22. Language, Dominance and Rights. In Globalization: Language, Culture and Media, edited by B.N. Patnaik and Imitaz Hasnain, Shimla: Indian Institute of Advanced Study, 2006, pp.71-78, Munmun Jha.
 23. Textualizing the Self: Adultery, Blatant Fictions, and Jewishness in Philip Roth's Deception Reprinted in Turning up the Flame: Philip Roth's Later Novels, eds. Jay

- L. Halio and Ben Siegel, Newark: University of Delaware Press, 2005, 58-67, G. Neelakantan.
24. Productivity Issues in In-House R&D Units: An Empirical Enquiry in Indian Metal Industry, in *Productivity and Quality A Multidisciplinary Perspective*, Edited by V Upadhyay, A Sharma, S Sharma, S K Jain, and D J Sumanth, Tata McGraw-Hill publishing Co, New Delhi, 2006, pp.95-105, Shikha Suman and Binay Kumar Pattnaik.
 25. Suffering and healing: Need for cultural psychological conceptualisation and applications. In R. Singh, A. Yadava, & N. R. Sharma (Eds.), *Health Psychology* (pp. 53-69), 2005, New Delhi: Global Vision, Priya, K. R., & Misra, G.
 26. Universal Networking Language: A Tool for Language Independent Semantics, in Cardenosa, J., A. Gelbukh and E. Tovar (eds.), *Universal Networking Language: Advances in Theory and Applications*, IPN, Mexico, 145-154, ISBN 970-36-0226-6, 2005, A. Mukerjee, Achla M. Raina, Pushpraj Shukla.
 27. A Study of Changing Patterns of Energy Consumption and Energy Efficiency in the Indian Manufacturing Sector. In V. Upadhyay et.al (Ed) *Productivity and Quantity: A Multidisciplinary Perspective*, pp. 964-979, 2005, Rath B. & Jena P.R..
 28. Logical Truth in Enworlded Subjectivity: Society., Culture and Consciousness edited by R. Balasubramanian, New Delhi: Centre for the Study of Civilizations, February, 2006, pp. 840-887, Srinivasa Rao.
 29. Perspectives on Health, Illness and Wellbeing: An Agenda for Future Research, in Dalal, Ajit K. and Subha Ray (eds.), *Social Dimensions of Health*, Rawat Publications, Jaipur, 2005, pp. 89- 104, A. K.Sharma.
 30. Social Representations of Health and Illness among Women, in Pandey, Arvind (ed.), *Aspects of Health and Population*, Hindustan Publishing Corporation, New Delhi, 2006, A. K. Sharma, Shikha Dixit and Mamta Misra.
 31. National Population and Health Policy, in Pandey, Arvind (ed.), *Aspects of Health and Population*, Hindustan Publishing Corporation, New Delhi, 2006, A.K. Sharma.
 32. Situating Pop Bhangra in Globalization: A Note on the Globalization Thesis, in Patnaik, B. N. and S. Imtiaz Hasnain (eds.), *Globalization: Language, Culture and Media*, Indian Institute of Advanced Study, Rashtrapati Nivas, Shimla, 2006, pp. 271-281, A. K. Sharma.
 33. *Computing for Management*, Prentice Hall of India Pvt Ltd, New Delhi, June 2005, Veena Bansal.
 34. *Kheti - A Multilingual Multimedia Thesaurus for Indian Agriculture Volume I*, Media Lab Asia, 2006, Chatterjee, Jayanta and Prabhakar, TV

35. Industrial Clustering and Cooperation: The Kanpur Saddlery Cluster, in Keshab Das (ed.), *Indian Industrial Clusters*, Ashgate Publishing Limited, Aldershot, UK, 2005, Dwivedi, Mridula and Rahul Varman.
36. On to Action : Building a Digital Ecosystem for Knowledge Diffusion in Rural India in Suliman Hawamdeh (ed), *Knowledge Management*, World Scientific Publishing Co.Pte.Ltd., Singapore, Part VI, Section 1, Page 401 to 416, 2005, Chatterjee, Jayanta and Prabhakar, TV.
37. *An Expedition to Geometry*, Hindustan Book Agency, New Delhi, 2005, Santhanam, G., Kumaresan, S.,
38. *Mathematical Biology - Recent Trends*, Anamaya Publishers, New Delhi, 2005, Chandra, Peeyush, Rathish Kumar, B.V. (eds.)
39. Feature selection using rough sets in *Multi-Objective Machine Learning*, Ed. Yaochu Jin, Series on Studies in Computational Intelligence 16 (Berlin;Springer-Verlag), 3-20, 2006, Banerjee, M., Mitra, S. and Anand, A.
40. Estimating zero coupon yield curve for government securities: the Indian experience during recent period, in DESACS Working Paper No. 2, Reserve Bank of India, 2005. Mitra, A., Gayen, S., Mitra, S., Bhaunik, D., Biswas, S.,
41. Abstract convexity in *Handbook of generalized convexity and generalized monotonicity*, (Series: Nonconvex Optimization and Applications 76, Springer, New York, 2005, pp 293-333, Dutta, J., Rubinov, A.
42. *Statistical Signal Processing in Encyclopedia of Statistical Sciences*, Wiley New York, 2006, N. Kannan and D. Kundu
43. *Stability Problems in Applied Mechanics*, Narosa Publishing House, New Delhi and Alpha Science, Oxford, 2005, A.K. Mallik and J.K. Bhattacharjee.
44. *Computer Aided Engineering Design*, Anamaya Publishers (INDIA) and Springer, PO BOX 322, 3300 AH Dordrecht, The Netherlands, 2005, A. Saxena and B. Sahay.
45. *Fundamentals of Design and Manufacturing*, Narosa Publishers, New Delhi, G.K. Lal, Vijay Gupta and N.V. Reddy.
46. *Fundamentals of Manufacturing Processes*, published jointly by Narosa Publishers, New Delhi and Alpha Science, London, G.K. Lal and S.K. Choudhury.
47. *Introduction to Fluid Mechanics*, converted from FPS system to SI units, Oxford University Press, ISBN 0-19-567783-8 (Indian Edition) by S. Khandekar, 2005, E. Shaughnessy, I. Katz and J. Schaffer.
48. *New Diesel Engines and Components and CI Engine performance for Use with Alternative Fuels*, SP-2014, 171 Pages, Published by SAE International, USA, (Eds.) (ISBN No. 10: 0-7680-1749-1), 2006, A. Jain, J.E. Mossberg, Avinash K. Agarwal and G.J. Thompson.
49. Chapter 2 on Biofuels in the Book entitled *Waste to Wealth*, Second edition, (Eds.) Banwari Lal, M R V P Reddy, published by Tata Energy Research Institute, Delhi, Chapter 2, pp. 29-88, 2005, Avinash Kumar Agarwal.

50. Optical Imaging and Control of Convection around a Crystal growing from its Aqueous Solution in New Developments in Crystal Growth Research, [ISBN: 1-59454-539-1] pp 1-89, editor: G.V. Karas, Nova Publishers, USA, 2005, K. Muralidhar, Atul Srivastava and P.K. Panigrahi.
51. Nano-finishing Techniques, Micromanufacturing and Nano-Technology, Editor: Prof. N.P.Mahalik, pp. 171-195, Springer Verlag, 2005, V.K.Jain and Sunil Jha.
52. The World Heritage Complex of the Qutub,; Aryan Books International, New Delhi, 2005.Hardbound, ISBN 81-7305-293-X, R. Balasubramaniam.
53. Story of the Delhi Iron Pillar Foundation Books, New Delhi, 2005.Paperback, ISBN-81-7596-301-8, R. Balasubramaniam.
54. Iron Pillar at Delhi,in Encyclopaedia of the History of Science, Technology and Medicine inNon-Western Cultures, 2nd Edition, Editor: Helaine Selin, Kluwer Academic Publishers, Dordrecht, The Netherlands, 2005, R. Balasubramaniam
55. Metallurgy of Ancient Indian Iron and Steel, in Encyclopaedia of the History of Science, Technology and Medicine in Non-Western Cultures, 2nd Edition, and Editor: Helaine Selin, Kluwer Academic Publishers, Dordrecht, The Netherlands, 2005, R. Balasubramaniam.
56. QUANTUM PHYSICS: by Professor H.C. Verma, Surya Publications, Ghaziabad, 2006.
57. Title: Mathematical Physics: Advanced Topics, by Professor S.D. Joglekar, Universities Press, Hyderabad, 2006.

JOURNAL AND CONFERENCE PAPERS

1. Wind tunnel Investigation of Typical Strategic Missile Configuration at High Angle of Attack, *J of Aerospace Science and Technology*, 58, 1, 75-81, 2006, A.K. Ghosh, Girish Sagoo, Ankur Singhal.
2. Contempt For Nagamese (The Ancestral Link Language) & Separatism in Nagaland', *Bharatiya Samajik Chintan, J of Indian Academy of Social Sciences*, October- November 2005, Kunal Ghosh.
3. Partition of Manipur, Greater Nagaland and Contrived, Tangkhul-Naga Identity: Role of Script and Lingua Franca, *Mainstream*, New Delhi, 6-12, .13 - 19, 2005, Kunal Ghosh.
4. 'Naga Question in Manipur: Outsiders' Reply to Vashum's paper, *Mainstream*, New Delhi, September 16 - 22, 13 - 17, 2005, Kunal Ghosh.
5. 'Naga Question in India: Outsiders' Reply to Vashum's paper - II, *Mainstream*, New Delhi, September 23 - 29, 19 - 22, 2005, Kunal Ghosh.
6. 'Urdu, Yiddish and Sectarian Nationalism: Role of Script and Linguistic Exclusion Principle - Part I', *Mainstream*, New Delhi, Dec. 2 - 8, 17 - 22, 2005, Kunal Ghosh.
7. 'Urdu, Yiddish and Sectarian Nationalism: Role of Script and Linguistic Exclusion Principle - Part II', *Mainstream*, New Delhi, Dec. 9 -15, 23 - 26, 2005, Kunal Ghosh.
8. Discharge Frequency Modulation of Pulsed Plasma Thruster, *J of Spacecraft and Rockets* 42, 4, 761-765, 2005, N. Dubey, V. Ravi and Abhijit Kushari.
9. Numerical Modeling of Lean CH₄-Air Combustion, *J of AMSE*, 74, 5, 53-62, 2005, Mishra D. P.
10. Numerical Simulation of Cold Flow in an Axisymmetric Dump Combustor, *Int. J of Turbo & Jet Engines*, 22, 237-253, 2005, D. P. Mishra and Vishak T.
11. Augmentation of Local and Average Heat Transfer to an Impinging Air Jets Using Orifice, *Int.J of Turbo & Jet Engines*, 22, 225-235, 2005, D. P. Mishra and D. Mishra.
12. Flow Past a Cylinder: Shear Layer Instability and Drag Crises, *Int. J for Numerical Methods in Fluids*, 47, 75-98, 2005, S.P. Singh and S. Mittal.
13. Effect of Leading Edge Cut on the aerodynamics of Ram-Air Parachutes, *Int. J for Numerical Methods in Fluid*, 47, 1-17, 2005, Balaji, RS Mittal and AK Rai.
14. Vortex induced Oscillations, at low Reynolds numbers: hysteresis & vortex-shedding modes, *J. of Fluids and Structures*, 20, 1085-1104, 2005, S.P. Singh and S. Mittal.
15. Vortex induced vibrations, at subcritical Re, *J of Fluid Mechanics*, 534, 185-194, 2005, S. Mittal and S. Singh.

16. Excitation of shear layer instability in flow past a cylinder at low Reynolds number Int. J for Numerical Methods in Fluids, 49, 1147-1167, 2005, S. Mittal.
17. Shear layer instability at low Reynolds Numbers, J of Visualization, 8, 3, 2005, S. Mittal.
18. Effect of blockage on critical parameters for flow past a circular cylinder at low Reynolds numbers Int. J for Numerical Methods in Fluid, 50, 2006, B. Kumar and S. Mittal.
19. High accuracy schemes for DNS and acoustics - J. Sci. Comput. 262, 151-193,2006 T K Sengupta, S K Sircar and A Dipankar.
20. An improved method for calculating flow past flapping and hovering airfoils -Theor. Comput. Fluid Dyn., 2006, 19(6), 417-440,2006 T.K. Sengupta, V. Vikas and A. Johri
21. Symmetrized compact scheme for receptivity study of 2D transitional channel flow -J. Comput. Phy., 215(1), pp 245-273,2006 A. Dipankar and T.K. Sengupta
22. A new flux-vector splitting compact finite volume scheme -- J. Computational Physics, 207, 261-281 2005, T K Sengupta, R. Jain and A Dipankar
23. Flow past a circular cylinder in the vicinity of a plane wall -- J Fluids Struct. 20, 403-423, 2005, A Dipankar and T K Sengupta
24. Subcritical instability on the attachment-line of an infinite-swept wing -- J. Fluid Mechanics, 529, 147-171 ,2005, T K Sengupta and A Dipankar
25. A new flux-vector splitting compact finite volume scheme J of Computational Physics, 207, 1, 261-281, 2005, Sengupta, T.K.; Jain, R.; Dipankar, A.
26. Flow past a circular cylinder in the vicinity of a plane wall , J of Fluids and Structures, .20(3), 403-423, 2005, Dipankar, A.; Sengupta, T.K.
27. Galerkin Finite element methods for wave problems: Sadhana, .30(5), 611-623, 2005.Sengupta TK, Talla Srikanth babu and Pradhan S.B
28. Trajectory and Attitude Simulation for Aerocapture and Aerobraking, J of Spacecraft and Rockets, 42, 4, 2005. Mrinal Kumar and Ashish Tewari
29. Loading- and substructure-induced irreversibility in texture during Route C Equal Channel Angular Extrusion, /Scripta Materialia/, 2005, 53(8):965-969, S. Mahesh, I. J. Beyerlein, and C. N. Tome.
30. Strain Evolution after FiberFailure in a Single Fiber Metal Matrix Composite under Cyclic Loading, Mater. Sci. Engng. A .399(1-2),33-42,2005 J. C. Hanan, S. Mahesh, E. Ustundag, I. J. Beyerlein, G. A. Swift, B.Clausen, D. W. Brown, and M. A. M. Bourke.

31. Forced nonlinear vibrations of laminated composite plates with random material properties, *Composite Structures*, 334-342, 2005 S. Mahesh, Amit K Onkar, D. Yadav.
32. A piezoelectric cylindrical shell under thermal and pressure loads, *Trends in Applied, Science Research*, 1(3), 214-225, 2006 K. Jayakumar, D. Yadav and B. Nageswara Rao.
33. Accurate computation of critical quantities of interest in composite laminated plates under transverse loading, *Computers and Structures*, 84 (10-11), 657-675, 2005, P.M.Mohite and C.S. Upadhyay.
34. Electro-elastic analysis and layer-by-layer modeling of a smart beam, *AIAA J* 1, 43 (12), 2005, 2606-2616, 2005, N.A.Sheikh, C.S.Upadhyay and C.Venkatesan.
35. Electro-thermo-elastic formulation for the analysis of smart structures, *J of Smart Mater. And Struct*, 15, 2, 401-416, 2006, Sheikh, N.A., Upadhyay, C.S., and Venkatesan, C.
36. Modeling of piezo stack actuators and their application in active vibration control, *J of Aerospace Sciences and Technologies*, 57, 3, 306-322, 2005, Singhvi, R., and Venkatesan, C.
37. Neuronal survival in epilepsy: to die or not to die? *J of Biosciences* 30, 561-565, 2005, Ganesh S and Singh S.
38. Mutations in the NHLRC1 gene are the common cause for Lafora disease in the Japanese population. *J of Human Genetics* 50, 347-352, 2005, Singh S, Suzuki T, Uchiyama A, Kumada S, Moriyama N, Hirose S, Takahashi Y, Inoue Y, Kimura K, Sawaishi S, Yamakawa K, and Ganesh S.
39. Analysis of GTPases carrying hydrophobic amino acid substitutions in lieu of the catalytic glutamine: Implications for GTP hydrolysis. *Proteins: Struct, Funct, and Bioinf.* 59, 332-338, 2005, Rajeev Mishra, Sudheer Kumar Gara Shambhavi Mishra, Balaji Prakash.
40. Affinity binding of cells to cryogel adsorbents with immobilized specific ligands: Effect of ligand coupling and matrix architecture. *J. Molecular Recognition* 18, 84-93, 2005, Kumar, A., Caballero, A. R., Fatima, P., Galaev, I. Yu., Nandakumar, K. S., Kamihira, M., Holmdahl, R., Orfao, T. and Mattiasson, B.
41. ATCUN-like metal-binding motifs in proteins: Identification and characterization by crystal structure and sequence analysis. *Proteins: Struct. Func. Bioinf.* 58, 211-221, 2005, R. Sankararamkrishnan, S. Verma and S. Kumar.
42. Enforcing solution phase nanoscopic aggregation in a palindromic tripeptide *Chem. Commn.* 2564-2566, 2005, K.K. Prasad, C.S. Purohit, A. Jain, R. Sankararamkrishnan and S. Verma.

43. Fat and Wingless signaling oppositely regulate epithelial cell-cell adhesion and distal wing development in *Drosophila*. *Development* 133, 925-935, 2006, Manish Jaiswal, Namita Agrawal and Pradip Sinha.
44. Recent advances in the molecular basis of Lafora's progressive myoclonus epilepsy. *J of Human Genetics* 51(1):1-8, 2006, Ganesh S, Puri R, Singh S, Mittal S, and Dubey D.
45. Translational repression restricts expression of the *C. elegans* Nanos homolog NOS-2 to the embryonic germline. *Developmental Biology* 292, 244-252, 2006, D'Agostino, I., Merritt, C., Chen, P-L., Seydoux, G., Subramaniam, K.
46. Detachment of affinity captured bioparticles by elastic deformation of macroporous hydrogel. *Proc Natl Acad Sci U S A.* 103, 849-854, 2006, Dainiak, M., Kumar, A., Galaev, I. Yu. and Mattiasson, B.
47. Supermacroporous cryogel matrix for integrated protein isolation: IMAC purification of urokinase from cell culture broth of a human kidney cell line. *J. Chromatography A* 1103, 35-42, 2006, Kumar, A., Bansal, V., Andersson, J., Roychoudhury, P. K. and Mattiasson, B.
48. Integrated Bioprocess for the production and isolation of urokinase from animal cell culture using supermacroporous cryogels. *Biotechnology and Bioengineering* 93, 636-646, 2006, Kumar, A., Bansal, V., Nandakumar, K. S., Galaev, I. Yu., Roychoudhury, P. K., Holmdahl, R. and Mattiasson, B.
49. Affinity binding of inclusion bodies on supermacroporous monolithic cryogels using labeling with specific antibodies. *J. Biotechnology* 122, 216-225, 2006, Ahlqvist, J., Kumar, A., Sundström, H., Ledung, E., Hörnsten, E. G., Enfors, S-O., Mattiasson, B.
50. Nanofibers and their applications in tissue engineering. *Int. J. Nanomed.* 1(1):15-30, 2006, Rajesh Vasita, Dharendra S. Katti.
51. Growth factor delivery systems for tissue engineering. *Exp. Rev. Med. Dev.* 3(1):29-47, 2006, Rajesh Vasita, Dharendra S. Katti.
52. Hexa-valent chromium ion removal through micellar enhanced ultrafiltration, *Chem. Eng. J.: Environ. Chem. Eng.*, 119, 45-53, 2006, Gargi Ghosh and Prashant K. Bhattacharya.
53. Parameter estimation and performance study during ultrafiltration of Kraft Black Liquor, *Separ. Purif. Technol.* Available on Line 31 March, 2006, C. Bhattacharjee, P. Sarkar, S. Datta, B.B. Gupta and P.K. Bhattacharya.
54. Application of positron annihilation: Study of pervaporation dense membranes, *Polymer*, 47, 1300-1307, 2006, S. V. Satyanarayana, V. S. Subrahmanyam, H. C. Verma, A. Sharma, P. K. Bhattacharya.

55. Pervaporation of Hydrazine - Water through Hollow Fiber Module: Modeling and Simulation, *Computers Chem. Eng.*, 30, 2, 202-214, 2005, Nazish Hoda, Satyanarayana V. Suggala and Prashant K. Bhattacharya.
56. Multi-objective optimization of reverse osmosis desalination units using different adaptations of the non-dominated sorting genetic algorithm (NSGA), *Computers Chem. Eng.*, 29 (9) 1977-1995, 2005, Chandan Guria, P. K. Bhattacharya and S. K. Gupta.
57. A combined biological and membrane based treatment of prehydrolysis liquor from pulp mill, *Separ. Purif. Technol.*, 45 (2) 119-130, 2005, R. Jayan, C. Bhattacharjee and P. K. Bhattacharya.
58. Membrane filtration of leather plant effluent: Flux decline mechanism, *J. Membrane Sci.*, 258, 85 - 96, 2005, M. K. Purkait, S. De, P. K. Bhattacharya.
59. Treatment of prehydrolysis liquor from pulp mill using biological route followed by Reverse Osmosis, *Chem. Eng. Technol.*, 28 (10) 1201-1211, 2005, R. L. Rath, C. Bhattacharjee, Shikha Jain, P. K. Bhattacharya.
60. Studies on UF of spent sulfite liquor (SSL) using various membranes for the recovery of lignosulphonates, *Desalination*, 174, 287 - 297, 2005, P. K. Bhattacharya, R. K. Todi, M. Tiwari, C. Bhattacharjee, S. Bhattacharjee, S. Dutta.
61. Drag on freely falling cones in Newtonian and Power law fluids, *Can. J. Chem. Eng.*, 83, 559-565, 2005, A. Borah and R. P. Chhabra.
62. Non-isothermal flow of a power law fluid past a rectangular obstacle (of aspect ratio 1x2) in a channel: Drag and heat transfer, *Int. J. Eng. Sci.*, 43, 707-720, 2005, S. Nitin and R. P. Chhabra.
63. Steady two-dimensional non-Newtonian flow past an array of long circular cylinders up to Reynolds number 500: A numerical study, *Can. J. Chem. Eng.*, 83, 437-449, Erratum, *ibid*, 1000-1001, 2005, A. A. Soares, J. M. Ferreira and R. P. Chhabra.
64. Flow and heat transfer across a confined square cylinder in the steady flow regime: Effect of Peclet number, *Int. J. Heat Mass Transfer*, 48, 4598-4614, 2005, A. K. Dhiman, R. P. Chhabra and V. Eswaran.
65. Wall effects in two-dimensional axisymmetric flow over a circular disk oriented normal to flow in a cylindrical tube, *Can. J. Chem. Eng.*, 83, 450-457, 2005, S. Nitin and R. P. Chhabra.
66. Flow and forced convection heat transfer in cross flow of non-Newtonian fluids over a circular cylinder, *Industrial and Engineering Chemistry Research*, 44, 5815-5827, 2005, A. A. Soares, J. M. Ferreira and R. P. Chhabra.
67. Effects of Reynolds and Prandtl numbers on the heat transfer across a square cylinder in the steady flow regime, *Numerical Heat Transfer: Part A*, 49, 717-731, 2006, A. K. Dhiman, R. P. Chhabra, A. Sharma and V. Eswaran.

68. A numerical study on the forced convection heat transfer from an isothermal and isoflux sphere in the steady symmetric flow regime, *Int. J. Heat Mass Transfer*, 49,984-994, 2006, S. D. Dhole, R. P. Chhabra and V. Eswaran.
69. Sedimentation of a circular disk in power law fluids, *J of Colloid and Interface Science*, 295, 520-527, 2006, S. Nitin and R. P. Chhabra.
70. Drag on non-spherical particles in power law non-Newtonian media, *Int. Journal of Mineral Processing*, 78, 110-121, 2006, P. Rajitha, R. P. Chhabra, N. E. Sabiri and J. Comiti.
71. An analytical model for the prediction of power consumption for shear-thinning fluids with helical ribbons and helical screw ribbon impellers, *Chem. Engng. Sci.*, 61, 3250-3259, 2006, G. Delaplace, R. Guerin, J.-C. Leuliet and R. P. Chhabra.
72. Solenoids and Plectonemes in stretched and twisted elastomeric filaments, *Physical Review Letters*, 95, 057801, 2005, A. Ghatak and L. Mahadevan.
73. Protecting Chemical Plants from Terrorist Attacks, *Chemical Weekly*, L (34), 209-213, 2005, S. Bajpai and J.P. Gupta.
74. Mitigating Consequences of Hazardous Gaseous Releases by Air Dilution – A Concept, *J of Loss Prevention in the Process Industries*, Vol. 18 (4-6), 502 – 505, 2005, J.P. Gupta.
75. Site Security for Chemical Process Industry, *J of Loss Prevention in the Process Industries*, Vol. 18 (4-6), 301 – 309, 2005, S. Bajpai and J.P. Gupta.
76. Land Use Planning in India, *J of Hazardous Materials*, Vol. 130, 300 – 360, 2006, J.P. Gupta.
77. Simultaneous Optimization of the Performance of Flotation Circuits and their Simplification using the Jumping Gene Adaptations of Genetic Algorithm, *Intl. J. Mineral Processing*, 77, 165-185, 2005, C. Guria, M. Verma, S. K. Gupta and S. P. Mehrotra.
78. Multi-objective Optimal Synthesis and Design of Froth Flotation Circuits for Mineral Processing using the Jumping Gene Adaptation of Genetic Algorithm, *Ind. Eng. Chem. Res.*, 44, 2621-2633, 2005, C. Guria, M. Verma, S. P. Mehrotra and S. K. Gupta.
79. Bulk Free Radical Polymerizations of Methyl Methacrylate under Non-Isothermal Conditions and with Intermediate Addition of Initiator: Experiments and Modeling, *Polymer*, 46, 11451-11462, 2005, J. S. Sangwai, S. A. Bhat, S. Gupta, D. N. Saraf and S. K. Gupta.
80. Some Practical Aspects of Designing a Laboratory Scale Batch Polymerization Reactor without Gas Entrapment and Interfacing with Virtual Instrumentation, *ISA Trans.*, 45, 259-269, 2006, S. A. Bhat, D. N. Saraf, S. Gupta and S. K. Gupta.

81. Use of Agitator Power as a Soft-Sensor for Bulk Free Radical Polymerization of Methyl Methacrylate in Batch Reactors, *Indus. Eng. Chem. Res.*, 45, 4253-4255, 2006, S. A. Bhat, D. N. Saraf, S. Gupta and S. K. Gupta.
82. Multi-objective Optimization of the Operation of an Industrial Low-density Polyethylene Tubular Reactor using Genetic Algorithm and its Jumping Gene Adaptations, *Ind. Eng. Chem. Res.*, 45, 3182-3199, 2006, N. Agarwal, G. P. Rangaiah, A. K. Ray and S. K. Gupta.
83. Simultaneous Optimization of the Performance of Flotation Circuits and their Simplification using the Jumping Gene Adaptations of Genetic Algorithm-II: More Complex Problems, *Intl. J. Mineral Processing*, 79, 149-166, 2006, C. Guria, M. Verma, S. P. Mehrotra and S. K. Gupta.
84. Viscosity of Bulk Free Radical Polymerizing Systems under Near-isothermal and Non-Isothermal Conditions, *Polymer*, 47, 3028-3035, 2006, J. S. Sangwai, D. N. Saraf and S. K. Gupta.
85. Nonlinear dynamics of confined polymer melt with attractive walls, *Langmuir*, 21, 9013-9016, 2005, Joshi Y. M.
86. Steady state analysis of reactive distillation using homotopy continuation, *Chemical Engineering Research and Design*, 83 (8 A), pp 959-968, 2005, BP Singh, R Singh, MVP Kumar and N Kaistha.
87. Steady-state analyses for reactive distillation control: An MTBE case study, *J of Loss Prevention in the Process Industries*, 18 (4-6), pp 283-292 2005, BP Singh, R Singh, MVP Kumar and N Kaistha.
88. Prediction of Binary VLE of Imidazolium based ionic liquids by COSMO-RS *Industrial Engineering Chemistry Research*, 45, 3207-3219, 2006, Tamal Banerjee and Ashok Khanna.
89. Improved Binary Parameters using GA for Multi-Component Aromatic Extraction: NRTL Model without and with Closure Equations, *Fluid Phase Equilibria*, 239, 107-119, 2006, Ranjan Kumar Sahoo, Tamal Banerjee, Syed Akhlaq Ahmad, and Ashok Khanna.
90. Volume, surface and UNIQUAC interaction parameters for imidazolium based ionic liquids via Polarizable Continuum Model, *Fluid Phase Equilibria*, 234, 64-76, 2005, Tamal Banerjee, Manish.K.Singh, Ranjan.K.Sahoo, and Ashok Khanna.
91. Genetic algorithm to estimate interaction parameters of multicomponent systems for liquid-liquid equilibria, *Computers and Chemical Engineering*, 29, 1712-1719, 2005, Tamal Banerjee, Manish.K.Singh and Ashok Khanna.
92. Effect of Calcium and Potassium on V₂O₅/ZrO₂ Catalyst for Oxidative Dehydrogenation of Propane: A Comparative Study, *Catal.Letters*, 102, 237-246, 2005, M.De and D.Kunzru.

93. Thermal Cracking of JP-10: Kinetics and Product Distribution, *J. Anal. & Applied Pyrolysis*, 76,154-160, 2006, P.Nageswara Rao and D.Kunzru.
94. Suppression of instability in liquid flow down an inclined plane by a deformable solid layer, *Physical Review E*, 73, 016301-1 - 016301-12, 2006, V. Shankar and Akhilesh K Sahu.
95. Electric field controlled surface instabilities in soft elastic films, *Adv. Materials* 18, 660-663, 2006, Arun N., Sharma A., Shenoy V. and Narayan K. S..
96. Instability and pattern formation in thin liquid films confined between two plates, *J. Colloid Interface Sci.* 296, 220-232, 2006, Verma R., Sharma A., Benarjee I. and Kargupta K..
97. Preparation and characterization of ACF for the adsorption of BTX and SO₂, *Chem. Eng. & Processing* 45, 1-13, 2006, V. Gaur, A. Sharma and N. Verma.
98. Numerical simulation of bubble growth in film boiling using CLSVOF method, *Phys. Fluids* 17, 112103, 2005, G. Tomar, G. Biswas, A. Sharma and A. Agrawal.
99. Self Assembly and pattern formation in thin liquid films, *Spatio-Temporal Chaos and Pattern Formation*, Ed. R. Amritkar, Proc. INSA, Part A Physical Sciences 71, 17-46, 2005; Review, A. Sharma and K. Kargupta.
100. Self-organized structures in soft confined thin films, *Pramana –J. Phys.* 65, 601-614, 2005, A. Sharma.
101. Electric field induced instability and pattern formation in thin liquid films, *Langmuir* 21, 3710-3721, 2005, R. Verma, A. Sharma, K. Kargupta and J. Bhaumik.
102. Instability and dynamics of thin liquid bilayers, *Ind. Eng. Chem. Res.* 44, 1259-1272, 2005, D. Bandyopadhyay, R. Gulabani and A. Sharma.
103. Adhesion and debonding of soft elastic films: crack patterns, metastable pathways and forces, *Langmuir* 21, 1457-1469 2005, J. Sarkar, A. Sharma and V. Shenoy.
104. Adhesion and debonding of soft elastic films on rough and patterned surfaces, *J. Adhesion* 81, 271-295, 2005, J. Sarkar, A. Sharma and V. Shenoy.
105. Catalytic oxidation of toluene and m-xylene by activated carbon fiber impregnated with transition metals, *Carbon* 43, 3041-3053, 2005, V. Gaur, A. Sharma and N. Verma.
106. Guidelines for direct-calculation of phase coexistence and surface tension of n-alkanes using Transition Matrix Monte Carlo, *J. Phys. Chem. B*, 110,13692006, J. K. Singh and J. R. Errington.
107. Lattice Boltzmann modelling of unsteady-state 2D concentration profiles in adsorption bed, *Chem Eng Sci.* 61, 2510-21, 2006, Manjhi, N., Verma, N., Salem, K., Mewes, D..

108. Catalytic oxidation of NO by Activated Carbon Fiber (ACF), Chem Eng. J. 116 (1), 25-37, 2006, Adapa, S., Gaur, V., Verma, N.
109. Removal of SO₂ by activated carbon fibers in presence of O₂ and H₂O, Carbon. 44, 46-60, 2006, Gaur, V., Asthana, R., Verma, N.
110. Mass transfer studies in multi-stage counter current fluidized bed ion exchangers, Chem. Eng. Process, 45(1), 31-35, 2006, Kishore, K., Verma, N.
111. Synthesis and characterization of activated carbon fiber for the control of BTX, Chem. Eng. Process, 45(1), 1-13, 2006, Gaur, V., Sharma, A., Verma, N.
112. Assembly of Lipophilic Tetranuclear (Cu₄ and Zn₄) Molecular Metallophosphonates from 2,4,6-Triisopropylphenylphosphonic Acid and Pyrazole Ligands, Inorg. Chem. 45, 3344, 2006 V. Chandrasekhar, P. Sasikumar, R.Boomishankar, and G. Anantharaman.
113. Nion template effect on the self-assembly and interconversion of metallacyclophanes, Campos-Fernandez. C. S., Schottel, B.L., Chifotides, H. T., J. Am. Chem. Soc. , 127, 12909, 2005 Bera, J. K., Bacsá, J., Koomen, J. M., Russell, D. H., Dunbar, K. R.
114. Molecular dynamics study of the liquid-vapor interface of acetonitrile: Equilibrium and dynamical properties, J. Phys. Chem. B, 109, . 20558 2005, S. Paul and A. Chandra,
115. Hydrogen bond properties and dynamics of liquid-vapor interfaces of aqueous methanol solutions, J. Chem. Theo. Comp. 1, 1221, 2005, S. Paul and A.Chandra,
116. Liquid-vapor interfacial properties of water-ammonia mixtures: Dependence on ammonia concentration, J. Chem. Phys. 123, 174712 2005, S. Paul and A. Chandra,
117. Liquid-vapor interfaces of water-acetonitrile mixtures of varying composition, J. Chem. Phys. 123, 184706 2005, S. Paul and A. Chandra,
118. Hydration and translocation of an excess proton in water clusters: An ab initio molecular dynamics study, Pramana - J. Phys. 65, 763, 2005, A. Bankura and A. Chandra
119. Dynamics of ionic and hydrophobic solutes in water-methanol mixtures of varying composition, J. Chem. Phys.123, 234501, 2005, S. Chowdhuri and A. Chandra.
120. Structural diffusion in aqueous basic solutions, Acc. Chem. Res. 39, 151-158, 2006, M.E. Tuckerman, A. Chandra and D. Marx.
121. Solute size effects on the solvation structure and diffusion of ions in liquid methanol under normal and cold conditions, J. Chem.Phys. 124, 84507 , 2006, S. Chowdhuri and A. Chandra
122. Monoorganotin (IV) phosphonates Appl. Organometal. Chem., 19, 429-436, 2005, Vadapalli Chandrasekhar, K. Gopal.

123. A Lipophilic Hexaporphyrin Assembly Supported on a Stannoxane Core J. Am.Chem. Soc., 127, 2410-2411,2005 V. Chandrasekhar, S. Nagendran, R. Azhakar, M. Ravi Kumar, A. Srinivasan, K. Ray, T. K. Chandrashekar, C. Madhavaiah, S. Verma, U. Deva Priyakumar, G. N. Sastry.
124. Biocatalysis by metallated cyclotriphosphazenes: $L_2Zn(NO_3)_2$ {L = spiro- $N_3P_3[O_2C_{12}H_8][N(CH_3)NH_2]$ } as a synthetic phosphoesterase and nuclease J. Chem. Sci. 43, 175-178, 2005 V. Chandrasekhar, V. Krishnan, R. Azhakar, C. Madhavaiah, S. Verma.
125. A Copper-Metalated, Hybrid Inorganic-Organic Polymer as an Oxidative Nuclease Eur. J. Inorg. Chem. 1482 - 1486, 2005 V. Chandrasekhar, A. Athimoolam, V. Krishnan, R. Azhakar, C. Madhavaiah, S. Verma.
126. N-Bonded Monosilanols: Synthesis and Characterization of $ArN(SiMe_3)SiMe_2Cl$ and $ArN(SiMe_3)SiMe_2OH$ (Ar = C_6H_5 ; 2,6- $Me_2C_6H_3$; 2,6- $iPr_2C_6H_3$) Eur. J. Inorg. Chem. 1880-85 , 2005 V. Chandrasekhar, R. Boomishankar, R. Azhakar, K. Gopal, A. Steiner, S. Zacchini.
127. A tubular architecture in a phosphorus based trihydrazide, $\{P(S)[N(CH_3)NH_2]_3\}$ CrystEngComm. 7, 346-349, 2005 V. Chandrasekhar, R. Azhakar
128. Synthesis, Structure, and Stereochemistry of Trinuclear Metal Complexes Formed from the Phosphorus-Based Achiral Tripodal Ligand $\{P(S)[N(Me)N=CHC_6H_4O-OH]_3\}(LH_3)$: Luminescent Properties of $L_2Cd_3 \cdot 2H_2O$ Inorg. Chem. 44, 4608-4615,2005 V. Chandrasekhar, R. Azhakar, S. Zacchini, J.F. Bickley, A. Steiner.
129. Organostannoxane Supported Multi-Ferrocenyl Assemblies: Synthesis, Novel Supramolecular Structures and Electrochemistry, Chem. Eur. J. 11, 5437-5448,2005 V. Chandrasekhar, K. Gopal, S. Nagendran, P. Singh, A. Steiner, S. Zacchini, J.F. Bickley.
130. A new structural form for a decanuclear copper (II) assembly Dalton. Trans (Commun)3143-3145, 2005 V. Chandrasekhar, L. Nagarajan, K. Gopal, V. Baskar, P. Koegerler
131. Organooxotincages, $\{(n-BuSn)_3(\mu_3-O)(OC_6H_4-4-X)_3\}_2[HPO_3]_4$, X = H, Cl, Br and I in Double O-Capped Structures: Halogen-Bonding-Mediated Supramolecular Formation Organometallics 24, 4926-4932,2005 V. Chandrasekhar, V. Baskar, K. Gopal, J. J. Vittal
132. Organooxotin assemblies from Sn-C bond cleavage reactions Coord. Chem. Rev. 249, 1745-1765, 2005V. Chandrasekhar, K. Gopal, P. Sasikumar, R. Thirumoorthi

133. Alternating Hydrophilic and Hydrophobic pockets in the Channel Structures of Organostannoxane Prismanes: Preferential onfinement of Guest Molecules, *J. Am. Chem. Soc.* 127, 11556-11557, 2005 V. Chandrasekhar, P. Thilagar, J. F. Bickley, A. Steiner
134. Mononuclear metal phosphinates with ancillary pyrazole ligands. Synthesis and X-ray crystal structures of $[M(Ph_2PO_2)_2(3,5-DMPZ)_2]$ $[M=Co,Zn]$ *Z. Anorg. Allg. Chem.* 631, 2727-2732 (Special Issue in honor of Prof. H.W. Roesky), 2005, V. Chandrasekhar, R. Boomishankar, P. Sasikumar, L. Nagarajan, A.W. Cordes.
135. Influence of Aromatic Substituents on the Supramolecular Architectures of Monoorganooxotin drums *Cryst. Growth Des.* 6, 267-273, 2006, V. Chandrasekhar, K. Gopal, S. Nagendran, A. Steiner, S. Zacchini
136. Multi-Site Coordination Ligands Assembled on Organostannoxane Supports, *J. Organomet. Chem.* 691, 1681-1692, 2006 V. Chandrasekhar, P. Thilagar, P. Sasikumar
137. Expanded Corrole: synthesis, properties and receptor behavior, *ISRAPS Bulletin*, 16, 20-24, 2005 (invited), R. Misra, R. Kumar, V. Prabhuraja, T. K. Chandrashekar
138. Supramolecular assemblies of expanded porphyrins containing sulphur and selenium mediated through non-covalent interactions *Phosphorous, Sulfur, Silicon*; 180, 845-872, 2005. (invited), T. K. Chandrashekar, S. Venkatraman, V. Prabhuraja, Rajneesh Misra, V. Baskar
139. A Lipophilic Hexa-Porphyrin Assembly Supported on a Stannoxane Core, *J. Am. Chem. Soc.*, 127(8), 2410-2411, 2005, V. Chandrasekhar, S. Nagendran, R. Azhakar, M. R. Kumar,^a A. Srinivasan, K. Ray, T. K. Chandrashekar, C. Madhavaih,^a S. Verma, U. D. Priyakumar, G. N. Sastry
140. Aromatic Core Modified expanded porphyrins: A Strategy Towards Third-order Nonlinear Optical Response, *J. Am. Chem. Soc.*, 127(33); 11608-11609, 2005, H. Rath, J. Sankar, V. Prabhuraja, T. K. Chandrashekar, Amit Nag and Debabrata Goswami
141. Core modified octaphyrins: Syntheses and anion binding properties, *J. Chem. Sciences.*, 117, 99-103, 2005. (Invited), R. Misra, V. G. Anand, H. Rath, T. K. Chandrashekar.
142. Modified push-pull expanded corroles: syntheses, structure and nonlinear optical properties, *J. Photochem. & Photobio.A: Chem.*, 75, 108-117, 2005, R. Misra, R. Kumar, V. Prabhuraja, T. K. Chandrashekar
143. Modified Expanded corrole-ferrocene conjugates; Syntheses, Structure and Properties. *Chemistry - A European J* 11, 5695-5707, 2005,

- Rajeev Kumar, Rajneesh Misra, Viswanathan PrabhuRaja, Tavarekere K. Chandrashekar*.
144. Figure-Eight Aromatic Core-Modified Octaphyrins with six meso links: Synthesis and Structural Characterization. *Chemical Communications.*, 3343-3345, 2005, Harapriya Rath, Jeyaraman Sankar, Viswanathan PrabhuRaja, Tavarekere K. Chandrashekar*, B. S. Joshi, R. Roy.
 145. Aromatic Core-Modified Twisted Heptaphyrins [1.1.1.1.1.0]: Syntheses and Structural Characterization. *Org. Lett.* 7, 5445, 2005, H. Rath, J. Sankar, V. Prabhuraja, T. K. Chandrashekar, B. S. Joshi.
 146. Modified 22π Smaragdyrins with large two photon absorption cross section: A structure function correlation. *Org. Lett.* 8, 629, 2006, R. Misra, R. Kumar, T. K. Chandrashekar, A. Nag and D Goswami.
 147. Electronic and magnetic properties of ligand-free FePt nanoparticles, *Adv. Mater.* 17(5) , 574-578, 2005; H.G. Boyen, K. Fauth, B. Stahl, P. Ziemann, G. Kaestle, F. Weigl, F. Banhart, M. Hessler, G. Schuetz, N.S. Gajbhiye, J. Ellrich, H. Hahn, M. Buettner, M.G. Garnier, P. Oelhafen.
 148. Magnetic Properties of ϵ -Fe₃N-GaN Core-Shell Nanowires, *Nanotechnology*, 16, 2012- 2029, 2005 N. S. Gajbhiye and Sayan Bhattacharyya.
 149. Effect of partial substitution of Cr on electrocatalytic properties of CoFe₂O₄ towards O₂-evolution in alkaline medium, *Int. J. Hydrogen Energy*, 31, 701- 707, 2006, R. N. Singh, N. K. Singh, J. P. Singh, G. Balaji and N. S. Gajbhiye.
 150. Swift heavy ions irradiation studies on some ferrite nanoparticles, *Nucl. Instrum. Meth. Phys. Res. B*, 244, 27-30, 2006; B. Parvatheeswara Rao, K. H. Rao, P. S. V. Subba Rao, A. Mahesh Kumar, Y. L. N. Murthy, K. Asokan, V. V. Siva Kumar, Ravi Kumar, N. S. Gajbhiye, O. F. Caltun.
 151. Studies on Homogeneous Lead Zirconate Titanate Powder Synthesized by Hydroxide Co-precipitation, *Solid State Phys.* 50, 267, 2005; N. S. Gajbhiye, P. K. Pandey, Lyci George and Abhishek Kumar
 152. An efficient route to regioselective opening of N-tosylaziridines with zinc (II), halides *Tetrahedron Lett.* 46, 4103, 2005, Manas K. Ghorai, Kalpataru Das, Amit Kumar and Koena Ghosh.
 153. High sensitive measurements of absorption coefficient and optical nonlinearities, *Opt. Comm.* 261, 158-162, 2006, Debabrata Goswami.
 154. Zinc (II)- and Copper(I)-Mediated Large Two-Photon Absorption Cross Sections in a Bis-cinnamaldiminato Schiff Base, *JACS Comm.* 128, 402-403, 2006, Sanjib Das, Amit Nag, Debabrata Goswami and Parimal K. Bharadwaj

155. Modified 22) Smaragdyrins with Large Two-Photon Absorption Cross Section: A Structure Function Correlation, *Org. Lett.* 8(4), 629-631, 2006, Rajneesh Misra, Rajeev Kumar, Tavarekere K. Chandrashekar, Amit Nag, and Debabrata Goswami
156. Multiphoton coherent control in complex systems, *J. Opt. B: Quantum Semiclass. Opt.* 7, S265-S269 2005, Debabrata Goswami
157. Adiabatic Quantum Computing with Phase Modulated Laser Pulses, *J. of Phys. A: Maths and General* 38, L615-L626, 2005, Debabrata Goswami.
158. Core-Modified Expanded Porphyrins with Large Third-Order Nonlinear Optical Response, *JACS Comm.* 127, 11608-11609, 2005, Harapriya Rath, J. Sankar, V. PrabhuRaja, T.K. Chandrashekar, Amit Nag and Debabrata Goswami.
159. Quantum Computation with Ultrafast Laser Pulse Shaping, *Resonance* 10(6), 8-14, 2005, Debabrata Goswami
160. Polarization-induced nonlinearity of a femtosecond nonlinear process, *Physics Letters A* 341(5-6), 523-526 2005, Alok Srivastava and Debabrata Goswami.
161. O-Substituted m-Xylylene Bridged Dicobaloximes: Structure-Property Relationship Using Variable Temperature ^1H NMR Study, *Organometallics*, 24, 4454-60, 2005 V. Vijaikanth, B. D. Gupta, Debaprasad Mandal and Shashank Shekhar.
162. Pyrazine Bridged Benzyl Dicobaloximes: Competition between π -Interaction and Steric Crowding in Crystal Structure, *J. Organometal. Chem.* 690, 3746-3754, 2005, Debaprasad Mandal and B. D. Gupta.
163. Cobaloximes with Dimesitylglyoxime: Synthesis, Characterization, and Spectral Correlations with the Related Cobaloximes, *Organometallics*, 24, 1501-1510, 2005, Debaprasad Mandal and B. D. Gupta.
164. Sulfur dioxide insertion into Co-C bond in organocobaloximes: crystal structure and Co-C bond reactivity study, *Organometallic* 25, 92-98, 2006 Preeti Chadha, B. D. Gupta, Kingsuk Mahata.
165. Accumulation of metabolic intermediates of p-Cresol in the culture medium by a *Pseudomonas* sp. strain A isolated from the activated sludge of a domestic waste water treatment plant. *World J. Microbiology and biotechnology* 21(8-9), 1529- 1534, 2005 Yadav, K., Iyengar, L., Birkeland, N. and Gurunath R
166. C-H...O interactions are favoured over C=O...C interactions in the crystal packing of imidazolin-5-one analogues *J. Molecular Structure* 752, 101-106, 2005 Bhattacharjya G, Savitha G and Gurunath R

167. Mineralization of Sulphanilic acid by Agrobacterium sp. Strain PNS - 1 Biodegradation, 1 - 8, 2006 Singh, P, Iyengar, L., Birkeland, N. and Gurunath R.
168. A solvent free lewis acid catalyzed vinylogous condensation ARKIVOC 6, 152-161, 2006, Bhattacharjya G., Agasti S.S., Savitha G. and Gurunath R
169. Highly efficient and recyclable Ruthenium-based supported catalysts. J of Catalysis 231, 438.2005, F. A. Khan and N. Sahu
170. A Concise Synthesis of Novel Oxa-bridged Compounds. J. Org. Chem., 70, 7565, 2005. F. A. Khan, J. Dash, Ch. Sudheer, N. Sahu and Karuppasamy P.
171. A New Reaction of Diazomethane with Norbornyl α -Diketones. Tetrahedron Lett. 46 7193, 2005 F. A. Khan, Rashmirekha Satapathy, Ch. Sudheer and Ch. Nageswara Rao.
172. An efficient route to pentasubstituted phenols. Eur. J. Org. Chem., 672, 2006, F. A. Khan, Sumit Choudhury.
173. Electronic structure and vibrational spectra of $X_2O_2H_2O$ ($X=C, Si, Ge, Sn$): A theoretical study, Theochem, 730, 171-176, 2005, G. Ramachandran, S. Manogaran.
174. Astrid Besmehn, Magnetism and electronic transport in $Sr_{4-x}La_xRu_{2-x}Mn_xO_9$: Interplay of Mn and Ru redox chemistry, J. Appl. Phys. 97, 10A304 2005, S. Sundar Manoharan and Brajendra Singh, Judith Driscoll, William Branford and Lesley Cohen.
175. White light electroluminescence based on ZnS -PFO blends, Physica Stat. Solidi (a) 202, 1124, 2005, S. Sundar Manoharan, Qureshi Mohammad.
176. High mobility electron transport material, 2, 5 dibenzthiazolyl thiophene, J. Appl. Phys. 97, 096101, 2005, S. Sundar Manoharan and Qureshi Mohammad.
177. White light organic light emitting diodes based on spectral broadening in electro luminescence due to formation of interfacial exciplexes, Appl. Phys. Lett. 86, 113505, 2005, Samarendra P. Singh, Y. N. Mohapatra, Qureshi Mohammad and S. Sundar Manoharan.
178. Time domain spectroscopic study of PL decay in zinc benzothiazole suitable for white light emitting OLEDs, Synthetic metals, 155, 376-79, 2005, Samarendra P. Singh, Y.N. Mohapatra, M. Qureshi, S. Sundar Manoharan.
179. Second order tunneling in half metallic CrO_2 , Chromium (IV) oxide grain pellets, J. Magn. Mag. Mater., 290, 1112, 2005, D. Elefant, S. Sundar Manoharan, P. Verges and H. Vinzelberg.
180. Electroluminescent properties of dimeric bis(2'-hydroxyl phenyl)benzthiazolate)zinc (II) complex, Solid State Communications, 133, 5,

- 2005, 305-309, M. Qureshi, S.Sundar Manoharan, Samarendra P. Singh and Y. Mahapatra.
181. Energy transfer and morphology study of a new iridium based cyclometalated phosphorescent complex; *Optical Materials*, available online on Science Direct, 2005, Dipti Gupta, M. Katiyar, Deepak, T. Hazra, A. Verma, S.Sundar Manoharan, A. Biswas.
 182. Polymer Light Emitting Diode Using a New Electrophosphorescent Cyclometalated Iridium Complex, *Materials and Manufacturing Process*, 21, 3, 285-289, 2006, Dipti Gupta, S.Singh, M.Katiyar, Deepak T.Hazra, A.Verma, S.S.Manoharan.
 183. Influence of Weaker Interactions on the Self-Assembly of Rigid Molecular Scaffolds Based on Tetraaryl bimesityls, *Crystal Growth & Des* 06, 919, 2006 Moorthy, J. N.* Natarajan, R.; Savitha, G.; Venugopalan, P
 184. Oxidations with IBX: Benzyl Halides to Carbonyl Compounds, and the One-Pot Conversion of Olefins to 1,2-Diketones, *Tetrahedron Lett.* 47, 1757, 2006, Moorthy, J. N.,* Singhal, N.; Senapati, K.
 185. Diastereomer-Differentiating Photochemistry: Control of the Reactivity of Triplet 1,4-Biradicals Derived from Norrish Type II Reactions, *ISRAPS (Indian Society for Radiation and Photochemical Sciences) Bulletin*, 18, 45, 2006, Moorthy, J. N.,* Singhal, N.; Samanta, S
 186. 3-Dimensional 4-Connecting Organic Scaffolds with a Twist: Synthesis and Self-Assembly, *J. Org. Chem.* 70, 8586, 2005 Moorthy, J. N.*; Natarajan, R.; Venugopalan, P.
 187. Substituent Electronic Effects on the Persistence and Absorption Spectra of (Z)-o-Xylylenols. A Nanosecond Laser-Flash Photolysis Study, *J. Org. Chem.* 70, 7439, 2005, Koner, A. L.; Singhal, N.; Nau, W. M.; Moorthy, J.N.*
 188. Corundum, Diamond, and PtS Metal-Organic Frameworks with a Difference: Self-Assembly of a Unique Pair of 3-Connecting D_{2d} -Symmetric 3,3',5,5'-Tetrakis(4-pyridyl)bimesityl, *Angew. Chem. Int. Ed.* 44, 2415, 2005. Natarajan, R.; Savitha, G.; Dominiak, P.; Wozniak, K.; Moorthy, J. N.*
 189. Facile and Highly Selective Conversion of Nitriles to Amides via Indirect Acid-Catalyzed Hydration Using TFA or AcOH-H₂SO₄, *J. Org. Chem.*, 70, 1926, 2005, Moorthy, J. N.*; Singhal, N.
 190. Homochiral 1D-Helical Metal-Organic Frameworks from Achiral Components. Formation of Chiral Channel via C-H \cdots Cl Interaction, *CrystEngComm* 7, 337-341, 2005, V. Balamurugan and R. N. Mukherjee.
 191. Structures and properties of bivalent nickel and copper complexes with pyrazine-amide-thioether coordination: Electrochemical

- generation of trivalent nickel, Dalton Trans. 2886-2891, 2005 A. K. Singh and R. N. Mukherjee.
192. Bivalent and Trivalent Iron Complexes of Acyclic Hexadentate Ligands Providing Pyridyl/Pyrazine-Amide-Thioether Coordination, Inorg. Chem. 44, 5813-5819, 2005, A. K. Singh and R. N. Mukherjee.
 193. Helical vs. Zigzag Coordination Polymer: Influence of Structural Preference of Metal-ion Coordination Geometry, Inorg. Chim. Acta 359, 1376-1382, 2006 V. Balamurugan and R. N. Mukherjee.
 194. Reaction with Dioxygen of a Cu(I)Complex of 1-Benzyl-[3-2'-pyridyl]pyrazole Triggers Ethyl Acetate Hydrolysis: Acetato-/Pyrazolato-, Dihydroxo- and Diacetato-bridged Cu(II) Complexes, Dalton Trans. 1611-1621, 2006 J. Mukherjee and R. N. Mukherjee.
 195. Reaction of 1-(dimethylsilyl)-2-silylbenzene with platinum(0) phosphine complexes ORGANOMETALLICS 24 24): 6029-6036 , 2005, Shimada S, Maddali L.N. Rao, Li YH, Tanaka M
 196. Chemistry of $[\text{Et}_4\text{N}][\text{Mo}^{\text{IV}}(\text{SPh})(\text{PPh}_3)(\text{mnt})_2]$ as an Analogue of Dissimilatory Nitrate Reductase with Its Inactivation on Substitution of Thiolate by Chloride, J.Am.Chem.Soc., 128, 4196 - 4197, 2006 Amit Majumdar, Kuntal Pal, and Sabyasachi Sarkar
 197. Direct and indirect arsenic release from soaps by unhygienic use in tubewells, CURR. SCIENCE, 89, 1913, 2005, Soumen Dey, Shahana Chatterjee and Sabyasachi Sarkar.
 198. Electron Paramagnetic Resonance Study of 3, 4 5,trimethoxytetraphenyl porphyrinoxovanadium (IV) Complex, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 63, 556-564, 2005, Swati Sharma, Anil Kumar, Prem Chand, B.K Sharma and Sabyasachi Sarkar
 199. Structural changes of DNA induced by mono- and binuclear cancer drugs, Journal of Structural Biology, 150 , 277, 2005, R. Mukhopadhyay, P. Dubey and S. Sarkar
 200. Reversible Penta- and Hexacoordination Motifs in $[\text{Co}(\text{TMPP})]$ Resulting in Interchange of 1D and 2D Supramolecular Designs, Inorg. Chem. 44, 7277, 2005 Suman Maji, Anil Kumar, Kuntal Pal, Sabyasachi Sarkar.
 201. Direct Incorporation of a Ferric Ion in the Porphyrinogen Core: Tetrakis (cyclohexyl) iron Porphyrinogen Anion with Different Conformers and Its Reaction with Iodine, Inorg. Chem. 44, 7699, 2005 Dibyendu Bhattacharya, Soumen Dey, Suman Maji, Kuntal Pal, and Sabyasachi Sarkar.

202. Synthesis and characterization of water soluble carbon nanotubes from mustard soot, *Pramana-Journal of Physics*, 65, 681, 2005 P. Dubey, D. Muthukumar, S. Dash, R. Mukhopadhyay and S. Sarkar
203. Time-dependent quantum mechanical wave packet study of the $\text{He} + \text{H}_2^+(\nu, j) \rightarrow \text{HeH}^+ + \text{H}$ reaction, *J. Chem. Phys.* 122, 054304, 2005, N. Panda and N. Sathyamurthy.
204. $\pi - \pi$ interaction in pyridine, *J. Phys. Chem. A* 109, 6-8, 2005. B. K. Mishra and N. Sathyamurthy.
205. Hydrogen bonding in phenol, water and phenol-water clusters, *J. Phys. Chem. A*, 109, 843-850, 2005, R. Parthasarathi, V. Subramanian and N. Sathyamurthy.
206. Three dimensional quantum dynamics of (H, H_2) and its isotopic variants, *J. Phys. Chem. A* 109, 2057-2061, 2005, A. N. Panda, K. Giri and N. Sathyamurthy
207. An experimental and theoretical investigation of the photophysics of 1-hydroxy-2-naphthoic acid, *J. Phys. Chem. A* 109, 2746-2754, 2005, H. Mishra, S. Maheshwary, H. B. Tripathi and N. Sathyamurthy.
208. Stability in polysilanes for light emitting diodes, *Compu. Mat. Sci.* 33, 206-211, 2005, A. Sharma, U. Lourderaj, Deepak, N. Sathyamurthy and M. Katiyar
209. Determination of stability and degradation in polysilanes by an electronic mechanism, *J. Phys. Chem. B* 109, 15860, 2005, A. Sharma, U. Lourderaj, Deepak and N. Sathyamurthy.
210. Water clusters in a confined nonpolar environment, *Chem. Phys. Letters* 410, 348-351, 2005, C. N. Ramachandran and N. Sathyamurthy
211. Bowls, balls and sheets of boric acid clusters: The role of pentagon and hexagon motifs, *J. Phys. Chem. A* 109, 8587-8593, 2005, M. Elango, R. Parthasarathi, V. Subramanian and N. Sathyamurthy.
212. Preferential scattering of one isotopomer over another in (He, HD^+) collisions, *Chem. Phys. Letters.* 414, 509-513, 2005, A. K. Tiwari and N. Sathyamurthy.
213. Atomic and molecular clusters: designer materials for the nanoworld, *Proc. Indian Natn. Sci. Acad.* 70A, 2005, M. Elango, R. Parthasarathi, V. Subramanian, C. N. Ramachandran and N. Sathyamurthy.
214. Blue shift in X-H stretching frequency of molecules due to confinement, *J. Phys. Chem. A* 110, 2-4, 2006, O. Shameema, C. N. Ramachandran and N. Sathyamurthy.
215. Isotopic branching in (He, HD^+) collisions, *J. Phys. Chem. A* 110, 389-395, 2006, K. Tewari, A. N. Panda and N. Sathyamurthy

216. Ground and excited states of the monomer and dimer of certain carboxylic acids, *J.Phys. Chem. A* 110, 2709, 2006, U.Lourderaj and N. Sathyamurthy.
217. Hydrogen bonding without borders: an atoms-in-molecules perspective, *J. Phys. Chem. A* 110, 3349-3351, 2006, R. Parthasarathi, V. Subramanian and N. Sathyamurthy.
218. Synthesis of Mannich type products via a three-component coupling reaction, *Tetrahedron Lett.* 46, 2137, 2005, G. Pandey, R.P. Singh, A. Garg, and Vinod K. Singh.
219. Imino-ene Reaction of N-tosyl arylaldimines with α -methylstyrene: application in synthesis of important amines, *Tetrahedron Lett.* 46, 5039, 2005, M.K. Pandey, A. Bisai, A. Pandey, and Vinod K.
220. Asymmetric Synthesis of all the Stereoisomers of Tarchonanthuslactone, *etrahedron Lett.* 46, 7527, 2005 S. Baktharaman, S. Selvakumar, and Vinod K. ingh.
221. Synthesis of chiral vicinal C₂ symmetric and unsymmetric bis (sulfonamide) ligands of trans-1,2-cyclohexanediamine by aminolysis of N-tosylaziridines, *Tetrahedron Lett.* 46, 7935, 2005 A. Bisai, B.A.B. Prasad, and Vinod K. Singh.
222. Enantioselective turnover in glyoxylate-ene reaction catalyzed by chiral copper complexes, *Tetrahedron Lett.* 47, 897, 2006 M.K. Pandey, A. Bisai, and Vinod K. Singh.
223. Enantioselective Oxidation of Olefins Catalyzed by Chiral Copper bis(oxazoliny), Pyridine Complexes: a reassessment, *Tetrahedron* 62, 3573, 2006S. K. Ginoira and Vinod K. Singh.
224. On dynamical tunneling and classical resonances, *J of Chemical Physics*, 122, 114109, 2005 Srihari Keshavamurthy.
225. Resonance-assisted tunneling in three degrees of freedom without discrete symmetry, *Physical Review E (rapid communication)*, 72, 045203(R), 2005 Srihari Keshavamurthy.
226. Enforcing solution phase nanoscopic aggregation in a palindromic tripeptide. *Chem. Commun.*2564-2566,2005 Krishna Prasad, K., Purohit, C. S., Jain, A., Sankararamakrishnan, R., and Verma, S.*
227. Copper-metalated inorganic-organic polymer as an oxidative nuclease. *Eur. J. Inorg. Chem.* 1482-1486,2005 Chandrasekhar, V.*, Athimoolam, A., Krishnan, V., Azhakar, R., Madhavaiah, C., and Verma, S.*
228. Biomimetic synthesis and ultrastructural characterization of a zerovalent gold- hydroxyapatite composite. *Bioorg. Med. Chem. Lett.*16, 363-366, 2006 Gupta, Y., Mathur, G.N., Verma, S.*

229. Light induced DNA scission by a luminescent mixed-ligand uranyl complex. *Inorg. Chim. Acta* 359, 548-552, 2006 Das, S., Madhavaiah, C., Verma, S.
230. A luminescent silver-adenine metallamacrocyclic quartet. *J. Am. Chem. Soc.* 128, 400-401, 2006 Purohit, C.S., and Verma, S.*
231. Synthesis of Conformationally Constrained C-Glycosyl and Amino acids and Sugar Carbamino sugar Hybrids via Diels-Alder Reaction, *Org. Lett.* 7, 5441, 2005 K. Jayakanthan and Yashwant D. Vankar
232. Glycosyl trichloroacetylcarbamate: A new glycosyl donor for O-glycosylation *Carbohydrate Research*, 340, 2688, 2005, K. Jayakanthan and Yashwant D. Vankar.
233. $\text{Bi}(\text{OTf})_3$ and $\text{SiO}_2\text{-Bi}(\text{OTf})_3$ as Effective Catalysts for Ferrier Rearrangement Molecules 10, 884, 2005, J. Lokesh Babu, Anakshi Khare and Yashwant D. Vankar.
234. Synthesis of novel hybrids of D-galactose with 1-deoxynojirimycin analogues as glycosidase inhibitors, *Angewandte Chemie Int. Ed.* 41, 2001, 2005 B. Gopal Reddy and Yashwant D. Vankar.
235. Selective deprotection of terminal isopropylidene acetals and trityl ethers using HClO_4 supported on silica gel, *Carbohydrate Research*, 340, 1661, 2005 Aditi Agarwal and Yashwant D. Vankar.
236. 1-Substituted-tricyclo [2.1.0.0^{2,5}]pentan-3-ones. Revisiting the Diastereoselectivity, *ARKIVOC* 03, 67-73, 2005 (invited in honor of 70th birth anniversary of Dr. A. V. Rama Rao), Veejendra K. Yadav, Archana Gupta, Divya Agarwal, Sachin Srivastava and Virendra S. Yadava
237. A remarkably efficient Markovnikov hydrochlorination of olefins and transformation of nitriles into imidates using AcCl and an alcohol, *Eur. J. Org. Chem.* 10, 452-456, 2005 Veejendra K. Yadav, K. Ganesh Babu
238. Investigation of the Diastereoselectivity of Tricyclo (5.2.1.0^{2,6}) decan-10-ones. Controversies and Agreements *J. Org. Chem.* 70, 692-695, 2005 Veejendra K. Yadav, Latika Singh
239. Silylmethyl-Substituted Aziridine and Azetidene as Masked 1,3- and 1,4-Dipoles for Formal [3 + 2] and [4 + 2] Cycloaddition Reactions, *J. Am. Chem. Soc.* 127, 16366-16367, 2005 Veejendra K. Yadav, Vardhineedi Sriramurthy.
240. Degradation of 4-aminobenzene sulphonate by alginate encapsulated cells of *Agrobacterium* sp. PNS-1. *Bioresource Technology*, available online, 2005, Poonam Singh, L.C. Mishra, Anjali Pandey and Leela Iyengar

241. Mineralization of 4-aminobenzene sulphonate by *Agrobacterium* sp. strain PNS-1. Biodegradation, available online, 2006, Poonam Singh, Nils-Kare Birkeland, Leela Iyengar and Ramanathan Gurunath
242. Transient accumulation of metabolic intermediates of p-cresol in the culture medium by a *Pseudomonas* sp. strain A isolated from a sewage treatment plant. *World Journal of Microbiology*, 21, 1529. 2005, Kamlesh Kumar Yadav, Leela Iyengar, Nils-Kare Birkeland and Gurunath Ramanathan.
243. Alteration in the Binding Property of Laterally Non-symmetric Aza Cryptand Toward Cu(II), Ag(I) and Tl(I) Ions upon Derivatization with Methylnitile Group, *Eur. J. Inorg. Chem.* 1923, 2006 D. Ray, P. K. Bharadwaj.
244. Design and Synthesis of 1,10-Phenanthroline Based Zn(II) Complexes Bearing 1D Push-Pull NLO-phores for Tunable Quadratic Nonlinear Optical Properties, *J. Organomet. Chem* 3234, 2006 S. Das, A. Jana, V. Ramanathan, T. Chakraborty, S. Ghosh, P. K. Das, P. K. Bharadwaj.
245. Zinc(II) and Copper(I) Mediated Large Two-Photon Absorption Cross Sections in a bis-Cinnamaldiminato Schiff Base, *J. Am. Chem. Soc.* 128, 402, 2006 S. Das, A. Nag, D. Goswami, P. K. Bharadwaj.
246. Decameric Water clusters Shaped as Two Parallel Cyclic Pentamers with Staggered Conformation Stabilize Supramolecularly Bonded Infinite Chains of H_2PO_4^- Ions Forming Large Voids Occupied by Cryptand Molecules, *Eur. J. Inorg. Chem.* 1341, 2006 S. K. Ghosh, P. K. Bharadwaj.
247. Fluorescence Signaling Systems with a Cryptand Receptor Incorporating Electron-Withdrawing Groups: Metal Ion Specificity and Solvent Dependence, *J. Photochem. Photobiol. A.* 1016, 2006 B. P. Bag, P. Mukhopadhyay, P. K. Bharadwaj.
248. Metal-Organic Framework Structures of Cd(II) Built with Two Closely Related Podands that are Further Stabilized by Water Clusters, *Crystal Growth and Design.* 433, 2006 B. P. Bag, P. Mukhopadhyay, P. K. Bharadwaj.
249. Supramolecularly Assembled Pentameric and Octameric Water Clusters Stabilized by a Mixed Complex of Ni (II), *Inorg. Chim. Acta.* 359, 917, 2006 S. K. Ghosh, P. K. Bharadwaj.
250. Light Induced DNA Scission by a Luminescent Mixed-Ligand Uranyl Complex, *Inorg. Chim. Acta.* 359, 548, 2006 S. Das, C. Madhavaiah, S. Verma, P. K. Bharadwaj.
251. Self-assembled Octameric and Tetrameric Water Clusters Gather Luminescent Zinc(II) Complexes Around to Hydrogen-Bonded Framework

- Structures and Associated Fluorescence Modulation, *Crystal Growth and Design*. 6, 187, 2006 S. Das, P. K. Bharadwaj.
252. Coordination Polymers Built from Cu (II) and Pyrazine-2,3,5,6-tetracarboxylate or Pyridine-2,4,6-tricarboxylate: Structural and Magnetic Studies, *Inorg. Chim. Acta.* 359, 468, 2006 S. K. Ghosh, M. S. El Fallah, J. Ribas P. K. Bharadwaj.
253. Metal-Organic Frameworks of Lanthanide (III) Ions with a Podand Bearing Terminal Carboxylates: Identification of Water Clusters of Different Nuclearity, *Polyhedron* 25, 1491, 2006 S. Neogi, P. K. Bharadwaj.
254. Structural and Spectroscopic Features of Mono- and Binuclear Nickel(II) Complexes with Tetradentate N(amine)2S(thiolate)2 Ligation., *Inorg. Chem.* 44, 8234, 2005 R. T. Stibrany, S. Fox, P. K. Bharadwaj, H. J. Schugar, J. A. Potenza.
255. A Metal-Organic Framework H-Bonded Like a Polycatenane: Coexistence of Acyclic Water Trimer and Nonamer, *Inorg. Chem.* 44 , 5553, 2005 S. K. Ghosh, P. K. Bharadwaj.
256. Mn(II) Staircase Structures Stitched by Water Clusters to a 3D Metal-Organic Open Framework: X-ray Structural and Magnetic Studies, *Inorg. Chem.* 44, 3856, 2005 S. K. Ghosh, J. Ribas, M. S. El Fallah, P. K. Bharadwaj.
257. Coordination Polymers of La(III) as Bunched Infinite Nanotubes and Their Conversion into an Open-Framework Structure, *Inorg. Chem.* 44 , 3156, 2005 S. K. Ghosh, P. K. Bharadwaj.
258. Octameric Water Clusters of Staircase Structure Present in a Metal-Organic Framework Built from Helical Lanthanide Coordination Polymers. *Eur. J. Inorg. Chem.* 4886, 2005 S. K. Ghosh, P. K. Bharadwaj.
259. Infinite Chains of Quasi-Planar Hexameric Water Clusters Stabilized in a Metal-Organic Framework Built from Co(II) and Pyrazine- 2,3,5,6-tetracarboxylic Acid, *Eur. J. Inorg. Chem.* 4880, 2005 S. K. Ghosh, P. K. Bharadwaj.
260. A Reusable Zigzag Copper (II) Coordination Polymer with Bio-essential Constituents as a Facile DNA Scission Agent, S. Das, *Inorg. Chim. Acta.* 358 , 3236, 2005 S. Das, C. Madhavaiah, S. Verma, P. K. Bharadwaj.
261. Attachment of Electron-Withdrawing 2,4-Dinitrobenzene Groups to a Cryptand-Based Receptor for Cu(II)/H⁺-Specific Exciplex and Monomer Emissions, *Org. Lett.* 7 , 1573, 2005, B.P. Bag, P.K. Bharadwaj
262. Fluorescence Enhancement with Different Ionic Inputs in a Cryptand Based Multireceptor Signaling System, *J. Chem. Sci. (Special Issue)* 117 , 145, 2005 B. P. Bag, P. K. Bharadwaj.

263. Self-Assembly of a Co(II) Dimer through H-bonding of Water Molecules to a 3D Open-Framework Structure, *J. Chem Sci.* 117 , 23,2005 S. K. Ghosh, P. K. Bharadwaj.
264. Characterization of 3D Metal-Organic Frameworks Formed Through Hydrogen Bonding Interactions of 2D Networks with Rectangular Voids by Co^{II} and Ni^{II} (pdc) [pdc= Pyridine-2,6-dicarboxylate] and 4,4'-Bipyridine or 1,2-Di(pyridyl)ethylene, *Crystal Growth and Design.* 5 , 623, 2005 S. K. Ghosh, J. Ribas, P. K. Bharadwaj.
265. Perturbation of the PET Process in Fluorophore-Spacer-Receptor Systems Through Structural Modification: Transition metal Induced Fluorescence Enhancement and Selectivity, *J. Phys. Chem. B* 109 , 4377, 2005 B. P. Bag, P. K. Bharadwaj.
266. An Infinite Water Chain Passes Through an Array of Zn(II)-Metalloclusters Built with a Podand Bearing Terminal Carboxylates, *Inorg. Chem.* 44, 816, 2005, S. Neogi, P. K. Bharadwaj.
267. Fluorescence Enhancement of a Signaling System in the Simultaneous Presence of a Transition and an Alkali Metal Ion: a Potential AND Logic Gate, *Chem. Commun.* 513, 2005, B. P. Bag, P. K. Bharadwaj.
268. Settlement Response of a Multi Layer Geosynthetic-Reinforced Granular Fill-Soft Soil System, *Geosynthetics International*, 12, 6, 288-298, 2005, Kousik Deb, S.Chandra and P.K.Basudhar.
269. Steady State Response of Beams on a Tensionless Geosynthetic-Reinforced Granular Fill-Soft Soil System Subjected to Moving Loads. *Soils and Foundations*, 45, 5, 11 - 18, 2005, Maheshwari, P., Chandra, S. and Basudhar, P.K.
270. Pseudo_Static Seismic Stability Analysis of Geosynthetic-Reinforced Soil Retaining Walls *Indian Geotechnical J*, 2005, Basha, B. M. and Basudhar, P. K.
271. Parameter Estimation of Hoek-Brown Rock Failure Criterion *Indian Geotechnical J*, 35, 2, 144 - 153, 2005, Sarat Kumar Das and Prabir Kumar Basudhar.
272. The Effect of Prestressing Force and Interfacial Friction on the Settlement Characteristics of Beams on Reinforced Granular Beds. *Indian Geotechnical J*, 35, 3, 283 - 298, 2005, Maheshwari, P., Basudhar P.K. and Chandra, S.
273. Optimum Design of Nailed Soil Slopes, *Geotechnical and Geological Engineering: An International Journal*, .23, 3, 273-296, 2005, Patra, C.R. and Basudhar, P.K.

274. Prediction of Coefficient of Lateral Earth Pressure Using Artificial Neural Networks, *The Electronic Journal of Geotechnical Engineering (EJGE)*, 10. Bundle-A, 2005, Das, S.K. and Basudhar, P.K.
275. Concepts of reliability in mechanistic-empirical bituminous pavement design, *Road Engineering Association of Asia and Australasia J*, 12, 1,24-30, 2005, Maji, A., and Das, A..
276. A simple model for structural evaluation of asphalt pavements at network level, *J of Infrastructure Engineering, ASCE*, 12,.1, 41-49, 2006, Agarwal, P. K., Das, A. and Chakroborty, P..
277. Identification of Groundwater Pollution Sources Using G.A. Based Linked Simulation Optimization Model, *J of Hydrologic Engineering, American Society of Civil Engineers*, 11, 2, 101-109, 2006, Singh, Raj Mohan and Datta, Bithin.
278. Optimal Management of Coastal Aquifers using Linked Simulation Optimization Approach, *Water Resources Management*, 19, 295-320, 2005, Bhattacharjee Rajib Kumar and Datta, Bithin.
279. Sequential batch culture studies for the Decolorisation of Reactive dye by *Coriolus versicolor*, *Bioresource Technology*, 97, 3, 396-400, 2005, Sanghi, R., Dixit, A. and Guha, S.
280. Collection of Depth-Specific Groundwater Samples from an Arsenic Contaminated Aquifer in West Bengal, India, *Environ. Eng. Sci.*, 22, 6, 870-880, 2005, Guha, S.; Raymahashay, B. C.; Banerjee, A.; Acharyya, S. K.; Gupta, A.
281. Enhanced granulation by Natural Ionic Polymer Additives in UASB reactor treating low-strength wastewater, *Water Research*, 39, 3801-3810, 2005, Tiwari, M. K.; Guha, S.; Harendranath, C. S.; Tripathi, S.
282. Removal of Chromium from Synthetic Plating Waste by Zero-Valent Iron and Sulfate Reducing Bacteria, *Water Environment Research*, 77, 411-416, 2005, Guha, S. and Bhargava, P.
283. Codal Provisions of Seismic Hazard in Northeast India, *Current Science*, 89, 12, 2004-2008, 2005, Das, S., Gupta, V.K. and Gupta, I.D..
284. A Probabilistic Seismic Hazard Analysis of Northeast India, *Earthquake Spectra*, 22, 1,.1-27, 2006, Das, S., Gupta, I.D. and Gupta, V.K..
285. An evaluation of artificial neural network technique for the determination of infiltration model parameters, *J. Applied Soft Computing*, 6(3), 272-282, 2006, Jain, A. and Kumar, A.
286. A comparative analysis of training methods for artificial neural network rainfall-runoff modeling, *J. Applied Soft Computing*, 6(3), 295-306, 2006, Srinivasulu, S. and Jain, A..

287. Integrated approach to modelling decomposed flow hydrograph using artificial neural network and conceptual techniques, *J. Hydrol.*, 317(3-4), 291-306, 2006, Jain, A. and Srinivasulu, S.
288. Comment on comparison of static-feedforward and dynamic-feedback neural networks for rainfall-runoff modeling by Y.M. Chiang, L.C. Chang, and F.J. Chang, 2004. *Journal of Hydrology* 290 (3-4), 297-311, *J. Hydrol.*, 314, 207-211, 2005, Jain, A.
289. Discussion of application of neural networks for estimation of concrete strength by Jong-In Kim, Doo Kie Kim, Maria Q. Feng, and Frank Yazdani, *J. Materials in Civil Engg, ASCE*, 17(6), 736-738, 2005, Jain, A., Misra, S., and Jha, S.K.
290. Determination of an optimal unit pulse response function using real-coded genetic algorithm, *J. Hydrol.*, 303(1-4), 199-214, 2005, Jain, A., Srinivasulu, S., and Bhattacharjya, R.
291. The Great Sumatra Earthquake and Indian Ocean Tsunami of December 26, 2004: The Effects in Mainland India and in the Andaman-Nicobar Islands, EERI Special Earthquake Report, EERI Newsletter, Vol. 39, No. 4, April 2005, 12 pages, Jain S K, Murty C V R, Rai D C, Malik J, Sheth A R, Jaiswal A, Sanyal S A, Kaushik H B, Gandhi P, Mondal G, Dash S R, Sodhi J S, Santhosh G.
292. Design of Non-Structural Elements for Buildings: A Review of Codal Provisions, *The Indian Concrete Journal*, 79, 8, 22- 28, 2005 Mondal G and Jain S K.
293. Modified Proposed Provisions for Seismic Design of Liquid Storage Tanks: Part I - Codal Provisions, *J of Structural Engineering, SERC Chennai*, 32, 3, 195-206, 2005, Jain S K and Jaiswal O R.
294. Modified Proposed Provisions for Seismic Design of Liquid Storage Tanks: Part II - Commentary and Examples, *Journal of Structural Engineering, SERC Chennai*, 32, 4, 297-310, 2005, Jaiswal O R and Jain S K.
295. Analysis of Earth Dams Affected by the 2001 Bhuj Earthquake, *Engineering Geology*, 80 (3-4), 282-291, 2005, Singh R, Roy D and Jain S K
296. Proposed Draft for IS 1893 on Design of Nonstructural Elements, *The Indian Concrete Journal*, 79, 10, 39 - 45, 2005, Mondal G and Jain S K.
297. The Indian Earthquake Problem, *Current Science*, 89, 9, 10, 2005, Jain S K.
298. Detection of Partial Blockage in Single Pipelines, *Journal of Hydraulic Engineering, ASCE*, 132, 2, 200-206, 2006, Mohapatra, P. K., Chaudhry, M. H., Kassem, A. A. and Moloo, J.
299. Micro-Hydro Power Plant, Vikash Path, Bharat Vikash Parishad, Ramkrishna branch, Kanpur (December Issue), 2005, Mohapatra, P. K..

300. Mallik, J.N., and Murty, C.V.R., alLandscape Changes in Andaman & Nicobar Islands (India) due to M_w 9.3 Tsunamigenic Sumatra Earthquake of 26 December 2004, Current Science, J of Indian Academy of Sciences, Bangalore, 88, 5, 357-359, 2005,. Malik, J.N., and Murty, C.V.R
301. Future Directions for Capacity Design of Steel Beam-to-Column Moment Resisting Connections, The Structural Engineer, International Journal of The Institution of Structural Engineers, UK, 83, 3, 36-41, 2005, Arlekar, J.N., and Murty, C.V.R..
302. The Great Sumatra Earthquake and Indian Ocean Tsunami of December 26, 2004, EERI Special Earthquake Report #3, EERI Newsletter, April 2005, 1-12, Jain,S.K., Murty,C.V.R., Rai,D.C., Malik,J.N., Sheth,A.R., Jaiswal,A., Sanyal, S.A., Kaushik,H.B., Gandhi,P., Mondal,G., Dash,S.R., Sodhi,J.S., Santhosh,G.
303. The Kashmir Earthquake of October 8, 2005, EERI Special Earthquake Report, EERI Newsletter, December 2005, 5-8, Rai, D.C., and Murty, C.V
304. Seismic Design of RC Columns and Wall Sections: Part 2 - Proposal for Limiting Strain in Steel, Indian Concrete Journal, The ACC Limited, Thane, 79, 4, 2005, 22-26, Dasgupta,K., and Murty,C.V.R.
305. Limitations of available Indian Hot-Rolled I-Sections for use in Seismic Steel MRFs, Journal of Structural Engineering, SERC, Madras, 32,3, 159-168, 2005 Goswami,R., Arlekar,J.N., and Murty,C.V.R.
306. Seismic Vulnerability of IRC Code-Designed RC Bridge Piers in light of Interim IRC:6-2002 Provisions, J of The Indian Roads Congress, Indian Roads Congress, New Delhi. 66-2, 379-426, 2005 Goswami,R., and Murty,C.V.R.
307. Cyclic Behaviour of Precast RC Connections, Indian Concrete Journal, The ACC Limited, Thane, 79, 11, 43-50, 2005 Joshi,M.K., Murty,C.V.R., and Jaisingh,M.P.
308. North Kashmir Earthquake - Reconnaissance Survey, Indian Concrete Journal, The ACC Limited, Thane, 79, 11, 17-18, 2005, Rai, D.C., and Murty, C.V.R.
309. Concerns on Seismic Moment-Shear Connections using available Indian Hot-Rolled I-Sections, Journal of Structural Engineering, SERC, Madras 32, 5, December 2005 - January 2 343-349, 2006 Goswami,R., Arlekar,J.N., and Murty,C.V.R.
310. Effect of Overconsolidation and Anisotropy of Kaolin Clay using True Triaxial Testing. Soils and Foundations, 45, 3, 71-82, 2005,Prashant, A., and Penumadu D.

311. A single hardening elasto-plastic model for Kaolin clay with loading-history-dependent plastic potential function. *Int. Jof Geomechanics, ASCE*, 6,1, 55-63, 2006, Han, L., Prashant, A., and Penumadu D.
312. Engineering Lessons Not Learnt from 2002 Diglipur Earthquake – A Review after 2004 Sumatra Earthquake, *Journal Current Science, Indian Academy of Sciences*, 89 10, 31-36, 2005, Rai, D. C., and Murty, C. V. R.
313. An Insight into the Flexibility of Light Beam-to-column Connections, *Journal of Institution of Engineers (India) (Civil Engineering Division)*, 86, 171-176, 2006 Kaushik, H. B. and Rai, D. C.
314. Discussion of Drawdowns due to Intermittent-Pumping Cycles, *Journal of Hydraulic Engineering, American Society of Civil Engineers*, 131(11), , 1023, 2005, Srivastava, R.
315. Increase in Groundwater Level due to Artificial Recharge. *ISH Journal of Hydraulic Engineering*, 11(3), 24-31, 2005, Vasudeo, A.D. and Srivastava, R.
316. Discussion of Simplified Use of Gamma-Distribution/ Nash-Model for Runoff Modeling, *Journal of Hydrologic Engineering, American Society of Civil Engineers*, 11(1), 86-87, 2005 Srivastava R.
317. Discussion of Parameter Estimation of Beta Distribution for Unit Hydrograph Derivation, *Journal of Hydrologic Engineering, American Society of Civil Engineers*, 112, 194-196, 2005 Srivastava R.
318. Discussion of Determination of Length of a Horizontal Drain in Homogeneous Earth Dams, *Journal of Irrigation and Drainage Engineering, American Society of Civil Engineers*, 132(1), 88-89, 2006, Srivastava R.
319. Discussion of Efficient Algorithm for Computing Einstein Integrals, *Journal of Hydraulic Engineering, American Society of Civil Engineers*, 132(3), 336-337, 2006 Srivastava R.
320. Evolution and similarity evaluation of protein structures in contact map space, *Proteins: Structure, Function, and Bioinformatics* 59,2 196 - 204, 2005 Nitin Gupta, Nitin Mangal, and Somenath Biswas.
321. Dense cluster gateway based routing protocol for multi-hop mobile, *Ad hoc Networks*, 4, 2, 168-185, 2006 R K Ghosh, V. Garg, M. S. Meitie, S. Raman, A. Kumar and N. Tewari.
321. Designing a new class of fault tolerant multistage interconnection network, *Jof Inter connection Networks*, 6, 4, 361-382, 2005 R K Ghosh, KV Arya.
322. Assigning tasks in 24-hour software development model, *J of Systems and Software*, 2006, Pankaj Jalote and G. Jain.
323. Geon-driven shape models for holistic semantics, *Int. J of Computer Aided Technology*, 23, 2-4, 2005, Amitabha Mukerjee and Hemant Muley.

324. Communications Letters, 10, 4, 2006 ,284 - 286, Arya Mazumdar, Ajit K. Chaturvedi, and Adrish Banerjee.
325. Inverter topologies for DSTATCOM applications – a simulation study, Electric Power Systems Research, 75, 2, 161-170, 2005, S. V. Iyer, A. Ghosh and A. Joshi.
326. Performance study of two different compensating devices in a custom power park, Proc. IEE – Generation, Transmission & Distribution, 152, 4, 521-528, 2005, A. Ghosh.
327. Static shunt and series compensations of an SMIB system using flying capacitor multilevel inverter, IEEE Trans. Power Delivery, 20, 4, 2613-2622, 2005, A. Shukla, A. Ghosh and A. Joshi.
328. Frequency domain characterization of sliding mode control of an inverter used in DSTATCOM application, IEEE Transactions Circuits and System – I: Regular Papers, 53, N 3, 662-676, 2006, R. Gupta and A. Ghosh.
329. Impact of Interfacial Barriers on Recombination Profile in Bilayer Organic Light-Emitting Diode, Organic electronics, 6 , 229-236,2005. B. Mazhari,
330. An Improved Solar Cell Circuit Model For Organic Solar Cells,Solar Energy Materials and Solar Cells, 90, 7-8, 5 , 1021-1033,2006 B. Mazhari
331. On the Estimation of Frequency Response in Amplifiers Using Miller’s Theorem, IEEE Trans. Education 48, 3, 559-561,2005. B. Mazhari,
332. An Optimum UPQC with Minimum VA Requirement and Mitigation of Unbalanced Voltage Sag, International Journal of Emerging Power Systems, 2, 2, 1, 2005, Y. Y. Kolhatkar and S. P. Das,
333. Implications of Carbon Tax on Generation Expansion Plan & GHG Emission: A Case Study on Indian Power Sector, Int. J of Emerging Electric Power Systems, 3, 1, 2005, Gaurav Nanda, Sangeeta Yamgar, S.C. Srivastava, S.N. Singh, Praveen Gupta, Dharam Paul and R.M. Shrestha.
334. Congestion Management in Competitive Power Market: A Bibliographical Survey, Electric Power Systems Research, 76, 1-3, 153-164, 2005, Ashwani Kumar, S. N Singh and S. C Srivastava.
335. Optimal Control Strategy Using Pseudo-Decentralization for Coordination of Power System Stabilizer and FACTS in a Multi-machine System, International Energy Journal, AIT Bangkok, 2005, B Kalyan Kumar, S. N Singh and S. C Srivastava,
336. Machine Translation: AnglaBharati and AnuBharati Approaches, CSI Communication, October 2005, R.M.K. Sinha (Invited Paper).
337. An overview of photonic packet switching architectures, IETE technical Review, 23, 1, 15-34, 2006 Rajat Kumar Singh, Y.N.Singh,.

338. Modeling with recurrent neural networks using generalized mean neuron model, *Neural Information Preprocessing - Letters and Reviews*, 8, 49-56, 2005, Gunjan Gupta, R.N.Yadav, Prem K Kalra, J.John.
339. Neural network learning with generalized-mean based neuron model, *Soft Computing*, 10, 1, 257-263, 2006 R.N.Yadav, Prem K Kalra, Joseph John.
340. Effect of transmitter positions on channel bandwidth in diffuse indoor multi-transmitter optical wireless systems, *Proc. SPIE*, . 6021, 251-258, 2005, Sivabalan Arumugam, Joseph John
341. ISI-Free Pulses with Reduced Sensitivity to Timing Errors, *IEEE Communications Letters*, . 9, 4., 292-294, 2005, P Sandeep, S Chandan and AK Chaturvedi.
342. A Family of ISI-Free Polynomial Pulses, *IEEE Communications Letters*, 9, 6, 496-498, 2005, S Chandan, P Sandeep and AK Chaturvedi.
343. Performance Analysis of Predetection EGC in Exponentially Correlated Nakagami-m Fading Channel, *IEEE Transactions on Communications*, 53, 8, 1252-1256, 2005, PR Sahu and AK Chaturvedi.
344. Effect of an Independent Antenna on the Performance of a Correlated Dual-Diversity Predetection EGC Receiver in Nakagami-m Fading Channel, *IEE Proc. Communications*, 152, 5, 725-728, 2005, PR Sahu and AK Chaturvedi.
345. Optimal Bandwidth Allocation to Coding and Spreading in DS-CDMA Systems Using LMMSE Front End Detector, *IEEE Transactions on Wireless Communications*, 4, 6, 2636-2641, 2005. Manish Agarwal, Kunal Dutta and AK Chaturvedi.
346. Application of Computational Geometry to Multiuser Detection in CDMA, *IEEE Transactions on Communications*, 54, 2, 204-207, 2006, Girish Manglani and AK Chaturvedi.
347. A Novel Method for Down-conversion of Multiple Bandpass Signals, *IEEE Transactions on Wireless Communications*, 5, 2, 427-434, 2006, Aditya Mahajan, Manu Agarwal and A. K Chaturvedi.
348. A Hybrid Time Divisioning Scheme for Power Allocation in DMT Based DSL Systems, *IEEE Communications Letters*, 10, 2, 73-75, 2006, Akshay Garg and A. K Chaturvedi.
349. Characterization of Accumulation Layer Capacitance for Extracting Data on High-K Gate Dielectrics, *IEEE Transactions on Electron Devices*, 52, 1187-1193, 2005 Samares Kar, Surendra Rawat, Shaloo Rakheja, and Dharmendar Reddy.
350. Study of silicon-organic interfaces by admittance spectroscopy, *Applied Surface Science*, V 252, 3961-3967, 2006 Samares Kar.

351. Parameter extraction using novel phenomenon in nano-MOSFETs with ultrathin (EOT=0.46-1.93 nm) high-K gate dielectrics, *Thin Solid Films*, 504, 178-182, 2006, Samares Kar.
352. A modified Ring Dielectric Resonator with Improved Mode Separation and its Tunability Characteristics in MIC Environment, *IEEE Trans. on Microwave Theory and Technique*, 53, No. 6, 1960-1967, 2005, K. V. Srivastava, V. V. Mishra and A. Biswas.
353. A CAD model of generalized high pass filter using Chebyshev polynomial for RF application, *International Journal of RF And Computer-Aided Engineering*, John Wiley, 6, 2, 155-163, 2006, P. Chandra and A. Biswas.
354. Modeling of On-chip inductors and transformers for GaAs MMICs, *Microwave and Optical Technology Letter*, John Wiley, USA, 47, 3, 5, 270-274, 2005, Mohan, G. Boech and A. Biswas.
355. Full-wave analysis of single and coupled striplines in multilayered cylindrical dielectrics using the 3D TLM method, *Microwave and Optical Technology Letters*, 48, 2, 298-302, 2006, Alok Kumar Gupta, Akhilesh Mohan, Animesh Biswas.
356. Optimal Control Strategy Using Pseudo-Decentralization for Coordination of Power System Stabilizer and FACTS in a Multi-machine System, *Int. Energy Journal*, AIT Bangkok, 2005, B Kalyan Kumar, S. N Singh and S. C Srivastava.
357. An Approach to Determine Voltage Control Areas Considering Impact of Contingencies, *IEE Proceedings Part-C on Generation, Transmission and Distribution*, 152, 3, 342-350, 2005 M.K.Verma and S.C.Srivastava
358. A Distribution Automation System Simulator for Training and Research, *KIEE Int. Trans. on Power Engineering*, 5A,2, 159-170, 2005 R.P. Gupta and S. C. Srivastava.
359. Congestion Management in Competitive Power Market: A Bibliographical Survey, *Electric Power Systems Research journal*,6, 153-164, 2005 Ashwani Kumar, SC Srivastava and SN Singh.
360. Implications of Carbon Tax on Generation Expansion Plan & GHG Emission: A Case Study on Indian Power Sector, *Int. J of Emerging Electric Power Systems*, Berkeley Electronic Press, 3, 2, Article 1045, 2005, S. Yamgar, G. Nanda, S.C.Srivastava, S.N.Singh, P.Gupta, Dharam Paul and Ram.M. Shrestha.
361. A Decentralized Automatic Generation Control Scheme for Competitive Electricity Markets, *IEEE Transactions on Power Systems*, .21,1, 312-320, 2006, Barjeev Tyagi and S.C.Srivastava.

362. Controlling Synchronization of Modified FitzHugh-Nagumo Neurons under External Electrical Stimulation, *International Journal of NeuroQuantology*. 4, 1, 50-67, 2006, Mishra, D., Yadav, A, Ray, S., and Kalra, P.K.
363. Levenberg-Marquardt Learning Algorithm for Integrate-and-Fire Neuron Model, *Neural Information and Processing Letters* 9, 2, 41-51, 2005, Mishra, D., Yadav, A, Ray, S., and Kalra, P.K.
364. Neural Network Learning with Generalized Mean Based Neuron Model, *Soft Computing*, 10, 3, 257-263, 2006, Yadav R. N., Kalra P. K. & John J.
365. Modeling with Recurrent Neural Network using Compensatory Neuron Model, *Neural Information Processing- Letters and Reviews*, 6, 3, 2005, Gupta G., Yadav R. N., Kalra P. K. & John J.
366. A Novel Adaptive Biasing Scheme for CMOS Op-Amps, *J of Semiconductor Technology and Science*, 5, 3, 168-172, 2005 Alope Dutta.
367. Data Protection and reliability measures through file backup, *Journal of the Society of Statistics, Computer and Applications*, Vol. 3, Nos.2 & 3, 2005 (April, New Series), pp 133-138, Parihar, H.P.S., Srivastava, S., Rai, D.P. Rai.
368. A Network Layer Approach to Enable TCP over Multiple Interfaces, *ACM/Kluwer J of Wireless networks (WINET)*, 11, 5, 637-650, 2005 K. Chebrolu, B. Raman and R. R. Rao.
369. Meaning and Explanations of Mental Illness: A Social Representations Approach, *Psychology and Developing Societies*, 17 (1), 1-18.2005 S. Dixit.
370. Children in Need: The Role of Helplines. In *Indian Journal of Social Research*, 46, 2, p 89-100, Munmun Jha and N.K. Sharma.
371. Sennior/Junior recipient status and reward allocation in India and Canada. *Psychology & Developing Societies*, 18, 1, 15-35, 2006, L. Krishnan, & Carment, D.W.
372. Between Love, Domination and Reason: Civic Education and its 'Others' in Central India, *Contemporary Education Dialogue*, 2, 2, 170-192, 2005 Amman Madan.
373. Dragon Daddies and False-Hearted Men: Patriarchy in Toni Morrison's *Love*. *Notes on Contemporary Literature*, 35, 2-4, 2005 Sathyaraj, V and G. Neelakantan.
374. Toni Morrison's Depiction of the City in *Jazz*. *Notes on Contemporary Literature*, 36,1 14-16 (Joe V. Yeldho and G. Neelakantan).
375. Impact of Globalization on the Technological Regime in India: Aspects of Change, in *Perspectives on Global Development and Technology*,

- 4, 1, 63-82, 2005, Brill Academic Publisher, Leiden,/ Boston,. Binay Kumar Pattnaik.
376. Effectiveness of Grassroots NGOs: An Empirical Exploration (with B Panda) in *Man and Development* (An International Quarterly), XXVII, 2, 39-66, 2005, Binay Kumar Pattnaik and Biswambhar Panda.
377. Perceiving the Role of Grassroots NGOs: From the Vantage of New Social Movement Perspective, (with B Panda) in *the Social Change*, 35, 3. 2005, Binay Kumar Pattnaik and Biswambhar Panda.
378. Changing Trends of Technological Research in Post-Globalization India, in *the Productivity*, (A quarterly Journal of the National Productivity Council) 45, 4, 534-42, 2005 Binay Kumar Pattnaik.
379. Ecological Bases of Indian Traditions: Search for an Indigenous Vision, in *the Eastern Anthropologist*, Special number, 58,3-4, 419-439, 2005 Binay Kumar Pattnaik.
380. How effective are harm reduction programme for drug users? Insights from evaluation of the programme at SHARAN, Delhi. *Journal of Health Mangement*, 72 219-236, 2005, Priya, K. R., Singh, S. K., Dorabjee, J., Varma, S., and Samson, L.
381. Complex Predicates and Semantic Underspecification, *Indian Linguistics* (Journal of the Linguistic Society of India), 65, 89-103., 2005, Achla M. Raina.
382. Does Trade Liberalization Create Pollution Haven? The Indian Experience. *International Journal of Environment and Development*, 2, 2, 253-270, 2005, Rath, B., Jena P.R.and Sahu, N.C.
383. An Impirical Regional Dynamic Input-Output Model for the Economy of Orissa State, *Indian Journal Of Regional Science*, XXXVII , 2, 1-11, 2005, S.C.Dhal and K.K.Saxena.
384. Effect of Cognitive Load and Paradigm on Time Perception, *J of the Indian Academy of Applied Psychology*, 32 (1), 37-42, 2006 Khan, A., Sharma, N. K. and Dixit, S.
385. Does the Choice of Market Structure Measure Matter? Evidence from the Indian Car Industry, *The ICFAI Journal of Industrial Economics* 3(1), 7-22, 2006 Singh S. K. and Sharma R.
386. Costs, Economies of Scale and Factor Demand in Urban Bus Transport: An Analysis of Municipal Transport Undertakings in India, *International Journal of Transport Economics* XXXII (2), 171-194, 2005 Singh S. K.
387. Review of Urban Transportation in India, *J of Public Transportation* 8(1), 79-97, 2005 Singh S.K.

388. General Health in Organizations: Relative Relevance of Emotional Intelligence, Trust, and Organizational Support. *Int. J of Stress Management*, 12 (3), 257-274, 2005, Jain, A. K., and Sinha, A. K.
389. Value realization and organizational effectiveness: Culture related imperatives. *Management and Labour Studies*, 31 (1), 32 - 48, 2006, Rai, S., Sinha, A. K., and Singh, A. K
390. Resilience for Well-being: The Role of Experiential Learning. *Psychological Studies*. 50 (1), 40-49, 2005, Srivastava, S.and Sinha, A. K.
391. ERP implementation and its effect on a few variables of organization structure and manager's job, *J of Academy of Business and Economics*, V, 3, 140-149, 2005 Sharma, R.R.K. and Chaudhary, R.
392. Formulation of web document classification: Transforming the quadratic problem into 0-1 integer linear, *Int. J of Digital Management*, ISSN 1738-8554, V1, 1, 63-70,2006 Iraj Mahdavi, Sharma, R.R.K. and Amiri, Z.R.
393. Asymmetric Penalized Prediction Using Adaptive Sampling Procedures;, *SEQUENTIAL ANALYSIS*, 24, 1, 23-43, 2005 RN Sengupta, S Chattopadhaya and Sujay Datta.
394. Three-Stage and Accelerated Sequential Point Estimation of the Normal Mean Using LINEX Loss Function; *STATISTICS*, 40, 1, 39-49, 2006 RN Sengupta and S Chattopadhaya.
395. Costa 2006 Recapturing Humanity: Embedded Market Community, *Academy of Marketing Science Review*, 2006 (4), Varman Rohit, Russell W. Belk and Janeen A..
396. The Unfree Consumer: Consumption and Freedom under Subaltern Conditions, *Academy of Marketing Science Review*, 2006 (4), Varman Rohit and Ram Manohar Vikas.
397. Effect of cognitive load and paradigm on time perception. *Journal of the Indian Academy of Applied Psychology*, 32 (1), 37-42, 2006, Khan, A., Sharma, N. K., and Dixit, S.
398. Entrepreneurship, Innovation and Marketing: Conceptualization of Critical Linkages, *J of Advances in Management Research*, 2, II, 54-69, 2005, Swami, Sanjeev, and Rajesh K. Porwal.
399. Multiple outlier detection in multivariate data using self-organizing maps, *Computational Statistics*, 20: 245-254, 2005 Nag, A. K., Mitra, A., Mitra, S.
400. Frequency estimation of undamped exponential signals using genetic algorithm, *Computational Statistics & Data Analysis*, 10.1016/j.csda, 2005, Mitra, A., Kundu, D.and Agrawal, G.

401. Wavelet decomposition based genetic neural network models for forecasting daily spot foreign exchange rates, *Statistical Methodology*, .3, 2, 103-124, 2006 Mitra, A., Mitra, S.
402. On linear codes over Z_2 Designs Codes and Cryptography, 36, 3, 227-244, 2005 Lal, A.K. Gupta, M.K. and Bhandari, M.C.
403. Change of variable formula for multiple integrals, *Mathematics Newsletter (NBHM)*, 15, 1, 6-9, 2005 Santhanam, G., Kumaresan, S.
404. Estimation of linear models with missing data: The role of stochastic linear constraints, *Communications in Statistics - Theory and Methods* 34, 2, 375-387, 2005 Shalabh, Toutenburg, H.
405. Estimation of regressions coefficients subject to exact linear restrictions when some observations are missing and balanced loss function is used, *TEST*, 14, 2, 385-396, 2005 Shalabh, Toutenburg, H.
406. Prediction in Restricted Regression Models, *Journal of Combinatorics, Information System and Sciences*, 29, 1-4, 2002 [Appeared in 2005] , 229-238, Shalabh and R. Chandra
407. Estimation of Parameters in Multiple Regression With Missing Covariates using a Modified First Order Regression Procedure, *Annals of Economics and Finance*, 6, 289-301, 2005 Shalabh, Toutenburg, H., Srivastava, V.K., Heumann, C.
408. Penetrative phototactic bioconvection, *Physics of Fluids* 17, 074101-11, 2005, Ghorai, S., Hill, N.A.
409. A subset selection procedure for selecting the exponential population having the longest mean lifetime when the guarantee times are the same, *Comm.Statist. Theory Method* 34, 7, 1555-1569, 2005 Misra, N., Somesh, K., Meulen van der E.C., Tripathi, Y.M.
410. James-Stein type estimators for ordered normal means, *J. Stat. Comput. Simul.* 75, .7, 501-511, 2005 Misra, N., Somesh, K., Tripathi, Y.M.
411. Estimation of order restricted concentration parameters of von Mises distributions. *Comm. Statist. Simulations and Comput*, 34, 1, 21-40, 2005 Misra, N., Singh, H., Li, Shengqiao.
412. Simultaneous selection of extreme populations: optima two-stage decision rules. *Advances in ranking and selection, multiple comparisons, and reliability*, 143-161, *Stat. Ind. Technol.* Birkhauser Boston, Boston, MA, 2005. Misra, N., Dhariyal, I.D.
413. Estimation of the entropy of a multivariate normal distribution, *J of Multivariate Analysis*, 92, 324-342, 2005 Misra, N., Singh, H., Demchuk, E.
414. On estimating the scale parameter of the selected gamma population under the scale invariant squared error loss function, *J of Computational and*

- Applied Mathematics, 186, 1, 268-282, 2006 Misra, N., van der Meulen, E.C., Branden, Karlien, V.
415. Weighted extended B-spline method for the approximation of the stationary Stokes problem, J. Comput. Appl. Math 186, 2, 335-348, 2006 Rathish Kumar, B.V., Das. P. C., Srinivas, V.V.K.
416. Wavelet multiplayer Taylor Galerkin schemes for hyperbolic and parabolic problems, Appl. Math. Computation. 166, 2, 312-323, 2005 Rathish, B.V., Mehra, M.
417. Time accurate solution of advection-diffusion problems by wavelet-Taylor-Galerkin Method, Comm. Numer. Methods Engrg. 21, 6, 313-326, 2005 Rathish Kumar, B.V., Mehra, M.,
418. Double diffusive natural convection in a doubly stratified wavy porous enclosure, Applied Mathematics and Computation, 171, 1, 180-202, 2005 Rathish Kumar, B.V., Shalini.
419. Wavelet based pre-conditioners for sparse linear system, Applied Mathematics and Computation, 171, 1, 203-204, 2005 Rathish Kumar, B.V., Mehra, M.
420. A time -accurate pseudo-wavelet scheme for parabolic PDE's, Nonlinear Analysis, 63, 345-356, 2005 Rathish Kumar, B.V., Mehra, M.
421. Non-stationary iterative solvers on a PC cluster, Advances in Engineering Software, 36, 6, 393-400, 2005 Rathish Kumar, B.V., Shalini, Mehra, M.
422. Parallel pre-conditioners for heat transfer applications on ANU-cluster, Applied Mathematics and Computation, 163, 3, 1243-1263, 2005 Rathish Kumar, B.V., Kumar, B.
423. Estimating the number of components of the fundamental frequency model J. Japan Statist. Soc.35, 1, 41-59, 2005 Kundu, D., Nandi, S.
424. Generalized Rayleigh distribution: different methods of estimations, Comput. Statist. Data Anal. 49, 1, 187-200, 2005 Kundu, D., Raqab, M. Z.
425. Discriminating between normal and Laplace distributions, Advances in ranking and selection, multiple comparisons, and reliability, Stat. Ind.Technology, 65-79, 2005Kundu, D.
426. Discriminating between the log-normal and generalized exponential distributions, J. Statist. Plann. Inference 127, 1-2, 213-227, 2005 Kundu, D., Gupta, R.D., Manglick, Anubhav.
427. Estimation of $P(Y < X)$ for generalized exponential distribution, Metrika, 61,3,291-308,2005 Kundu, D., Gupta, R.D.
428. Comparing different estimators of $P(X < Y)$ for a Burr Type X distribution, Communications in Statistics - Simulation and Computation,34, 2, 465-483, 2005 Kundu, D., Raqab, M.Z.

429. Tolerance intervals for exponentiated scale family of distributions, *Journal of Applied Statistics*, 32, 10, 1067-1074, 2005 Kundu, D., Shirke, D.T., Kumbhar, R.R.
430. On discrete domain multidimensional sinusoidal models, *Statistics*, 40,2, 129-147, 2006 Kundu, D., Nandi, S.
431. A., A parameter uniform implicit difference scheme for solving time-dependent Burgers' equations. *Appl. Math. Comput.* 170, 2, 1365-1393, 2006 Kadalbajoo, M. K., Sharma, K.K., Awasthi.
432. Numerical treatment for singularly perturbed differential equations with negative shift *Nonlinear Anal.* 63, 1909-1924, 2005, Kadalbajoo, M.K., Sharma, K.K.
433. Numerical treatment of boundary-value Problems for second order singularly perturbed delay differential equations, *Comp. App. Math.* 24, No.2, 151-172, 2005 Kadalbajoo, M.K., Sharma, K.K.
434. Fitted mesh B-spline collocation method for solving singularly perturbed reaction-diffusion problems, *J. Comput. Math.* 4, .3, 349-365, 2005 Kadalbajoo, M.K., Aggarwal, V.
435. Numerical treatment of a mathematical model arising from a model of neuronal variability. *J. Math. Anal. Appl.* 307, 2, 606-627, 2005 Kadalbajoo, M.K., Sharma, K.K.
436. Fitted mesh B-spline collocation method for solving self-adjoint singularly perturbed boundary value problems, *Appl.Math.Comput.* 161, 3, 973-987, 2005 Kadalbajoo, M. K., Aggarwal, V.K.
437. Numerical solution of singular boundary value problems via Chebyshev polynomial and B-spline, *Appl. Math. Comput.* 160, 3, 851-863, 2005 Kadalbajoo, M.K., Aggarwal, V.K.
438. Exact and approximate solutions of delay differential equations with non-local history conditions, *J. Appl. Math. Stoch. Anal.* 2, 181-194, 2005 Bahuguna, D., Agarwal, S.
439. Application of Rothe's method to delay differential equations, *Bull. Calcutta Math. Soc.* 97, 6, 511-516, 2005 Bahuguna, D., Shukla, R.K.
440. Partial functional differential equations and applications to population dynamics, *Nonlinear Dyn. Syst. Theory* 5, 4, 345-356, 2005 Bahuguna, D., Shukla, R.K.
441. Approximation of solutions to retarded differential equations with applications to population dynamics, *J. Appl. Math. Stoch. Anal.* .1, 1-11, 2005 Bahuguna, D. and Muslim, M.
442. Approximation of solutions to history-valued neutral functional differential equations, *Computers and Mathematics with Applications*, 51, 3-4, 537-550, 2006 Muslim, M, Bahuguna, D

443. Approximation of solutions to non-local history-valued retarded differential equations, *Applied Mathematics and Computation* 174, 165-179, 2006 Muslim, M., Bahuguna, D.
444. A study of nonlocal history-valued retarded differential equations using analytic semigroups, *Nonlinear Dynamics and System Theory*, 6(1), 63-75, 2006 Muslim, M., Bahuguna, D.
445. Evolution equations arising in the study of materials with memory, *Bull. Calcutta Math. Soc.* 97, No.2, 173-186, 2005 Bahuguna, D., Shukla, R.K.
446. Optimality conditions for maximizing a locally Lipschitz function, *Optimization*, 54, 377-389, 2005 Dutta, J.
447. Necessary optimality conditions and saddle points for approximation optimisation in Banach spaces, *Top*, 13,.1, 127-143, 2005 Dutta, J.
448. Generalized derivatives and non-smooth optimisation - a finite dimensional tour, *TOP*, 13, 185-314, 2005 Dutta, J.
449. A convolution back projection algorithm for local tomograph, *ANZIAM J.* 46, 3, 341-360, 2005 Das, P. C., Sastry, Challa, S.
450. Biological correlates of diffusivity in brain abscess, *Magnetic Resonance in Medicine*, 54, 878-885, 2005 Rathore, R.K.S., Mishra, A.M., Saksena, S., Prasad, K.N., Purwar, D., Husain, N., Jha, D.K., Husain, M.
451. Generalized cubic spline fractal interpolation, *SIAM J. Numerical Anal.* 442, 655-676, 2006 Kapoor, G.P., Chand, A.K.B.
452. Dynamics of non-critically finite odd transcendental meromorphic function, *Indian J. Pure Appl. Math.* 36(4), 2005, Kapoor, G.P., Sajid, M.
453. A combinatorial arc tolerance analysis for network flow problems, *J of Applied. Mathematics & Decision Sciences* 2, 83-94, 2005 Sharma, P.
454. Modelling and analysis of the spread of Malaria: Environmental and ecological effects, *J. of Biological Systems*, 13. 1, 2005, Singh, S., Chandra, Peeyush, Shukla, J.B.,
455. Continuity of the optimal value fuction under some hyperspace topologies, *Jof convex analysis* 12, 397-406, 2005 Shunmugaraj, P., Chakrabarty, A.K.
456. Fourier Trigonometric Compression in Magnetic Resonance Imaging, *International Journal of Tomography & Statistics (IJTS)*, 3, 5 44-80, 2005 R.K.S. Rathore, R.K. Gupta, R. Kalyan Raman, and Divya K.S. Rathore,
457. Reconstruction of the concentration field around a growing KDP crystal using schlieren tomography, *Applied Optics*, 4426, 1-12, 2005 Atul Srivastava, K. Muralidhar and P.K. Panigrahi.
458. Role of internal radiation during Czochralski growth of YAG and Nd: YAG crystals, *Int of Thermal Sciences*, Vol. 45, 2, 151-167, 2006 J. Banerjee and K. Muralidhar.

459. Experimental study of convection in a model Czochralski crucible using liquid crystal thermography, *J of Visualization*, 9(1), 111-119, 2006 J. Banerjee, R. Bharadwaj and K. Muralidhar.
460. Simulation of transport processes during Czochralski growth of YAG crystals, *J of Crystal Growth*, 286(2), 350-364, 2006 J. Banerjee and K. Muralidhar.
461. PIV investigation of flow behind surface mounted permeable ribs, *Experiments in Fluids*, 40, 277-300, 2005 P.K. Panigrahi, A. Schroeder and J. Kompenhans.
462. A schlieren study of the effect of ramp rate and rotation on convection around a crystal growing from an aqueous solution, *J of Crystal Growth*, 274, 1-2, 191-208, 2005 A. Srivastava, K. Muralidhar and P.K. Panigrahi.
463. Numerical prediction of flow and heat transfer in a channel in the presence of a built-in circular tube with and without an integral wake splitter, *Int J Heat and Mass Transfer*, 48, 439-453, 2005 S. Tiwari, D. Chakraborty, G. Biswas, and P.K. Panigrahi.
464. Artificial neural network control of a heat exchanger in a closed flow air circuit *Applied Soft Computing*, 5(4), 441-465, 2005 K. Vershney and P.K. Panigrahi.
465. Forces Prediction during material deformation in abrasive flow machining, *Wear* 260, 128 - 139, 2006 V.K. Gorana, V.K. Jain and G.K. Lal.
466. Shaped Tube Electrochemical Machining of Cooling Holes in Inconel for Turbine Applications, *Manufacturing Technology & Research*, 1, 2, 45-48, 2005 D.S. Bilgi, V.K. Jain, R. Shekhar and S. Mehrotra.
467. A new apparatus for finishing large size/large batch silicon nitride (Si_3N_4) balls for hybrid bearing applications by magnetic float polishing (MFP), *Int J of Machine Tools and Manufacture*, 46, 151-169, 2005 N. Umehara, T. Kirtane, R. Gerlick, V.K. Jain and R. Komanduri.
468. Modeling and simulation of magnetic abrasive finishing process, *Int J of Advanced Manufacturing Technology*, 26, 477-490, 2005 S.C. Jayaswal, V.K. Jain and P.M. Dixit.
469. Stray current attack and stagnation zones in electrochemical drilling, *Int Advanced Manufacturing Technology*, 26, 527-236, 2005 V.K. Jain, Y. Kanetkar and G.K. Lal.
470. Magnetic Abrasive Finishing - a Parametric Study, *J of Advanced Manufacturing Systems*, 4, 2, 31 - 150, 2005 S.C. Jayswal, V.K. Jain and P.M. Dixit.

471. Experimental Determination of viscosity of abrasive flow machining media, *Int J of Manufacturing Technology and Management*, 7, Nos.2/3/4, 2005 A. Agarwal, V.K. Jain and K. Muralidhar.
472. Measurement of Hydrogen Content in Electrical Discharge machined Components, *Machining Science and Technology*, 9, 289 - 299, 2005 V.N. Kulkarni, V.K. Jain and A.K. Shukla.
473. On the temperature and specific energy during electrodischarge diamond grinding (EDDG), *Int J Advanced Manufacturing Technology*, 26, 56-67, 2005 V.K. Jain and Rakesh G. Mote.
474. Analysis of surface texture generated by a flexible magnetic abrasive brush, *Wear* 2005, 259, 1254 - 1261, 2005 Dharendra K. Singh, V.K. Jain, V. Raghuram and R. Komanduri.
475. On the performance analysis of flexible magnetic abrasive brush, *Machining Science and Technology*, 9, 601-619, 2005 D.K. Singh, V.K. Jain and V. Raghuram.
476. Finishing: Last but not Least, equipment news October 2005, Singapore, (Popular Article). V.K. Jain.
477. Loading and substructure-induced irreversibility in texture during Route C Equal Channel Angular Extrusion, *Scripta Materialia*, 53(8), 965-969, 2005 S. Mahesh, I. J. Beyerlein and C. N. Tome.
478. Strain Evolution after Fiber Failure in a Single Fiber Metal Matrix Composite under Cyclic Loading, *Mater. Sci. Engng. A*, 399(1-2): 33-42, 2005 J. C. Hanan, S. Mahesh, E. Ustundag, I. J. Beyerlein, G. A. Swift, B. Clausen, D. W. Brown and M. A. M. Bourke.
479. Synthesis of Compliant Mechanisms for Path Generation using Genetic Algorithm, *ASME Journal of Mechanical Design*, 127, 1-8, 2005 A. Saxena.
480. Topology Design of Large Displacement Compliant Mechanisms with Multiple Materials and Multiple Output Ports, *Structural and Multidisciplinary Optimization*, 30 (6), 477-490, 2005 A. Saxena.
481. Steady-state response of an infinite beam on elastic foundation subject to moving load, *J of Sound and Vibration*, 291, 1148 - 1169 , 2006 A. K. Mallik, S. Chandra and A. K. Singh.
482. Large-Eddy Simulation of High Reynolds Number Turbulent Flow Past a Square Cylinder, *J of Engineering Mechanics (ASCE)*, 132, 327-335, 2006 Y. Srinivas, G. Biswas, A.S. Parihar and R. Ranjan.
483. Comparison of Volume-of-Fluid Methods for Computing Surface Tension-Dominant Two-Phase Flows, *Int J of Heat and Mass Transfer*, 49, 740-754, 2006 D. Gerlach, G. Tomar, G. Biswas, and F. Durst.

484. Numerical Simulation of Bubble Growth in Film Boiling Using CLSVOF Method, *Physics of Fluids*, 17, 112103, 2005 G. Tomar, G. Biswas, A. Sharma and A. Agrawal.
485. Reverse Flow in Channel with Obstruction at Entry, *Fluid Dynamics Research*, 37, 387-398, 2005 K. Senthil Kumar, E. G. Tulapurkara, G. Biswas and B.H.L. Gowda,
486. Quasi-Static Bubble Formation on Submerged Orifices, *Int Jof Heat and Mass Transfer*, 48, 425-438, 2005 D. Gerlach, G. Biswas, F. Durst and V. Kolobaric.
487. Heat Transfer and Fluid Mechanics related to Turbulent Flow, *Annals of the Indian National Academy of Engineering*, Vol. II, 19-25, 2005 G. Biswas.
488. Experimental Investigations into Lubricating Oil Tribology of EGR Operated Engine, *Applied Thermal Engineering*, 26, 2-3, 259-266, 2006 Shrawan Kumar Singh, Avinash Kumar Agarwal and Mukesh Sharma.
489. Lubrication Oil Tribology Of A Biodiesel-Fuelled CI Engine, *J of Automobile Engineering*, *Proceedings of the I MECH E Part D*, 219, 703-714, 2005. , Avinash Kumar Agarwal.
490. Characterization of Exhaust Particulates from Diesel Engine, *Atmospheric Environment*, 39, 17, 3023-3028, 2005, Mukesh Sharma, Avinash Kumar Agarwal and K. V. L. Bharathi.
491. Chronology of Total Hip Joint Replacement and Material Development, *Trends in Biomaterials and Artificial Organs*, 19, 1, 15-25, 2005, Sumit Pramanik, Avinash Kumar Agarwal and K. N. Rai.
492. Development of High Strength Hydroxyapatite for Hard Tissue Replacement, *Trends in Biomaterials and Artificial Organs*, 19, 1, 45-49, 2005 Sumit Pramanik, Avinash Kumar Agarwal and K. N. Rai.
493. Numerical and Experimental Investigation of Oil Jet Cooled Piston, SAE Paper No. 2005-01-1382, SAE Special Publication SP-1945, 19-25, 2005 Mani Bijoy Varghese, Sandeep Kumar Goyal and Avinash Kumar Agarwal.
494. Evaluation of Steel Cap Piston for Up-gradation of Diesel Electric Locomotives for Indian Railways, SAE Paper No. 2005-01-1645, SAE Special Publication, SP-1964, 2005, pp. 43-48, Anirudh Gautam and Avinash Kumar Agarwal.
495. Prediction of Damage Behaviors in Asphalt Materials Using a Micromechanical Finite Element Model and Image Analysis, *ASCE J of Engineering Mechanics*, 131:7, 668-677, 2005 Q. Dai, M.H. Sadd, V. Parameswaran and A. Shukla.

496. Modelling and simulation of magnetic abrasive finishing process, *Int J of Advanced Manufacturing Technology*, 26(5), 477-490, 2005 S.C. Jayswal, V.K. Jain and P.M. Dixit.
497. Magnetic abrasive finishing process - a parametric analysis, *J of Advanced Manufacturing Systems*, 42, 131-150, 2005 S.C. Jayswal, V.K. Jain and P.M. Dixit.
498. Analysis of temperature effects near mode I crack in glassy polymers, *Int J. Fracture*, 132, 249-273. 2005 R. Estevez, S. Basu and E. Van der Giessen.
499. Micromechanics of the growth and failure of a craze fibril in glassy polymers. *Polymer*, 46, 7504-7518, 2005 S. Basu, D. Mahajan and E. Van der Giessen.
500. Characterization of toughened bonded interface against fracture and impact loads, *Int J of Adhesion & Adhesives*, 25, 6, 527-533, 2005, P. Kumar , Shishir Tiwari and R. K. Singh.
501. Large-Eddy Simulation of Unsteady Surface Pressure on a LP Turbine Blade due to Interactions of Passing Wakes and Inflexional Boundary Layer, *ASME Journal of Turbomachinery*, 128, 221-231, 2006 S. Sarkar and P.R. Voke.
502. Unsteady RANS Simulation of Turbulent Flow and Heat Transfer in Ribbed Coolant Passages of Different Aspect Ratios, *Int J Heat Mass Transfer*, 48, 4704-4725, 2005 A.K. Saha and Sumanta Acharya.
503. Three-Dimensional Numerical Study of Flow and Heat Transfer from a Cube Placed in a Uniform Flow, *Int J Heat Fluid Flow*, 27, 80-94, 2006 A.K Saha.
504. Flow and Heat Transfer in Internally Ribbed Ducts with Rotation: An Assessment of LES and RANS, *ASME Journal of Turbomachinery*, 127, 2, 306-320, 2005 A.K. Saha and Sumanta Acharya.
505. Rajagopala - The Massive Iron Cannon at Thanjavur in Tamil Nadu, *Indian Journal of History of Science*, 40(30), 269-294, 2005 R.Balasubramaniam, A.Saxena and T.R. Anantharaman.
506. The Medieval Forge Welded Iron Cannon at Bishnupur *Indian Journal of History of Science*, 40(3) , 295-320, 2005 R. Balasubramaniam, K. Bhattacharya and A.K. Nigam Dal Mardan
507. The Forge Welded Iron Cannon at Bada Burj of Golconda Fort Rampart *Indian Journal of History of Science*, 40(3), 321-336, 2005 R. Balasubramaniam, M. Surender and S. Sankaran.
508. The Forge Welded Iron Cannon near Fateh Burj of Golconda Fort Rampart *Indian Journal of History of Science*, 40(3), 337-348, 2005 R. Balasubramaniam, S. Sankaran and M. Surender.
509. The Forge Welded Iron Cannon at Jhansi Fort *Indian J of History of*

- Science, 40(3) , 371-388, 2005 R. Balasubramaniam; Kadak Bijli.
510. On the First Catalogue of Forge-Welded Iron Canons by Neogi Indian J of History of Science, 40(3) , 259-268, 2005 R. Balasubramaniam.
 511. The Composite Iron-Bronze Canon at Musa Burj of Golconda Fort Indian J of History of Science, 40(3) , 389-408, 2005 R. Balasubramaniam, Azdaha Paikar.
 512. The Massive Bronze Canon at Petla Burj of Golconda Fort, Indian J of History of Science, 40(3) ,409-430, 2005 R. Balasubramaniam, Fath Raihbar.
 513. Development of Cannon Technology in India, Indian J of History of Science, 40(4) , 503-538, 2005 R. Balasubramaniam.
 514. Saltpetre Manufacture and Marketing in Medieval India, Indian J of History of Science, 40(4) , 663-672, 2005 R. Balasubramaniam and S. Jai Kishan.
 515. European Mercenary Artillerymen in Indian Subcontinent (1500-1800), Indian J of History of Science, 40(4), 673-678, 2005 R. Balasubramaniam.
 516. Technical Report on Analysis of Iron Slags from Kamrej, J of Indian Ocean Archaeology, 2 , 103-106, 2005 R. Balasubramaniam and Tanushree.
 517. Cube Texture Formation in P/M Ni, Ni-W and Ni-Mo Alloy Tapes for Coated Superconductor Applications, Materials Science Forum, 495-497, 1437-1442, 2005 P.P. Bhattacharjee, R.K. Ray, A. Upadhyaya.
 518. Development of Cube Texture in Pure Ni, Ni-W and Ni-Mo Alloy, Prepared by the P/M Route Scripta Materialia, 53, 1477-1481, 2005 P.P. Bhattacharjee, R.K. Ray, A. Upadhyaya.
 519. Electrochemical Behavior of Ti-based Alloys in Simulated Human Body Fluid, Environment, Trends in Biomaterials and Artificial Organs, 18,(2) ,64-72, 2005 A Choubey, B. Basu and R. Balasubramaniam.
 520. Tribological Behavior of Titanium Based Alloys, Trends in Biomaterials and Artificial Organs, 18(2) , 141-147, 2005 A Choubey, Bikramjit Basu and R. Balasubramaniam.
 521. Effect of MgO and Al₂O₃ variations in oxygen steelmaking (BOF) on slag morphology and phosphorus distribution, Ironmaking and steelmaking 32, 54-60, 2005 B.Deo, J.Jalder, B.Snoeijer. A.Overbosch and R.Boom.
 522. Particulate gold as money and currency material, Powder Metallurgy, 48,(2), 116-121,2005 R.K. Dube.
 523. , A Characterization Study to Ascertain Cenosphere Content in Fly Ash, In 'Emerging Trends in Mineral Processing and Extractive Metallurgy' Eds: Vibhuti N. Mishra, S.C. Das and T. Subbaiah, Allied Publishers 2005, K. Dutta, A. Garg, S. Sangal, B.K. Mishra, Padma Vankar,

- and P. K. Rohatgi.
524. Structure and Properties of Lanthanide Doped Bi₄Ti₃O₁₂ Films, *Ferroelectrics*, 328, 93-97 2005, A.Garg, X. Hu. and Z.H. Barber.
 525. Transmission Electron Microscopy of Hydrogen Effects in Internally Oxidized, Palladium-Chromium Alloys, *J of Alloys and Compounds*, 404-406, 617-620,2005 Gouthama, R. Balasubramaniam, D. Wang and Ted B. Flanagan.
 526. Growth and characterization of pulsed-laser-deposited polycrystalline, Bi_{3.33}Sm_{0.67}Ti₃O₁₂ ferroelectric thin films, *Materials Letters*, 59, 2583 - 2587 ,2005, X.Hu, A. Garg and Z.H. Barber.
 527. Structural and electrical properties of Samarium-substituted bismuth titanate ferroelectric thin films on Pt/TiO_x/SiO₂/Si substrates, *Thin Solid Films*, 484, 188-195 2005, X.Hu, A. Garg and Z.H. Barber.
 528. Experimental Validation of Flow and Tracer-Dispersion Models in a Four-Strand, Billet- Casting Tundish, *Metallurgical and Materials Transactions B*, 36, 6, 777-785, 2005 A.Kumar, D. Mazumdar, S.C.Koria.
 529. Oxidation of Monolithic TiB₂ and TiB₂-20 wt % MoSi₂ Composite at 850°C, *J of the European Ceramic Society*, 26, 187-192, 2006 T.S.R.Ch.Murthy, R.Balasubramaniam, B.Basu, A.K.Suri and M.N.Mungole.
 530. Processing and Properties of TiB₂ with MoSi₂ sinter-additive: A first report, *J of the American Ceramic Society*, 89,131-138, 2006 T.S.R.Ch. Murthy, B. Basu, R. Balasubramaniam, A.K. Suri, C. Subramanian and R. K. Fotedar.
 531. Tribological Properties of TiB₂ and TiB₂-MoSi₂ Ceramic Composites, *Journal of the European Ceramic Society*, 26,1293-1300, 2006 T. S. R. Ch. Murthy, B. Basu, Amitesh Srivastava, R. Balasubramaniam and A.K. Suri.
 532. The Forge Welded Iron Cannon at Jhansi Fort, *Indian J of History of Science*, 40(3) , 349-370, 2005 D. Neff and R.Balasubramaniam, Bhavani Shankar.
 533. Sintering Response of Austenitic (316L) and Ferritic (434L) Stainless Steel Consolidated in Conventional and Microwave furnaces *Scripta Materialia*, 54, 2179-2183, 2006 S.S. Panda, V. Singh, A. Upadhyaya, and D. Agrawal.
 534. Solidification behaviour of droplets in spray deposition, *Powder Metallurgy*, 48, 3, 270-276, 2005 Sahu, S.N.; Harikishore, S.; Koria, S.C.
 535. Microstructural evolution and tensile behaviour of medium carbon microalloyed steel processed through two thermomechanical routes, *Materials Science and Technology*, 21,10, 1152-1160, 2005 S. Sankaran, S. Sangal, K.A. Padmanabhan.

536. Room Temperature UV Emission at 357 nm from polysilane based OLEDs, *Appl. Phys. Lett.*, 88, 143511, 2006 Asha Sharma, Monica Katiyar, Deepak, S. Seki and S. Tagawa.
537. Determination of stability & degradation in Polysilanes by electronic mechanism, *J of Phys.chem.B*,109,15860-67,2005 Asha Sharma, U.Lourderaj, Deepak, N.Sathyamurthy & M.Katiyar.
538. Stability in Polysilanes for light emitting diodes, *Computational Mat.Sc.*, 33, (1-3),206-11, 2005 Asha Sharma, Deepak and M.Katiyar.
539. Effect of Cerium Addition on Microstructures of Carbon-alloyed Iron Aluminides *Bulletin of Materials Science*, 28 , 547-554, 2005 Sriram, R. Balasubramaniam, M.N. Mungole, S. Bharagava and R.G. Baligidad.
540. Microstructural characterization of copper corrosion in aqueous and soil environments, *Materials Characterization*, 55 , 127-135, 2005 Srivastava and R. Balasubramaniam.
541. Electrochemical Impedance Spectroscopy Study of Surface Films Formed on Copper in Aqueous Environments, *Materials and Corrosion*, 56,611-618, 2005 Srivastava and R. Balasubramaniam.
542. Advances in Alloy Design of Hardmetals, *Transactions Indian Ceramic Society*, 64, 4, 197-202, 2005 A. Upadhyaya and D. Sarathy.
543. The near elimination of hysteresis in Pd/Cr₂O₃ composites, *J of Alloys and Compounds*, 404-406, 38-42, 2005 D. Wang , T.B. Flanagan, R. Balasubramaniam and K. Shanahan.
544. Melting of heterogeneous vortex matter: the vortex nanoliquid, *Pramana Journal of Physics*, 60, 43, 2006. S. S. Banerjee, S. Goldberg. Y. Myasoedov, M. Rappaport, E. Zeldov. A. Soibel, F. De la Cruz, C. J. van der Beek, M. Konczykowski, T. Tamegai, V. Vinokur.
545. Probing thermomagnetic history effects and phase - coexistence phenomena around the peak effect, second magnetization peak regime with harmonic ac susceptibility measurements, *Pramana Journal of Physics*, 60, 159, 2006 A.D. Thakur, S. S. Banerjee, M. J. Higgins, S. Ramakrishnan, A. K. Grover.
546. Laser processed channels of easy vortex motion in YBa₂Cu₃O_{7- δ} films, *Applied Physics Letters*, 87, 192504, 2005. A. Jukna, I. Barboy, G. Jung, S. S. Banerjee, Y. Myasoedov, V. Plausinaitiene, A. Abrutis, X. Li, D. Wang, Roman Sobolewski.
547. Exploring metastability across the Peak effect via the third harmonic measurements in single crystals of 2 H-NbSe₂, *Phys. Rev. B*, 72, 1345241, 2005. A. D. Thakur, S. S. Banerjee, M. J. Higgins, S. Ramakrishna, A. K. Grover.

548. Accurate parametric modeling of folded waveguide circuits for millimeter-wave traveling wave tubes, *IEEE Transaction on Electron Devices*, 52, 685-694, 2005. J.H. Boske, M.C. Converse, V.L. Kory, C.T. Chevalier, D.A. Gallagher, K.E. Kreischer, V.O. Heinen, S. Bhattacharjee.
549. Generation of chaotic radiation in a driven traveling wave tube amplifier with time-delayed feedback, *Physics of Plasmas*, 13, 013104, 2006. C. Marchewka, P. Larsen, S. Bhattacharjee, J. Booske, S. Sengele, N. Ryskin, V. Titov.
550. Magnetotransport in epitaxial films of the degenerate semiconductor $Zn_{1-x}Co_xO$, *J. Phys. Condens. Matter*, 17, 75, 2005. R.C. Budhani, P. Pant, R.K. Rakshit, K. Senapati, S. Mandal, N.K. Pandey and J. Kumar,
551. Giant quenching and mobile carrier assisted recovery of ordered moments in $La_{0.7}Ca_{0.3}MnO_3/Er_{0.7}Sr_{0.3}MnO_3$ and $La_{0.7}Ca_{0.3}MnO_3/Er_{0.7}Sr_{0.3}MnO_3$ superlattices, *Phys. Rev. B* 71, 144415, 2005. P. Padhan and R. C. Budhani,
552. Superconducting and normal state interlayer exchange coupling in $La_{0.67}Sr_{0.33}MnO_3$ - $YBa_2Cu_3O_7$ - $La_{0.67}Sr_{0.33}MnO_3$ epitaxial trilayers, *Phys. Rev. B*, 71, 224507, 2005. K. Senapati and R. C. Budhani
553. Microwave studies of thin manganite films on $SrTiO_3$ substrates, *J. Appl. Phys* 98, 084902, 2005. M. Golosovsky, M. Abu-Teir, D. Davidov, O. Arnache, P. Monod, N. Bontemps and R. C. Budhani
554. Magnetic relaxation and superparamagnetism in non-interacting, disordered CoPt nanoparticles, *J. Phys. D Appl. Phys.* 39, 1743, 2006. R.K. Rakshit and R.C. Budhani
555. Intra-cellular transport of single-headed molecular motors KIFIA, *Phy. Rev. Lett.* 95, 118101, 2005. K. Nishinari, Y. Okada, A. Sachadschneider and D. Chowdhury.
556. Evolving eco-system: a network of networks, *Phy. Rev. Lett.* 95, 118101, 2005. D. Chowdhury and D. Stauffer.
557. Evolutionary ecology in silico: evolving foodwebs, migrating population and speciation, *Physica*, 352, 202, 2005. D. Stauffer, A. Kunwar and D. Chowdhury.
558. Physics of Transport and Traffic Phenomena in Biology: from molecular motors and cells to organism, *Physics of Life Reviews*, 2, 318, 2005. D. Chowdhury, A. Schadschneider and K. Nishinari.
559. Evolutionary ecology in-silico: Does mathematical modeling help in understanding the 'generic' trends? *Journal of Biosciences*, 30, 277, 2005. D. Chowdhury and D. Stauffer.
560. 100 years of Einstein's theory of Brownian motion: from pollen grains to protein trains-Part 1, *Resonance*, 10 (9), 63, 2005. D. Chowdhury.

561. 100 years of Einstein's theory of Brownian motion: from pollen grains to protein trains-Part 2, , Resonance, 10 (11), 42 2005. D. Chowdhury.
562. Dynamic instability of microtubules: effect of catastrophe-suppressing drugs, P.K.Mishra, A. Kunwar, S. Mukherji and D. Chowdhury, Phy. Rev. E. 72, 051914 2005. (selected for the November 15, 2005, issue of the Virtual Journal of Biological Physics Research).
563. Scanning tunneling spectroscopy of the superconduction proximity effect in a diluted ferromagnetic alloy, Phys. Rev. B 72, 024511 2005 .L. Cretinon, A.K. Gupta, H. Sellier, F. Lefloch, M. Faure, A. Buzdin, and H. Courtois
564. Multicolored coherent population trapping in a system using phase modulated fields, Phy. Rev. Lett. 96, 2006. H. Wanare.
565. Nonequilibrium Criticality at shock formation in Steady States, J. Physics A 38, L285-L291, 2005 S. Mukherji and S.M. Bhattacharjee.
566. Dynamic Instability of Microtubules: Effect of Catastrophe Suppressing drugs, , Physical Review E 72, 051914 2005 P.K. Mishra A. Kunwar, S. Mukherji and D. Chowdhury.
567. Effect of Ni doping on the properties of fine magnetite particles, JMMM, 295, 44-50 2005M Mohapatra, B. Pandey, C. Uppadhyay, S. Anand, R.P. Das and H.C.Verma.
568. Structural and Compositional changes during mechanical milling of the Fe-Cr system, J Phys: Cond. Mat. 17, 7981-7993 2005.B. Pandey, M.A. Rao, H.C. Verma and S Bhargav.
569. Sol-Gel synthesis and characterization of $\text{Eu}^{++}/\text{Y}_2\text{O}_3$ nanophosphors by an alkoxide precursor, Materials Chemistry and Physics 96, 466-470 2006.Ashutosh Pandey, Anjana Pandey, M.K. Roy and H.C. Verma.
570. Characteristic length scales of nanosize zinc ferrite, Nanotechnology 17, 232-237, 2006. M.K. Roy and H.C. Verma.
571. Application of positron annihilation: study of pervaporation dense membranes, Polymer 47, 1300-1307 2006 S.V. Satyanarayana, V.S. Subrahmanyam, H.C. Verma, A. Sharma, P.K. Bhattachary.
572. Field and Pressure Induced Phases in $\text{Sr}_4\text{Ru}_3\text{O}_{10}$: A Spectroscopic Investigation, Phy. Rev. Lett. , 96, 067004, 2006 Rajeev Gupta, M. Kim, H. Barath, S. L. Cooper and G. Cao
573. Yb-based heavy-fermion metal situated close to a quantum critical point, Phy. Rev. B 72, 94411-1-4 2005. Z. Hossain, C. Geibel, F. Weickert, T.Radu, Y. Tokiwa, H. Jeevan, P. Gegenwart, F. Steglich.
574. Energy dispersion of 4f-driven emissions in photoelectron spectra of the heavy-fermion compound YbIr_2Si_2 . **Phy. Rev. Lett.**, 106402, 2006. 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, S. L. Molodtsov.
575. Quasi-quartet crystal-electric field ground state with possible quadrupolar ordering in the tetragonal compound YbRu_2Ge_2 , *Phy. Rev. B*, 73, 20407-1-4 2006. H. S. Jeevan C. Geibel, Z. Hossain.
576. Evidence for evolution or bias in host extinctions of high redshift supernovae, *Astrophys. J.* 637, 91, 2006. P. Jain and J. P. Ralston.
577. Supersymmetry and the Lorentz Fine Tuning Problem, *Phys. Lett B* 621, 213 2005. P. Jain and J. P. Ralston.
578. Probing Light Pseudoscalars with Light: Propagation, Resonance and Spontaneous Polarization, *JCAP* 06, 002 2005 S. Das, P. Jain, J. P. Ralston and R. Saha.
579. Dark energy in an axion model with explicit $Z(N)$ symmetry breaking, *Mod. Phys. Lett. A* 20, 1763 2005. P. Jain.
580. Relating Calculations and Renormalization in Axial and Lorentz Gauges and Gauge-independence, *Int. J. Mod. Phys. A* 20, 6437 2005. S. D. Joglekar.
581. Wavelet based characterization of spectral fluctuations in normal, benign and cancerous human breast tissues, *J of Biomedical Optics*, 10(5), 2005. Sharad Gupta, N. C. Biswal, Nidhi Agarwal. Maya S. Nair, P. K. Panigrahi and Asima Pradhan.
582. Effects of crystallite size distribution on the Raman-scattering profiles of silicon nanostructures, *J of Applied Physics*, 98, 024309, 2005. Md. N. Islam, Asima Pradhan, and Satyendra Kumar.
583. $1/f$ Noise in Single -Channel Current of Voltage Dependent anion Channel, *Europhys. Lett.* 73, 457, 2006. J. Banerjee, M. K. Verma, S. Manna, and S. Ghosh.
584. Field-theoretic Calculation of Kinetic Helicity Flux, *Pramana*, 66, 447, 2006. V. Avinash, M.K. Verma, A.V. Chandra.
585. Energy transfers and locality in magnetohydrodynamic turbulence, *Phys. Plasmas*, 12, 82307, 2005. M. K. Verma, A. Ayyer, and A. V. Chandra.
586. Local shell-to-shell energy transfer via nonlocal interactions in fluid turbulence, *Pramana*, 65, 297, 2005. M. K. Verma, A. Ayyer, O. Debliquy, Shishir Kumar, and A. V. Chandra.
587. Electron paramagnetic resonance study of 3,4,5-trimethoxyterraphenyl porphyrinoxovanadium (IV) complex, *Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy*, 63A (3), 556-564, 2006. S. Sharma, A. Kumar P. Chand, B.K. Sharma, S. Sarkar.

588. EPR and electrical studies in layered $\text{Na}_{1.9}\text{Li}_{0.1}\text{Ti}_3\text{O}_7$ and its copper doped derivatives, *J of the Korean Chemical Society*, 49 (6), 560-566, 2005. D. Pal, P. Chand, R.P. Tandon, Shripal.
589. Mechanism of horseradish peroxidase-catalyzed heme oxidation and polymerization (β -hematin formation), *Biochimica et Biophysica Acta, General Subjects* 2005.V. Trivedi, P. Chand, P. Maulik, U. Bandyopadhyay.
590. Clotrimazole Inhibits Hemoperoxidase of *Plasmodium falciparum* and Induces Oxidative Stress: proposed antimalarial mechanism of clotrimazole, *J of Biological Chemistry*, 280 (50), 41129-41136, 2005. V. Trivedi, P. Chand, K. Srivastava, S.K. Puri, P.R. Maulik, U. Bandyopadhyay.
591. A variable temperature EPR study of Mn^{2+} -doped $\text{NH}_4\text{Cl}_{0.910}$ single crystal at 170 GHz-field splitting parameter and its absolute sign, *J of Magnetic Resonance* 174(2), 265-269, 2005 S.K. Misra, S.L. Andronenko, P. Chand, K.A. Earle, S.V. Paschenko, J.H. Freed.
592. Negative refraction in 2D checkerboards related by mirror anti-symmetry and 3D corner lenses, *New J. Phys.*, 7, 164, 2005, S. Guenneau, A.C. Vutha and S.A. Ramakrishna.
593. Resolving the wave-vector in negative refractive index media, *Opt. Lett.*, 30, 2626 2005. S. A. Ramakrishna and O.J.F. Martin.
594. Multipartite Entanglement in a one-dimensional Time dependent Ising model, *Phys. Rev. A*71, 062334 2005. A Lakshminarayan and V. Subrahmanyam.
595. Transport of entanglement through a Heisenberg-xy spin chain, *Physics Letter A*349, 164 2006 V. Subrahmanyam and A. Lakshminarayanan.
596. Swift heavy ion beam induced recrystallization of amorphous Si layers, *Nuclear Instruments & Methods in Physics Research, B-240*, 239-244 2005. P.K. Sahoo, T. Som, D. Kanjilal and V.N. Kulkarni.
597. Measurement of hydrogen content in electrical discharge machined components, *Machining Science & Technology*, 9, 289-299 2005. V.N. Kulkarni, V.K. Jain, and A.K. Shukla.
598. Trapping phenomena in intrinsic hydrogenated amorphous silicon like materials studied using current transient spectroscopies, *Journal of Non-Crystalline Solids* 2006. Vibha Tripathi, Y.N. Mohapatra, P. Roca i Cabarrocas.
599. Electroabsorption spectroscopy study of an electron transport material-CN-PPV, *Synthetic Metals* 155, 303-305, 2005. G.S.Samal, A.K.Biswas, Y.N.Mohapatra.
600. Photoluminescence quantum efficiency (PLQ) and PL decay dynamics study on polymeric light emitting materials, *Synthetic Metals* 155,

- 344-348, 2005 G.S. Samal, A.K. Biswas, A.K. Tripathi, Swapnil Singh Y.N. Mohapatra.
601. Effect of condensed phase environment on luminescent properties of MEH-PPV thin films, *Synthetic Metals* 155, 340-343, 2005. A. K. Biswas, Awnish Tripathi, Swapnil Singh and Y. N. Mohapatra.
602. Time domain spectroscopic study of PL decay in Zinc Benzothiazole suitable for White light emitting OLEDs, *Synthetic Metals* 155, 340-343, 2005 Samarendra P. Singh, Y. N. Mohapatra, M. Qureshi and S. Sundar Manoharan
603. Signatures of spin glass freezing in NiO nanoparticles. *Phys Rev. B*, 72, 104433, 2005. S. D. Tiwari and K. P. Rajiv.
604. Magnetic properties of NiO nanoparticles, *Thin Solid Film*, 505, 113, 2006. S. D. Tiwari and K. P. Rajiv.
605. Dopant induced stabilization of rhombohedral LiMnO_2 against Jahn-Teller distortion, *Phys. Rev. B* 71, 134111 2005 R. Prasad, R. Benedek, M. M. Thacker
606. Dielectric critical behaviour at a metal-insulator transition under lattice compression, *J. Physics. Chem. Solids* 66, 1150 2005 S. Shukla, D. Kumar, N. N. Shukla, R. Prasad, J.

Conference Papers

1. Experimental Investigation of the Trajectory of Compressible Vortex Rings, 11th AIAA/CEAS Aeroacoustics Conference 26th AIAA Aeroacoustics Conference) 23 - 25 May 2005, Monterey, California. AIAA 2005-2953, Debopam Das and Vivek Kumar.
2. Flight Path Prediction of an Artillery Shell Using Feed Forward Neural Networks, Proceedings AIAA Paper No. 2005-5820, AIAA Flight Mechanics Conference-05, A.K. Ghosh, Ankur Singhal, Ayush Jha.
3. Parameter Estimation from Flight Data of A Typical Parafoil Using Maximum Likelihood Method, National Convention of Aerospace Engineering Division-2005, Institution of Engineers, Jaipur, Ujjwala Darvemula, A. Singhal, A.K. Ghosh.
4. Estimation of Drag Coefficient from Free Flight Trajectory Data of an Artillery Shell, National Convention of Aerospace Engineers-2005, Institution of Engineers, Jaipur, K.V.Chandra Shekar, G.G.Dutta, Ankur Singhal, I.V.S. Sridhar, A.K. Ghosh.
5. Wind Tunnel and Open Air Tests of Vinh-Houmaire Vertical Axis Wind Turbine, Proc. of WINDPOWER 2005 Conference & Exhibition of American Wind, Energy Association, Denver, Colorado, USA, May 15 - 18, 2005, Kunal Ghosh, D. Das & B. Chandra.
6. Characterization of Pulsed Plasma Thruster Operation, 19th National Convention of Aerospace Engineers, Aerospace Engg. Div., The Institution of Engineers (India), 19-20, Nov. 2005. A Srikanth, V. Ravi, A.Kushari.
7. Vibration Induced Flow Perturbations in Pipe Flows, 19th National Convention of Aerospace Engineers, Aerospace Engg. Div., The Institution of Engineers (India), 19-20 Nov. 2005. Kumares Bagchi, A.Kushari, NGR Iyengar.
8. Spray Evolution in a Twin-Fluid Swirl Atomizer, Proceedings of 10th Annual Conference on Liquid Atomization and Spray Systems, ILASS-Asia 2005 Conference, Seoul, Korea, J. Karnawat and A Kushari.
9. Control of Boundary Layer Separation using a Flapping Plate Vortex Generator, Proceedings of ISSS International Conference on Smart materials,

- Structures and Systems, 28-30 July 2005. Bangalore D.Ahmed, S.K. Singh, V Ravi, A. Kushari, CS Upadhyay, C.Venkatesan.
10. Local Surface Modulation to Prevent Flow Separation over the Airfoil, Proceedings of ISSS International Conference on Smart Materials, Structures and System, 28-30 July 2005, Bangalore D. Ahmed, SK Singh, V Ravi, A.Kushar, CS Upadhyay, C. Venatesan.
 11. Controlled Spray Pattern Factor using a Twin-Fluid Swirl Atomizer, AIAA 2005-4481, 41st AIAA/ASME/SAE/ASEE Joint Propulsion Conference, July 10-13, 2005, Tucson, Arizona J. Karnawat and A. Kushari
 12. Recirculating flow and Turbulence in a Low Aspect Ratio Dump Combustor', FEDSM2005-77112, Proceedings of FEDSM2005, 2005, ASME Fluids Engineering Division Summer Meeting and Exhibition, June 19-23, 2005, Houston, TX, USA, S Karmakar and A.Kushari.
 13. Advances in Gas Fired Furnace Combustion Technology, Proceedings of National Seminar on Combustion, 2005, D. P. Mishra, S. C. Nayak and R. K. Ugandhar.
 14. Characterization of Ceramic Nanopowders produced from Combustion Method, National Conference on Advanced Characterization on Nanomaterials, 24-25th August, 2005, R. N. Yadav, S. K. Jaiswal, D. P. Mishra.
 15. Numerical Studies of Sudden Expansion Ramjet Combustor, 19th National Convention of Aerospace Engineers, The Institution of Engineers, Jaipur 2005, D. P. Mishra.
 16. Experimental Study of Synthesis and Sintering of Silica Nanopowders, International Conference on Advanced Materials Design and Development, 2005, S. S. Panda, D. P. Mishra, A. Upadhyaya.
 17. Synthesis of the Titania Nanoparticles using LPG Diffusion Flame, International Conference on Advanced Materials Design and Development, 2005, A. Agrawal, N. S. Karan, D. P. Mishra N. S. Gajbhiye.
 18. Synthesis, Characterization and Sintering of Silica Nano-particles Using Diffusion Flame Reactor, 4th Asian Aerosol Conference, 2005, S. S. Panda, D. P. Mishra, A. Upadhyaya.
 19. Experimental Studies of Hydrogen Combustion in a Vortex Burner, Proceedings of 19th National Conference on IC Engine and Combustion, 2005, S. C. Nayak and D. P. Mishra.
 20. Numerical Studies of Effect of Ambient Oxygen Concentration on Droplet Burning, Proceedings of 19th National Conference on IC Engine and Combustion, 2005, A. Majee and D. P. Mishra.
 21. Experimental Investigation of the Bluff-body Stabilized Jet Diffusion Flames, Proceedings of 19th National Conference on IC Engine and Combustion, Allied Publisher pp. 283-288, 2005, D. P. Mishra and Kiran Kumar D. Y.

22. An Experimental Study of Flame Spread over an Inclined Thin Fuel Surface, Proceedings of 19th National Conference on IC Engine and Combustion, Allied Publishers pp. 307-311, 2005, D. P. Mishra and M. Maheswari.
23. Internally Mixed Twin-Fluid Atomization, Proceedings of 19th National Conference on IC Engine and Combustion, Allied Publishers, pp. 313-320, 2005, D. P. Mishra.
24. Synthesis of Silica-nano Powders Using Diffusion Flame Reactor, Proceedings of 19th National Conference on IC Engine and Combustion, Allied Publishers pp. 351-355, 2005, S. S. Panda D. P. Mishra and A. Upadhyaya.
25. Effect of Injection Pressure and GLR on Spray Characteristics of an Internally Mixed Twin Fluid Atomizer, Proceedings of 19th National Conference on IC Engine and Combustion, Allied Publishers pp. 357-361, 2005, K. U. Reddy and D. P. Mishra.
26. Structure of Distributed Reaction Zone in a well-stirred Reactor, Proceedings of 19th National Conference on IC Engine and Combustion, Allied Publishers, pp 391-398, 2005, A. Yoshida, A. Naito and D. P. Mishra.
27. Effect of Nozzle Geometry of Turbulent Jet on the Impingement Heat Transfer to a Flat Plate, 18th National & 7th ISHMT/ASME Heat and Mass, January 2006, D. P. Mishra.
28. Study of Downward smoldering Combustion in Polyurethane Foams, 18th National & 7th ISHMT/ASME Heat and Mass, January 2006, D. P. Mishra, and Anurag Verma.
29. Experimental Studies of Low Emission Vortex Burner, 18th National & 7th ISHMT/ASME Heat and Mass, January 2006, D. P. Mishra, and S. Nayak
30. Accurate computation of critical response quantities for laminated composite structures, Proceedings of the 46th AIAA/ASME/ASCE/AHS/ASC Structures, Structural dynamics and materials conference, 18-21 April 2005, Austin, Texas (USA), 2005, P.M. Mohite and C.S. Upadhyay.
31. Reliable computation of pointwise data for laminated composite plates, Presented at 8th USNCCM Conference, 24-28 July 2005, Austin, Texas (USA), 2005, P.M. Mohite and C.S. Upadhyay
32. Study of interaction curves for composite laminate with cut-outs, Proceedings of Third MIT Conference on Computational Solid and Fluid Mechanics, 14-17 June 2005, Boston, MS (USA), 2005, V. Anil, C.S. Upadhyay and N.G.R. Iyengar
33. Singhvi, R., and Venkatesan, C., Vibration control of an idealised helicopter model using piezo stack sensor-actuator, Paper No. AIAA-2005-2275, 13th AIAA/ASME/ AHS Adaptive Structures Conference, Austin, Texas, USA, April 2005.

34. Electro-thermo-elastic formulation for analysis of smart structures, 4-th ISSS International Conference on of Smart Materials, Structures and Systems, Bangalore, India, July 2005, Sheikh, N.A., Upadhyay, C.S., and Venkatesan, C.
35. Dynamic Stall Modeling and Its Effect on Airfoil Response, 11-th International Workshop on Rotorcraft Dynamics and Aeroelasticity, Florida, USA, Oct. 2005, Laxman, V. and Venkatesan, C.
36. Dynamic Stall Models for Aeroelastic Analysis of Helicopter Rotor Blades, International Conference on Computational and Experimental Engineering and Sciences, IIT Madras, India, Dec. 2005, Invited Talk: Venkatesan, C., and Laxman, V..
37. Self-assembled Amphiphilic Molecules as Templates for Nanostructures, CHEMCON 2005 (Indian Chemical Engg. Congress) Proceedings, p.279, 2005, Kanchan Dutta, Sanjoy Saha, Rajdip Bandyopadhyaya.
38. Modeling of nanoparticle formation in water-in-oil microemulsion, CHEMCON 2005 (Indian Chemical Engg. Congress) Proceedings, pp 104-105, 2005, M. Ethayaraja, Rajdip Bandyopadhyaya.
39. Modeling of Carbon Nanotube Synthesis in a Tubular Aerosol Reactor, AAC 2005 (Asian Aerosol Conference), 2005, India, Robin Gupta, Rachit Agrawal, Rajdip Bandyopadhyaya, Deepak Kunzru.
40. Kinetic Parameter Analysis of the Effect of Modifiers on Supported Vanadia-Titania Catalysts for Propane ODH Reaction Chemcon-2005, IChE Annual Meeting, New Delhi, 2005, B.K. Verma and G. Deo.
41. ODH of propane over V_2O_5/TiO_2-SiO_2 catalyst: Effect of TiO_2 content on structure-reactivity and kinetic parameter, Chemcon-2005, IChE Annual Meeting, New Delhi, 2005, D. Shee and G. Deo.
42. A Mechanistic Study of Propane ODH over Supported V_2O_5/Al_2O_3 and MoO_3/Al_2O_3 Catalysts (KEYNOTE-Lecture) Chemcon-2005, IChE Annual Meeting, New Delhi, 2005, T.V.M. Rao, B. Mitra and G. Deo.
43. Increasing the Propane Conversion and Propene Yield over Supported Vanadium Oxide Catalysts by Understanding Variations in Kinetic Parameter, Students Chemcon-2005, Gauhati, 2005, D. Shee, T.V.M. Rao and G. Deo.
44. Kinetic Considerations for Non-first Order Reactions with Special Emphasis to Mars-van-Krevelan (M-V-K) Mechanism for Oxidative De-Hydrogenation (ODH) of Propane, Students Chemcon-2005, Gauhati, 2005, T. Ukil and G. Deo.
45. Bhopal Gas Tragedy and the Global Movement on Process Safety, Japan Society of Safety Engineers, Annual Meeting, Okayama University, Okayama, Japan, November 24-25, 2005: Invited Plenary Lecture, J.P. Gupta.
46. Multi-objective Optimization of the Operation of an Industrial Low-density Polyethylene Tubular Reactor using Genetic Algorithm and its Jumping Gene Adaptations; presented at the Third Intl. Conf. on Computational Intelligence,

- Robotics and Autonomous Systems (CIRAS 2005, Singapore, Dec 13-16, 2005, N. Agarwal, G. P. Rangaiah, A. K. Ray and S. K. Gupta.
47. Control structure synthesis for reactive distillation columns: A methyl acetate case study, Presented at the Annual AIChE Meeting, Nov 2005, Cincinnati, OH, USA, N Kaistha and MVP Kumar.
 48. Steady state modeling of reactive distillation using homotopy continuation, Presented at the Annual AIChE Meeting, Nov 2005, Cincinnati, OH, USA, N Kaistha and MVP Kumar.
 49. A simple algorithm for rigorous multicomponent distillation design, Presented at the Annual CSChE Meeting, Oct 2005, Toronto, Canada, G Kedia, S Gedam, DP Rao and N Kaistha.
 50. Steady state reactive distillation simulation using the Naphtali-Sandholm method, Presented at the Annual CSChE Meeting, Oct 2005, Toronto, Canada, R Singh, BP Singh and N Kaistha.
 51. Modeling of Carbon Nanotube Synthesis in a Tubular Aerosol Reactor, 4th Asian Aerosol Conference, Mumbai, Dec.13-16, 2005, R. Gupta, R. Agrawal, R. Bandyopadhyaya and D. Kunzru.
 52. Production of Hydrogen by Steam Reforming on Ni/CeO₂-ZrO₂ Catalysts, CHEMCON-2005, New Delhi, Dec.14-17,2005, P.Biswas and D.Kunzru .
 53. Self-organized structures in soft confined thin films, In Nano Science and Technology, Proceedings of the National Conference, pp. 601-614, Eds. A. K. Sood, K N. Ganesh, C. S. Sundar and A. K. Raychaudhuri, Pramana, Indian Academy of Sciences, Bangalore 2005, Sharma A..
 54. Many paths to self-organized meso-structures in polymers, In Annals of the Indian National Academy of Engineering, 2, 97-104, 2005, Sharma A..
 55. Lattice Boltzmann modelling and experimental measurements of concentration profiles in adsorption bed, 18th National & 7th ISHMT-ASME , Heat and Mass Transfer Conference, January 4-6, 2006, IIT Guwahati, India, Manjhi, N, N. Verma, K. Salem, D. Mewes.
 56. Reduction of NO by metal impregnated activated carbon fibers, Chemcon-2005, Dec 21-25 2005, Delhi, India, V. Gaur, S. Adapa, A. Sharma, N. Verma.
 57. Continuous removal of dissolved solutes from wastewater by multi-stage fluidized bed column, Filtech-2005, October 2005, Frankfurt (Germany), Kishore, K., and N. Verma.
 58. Electric and magnetic studies on copper/cobalt substituted Ni-Zn ferrites, Electromagnetic Materials, Proceedings of the symposium R, International Conference on Materials for Advanced Technologies, 3rd Suntec City, Singapore, July 3-8, 2005 2005; B. Parvatheeswara Rao, R. H. Rao, P. S. V. Subba Rao, pallam S. Setty, N. S. Gajbhiye, O. F. Caltun

59. Studies on Homogeneous Lead Zirconate Titanate Powder Synthesized by Hydroxide Co-precipitation, Proc. Solid State Physics (BARC). 50, 267 2005 ; N. S. Gajbhiye, P. K. Pandey, Lyci George and Abhishek Kumar
60. Flame Synthesis of Titania Nanoparticles using LPG Diffusion Flame, Proc. ICAMDD 2005; A. Agrawal, N. S. Karan, N. S. Gajbhiye, D. P. Mishra
61. Thermal, Structural and Electrical Studies of Nanostructured PZT Synthesized by Low Temperature Technique, Proc. Thermans, Jaipur, India 2006 284; N. S. Gajbhiye, P. K. Pandey, Lyci George and Abhishek Kumar
62. Realistic Fallouts of Quantum Computing with Ultrafast Lasers, Debabrata Goswami, 2nd International Conference on Current Developments in Atomic,
63. Molecular and Optical Physics with Applications (CDAMOP), K.M.College, Delhi University, India, March 21-23 2006.
64. Adiabatic QC & its Backaction to Solve Hard Problems, Debabrata Goswami, International Conference on Quantum Computing: BackAction 2006, IIT Kanpur, India, March 6-12 2006.
65. Adiabatic QC & Femtosecond Induced Nonlinear Processes, Debabrata Goswami, Fourth Singapore-India Collaborative and Cooperative Chemistry Symposium (SInCCCS₄), National University of Singapore, Singapore, Feb.20-21 2006.
66. Adiabatic Quantum Computing with Optical Schemes, Debabrata Goswami, Differential Geometry and Topology in the Perspective of Modern Trends (DGTPMT-2006, Dayalbagh Educational Institute, Agra, India, Feb. 18-19 2006.
67. Ultrafast Pulse Shaping for All-Optical Switching & Adiabatic Quantum Computing, Debabrata Goswami, Topical Conference on Atomic, Molecular and Optical Physics (TC-2005, IACS, Kolkata, India, Dec. 13-15 2005.
68. Interferometric Shaped Pulse Correlations, Debabrata Goswami, Brijuni Conference on Laser Control and Molecular Switches, Brijuni Islands, Croatia, Aug. 28 - Sept. 2 2005.
69. Ultrafast Laser Pulse Shaping for Quantum Computing Goals, David Joseph and Debabrata Goswami, National Conference on Optics and Related Phenomena, Kollam, Kerala, India, Aug. 29-30, 2005.
70. Nonlinear Spectroscopy with Femtosecond Shaped Pulses, Amit Nag, Sherdeep Singh, Debabrata Goswami, Chemfest-2005, Department of Chemistry, IIT Kanpur, India, April 2 2005.
71. Imidazolin-5-ones in organic semiconducting diodes in Molecules to materials- Proceedings of the international conference on molecules to materials 2006 at at Sant Longowal Instittue of Engineering and Technology. Longowal, Punjab, pp 8-12, 2006, Bhattacharjya G., Arun Tej, S.S.K. Iyer and Gurunath R.

72. Bivalent and Trivalent Iron Complexes of Varying Nuclearity with Pyridine Amide Ligands. *Inorganic and Bioinorganic Perspectives*, 12th International Conference on Biological Inorganic Chemistry, University of Michigan, Ann Arbor, USA, Book of Abstracts (1-MICH-75, July 31 - August 5, 2005 (Presented by A. K. Singh), R.N. Mukherjee.
73. Co(II) and Co(III) Complexes of Thioether-containing Pyrazine Amide Ligands. Effect of Ligand Ring Size on Metal Oxidation State, 8th National Symposium in Chemistry (NSC-8), Indian Institute of Technology Bombay, Book of Abstracts (PP-27), February 3-5, 2006 (Presented by A. K. Singh), R.N. Mukherjee.
74. Demonstration of Aromatic Ring Hydroxylation (Tyrosinase-like Activity) Using New m-Xylyl-Based Schiff Base Ligand: Copper-Oxygen Intermediate Due to Reaction between Bis(μ - hydroxo)dicopper(II) and Hydrogen Peroxide, 8th National Symposium in Chemistry (NSC-8), Indian Institute of Technology Bombay, Book of Abstracts (PP-9), February 3-5, 2006 (Presented by S. Mandal), S. Mandal and R. N. Mukherjee.
75. Unsolved mysteries: The electronic structures of meso-hydroxylated hemes and the $g = 2.006$ resonance in CO treated Heme Oxygenase, Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006, A. L. Balch; M. M. Olmstead and S. P. Rath.
76. Breakthrough curves for reactive transport through porous media, National Conference on Hydraulics and Water Resources - Hydro 2005, Tumkur, Dec. 2005, Sharma P.K. and Srivastava R.
77. Estimation of unsaturated flow parameters using multistep outflow experiments, National Conference on Hydraulics and Water Resources - Hydro 2005, Tumkur, Dec. 2005, Bachu, L.N., Srivastava R. and Mohapatra P.K.
78. Nonideal transport in vadose zone due to leaching from a landfill, National Conference on Hydraulics and Water Resources - Hydro 2005, Tumkur, Dec. 2005, Kartha S.A. and Srivastava R..
79. Application of Soil Liquefaction Predictive Models to some sites in Uttar Pradesh And Their Comparative Study National Conference on Earthquake Disaster Technology and Management: Earth 2006, IGS, Allahabad Local Chapter, M.N.N.I.T. Allahabad, India, 11th - 12th February, 2006 (In Press), 2006, P. K. Basudhar, M. K. Rajpal, Sourav De, Arindam Dey and Kousik Deb.
80. Equivalent Thickness of the Geosynthetic-Reinforced Granular Fill over Soft Soil, Indian Geotechnical conference, Ahmedabad, India, 17-19th December. Vol-2, pp: 249-252, 2005, Kousik Deb, S.Chandra and P.K.Basudhar.

81. Settlement Response of Embankment on Multi Layer Geosynthetic-Reinforced Reclaimed Ground International Conference on Geotechnical Engineering for Disaster Mitigation and Rehabilitation, Singapore, 12-13th December, pp: 460-465, 2005, Kousik Deb, S.Chandra and P.K.Basudhar.
82. Startup of UASB reactor using low strength domestic wastewater, International Workshop on Biotechnology of Anaerobic Bacteria & Archaea, March 3 & 4, 2006, Agharkar Research Institute, Pune, India, Quaff, A. R., Arokia, V. J., Singh, R., Guha, S., Harendranath, C. S..
83. Application of Image Analysis and Electron Optical Techniques in the Evaluation of Anaerobic Process, International Workshop on Biotechnology of Anaerobic Bacteria & Archaea, March 3 & 4, 2006, Agharkar Research Institute, Pune, India, Arokia, V. J., Quaff, A. R., Singh, R., Harendranath, C. S., Guha, S.
84. Wavelet-Based Simulation of Spatially Correlated and Spectrum-Compatible Accelerograms, Proceedings of National Symposium on Structural Dynamics, Random Vibrations & Earthquake Engineering (NSSD-2005, Department of Civil Engineering, Indian Institute of Science, Bangalore, pp. 69-78, 2005, Sarkar, K. and Gupta, V.K.
85. Evaluation of the sensitivity of learning rate on the training of neural network hydrologic models, Session H35 - Soft computing tools for hydrologic modeling - Proc. AGU Fall Meeting 2005, December 5-9, 2005, San Francisco, California, USA, 2005, Narain, S. and Jain, A.
86. Evaluating impacts of land use/land cover changes on water balance of a small watershed using a distributed hydrologic model, Session H16 - Impacts of land use/land cover change on the water cycle - Proc. AGU Fall Meeting 2005, December 5-9, 2005, San Francisco, California, USA, 2005, Jha, S.K., Ostrowski, M.W., and Jain, A..
87. Locating groundwater pollution source using breakthrough curve characteristics and artificial neural networks, Session H35 - Soft computing tools for hydrologic modeling - Proc. AGU Fall Meeting 2005, December 5-9, 2005, San Francisco, California, USA, 2005, Kumar J., Jain, A., and Srivastava, R.
88. Prediction of rainfall occurrence using a single artificial neuron model, Proc. National Conf. on Hydraulic, Water Resources, Coastal, and Environmental Engineering with Special Emphasis on Tsunami ,HYDRO2005, December 8-9, 2005, Siddaganga Institute of Technology, Tumkur, Karnataka, India, 2005, Narain, S. and Jain, A.
89. Estimation of concrete slump based on mix constituents using artificial neural networks, Special session on natural computing in infrastructure engineering and management - Proc. IICAI2005: Second Indian Intl. Conf. on Artificial

- Intelligence, December 20-22, 2005, Pune, India, 2005, Jain, A., Jha, S.K., and Misra, S..
90. Godavari river flow prediction using neural networks, Proc. National Conf. on Hydraulic, Water Resources, Coastal, and Environmental Engineering with Special Emphasis on Tsunami (HYDRO2005, December 8-9, 2005, Siddaganga Institute of Technology, Tumkur, Karnataka, India, 2005, Ghosh, S., Kumar, S., and Jain, A.
 91. Estimating groundwater pollution source location from observed breakthrough curves using neural networks, Special session on AI Applications to Hydraulics, Water Resources, and Environmental Engineering - Proc. IICAI2005: Second Indian Intl. Conf. on Artificial Intelligence, December 20-22, 2005, Pune, India, 2005, Kumar J., Jain, A., and Srivastava, R.
 92. Identification of trends in training of ANN rainfall-runoff models for improved training performance, Proc. of Special Session on Data-Driven and Computational Intelligence Methods in Flood Forecasting, EGU's General Assembly 2005, 24-29 April 2005, Vienna, Austria, Jha, S.K. and Jain, A..
 93. Seismic Design of Buried Pipelines in Indian Context, Proceedings of National Symposium on Structural Dynamics, Random Vibrations & Earthquake Engineering (C S Manohar and D Roy, editors), July 21-22 2005, Bangalore, pp. 25-32, Dash S R and Jain S K.
 94. Effect of urbanization on hydrological parameters and some remedies, Intel Science Talent Discovery Fair, Bangalore, Decemebr 7 - 10, 2005, Singh, S. and Mohapatra, P. K.
 95. Estimation of unsaturated flow parameters using multi-step outflow experiments, HYDRO-2005, Bangalore, December 2005, pp. 101-110, Lakshminarayana, B., Srivastava, R., and Mohapatra, P. K.
 96. Uncertainties in a dam-break flow study, National Conference on Advances in Water Engineering for Sustainable Development (NCAWESD - 2005, IIT Madras, Mohapatra, P. K..
 97. Earthquake Resistance of Structures: A Pre-requisite for Sustainable Development in India, National Seminar on Sustainable Infrastructure for National Development, Aligarh, India, 17-18 April 2005, pp 9-24, Murty, C.V.R.
 98. IITK-BMTPC Earthquake Tips: Learning Earthquake Resistant Design and Construction, 2nd ICI-Asian Conference on Concrete, ACECON 2005, International Conference on Ecstasy in Concrete, 22- Bombay, India, 25 September 2005, pp VIII-15 to VIII-21, Murty, C.V.R.
 99. Influence of Rotation and Uplift Displacement on Oblique Capacity of Line Pile Groups: An Investigation IGC-2005, India, 2005, Shalini and Patra, N. R.
 100. Gneralized Solution of Piles under Oblique Pull in Elasto-Plastic Soil., Geo Congress, ASCE, 2006, Shubhra, G and Patra, N. R.

101 Virtual Simulator for Advanced Geotechnical Laboratory Testing ASCE GeoCongress'06, ASCE, Feb 2006, pp. 1-6, Penumadu D., and Prashant A..

100.

102. Experimental and Analytical Aspects of Strain Localization for Cohesive Frictional Materials, International Conference on Computational & Experimental Engineering and Sciences, Dec 2005, pp. 1-6. Penumadu D., Sachan A., and Prashant A.

103 On shear strength behavior of clay with sudden failure response 11th IACMAG conference, Italy, June 2005, Prashant, A., and Penumadu D..

calization analysis for overconsolidated Kaolin clay behavior. 3rd M.I.T. Conference on Computational Fluid and Solid Mechanics, M.I.T., Cambridge, MA, USA, June 2005, pp. 1-6, Prashant, A., and Penumadu D..

101. Seismic Risk for the state of Orissa: A review, National Conference on Technology for Disaster Mitigation, JITM, Paralakhemundi, Gajapati, Orissa, January 27-28, 2006, p. 171-178, Sahoo, D. R. and Rai, D. C.

102. A Library for Parallelization of Irregular Applications", Proceedings of Thirteenth International Conference on Advanced Computing and Communications (ADCOM 2005, India, Dec 2005, Anshu Jain, Sanjeev K Aggarwal.

103. Proving Lower Bounds via Pseudo-random Generators, in proceedings of the 25th FST & TCS Conference, LNCS 3821, pages 92-105, Hyderabad, 2005, Manindra Agrawal.

104. Equivalence of F-Algebras and Cubic Forms, in proceedings of the 23rd STACS Conference, LNCS 3884, pages 115-126, Marseille, 2006, authors, Manindra Agrawal, N. Saxena.

105. Behavioral Approximations for Restricted Linear Differential Hybrid Automata, in proceedings of the 9th Workshop on Hybrid Systems: Computation and Control, LNCS 3927, pages 4-18, Santa Barbara, 2006, Manindra Agrawal.

106. Feasibility Study of Spatial Reuse in an 802.11 Access Network, XXVIII URSI General Assembly, New Delhi, India, Oct 2005, A. R. Harish, Sreekanth Garigala, Bhaskaran Raman and Phalguni Gupta.

107. Design and Evaluation of a new MAC Protocol for Long-Distance 802.11 Mesh Networks, 11th Annual International Conference on Mobile Computing and Networking paper (MOBICOM), August 2005, Cologne, Germany, Bhaskaran Raman and Kameswari Chebrolu.

108. A Network Layer Approach to Enable TCP over Multiple Interfaces, Wireless Networks (WINET), Springer Science Business Media, Volume 11, Issue 5, Sep

- 2005, Pages 637-650, Kameswari Chebrolu, Bhaskaran Raman and Ramesh Rao.
109. Joindistinct aggregate, Estimation over update streams. In Proceedings of the 24th ACM SIGACT-SIGMOD-SIGART , Symposium on Principles of Database Systems, June 13-15, 2005, Baltimore, Maryland, USA, pp. 259-270, Sumit Ganguly, Minos N. Garofalakis, Amit Kumar and Rajeev Rastogi.
 110. Practical Algorithms for Tracking Database Join Sizes. In Proceedings of Foundations of SoftwareTechnology and Theoretical Computer Science, 25th International Conference (FSTTCS), Hyderabad, India, December 15-18, 2005, Lecture Notes in Computer Science 3821 Springer 2005, pages 297-309, Sumit Ganguly, Deepanjan Kesh, Chandan Saha.
 111. Counting Distinct Items over Update Streams. In Proceedings of 16th International Symposium on Algorithms and Computation ISAAC 2005, Sanya, Hainan, China, December 19-21, 2005, Lecture Notes in Computer Science 3827 Springer pages 505-514, Sumit Ganguly.
 112. Simpler Algorithm for estimating frequency moments of data streams. In Proceedings of the 17th Annual ACM- SIAM Symposium on Discrete Algorithms, SODA 2006, Miami, Florida, USA, January 22- 24, 2006. ACM Press 2006, ISBN 0-89871-605-5, pages 708-713, Lakshminath Bhuvanagiri, Sumit Ganguly, Deepanjan Kesh and Chandan Saha
 113. Resilient Dissemination of Events in a Large-Scale Event Notification Service System, IEEE International Conference on e- Technology, e-Commerce and E-Service (EEE'05 pp. 502-507, RK Ghosh,Chit Htay Lwin, Hrushikesh Mohanty, Goutam Chakraborty.
 114. Tracking of Mobile Terminals Using Subscriber Mobility Pattern with Time-Bound Self Purging Indicators and Regional Route Maps, IWDC 2005, LNCS, volume 3741, pp.512-523, R K Ghosh, Saurabh Aggarwala, Hemant Mishra, Ashish Sharma and Hrushikesh Mohanty.
 115. Using Defect Analysis Feedback for Improving Quality and Productivity in Iterative Software Development, Invited paper, 3rd Int. Conf. on Information and Communication Technology, ICICT, 2005, Cairo, Dec 2005, Pankaj Jalote and N. Agrawal.
 116. Evaluating Performance Attributes of Layered Software Architecture, Proceedings of 8th Intl. SIGSOFT Symposium on Component-based Software Engineering (CBSE), St. Louis, May 2005, V. Sharma, Pankaj Jalote and K. S. Trivedi.
 117. A Technique for Extracting Keyword Based Rules from a Set of Programs. Proc. 9th European Conference on Software Maintenance and

- Reengineering, Machester, 2005, 217-225, A. Dubey, S.K. Aggarwal, Pankaj Jalote.
118. Efficient Static Analysis With Path Pruning Using Coverage Data, Workshop on Dynamic Analysis (WODA-2005 at ICSE2005, St Louis, May 2005, Vipindeep V and Pankaj Jalote.
 119. Extracting Semantic Structure of Web Documents using Content and Visual Information, Proceedings International World Wide Web Conference (WWW '05, Chiba, Japan, May 2005, R. Mehta, P. Mitra and H. Karnick.
 120. Bilingual Lexical Processing: Contrastive Polysemies, Proceedings of the Sixth Tokyo Conference of Psycholinguistics, Keio University, Japan, 2005, Banerjee, S., A.M. Raina and H. Karnick.
 121. Lexical Organization and Access of Code-mixed Collocations Proceedings of Asialex 2005, National University of Singapore, 2005, Banerjee, S., A.M. Raina and H. Karnick.
 122. EUCLID: A System for the Exploratory Discovery of Geometrical Properties of Triangles, Proceedings of 2nd Indian International Conference on Artificial Intelligence, pp2759-2776, Dec. 20-22, 2005, Pune, India, Gaurav Pandey, Ankit Anand and Harish Karnick.
 123. Improved Kernel Matrix Learning by Minimizing the Upper Bound on the VC Dimensions, Vijaya V. Saradhi, Harish Karnick, Proceedings of the 3rd WCVGIP, Editors: P. K. Biswas and C. V. Jawahar, Hyderabad, Jan 12 - 23 2006.
 124. Some Algorithms on Conditionally Critrical Indecomposable Graps 7th International Colloquium on Graph Theory (ICGT 2005 Hyeres France 12-16 September 2005 Electronics Notes in Discrete Mathematics, Shanshak Kumar Mehta with Chanadan Kumar Dubey.
 125. 11th International Computing and Combintorics Conference (CO-COON 2005Kunning (Yunnan) China 16-19 2005 LNCS 3595 pp 690-700, Shanshak Kumar Mehta with Chanadan Kumar Dubey and Jitendra Singh Deogunm.
 126. 31st International Workshop on Graph -Theoretic Concepts in Computer Science (WG 2005 Metz 23-25 June 2005 LNCS 3787 pp 28-37, Shanshak Kumar Mehta, Divesh Aggarwal and Jitendra Singh Deogun...
 127. Proceedings of the Workshop on Computer Vision, Graphics, and Image Processing Hyderabad, Andhra Pradesh, India, January 12-13, 2006.
 128. Animating Hand Behaviours Using Virtual Sensors and an Automata Hierarchy Proceedings Fourth Asian Conference on Industrial Automation and Robotics ACIAR-05, May 11-13, 2005, Bangkok, Thailand, Rahul Banerjee and Amitabha Mukherjee.

129. Learning and Cyclicity in Multi-Agent Action Spaces, Proceedings Fourth Asian Conference on Industrial Automation and Robotics ACIAR-05, May 11-13, 2005, Bangkok, Thailand, Amitabha Mukerjee and Anurag Adarsh.
130. A Multiscale Co-linearity Statistic Based Approach to Robust Background Modeling, Proceedings of the 7th Asian Conference on Computer Vision, Lecture Notes in Computer Science, No. 3851, Springer, pp. 297-306, Hyderabad (India), January 13-16, 2006, Prithwijit Guha, Dibyendu Palai, K.S. Venkatesh and Amitabha Mukerjee.
131. Efficient Occlusion Handling for Multiple Agent Tracking by Reasoning with Surveillance Event Primitives, Proceedings of The Second Joint IEEE International Workshop on Visual Surveillance and Performance Evaluation of Tracking and Surveillance (In conjunction with ICCV 2005, pp. 49-56, Beijing (China), October 15-16, 2005, Prithwijit Guha, Amitabha Mukerjee and K.S. Venkatesh.
132. Hybrid Hierarchical Learning from Dynamic Scenes. Pattern Recognition and Machine Intelligence, ed. S.K. Pal, S. Bandyopadhyay and S.Biswas, Springer LNCS v 3776, Dec 2005, pp.212-217, Prithwijit Guha, Pradeep Vaghela, Pabitra Mitra, K. S. Venkatesh, Amitabha Mukerjee.
133. The Cooperative Behavior of a Human Work Group: A Distributed Learning Approach Ninth International Symposium on Artificial Intelligence and Mathematics, Florida, January 4-6, 2006, Tapesha Santra, K.S. Venkatesh, and Amitabha Mukerjee.
134. Hybrid Hierarchical Architecture for Learning from Dynamic Scenes, Proceedings of the First International Conference on Pattern Recognition and Machine Intelligence, Lecture Notes in Computer Science, No. 3776, Springer, pp. 212-217, Calcutta (India), December 18-22, 2005, Prithwijit Guha, Pradeep Vaghela, Pabitra Mitra, K.S. Venkatesh and Amitabha Mukerjee.
135. DynaTracker: Target Tracking in Active Video Surveillance Systems, Proceedings of the 12th International Conference on Advanced Robotics (ICAR 2005, Seattle, July 17-20, 2005, Prithwijit Guha, Dibyendu Palai, Dip Goswami, and Amitabha Mukerjee.
136. Visual Navigation of Wheeled Robots: Compensating Floor Undulations Proceedings of the 12th International Conference on Advanced Robotics (ICAR 2005, Seattle, July 17-20, 2005, Adnan Bohori, K S Venkatesh, Vivek K Singh and Amitabha Mukerjee.
137. Feature Selection and Function Approximation for Mutual Funds: An Application in Multi-objective Optimization, NIPS 2005 Workshop on Machine Learning in Finance, Whistler, Canada, December 9, 2005, Preeti Goel, Pabitra Mitra, Amitabha Mukerjee, and Rita Biswas.

138. Application of Genetic Algorithms for a Three-way Optimization of Risk-Return-Tax Tradeoff in Equity Mutual Fund Portfolios. Proceedings of the Eastern Finance Association Conference, Norfolk VA, 21-23 April 2005, Rita Biswas, Preeti Goel, Amitabha Mukerjee, and Hany A. Shawky.
139. Semantic Underspecification in Hindi Complex Predicates. Proceedings of the Generative Lexicon Workshop GL2005, Geneva, May 2005, Raina, Achla M and Amitabha Mukerjee.
140. Towards a Visualization for Possible Realization of a Gupta period temple, at Bhitari, Annual Meeting of the Indian Archaeological Society, Bangalore. December 15-18, 2005, Vidula Jayaswal, Neves Rodrigues and Amitabha Mukerjee.
141. An Approach to Workflow Modeling and Analysis, ETX, OOPSLA, October 2005, Hemant Kr. Meena, Indradeep Saha, Koushik Kr. Mondal, TV Prabhakar.
142. Some Experiments with the Performance of LAMP Architecture, CIT, September 2005, Shanghai, UV Ramana, TV Prabhakar.
143. Dynamic Selection of Web Services with a Recommendation System, International Conference on Next Generation Web Services Practices, August 2005, Seoul, Korea, Umardand Shripad Manikrao, TV Prabhakar.
144. On Archiving Architecture Documents, APSEC 2005, Dec 2005, Taiwan, Rambabu D, TV Prabhakar.
145. The Network Monitoring Tool – PickPacket, In Proc. of Int'l Conf. on IT and Applications Sydney, July, 2005, B Pande, D Gupta, D Sanghi, and S K Jain.
146. (Invited Paper), Machine Translation: AnglaBharati and AnuBharati, Approaches, CSI Communication, November 2005, R.M.K. Sinha.
147. Machine Translation of Bi-lingual Hindi-English (Hinglish), Text, 10th Machine Translation summit (MT Summit X), Phuket, Thailand, September 13-15, 2005. pp 149-156, R.M.K. Sinha and Anil Thakur.
148. Dealing with Replicative Words in Hindi for Machine Translation to English, 10th Machine Translation summit (MT Summit X), Phuket, Thailand, September 13- 15, 2005. pp 157-164, R.M.K. Sinha and Anil Thakur.
149. Divergence Patterns in Machine Translation between Hindi and English, 10th Machine Translation summit (MT Summit X), Phuket, Thailand, September 13-15, 2005. pp 346-353, R.M.K. Sinha and Anil Thakur.
150. Handling ki in Hindi for Hindi-English MT, 10th Machine Translation summit (MT Summit X), Phuket, Thailand, September 13-15, 2005. pp 356-363, R.M.K. Sinha and Anil Thakur,

151. Dealing with Mixing of English Verbs in Hindi for Machine Translation, ICAI'05 - The 2005 International Conference on Artificial Intelligence, Las Vegas, Nevada, USA, June 27-30, 2005, R.M.K. Sinha.
152. Interpreting Unknown Lexicons in Machine Translation from Hindi to English, 4th IASTED International Conference on Computational Intelligence (CI 2005, Calgary, Alberta, Canada, July 4-6, 2005, R.M.K. Sinha.
153. Integrating CAT and MT in AnglaBharti-II Architecture, EAMT 2005, 30th-31st May, 2005, Budapest, Hungary, R.M.K. Sinha.
154. Translation Divergence in English-Hindi MT, EAMT 2005, 30th-31st May, 2005, Budapest, Hungary, R.M.K. Sinha and Anil Thakur.
155. Consciousness and High Gamma of Electroencephalogram: A Correlation Study, International Conference on Krishnamurthy and Consciousness, Hyderabad, 6 - 8 January, 2006, G.C.Ray,.
156. Modelling of Soliton pulses in fiber loop buffer switch, ICOL-2005, Dehradun, India, December 2005, Rajiv Srivastava, Swapnil Shukla, Y.N.Singh.
157. Reliability improvement with critical span protection using modified algorithms of preconfigured (P) cycles, ICOL-2005, Dehradun, India, December 2005 Rachana Asthana, Y.N.Singh.
158. Upper limit on fiber based subscriber access networks, ICOL-2005, Dehradun, India, December 2005, T.M.Prasanna, Rajiv Srivastava, Y.N.Singh.
159. A novel architecture for fiber based optical memory, ICOL-2005, Dehradun, India, December 2005, Rajiv Srivastava, Swapnil Shukla, Y.N.Singh.
160. Comparative study of duobinary modulation in fiber-optic link with different pulse shapes, ICOL-2005, Dehradun, India, December 2005, Parthasarathi Ghatak, Y.N.Singh.
161. Advantage of soliton pulse in fiber loop buffer switch, WCSN 2005, IIIT Allahabad, April 2005, Rajiv Srivastava, Swapnil Shukla, Y.N.Singh.
162. Hybrid Hierarchical Learning from Dynamic Scenes, First Int'l Conf. on Pattern Recognition and Machine Intelligence (PReMI'05 ISI Kolkata, Dec. 2005, P Guha, P Mitra, P Vaghela, K S Venkatesh, A Mukerjee.
163. A Multi-Scale Colinearity Statistic Based Approach To Robust Background Modeling, Seventh Asian Conf. on Computer Vision, (ACCV'06, Hyderabad, Jan 13-16, 2006, P Guha, K S Venkatesh, A Mukerjee.
164. Broadband concentric rings fractal slot antenna, 28th general assembly of URSI, October 23-29, 2005, New Delhi, Joshi Ravi Kumar and A.R. Harish.
165. Identification of antennas in an indoor wireless network, 28th general assembly of URSI, October 23-29, 2005, New Delhi, I. Ilamparidhi and A.R. Harish,

166. Feasibility study of spatial reuse in an 802.11 access network, 28th general assembly of URSI, October 23-29, 2005, New Delhi, A.R. Harish, Sreekanth Garigala, Bhaskaran Raman and Phalguni Gupta.
167. Periodically loaded microstrip based metamaterial with negative group velocity, International Radar Symposium India - 2005, 19-22 December 2005, Rajesh Kumar and A.R. Harish.
168. Wideband printed hybrid fractal loop antenna, International Radar Symposium India - 2005, 19-22 December 2005, Ravi Kumar Joshi and A.R. Harish.
169. Compact Loop Antennas and Arrays, Proceedings of International Conference of Antenna Technologies (ICAT2005, pp. 531-534, Feb 23-24, 2005, ISRO, Ahmedabad, India, A.R. Harish, Abhinav Agarwal, Nitigya Kuchhal, and Vibhor Jain.
170. Parasitically loaded Vivaldi Antenna, Proceedings of International Conference of Antenna Technologies (ICAT2005, pp. 525-529, Feb 23-24, 2005, ISRO, Ahmedabad, India, R.K. Joshi and A.R. Harish.
171. A Neural Network Using Single Multiplicative Spiking Neuron for Function Approximation and Classification, IEEE International Joint Conference on Neural Network, IJCNN-2006, Vancouver (Canada), 2006 Mishra, D., Yadav, A, Ray, S., and Kalra, P.K.
172. Learning with Single Quadratic Integrate-and-fire Neuron, Proceedings of Third International Symposium of Neural Network 2006, Chengdu (China), J. Wang et al. (Eds.): ISNN 2006, LNCS 3971, pp. 424-429, 2006, Mishra, D., Yadav, A, and Kalra, P.K.
173. Effects of Noise on the Dynamics of Biological Neuron Models, The Fourth IEEE International Workshop on Soft Computing as Transdisciplinary Science and Technology , 2005. Mishra, D., Yadav A, S. Ray, Kalra, P.K.
174. Bifurcation analysis in modified Fitzhugh Nagumo neuronal model, National Conference on Control and Dynamical Systems, Bombay, 2005, Mishra D, A. Yadav, S. Ray, Kalra, P.K.
175. Representation of Complex-Valued Neural Networks: A Real Valued Approach, Proceedings of International Conference on Intelligent Sensing and Information Processing, pp.331-335, 2005, Yadav, D. Mishra, S. Ray, R.N. Yadav and Kalra, P.K.
176. Learning with Single Integrate-and-Fire Neuron, IEEE International Joint Conference on Neural Network, IJCNN-2005, Montreal (Canada), 2005. Mishra, D., Yadav, A, Ray, S., Yadav, R.N. and Kalra, P.K.
177. From Point Neuron to Axon Modeling: A New Approach, The 12th International Conference on Neural Information Processing, Taipei, Taiwan, 2005, Ray, S., Mishra, D, Yadav, A, and Kalra, P.K.

178. Nonlinear Coupling and Synchronization in Modified Fitzhugh-Nagumo Neuron Model, The 12th International Conference on Neural Information Processing, Taipei, Taiwan, 2005, Mishra, D, Yadav, A, Ray, S. and Kalra, P.K.
179. Synchronization Control of Coupled FitzHugh-Rinzel Neuron, ICCES 2005, December 1-6, Indian Institute of Technology Madras, Chennai 600036. INDIA, 2005, Mishra, D. and Kalra, P.K.
180. Nonlinear Dynamical Analysis on Coupled Modified FitzHugh-Nagumo Neuron Model, Proceedings of International Symposium of Neural Network 2005, Chongqing (China), pp. 95 - 101, 2005, Mishra, D, Yadav, A, Ray, S. and Kalra, P.K.
181. Fuzzy Clustering with M-Estimators. IICAI 2005: 2101-2119, K. Madhava Krishna, Kalra,P.K
182. Design and Evaluation of a new MAC Protocol for Long-Distance 802.11 Mesh Networks, The 11th Annual International Conference on Mobile Computing and Networking paper (MOBICOM), Aug/Sep 2005, Cologne, Germany. [Acceptance rate: 10.3%], B. Raman and K. Chebrolu.
183. Imidazolin-5-ones in organic semiconductor diodes, Proceedings of International Conference on Molecules to Materials, 2006, Longowal India, pp. 8-12. Gitalee Bhattacharjya, Arun Tej Malljosyula, SSK Iyer and Gurunath Ramanath.
184. Simulation of MOSFET Devices and Circuits Fabricated on Selective Buried Oxide (SEL-BOX) Substrates, Proceedings of 2005 IEEE Conference on Electron Devices and Solid-State Circuits, Hong Kong, Chander Pal, Baquer Mazhari and S. Sundar Kumar Iyer.
185. On the spread of random interleavers, in Proceedings of IEEE International Symposium on Information Theory, Adelaide Australia, 4-9 September 2005 Page(s):439 - 443, Arya Mazumdar, Adrish Banerjee and Ajit K. Chaturvedi.
186. Operation of a controlled rectifier supported dynamic voltage regulator, Proc. IEEE-PES General Meeting, pp. 1475-1481, San Francisco, 2005, S. V. Iyer, A. Ghosh and A. Joshi.
187. Voltage regulation using dynamic voltage restorer for large frequency variations, Proc. IEEE-PES General Meeting, pp. 1780-1786, San Francisco, 2005, A. K. Jindal, A. Ghosh and A. Joshi.
188. Evaluation of transient stability margin of a power system containing multiple FACTS devices, Proc. IEEE-PES General Meeting, pp. 1787-1794, San Francisco, 2005, D. Chatterjee and A. Ghosh.

189. A hysteresis current controlled flying capacitor multilevel inverter based DSTATCOM, Proc. IEEE-PES General Meeting, pp. 1801-1808, San Francisco, 2005, A. Shukla, A. Ghosh and A. Joshi.
190. Power converters and their applications, Proc. 2nd National Power Electronics Conference, pp. XXV-XXXIII, IIT Kharagpur, December, 2005, A. Ghosh.
191. Flying capacitor multilevel inverter topologies with efficient utilization of switching devices, Proc. 2nd National Power Electronics Conference, pp. 131-135, IIT Kharagpur, December, 2005, A. Shukla, A. Ghosh and A. Joshi.
192. Shunt compensation in three-phase four-wire distribution systems with non-ideal supply, Proc. 2nd National Power Electronics Conference, pp. 167-170, IIT Kharagpur, December, 2005, S. V. Iyer, A. Ghosh and A. Joshi.
193. Compensation of a distribution system using a neutral-clamped DVR, Proc. 2nd National Power Electronics Conference, pp. 180-184, IIT Kharagpur, December, 2005, A. K. Jindal, A. Ghosh and A. Joshi.
194. Linear modulation and analysis of shunt compensated distribution system, Proc. 2nd National Power Electronics Conference, pp. 185-190, IIT Kharagpur, December, 2005, R. Gupta, A. Ghosh and A. Joshi.
195. Bifurcation behavior of a current-mode Cuk converter, Proc. 2nd National Power Electronics Conference, pp. 365-369, IIT Kharagpur, December, 2005, K. Jayalakshmi, A. Joshi and A. Ghosh,.
196. Heterostructure PIN Rectifier Diode for power applications, IEEE Conference on Electron Devices and Solid-State Circuits, Dec. 19-21, 2005, pp.807-810; Hong Kong, B. Mazhari, M. Sinha and J. Dixit,.
197. Utility Friendly Magnet-Load Power Supply, Conference Proceedings of Power Electronics Specialists Conference (PESC) 2005, Recife, Brazil, June 12-16, 2005, pp. 333-339, R. K. Tripathi and S. P. Das.
198. A Sliding Mode Controller Based Optimum UPQC with Minimum VA Loading, Proceedings of IEEE PES General Meeting, San Francisco, USA, June 12-16, 2005, pp. 2240-2244, Y. Y. Kolhatkar, Rammohan Rao Errabelli, and S. P. Das.
199. A Fuzzy Controlled Optimum UPQC with Minimum VA Loading, Proceedings of Indian International Conference on Artificial Intelligence (IICAI) 2005, Pune, Dec. 2005, pp. 2288-2307, Rammohan Rao E., Y. Y. Kolhatkar, and S. P. Das.
200. Fuzzy Logic Controller-based High Performance Induction Motor Drive, Conf. Proceedings of IEE Sponsored National Conference on Power Engineering Practices and Energy Management-2005, TIET, Patiala, pp. 51-54, Jan. 28-29, 2005, S. Behera, B. Subudhi, S. P. Das, and S. R. Doradla.

201. Design and Simulation of a Sliding Mode Controller-based Unified Power Quality Conditioner, Conf. Proceedings of Recent Advances in Power Systems and Power Electronics (RAPSPE-2005, College of Engineering and Management, Kolaghat, pp. 159-164, August 20, 2005, E. Rammohan Rao, Y. Y. Kolhatkar, and S. P. Das.
202. Design and Simulation of a Three-Phase Three-Level UPQC for Power Distribution Systems, Conf. Proceedings of National Power Electronics Conference (NPEC) 2005, IIT Kharagpur, pp. 303- 306, Dec. 22-24, 2005, Hema Rani P. and S. P. Das.
203. A Modal Controllability Index for Optimal Placement of TCSC to Damp Inter-Area Oscillations, IEEE PES General Meeting 2005 June 12-16 2005 in San Francisco, California, pp. 1664 - 1668, B. Kalyan Kumar, SN Singh and SC Srivastava.
204. Novel Parallel Radial Basis Function Neural Network for Voltage Security Analysis, ISAP05, Washington, USA, November 2005, pp. 320-326, T Jain, L Srivastava, SN Singh and I Erlich.
205. Locating Unified Power Flow Controller for Enhancing Power System Loadability, International Conference on Future Power System, Netherlands, November 16-18, 2005, SN Singh and I Erlich.
206. Price Area Congestion Management Approach for Restructured Indian Power Market, International Conference on Power System, CRPI Bangalore, Dec 20-22, 2005, P Bajpai and SN Singh.
207. Optimal Power Flow Control with TCPAR and UPFC in Competitive Electricity Market, International Conference on Power System Operation in Deregulated Regime (ICPSODR-2006, IT BHU, India, March 6-7, 2006, pp. 68-76, SK Parida, SN Singh and SC Srivastava.
208. Optimal Placement of TCSC for Enhancing Power System Loadability, National Conference on Electric Power Technology, Management and IT Application, MMMEC Gorakhpur, February 17-18, 2006, JG Singh, SN Singh and SC Srivastava.
209. Artificial Intelligence Technique for Load Forecasting, Bid Forecasting and Market Clearing Price Prediction in Power Systems: An Overview, National Conference on Electric Power Technology, Management and IT Application, MMMEC Gorakhpur, February 17-18, 2006, MM Tripathi, SN Singh and KG Upadhyay.
210. FACTS Technology in Deregulated Electricity Market: An Overview, National Conference on Electric Power Technology, Management and IT Application, MMMEC Gorakhpur, February 17-18, 2006, SK Srivastava, KG Upadhyay and SN Singh.

211. Optimal Placement of TCPAR for Enhancing Power System Loadability, National Conference on Technical Challenges in Power Systems, KNIT Sultanpur, March 24-25 2006, pp. 207-211, JG Singh, SN Singh and SC Srivastava.
212. Simulation of Power Quality Problems for Analysis and Characterization, National Conference on Technical Challenges in Power Systems, KNIT Sultanpur, March 24-25 2006, pp. 1-10, Deepti Shakya, UK Dwivedi and SN Singh.
213. Modelling of Soliton pulses in fiber loop buffer switch, ICOL-2005, Dehradun, India, December 2005, Rajiv Srivastava, Swapnil Shukla, Y.N.Singh.
214. Reliability improvement with critical span protection using modified algorithms of preconfigured (P) cycles, ICOL-2005, Dehradun, India, December 2005, Rachana Asthana, Y.N.Singh.
215. Upper limit on fiber based subscriber access networks, ICOL-2005, Dehradun, India, December 2005, T.M.Prasanna, Rajiv Srivastava, Y.N.Singh.
216. A novel architecture for fiber based optical memory, ICOL-2005, Dehradun, India, December 2005, Rajiv Srivastava, Swapnil Shukla, Y.N.Singh.
217. Comparative study of duobinary modulation in fiber-optic link with different pulse shapes, ICOL-2005, Dehradun, India, December 2005, Parthasarathi Ghatak, Y.N.Singh.
218. Advantage of soliton pulse in fiber loop buffer switch, WCSN 2005, IIT Allahabad, April 2005, Rajiv Srivastava, Swapnil Shukla, Y.N.Singh.
219. Performance analysis of Diffuse Indoor Optical Wireless Systems in Ambient Noise Environments, Proceedings of the 12th National Conference on Communications (NCC-2006,IIT Delhi, India, pp.460-464, Jan. 27-29, 2006, A. Sivabalan and Joseph John.
220. Implementing Frequency-Warping and VTLN Through Linear Transformation of Conventional MFCC, Proc. of InterSpeech 2005, (Lisbon, Portugal), Sep. 2005 , S. Umesh, A. Zolnay and H. Ney [2005].
221. The Speech Scale and Spectral Transformation, Proc. of SPIE Conference on Wavelet Applications in Signal & Image Proc., July 2005, S. Umesh, L. Cohen and D. Nelson.
222. Linear-Transformation Approach to Shift-Based Speaker- Normalisaion Proc. of National Conference on Communications , (IIT,Delhi), January 2006 , R. Sinha and S. Umesh .
223. Study of Non-linear Frequency Warping functions for Speaker Normalisation Proc. of National Conference on Communications , (IIT,Delhi), January 2006, S. Umesh and S. V. Bharath.
224. Optimal Train Rescheduling for Single Track Railway Line, IICAI 2005: pp 38-53, Srinivasulu Kyavars, Ramprasad Potluri.

225. Visual Navigation of Wheeled Robots: Compensating Floor Undulations, Twelfth Int'l Conf. on Advanced Robotics (ICAR 2005, Seattle, USA, July 17-20, 2005, A Bohori, K S Venkatesh, A Mukherjee, V K Singh.
226. Insights Offered By A Mathematical Model Of The HPT Axis On Transdermal Testosterone Delivery For Male Contraception, Controlled Release Society Conf. Mumbai, March '05, R Mallik, A Misra, K S Venkatesh, S Tondwal.
227. Efficient Occlusion Handling for Multiple Agent Tracking by Reasoning with Surveillance Event Primitives, Tenth Int'l Conf. on Computer Vision, ICCV - VS-PETS, 2005, Beijing, China, Oct 14-21, 2005, Prithwijit Guha, Amitabha Mukerjee, K.S. Venkatesh.
228. Self Managing Systems Based On Human Social Behaviors, Ninth Int'l Symp. On Artificial Intelligence and Mathematics (AIMATH 2006, Ft. Lauderdale, Florida, USA, Jan 4-6, 2006, T Santra, K S Venkatesh, A Mukerjee.
229. A New Computationally Efficient Shot Detection Algorithm for Cricket Videos, National Communication Conference, NCC'06, IIT Delhi, O Kiran Kumar, K S Venkatesh.
230. On the Spread of Random Interleavers, Proc. IEEE International Symposium on Information Theory, 4-9 Sept 2005, Arya Mazumdar, MP Sriram and AK Chaturvedi.
231. Towards Optimal Set of Bases for Orthonormal Code Diversity Detection CDMA Systems, Proc. National Conference on Communications, 27-29 Jan 2006, A Mazumdar, A Banerjee and AK Chaturvedi.
232. A New Approach to Pulse Design for Ultra-Wideband Communications, Proc. National Conference on Communications, 27-29 Jan 2006, P Sandeep, S Chandan and AK Chaturvedi.
233. A New Family of Nakagami-m Parameter Estimators for Noisy Channel Samples, Proc. National Conference on Communications, 27-29 Jan 2006, S Ravi Teja, Rohit Aggarwal and AK Chaturvedi.
234. One-Dimensional Sub-Threshold Model for Symmetric Double-Gate MOSFETs, International Semiconductor Device Research Conference (ISDRS), Bethesda, Maryland, U.S.A., December 7-9, 2005, S. Qureshi and Gaurav Chhabra.
235. Nonlinear Function Approximation Using Local Input-output Maps in a Learning Framework, WCLC 2005, Bangalore, Dec 16-18, 2005, Pawan Goyal, Maikanth Mohan and Laxmidhar Behera.
236. Network based Image Coding, WCLC 2005, Bangalore, 16-18 Dec 2005, Shikher Bisaria and Laxmidhar Behera.

237. Intelligent Control Schemes for a Redundant Manipulator, 2nd Indian Int. Conf on Artificial Intelligence, Pune, India, 20-22, December 2005, Prem Kumar, Indrani Kar and Laxmidhar Behera.
238. Simulations and Experiments on a Robotic Arm, CIRAS-05, 10-14, December 2005, Singapore, Dip Goswami, Laxmidhar Behera, and Ashish Dutta.
239. Dynamic Walking of Eight DOF Biped using Neural Net Controller, SICE-05, Japan, August 2005 , Dip Goswami, Ashish Dutta and Laxmidhar Behera.
240. On Identification and Stabilization of Nonlinear Plants using Fuzzy Neural Network IEEE SMC 2005, Hawaii, Oct 10-12, 2005, Indrani Kar, Prem Kumar and Laxmidhar Behera.
241. Quantum Stochastic Filtering, IEEE SMC 2005, Hawaii, Oct 10-12, 2005, Laxmidhar Behera and Indrani Kar.
242. Closed Form Expression for On-Chip GaAs MMICs Transformers, International Microwave and Optoelectronic Conference, Brazil, pp. 25-28, July 2005, Brasilia, A. Mohan, A. Biswas, D. Pienkowski and G. Boeck.
243. Dispersion characteristics of dominant and higher order modes for single and coupled strip in multilayered cylindrical dielectrics using TLM method, Proc. in XXVIIIth General Assembly of International Union of Radio Science (URSI), Oct-2005, New Delhi, A. K. Gupta, A. Mohan and A. Biswas,.
244. Dispersion properties of multiconductor microstripline in suspended substrate and inverted microstrip lines by using modal analysis, Proc. in XXVIIIth General Assembly of International Union of Radio Science (URSI), Oct-2005, New Delhi, S. Awasthi, K.V. Srivastava and A. Biswas.
245. Dispersion and impedance characteristics of single and coupled strip in multilayered cylindrical dielectrics using 3D-TLM method, Asia Pacific Microwave Conference'05, China, Dec. 2005, Volume 2, 04-07 Dec. 2005, A. K. Gupta, A. Mohan and A. Biswas.
246. Dispersion characteristics of an off-layered coupled Non Radiative (NRD) guide, Asia Pacific Microwave Conference'05, China, Dec. 2005, Volume 2, 04-07 Dec. 2005, S. Mukherjee, A. Mohan and A. Biswas
247. Dispersion properties of four and five coupled microstrip line in suspended substrate using hybrid mode formulation, Asia Pacific Microwave Conference'05, China, Dec. 2005, Volume 2, 04-07 Dec. 2005, S. Awasthi, K. V. Srivastava and A. Biswas.
248. A Modal Controllability Index for Optimal Placement of TCSC to Damp Inter-Area Oscillations, IEEE PES General Meeting San Francisco, USA,

- June 12-16 2005, pp. 1664 - 1668, B. Kalyan Kumar, SN Singh and SC Srivastava
249. A Reduced Network Representation Suitable for Fast Nodal Price Calculations in Electricity Markets, Manuscript no. 05 GM 0050, IEEE PES General Meeting 2005, San Francisco, USA, June 12-16, 2005, pp.118-125. H.K.Singh and S.C.Srivastava.
250. Optimal Placement of TCSC for Enhancing Power System Loadability, National Conference on Electric Power Technology, Management and IT Application, MMMEC Gorakhpur, February 17-18, 2006, JG Singh, SN Singh and SC Srivastava,.
251. Optimal Placement of TCPAR for Enhancing Power System Loadability, National Conference on Technical Challenges in Power Systems, KNIT Sultanpur, March 24-25 2006, pp. 207-211, JG Singh, SN Singh and SC Srivastava.
252. Availability based Tariff Mechanism for Frequency Regulation in India: A Mathematical Framework, International Conference on Power System Operation in Deregulated Regime (ICPSODR-2006, IT BHU, India, March 6-7, 2006, pp. 31-39, Barjeev Tyagi and SC Srivastava.
253. Optimal Power Flow Control with TCPAR and UPFC in Competitive Electricity Market, International Conference on Power System Operation in Deregulated Regime (ICPSODR-2006, IT BHU, India, March 6-7, 2006, pp. 68-76, SK Parida, SN Singh and SC Srivastava,.
254. Enhancement of Voltage Stability Margin Under Contingencies using FACTS Controllers, International Conference on Power System Operation in Deregulated Regime (ICPSODR-2006, IT BHU, India, March 6-7, 2006, pp. 139-149, MK Verma and SC Srivastava,.
255. Current Controlled Voltage Source Inverter Under Saturation - Analysis and New Algorithms, Proceedings of IASTED Conference on Applied Simulation and Modeling, Benalmadena, Spain, June 15-17, 2005, M. Dighrasker and Partha Sarathi Sensarma.
256. A Novel Approach to Harmonic Compensation in Power Systems Using Series Connection of Parallel Resonant Circuit and Active Filter, Proceedings of 2nd National Power Electronics Conference, NPEC-2005, IIT-Kharagpur, India, December 22-24, 2005, Kingshuk Kr. Das and P. Sensarma.
257. Full Bridge Zero-Voltage-Switching Converter Topology with Wide-Conversion-Range Applications, Proceedings of National Power Electronics Conference, NPEC-2005, IIT-Kharagpur, India, December 22-24, 2005, D. Durga Praveen Kumar, Sunil Tiwari, Mangesh Borage, Swarna Kotaiah and P. Sensarma.

258. The Common Conceptualization of Mental Health: A Qualitative Investigation of Categories of Meaning, in A.K. Dalal and S. Ray (Eds). *Social Dimensions of Health*, Jaipur: Rawat Publications, 2005, 53-68, S. Dixit.
259. Prem and Virodh in the Village: School Book Civics and its Contradictions with Local Modes of Public Action, pp.41-47 in Tista Bagchi and Rama Kant Agnihotri (eds.) 2005, *Proceedings of the International Seminar on Construction of Knowledge*, Udaipur: Vidya Bhawan Society. Amman Madan.
260. A Multilingual Conceptual Analysis of the Notion of Instrumentality, *Proceedings of EACL06, 11th Conference of the European Chapter of the Association for Computational Linguistics (ACL-SIGSEM)*, Trento, Italy, 2006, Asanee Kawtrakul, Bali Ranaivo-Malancon, Achla M. Raina, Sudeshna Sarkar, Patrick Saint-Dizier.
261. Complex Predicates in the Generative Lexicon, in Bouillon, Pierrette and Kanzaki, Kyoko (eds.), *Proceedings of GL'2005, Third International Workshop on Generative Approaches to the Lexicon*, School of Translation and Interpretation, University of Geneva, Switzerland, 210-221, 2005, Achla M. Raina.
262. Lexical Organisation and Access of Code-mixed Collocations, in Ooi, Vincent B.Y. et al. (eds.), *Words in Asian Cultural Context, ASIALEX*, 2005, National University of Singapore, 22-26. ISBN: 981-05-3712-3, 2005, Somsukla Banerjee, Achla M. Raina and Harish Karnick.
263. Bilingual Lexical Processing: Contrastive Polysemies, Otsu, Tokyo (ed.) Proceedings of the Sixth Tokyo Conference on Psycholinguistics, Tokyo, 27-53, ISBN: 4-89476-244-1, 2005, Somsukla Banerjee, Achla M. Raina and Harish Karnick.
264. The Paradigm of the Metaphysic of Experience: A Study of Gaudapada's Mandukyakarika which was delivered as the Plenary Address at the International Conference on Vedanata held at the University of Waltair, Vishkhapatnam (January, 2005, published in the *Proceedings of the International Conference on Vedanta* by Waltair University Press, January 2006, edited by Professor George Victor. Srinivasa Rao.
265. Internationalization of Intellectual Property Rights: Implications for the Developing Countries. International Conference on Globalisation and Economic Asymmetires, IIM Kozhikode in association with The Athenian Policy Forum Inc, Dec 15-17, 2005, K.K.Saxena & Ruchi Sharma.
266. Productivity, Prices and Profitability: A Case Study of Municipal Transport Undertakings in India, in V. Upadhyay et al. (ed.) *Proceedings of the 11th Conference on Productivity and Quality Research* organized by IIT Delhi

- in association with International Society for Productivity and Quality Research, Tata McGraw-Hill, New Delhi, 2006: pp. 907-928, Singh S. K.
267. Institutions of Rural Development and Challenges for Reforms: A Case Study of Land Reclamation Projects in UP, Proceedings of Conference on Policy in Practice: Designing and Promoting Effective Institutions, Indian Institute of Management Bangalore, 2005, A .K. Sharma and Rita Singh.
268. Absent Qualia Argument: Shoemaker's Response and its tenability, in A.V. Afonso, ed. /Consciousness, Society and Values/ (Shimla: Indian Institute of Advanced Studies, 2006 pp.38-57, C.A. Tomy.
269. Two stage capacitated warehouse location problem : Developing new strong constraints, Proceedings, Fifth International Conference on Operational Research for Development : ICORD V, held at Jamshedpur, INDIA during Dec. 19-21, 2005, pp. 330-333, Sharma, R.R.K. and Namdeo, S.
270. Ranking of Software Companies using Fuzzy Analytical Hierarchy Process (FAHP) and Data Envelopment Analysis (FDEA) Methods; International Conference on Operational Research for Development (ICORD-V), Operational Research Society of India, International Federation of Operational Research Societies (IFOR), Jamshedpur, 19th-21st , December, 2005, RN Sengupta, and A Chandra.
271. Time Series Analysis of Seasonal Demand in a Supply Chain; International Conference on Operational Research for Development (ICORD-V), Operational Research Society of India, International Federation of Operational Research Societies (IFOR), Jamshedpur, 19th - 21st December, 2005, RN Sengupta, S Agarwal and K Shanker.
272. Erasing Futures: Ethics of Marketing an Intoxicant to Homeless Children, Advances in Consumer Research, San Antonio, USA 2005, Vikas, Ram Manohar and Rohit Varman.
273. Rising Consumer Culture and the Working Class. International Conference in Critical Management Studies, Cambridge, U.K. 2005, Varman Rohit and Ram Manohar Vikas Media.
274. Rising Markets and Falling Healthcare: Efficiency for Whom? International Conference in Marketing and Development, Thessaloniki, Greece, 2005, Varman Rohit and Ram Manohar Vikas.
275. Ethical Decision Making in Marketing Management through Consequentialism, Kantian Ethics and Virtue Ethics. Philosophy of Management. Oxford, U.K. 2005, Vikas, Ram Manohar and Rohit Varman.
276. Approaching Human Phenomenon: A Methodological Note. First People's Education Congress, Allahabad, Sep. 15-17, 2005, Varman, Rahul.

277. Labour Standards in the Times of Globalization. 47th Conference of The Indian Society of Labour Economics, Dec. 15-17, 2005, Chakrabarti, M. & Varman, R..
278. New Products and Services: R&D Process and the Influence of Market Competitiveness on Test and Launch Decisions, Presented at the International Conference on Innovative New Product Development: Engineering Meets Marketing, Chennai, December 21-23, 2005, Sharma, N. K., & Singh, Trishla.
279. Venture Creation: Transforming Vision into Action. Presented at the Seminar on Creating Entrepreneurship Environment And Developing Entrepreneurial Management, Shailesh J Mehta School of Management, Bombay, March 16-18, 2006, Sharma, Narendra, K., & Singh, N.
280. Impact of Quality of Interaction on Subordinates, Compliance With Leader's Bases of Power'. Presented at the Third AIMS International Conference on Management, Indian Institute of Management Ahmedabad, Ahmedabad, January 1-4, 2006, Gupta, Bindu & Sharma, N. K.
281. The Effect of Liberalization of Foreign Direct Investment (FDI) Limits on Domestic Equity Prices: B.V. Phani, Chinmoy Ghosh & John Harding.
282. Insider Ownership, Corporate Governance and Corporate Performance; B.V. Phani, V N Reddy, N Ramachandran and Ashish Bhattacharya.
283. Factors Affecting Energy Efficiency in Indian Pulp & Paper Industry: An Econometric Analysis (with Vinay Gupta) International Conference on Energy for Sustainable Development: Issues and Prospect for Asia, March 1-3, Phuket, Thailand, Anoop Singh.
284. Towards a Competitive Market for Electricity and Consumer Choice in Indian Power Sector, International Conference on Power Market Development in India: Reflections from International Experience, April 19-21, 2005, Indian Institute of Technology Kanpur, Anoop Singh.
285. Conflict Resolution in the Organizational Knowledge Exchange Process, Proceedings, National Symposium on Knowledge Management - The Key Differentiator for Leaders, Jamshedpur, December 6-7, 2005, Section 1, Part II of Conference Proceedings CD, Chatterjee, Jayanta.
286. A Normative and Conceptual Model for Human Motivation for Better Worldliness, (Abstracts of EBW-2005, Dayalbagh Educational Institute (Deemed) University, Dayalbagh, Agra, India, October 1-2, 2005, 2005, Swami, Sanjeev and Sudha Sahgal.
287. A Dynamic Programming Approach to Optimal Outsourcing Policies in Supply Chain Management, (Proceedings of ICORD-V, Jamshedpur, India, December 19-21, 2005, 2005, Dev, Navin, Sanjeev Swami and Rahul Caprihan.

288. Modelling the survival of a biological species affected by toxicants (pollutants) emitted from external source as well as formed by precursors in Mathematical Biology- Recent Trends (Proc. ICMB-2004), pp. 278-284, 2006. Sinha, P., Shukla, J.B., Sharma, S.,
289. Numerical methods for solving a mathematical model of neuronal variability, Industrial Mathematics Proceedings of an international Conference pp. 241-264, Narosa, 2006, Kadalbajoo, M. K., Sharma, K.K.
290. Sample size determination for bioequivalence test, 2006, 117-126, , Statistical Advances in Biosciences and Bio Informatics Proceedings of the Seventh Conference of the International Biometric Society (Indian Region) Shukla, G.K., Prasad, Anurag
291. Resonance problems for Hardy-Sobolev operator with indefinite weights, Proc. Dynamical Systems and applications, Vol. 4, 2005, p.233-238, Raghavendra, V., Sreenadh, K.,
292. The observed heterogeneity of DTI scalar metrics in high and low FA regions of brain abscess, Proc. Intl. Soc. Mag. Reson. Med. 13, 2005, Rathore, R.K.S, Purwar, A., Gupta, R.K., Mishra, A.M.
293. Biological correlates of diffusivity in brain abscess, Proc. Intl. Soc. Mag. Reson. Med. 13, 2005, Rathore, R.K.S, Mishra, A.M., Gupta, R.K., Husain, M., Saxena, S., Prasad, K.N., Jaggi, , R.S., Purwar A., Pandey, C.M., Husain, N.
294. Blood flow in a vessel with asymmetric aneurysm, in Mathematical Biology- Recent Trends (Proc. ICMB-2004), Anamaya Publishers, New Delhi 29-36 2006. Rathish Kumar, BV.,
295. Pulsatile power law fluid flow in a channel filled with a homogeneous porous medium (Proc. ICMB-2004), Anamaya Publishers, New Delhi 90-95,2006. Rathish Kumar, BV., Shalini.
296. Modelling the depletion of dissolved oxygen in a water body due to organic pollutants and their effect on survival of species, in Mathematical Biology- Recent Trends (Proc. ICMB-2004), Anamaya Publishers, New Delhi 266-272,2006.Chandra, P., Shukla, J.B., Misra, A.K.
297. Modelling the spread of malaria: Environmental effects (Proc. ICMB-2004), in Mathematical Biology- Recent Trends Anamaya Publishers, New Delhi, 285-290, 2006. Chandra, P., Shukla, J.B., Singh, S.
298. WEBS method for the approximation of stokes problem, in industrial mathematics, 441-458, 2006 Narosa. Rathish Kumar, B. V., Joshi, M.C., Pani, A.K., Safnis, S.V.
299. 3D parallel computation on parallel processors of the natural convection process in porous enclosures, in ISTAM, Proceedings Dec. 14-17, 2005, IIT Khatrappur. Rathish Kumar, B.V., Shalini.,

300. 3D - unsteady flow dynamics in a vessel with oversystem in industrial mathematics, 369-384, 2006 Narosa. Rathish, BVK., Joshi, M.C., Pani, A.K., Sabnis, S.V.,
301. Influence of hydrogen addition to Acetylene-air laminar diffusion flames on soot formation, 4th Mediterranean Combustion Symposium, Lisbon, October 6-10 2005. P. Pandey, B.P. Pundir and P.K. Panigrahi.
302. Turbulent structures and budgets behind permeable ribs, 6th International Symposium on PIV, Pasadena, California, September 21-23 2005, P.K. Panigrahi, A. Schroeder and J. Kompenhans.
303. Reconstruction of the concentration field around a KDP crystal growing in diffusion-dominated regime using schlieren tomography, Proceedings of International Conference on Optics and Optoelectronics, held at IRDE Dehradun, 12-15 December 2005, Atul Srivastava, K. Muralidhar and P.K. Panigrahi,.
304. Flow structure and concentration gradients around a crystal growing from its supersaturated solution in the mixed convection regime, in Proceedings of the 18th National and 7th ISHMT-ASME Heat and Mass Transfer conference, held at IIT Guwahati, pp. 431-439, January 2006, Atul Srivastava, K. Muralidhar and P.K. Panigrahi.
305. Modeling solutal concentration of Nd dopants in molten YAG during the Czochralski growth of Nd: YAG crystals, in Proceedings of the 18th National and 7th ISHMT-ASME Heat and Mass Transfer conference, held at IIT Guwahati, pp. 2212-2219, January 2006, J. Banerjee, Vinay Kumar and K. Muralidhar.
306. On Preliminaries of 3d Solid Reconstruction Using Auxiliary Views, ASME Design Engineering Technical Conferences, Design Automation Conference, Long Beach, CA, Sept. 24-Sept 28, 2005, paper # DETC2005-84230, A. Mishra and A. Saxena.
307. Determination of Optimal Contact Points for Constraining a 2D Polygonal Object by a Group of Mobile Robots, IEEE International Conferences on Cybernetics & Intelligent Systems (CIS) and Robotics, Automation & Mechatronics (RAM) (CIS-RAM 2006, # P0474, P. Sharma, A. Dutta and A. Saxena.
308. Multi-Agent Form Closure Capture Of A Generic 2d Polygonal Object Based On Projective Path Planning, 26th Computers and Information in Engineering Conference (CIE), CIE-6 Computers in Electromechanical Systems (CINEMAS), DETC2006-99335, P. Sharma, A. Saxena and A. Dutta.
309. On Optimal Design Of Compliant Mechanisms For Specified Nonlinear Path Using Curved Frame Elements And Genetic Algorithm, 30th Annual

- Mechanisms and Robotics Conference, (MR) MR-6 Compliant Mechanisms, DETC2006-99298, 2006, A. Rai, A. Saxena, N. Mankame and C.S. Upadhyay.
310. Automated Modular Fixture Planing, Ketnote Paper, Computer-Aided Production Engineering, University of Monash, Melbourne, Australia - 21-24 November 2005, S. Bansal, N.V. Reddy and A. Saxena.
311. Utilization of Biodiesel for Rail Traction on Indian Railways, paper presented and published in proceedings of *ISFL-2006* held from 7-10 March 2006, New Delhi. A. K. Kathpal, Anirudh Gautam and Avinash Kumar Agarwal.
312. Alternative Fuels: Economics of Biodiesel as a Transport Fuel for Urban India, *Technex Conference*, Next Paradigms in Automotive Technology; Safety, Emissions and Beyond, February 2006, Jaipur, India and Avinash Kumar Agarwal.
313. Diesel Exhaust Particulate Characterization for Poly Aromatic Hydrocarbons and Benzene Soluble Fraction, (Paper No. 2005-26-348) presented and published in *SAE India International Mobility Engineering Congress and Exposition-2005*, October 2005, K. V. L. Bharathi, Dipankar Dwivedi, Mukesh Sharma and Avinash Kumar Agarwal.
314. Combustion Characteristics of Rice Bran Oil Derived Biodiesel in a Transportation Diesel Engine, (Paper No. 2005-26-356 presented and published in *SAE India International Mobility Engineering Congress and Exposition-2005*, October 2005, Shailendra Sinha and Avinash Kumar Agarwal.
315. Matching and Optimisation Of Turbochargers for Upgradation Of High Horse Power Diesel Electric Locomotives For Indian Railways, Paper No. ICES2005-1103, Presented and Published in the Proceedings of ICES2005 ASME Internal Combustion Engine Division 2005 Spring Technical Conference, April 5-7 2005, Chicago, IL, USA. (ISBN # 0-7918-3753-X), Anirudh Gautam and Avinash Kumar Agarwal.
316. Experimental Investigation of the Effect of EGR on Wear Performance of a Compression Ignition Engine, Paper No. ICES2005-1104, Presented and Published in the Proceedings of ICES2005 ASME Internal Combustion Engine Division 2005 Spring Technical Conference, April 5-7 2005, Chicago, IL, USA. (ISBN # 0-7918-3753-X), Shrawan Kumar Singh, Dhananjay Kumar Srivastava, Avinash Kumar Agarwal and Mukesh Sharma.
317. Information Science Technology and Management held at Delhi during 2005, V.K.Jain, and Lakshman Thakur.
318. Analysis of Surface roughness and surface texture generated by Pulsating Flexible Magnetic Abrasive Brush (P-FMAB), WTC2005-63134, Proceedings of the *World Tribology Conference III*, Sept. 12-16, 2005, Washington, D.C., USA., D.K. Singh, V.K. Jain, V. Raghuram and R. Komanduri.

319. Evaluation of Rheological Properties of Magnetorheological polishing fluid and their effect on surface finish in ultra precision finishing processes, WTC2005-64260, Proceedings of the World Tribology Conference III, Sept. 12-16, 2005, Washington, D.C., USA, Sunil Jha and V.K.Jain.
320. Computer simulation of Magnetorheological abrasive flow finishing process, Proceeding of COPEN 2005, Dec. 16th -17th, pp. 350-356, Manas Das, V.K.Jain and P.S. Ghoshdastidar.
321. Role of Particle action during Magnetorheological Abrasive Flow finishing process, *Proceeding of COPEN 2005*, Dec. 16th -17th, pp.221-227, Sunil Jha and V.K.Jain.
322. Precision Finishing and Deburring, Proc. of COPEN 2005, Dec. 16th-17th, pp.18-30, Organized by Production Engineering Department, JadHAVpur University, Kolkata. V.K.Jain, (Key note Lecture).
323. Insights into the Performance Modes of Closed Loop Pulsating Heat Pipes and Some Design Hints, 18th National & 7th ISHMT-ASME Heat and Mass Transfer Conference, Guwahati, India, January 4 - 6 2006, S. Khandekar and M. Groll.
324. Some Aspects of Kaleidoscopic Flow Past a Square Cylinder, Aswathanarayana Honorary Lecture, 32nd National Conference on Fluid Mechanics and Fluid Power, Osmanabad, India, HL1-1-21, 15-17 December 2005, G. Biswas.
325. A Three-dimensional Numerical Modelling of Atmospheric Pool Boiling by the Coupled Map Lattice Method, Proceeding 2005 ASME Summer Heat Transfer Conference, San Francisco, California, USA, July 17-22 (2005. Paper No. HT2005-72497. A. Gupta and P.S. Ghoshdastidar.
326. A Coupled Map Lattice Model of Flow Boiling in a Horizontal Tube, Proceeding 18th National & 7th ISHMT-ASME Heat and Mass Transfer Conference, IIT Guwahati, January 4-6, 2006, Paper No. HMT-06-C079, pp.559-566, P.S. Ghoshdastidar and Indrajit Chakraborty.
327. Computer Simulation of Heat Transfer in a Rotary Kiln during Incineration of Solid Waste, National Workshop on Incineration and Solid Waste Management, IIT Madras, April 29-30 2005, P.S. Ghoshdastidar.
328. Computer Simulation of the Pool Boiling Process: A Coupled Map Lattice Approach, 50th Congress of ISTAM (An International Meet), IIT Kharagpur, December 14-17, 2005, P.S. Ghoshdastidar.
329. Enhancement of surface finish in Fused Deposition Modelling, Proceedings of Second International Conference on Advanced Research in Virtual and Rapid Prototyping, Leiria, Portugal, 28 September - 1 October (2005, N.V. Reddy, P.M. Pandey.

330. Automated Modular Fixture Planning, Computer Aided Production Engineering, November 21-23 2005, Melbourne, Monash University, S. Bansal, P. Malik, N. V. Reddy, A. Saxena, (Keynote Paper).
331. Determination of limiting blank holding force and cavity pressure in hydromechanical deep drawing, Computer Aided Production Engineering, November 21-23 2005, Melbourne, Monash University, K.S. Deep, N.V. Reddy, J. Ramkumar.
332. An Extruder Deposition System for Layered Manufacturing to enhance bond strength, First Japan-India joint seminar on micro/nano manufacturing science, Tokyo, February 19-26 2006, B.V. Reddy, N.V. Reddy, A. Ghosh.
333. Dynamic Fracture Testing of Brittle Polymers Using a Modified Hopkinson Pressure Bar: An Evaluation, Proceedings of the International Conference on Computational & Experimental Engineering and Sciences, 2005, December 1-6, IIT Madras. V.F. Evora and V. Parameswaran.
334. Synthesis and Characterization of Epoxy-Alumina Platelet Nanocomposites, Proceedings of the International Conference on Computational & Experimental Engineering and Sciences, 2005, December 1-6, IIT Madras, D.K. Shukla, and V. Parameswaran.
335. Surface Discharge Studies On Polymer Nanocomposite Dielectric Materials, International Conference on Materials Design & Development (ICAMDD 2005, Goa, India, December 14-16 2005, Parimal Maity, Sumit Basu, Parameswaran Venkitanarayanan and Nandini Gupta.
336. A top down approach to the modelling of fracture in amorphous glassy polymers, Proceedings of International Conference on Advanced Materials Design and Development, Goa, India S. Basu and R. Estevez.
337. Surface discharge studies on polymer nanocomposite materials, Proceedings of International Conference on Advanced Materials Design and Development, Goa, India P. Maity, S. Basu, P. Venkitanarayanan and N. Gupta.
338. Closed form studies of a New Hybrid Vibration Control Methodology Using a Discretised Hysteretic Damping Model, Proceedings of the 4th International conference on Smart Materials, Structures and Systems, Vol. 2, pp 26-34, 2005, S. Ahalwat and B. Bhattacharya.
339. Active Vibration Suppression of a Flexible Link using Ionic Polymer Metal Composite, CIS2006, IEEE International Conference on Advanced Robotics and Automatic, Bangkok 2006, D. Bandyopadhyay and B. Bhattacharya and A. Dutta.
340. Vision of Design Programme at IIT Kanpur, Indo-US workshop on Design Engineering, Bangalore, 5th - 7th January 2006, P. Kumar

341. Toughness of adhesive bonded interface under static and dynamic loads, *ICAMDD-2005*, International Conference on Advanced Material Design & Development, 14th -16th December Goa, P. Kumar, R.K. Singh and Kalyan Kumar Singh.
342. Wake-induced transition of a highly loaded LP turbine blade through large-eddy simulation, ASME Turbo Expo 2005, Paper No. GT2005 68895, S. Sarkar.
343. Large-eddy simulation of unsteady surface pressure on a LP turbine blade due to interactions of passing wakes and inflexional boundary layer, ASME Turbo Expo 2005, Paper No. GT2005 68867, S. Sarkar and P. R. Voke.
344. Carbonnanotube Coated Carbon Fiber Reinforced Polyester Composites, *International Conference on Advanced Materials Design and Development*, 14-16 December 2005, Goa, India, Kamal K. Kar,.
345. Characteristics Of Flow Past A Cube Placed In A Uniform Flow, Proceeding of the FMFP, 2005. A.K. Saha.
346. Flow and Heat Transfer Characteristics Behind a Cube Placed in a Uniform Flow, Proceeding of the ISHMT, 2006, A.K. Saha.
347. A Three-dimensional Numerical Modelling of Atmospheric Pool Boiling by the Coupled Map Lattice Method, Proc. 2005 ASME Summer Heat Transfer Conference, San Francisco, California, USA, July 17-22, 2005. Paper No. HT2005-72497, A. Gupta and P.S. Ghoshdastidar.
348. Computer Simulation of Magnetorheological Abrasive Flow Finishing Process, Proceeding 4th National Conference on Precision Engineering, Jadavpur University, Kolkata, December 16-17, 2005, pp.350-356, Manas Das, V.K.Jain and P.S. Ghoshdastidar.
349. A Coupled Map Lattice Model of Flow Boiling in a Horizontal Tube, Proceeding 18th National & 7th ISHMT-ASME Heat and Mass Transfer Conference, IIT Guwahati, January 4-6, 2006, Paper No. HMT-06-C079, pp.559-566, P.S. Ghoshdastidar and Indrajit Chakraborty.
350. Computer Simulation of Heat Transfer in a Rotary Kiln during Incineration of Solid Waste, National Workshop on Incineration and Solid Waste Management, IIT Madras, April 29-30, 2005, P.S. Ghoshdastidar.
351. Computer Simulation of the Pool Boiling Process: A Coupled Map Lattice Approach, 50th Congress of ISTAM (An International Meet), IIT Kharagpur, December 14-17, 2005. P.S. Ghoshdastidar.
352. A Tem Study Of Ultra-Fine Grained Al Alloy Obtained By Sdp-Spd, International Coference on Science and Technology of Advanced Materials, Pondichery, July, 2005, J. Bhagyaraj, Gouthama, S.N. Ojha and Sentil.

353. Synthesis of Silicon Carbide in a Dual-drive Planetary mill by Reaction milling, Proceedings of The Society for Mining, Metallurgy, and Exploration (SME) in the special symposium Functional Filler and Nanoscale Minerals II, March 2006, USA, pp. 253-265, D. Chaira, B. K. Mishra, and S. Sangal.
354. Synthesis of aluminium-cementite metal matrix composite by mechanical alloying, Proceedings of International conference on advances in materials and materials processing (ICAMMP), February 2006 in IIT Kharagpur, India, pp.79-85, D.Chaira, S. Sangal, and B. K. Mishra.
355. Physical and mathematical modelling of two phase flows in a hollow jet nozzle, Procd. ICAMMP-2006, Kharagpur (India), pp.671-681, D.Chatterjee and Dipak Mazumdar.
356. Detailed Comparison of Lanthanide Doped Bismuth Titanate Films Grown by Chemical Solution Deposition and Pulsed Laser Ablation, Proceedings of TMS Annual Meeting 2006, 12-16 March 2006, San Antonio (USA), Garg, X. Hu and Z.H. Barber.
357. Effect of pentacene thickness on bottom and top contact organic thin film transistor, 12th International Display Workshop (IDW/AD'05, December 2005, Takamatsu, Japan, Dipti Gupta, M.Katiyar, Deepak.
358. Effect of semiconductor thickness on the device characteristics of organic thin film transistors made of pentacene, 13th International workshop on physics of semiconductor devices (IWPSD'05, December 2005, National Physical Laboratory, New Delhi, India (Best Poster Paper Award in IWPSD'05, Dipti Gupta, M.Katiyar, Deepak.
359. Prediction and control of superheat during continuous casting of Steel, Procd. International conference on past, present and future of continuous casting of steel, Jamshedpur, 2005, pp.7-14, S. P.Patil, D.Chatterjee and D. Mazumdar.
360. Calcilum: Tool, Toy or Trouble, Proc. AIST, 2006, VolIII pp. 395-403, W.Tiekink, B.Santillana, R. K Kooter, F. Mesonides, B.Deo, R. Boom.
361. A comparison of light soaking effects between Porous silicon and a-Si : H, N. P. Mandal and S. C. Agarwal, Mater. Res. Soc. Symp. Proc. A9.8, Vol 862, Spring 2005, San Francisco.
362. Role of Surface in the Light Induced Degradation of Nanaocrystalline and Amorphous Silicon, N. P. Mandal, Abhishek Kumar And S. C. Agarwal, Proc. of IWPSD 2005, New Delhi, INDIA.
363. Polystyrene Coating Protects the Nanocrystalline Silicon Layers from Light Soaking, N. P. Mandal, A. Kumar and S. C. Agarwal, Proc. of International Conference on MEMS and Semiconductor Nanotechnology (MEMSNANO), I. I. T. Kharagpur, 2005.

364. Polystyrene Coating Reduces the Photo Degradation of Amorphous Silicon, N. P. Mandal, A. Kumar and S. C. Agarwal, Proc. in 50th DAE Symposium, Dec 2005, BARC, Mumbai.
365. Polycrystalline form of the flux line lattice and the anomalous variation in the critical current density. S. S. Banerjee, A. D. Thakur, S. Ramakrishnan, A. K. Grover, Proceeding of the DAE Solid State Physics Symposium, 50, 667-2205.
366. Effect of Driving force on the state of phase coexistence in weakly pinned single crystals of CeRu₂ and Lu Ni₂B₂C and LuNi₂B₂C. D. Jaiswal-Nagar, A. D. Thakur, S. S. Banerjee, T. Isshiki, H. Aoki, Y. Onuki, M. R. Eskildsen, P. C. Canfield, S. Ramakrishnan, A. K. Grover, Proceeding of the DAE Solid State Physics Symposium, 50, 673 2005.
367. Criterion of sheath formation for negatively charged particles, H. Amemiya and S. Bhattacharjee, Proceedings of the XXVII International Conference on Phenomena in Ionized Gases, 08-145, July 18-22, 2005, Eindhoven, The Netherlands
368. Anomalous density of states in hybrid normal metal-superconductor bilayers, Anjan K. Gupta, L. Cretinon, H. Courtois and B. Pannetier, Pramana 66, 251 2006.
369. YbCo₄Ge₂ and YbNi₅G₃: Two compounds with a stable trivalent, antiferromagnetically ordered Yb state, H. S. Jeevan, Z. Hossain, C. Geibel; Proceedings of International Conference on Strongly Correlated Electron Systems held in Karlsruhe, Germany, July 2004 published in Physica B Vol.359-361, Apr 30, 2005, p235-238
370. V.L.N. Sridhar Raja, Sharad Gupta, Asima Pradhan Recovery of intrinsic fluorescence of tissue mimicking model media and human breast tissues from spatially resolved fluorescence and simultaneous evaluation of optical transport parameters Proc. SPIE Vol. 6091 p. 12-21, Optical Biopsy VI, (Feb 2006).
371. V.L.N. Sridhar Raja, Kalpana Mandal and Asima Pradhan Depth Resolved Fluorescence Technique National Laser Symposium, held at Vellore, Jan.2006.
372. Prashant Shukla, R. Sumathi, Sangeeta Chakrabarti and Asima Pradhan, 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.
373. Recent developments in Rayleigh Benard Convection, M. K. Verma, in the proceedings of the National Conference on Nonlinear systems and dynamics-2006 (Chennai), Ed. M. Lakshmanan, R. Sahadevan, p.137, 2006.

374. Non-linear effects in negative magnetic meta-materials Proc. XXVIIIth URSI General Assembly, New Delhi, India, 23-29 October 2005, S. A. Ramakrishna, S. O'Brien and J. B. Pendry.
375. Electrical transient based defect spectroscopy in polymeric and organic semiconductors, Y.N.Mohapatra, V. Varshney, V. Rao, S.P. Singh, G.S. Samal, Mater. Res. Soc. Symp. Proc. Vol. 864 © 2005 Materials Research Society E5.1.1
376. PECVD grown polymorphous hydrogenated silicon (pm-Si:H) studied using current transient spectroscopies in PIN Diodes, Vibha Tripathi, Y N Mohapatra, P. Roca i Cabarrocas, Mater. Res. Soc. Symp. Proc. Vol. 862 © 2005 Materials Research Society A18.2

SEMINAR PRESENTED

1. Ballistics and Aerodynamics of Long Range Rockets, ARDE, Pune, A. K. Ghosh.
2. Laser Doppler Velocimetry (LDV) and Phase Doppler Particle Analyzer (PDPA) and their application in Industrial Systems, National Workshop on Combustion Diagnostics, Organized by: Programme AD, Hyderabad Under the Auspices of the Combustion Institute (Indian Section) 23rd-24th June, 2005, A. Kushari.
3. Theory and Applications of Liquid Atomization, workshop in liquid atomization and spray modeling, CEEES, DRDO, New Delhi, 12-14, Spet. 2005, A.Kushari..
4. Invited Lecture Finite Element Computations towards understanding Bluff Body Flows at the International Conference on Computational and Experimental Engineering and Sciences (ICCES'05, December 1-6, IIT Madras Chennai, 2005, S.Mittal.
5. Invited Lecture Instabilities in Bluff Body Flows at the Indo-German Winter Academy, Tata Steel, Jamshedpur, December 11, 2005, S.Mittal.
6. Invited Lecture finite Element Computation of fluid flows, National Symposium on Scientific Computing with Application to Partial Differential Equations (NSSCAPDE05, Indian Institute of Technology Kanpur, November 19-21, 2005, S.Mittal.
7. Contributed talk Effect of blockage on vortex induced at low Re at the 4th Conference on Bluff Body Wakes and Vortex-Induced Vibrations-BBVIV4, 21-24 June, Santorini Island, Greece 2005, S.Mittal.
8. Invited Lecture Vortex Induced Vibrations of a Circular Cylinder At Low Reynolds Number, The Mechanical and Aerospace Engineering Department, School of Engineering and Applied Science, The George Washington

- University, 801 22nd St. NW, Washington, DC 20052, USA June 17, 2005, S.Mittal.
9. Wind tunnel measurements for modeling large amplitude high alpha maneuvers, National Aerospace Laboratories, Bangalore Oct. 18, 2005, in *Advances in Wind Tunnel Test Technique*, T.G. Pai.
 10. Presented a seminar entitled Biomaterials, July 4-22, 2005, SERC Summer School in Solid State and Materials Chemistry at Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore, India. Summer School sponsored by Department of Science and Technology, Government of India, Dhirendra S. Katti.
 11. Aerosol and Colloidal Route to Materials at Nanoscale, IISc, Bangalore, June, 2005, Rajdip Bandyopadhyaya.
 12. Invited Lecture on An overview of pressure driven membrane processes, at Z H College of Engineering, Chemical Engineering Department, on January 28, 2006, P.K. Bhattacharya.
 13. Invited Lecture in International Harcourtian Meet and Seminar cum Expo 2005 on Impact of Technical Education on Society, November 25, 2005, P.K. Bhattacharya.
 14. Thermal Analysis at the National Symposia on Current Trends in Materials Characterization, IIT Kanpur, December, 2005, G. Deo.
 15. Formosa Plastics Group, Maliliao Village, Yunlin country, Taiwan, December, 2005, J.P. Gupta.
 16. Institute of Occupational Safety and Health, Taipei, Taiwan, December, 2005, J.P. Gupta.
 17. Japan Society of Safety Engineers, Tokyo, November, 2005, J. P. Gupta.
 18. National Yunlin University of Science & Technology, Taiwan, December, 2005, J.P. Gupta.
 19. Research Institute of Safety Engineering, Tokyo, November, 2005, J.P. Gupta.
 20. Hikal's CHEMCON Distinguished Speaker Award (Indian Institute of Chemical Engineers, Annual Meeting) Title: Multi-Objective Optimization of an Industrial LDPE Reactor, Dec 2005, S.K. Gupta.
 21. Dynamics of smectite clay filled systems, Javaharlal Neharu center for advanced scientific research, Bangalore, 29 March, 2006, Y.M. Joshi.
 22. Dynamics of smectite clay filled systems, John Welch Technology center, GE Plastics, Bangalore, Bangalore, 27 March, 2006, Y.M. Joshi.
 23. Delivered 12 hours of lectures on 'Polymer dynamics and rheology' to the Polymer Group at NCL Pune, July 2005, V. Shankar.
 24. Stability and dynamics of fluid flow past deformable solid media, Invited lecture at the 16th Mid-Year meeting at the Indian Academy of Sciences, Bangalore, July 2005, V. Shankar.

25. DMSRDE (Kanpur) A. Sharma
26. Banaras Hindu University (Varanasi), A. Sharma.
27. University of Western Ontario, A. Sharma.
28. Carnegie Mellon University, A. Sharma.
29. University of California at Irvine, A. Sharma.
30. National Center for Biological Sciences (Bangalore), A. Sharma.
31. General Electric Research Center (Bangalore), A. Sharma.
32. Central Glass and Ceramic research Institute (Kolkata), A. Sharma.
33. Hydrogen bond dynamics in aqueous solutions under normal and supercritical conditions, S.N. Bose Centre for Basic Sciences, Salt Lake, Kolkata, on January 12, 2006, A. Chandra.
34. Organostannoxane motifs in cages and supramolecular architectures. April 18 2005. Workshop on Organometallic Chemistry April 18-20, BARC, Mumbai, V. Chandrasekhar.
35. Structural Aspects of Aminosilanols. August 2 2005. Invited lecture at the 14th International Symposium on Organosilicon Chemistry, July 31-August 5 2005, Wuerzburg, Germany, V. Chandrasekhar.
36. Organostannoxanes and organophosphonates. Sep 24 2005. Sri Sathya Sai Institute of Higher Learning, Puttaparthi. A conference sponsored by Indian academy of sciences, Bangalore, Sep 24-26 2005, V. Chandrasekhar.
37. Nobel Prize in Chemistry-2005. Nov 7th 2005. IIT-Kanpur, V. Chandrasekhar.
38. Silicon-Silicon Triple Bond: A Mile Stone in Chemistry. October 17 2005. Frontier Lectures in Chemistry, Banaras Hindu University, October 16-18, 2005, V. Chandrasekhar.
39. Inorganic-Cored Starbursts. October 18 2005. Frontier Lectures in Chemistry, Banaras Hindu University, October 16-18, 2005, V. Chandrasekhar
40. Stannoxanes and phosphonates: New approaches in organometallic and transition metal assemblies. Dec 8 2005. Invited Lecture at the 11th Symposium on Modern Trends in Inorganic Chemistry. Dec 8-10, 2005, New Delhi, V. Chandrasekhar.
41. Multi-metal assemblies. Feb 17 2006. Talk at a Condensed Matter Workshop, IIT-Kanpur Feb 17-19 2006, V. Chandrasekhar.
42. Stannoxanes and phosphonates: New approaches in organometallic and transition metal assemblies. Feb 21, 2006. Invited talk at Singapore-India Collaborative and Cooperative Chemistry Symposium-4. National University of Singapore, Singapore, Feb 20-21, V. Chandrasekhar.
43. (i) Convenor: 'Symposium on Nanoscience and Nanotechnology, 24th Annual
44. Conf., Indian Council of Chemists, BIT-Mesra, Ranchi, December, 16-18, 2005,
45. N.S. Gajbhiye.
46. (ii) Convenor: Chhattisgarh Swami Vivekanand Technical University, Bhilai,

- a. (Raipur), 'National Workshop on Nanotechnology, August 27-28, 2008,
- b. N.S. Gajbhiye.
47. 12. Instrumentation, Debabrata Goswami, Symposium on Digital Fabrication
48. Hogskolen, Tromso Norway, Aug.10-17 2005, G. Goswami.
49. A Motley of fs Induced Processes with Intermediate Intensity Lasers, Debabrata Goswami, Department of Nuclear & Atomic Physics Seminar, Tata Institute of Fundamental Research, Mumbai, Jan. 06 2006, D. Goswami.
50. BARC: Novel materials and structural chemistry division, Mumbai, April 2005, B.D. Gupta
51. Department of Chemistry, I. I. T. Kanpur April 2005, B.D. Gupta.
52. Department of Chemistry, I. I. T. Roorkee Aug 2005, B.D. Gupta.
53. Department of Chemistry, National University of Singapore March 2006, B.D. Gupta.
54. Department of Chemistry, NTU, Singapore, March 2006, B.D. Gupta.
55. Intramolecular vibrational energy flow: Decisive influence of the classical phase space structures, Chennai, India, February 2006, K. Srihari
56. Classical-Quantum correspondence study of vibrational energy flow in strongly coupled systems with three degrees of freedom, Nottingham, UK, June 2005, K. Srihari
57. Dynamical tunneling: role of the classical resonances, Bristol, UK, April 2005, K. Srihari
59. White light emitting organic molecules: synthesis and device strategies., Dept of Physics, University of Maryland, May 2005, S. Sundar Manoharan.
60. Molecular Self-Assembly: New Structural Motifs and Rational Approaches to Porous Organic and Metal-Organic Frameworks, Department of Chemistry, University of Essen, Essen, Germany, Date : 17th May, 2005, J.N. Moorthy.
61. Control of Organic Molecular Photoreactivity and Ordering in the Solid State, Department of Chemistry, Dresden University, Germany, Date : 05th April, 2005, J.N. Moorthy.
62. Enforcing aggregation in small peptide conjugates, Department of Bioengineering, University of Twente, Enschede, The Netherlands, 2005, Sandeep Verma.
63. Invited talk on May 26, 2005 at University of Goettingen, Germany, V.K. Singh
64. Invited talk on June 03, 2005 at Univ of Caen, France, V.K. Singh
65. Invited talk on June 05, 2005 at Leipzig University, Germany, V.K. Singh
66. Invited talk on June 13, 2005 at Univ of Dresden, Germany, V.K. Singh
67. Invited talk on June 16, 2005 at Univ of Bonn, Germany, V.K. Singh
68. Invited talk on July 05, 2005 at Honeheim University, Stuttgart, Germany, V.K. Singh

69. Invited Lecture at ACS symposium held during January 5-6, 2006 at NCL, Pune, V.K. Singh
70. Invited lecture at a symposium INSOC 2006 held during January 9-11 at Kottayam, V.K. Singh
71. Invited lecture at a symposium National Organic Chemistry Seminar held during Feb 22-23, 2006 at Kolkatta, V.K. Singh
72. Atomic and molecular clusters: designer materials for the nanoworld, Kumaon University, Nainital, December 4, 2005, N. Sathyamurthy.
73. Atomic and molecular clusters: designer materials for the nanoworld, University of Hyderabad, Hyderabad, March 14, 2006, N. Sathyamurthy
74. An overview of the research activities at IIT Kanpur, Invited seminar presented at the School of Geography, March 02, 2006, University of Leeds, Leeds, UK, Jain, Ashu.
75. Estimating groundwater pollution source location from observed breakthrough curves using neural networks in Session HEE2005 - AI applications to hydraulics and environmental engineering at the 2nd Indian International Conference on Artificial Intelligence (IICAI2005, December 20-22, 2005, Pune, INDIA, Jain, Ashu.
76. Estimation of concrete slump based on mix constituents using artificial neural networks in Session NCIEM05 - Natural computing in infrastructure engineering and management at the 2nd Indian International Conference on Artificial Intelligence (IICAI2005, December 20-22, 2005, Pune, INDIA, Jain, Ashu.
77. Locating groundwater pollution source using breakthrough curve characteristics and artificial neural networks in Session H35 - Soft computing tools for hydrologic modeling at the AGU Fall Meeting 2005, December 5-9, 2005, San Francisco, California, USA, Jain Ashu.
78. Evaluation of the sensitivity of learning rate on the training of neural network hydrologic models in Session H35 - Soft computing tools for hydrologic modeling at the AGU Fall Meeting 2005, December 5-9, 2005, San Francisco, California, USA, Jain Ashu.
79. Hydrological aspects of CTCZ and rainfall runoff modeling in the Indo-Gangetic plains, Brainstorming seminar on continental tropical convergence zone, Indian Climate Research Programme of DST, 28-30 June 2005, Birla Institute of Technology, Mesra, Ranchi, India, Jain Ashu.
80. Micromechanical analysis of asphalt mix, Department of Civil Engineering, IIT Madras, 19th July, 2005, Das A.
81. Cold in-place recycling with bitumen emulsion, Indo-Belarus Seminar on Bitumen Emulsion and Cold Mix Technologies, Central Road Research Institute, New Delhi, 19th October, 2005, Das A.

82. Optimization of pavement design, Indian Roads Congress Annual Session, Bhubaneswar, 11th November, 2005, Das A..
83. Effects of 2004 Sumatra Earthquake in Andaman and Nicobar Islands and Mainland India , International Workshop on Modelling Tsunamis - Generation, Propagation and Impacts, 1-2 April 2005, IIT Madras, Murty C.V.R.
84. Invited lecture at Center for Atmospheric and Oceanic Sciences, IISc, Bangalore, Tripathi, S.N.
85. Fermat's Last Theorem: From Integers to Elliptic Curves, Homi Bhabha Center, for Science Education, December 2005, Manindra Agrawal.
86. Manindra Agrawal Determinant versus Permanent, Chennai Mathematical Institute, January 2006,.
87. Is n a Prime Number? Dutch Mathematical Congress, March 2006, Manindra Agrawal.
88. RuralNet (Digital Gangetic Plains): WiFi-Based Low-Cost Rural Networking Keynote Presentation, Symposium on Wireless Networking Systems, University of Philippines, 19 Nov 2005, Bhaskaran Raman.
89. Satyam Computers Ltd, Hyderabad, July 2005, Pankaj Jalote.
90. Philips Research in Philips Innovation Campus, March 2005, Pankaj Jalote.
91. IBM India Research Lab, Feb 2005, Pankaj Jalote.
92. Dept of CSE, Indian Institute of Technology, Kanpur, Feb, 2005, Pankaj Jalote.
93. Topic Map and Development tools for Agricultural Knowledge Repository Architecture, Mission 2007-Digital Content Task Force Seminar at Indian Science Congress, January, 5, 2006, T V Prabhakar.
94. Comparative approaches to thesaurus Building Methodologies for Domain Knowledge aggregation ICRISAT, Hyderabad, June 14-15, 2005, T V Prabhakar.
95. Workflows, University of Mauritius, September 2005, Mauritius, T V Prabhakar.
96. Petri Nets and Workflows, IBM Pune September 2005, T V Prabhakar.
97. The Landscape of Software Architecture, IBM Hyderabad, January 2005, T V Prabhakar.
98. Computer and Internet Security CBI Academy, Ghaziabad, December 2005, Dheeraj Sanghi.
99. Internet: Risks and Rewards NIFFT, Ranchi, January 2006, Dheeraj Sanghi.
100. IPv6: Status and Transition Mechanisms Airtight Networks, Pune, February 2006, Dheeraj Sanghi.
101. Tutorial delivered at IEEE Power Engineering Society General Meeting in San Francisco., A. Ghosh

102. IEEE Tutorial Course – IEEE Power Engineering Society, No. 05TP176, IEEE-PES General Meeting, San Francisco, 2005, Application of Power Electronics to Power Distribution System, A. Ghosh and G. Ledwich.
103. Keynote Lecture delivered at 2nd National Power Electronics Conference in IIT Kharagpur. Power converters and their applications. A. Ghosh.
104. Distinguished Lecture presented at Department of Electrical Engineering, University of Seville, Spain in May-June, 2005, FACTS and custom power technologies. A. Ghosh.
105. VLSI Design Methodology, HBTI, Jan. 2006, B. Mazhari,.
106. Power System Restructuring, MMMEC Gorakhpur, February 17-18, 2006, S. N Singh
107. Introduction to FACTS, KNIT Sultanpur, March 24-25 2006, S. N Singh.
108. Machine Translation Summit 2005, Phuket, R. M. K Sinha.
109. Member International Program Committee and Session Chair, The Fourth IASTED International Conference on Computational Intelligence (CI 2005 Calgary, Canada, July 4 - 6, 2005, R. M. K Sinha
110. Session Chair at International Conference on Artificial Intelligence (ICAI-2005, Las Vegas, USA, July 27-30, 2005, R. M. K Sinha

111. Optical Communications: An overview, Techsrijan 2006, 30 March 2006, MMMEC, Gorakhpur, Y. N Singh.
112. All-optical packet switching, Conference on Electronic circuits and communications, Feb 9-10, 2006, TIET, Patiala, Y. N Singh.
113. Brihaspati: An opensource elearning platform, Conference on Digital Learning Environments, ISI Bangalore Center, 11-13 January 2006, YN Singh.
114. Brihaspati Virtual classroom, ELELTECH, CDAC-Hyderabad, 8-9 August 2005.
115. National Law School University of India, 6-7 August 2005, Y.N. Singh.
116. Open Source for equitable information society, World Telecom Day Celebrations, IETE Kanpur local center and IE (I), Kanpur, held in LHC, IIT Kanpur, 17 May 2005, YN Singh.
117. Fiber optic Communications, IETE Kanpur, February 2, 2006. J. John
118. Statistical Fundamentals for Speech Recognition Winter School on Speech Recognition, (IISc., Bangalore), Jan. 2006, S. Umesh.
119. Large Vocabulary Continuous Speech Recognition, International Conference on Natural Language Processing, (IIT, Kanpur), Dec. 2005, S. Umesh.

120. Signals and Systems on Sets: Towards a Non-numerical Theory of Systems: GE Bangalore (John F Welch Centre), Oct 7th, '2005, R. Potluri.
121. Reliable Object Detection: the Basis of Robust Artificial Vision: DA-IICT Gandhinagar., Feb 16th, 2006, R. Potluri.
122. A new approach to electrical parameter extraction in MOS devices with high-K gate dielectrics; 05 July 2005; Department of Electrical and Computer Engineering, National University of Singapore, Singapore, S.Kar..
123. Novel features of and a new parameter extraction technique for high-K MOS devices; 14 October 2005; Department of Electrical and Computer Engineering, University of California, Santa Barbara, California, USA., S. Kar.
124. Delivered a pre-conference tutorial on 15th Dec. 2005 on Electricity Markets: Few Technical Challenges in the National Power Engineering Conference (NPEC 2005 held at Thiagarajar College of Engineering, Madurai, during 16-17 December 2005, S.C. Srivastava.
125. Delivered a tutorial on Transmission System Management in Restructured Electricity Markets in the International Seminar and Tutorial on 'Power Transmission Research Interests and Challenges' held at Central Power Research Institute Bangalore, December 20-22, 2005, SC Srivastava.
126. Delivered an invited lecture on Power System Restructuring at Institute of Engineering, Tribhuvan University, Nepal, January 9th 2006, SC Srivastava.
127. Delivered a key note Lecture on Indian Power Sector: Present Scenario and Challenges in the National Conference on Electric Power Technology, Management and IT Application, MMMEC Gorakhpur, February 17-18, 2006, SC Srivastava.
128. Delivered a key note lecture on Competitive Electricity Markets and Their Secure Operation in the International Conference on Power System Operation in Deregulated Regime (ICPSODR-2006, IT BHU, India, March 6-7, 2006, SC Srivastava.
129. Presented a seminar titled Some Issues on Real-Time Control of Power Electronic Systems using DSP Processors, at Bengal Engineering and Science University, Shibpur, West Bengal on 9.2.2006, P. Sensarma.
130. Inaugural talk on VLSI Processing on 19th Jan., 2006. in the Short course on Introducton to VLSI Design at HBTI, Kanpur, Jan 19-21, 2006, S. S. K Iyer.
131. Lecture on Organic Solar Cells in Short course on Energy Management at MNNIT, Allahabad, March 27-31, 2006, S. S. K Iyer.
132. Design an Information System for Indexing of Rural Development at Block level presented in the 8th Annual Conference of Society of Statistics, Computer and Applications held at the Department of Statistics, Govt.

- Vidarbha Institute of Science & Humanities, Amravati, December 22-24, 2005, Parihar, H.P.S., Srivastava, S., Rai, D.P.
133. Database Design and Development of Information System for Rural Development at District Level presented in the National Seminar on Empowering the Masses through Technology Application & Skill Training held at the Department of Rural Development, National Institute of Technical Teachers' Training and Research, Chandigarh, December 01-02, 2005, Parihar, H.P.S., Srivastava, S., Rai, D.P.
 134. Rural Development: Measurement and developing indices for the development planning at micro levels presented in the National Seminar on New Horizons in Environment and its Derived Problems held at the Govt. Geetanjali Girls P.G. College, Bhopal, February 03-04, 2006, Parihar, H.P.S., Srivastava, S., Rai, D.P.
 135. Major Debates in Human Right Discourse. National Seminar on Human Rights: Indian Scenario. DAV College, Kanpur, 12 December 2005, Munmun Jha.
 136. Sociology and Human Rights Education. Symposium on Sociology in the IITs and IIMs: trends, Prospects and Possibilities. Department of HSS, IIT Bombay, 12-13 November, 2005, Munmun Jha.
 137. The Elderly in a Rights Framework: Beyond Tradition, Law or Economics. National Seminar on Aging: Issues and Emerging Trends. MCM DAV College for Women, Chandigarh, 21-22 October 2005, Munmun Jha.
 138. Moral development and Prosocial Behaviour, Department of Psychology, Allahabad University, Allahabad, March 26, 2006., Krishnan, L.
 139. Urban Land use in India: A Case Study of Urban Development Authorities, Conference on Law, Economics and Development, during March 31- April 1, 2005 at Centre for the Study of Law and Governance, Jawaharlal Nehru University, New Delhi, P.M. Prasad.
 140. Environmental Protection: The Role of Regulatory System in India, International Conference on Environment and Development: Developing Countries Perspectives, during 7-8 April 2005 at School of International Studies, Jawaharlal Nehru University, New Delhi, P. M. Prasad.
 141. Environmental Protection: The Role of Regulatory System in India, The Indian Society for Ecological Economics (INSEE), Conference on Ecology and human Well Being, during 3-4 June, 2005 at Indira Gandhi Research of Development, Mumbai, P.M.Prasad.
 142. Environmental Protection: The Role of Regulatory System in India, The Asian Law and Economic Association (AsLEA), during 24-25 June, 2005 at Seoul National University, Seoul, Korea, P.M. Prasad.

143. Compositionality in Complex Predicates, STIC-Asia Workshop, Kasetsart University, Bangkok, 2006, Achla M Raina and A. Mukerjee.
144. Scope of Community Participation in Rainwater Harvesting, Bharat Vikash Parishad, Ramakrishna Sakha, Kanpur, May 23, 2005, B.Rath.
145. Issues and Challenges in Water Resource Management, Department of Economics, NEHU, Shillong, October 21, 2005, B.Rath.
146. Chairman, Technical Session on Managerial Issues, 11th International Conference on Productivity and Quality Research, IIT Delhi, December 12-15, 2005, B. Rath.
147. Sustainable Development of Land and Water Calls for Application of IWRM Approach, Keynote address in the National Seminar on Sustainable Development of Land Resources: Opportunities and Challenges, Armapore PG Degree College, Kanpur University, January 27-28, 2006, B. Rath.
148. Presentation of the Reports on Rapid Evaluation of ISRHHD and SAY Schemes, Ministry of Rural Development, Department of Rural Development, Krishi Bhavan, New Delhi, 13 May 2004, A.K. Sharma.
149. A lecture on Readings of Epics: Sociological Inferences from Epics and Religion, in Refresher Course on Indian Society: Crisis & Challenges, Organized by Department of Sociology, Lucknow University, Academic Staff College, Lucknow University, Lucknow, 22 December 2005, A.K. Sharma.
150. Presented a paper on Urban Bus Policy to Reduce Air Pollution and Congestion during the 2nd Uttar Pradesh Economic Association (UPEA) Annual Conference held at C.S.A. University of Agriculture & Technology, Kanpur on December 18-19, 2005, S.K. Singh.
151. The Meaning of Cittta Vrittinirodha, National Seminar on/Yogamala: Synthesis of Yoga from Philosophical Perspective, Goa University, Goa, March 10-11, 2006, C.A. Tomy.
152. Significance of HRM in the Times of Downsizing and Restructuring, Ministry of Petroleum Training Centre, Mehmoudabad, Iran, 20th June, 2005, Rahul Varman.
153. Evaluation, Rating and Certification of Web Documents, International conference on Tehnology, Knowledge and Society, organized by Common Grounds, Melbourne, Australia, at Hydarabad, Dec 12-15, 2005, Veena Bansal.
154. Inaugural lecture on Energy Conservation and CDM Opportunities in Indian Industries at Short-term course on Energy Management 27-31 March 2006, MNNIT, Allahabad, Anoop Singh.
155. Regulatory and Policy Environment for Private Investment in the Power Sector: International Comparison EDP on Infrastructure Financing and Public Private Partnership at Indian Institute of Management, Bangalore from Feb. 6-8, 2006, Anoop Singh.

156. Knowledge Sharing and Knowledge Management in Business, July, 9, 2005, Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka, Chatterjee, Jayanta.
157. Socio-Technical Research Applications in KM Projects at Indian Plants, July 25-26, 2005, IMI, New Delhi, Chatterjee, Jayanta.
158. Business Process Modeling for Accelerating Technology Development, August 17, 2005, RCI, DRDO, New Delhi, Chatterjee, Jayanta.
159. Information Design Principles and an Ecosystem Approach to Agrovoc Construction in Indian Languages, October, 19-20, 2005, International Experts Group Consultative Seminar, FAO, Rome, Chatterjee, Jayanta and Prabhakar, TV.
160. Poster session on Communities and Collaboration for Knowledge Management at International Conference on Knowledge Management (ICKM 2005, October 27-28, 2005, Charlotte, North Carolina, USA, Chatterjee, Jayanta.
161. Evaluating Business Models for Rural Digital Services and Village Knowledge Centers, Bankers' Institute of Rural Development, Lucknow, January, 13-14, 2006, Chatterjee, Jayanta and Singh, Mura.
162. Developing an Interactive Information Communication Network for Market Operations, Food Corporation of India, Regional Team, Lucknow, April, 6, 2005, Chatterjee, Jayanta and Singh, Murat.
163. Topic Map and Development tools for Agricultural Knowledge Repository Architecture, Mission 2007-Digital Content Task Force Seminar at Indian Science Congress, January, 5, 2006, Chatterjee, Jayanta and Prabhakar, TV.
164. Kheti-an emerging Knowledge Repository Architecture for multiple applications, at eAgriculture Conference, VPIIT, Baramati Maharashtra, March, 10, 2006, organized by Yes Bank and Ministry of Agriculture, Chatterjee Jayanta.
165. Comparative approaches to thesaurus Building Methodologies for Domain Knowledge aggregation ICRISAT, Hyderabad, June 14-15, 2005, Chatterjee, Jayanta, and Prabhakar, TV.
166. ICT Architecture for Integrating Agricultural Productivity Development and Alternative Rural Livelihood Projects at PAN IIT Workshop on 'ICT for Development', March, 26, 2006, Chatterjee, Jayanta.
167. Talk on Business Strategy in a Fast-Changing Environment, Delhi, July 15, 2005, Pearson Education, Sinha AP.
168. Poverty Reduction Strategies in Asia: ADBI Annual Conference 9 December 2005, Tokyo, Japan, Anoop Singh.

169. Regulatory and Policy Reforms in the Indian Power Sector
Nov. 18, 2005, Division of Corporate Planning, Electric Power
System Council of Japan, Tokyo, Anoop Singh.
170. Department of Mathematics, University of Limoges, France, May 27
2005, Dutta J.
171. Lagrange multipliers: Revisited at the Center for optimization and
stochastics, Martin-Luther University, Halle, Germany., seminar title 'Dutta, J.
172. Invited lectures at National seminar on partial differential equations
and scientific computing held at Department of Mathematics, Sixth Gujarat
University, Surat from 23-25, Jan. 2006, Raghavendra, V.(also chaired 2
seminars).
173. Numerical Methods for Singularly perturbed Delay Differential
Equations - Professor S.K. Lakshamana Rao endowment lecture at NIT
Warangal August'2005. Kadalbajoo, M.K.
174. Invited lectures in National Symposium on Scientific Computing with
Application to Partial Differential Equations IIT Kanpur, Nov. 19-21, 2005
Ghorai, S.
175. An overview of FDM for PDEs in National Symposium on Scientific
Computing with Applications to PDEs' at IIT Kanpur, Nov. 19-21'05
Kadalbajoo, M.K.
176. The Derived space of $L^p(G)$.on Feb. 25, 2006 at Department of
Mathematics, University of Jammu. Tewari, U.B.
177. Frechet algebras of power series in the Department of Mathematics,
University of Copenhagen, Denmark on 26th May 2005, Patel, S.R.,
178. Approximation by K-finite functions, ISI Kolkata, June, 2005, Ray, S.K.
179. Rough consequence relations at IMSc, Chennai, July, 2005, Banerjee, M.
180. A new class of stabilized mesh free methods for viscous fluids: Part I.
(ii) A new class of stabilized mesh free methods for viscous fluids: Part II, (iii)
Wavelet Taylor Galerkin method for PDEs. Wavelet -Taylor Galerkin method &
PDEs NUS, Singapore, 24 Oct. 2005, Rathish Kumar, BV
181. Regression Analysis in Agricultural sciences at Agricultural Institute,
Allahabad, India in 2005, Shalabh.
182. Stability problems in applied mechanics, University of Jadavpur,
Kolkata August 11, 2005, (A.K. Mallik).
183. Curious consequences of simple sequences, CMERI, Durgapur,
November 2005, (A.K. Mallik).
- 184.** Dynamic Failure of Functionally Graded Composites Under High
Strain Rates, Central Ceramic and Glass Research Institute, Kolkata, December
12, 2005, (V. Parameswaran).

185. Surface finish enhancement in fused deposition modeling, INVITED TALK, National Conference on Design for Product Life Cycle, BITS Pilani, February 17-18, (N.V. Reddy).
186. Introduction to Generative Manufacturing, GVP College of Engineering, Vishakhapatnam, December 2005, (N.V. Reddy).
187. Structure of Low Reynolds Number Flow Behind a Prism of Square Cross-Section at Various Orientations, Presented at the 50th (Golden Jubilee) ISTAM Congress at IIT Kharagpur, 14-17 December 2005, (K. Muralidhar).
188. Optical Measurement Techniques, (B) Optical Tomography, lectures given at R & D (Engineers), Dighi, Pune, 22nd October 2005, (K. Muralidhar).
189. Optical Imaging and Control of Convection around a Crystal Growing from its Aqueous Solution, Presented at the Symposium entitled Crystal Growth and Characterization, Loyola College, Chennai, 29th September 2005, (K. Muralidhar).
190. Argonne National laboratory, Chicago, USA, 2005, (A.K. Agarwal).
191. College of Military Engineering, Vadodara, 2005, (A.K. Agarwal).
192. Research Designs and Standards Organization, Lucknow, 2006, (A.K. Agarwal).
193. University of Michigan, Dearborn, USA, 2006, (A.K. Agarwal).
194. 4th International Conference on Smart Materials, Structures and Systems, July 2005, (Bishakh Bhattacharya).
195. Opportunities for Interdisciplinary research in Energy Technology, Invited Lecture, National Conference of Electrical and Mechanical Engineering, Guru Ramdas Khalsa Institute of Technology, Jabalpur (MP), March, 2006, (S. Khandekar).
196. Introduction to Fuel Cell Technology: Energy Outlook and Research Directions, National Workshop titled Fuel Cells: Power Device of the Future, IIT Kanpur, Kanpur (UP), February, 2006, (S. Khandekar).
197. Emerging Importance of Microscale Heat Transfer, Invited Lecture, Federal University of Santa Catarina, Florianopolis, Brazil, June, 2005, (S. Khandekar).
198. Analysis and Simulation of Snake-like Robots: An Outline, IGCAR, Kalpakkam, 6 May 2005, (B. Dasgupta).
199. CAD and Optimization in Molecular Docking, TU Berlin, 14 June 2005, (B. Dasgupta).
200. An engineer's guide to multiscale modeling, Workshop on nanoscale modelling, invited tutorial at GE Global Research, Bangalore India, (S. Basu).
201. Modelling of deformation and fracture in glassy amorphous polymers, invited talk at India-European thematic meeting on Computational Materials Science, IISc, Bangalore, India, (S. Basu).

202. 4th International Conference on Smart Materials, Structures and Systems, July 2005, (Bishakh Bhattacharya).
203. On-line monitoring of drilling performance after microwave post sintering, 1st INDO-JAPAN Joint Seminar on Micro/Nano Manufacturing Science, Tokyo Japan, 2006, (J. Ramkumar).
204. Turbulence modeling and their applications, Delivered a series of lectures, Teaching Workshop, Organised by GE, India, Bangalore, 2005, (S. Sarkar).
205. Hybrid nanocomposites of carbon nanotube grown on carbon fiber for structural application, ISRO Satellite Centre, Bangalore, INDIA, 28th October, 2005, (K.K. Kar).
206. Synthesis and characterization of carbon nanotubes on the surface of glass fiber and its composite in epoxy matrix, International Advanced Research Centre for Powder metallurgy and new Materials (ARCI), Hyderabad, India, 16th September 2005, (K.K. Kar).
207. Polymer Rheology and its importance, Defence Materials and Stores Research and Development Establishment (DMSRDE) India, 5th September, 2005, (K.K. Kar).
208. Surface finish enhancement in fused deposition modeling, Invited talk, National Conference on Design for Product Life Cycle, February 17-18, BITS Pilani, (N.V. Reddy).
209. Introduction to Generative Manufacturing, GVP College of Engineering, Vishakhapatnam, December 2005, (N.V. Reddy).
210. Comparison of Corrosion of Phosphoric Irons with Low Alloy/Mild Steels in Select Environments, Annual Technical Meeting of the Indian Institute of Metals, Chennai, 15-16 November 2005, R. Agarwal, G. Sahoo And R. Balasubramaniam.
211. Marvels of Indian Iron through Ages Workshop on History of Science and Technology, Nainital, 9-12 December 2005, R. Balasubramaniam.
212. On the Use of Scanning Electron Microscopy in Numismatic Studies, 89th Meeting of the Numismatic Society of India, Chandigarh, 24-26 December 2005, R. Balasubramaniam.
213. Analysis of Archaeomaterials Seminar on Technology Development for the Study of the Past, Indian Institute of Technology, Kanpur, 18-19 March 2005, R. Balasubramaniam.
214. Massive Forge Welded Iron Cannons of India Seminar on History Of Science and Technology in India, Central University, Hyderabad, 01-03 September 2005, R. Balasubramaniam.
215. Synthesis of nanocementite by Reaction milling in Dual-drive Planetary mill, In the conference International Conference of advanced materials design

- and development (ICAMDD), 14-16 December 2005, Goa, India, D. Chaira, S. Sangal and B. K. Mishra.
216. Synthesis of Silicon Carbide in a Dual-drive Planetary mill by Reaction milling, In the conference National Metallurgists Day (NMD-ATM 2005, 12-14 November 2005, Chennai, India, D. Chaira, B. K. Mishra, and S. Sangal.
 217. Synthesis of Silicon Carbide in a Dual-drive Planetary mill by Reaction milling, In the conference The Society for Mining, Metallurgy, and Exploration (SME) in the special symposium Functional Filler and Nanoscale Minerals II, March 2006, USA, D. Chaira, B. K. Mishra, and S. Sangal.
 218. Characterization of Cenospheres in Fly Ash, International Conference on 'Emerging Trends in Mineral Processing and Extractive Metallurgy' 13 -14th June, 2005, Regional Research Laboratory, Bhubaneswar, India, K. Datta, A. Garg, S. Sangal, B. K. Mishra, Padma Vankar, and P. K. Rohatgi.
 219. 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, A. Garg, X. Hu and Z.H. Barber.
 220. Toxic Metals in Sweet Wraps Chandi Work: A Study using TEM and SEM-EDS, EMSI-2006, Thiruvananthapuram, April 2006, Gouthama and S.C. Barthwal.
 221. A TEM and EBSD Study of the Mechanism of in-situ Grain Refinement during Superplastic Deformation, International seminar on Frontiers on Materials Design Chennai, November, 2005, Gouthama and R. K. Srivastav.
 222. Material Characterization of Copper from Harappan Civilization Site of Dholavira Annual Technical Meeting of the Indian Institute of Metals, Chennai, 15-16 November 2005, S. Gupta, R. Balasubramaniam, A.S. Bisht, V.N. Prabhakar and K.C. Nauriyal.
 223. Deposition and Characterisation of bismuth-layered perovskite ferroelectric thin films, Oral Presentation in UK Ferroelectric Materials Network, Annual Conference, Cranfield (UK), 14-15 June 2005, X. Hu, A. Garg, Zoe H. Barber, James F. Scott, A. Snedden and P. Lightfoot.
 224. Deposition and Characterization of Pulsed-Laser-Deposited and Chemical-Solution-Derived Sm-Substituted Bismuth Titanate Films, International Symposium on Integrated Ferroelectrics, Shanghai, 17-20th April 2005, China, X. Hu, A. Garg, Zoe H. Barber.
 225. Pulsed laser deposition and characterization of (BiFeO₃)_{0.7}-(PbTiO₃)_{0.3} thin films, Electron Microscopy and Analysis Group and the Nanoscale Physics and Technology Group Conference, 31 August- 2 September 2005, University of Leeds, M A Khan, A Garg, and A J Bell.

226. Effect of Deposition Pressure on Structure of Pulsed Laser Ablated $(\text{BiFeO}_3)_x (\text{PbTiO}_3)_{1-x}$ Thin Films, MRF Fall Meeting, Boston (USA), Nov 2005, M A Khan, A Garg, T. Comyn, and A J Bell.
227. Artificial neural nets, genetic algorithms and multiple linear regression as complementary modeling techniques in oxygen steelmaking, Int. Conf. on Neural Network and Genetic Algorithm in Materials Science and Engineering, Jan. 11-13, 2006, Ed. BESU, Shibpur, India, S. Kumar and B. Deo.
228. Annual Technical Meeting (Organized by Indian Institute of Metals), Chennai, 15-16 Nov 2005, S. Kumar and A. Garg.
229. Some shop floor problems in steel plants and their solution through Process Engineering, 59th Annual technical Meeting of I.I.M, Chennai, 2005, D. Mazumdar.
230. Prediction and control of superheat during continuous casting of Steel, International conference on past, present and future of continuous casting of steel, Jamshedpur, 2005, D. Mazumdar.
231. Detailed X-ray Diffraction Analysis of the PLD Grown $(\text{BiFeO}_3)_x (\text{PbTiO}_3)_{1-x}$ Thin Films, Annual Technical Meeting (Organized by Indian Institute of Metals) Chennai, 15-16 Nov 2005, P. Mittal, M. Khan, A. Garg, and A.J. Bell.
232. Corrosion Related Issues in Indian Railways, Annual Technical Meeting of the Indian Institute of Metals, Chennai, 15-16 November 2005, B. Panda, R. Balasubramaniam And A.K. Manuwal.
233. Processing and Characterization of Iron-Copper Nano-crystalline Material Synthesized by Mechanical Alloying, National conference of IIM-ATM, Chennai, November, 2005, S.K. Reddy, A. Ramaria, Gouthama and R. K. Dube.
234. International Conference on Advances in Materials Design and Development, Goa (India), 14-16 Dec 2005, P. Prakash, M.K. Roy, H.C. Verma and A. Garg.
235. International Conference on Advances in Materials Design and Development, Goa (India), 14-16 Dec 2005; Won Best Poster Award, Umesh Prasad, Sumeet Kumar and Ashish Garg.
236. Annual Technical Meeting (Organized by Indian Institute of Metals), Chennai, 15-16 Nov 2005, M.Kumar Roy, P.Prakash, A.Garg and H.C. Verma.
237. Corrosion of Rare Earth-Iron Alloys and Compounds, Annual Technical Meeting of the Indian Institute of Metals, Chennai, 15-16 November 2005, D.Sachdeva And R. Balasubramaniam.
238. Metallography and Phase Transformations of Iron-Phosphorus Alloys, Annual Technical Meeting of the Indian Institute of Metals, Chennai, 15-16 November 2005, G. Sahoo, R. Balasubramaniam and M.N. Mungole.

239. Annual Technical Meeting (Organized by Indian Institute of Metals), Chennai, 15-16 Nov 2005, A.Sharan, A.Garg, D.Gupta and S.Kumar.
240. International Conference on Advances in Materials Design and Development, Goa (India), 14-16 Dec 2005, A. Sharan, D. Gupta, S. Kumar and A. Garg.
241. Analysis of Iron Slags from Kamrej, Annual Technical Meeting of the Indian Institute of Metals, Chennai, 15-16 November 2005, Tanushree and R. Balasubramaniam.
242. A TEM Study on the GB Cavity Nucleation in a High Temperature Tested Al-5083 Alloy, National conference of IIM-ATM, Chennai, November, 2005, R. K. Srivastav and Goutham.
243. Characterization of Atmospheric Rust on Rail Steels, Annual Technical Meeting of the Indian Institute of Metals, Chennai, 15-16 November 2005, A.C. Vajpei, B. Panda, R. Balasubramaniam and A.K. Manuwal.
244. Microstructural Evolution of Thermo-mechanically processed Near- α Ti Alloy, EMSI-2006, Thiruvananthapuram, April 2006, A. Sundar Vishal, Gouthama, and S. Bhargava.
245. Investigation into Electrophoretic Deposition of Phosphors, Annual Technical Meeting (Organized by Indian Institute of Metals), Chennai, 15-16 Nov 2005, C.K. Yadav, D. Chaira, A. Garg and B.K. Mishra.
246. Electromagnetic sources of THz radiation: toward efficient generation and control, Indo-French workshop on free electron lasers and their applications, Goa, March 20-24, 2006, Sudeep Bhattacharjee.
247. Intense microwave plasmas for focused ion beams, Condensed Matter Physics Workshop (CMPW-06, IIT Kanpur, February 17-19, 2006, Sudeep Bhattacharjee.
248. Closed String Tachyons on Orbifolds of C2 and C3, Ohio State University, May 27th, 2005, T. Sarkar.
249. Closed String Tachyons on Orbifolds of C2 and C3, California Institute of Technology (Caltech), June 3rd, 2005, T. Sarkar.
250. Einstein and the Theory of Relativity, Colloquium at University of Lethbridge, Alberta, Canada, June 16th, 2005, T. Sarkar.
251. Traffic: from molecules to vehicles, Max-Planck Institute for Colloids and Interface Research, Potsdam (Germany), 13 October, 2005, D. Chowdhury.
252. Lectures delivered in: 'A Short-term Course on Developments & Applications of All Solid State Lasers' January 09-14, 2005, Topic: 'Introduction to Lasers', H. Wanare.
253. Causality Violation in Non-local QFT, 100 Years After Einstein's Revolution : A National conference to celebrate the world Year of Physics 2005, IIT Kanpur 4-6 Nov. 2005, S.D.Joglekar.

254. Interlayer exchange coupling in Fe/Nb magnetic multilayers, Banaras Hindu University, March 31, 2006, R. Prasad.
255. Recent Developments in Rayleigh Benard Convection, National Conference on Nonlinear systems and Dynamics-2006, Chennai, March 2006, M. K. Verma.
256. Dynamo Using Turbulent Energy Fluxes, in International Solar Workshop on Transient Phenomena on the Sun and Interplanetary Medium, Nainital, April 2005, M. K. Verma.
257. Dynamo Using energy Fluxes, in Nonlinear Cosmology: Turbulence and Fields, held at ICTP in 9 May-12 May, 2005, M. K. Verma.
258. Universal Scaling Laws for Driven-Non-equilibrium Systems, in Bharatidasan University, Trichy, and IIT Kanpur, March 2006, M. K. Verma.
259. Low dimensional Models of convective Flows, in ICTP, Trieste, June 2005, M. K. Verma.
260. Statistical Theory of MHD Turbulence-A Review, in ENS, Paris, June 2005, M. K. Verma.
261. Colloquium on Sub-wavelength optics via plasmons on a metal surface, Raman Research Institute, Bangalore, 21 July 2005, S. A. Ramakrishna.
262. Seminar on Negative refractive Index: A revolution in Optics Inter-University Accelerator Centre, New Delhi, 28 March 2005, S. A. Ramakrishna.
263. Entanglement in Spin Systems, BHU, Varanasi, I March 2006, V Subrahmanyam.
264. Spin Decoherence in Quantum Dots In the conference Quantum Computation Back Action 2006, V Subrahmanyam.

CONFERENCES ATTENDED OUTSIDE IIT KANPUR

1. Convention for Aeronautical Engineer-2006, Institution of Engineers, Jaipur-Chapter, Jaipur, A. K. Ghosh.
2. WINDPOWER 2005 Conference & Exhibition of American Wind Energy Association, Denver, Colorado, USA, May 15 - 18, 2005. (PRESENTED A CONTRIBUTED PAPER), Kunal Ghosh.
3. 29TH Indian Social Science Congress, Lucknow, Dec. 25 - 30, 2005. (PRESENTED A CONTRIBUTED PAPER) , Kunal Ghosh.
4. ISS International Conference on Smart Materials, Structures and Systems, 28-30 July 2005, Bangalore, Contributed papers, A. Kushari.
5. 19th National Conference on IC Engine and Combustion, Allied Publisher p. 357-361, 2005, D. P. Mishra.

6. 18th National & 7th ISHMT/ASME Heat and Mass, January 2006, D. P. Mishra.
7. International Conference on Computational and Experimental Engineering and Sciences (ICCES'05, December 1-6, IIT Madras, Chennai, 2005, S.Mittal.
8. Indo-German Winter Academy, Tata Steel, Jamshedpur, December , 2005, S.Mittal.
9. National Symposium on Scientific Computing with Application to Partial Differential Equations (NSSCAPDE 05, Indian Institute of Technology Kanpur, November 19-21, 2005, S.Mittal.
10. 4th Conference on Bluff Body Wakes and Vortex-Induced Vibrations-BB-VIV4, 21-24, June, Santorini Island, Greece 2005, S.Mittal
11. 11-th International Workshop on Rotorcraft Dynamics and Aeroelasticity, Florida, USA, Oct. 2005, Venkatesan, C.
12. Invited Talk: International Conference on Computational and Experimental Engineering and Sciences, IIT Madras, India, Dec. 2005., Venkatesan, C.
13. GTPases carrying hydrophobic amino acid substitutions in lieu of the catalytic glutamine have Novel Implications for GTP Hydrolysis. 6th European Symposium of the Protein Society. Barcelona, Spain, 2005, Balaji Prakash.
14. Invited talk delivered in the Indo-Brazil-South Africa Trilateral Workshop on Functional Genomics, Life Science, GM Food and Agriculture, organized by the Institute of Genomics and Integrative Biology, New Delhi (July 18-19, 2005, Ganesh S.
15. Invited talk delivered in the 74th AGBM of the Society of Biological Chemists (India), organized by the Central Drug Research Institute, Lucknow (November 7-10, 2005, Ganesh S.
16. Invited talk delivered in the XXIX All India Cell Biology Conference and Symposium, organized by the Industrial Toxicology Research Institute, Lucknow, January 18-20, 2006, Ganesh S.
17. Invited talk in the Molecular Graphics and Modelling Society meeting on Membranes and membrane proteins held at St. Catherine's College, University of Oxford, U.K. from April 4th to April 6th, 2005, R. Sankararamakrishnan.
18. Invited talk Organ size regulation in Drosophila: The Fat tumor suppressor represses Wnt signaling to regulate cell proliferation and cell adhesion at University of North Carolina, 4th April 2005, Pradip Sinha.

19. Invited presentation in the Indo-Brazil-South Africa Trilateral Workshop on Functional Genomics, Life Science, GM Food and Agriculture organized by Institute of Genomics & Integrative Biology, New Delhi from July 17th to July 19th 2005, R. Sankararamakrishnan.
20. Development of Nano-Biomaterials for Tissue Engineering Applications, January 19-21, 2005, Indo-Australian Conference on Biomaterials, Implantable Devices and Tissue Engineering (BITE 2005 at Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram, India, Invited presentation by Dhirendra S. Katti
21. Chaired a session on Biomaterials and the session on Paper presentation at the Second International Workshop on Nanotechnology and Health Care, at the School of Chemical and Biotechnology, Shanmuga Arts, Science, Technology and Research Academy (SASTRA), Tanjavur, Tamil Nadu, India, May 23-24, 2005, Dhirendra S. Katti.
22. Engineering Tissues: The Stem Cell Approach. Poster presented at the International Symposium on Stem Cells: Premises & Promises for Research & Therapeutics, Mumbai, India, 2005, Pawan B. Singh, Dhirendra S. Katti.
23. Proposed Methods for Allignment of Electrospun Nanofibers to be used as Scaffolds in Tissue Engineering. Poster presented at the SCHEMCON 2005 (1st Annual Session of Students Chemical Engineering Congress), 7th - 9th, December 2005, IIT - Guwahati, India. This paper was awarded the first prize in the poster presentation category and was adjudged the best overall presentation amongst all oral and poster presentations at SCHEMCON 2005, Riju Mohan Singhal, Amit Nandan, Dhirendra S. Katti.
24. 12. CRYOGELS: Superporous gels with interesting properties for bioseparations. European Federation of Biotechnology-Meeting of the working group downstream processing, Technical University of Denmark, Copenhagen, DENMARK. 25th -26thAugust, 2005 (invited presentation), 2005, Ashok Kumar.
25. Selective separation of cells: Supermacroporous monolithic cryogel provide a new tool. AFFINITY2005 - 16th Biannual meeting of the International Society for Molecular Recognition (ISMR), Uppsala, SWEDEN. 14th - 18th August, 2005 (contributed presentation), Ashok Kumar.
26. Novel functional polymeric materials for Bioseparation and Bioprocessing. National Seminar on Nanobiotechnology, National Botanical Research Institute, Lucknow, INDIA, 18th-19th November, 2005 (chairing session & key note presentation), 2005, Ashok Kumar.
27. Regulation of cell adhesion and organ size by the Fat atypical cadherin of Drosophila. 46th Annual Drosophila Research Conference, Town & Country

- Resort & Convention Centre, San Diego, California, USA. 30th March to 3rd April'2005, Pradip Sinha, Jaiswal M, Agrawal N.
28. A genetic screen to identify the targets of puf-8, a Puf family gene involved in the meiotic progression of *C. elegans* spermatocytes. Annual meeting of the Society for Developmental Biology, San Francisco, California, USA. July 27 - August 1, 2005, Subramaniam K and Mohd Ariz.
 29. Germ cell development: PUF-8 keeps the sperms committed. Annual meeting of the Indian Society of Developmental Biology, Kalyani, November 23-25, 2005, Subramaniam K.
 30. Multiple mechanisms Restrict expression of the *C. elegans* Nanos homology Nos-2 to the primordial germ cells. Annual meeting of the Indian Society of Cell Biology, Lucknow, January 17-20, 2006, Jadhav S, Rana M and Subramaniam K.
 31. A large and highly divergent aquaporin family in rice: Identification and homology modeling studies. Membranes and Membrane Proteins Conference organized by the Molecular Graphics and Modelling Society at St. Catherine's College, University of Oxford. 4th to 6th April 2005, Anjali Bansal and R. Sankararamakrishnan.
 32. Neurocytoskeletal Features in Lafora Disease Null Mutant Mice. Proceedings of the 26th International Epilepsy Congress Paris, France, August 28th September 1st 2005. Published in *Epilepsia*, 46, Suppl. 6: 75, 2005, Machado-Salas1 J, Guevara P, Guevara J, Martínez I, Durón R, Bai D, Ganesh S, Yamakawa K, Suzuki T, Amano K, Cornford E, Delgado-Escueta A.V.
 33. Clinical, Genetic and Allelic Heterogeneity in Lafora's progressive myoclonus epilepsy. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, S. Ganesh.
 34. Multiple mechanisms restrict expression of the *Caenorhabditis elegans* nanoshomolog nos-2 to the primordial germ cells. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, K. Subramaniam.
 35. Locus and Allelic heterogeneity in lafora's progressive myoclonusepilepsy: novel mutations in EPM2A and NHLRC1 Genes and genotype-phenotype correlations. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Shweta Singh, P. Satishchandra, SK Shankar, K. Yamakawa, AV Delgado-Escueta, and S. Ganesh.
 36. Unraveling the molecular pathways behind the formation of neuronal inclusion in lafora disease. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Rajat Puri and S. Ganesh.

37. Proteasomal dysfunction in neurological conditions: Functional characterization of malin, an ubiquitin ligase, defective in Lafora disease. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Shuchi Mittal, D. Dubey, and S. Ganesh.
38. Defining genetic risk factors for stroke: Synergistic effect of gene polymorphism. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Veena Gupta and S. Ganesh.
39. The EPM2A Gene defects in Lafora's progressive myoclonus epilepsy: correlations between differential splicing and disease phenotype. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Deepti Dubey, S. Singh and S. Ganesh.
40. Unraveling the molecular mechanism of amyotrophic lateral sclerosis by the development of transgenic *C.elegans* model. 2006. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Upasana Arya, K. Subramaniam, and JR Subramaniam.
41. Microarray profiling of *Drosophila* tumors- a case study with fat 2006. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Amit Sinha and P. Sinha.
42. Dissection of molecular mechanism of the *C. elegans* germ cell regulatory Nos-2. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Sonal Gupta and K. Subramaniam.
43. Identification of in-vivo mRNA targets of PUF-8, A Puf repeat-containing protein required for *C. elegans* germ cell development. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Mainpal Rana and K. Subramaniam.
44. Maternal RNA-binding protein SPN-4 suppresses the somatic expression of *C. elegans* germ cell regulator Nos-2. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Shreyas Jadhav, Mainpal Rana and K. Subramaniam.
45. Developmental regulation of cell shapes in the distal tip of *drosophila* leg. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Mohammad Atif Alam, M. Jaiswal and P. Sinha.
46. Clonal initiation of tumors in *Drosophila*: A search for the pathway to tumor development induced by loss of *Igl* tumor suppressor. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Sumbul Jawed Khan and P. Sinha.
47. Signaling input for the regulation of cell-cell adhesion in *Drosophila*. XXIX All India Cell Biology Conference & Symposia, ITRC, Lucknow, Jan-17-20, 2006, Manish Jaiswal and P. Sinha.

48. Invited talk in National Symposium on Chemical Engineering - The Journey Ahead, IISc, Bangalore, June, 2005, Rajdip Bandyopadhyaya.
49. Workshop on SAXS for Nanotechnology, IIT Bombay, July, 2005, Rajdip Bandyopadhyaya.
50. Nanomaterials for Spacecraft Structural and Thermal Applications, participation in discussion and technical sessions, ISRO Satellite Centre, Bangalore, October, 2005, Rajdip Bandyopadhyaya.
51. Panelist and session chair (for the session: Fundamentals and Overall Opportunities) in the Nanoparticle Aerosol Science and Technology workshop, held jointly between Indian and US scientists in Bombay, December, 2005. Participated and conducted panel discussions and compiled research recommendations from this workshop, Rajdip Bandyopadhyaya.
52. Speaker for contributed paper and session chair (for the session: Material Synthesis and Nanoparticle Technology) in 4-th Asian Aerosol Conference, Bombay, December 2005, Rajdip Bandyopadhyaya.
53. Speaker for contributed paper in IIT-National Univ. of Singapore joint session in Chemical Engg. Congress (CHEMCON), New Delhi, December, 2005, Rajdip Bandyopadhyaya.
54. Tuning the Inverse Activity-Selectivity Relationship over Supported Vanadium Oxide Catalysts: Propane ODH Reaction, 5th World Congress on Oxidation Catalysis, Sapporo, Japan, Sept - 2005, G. Deo, T.V.M. Rao and D. Shee.
55. The effect of modifiers on supported V_2O_5/Al_2O_3 catalysts: Methanol Oxidation and Propane ODH, 19th North American Meeting of the Catalysis Society, Philadelphia, May-2005, B. Mitra, I.E. Wachs and G. Deo.
56. Kinetic parameter estimation for supported vanadium oxide catalysts for the propane ODH reaction: Understanding the effect of loading and support, 5th International Conference on Group 5 Elements, Hancock, MA, USA, May-2005, D. Shee, T.V.M. Rao and G. Deo.
57. Session Co-Chair for the session on Acid Catalysis during CHECOM 2005, IIT Delhi, December, 2005, G. Deo.
58. Session Chairman during the 5th International Symposium on Group Five Elements, Hancock, MA, USA (May 18-21, 2005, G. Deo.
59. Temperature based control of a methyl acetate reactive distillation column, Presented at ChemCon, Dec 2005, New Delhi, India, MVP Kumar and N Kaistha.
60. A simple algorithm for rigorous multicomponent distillation design and rating, ChemCon, Dec 2005, New Delhi, G Kedia, S Gedam, DP Rao and N Kaistha.

61. Binary Vapor Liquid Equilibria Prediction using Quantum Mechanical Calculations, CHEMCON 2005: 58th Annual Session of the Indian Institute of Chemical Engineers, IIT Delhi, New Delhi, India, December 14-17, 2005, Tamal Banerjee, Ashok Khanna.
62. Jordan International Chemical Engineering Conference - V, Amman, Jordan, September 12-15, 2005. Paper presented, J.P. Gupta.
63. International Conference on Toxicology, Environmental & Occupational Health, I.T.R.C., Lucknow, November 14-17, 2005. Session Chair, J.P. Gupta.
64. Japan Society of Safety Engineers, Annual Meeting, Okayama University, Okayama, Japan, November 24-25, 2005: Invited Plenary Lecture, J.P. Gupta.
65. Industry- Academia Interaction, Petrotech Symposium, New Delhi, September 2005 (chaired a session), D. Kunzru.
66. Chemcon-2005, IIChe Annual Meeting, New Delhi, December 2005 (chaired a session), D. Kunzru.
67. International Conference on Structured Catalysts and Reactors, Delft, Netherlands, October 2005, D. Kunzru.
68. Of small things and other stories, National Symposium on Chemical Engineering: Journey Ahead, IISc, Bangalore, June 20-21, 2005, A. Sharma.
69. Self-organized patterning of soft materials, JSPS-DST Symposium on Surfaces and Interfaces for Nanostructured Materials, University of Tokyo, November 2005, A. Sharma.
70. Self-organized patterning of soft materials, UK-India Workshop on Nanotechnology, Cambridge University, October 2005, A. Sharma.
71. Paradigms of Meso-Fabrication: Beyond the Top-down and Bottom-up National Frontiers of Engineering Conference, New Delhi, February 2006, A. Sharma.
72. Self-organized Nano-fabrication, Indo-US Nanotechnology Conclave, New Delhi, February 2006, A. Sharma.
73. Physics of Self-organized patterning of soft materials, Condensed matter Physics Workshop, IIT Kanpur, February 2006, A. Sharma.
74. Paradigms of Meso-Fabrication: Beyond the Top-down and Bottom-up, Indo-US Frontiers of Engineering Conference, Agra, March 2006, A. Sharma.
75. Elastic Contact Lithography: A New Method for Self-organized Patterning of Soft Solids, International Conference on Nanoscience and Technology (ICONSAT), New Delhi, March 2006, A. Sharma.
76. Elastic Contact Lithography, The 2nd India-Taiwan Workshop on Nanoscience, New Delhi, March 2006, A. Sharma.

77. Patterning of soft materials, Indo-UK Workshop on Nanotechnology, New Delhi, March 2006, A. Sharma.
78. MTIC XI, IIT Delhi, Dec. 8 - 10, 2005, presented a poster. (Preparation of Carbene adducts of Transition Metal Carboxylates G. Anantharaman*, K. Elango, and R. Srirambalaji).
79. Interaction of the M-M Bond Orbitals with C-H Bond: Route to Agostic and Cyclometallated Compounds : Presented at the 11th symposium on Modern Trends in Inorganic Chemistry as a invited speaker at IIT Delhi, December 8-10, 2005, Jitendra K. Bera.
80. Self-Assembled Metallomacrocycles Based on 1,1'- bis(1,8-naphthyrid-2-yl)ferrocene (FcNP₂) Ligand : Presented poster at the 6th CRSI National Symposium in Chemistry at IIT Bombay, 3-5 February 2006, Jitendra K. Bera.
81. Annual Meeting of Indian Academy of Sciences, held at Tiruchirapalli in November 2005 A. Chandra.
82. CRSI National Symposium of Chemistry, held at IIT Bombay during February 3-5, 2006, A. Chandra
83. Indo-EU Meeting on Computational Materials Science, held at Indian Institute of Science, Bangalore, February 20-22, 2006, A. Chandra.
84. Spectroscopy and dynamics of molecules and clusters, held in Goa, March 30-31, 2006, A. Chandra.
85. National Seminar on Applied Research on Solid State Chemistry and Nanotechnology (NSASN - 2005, Department of Chemistry, Annamalai University, India, February 25 - 26, 2005, Keynote Address : The Fascinating World of Materials and the Role of Solid State Chemistry, N.S. Gajbhiye.
86. National Symposium on Advances in Material Science, Department of Physics, D. D. U. Gorakhpur, March 17 - 19, 2005, Invited Lecture and contributed paper; 'Magnetic properties of Iron Nitrides' N.S.Gajbhiye
87. National Conference & Symposium on Solid State Chemistry and Allied Areas, ISCAS 2005, 1-3 December 2005, Goa; Oral Presentation, 'Dielectric Behaviour of Chemically Synthesized Nanostructured PZT Powders'; N. S. Gajbhiye, P. K. Pandey, Lyci George and Abhishek Kumar, N.S. Gajbhiye
88. National Conference & Symposium on Solid State Chemistry and Allied Areas, ISCAS 2005, 1-3 December 2005, Goa; Oral Presentation; 'Liquid phase synthesis of Nickel Nanoparticles'; N. S. Gajbhiye, and Sachil Sharma, N.S. Gajbhiye.
89. DAE-Solid State Physics Symposium 2005, BARC, Mumbai, 5-9 Dec 2005. Oral Presentation; 'Studies on Homogeneous Lead Zirconate Titanate

- Powder Synthesized by Hydroxide Co-precipitation'; N. S. Gajbhiye, P. K. Pandey, Lyci George and Abhishek Kumar, N.S. Gajbhiye.
90. 24th Annual Conf. Indian Council of Chemists, BIT Mesra, Ranchi, 16-18 December 2005; Invited Lecture 'Magnetic Interactions study of ϵ -Fe₃N-GaN Core Shell Nanocomposites /Nanowires', N. S. Gajbhiye and Sayan Bhattacharya.
 91. Thermans 2006, 6-10 Feb 2006, Jaipur, Oral Presentation 'Thermal, Structural and Electrical Studies of Nanostructured PZT Synthesized by Low Temperature Technique'; N. S. Gajbhiye, G. Wilde, P. K. Pandey, Lyci George and Abhishek Kumar
 92. Int. Conf. on Nanoscience and Technology 2006, 16-18 March, New Delhi; Poster Presentation 'Characterization of Nanostructured PZT Prepared by Chemical Routes'; N. S. Gajbhiye, P. K. Pandey, Lyci George and Abhishek Kumar.
 93. Int. Conf. on Nanoscience and Technology 2006, 16-18 March, New Delhi; Oral Presentation, 'Synthesis, Characterization and Magnetic Interactions Study of ϵ -Fe₃N-CrN Nanorods'; N. S. Gajbhiye, Sayan Bhattacharyya, S. M. Shivaprasad and J. Weissmüller.
 94. Participated in the XIth NOST Symposium held during October 25-29, 2005 at Goa, Manas K. Ghorai.
 95. Participated in the third conference in India by Innocentive titled 'InnoCentive Innovation Series: Value Addition to Natural Products.' at the National Institute for Pharmaceutical Education and Research (NIPER), Chandigarh, Punjab on Saturday, March 4, 2006, Manas K. Ghorai.
 96. 2nd International Conference on Current Developments in Atomic, Molecular and Optical Physics with Applications(CDAMOP), K.M.College, Delhi University, India, March 21-23 2006 – Debabrata Goswami, Invited Speaker & Session Chair.
 97. Topical Conference on Atomic, Molecular and Optical Physics (TC-2005, IACS, Kolkata, India, Dec. 13-15 2005 – Debabrata Goswami, Invited Speaker.
 98. Brijuni Conference on Laser Control and Molecular Switches, Brijuni Islands, Croatia, Aug. 28 - Sept. 2 2005 – Debabrata Goswami, Invited Speaker.
 99. Fourth Singapore-India Collaborative and Cooperative Chemistry Symposium (SInCCCS₄), National University of Singapore, Singapore, Feb.20-21 2006 – Debabrata Goswami, Invited Speaker.
 100. Differential Geometry and Topology in the Perspective of Modern Trends (DGTPMT-2006, Dayalbagh Educational Institute, Agra, India, Feb. 18-19 2006 – Debabrata Goswami, Plenary Speaker.

101. Modern Trends in Inorganic Chemistry MTIC XI: IIT Delhi: Dec 2005:Delivered an invited lecture, B.D. Gupta.
102. National Symposium on New challenges in Chemistry: GNDU, Amritsar: March 2006 ,Delivered an invited lecture, B.D. Gupta
103. The Singapore international chemistry conference December 6-8, 2005, National Univesity of Singapore, Singapore. Presented an invited lecture on Lewis acid catalyzed vinylogous condensation., R. Gurunath.
104. Symposium on Structure and Dynamics, IIT Madras, Chennai April 22, 2005 (Invited talk), N. Sathyamurthy.
105. Recent Advances in Nanoscience and Technology, Periyar University, Salem Sep. 29, 2005 (Inaugural address), N. Sathyamurthy.
106. Humboldt Kolleg, Banaras Hindu University, Varanasi November 28-30, 2005 (invited talk), N. Sathyamurthy.
107. Recent Trends in Fluorescence Spectroscopy and its Applications, Kumaun University, Nainital Dec. 1-3, 2005 (invited talk), N. Sathyamurthy.
108. National Symposium on Spectroscopy and its applications, Indian Association for the Cultivation of Science, Kolkata, January 18-20, 2006 (Inaugural address), N. Sathyamurthy.
109. Spectroscopy and dynamics of molecules and clusters, International Center, Goa, April 2006 K. Srihari
110. National conference on nonlinear systems and dynamics, Ramanujan Institute of Mathematical Sciences, Chennai, February 2006, K. Srihari.
111. East Midlands Mathematical Physics workshop on Molecules in Motion, School of Mathematical Sciences, University of Nottingham, June 2005, K. Srihari.
112. Invited lecture at National Symposium on Organic Synthesis: New Dimensions, BHU, Varanasi (March 6-7, 2005, F.A. Khan.
113. Presented a poster at Gordon Research Conference on Free Radical Reactions-2005, Holderness School, Plymouth, NH, USA, July 3-8, 2005, F.A. Khan.
114. Invited lecture at International Symposium in Organic Chemistry - 2006 (INSOC-2006, organized by School of Chemical Sciences, Mahatma Gandhi University, Kottayam. 9-11th January 2006, F.A. Khan
115. Invited lecture at Building Bridges, Forging Bonds for 21st Century Organic Chemistry and Chemical Biology (OCCB-2006: 6-9 January, 2006 at NCL pune and 11-12 January, 2006 at IICT Hyderabad, F.A. Khan

116. Control of Photoreactivity of o-Alkylaromatic Aldehydes in the Solid State, Invited Talk Gordon research Conference on Organic Photochemistry, Smithfield, Rhod Islands, USA, 13th July, 2005, J.N. Moorthy.
117. Organic Molecular Photoreactivity and Molecular Association IFCOS meeting, Indian Institute of Chemical Technology, Hyderabad, 23rd October, 2005, J.N. Moorthy.
118. Control of Molecular Reactivity and Molecular Association Invited Talk National Organic Symposium Trust (NOST) Meeting, Goa, 29th Oct., 2005, J.N. Moorthy.
119. 12th International conference on Biological Inorganic Chemistry, July 31 - August 5, 2005, University of Michigan, Ann Arbor, USA. Attended (my Ph D student Akhilesh K. Singh presented our contributed paper), R.N. Mukherjee.
120. Invited Talk in the National Symposium on Modern Trends in Inorganic Chemistry (MTIC-XI) held on IIT Delhi from Dec. 8-10, 2005, S.P. Rath.
121. Singapore International Chemical Conference - 4 (December 8-10, 2005, S.V. Verma.
122. CRSI-RSC-EPSC Workshop, IIT Bombay (February 2, 2006, S. Verma.
123. 8th National Chemistry Symposium, IIT-Bombay (February 3-5, 2006, S. Verma.
124. Delivered a lecture at a National Organic Symposium Trust symposium at Goa, India 25-29 October 2005 Title: Conjugated Nitro Sugars in the Synthesis of Biologically Important Molecules, Y.D. Vankar.
125. Delivered a plenary lecture at XX Carbohydrate Conference, Lucknow
126. University 24-26th November 2005 Title: Newer Synthetic Approaches towards Glycosidase Inhibitors and Glycosamino Acids using Chemistry of Nitroaliphatics, Y.D. Vankar.
127. Delivered a lecture at Indo-Singapore Symposium held at Singapore (February 20-21, 2006 Synthetic Endeavors Towards Glycosidase Inhibitors and Glycosamino Acids, Y.D. Vankar.
128. ICT, Hyderabad, October 2005, V.K. Yadav
129. NOST, Goa, October 2005, V.K. Yadav.
130. Bioremediation of BTEX contaminated groundwater. Proceedings National Workshop on sustainable Pollution control, held at IET, Lucknow. Dec. 2005, Poonam Singh and Leela Iyengar.
131. Azo dye decolourization and degradation by microorganisms. Proceedings National Workshop on sustainable Pollution control, held at IET, Lucknow. Dec. 2005, Leela Iyengar.

132. Anoxic bacterial decolourization of Acid Orange 7. Proceedings National Workshop on Environmental Biotechnology, Biological perspective: Issues and Challenges, held at Mumbai University, Mumbai. Feb. 2006, Taruna Joshi, Anjali Pandey and Leela Iyengar.
133. Attended as one of the collaborators, representing India in a multination research scheme on : Optimization Strategies for the Management of Change in Coastal Zone and Inland Waters Caused by Salinity Intrusion, Funded by Asia Pacific Network (APN), held in SriLanka, October, 2005, Datta, Bithin.
134. National Symposium on Structural Dynamics, Random Vibrations & Earthquake Engineering (NSSD-2005, Bangalore; July 21-22, 2005, Gupta, Vinay Kumar.
135. Presented an Invited Paper and Chaired a Technical Session, International Conference on Advances in Structural Dynamics and its Applications (ICASDA-2005, Visakhapatnam; December 7-9, 2005, Presented a Keynote Lecture and Chaired a Technical Session, Gupta, Vinay Kumar.
136. 2nd Indian International Conference on Artificial Intelligence (IICAI2005, December 20-22, 2005, Pune, INDIA, presented two contributed papers, Jain Ashu.
137. American Geophysical Union (AGU)'s Fall Meeting 2005, December 5-9, 2005, San Francisco, California, USA, presented two contributed papers, Jain Ashu.
138. Department of Science & Technology (DST)'s brainstorming seminar on Continental Tropical Convergence Zone (CTCZ), Indian Climate Research Programme, 28-30 June 2005, Birla Institute of Technology, Mesra, Ranchi, India, Jain Ashu.
139. One-day brainstorming session of the UNESCO's International Hydrological Programme - Phase VII, May 20, 2005, Indian Institute of Science, Bangalore, India, Jain Ashu..
140. Attended Global IIT Alumni Conference, Bethesda, USA, May 20 to May 22, 2005, Jain, S.K.
141. Attended International Conference on 8 October 2005 Earthquake in Pakistan: Its Implications and Hazard Mitigation, Islamabad, January 18-19, 2006, Jain, S.K.,
142. Attended Earthquake Summit Beijing, China, during February 20 - 22, 2006, Jain, S.K.
143. First Indo-US Frontiers of Engineering Symposium, 2-4 March 2006, Agra; Session Co-Chairman, Natural Disaster Simulation and Mitigation, Murty, C.V.R.

144. Presented paper in the Conference on Geo Congress, Atlanta, USA, Feb 28 2006- March 1 2006, Patra, N.R.
145. 3rd M.I.T. Conference on Computational Fluid and Solid Mechanics, M.I.T., Cambridge, MA, USA, June 2005, Paper presentation, Prashant A.
146. International Conference on Computational & Experimental Engineering and Sciences, Chennai, India, Dec 2005, Paper presentation, Prashant A.
147. First National Frontiers of Engineering Symposium, New Delhi, February 3-5, 2006, Invited speaker on experiemntal earthquake engineering, Rai, D.C.
148. First Indo-US Frontiers of Engineering Symposium, Agra, March 1-4, 2006, invited speaker on experiemntal earthquake engineering, Rai, D.C.
149. Hydro-2005, Tumkur, December 2005, three contributed papers, Srivastava, R.
150. Size resolved chemical composition of Fog at Kanpur, India, Asian Aerosol Conference, December 2005, Manar, M., S. N. Tripathi, and S. Kishore.
151. Measurements of aerosol parameters during ISRO-GBP Land campaign-II at Kanpur (Indo-Gangetic Basin)-Chemical Properties, Asian Aerosol Conference, December 2005, Srivastava, A. K., S. N. Tripathi, N. Chinnam, Sagnik Dey, M. Manar, Vijay Kanawade, A. Agarwal, S. Kishore, R. B. Lal, V. Tare and M. Sharma.
152. What triggers particle nucleation during TOPSE atmospheric nucleation event?, Asian Aerosol Conference, December 2005, Kanawade, Vijay and S. N. Tripathi.
153. Evidences for New Particle Formation in the Arctic as a Part of TOPSE Atmospheric Nucleation Event, AGU Fall Meeting, San Francisco, December 2005, Tripathi, S. N. and Vijay Kanawade.
154. Model Prediction of Sulfuric Acid in the Tropical/Subtropical Cirrus Clouds as a Part of Crystal-Face Mission, AGU Fall Meeting, San Francisco, December 2005, Kanawade Vijay and S. N. Tripathi.
155. Symposium on wireless Networking System, University of Philippines, Nov 2005, Bhaskaran Raman
156. XXVIII URSI General Assembly, New Delhi, Oct 2005, Bhaskaran Raman
157. 11th Annual International Conference on Mobile Computing and Networking Paper, Cologne Germany, Aug 2005, Bhaskaran Raman
158. FSTTCS `Foundations of Software Techology, Hyderabad, Dec 2005, Sumit Ganguly

159. ISAAC Int'l Symp. on Automata, Algorithms, China, Dec 2005, Sumit Ganguly
160. ACM SODA Symp. on Discrete Algorithms, USA, Jan 2005, Sumit Ganguly
161. ICDCIT 2005, Bhubaneswar, Dec 2005, R K Ghosh.
162. IWDC 2005, Kharagpur, Dec 2005, R K Ghosh.
163. Satyam's conference on software Reliability, Hyderabad, July 2005, Contributed Paper, Pankaj Jalote.
164. 13th Asia Pacific Software Engineering Conference, APSEC 2005, Taiwan, Dec2005, Co- Program Chair, Pankaj Jalote.
165. ICICT 2005, Cairo , Dec 2005, Pankaj Jalote.
166. 11th International Computing Conference (COCOON 2005, Yunnan, China, Aug 2005, Shashank Kumar Mehta.
167. 31st International Workshop on graphs Theortic Concepts in Compter Science, (WG 2005 , Metz, France, June 2005, Shashank Kumar Mehta.
168. OOPSLA 2005, San Diego, Oct2005, Presenting a paper, T V Prabhakar.
169. CIT 2005, Shanghai, Sept 2005, Presenting a paper, T V Prabhakar.
170. National Science Congress, Hyderabad, Jan 2006, Presenting a paper, T V Prabhakar.
171. Pan-IIT Conference, Washington DC, USA, May, 2005, Attended, Dheeraj Sanghi.
172. 12th Int'l Conf. on High Performance Computing (HIPC 2006,, Goa , Dec 2005, Attended, Dheeraj Sanghi.
173. The Fourth IASTED International Conference on Computational Intelligence 2005, Calgary, Canada, July 2005, Contributed Paper, R M K Sinha.
174. International Conference on Artificial Intelligence ICAI-2005, Las Vegas, USA, July 2005, Session Chair, R M K Sinha.
175. Symposium on Modelling and Shallow Parsing of Indian Languages (MSPIL-06, IIT Bombay, April 2006, Presented Invited Paper, R M K Sinha.
176. FSTTCS, Hyderabad, Dec2005, Chaired a Session, Anil Seth.
177. IEEE International Symposium on Information Theory, Adelaide Australia (presented a contributed paper.), A. Ghosh
178. 12th National Conference on Communications, I.I.T. Delhi (IIT Kanpur representative in joint Telematics group meeting.) A Ghosh
179. IEEE Power Engineering Society General Meeting at San Francisco, California, USA in June 2005, A Ghosh
180. 2nd National Power Electronics Conference at IIT Kharagpur in December, 2005, A Ghosh.

181. National Power Electronics Conference (NPEC) 2005, IIT Kharagpur, Dec. 22-24, 2005, S.P. Das.
182. Presented a Contributed Paper and Chaired a Session on Application of Power Electronics in Power Systems-II, SP Das.
183. 13th International Conference on Intelligent System Application to Power (ISAP05, Washington, USA, November 6-10, 2005. (presented paper), SN Singh.
184. International Conference on Future Power System, Netherlands, November 16-18, 2005. (presented paper), SN Singh.
185. National Conference on Electric Power Technology, Management and IT Application, MMMEC Gorakhpur, February 17-18, 2006. (Delivered Keynote lecture), SN Singh.
186. Tutorials delivered at National Conference on Technical Challenges in Power Systems, KNIT Sultanpur, March 24-25 2006, S. N Singh.
187. Invited speaker, ELELTECH, CDAC-Hyderabad, 8-9 August 2005, Y. N Singh.
188. Invited speaker, Conference on Digital Learning Environments, ISI Bangalore Center, 11-13 January 2006, Y. N Singh.
189. Invited speaker, keynote speaker, session chairman, Conference on Electronic circuits and communications, Feb 9-10, 2006, TIET, Patiala, Y. N Singh.
190. Chaired the Grid Related Issues International Conference on Wind Energy: Trends and Issues, at National Institute of technical teachers' Training and Research, Bhopal, January 5-7,2006, -.
191. Winter School on Speech Recognition, (IISc., Bangalore), Jan. 2006 , Invited Speaker, Panelist in Discussion, S Umesh
192. National Conference on Communications , (IIT,Delhi), Jan 2006, Chairing of a Session,Presented contributed papers, S Umesh.
193. INAE Workshop on Image and Speech Processing (IIT, Chennai), Feb. 2006, Panelist in Discussion, S. Umesh.
194. Attended 2nd Indian International Conference on Artificial Intelligence, Pune, India, December 20-22, 2005. Chaired two sessions, Ramprasad Potluri.
195. ICCV- 2005, Beijing, China, 15-20 Oct, 2005, K. S Venkatesh.
196. NCC 2006, IIT Delhi, 27-29 January, 2006, K. S Venkatesh

197. Chaired a session at the 12th National Conference on Communications held at IIT Delhi during 27-29 Jan, 2006, A. K Chaturvedi.
198. International Semiconductor Device Research Conference (ISDRS), Bethesda, Maryland, U.S.A., December 7-9, 2005, Contributed paper, S. Qureshi.
199. IEEE International Conference on System, Man and Cybernetics, Hawaii, USA, 10-12 October, 2005, contributed paper, L. Behera.
200. 3rd International Conference on Materials for Advanced Technologies (ICMAT 2005 and 9th International Conference on Advanced Materials (ICAM 2005, 03-08 July 2005, Singapore: Presented two contributed papers, S. Kar.
201. Third International Symposium on High Dielectric Constant Gate Stacks, 16-21 October 2005, Los Angeles, California, USA.: Participated as Chairman of the Symposium and Session Chair. S. Kar.
202. IEEE PES General Meeting 2005 June 12-16 2005 in San Francisco, California (chaired a session and presented paper). S. C Srivastava.
203. National Power Engineering Conference (NPEC 2005 held at Thiagarajar College of Engineering, Madurai, during 16-17 December 2005 (Offered a tutorial and delivered inaugural address), S. C Srivastava.
204. International Seminar and Tutorial on Power Transmission Research Interests and Challenges, Central Power Research Institute Bangalore, December 20-22, 2005, Delivered tutorial and chaired session, S. C Srivastava.
205. National Conference on Electric Power Technology, Management and IT Application, MMMEC Gorakhpur, February 17-18, 2006. (Delivered Inaugural Keynote lecture and chaired a session), S. C Srivastava.
206. International Conference on Power System Operation in Deregulated Regime (ICPSODR-2006, IT BHU, India, March 6-7, 2006 (Delivered Keynote lecture and chaired a session) S. C Srivastava.
207. International Conference of Antenna Technologies (ICAT2005, Feb 23-24, 2005, ISRO, Ahmedabad, India, A.R. Harish.
208. International Radar Symposium India - 2005, Bangalore, 19-22 December 2005, AR Harish.
209. Presented a paper at 2nd National Power Electronics Conference, 2005, IIT Kharagpur, INDIA, Dec 22-24, 2005. Chaired a session, P. Sensarma.
210. The Triumph of the Religious Will, paper presented in the National Seminar on The Role of Faith and Reason in Religion, organized by Samvad, Navsadhana Kendra, Varanasi, March 23-25, 2006, B.H. Boruah.
211. What's the Use of Stories that aren't even true?: Politics and the Book, paper presented at the Asia- Pacific regional conference of the Society for

- the History of Authorship, Reading and Publishing (SHARP) at Jadavpur University, January 2006, Mini Chandran.
212. Instructional Design: A Perspective Based on Cognitive and Constructivist Approaches. 7th International Conference on Cognitive Systems, Centre for Research in Cognitive Systems, NIIT Institute of Technology, New Delhi, 14-15 December, 2005, S. Dixit..
 213. Experience of Disease and Reporting of Physical Symptoms: Relevant Issues and Theoretical Tenets. Section of Psychology in the 29th Indian Social Science Congress, Department of Psychology, Lucknow University, 27-28 December, 2005, Singh, R. and S. Dixit.
 214. Impact of Disease Information on Cancer Patients: Issues and Challenges. Section of Psychology in the 29th Indian Social Science Congress, Department of Psychology, Lucknow University, 27-28 December, 2005, Mehrotra, A. and S. Dixit.
 215. Lay Understanding of Mental Health and Illness: A Social Representations Approach. National Seminar on Psychophysiology of Well Being, Department of Psychology, M.D. University, Rohtak, 28-29 March, 2006, Maurya, A.S. and S. Dixit.
 216. Invited Theme paper National Seminar on Human Rights: Indian Scenario. DAV College, Kanpur, 12 December 2005, M. Jha.
 217. Paper presenter and panelist Symposium on Sociology in the IITs and IIMs: Trends, Prospects and Possibilities Deptt. Of HSS, IIT Bombay, 12-13 November 2005, Munmun Jha.
 218. Invited paper National Seminar on Aging Issues and Emerging Trends, MCM DAV College for Women, Chandigarh, 21-22 October 2005, Munmun Jha.
 219. The Conceptualization of Social Justice, Psychology Section, Indian Social Science Congress, Lucknow, Department of Psychology, Lucknow University, December 27, 2005, L. Krishnan..
 220. Panelist in Discussion - Workshop on Identity and Collective Experience, Jointly organized by Department of Psychology, Allahabad University, Allahabad, and University of Dundee, Scotland, UK - Feb. 8-9, 2006, L. Krishnan.
 221. Sociology of Education in India: Looking Back, Looking Forward, National Seminar, Zakir Husain Centre for Educational Studies, Jawaharlal Nehru University, New Delhi, 9-10 March 2006. Invited paper: Does education really change anything: Theoretical reflections on a case study, Amman Madan.
 222. Kiski Ankhon Ka Tara Hai Tu?: Picturing Motherhood and Adoption in Popular Hindi Cinema, presented at the 26th Annual Meeting of the

- National Women's Studies Association, Orlando, FL, June 9-12, 2005, Suchitra Mathur.
223. Holmes Reincarnated: A Study in Postcolonial Transposition, presented at The Detective Novel: Themes and Perspective, an international Conference organized by the Institut Catholique de Paris, Paris, France, May 10-12, 2005, Suchitra Mathur.
224. 20th Century Literature and Culture Conference. University of Louisville, February 23-25 2006, Presented an invited paper titled, Philip Roth's Nostalgia for the Yiddishkeit in The Plot Against America, G. Neelakantan.
225. Chaired a Technical Session and presented a paper entitled Productivity issues in In-House R&D units: An empirical enquiry in Indian metal industry in the International Conference on Productivity and Quality Research, organized by IIT Delhi in collaboration with International Society for Productivity and Quality Research, (University of Miami, USA) during December 12-15, 2005, Binay Kumar Pattnaik.
226. Delivered a keynote address titled, Sociology in IITs: Retrospect and Trends in Symposium on the Sociology in the IITs and IIMs: Trends, Prospects and Retrospects organized by the Department of Humanities and Social Sciences at Indian Institute of Technology Bombay during November 2005. Binay Kumar Pattnaik.
227. Presented a paper entitled Changing trends of Technological Research in India under Globalization in the International Conference on Globalization and Economic Asymmetries organized at the IIM Kozhikode in association with The Athenian Policy Forum INC, during December 15-17, 2005, Binay Kumar Pattnaik.
228. Chaired a Session: 11th International Conference on Productivity and Quality Research at IIT Delhi New Delhi, 12-15 December 2005, P.M. Prasad.
229. Presented a paper titled, Ethnography: A Critical Overview at the National Seminar on Holistic Paradigms in Psychology held at the Department of Psychology, Zakir Husain College, University of Delhi on 10-11 March, 2006, K.R. Priya.
230. Presented a paper titled, Understanding Disaster Trauma in a Culture-Sensitive Mode: Theoretical and Methodological Issues at the National Seminar on Environment and Human Behaviour held at the Department of Psychology, D.D.U. Gorakhpur University on 21-22 March, 2006, K.R. Priya
231. Role of Change Agents in Delivering the Service for Advance Warning for Disaster Prevention at Community Level, National Workshop on Community Approach to Flood management in India, organized by

- Institute for Resource Management & Economic Development in association with WMO and GWP, November, 28-29, 2005, Rath B.
232. A Study of Changing Patterns of Energy Consumption and Energy Efficiency in the Indian Manufacturing Sector in the 11th International Conference on Productivity and Quality Research, IIT Delhi, December 12-15, 2005, Rath B, & Jena P.R.
233. Rath. B. & Sahu N.C. 2005, Impact of Common Property Resources (CPRs) Utilization on the State of Labour Market in a Tribal Economy of India, 47th Annual Conference of The Indian Society of Labour Economics, JNU, New Delhi, December 16-18, 2005, Rath B. & Sahu.
234. Sustainable Development of Land and Water Calls for Application of IWRM Approach, National Seminar on Sustainable Development of Land Resources: Opportunities and Challenges, Armapore PG Degree College, Kanpur University, January 27-28, 2006, B. Rath.
235. Trade Liberalization Policy vis-à-vis Pollution Haven Hypothesis: Empirical Evidence from India, the Development Co-operation of Ireland International Conference, Dublin City University, Dublin, Ireland, March 23- 24, 2006, Rath B. & Jena P.R.
236. Invited to deliver the Inaugural Address of the International Bi-annual Session of the Global congress of Vedanta held at the Hindu University America, Orlando, FL, USA, October 8-12, 2005. Title of the Inaugural Address: The Beauty of Asymmetrical Identity: A Study of Sankara's Concept of Ananyatva, Srinivasa Rao.
237. Invited to present the paper Philosophy and the Challenges Facing the Modern World at the 24th Indian Social Congress held at the University of Lucknow, Lucknow between 26-30 December, 2005, Srinivasa Rao.
238. Invited to present the paper Reason and Religion: Why There is a Mismatch at the National Seminar on the Place of Reason and Faith in Religion organized by Samvada at Varanasi between 24-26, March, 2006, Srinivasa Rao.
239. Presented a paper on Colonial Chromosomes and Postcolonial Genes: Hybrid Metros in the Making of India in the Annual Conference of the Indian Association for Commonwealth Literature and Language Studies (IACLALS) on The Nation and the Postcolonial held from February 3 to 5, 2006 at the Department of English and Other Modern European Language, Visva-Bharati, Santiniketan, T. Ravichandran.
240. Presented a paper on Discrepancies in the Discourse of Oppositionality: De-Scribing the Exile Representations in Untouchable and Coolie in the International Seminar on Mulk Raj Anand and the Early Indian Novel in English held from December 11 to 13, 2005 jointly organized by the

- Department of English, Osmania University, Hyderabad and the Indian Association for Commonwealth Literature and Language Studies (IACLALS), T. Ravichandran.
241. 11th International Conference on Productivity and Quality Research (ICPQR), IIT Delhi, Dec 12-14, 2005, Chaired a Session on Productivity and Quality Concepts and Measurement Issues, K.K. Saxena.
 242. Presented a paper on Internationalization of Intellectual Property Rights: Implications for the Developing Countries. International Conference on Globalisation and Economic Asymmetries, IIM Kozhikode in association with The Athenian Policy Forum Inc, Dec 15-17, 2005, K.K. Saxena & Ruchi Sharma.
 243. National Seminar on Marriage & Family-Challenges and Trends, Department of Social Work, CSJM University, Kanpur, 15-16 Jan. 06, A.K. Sharma.
 244. National Seminar on Rethinking the National Legacy: Gandhi and the Freedom Movement, Jamia Millia Islamia, New Delhi, 20-21 February 2006, as discussant on paper entitled Gandhi and the Labour Problem, by Shambhu Joshi, A.K. Sharma.
 245. Dissemination Seminar: Reproductive and Child Health Project (DLHS-RCH, 2002-04), International Institute for Population Sciences, Mumbai and Population Research Centre, Lucknow University, Lucknow. Sponsored by Ministry of Health and Family Welfare, Govt. of India, New Delhi, at Hotel Clarks, Avadh, Lucknow, 26 May, 2005, participated and chaired a session, A.K. Sharma.
 246. Productivity and Efficiency in State Transport Undertakings in India: Determinants and Implication for Pricing in the Regional Science Association International (RSAI) Symposium and 37th Annual Conference of the Indian Regional Science Association held at the Indian Institute of Management Bangalore from January 6 to 8, 2006, S.K. Singh.
 247. Productivity, Prices and Profitability: A Case Study of Municipal Transport Undertakings in India in the 11th International Conference on Productivity and Quality Research organized by the Indian Institute of Technology Delhi in association with International Society for Productivity & Quality Research, USA. The Conference was held at IIT Delhi from December 12 to 15, 2005, S.K. Singh
 248. Transport Policy for Clean Air in Urban Areas in a National Conference on Urban Transport Planning and Management organized by the Central Institute of Road Transport (CIRT) Pune in collaboration with the Association for Transport Development in India (ATDI), New Delhi. The Seminar was held in CIRT Pune from October 20 to 22, 2005, S.K. Singh

249. Issues in Urban Transportation in India in the 16th Regional Conference of Clean Air and Environment in Asian Pacific Area 2005 (RCCA) held in the Kogakuin University, Tokyo, Japan from August 2 to 4, 2005, S.K. Singh.
250. Connecting nine dots with four straight lines: Toward a holistic framework in industrial organizational psychology. Invited paper in National Seminar on Holistic Paradigm in Psychology: Problems and Prospects. Dept of Psychology, Zakir Hussain College, New Delhi, March 10 - 11, 2006, Sinha, A. K
251. Use and interpretation of some multivariate statistical analyses in social science research. Invited lecture in two week training course on computer application in social science data analysis, sponsored by ICSSR, New Delhi, organized by G. B. Pant Social Science Institute, Allahabad, February, 13 - 25, 2006, Sinha A.K.
252. Indo-US Initiative on Technopreneurship in Academia; 23-25 January 2006; New Delhi; Conducted Jointly by, Indo-Us Science and Technology Forum, CSIR, Harvard-MIT and NSTEDB, DST, BV Phani.
253. Workshop on Competition Assessment and Regulatory Impact Analysis: Instruments for Competition Advocacy, March 17-18, 2006, New Delhi, Anoop Singh.
254. Advisory Committee Meet on Electricity Futures by Multi-Commodity Exchange of India, Jan., 2006 Mumbai, Anoop Singh.
255. International Conference on Knowledge Management, October, 28 -29, 2005, Charlotte, NC, USA, J. Chatterjee.
256. American Society of Information Science and Technology, International Conference on bringing Research and Practice together, October, 30 - November, 2, 2005, Charlotte, NC, USA, J. Chatterjee.
257. Manufacturing Summit on Competitiveness, August, 18-19, 2005, Indian School of Business, Hyderabad, J. Chatterjee.
258. Attended Two-Day Workshop on Operations Research Weekend, Organised by IIT, Delhi, and IBM Research, April 8-9, 2006, S Swami.
259. Round table discussion on Dissemination of Clean Technologies in Small and Micro Enterprises, Organisers: CoSMiLE (Competence Network for Small and Micro Learning Enterprises), TERI and Swiss Agency for Development and Cooperation (SDC), New Delhi, November 9, 2005, S Swami, Invited Member .
260. Attended Two-Day Training Program on Teaching Operations Management Topics Using SAP R/3, Organised by SAP, Bangalore, and

- Kelley School of Business, Indiana University, (Prof. M.A. Venkataramanan), August 8-9, 2005, S Swami.
261. INFORMS Marketing Science Conference, Goizueta Business School, Emory University, Atlanta, USA, June 16-18, 2005, S Swami.
262. Technology mapping using patent literature for Operations Research ,Invited Paper, ICORAID-2005 ORSI, Bangalore ,27-29 December 2005, Ashok K Mittal.
263. Patent Management at IIT Kanpur Indo- US Symposium on IP Management in Public Private Partnership Manesar, Feb12-14 , 2006, Ashok K Mittal.
264. Role of Research Science and Engineering University in Developing Countries, Invited talk LUMS- SSE Workshop, Lahore Pakistan Feb 16-17, 2006, Ashok K Mittal.
265. Text mining for Patent Literature, Workshop on Role of patent Literature in Technology Mapping, IIT Kanpur, December 1, 2005, Ashok K Mittal.
266. National Convention of Quality Circle Forum of India , Ernakulam, December 27-29, 2005, Ashok K Mittal.
267. ICORAID-2005-ORSI , Bangalore , 27-29 December, 2005, Ashok K Mittal.
268. Eighth National convention on Student Quality Circle , Lucknow, 2-5, December, 2005, Ashok K Mittal.
269. ICORD-V Fifth International Conference of O.R. in Development, Jamshedpur, 19-21 December, 2005, Ashok K Mittal.
270. Indo-US Symposium on IP Management in Public-Private Partnership, Manesar 12-14 February, 2006, Ashok K Mittal.
271. 15th Kanpur Chapter Convention on Quality Circle , Kanpur , 1 October, 2005, Ashok K Mittal.
272. LUMS -SSE workshop, Lahore Pakistan, February 16-17, 2006, Ashok K Mittal.
273. 9th Discussion meeting on harmonic analysis, HRI, Allahabad in Oct.'05 - invited talk on Integer translates L^p functions and chaired one session - S. Madan.
274. 9th Discussion meeting on Harmonic Analysis HRI, Allahabad from Oct. 05 - invited talk, titled Order Convolution and Vector-valued multipliers, also chaired a session. . U.B. Tewari
275. 9th Discussion meeting on harmonic analysis, HRI, Allahabad in Oct.'05 Contributory Paper by R. Rawat.

276. Recent advances in operator's theory and operator algebras III, I.I.Sc. Bangalore, December 12-22, 2005, invited lecture 'Approximation by K-finite functions in L^p spaces' by S.K Ray.
277. Recent advances in operator's theory and operator algebras III, I.I.Sc. Bangalore, December 12-22, 2005, lecture On Frechet algebras of power series by S.R. Patel.
278. 55th session of International Statistical Institute Sydney, Australia, April 2005, contributory paper 'On the regression method of estimation of population mean from incomplete data through imputation' by Shalabh
279. Golden Jubilee Congress of Indian Society of Theoretical and Applied Mechanics (An International Meet), 14-17 December, 2005, IIT Kharagpur, Invited talk Three dimensional bioconvection by S. Ghorai.
280. 20th summer conference on topology and its applications; July 10-14, 2005 Talk Order Convolution and vector-valued multipliers by U.B. Tewari.
281. International Conference on Reliability and Survival Analysis, at Indian Statistical Institute, New Delhi, December 20- 22, 2005- paper On Stochastic Comparisons of Poisson and Binomial Random Variables With Their Mixtures presented by N. Misra.
282. International Conference on Operations Research Applications in Infrastructure Development held at IISc, Bangalore from 27th to 29th Dec.'05, - paper presentation An efficient local search scheme for minimising weighted mean absolute deviation, by P. Sharma, A. Gupta.
283. International symposium on Algorithmic Operations Research at Simon Fraser University, Burnaby, Canada on the 27th Jan'06. Sharma, P. (participated)
284. Mini-symposium on Bilevel programming at T.U. Bergakademie, Freiberg, on 19th May 2005 Paper presented (with Stephan Dempe) titled: 'Bilevel programming with convex lower problems' by Dutta, J.
285. 8th International conference on generalized convexity and generalized monotonicity at University of Insubria, Varese, Italy, 3rd-8th of July 2005. Invited paper (jointly with Stephan Dempe), Dutta, J.
286. Recent advances in Operations Research and Graph Theory Calicut on December 16th and 17th, 2005 distinguished speaker Sridharan, M. R..
287. Commutative Algebra and Algebraic Geometry, Indian Institute of Mathematical Sciences, Chennai, August 1-6, 2005. Talk by Maloo, A.K.
288. 60th Annual meeting of the STLE, Las Vegas, NV, USA, May 15-19, 2005. Contributory paper (jointly with Saxena, S) Thermoelastohydrostatic lubrication of an externally Pressurized conical bearing with temperature and pressure dependent viscosity, by Sinha, P.

289. 3rd MIT Conference on Computational Fluid & Solid Mechanics, Cambridge, MA, USA, June14-17, 2005, Contributory paper (jointly with Rao, P. S.) A streamline upwind Petrov - Galerkin finite element Simulation of thermo-hydrodynamic lubrication in titled pad slider bearing considering fluid inertia and heat conduction to the pad: reference to load generation in a parallel slider Sinha, P.
290. SCI 2005 international Conference held at Orlando, U.S.A, July 10-12'2005 - invited paper by Kadalbajoo, M.K.
291. Scientific Computation, Numerical Analysis and Application IISc Bangalore, India during July 18-21'2005 invited paper by Kadalbajoo, M.K.
292. International conference on Functional and numerical analysis I.I.T. Bombay, 7-9, December 2005, invited talk Convergence of slices and subdifferentials by Shunmugaraj, P.
293. Conference in Reliability Analysis Indian Statistical Institute, New Delhi, Dec. 20-22, 2005, paper Analysis of partially complete time and type of failure data, Kundu, D.
294. Indo-Chinese Conference on Probability and Statistics Indian Statistical Institute, Kolkata, Jan 4-6, 2006, paper: Generalized exponential distribution, Kundu, D (jointly with Gupta, R.D.).
295. National Conference on Lifetime Data Cochin University of Science and Technology, Feb.20-22, 2006. Invited talk Step-Stress Model by Kundu, D.
296. International Conference on Topics in Functional and Numerical Analysis Indian Institute of Technology, Bombay, 07-09, December 2005, paper presented (jointly with Muslim M.), 'Approximations of Solutions to Nonlocal Functional Differential Equations' Bahuguna, D.
297. 17th Banach Algebra Conference at University of Bordeaux1, Bordeaux1, France, 2005 invited talk On Frechet algebras of power series; also chaired a session, Patel, S.R.
298. DST-CARDMATH working group & 4th update meeting on automata, concurrency, logic and verification, IIT Bombay, July, 2005, Invited Talk - Non-monotonic Reasoning, Banerjee, M.
299. 1st Indian Winter School on Logic and its Relationship with Other Disciplines, IIT Bombay, January, 2006 - Tutorial on Reasoning under uncertainty, Banerjee, M.
300. 1st International Conference on pattern recognition and machine intelligence (PreMI '05, ISI Kolkata, December, 2005, paper presented by Banerjee, M.,
301. Conf. on Topics on functional and numerical analysis, IIT, Bombay, from 7th to 9th Dec. 2005. Patel, S.R.

302. 9th Discussion meeting on harmonic analysis, HRI, Allahabad in Oct.'05, participated, S.R. Patel.
303. 4th Int. Conf. OWCHMT, May 17-20, 2005, Paris. Paper: Numerical predication of heat transfer and fluid flow in a complex ADSS geometry with straight guide-using SUPG-FEM, pp. no. ICCHMT 05163, Rathish Kumar, BV. Prakash, A.K., Biswas, G.
304. ASME, Summer Heat Conf. July 17-22, 2005 San Francisco, U.S.A. Paper HT 2005-72445, Thermal-Hydraulics of air ADSS with sharp 180° bend and St. flow guide using FEM, Rathish Kumar, BV., Prakash, A.K., Biswas, G
305. ASME. Int. Mech. Engng. Congress and Exposition, Nov. 5-11, 2005, Paper #IMEC92005-80262, 2005 Florida, U.S.A. Numerical simulation of ADSS with surface heat flux and heat generation using FEM, Rathish Kumar, BV., Prakash, A.K., Biswas, G
306. 18th National and 7th ISHMJ-ASME HMTC, Jan. 4-6, 2006 IIT Kharagpur, Paper # 4004, Numerical simulation of complex ADSS with FEM, Rathish Kumar, BV. Prakash, A.A., Biswas, G.
307. International Conference on Computational & Experimental Engineering and Sciences, 2005, December 1-6, IIT Madras, Dynamic Fracture Testing of Brittle Polymers Using a Modified Hopkinson Pressure Bar: An Evaluation), Invited paper, 2005, V.F. Evora and V. Parameswaran.
308. International Conference on Advanced Materials Design and Development, A top down approach to the modelling of fracture in amorphous glassy polymers, 14-16 December 2005, Goa, India, S. Basu and R. Estevez.
309. Session Chair and Organizer for SAE World Congress 2005, P-27: CI Engine Performance for Use with Alternative Fuels Session, to be held in Detroit, USA April 2005, A.K. Agarwal.
310. Session Organizer for SAE World Congress 2006, P-19: CI Engine Performance for Use with Alternative Fuels, Session held in Detroit, USA, April 2006, A.K. Agarwal.
311. Session Chair and Organizer for ASME- IC Engine Division Spring Technical Conference 2005, Track 1: Advanced Technology Session, to be held in Chicago, USA April 2005, A.K. Agarwal.
312. Session Chair and Organizer for ASME- IC Engine Division Spring Technical Conference 2006, Track 1: Session 4.1 on Alternative Fuels, to be held in Aachen, Germany, May 2006, A.K. Agarwal.

313. Conference Session Chair at NTPC National Vision Conference on Energy, Held in Delhi, January 2005, A.K. Agarwal.
314. 50th (Golden Jubilee) ISTAM Congress at IIT Kharagpur, 14-17 December 2005. K. Muralidhar.
315. Crystal Growth and Characterization, Loyola College, Chennai, 29th September 2005. K. Muralidhar.
316. *ICAMDD 05*. Goa. 14-17 December 2005. Presenting an invited paper. S. Mahesh
317. ASME Summer Heat Transfer Conference, San Francisco, California, USA, July 17-22, 2005. Contributed Paper. P.S. Ghoshdastidar.
318. Golden Jubilee Congress of Indian Society of Theoretical and Applied Mechanics (An International Meet), IIT Kharagpur, December 14-17, 2005. Invited Paper. P.S. Ghoshdastidar.
319. Some Aspects of Kaleidoscopic Flow Past a Square Cylinder, Aswathanarayana Honorary Lecture, 32nd National Conference on Fluid Mechanics and Fluid Power, Osmanabad, India, HL1-1-21, 15-17 December, 2005, G. Biswas.
320. Micro PIV workshop at Delft University, Netherland, April 2005, P.K. Panigrahi.
321. Indo-US workshop on Design Engineering, Bangalore, 5th - 7th January 2006, P. Kumar.
322. *ICAMDD-2005*, International Conference on Advanced Material Design & Development, 14th -16th December, Goa, P. Kumar.
323. ASME Turbo Expo 2005, Reno, USA, June 6-9, 2005, Contributed Paper, S. Sarkar.
324. ASME Turbo Expo 2005, Reno, USA, June 6-9, 2005, Contributed Paper, S. Sarkar.
325. 8th Annual CFD Symposium, Aeronautical Society of India, Bangalore, 11-13th August 2005, Invited paper, S. Sarkar.
326. 18th National & 7th ISHMT-ASME Heat and Mass Transfer Conference, January 4-6, 2006, IIT Guwahati, India, A.K. Saha.
327. 18th National & 7th ISHMT-ASME Heat and Mass Transfer Conference, January 4 - 6, 2006, Guwahati, India,. Poster presentation, Sameer Khandekar.
328. Computer Aided Production Engineering 2005, November 2005, Melbourne, Australia, N.V. Reddy.
329. First Japan-India Joint seminar on Micro/nano Manufacturing Science, Tokyo, Feb 2006, N.V. Reddy.
330. National Conference on Design for Product Life Cycle, February 17-18, BITS Pilani, N.V. Reddy.

331. IIT Roorkee, August, 2005 (S. C. Agarwal)
332. MRS Symposium, San Francisco, March 27- April, 2005 (S. C. Agarwal)
333. Presented poster titled Polycrystalline form of the flux line lattice and the anomalous variation in the critical current density at the DAE solid state physics symposium (50th Golden Jubilee year), B. A. R. C., Mumbai, Dec. 5-9th, 2005. (S. S. Banerjee)
334. Indo-French workshop on free electron laser and their applications, Goa, March 20-24, 2006, Invited Oral Presentation (Sudeep Bhattacharjee)
335. Workshop on Engineering challenges for Future Accelerators, IIT Delhi, March 13th 2006, Invited participant from IIT Kanpur (S. Bhattacharjee)
336. Plenary Lecture at the International conference on Traffic and Granular Flow 2005, Berlin (Germany), 10-12 October, 2005. (D. Chowdhury)
337. Invited talk at the National Conference on Physics in the Trails of Einstein' Indian Physical Society (Kolkata), 21-22 November, 2005. (D. Chowdhury)
338. Life Science Interface Workshop, EPSRC (UK), Bangalore 2005. (D. Chowdhury).
339. Third SERC School on Condensed Matter and Materials Physics held in BHU during February 28 to March 27, 2006. Delivered eight lectures on Phase Transitions in Disordered systems (Amit Dutta)
340. Invited talk at Department of Physics, Universitaet Dortmund, Germany Shocks in asymmetric simple exclusion processes, June, 2005 (S. Mukherjee)
341. National Symposium on Applications of Mössbauer Spectroscopy, JNV University, Jodhpur, worked as the Chairman Scientific Committee, One Invited Paper and two contributed papers, Chaired one session. (H. C. Verma)
342. Contributed papers at International Conference on Strongly Correlated Electron Systems held in Vienna, Austria during July 26th -30th , 2005. (Z. Hossain)
343. Symposium on Einsteinian Physics Indian Statistical Institute, Calcutta, 25, 26 June 05. on the National Advisory Board' (S. D. Joglekar)
344. International workshop on Theoretical High Energy Physics, IIT Roorkee, March 15-20, 2007 On the International Advisory Committee and National Organizing Committee (S. D. Joglekar)
345. National Conference on Nonlinear Systems and Dynamics-2006, Chennai, March 2006, Invited Speaker. (M. K. Verma).

346. Nonlinear Cosmology: Turbulence and Fields, held at ICTP in 9-12 May, 2005. contributed Speaker. (M. K. Verma).
347. International Solar Workshop on Transient Phenomena on the Sun and Interplanetary Medium, Nainital, April 2005, Invites Speaker. (M. K. Verma).
348. Negative refractive index and degenerate plasmonic surfaces, Third Indo-Israeli Meeting on Condensed Matter Physics, Toshali Sands, Puri, 17-21 April 2005, (Invited Lecture) (S. A. Ramkrishna)
349. Non-linear effects in negative magnetic meta-materials, The 6th General Assembly of the Union of Radio Science Inter-national (URSI), New Delhi, 23-29 October 2005 (Invited paper). (S.A. Ramakrishna).
350. Condensed Matter meeting at S. N. Bose National Centre for Basic Seminar, March 10-11, 2006, Invited talk. (Dr. R. Prasad).
351. Symposium on statistical and condensed Matter Physics, School of Physics JNU March 3-4, 2006, Invited talk. (Dr. R. Prasad)
352. Indo-EU workshop on Computational Materials Science, IISc Bangalore, Feb 20-22, 2006 Chaired a session. (Dr. R. Prasad)
353. International conference on Advanced materials, Design and Development, Goa, Dec. 14-16, 2005, invited talk, chaired a session. (Dr. R. Prasad)

OTHER ACTIVITIES

(A) TECHNOLOGY DEVELOPED

1. Design and development of a coal combustor, D. P. Mishra.
2. Set of Imidazoline-5-one analogues that absorb wavelengths of light have been developed for applications in organic photo diodes. This technology will be patented soon, R. Gurunath.
3. Scale up process of biodegradable polymers for nanoencapsulation of tuberculosis drugs : Jointly funded by DST and life care innovation, Gurgaon, India, S. Sundar Manoharan.
4. Prasant A., Ring Shear Apparatus for residual shear strength properties of soil. (Stability analysis of natural and manmade slopes against catastrophic failures), Further development needed.
5. Algorithms and software for network topology planning in Long- Distance Wireless mesh networks (further development needed), Bhaskaran Raman.
6. Wireless sensor network based system for structural health monitoring of Railway bridges (further development needed), Bhaskaran Raman.
7. Wireless sensor network based system for vibration monitoring of Industrial Motors (further development needed), Bhaskaran Raman.
8. The SRAWAN MAC protocol and 2P MAC implementation on Atheros-based Chipsets, in collaboration with Zazu networks, Bangalore, Bhaskaran Raman.
9. A Visual browsing tool for large Ontologies, T V Prabhakar.
10. Automatic Generation of Topic Map Driven Portals, T V Prabhakar.
11. Pickpacket v2: Network Monitoring Tool (Ready to be transferred.) Dheeraj Sanghi
12. AnglaBharti-II: English to Indian Languages Machine Aided Translation Technology (under development), R. M. K Sinha.
13. AnuBharti-II: Hindi to English and other languages Machine Translation Technology (under development), R. M. K Sinha.
14. 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.
15. True Zoom, Miltiview Image Format. Some more Development Needed., K. S Venkatesh.
16. Anthropological Security: Ready for Transfer, K. S Venkatesh.
17. UHF RFID tag antenna, prototypes are undergoing testing at the partnering

organization. A. R Harish.

18. A low power, wideband, hybrid active filter: hardware under development, P. Sensarma
19. A fast and improved PLL for Power System applications: hardware implementation in progress, P. Sensarma.
20. BriMon: Towards Long Term Bridge Monitoring (based on Sensor Networks), Further Development needed. K. Chebrolu.
21. Interactive Knowledge and Information Network for Food Corporation of India. Project sponsored by FCI and deployed in May, 2005, J. Chatterjee.
22. Digital Ecosystem for Agriculture and Rural Livelihood Service Network. Project sponsored by Media Lab Asia, MCIT, Phase I operational since December, 2005, J. Chatterjee.
23. Agricultural Ontology Service deployment through knowledge portal, Phase I, www.kheti.org.in operational since January, 2006, J. Chatterjee.
24. Patent Mapping Search Engine www.patentsmapping.com, AK Mittal & Veena Bansal.
25. Novel Turn-Indicator using SMA (Transferred to GM), B. Bhattacharya.
26. WIRO-The wire manager, P. Kumar.
27. A low cost table top setup for imaging data on a magnetic strip. (Patent applied for.) Satyajit Banerjee
28. Developed STM Control electronics in collaboration with Nuclear Science Center, New Delhi. (Anjan K. Gupta)

(B) SOFTWARE DEVELOPED

1. AnglaHindi-II : English to Hindi MAT System (under development) RMK Sinha.
2. HindiAngla-II : Hindi to English MAT (under development), R. M. K Sinha.
3. Brihaspati-2, Brihaspati_sync : ready for transfer, Y. N Singh.
4. Software developed for portfolio selection problem using GA, RRK Sharma and K Pankaj.
5. Software developed for dynamic plant layout problem (DPLP) using GA, RRK Sharma and SP Singh.
6. Developed a LES code for complex geometry. S. Sarkar.

(C) INDUSTRIES VISITED

1. Institut Européen des Membranes, Montpellier, France: from November 29, to December 29, 2005 (one month) - Research under Indo-French project, P.K. Bhattacharya.
2. Ranbaxy, Mohali - Discussion for consultancy - March 16, 2006, P.K. Bhattacharya.
3. Chemical Engineering Dept., Aligarh Muslim University - Thesis examiner and seminar presentation - February 04, 2006, P.K. Bhattacharya.
4. Chemical Engineering Dept., I. I. T. - Delhi - Thesis examiner and selection committee member, October & November, 2005, P.K. Bhattacharya.
5. Chemical Engineering Dept., I. I. T. - Kharagpur - Thesis examiner, October, 2005, P.K. Bhattacharya.
6. Formosa Plastics, Maliliao Village, Yunlin Country, Taiwan: One day workshop on Process Safety, Dec. 5-7, 2005, J.P. Gupta.
7. National Yunlin University of Science & Technology, Yunlin, Taiwan: Discussion on Collaborative research projects. Dec. 7-9, 2005, J.P. Gupta.
8. Threads India Pvt. Ltd, Consultancy project on improving adhesion of nylon filaments with each other in a thread. Started on 16 November 2005 and still continuing, Y.M. Joshi.
9. Spent last summer for research purpose (June-July, 2005 in Siegen University, Germany as a visiting faculty with a short term Alexander von Humboldt fellowship, Manas K. Ghorai.
10. Consultancy project initiated on composite polymer sleepers with rawatsons Pvt.
11. Ltd., Mumbai (Six months), S. Sundar Manoharan.
12. HCC, Mumbai Site - Site visit for one day, BARC, Mumbai - Facility visit for one day, Konkan Railway at Ratnagiri - Site visit and collection of data related to land sliding and boulder movements. For two days, Prasant A..
13. University of Maryland, College Park, Dheeraj Sanghi.
14. NTU, Singapore, Dheeraj Sanghi.
15. IIT Delhi, Dheeraj Sanghi.
16. IIIT, Hyderabad, Dheeraj Sanghi.
17. IDRBT, Hyderabad, Dheeraj Sanghi.
18. CDAC, Hyderabad, Dheeraj Sanghi.
19. CDAC, Trivandrum, Dheeraj Sanghi.
20. AK College of Engineering, Srivilliputtur, TN, Dheeraj Sanghi.
21. ERNET, New Delhi, Dheeraj Sanghi.
22. NIC, New Delhi, Dheeraj Sanghi.
23. DIT, New Delhi, Dheeraj Sanghi.
24. CERT-In, New Delhi, Dheeraj Sanghi.
25. Intel, Bangalore, Dheeraj Sanghi.

26. NIFFT, Ranchi, Dheeraj Sanghi.
27. AirTight Networks, Pune, Dheeraj Sanghi.
28. CDAC, Pune, Dheeraj Sanghi.
29. Persistent Systems, Pune, Dheeraj Sanghi.
30. Nanyang Technological University, Singapore for a fortnight in December, 2005, A. K. Chaturvedi.
31. Attended Workshop on Special Manpower Development Programme in the area of VLSI Design, February 3-5, 2006, held at I. I. T. Madras, S. Qureshi
32. Chung-Ann University, Seoul, Korea as a distinguished professor from August 2005 to December 2005, A. Biswas.
33. Institute of Engineering Tribhuvan University Nepal, 8-9 Jan. 2006, S. C. Srivastava.
34. NTU Singapore during December 03-16, 2006 for exploring possible technical collaboration, A. R. Harish.
35. Delivered two lectures on Fractal Antennas and Chaos at Microwave Frequencies, A. R. Harish
36. BHEL, Bhopal, for Research Based Industrial Consultancy. (MoU signed on April 25, 2006, P. Sensarma.
37. University of Peredaniya, Kandy, Sri Lanka, Prof. J. Chatterjee.
38. National University of Singapore, Prof. J. Chatterjee.
39. ICRISAT, Hyderabad, Prof. J. Chatterjee.
40. Tata Steel, Janshedpur, Prof. J. Chatterjee.
41. Schneider Electric, New Delhi, Prof. J. Chatterjee.
42. FAO, Rome, Prof. J. Chatterjee.
43. ISI Delhi from 2nd June 2005 to 29th June 2005, Lal, A.K.
44. Shalabh visited (i) Faculty of information technology, Bond University, Australia in April 2005. (ii) Department of Statistics, University of Woolangong, Woolangong, Australia in April 2005, (iii) Institute of Statistics, Ludwig Maximilian University, Munich, Germany in May 2005, (iv) Institute of Statistics, University of Angsburg, Angsburg, Germany in May 2005.
45. Visited The Institute of Mathematical Sciences, Chennai, June-
46. July 2005, Banerjee, M..
47. Visited the Department of Mathematics, University of Bordeaux1, Bordeaux1, France from 1st June to 18th July 2005 for collaborative work with Prof. J. Esterle and M. Akkar, S. R. Patel.
48. Visited the Department of Mathematics, University of Copenhagen, Copenhagen, Denmark from 24th May to 31st May 2005 to discuss the research with Profs. K. B. Laurson and N. Gronbaek, S. R. Patel.
49. Visited ISI Kolkata, Stat/math Unit from 20th June, 2005 to 8th July, 2005, S. K. Ray.

50. Visited TU Berlin as Mercator Guest Professor during May-Dec 2005. From there also visited 4 other universities at Braunschweig, Munich and Karlsruhe, B. Dasgupta
51. Visited GEMPPM, Insa-Lyon, Lyon, France, Visiting Assistant Professor during 3rd May-28th July 2005, S. Basu.
52. Visited Department of Mechanical Engineering, Stanford University, California, USA, P. Kumar.
53. Visited University of Santa Catarina, Florianopolis, Brazil, as Visiting Faculty during June- July 2005, Research on Pulsating Heat Pipes and Summer Course (30 hrs, 12 Graduate Students) on Heat Pipe Science and Technology, Sameer Khandekar.
54. Visited Nuclear Science Centre, New Delhi, for scientific interaction and collaboration, during 2-3 February, 2006, Sudeep Bhattacharjee.
55. Visited Nuclear Science Centre, New Delhi, for scientific interaction and collaboration, during 12-15 March, 2006, Sudeep Bhattacharjee.
56. Visited Institute of Physics, Bhubneswar for Collaborative research during April 2005, S.A. Ramakrishna.
57. Visited Raman Research Institute, Bangalore for Collaborations and Colloquium in July 2005, S.A. Ramakrishna.
58. Visited Inter University Accelerator Centre, New Delhi for Discussions and Seminar in March 2006, S.A. Ramakrishna.
59. Visited the Centre for Theoretical Physics, MIT during 11th to 17th May, 2005, for discussions with the MIT String Theory group. (Dr. T. Sarkar)
60. Visited the High Energy Theory Group, Harvard University, during 17th to 26th May, 2005, for discussions with the Harvard String Theory group. (Dr. T. Sarkar)
61. Visited the Ohio State University for discussions with the String Theory Group, during 26th to 29th May 2005. (Dr. T. Sarkar)
62. Visited the High Energy Group, Caltech, for discussions with the String Theory Group, during May 29th to June 5th, 2005. (Dr. T. Sarkar)
63. Visited the Physics Department, University of Lethbridge, Alberta, Canada, during June 6th to 24th, for discussions with the High Energy Physics Group. (Dr. T. Sarkar)
64. Visited International Center for Theoretical Physics, Trieste (as an Associate), and University of Brussels for collaboration during summer 2005. (Dr. M. K. Verma)

(D) PATENTS

1. Process for the Recovery of Inorganic Chemicals from Kraft Black Liquor - Patent No. (India) 189310, P.K. Bhattacharya.
2. Indian Patent No.2787/DEL/2005, filed on 19.10.2005, A method and apparatus for the formation of patterns on surfaces and an assembly and alignment of the structure thereof, A. Sharma, M. Gonuguntala, S Subramanian and R. Mukherjee, P.K. Bhattacharya.
3. System and Method for Improved Coherent Pulsed Communication System having Spectrally Shaped Pulses, M. Sinha and D. Goswami, US Patent US2004/0208613 A1.
4. A novel method to prepare Gamma Iron oxide, Indian Patent Appl. No.532/Del/2001, accepted April 2006, S. Sundar Manoharan, Ranjan Kumar Sahu, Manju Lata Rao, M. Qureshi, J. Prasanna.
5. Programmable Interface without Computer. Initial Disclosure Filed through Media Lab Asia May 2005, Sarala Verma and Amitabha Mukerjee.
6. Power Supply for Personal Computers, in place of the Conventional SMPS and UPS. Awaiting filing of patent. K. S Venkatesh.
7. US patent on Dielectric Resonator, US patent Application No. 11/2248023, Date of filing: Oct 11, 2005, Kumar Vaibhav Srivastava, Vishwa V. Mishra, Animesh Biswas.
8. Variable threshold voltage in proximally located MOSFETs by controlling buried oxide and location below the transistor, 2056/DEL/2005, S. S. K Iyer, Chander Pal and Baquer Mazhari.
9. Transfer of Power to contact-less Smart Cards with light from the reader 2190/DEL/2005, S. S. K Iyer.
10. Patent on Solar Cells with CNT ____/DEL/2006, Arun Tej Mallajosyula and S. S. K Iyer.
11. B. Bhattacharya, Vibration Damping System And A Method Of Damping Vibrations, US Patent No. 6688439.
12. Kamal K. Kar, P. K. Agnihotri And S. Dasgupta, Carbon Nanotube Coated Long Fiber And The Process For Preparation Thereof, Ref. No.:- 3061/Del/2005 Dated: 16th November, 2005, India.
13. Kamal K. Kar, P. K. Agnihotri And S. Dasgupta, Nickel Coated Carbon Fiber Reinforced Polymer Composites And A Method For The Preparation Thereof, Ref. No.:- 3062/Del/2005 Dated 16th November 2005, India.
14. Kamal K. Kar, P. K. Agnihotri And S. Dasgupta, A Method For Preparation Of Nanoparticle Coated Carbon Fiber, Ref. No.:- 3063/Del/2005 Dated 16th November 2005, India.

15. Kamal K. Kar And Ahankari S. Suresh Rao, A Functionally Graded Elastomer Nanocomposites (Fgencs) And A Process For Preparation Thereof, Ref. No.:- 3125/Del/2005 Dated 23rd November 2005, India.
16. Kamal K. Kar And Pradip Paik, A Process For Preparation Of Nanoparticles Of Higher Molecular Weight Of Polyethylene Polypropylene And Polystyrene, Ref. No.:- 3161/Del/2005 Dated 25th November 2005, India.
17. Kamal K. Kar, P. Kumar, N.G.R. Iyengar And P. K. Agnihotri, Carbon Nanotube And Nanoparticle Coated Carbon Fiber Reinforced-Polymer Hybrid Nanocomposite With Improved Thermomechanical Properties And A Process For Preparation Thereof, Ref. No.:- 1813/Del/2005 Dated 14th July 2005, India.
18. Corrosion Resistant Phosphoric Iron for Concrete Embedment and Reinforcement Applications Indian Patent Application No. 1823/DEL/2005, R. Balasubramaniam.
19. Plasmon Assisted Enhancement of Organic Optoelectronic Devices, US Patent No. 6,999,222 issued on 14 February 2006, G.C. Bazan*, J.C. Ostrowski*, A. Mikhailovsky*, M. Katiyar (*University of California, Santa Barbara).
20. Applied for Indian Patent on the work Synthesis of nano iron carbides by reaction milling in a dual-drive planetary mill, D.Chaira, B. K.Mishra, and S. Sangal.
21. Applied for Indian Patent on the work Technique for the preparation of thin foils for cross sectional transmission electron microscopy of very thin surface layers including Galvannealed coating on steels, S.Sangal.
22. An improved organic light emitting diodes, an improved organic emitting diodes for tuning the white emission and a process for fabrication thereof, Patent Application No.1532/DEL/2005, A.Sharma .M.Katiyar, D.Gupta, Shu Seki.

(E) AWARDS AND HONOURS

1. Fellow, Indian National Academy of Engineering (FNAE) 2006, S.Mittal.
2. Member of the Organizing Committee of the Indo-US Frontiers of Science Symposium conducted in January 2005 by the Indo-US Forum, DST, S.Mittal.
3. Member of the Organizing Committee International Seminar on Technologies & Trends in Development of Para Recovery Systems, (PARA INTERNATIONAL 05 Agra, India, March 15-17, 2005, S.Mittal.
4. Member, Advisory Board, International Journal of Numerical Methods in Fluids John Wiley & Sons 2005, S.Mittal.
5. Chairman, Organizing Committee, First National Frontiers of Engineering Symposium (NatFOE), February 4-5, 2006, IIT Delhi, S.Mittal.

6. Co-Chairman, Organizing Committee, First Indo-US Frontiers of Engineering Symposium (FOE), March 1-5, 2006, Jaypee Palace Hotel and Convention Center, Agra, S.Mittal
7. Member, International Organizing Committee of ICCM07, Int. Conf. on Computational Methods, to be held in Hiroshima, JAPAN, 4-6, Apr. 2007, S.Mittal
8. Elected Fellow, The National Academy of Sciences, India, Allahabad, 2005, S. K. Gupta.
9. BRNS Young Scientist Research Award by Department of Atomic Energy, Government of India, Y.M. Joshi.
10. J. C. Bose Fellow, Department of Science & Technology 2006, A. Sharma.
11. Member of Editorial Advisory Board, The Canadian Journal of Chemical Engineering 2006-2007, A. Sharma.
12. Member of Editorial Board, Indian Chemical Engineer (Journal of the Indian Institute of Chemical Engineers; 2006, A. Sharma.
13. Professor Gopal Tripathi Memorial University Lecture, Banaras Hindu University 2005, A. Sharma.
14. Bronze Medal of Chemical Research Society of India, February, 2006, Dr. A. Chandra.
15. International Who's Who citation 2005, D. Goswami.
16. Swarnajayanti Fellowship in Chemical Sciences, DST, S. Verma.
17. Bronze Medal, Chemical Research Society of India, S. Verma.
18. Prof. R.D. Desai 80th Birthday Commemoration Award of 2004 was given early 2006, V.K. Singh.
19. CNR Rao Lecture, IIT Kanpur, Fellow, Academy of Sciences for the Developing World (TWAS), Trieste, Italy, N. Sathyamurthy.
20. Keynote Lecture, A Probabilistic Seismic Hazard Analysis of North-East India, at the International Conference on Advances in Structural Dynamics and its Applications (ICASDA-2005, College of Engineering, GITAM, Visakhapatnam on December 7-9, 2005, Gupta, Vinay Kumar.
21. Awarded Royal Society Fellowship to carry out research at the University of Leeds, Leeds, UK, Feb-Jul, 2006, Jain, Ashu.
22. Fellow of the Indian Water Resources Society, Jain, Ashu.
23. Fellow of the Indian Society for Hydraulics, Jain, Ashu.
24. Editor-in-Chief, World Housing Encyclopedia, Earthquake Engineering Research Institute, October 2005 - present, See <http://www.world-housing.net>, Murty, C.V.R..
25. ICI Best Construction Technique Paper Award for authoring the book Earthquake Tips: Learning Earthquake Design and Construction, Indian Concrete Institute, September 2005, Murty, C.V.R..

26. Honorary Advisor (Earthquake Mitigation), Government of National Capital Territory of Delhi, June 2005 – present, Murty, C.V.R.
27. Young Researcher Fellowship Award, Third M.I.T. Conference on Computational Fluid and Solid Mechanics, June 2005, at the Massachusetts Institute of Technology, Cambridge, MA 02139 U.S.A., Prashant A.
28. Invited Speaker, First Indo-US Frontiers of Engineering Symposium, Agra, March 3-5, 2006, First National Frontiers of Engineering Symposium, Feb, Rai, D.C.
29. G.M. Nawathe award of the Indian Society for Hydraulics for best paper at Hydro-2005, Srivastava, R.
30. Program committee chair for 21st conference on computational complexity to be held in Prague, July 2006, Manindra Agrawal.
31. Godel Prize for outstanding paper in the area of theoretical computer science, Manindra Agrawal.
32. Prog Committee ICSM, RE, ISSRE etc, Pankaj Jalote.
33. Invited Expert on occasion of release of CD for Hindi fonts and Web-site by Smt. Sonia Gandhi, Vigyan Bhavan, June 20, 2005, R M K Sinha.
34. Member national Technical Advisory Committee of Centre for Development of Advanced Computing (CDAC), R M K Sinha.
35. Chairman of the Working Group on Localisation and Language Technology Standards under National e-Governance Program (NeGP), R M K Sinha.
36. Member IASTED International Technical committee, R M K Sinha.
37. Elected Fellow of IEEE for contributions to education in power electronic applications to transmission and distribution systems, A. Ghosh
38. Invited Expert on occasion of release of CD for Hindi fonts and Web-site by Smt. Sonia Gandhi, Vigyan Bhavan, June 20, 2005. R. M. K Sinha.
39. Member national Technical Advisory Committee of Centre for Development of Advanced Computing (CDAC). R. M. K Sinha.
40. Chairman of the Working Group on Localisation and Language Technology Standards under National e-Governance Program (NeGP), R. M. K Sinha.
41. Member IASTED International Technical committee, R. M. K Sinha.
42. Vice Chairperson, Technical Activities of IEEE India Council for the year 2006, S. C Srivastava.
43. Invited to join as Member of the State Advisory Committee of the U.P. Electricity Regulatory Commission, S. C Srivastava.
44. Chief Guest to the inaugural function of the National Power Engineering Conference (NPEC 2005 held at Thiagarajar College of Engineering, Madurai, during 16-17 December 2005, S. C Srivastava.
45. Bharat Jyoti Award (India International Friendship Society), P. K Kalra.

46. Inclusion in Afro-Asian Who's Who 2006, Rifacimento International, New Delhi, Braj Bhushan.
47. Man of The Year Award 2005, American Biographical Institute, North Carolina, USA, Braj Bhushan.
48. Received the Manas Chatterji Award for Excellence in Research in Regional Science during the Regional Science Association International (RSAI) Symposium held at the Indian Institute of Management Bangalore during Jan. 6-8, 2006. This award is instituted by Dr. Manas Chatterji, Professor of Management, School of Management, Binghamton University (State University of New York), Binghamton, NY on behalf of Regional Science Association - Indian Section, S.K. Singh.
49. VIJAYSHREE AWARD, 2005, India International Friendship Society, New Delhi, Award given at the hands of Honorable Minister Shri Haroon Yusuf, Minister for Transport and Power, Govt of Delhi, Prof. RRK Sharma.
50. GLORY OF INDIA GOLD MEDAL, 2005, International Institute of Success Awareness, New Delhi, Award given at the hands of Dr Bhisham Narain Singh, Honorable Ex Governor of Tamil Nadu State, India, Prof. RRK Sharma.
51. LFIBA, Life Fellow, International Biographical Association, St. Thomas Place, Ely, Cambridgeshire, CB7 4GG ENGLAND, Prof. RRK Sharma.
52. The IBC Leading Educators of the World 2005, given by International Biographical Centre, St. Thomas Place, Ely, Cambridgeshire, CB7 4GG ENGLAND, Prof. RRK Sharma.
53. Reviewer, International Journal of New Product Development, Hong Kong, Prof. RRK Sharma.
54. Reviewer, Academy of Marketing Science Review and Journal of Macromarketing, Rohit Varman.
55. Reviewer, ACR (Association for Consumer Research)/Sheth dissertation competition, 2006, N K Sharma.
56. Visiting Researcher Fellowship from Asian Development Bank Institute, Tokyo for a period of 6 months from July 2005, Anoop Singh.
57. Reviewer, Academy of Management Review, Philosophy of Management, IIMB Review, Rahul Varman.
58. Member of Editorial Board, Journal: eSocial Sciences, Rahul Varman.
59. Nominated to International Advisory Board of ICKM 2006, Greenwich, London, www.ICKM2006.org, J Chatterjee.
60. Prof. J Chatterjee, Nominated as Track Chair to Information System Governance Conference, PACIS 2006, Kualalampur, Malaysia. www.pacis2006.com.my.
61. Prof. J Chatterjee, Invited to Academic Advisory Council of Management School, Thapar Institute of Engineering & Technology, Patiala.

62. Prof. J Chatterjee, Invited to Global Experts Group on Digital Content Management, FAO, Rome.
63. Dr S Swami, Best Reviewer (Top 60 List), Marketing Science, Senior Member, ORSI (Operational Research Society of India), Member, CDC (Consultancy Development Center), New Delhi, Reviewer : Manufacturing and Services Operations Management, Management Science, Annals of Operations Research, International Marketing Review, IIMB Management Review, D.E.I. Journal of Science and Engineering Research.
64. Dr P. Mehta, Reviewer, IIMB Review (IIMB Journal).
65. INAE Young Engineer Award-2005 awarded by Indian National Academy of Engineers, India, A.K. Agarwal.
66. Swarna Jayanti Fellowship awarded by DST, 2005-2006, P.K. Panigrahi.
67. Young Scientist awarded by the Department of Atomic Energy, Government of India, 2005. Sameer Khandekar.
68. S.S. Bhatnagar awarded by CSIR in Engineering Sciences for the year 2005, Kalyanmoy Deb.
69. AICTE Career Award awarded by AICTE, 200502006, Anupam Saxena.
70. Appointed to the Editorial Board of *International Journal of Machining and Machinability of Materials*, V.K. Jain.
71. Invited to join the editorial board of *International Journal of Nano-manufacturing*, an Inter science Journal, V.K. Jain.
72. Presented the Ashwathanarayana keynote lecture during the annual Fluid Mechanics and Fluid Power Conference held at Osmanabad (Maharashtra), G. Biswas.
73. Nominated to the Editorial Consultant Board of *International Journal of Advanced Robotics Systems*, Ashish Dutta
74. Invited to join Editorial Advisory Board Member of Transactions of the, Indian Institutof Metals Journal, R. Balasubramaniam.
75. Invited to join Editorial Board Member of Journal of South Asian Archaeology Journal, R. Balasubramaniam.
76. The research on corrosion of phosphoric irons being conducted in the laboratory, Has been covered in a special article in the journal MATERIALS PERFORMANCE, [M.V. Veazey, 1600 Years Young, Materials Performance, **44(7)** 2005 16-19]. This article was also reprinted in CHEMISTRY INTERNATIONAL [**27(6)** 2005 10-5], R. Balasubramaniam.
77. Indian National Science Academy (INSA) medal for 'Young Scientist' in Engineering Sciences, 2005, B. Basu.
78. Invited foreign member on the editorial board of Journal of Korean Ceramic Society, B.Basu.

79. Editorial board member of India's only Biomaterials journal: Trends in Biomaterials and Artificial organs, published by Society of Biomaterials and Artificial organs (SBAOI), B.Basu.
80. Invited as a member of the Editorial Board of the journal Powder Metallurgy, published by the Institute of Materials, Minerals and Mining, London, R.K. Dube.
81. Invited as a member of the Central Advisory Board of Archeology, Government of India, New Delhi, and also as a member of its Standing Committee, R.K. Dube.
82. Sri Ram Arora Award 2005 presented by the TMS, USA, A.Garg.
83. Elected a fellow of the Indian Institute of Metals, D Mazumdar.
84. Re-elected , Key Reader Materials & Metallurgical Transactions, D Mazumdar.
85. Best Poster Award in International Conference on Advances in Materials Design and Development, Goa (India), 14-16 Dec2005, Umesh Prasad, Sumeet Kumar and Ashish Garg.
86. G.S. Tendulkar Prize for the overall best paper in the PM-06 conference by Powder Metallurgy Association of India, Feb 06, A. Upadhyaya.
87. Continue as Honorary Technical Director of METFORM India, Bangalore, A. Upadhyaya.
88. Invited to serve as a member of the Editorial Advisory Board of the 'Transactions of the Indian Ceramic Society and Transactions Indian Institute of Metals, A. Upadhyaya.
89. Appointed as Joint Secretary of the Powder Metallurgy Associate of India (PMAI) , A. Upadhyaya.
90. Elected Fellow of the National Academy of Sciences 2005, Prof. R. C. Budhani.
91. Paper titled A Compact Scanning Tunneling Microscope System for Low Temperatures got selected for presentation at YPC-05 (Colloquium for young Physicists) in SINP, Kolkata. (Dr. Anjan Kr. Gupta)
92. Review Paper The Physics of negative refractive index materials, Rep. Prog. Phys. 68, 449-521 2005 was adjudged by IOP, UK as one of the Highlights for the year 2005 and show-cased by the journal. (Dr. S. A. Ramakrishna)
93. Best Paper Award for his research paper entitled Magnetotransport in ZnCoO films in the Journal of Physics: Condensed Matter for the year 2005, Professor R.C. Budhani.

(F) CONTINUING EDUCATION ACTIVITIES

1. CEP Course On Design of FAE Bombs at HEMRL, Pune , A. K. Ghosh.

2. CEP Course On Issues Related to Parafoil Dynamics at ADRDE, AGRA, A. K. Ghosh.
3. CEP Course On Engineering Approach Towards- Prediction, Accuracy of an Artillery Shell and Rocket at PXE Chandipur, A. K. Ghosh.
4. CEP Course On, Stability and Control of Military Transport Aircraft at HAL, Kanpur, A. K. Ghosh.
5. Coordinator, Non Conventional Energy Sources, IRDP sponsored short-term course, December 2005, D. P. Mishra.
6. HAL Management and Design Trainee Programs, C.S.Upadhya.
7. Following faculty members and scientists of the department participated in short term course on selected topics in biology held for CHIPS in the e-classroom from Feb 2nd -Feb. 10th, 2006 at IIT Kanpur., Dr. K. Subramaniam, Dr. Ashok Kumar, Dr. R. Sankararamkrishanan, Dr. S. Ganesh, Dr. Jamuna Subramaniam
8. Keynote Address on Bio-separations and pressure driven membrane separations: an overview, in a Workshop on Biotechnology & Bio-separations (under TEQIP) at department of Chemical Engineering, JNTU College of Engineering, Ananthapur (A.P.) on February 16, 2006, P.K. Bhattacharya.
9. Visited National Chemical Laboratory, Pune as a visiting faculty to conduct courses on fundamentals of polymer science, viscoelasticity, thermodynamics and statistical mechanics, Y.M. Joshi.
10. Delivered lectures in the DST-SERC School on Modeling of Industrial Reactors, May 2005, IIT Bombay, D. Kunzru.
11. DST sponsored SERC School on Colloids and Interfaces, IIT Bombay, March 2006; gave 5 lectures; number of participants: 25, Ashutosh Sharma.
12. SERC/DST School on Modeling and Optimization of Chemical Reactors, I I T, Bombay: Polymerization Engineering and Genetic Algorithms (6 lectures), May 2005, S. K. Gupta.
13. Optical Computing, Short-term Course on Developments in and Applications of All Solid State Lasers, SERC School, Centre for Laser Technology, IIT Kanpur, India, January 9-14, 2006, D. Goswami
14. Short term course in Bioinformatics for College teachers from Chhatisgarh at IIT Kanpur 4-8, April 2005, R. Gurunath.
15. Short term course in Biology for students of Chhatisgarh at IIT Kanpur Feb. 2-13, 2006, R. Gurunath.
16. National Symposium on current trends in materials characterization (CTMC - 05, December 3-5, 2005, Sponsored by DST and CSIR, Cosponsored by six industries registered participants 120, S. Sundar Manoharan.
17. Co-coordinator, QIP short course on Pavement and Traffic Engineering, October 04-07, 2005, IIT Kanpur, 31 participants from academia participated, Das, A.

18. QIP Short-Term Course on Unsteady Flow in Open Channels (UFOC), Oct 24 - 29, 2005, IIT Kanpur, 13 persons attended this course, Mohapatra, P.K.
19. Murty, C.V.R., 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 Steel Structures at:
IIT Kanpur in May 2005 (43 participants under NPEEE)
on Seismic Evaluation and Strengthening of Structures at:
IIT Kanpur in August 2005 (37 participants for NPEEE)
on Seismic Design of Masonry Structures at:
IIT Kanpur in October 2005 (31 participants for NPEEE)
20. Murty, C.V.R., 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 professional architects and planners, and teachers of colleges of architecture on Architecture for Earthquake Resistance of Buildings/Architectural Considerations in Seismic Design of Buildings at:
SCET, Surat in October 2005 (30 participants under NPEEE)
21. Seismic Design of Concrete and Steel Structures, Sponsored by Reliance Engineering, Jamnagar, Gujarat, 23-25 January, 2006, Number attended 31, Rai, D.C.
22. 6. Seismic Design of Masonry Buildings, Sponsored by NPEEE for Engineering college teachers, IIT Kanpur, 3 - 7 October 2005, Number attended 31, Rai, D.C..
23. Seismic Evaluation and Strengthening of Buildings, Sponsored by NPEEE for Engineering college teachers, IIT Kanpur, August 8-12, 2005, Number attended 31, Rai, D.C..
24. Five invited lectures in the 4th PG Course on Space and Atmospheric Science of CSSTEAP (Center for Space and Technology Education in Asia and Pacific) conducted at Physical Research laboratory, Ahemdabad, August 2004, Tripathi, S.N.
25. QIP short term course on Fundamentals of Wired and Wireless Networks, May 9-13, 2005, Bhaskaran Raman and Kameswari Chebrolu.
26. Technology and operations Village Knowledge Centres Using the Digital Ecosystem Model, Workshop for KVK Scientists' UP Uttaranchal at IITK, PBCEC, March, 9-10 and 23-24, 2006, Chatterjee, Jayanta, Prabhakar TV, and Singh, Murat.
27. Knowledge Management and eLearning Workshop for College of Defence Management at IITK, PBCEC, February, 27-28, 2006. Chatterjee, Jayanta, Prabhakar, TV, and Singh, Y.N.
28. Organized a Workshop on System Administration at IIT Kanpur, October 2005, Dheeraj Sanghi.

29. QIP course on Overview of VLSI Design, Dec. 20-24, 2005, Kanpur. Short-term course on Organic Electronics and flat panel Displays, July 11-15, Kanpur. B. Mazhari.
30. Organization, Coordination, and part Instruction of Avionics Course for HAL candidates, K. S Venkatesh.
31. Design of DSP-Based Work Station, 16-21 May and 18-23 July, 2005, G.C.Ray.
32. Virtual Instrumentation using LabVIEW, Self-sponsored, IIT Kanpur, July 25-29, 2005, J John.
33. Two-day workshop on Recent Advances in Controls & Sensors sponsored by the Department of Electrical Engineering (IITK), IEEE UP Section, and INAE. March 24 & 25, 2006, R Potluri.
34. Lectures in course on QIP Short Term Course on Overview of VLSI Design, December 20-24, 2005, S. Qureshi.
35. Delivered lectures for CHiP programme, S. Qureshi
36. Electrical Characterization and Characteristics of MOS Devices with Ultrathin (0.5-1.5 nm) High-K Gate Dielectrics; Sponsored by The Electrochemical Society, USA at the 208th Meeting of The Electrochemical Society, 16-21 October 2005, Los Angeles, S.Kar.
37. Co-organizer of a Workshop on design and applications of meta-materials, 27 October 2005, IIT Kanpur, AR Harish.
38. QIP short-term course on Application of MATLAB® in Engineering, 2006, P.K. Kalra.
39. Delivered lectures on the short course on VLSI Systems, organized by the Department of Electrical Engineering, January 2006, Alope Dutta.
40. Organised QIP short term course on Fundamentals of Wired and Wireless Networks, IIT Kanpur, May 9-13, 2005, K. Chebrolu.
41. Gave lectures on Printable Electronics and in Organic Solar Cells Short term course on Organic Electronics and Flat Panel Displays 11-15 July, 2005 held at IIT Kanpur, S. S. K Iyer.
42. CHiPS Programme - remote classroom project. 26, 28-29 Sept. and 3-4 Oct., 2005, S. S. K Iyer.
43. Two lectures in QIP short course on Overview of VLSI Design on 20th-24th December, 2005, IIT Kanpur, S. S. K Iyer,
44. Organised a one day short course on Solar Cells on 30th December, 2005 at IIT Kanpur, S. S. K Iyer
45. Organized the International Workshop on Radio Frequency Identification (RFID) and Wireless Sensors, 11-13 November 2005, IIT Kanpur, sponsored by Indo-US Forum on Science & Technology, New Delhi; Department of Information Technology, S. Kar.

46. Conducted a Workshop on 'Communication Skills for Hospital Staff Dealing With Cancer Patients'. The Workshop was conducted for the hospital staff at Ratan Cancer Hospital, Kanpur on 25th February 2006. S. Dixit.
47. Workshop (invited) - Two 3-hr sessions (for CA trainees of Institute of Chartered Accountants of India, Kanpur - December 8, 2005, L. Krishnan.
48. 1) Team Building 2) Success in interviews.
49. Workshop/talk (invited) - One 3 -hr session (for CA trainees of Institute of Chartered Accountants of India, Kanpur - January 29, 2006, L. Krishnan. (1)Team Building
50. Delivered a Lecture on Non-Verbal Communication on 14 October 2005 to the participants of the QIP Short Term course on Recent Trends in Advanced Composites at IIT Kanpur, T. Ravichandran.
51. Delivered a lecture on Interview Skills on 18 September 2005 during VAARTA 2005 - A Dialog on Careers, organized by the Career counseling Cell at IIT Kanpur, T. Ravichandran.
52. A short-term course on Law and Economics during 9-16 October 2005 Department of Humanities and Social Sciences, IIT Kanpur, for engineering faculty and non-engineering academicians. The course has been sponsored by the AICTE under the Quality Improvement Programme at IIT Kanpur, P.M.Prasad, (Along with Prof. TVS Ramamohan Rao).
53. Short Term Course on Environmental Economics & EIA, sponsored by CDTE/QIP, IIT Kanpur, July 11-17, 2005, B. Rath.
54. Workshop (invited): Lucknow University, Department of Psychology: April 30, 2005. Interpersonal Skills and Team Building. - 3 hours (including exercises in Interpersonal Judgment, Team Building, Conflict-handling and Self- disclosure. L. Krishnan.
55. Workshop (invited): Personality assessment with Cattell's 16 PF (Training session). NABARD, Principal, NBSC, Lucknow. March 24, 2006, L. Krishnan.
56. Delivered two lectures on Overcoming Barriers to Communication and Body Language on 10 March 2006 at the Polplyex Corporation Limited, Noida, T. Ravichandran.
57. Conducted a SAP workshop for ICFAI business schools faculty, Gurgaon, Dec.2005, Veena Bansal.
58. Organized a two day workshop on Role of patent literature in technology development, at IIT Kanpur, Dec 1-2, 2005, sponsored by MCIT, Veena Bansal & A.K. Mittal.
59. Taught Software Project Management to Faculty of AICTE approved Engineering and Management colleges from July 1 -7, 2005 at IIT Kanpur, Veena Bansal.
60. Technology and operations for Village Knowledge Centres Using the Digital Ecosystem Model, Workshop for KVK Scientists' UP & Uttaranchal at IITK,

- PBCEC, March, 9-10 and 23-24, 2006, Chatterjee, Jayanta, Prabhakar, TV, and Singh, Murat.
61. Knowledge Management and eLearning Workshop for College of Defence Management at IITK, PBCEC, February, 27-28, 2006, Chatterjee, Jayanta, Prabhakar, TV, and Singh, Y.N.
 62. Manufacturing Execution System- Bridging strategies between Factory Automation and Business Automation Systems, IEEE sponsored Workshop at IITK, PBCEC, March, 25-26, 2006, Chatterjee, Jayanta.
 63. Targeted Innovation Deploying Prior Art Knowledge Base, presentation at MCIT Workshop organized by Prof. A.K. Mittal and Dr. Veena Bansal at IITK, PBCEC, Dec, 2005, Chatterjee, Jayanta.
 64. QIP sponsored short term course on Micromachining Oct. 25, 2006 - Oct. 29, 2006 at I.I.T. Kanpur, V.K. Jain.
 65. QIP sponsored, Recent trends in advanced Composites October 10-14, 2005 at IIT Kanpur. K.K. Kar. And J. Ramkumar.
 66. Organizing secretary of a two-day national workshop titled, Fuel Cells: Power Device of the Future, February 3-4, 2006 at IIT Kanpur, S. Khandekar and A.K. Saha.

(G) PARTICIPATION IN HIGH LEVEL INDUSTRY ACADEMIA INDUSTRY INTERACTION PROGRAMME DURING SUMMER

1. Visited University of Maryland to collaborate on dilute magnetic semiconductors, S. Sundar Manoharan.
2. New Projects Received, Ab initio quantum simulations of protonic defects in mixed hydrogen bonded liquids, Agency : BRNS (DAE), Government of India, Amount : Rs. 16,03,500, A. Chandra.
3. SAP Labs, Bangalore. Workshop on SAP Modules. 3 days, 2005, Piyush Mehta.
4. Indo-Japan Joint research program worked on advanced composites machining from May to July 05 at Tamagawa University, Tokyo Japan, J. Ramkumar.
5. QIP for Central School physics teachers , Central School IITK, Dates: 12.05.05 & 13.05.05 (Lectures on vacuum tech. and cryogenics) Anjan K. Gupta.
6. Delivered lecture on 'Biotechnology by Lasers' in a short course on Developments & Applications of All Solid State Lasers held on January 09-14, 2005, course Coordinator Dr. Bansi Lal, Dr. A. Pradhan.

(H) ANY OTHER IMPORTANT ACTIVITY NOT SPECIFIED IN ABOVE COLUMNS

1. Alexnder von Humdoldt Fellow, German Aerospace Centre (DLR), Goettingen, Germany May-June 2005, T.G. Pai.
2. Recorded a 38 lecture course on Finite Element Method for NPTEL, C.S.Upadhyay.
3. Coordinated two 6-weeks courses for Executive Trainees from HAL from August to December, 2005, C.S.Upadhyay.
4. Coordinated a semester programme for Management Trainees from HAL from January to May, 2006, C.S.Upadhyay.
5. Technical committee member of 4-th Asian Aerosol Conference, Bombay December 2005. Reviewed the submitted papers for planning the technical sessions. Rajdip Bandyopadhyaya.
6. Participated in Winter academy 2005 held Jamshedpur as faculty for section polymers and polymeric fluids, Y.M. Joshi.
7. Member of National Activity on Aeroelasticity of gas turbines, Venkatesan, C.
14. 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.
15. Member, Technical Committee, Environmental Systems 2004-2007), International Association of Science and Technology for Development, IASTED, Jain, Ashu.
16. Member, Program Committee, Second Indian International Conference on Artificial Intelligence: IICAI2005, December 20-22, 2005, Pune, India, Jain, Ashu.
17. Session Organizer, Special Session (H35O)-Soft computing tools for hydrologic modeling at the AGU Fall Meeting 2005, December 5-9, 2005, San Francisco, California, USA, Jain, Ashu.
18. Session Organizer, Special Session (H35P)-Soft computing tools for hydrologic modeling at the AGU Fall Meeting 2005, December 5-9, 2005, San Francisco, California, USA, Jain, Ashu.
19. Session Organizer, Special Session on AI Applications to Hydraulic and Environmental Engineering (HEE2005, Second Indian International Conference on Artificial Intelligence: IICAI2005, December 20-22, 2005, Pune, India, Jain, Ashu.
20. Session Organizer, Special Session on AI Applications to Water Resources Engineering (WRE2005, Second Indian International Conference on Artificial Intelligence: IICAI2005, December 20-22, 2005, Pune, India, Jain, Ashu.
21. Conducted Summer Camp 2005 (June-July, 2005 at IIT Kanpur for UG students of various Engineering Colleges of India, Mohapatra, P.K..
22. Organized: CIV-ERE - Civil Engineering Armature Paper Presentation Competition, 17-19 February 2006, IIT-Kanpur. Papers invited from the undergraduate and graduate level students from all over the country, Prashant A.
23. Member of the Administrative Reforms Committee, Bihar Government, T V Prabhakar.
1. CAD/CAM, German technical cooperation, Finished in December 2005, N.V.

Reddy.

2. Organized Winter Academy 2005, G. Biswas, Winter Academy 2005 was organized in TATA STEEL premises, Jamshedpur during December 11-18, 2005. The purpose of the Academy is to motivate the bright students of different IITs in their research pursuit. The major objective is to let the students know what research is and what is exciting in innovation. TATA STEEL Jamshedpur, the Aditya Birla Group Mumbai and the German Ministry of Education and Science sponsored the Academy. A total number of 47 students from IIT Kanpur, IIT Kharagpur, IIT Bombay, IIT Delhi, IIT Guwahati and the University of Erlangen-Nuremberg, participated in the Academy. The seminar topics were in the areas of (i) Fluid Mechanics and Thermal Sciences (ii) Polymers and Dynamics of Polymeric Liquids and (iii) Semiconductors and Silicon Technology. A number of well-known Professors from Germany and various IIT s took part in the Academy.

INVITED LECTURES

1. New Insights on Delhi Iron Pillar - A Metallurgical Marvel, Bhabha Atomic Research Centre, Mumbai, 4 July 05, R. Balasubramaniam.
2. The Story of The Delhi Iron Pillar - A Metallurgical Marvel, Nehru Science Museum, Mumbai, 5 July 05, R. Balasubramaniam.
3. Delhi Iron Pillar: New Insights, Archaeology Department, Deccan College Pune, 6 July 05, R. Balasubramaniam.
4. Massive Forge Welded Iron Cannons of India, Salem Steel Plant, Salem, 5 September 05, R. Balasubramaniam.
5. Story of the Delhi Iron Pillar, Research and Development Centre for Iron and Steel, SAIL, Ranchi, 9 January 2006, R. Balasubramaniam.
6. Story of the Delhi Iron Pillar, Tata Steel, Jamshedpur, 11 January 2006, R. Balasubramaniam
7. Story of the Delhi Iron Pillar, National Metallurgical Laboratory, 12 January 2006, R. Balasubramaniam.
8. Story of the Delhi Iron Pillar, Indian Institute of Technology, Roorkee, 02 April 2006, R. Balasubramaniam.
9. The Saga of Ferocious Gunpowder and Mighty Cannons of India, Science Day Lecture of Chemistry Department, IIT Kanpur, 27 Feb 06, R. Balasubramaniam.
10. Metallurgy of Indian Coins through Ages, IIM Kanpur Chapter Annual General Body Meeting, IIT Kanpur, 30 April 06, R. Balasubramaniam.

11. Processing and characterization of nanostructured and biocompatible ceramics, International Advanced Center for Powder Metallurgy and New Materials, ARCI, Hyderabad, June, 2005, B.Basu.
12. Overview of Research Activity on Structural Ceramics at Laboratory for Advanced Ceramics at IIT-K, Energy Technology Division, NTPC, New Delhi, 13th August, 2005, B.Basu.
13. Processing and characterization of nanostructured composites and biocompatible materials, Department of Metallurgy and Materials Engineering, IIT-Madras, Chennai, 23rd August, 2005, B.Basu.
14. Processing and characterization of nanostructured ceramics, National seminar Advanced Characterisation Tools for Nanomaterials, IIT-Roorkee, 26rd August, 2005, B.Basu.
15. Processing and Characterisation of Bulk Nanostructured Ceramics and Biocompatible materials, ICAMDD, Goa, December 2005, B.Basu.
16. Fundamentals of Tribology and Materials for Tribological Applications, IT-BHU, Varanasi, March 4th, 2006, B.Basu
17. National seminar on Advances in Corrosion, Jadavpur University, Kolkata, 16th March, 2006, B.Basu .
19. Nanostructured Coating for Tribological and sensor Applications, IIT-Kharagpur-extension centre, kolkata, 25-26th March, B.Basu.
20. Thin Films for Sensors and Actuators Applications, National Thermal Power Corporation National Meeting, Noida (India), (September 2005), A. Garg.
21. National Conference on Materials for Electrical, Electronic & Magnetic Applications: Characterization & Measurements, September 2-3, 2005, Hyderabad (India), (September 2005), A.Garg.
22. Growth and Characterization of Bi-layered ferroelectric thin films, International Conference on Advances in Materials Design and Development, 14-16 December, Goa (India), (December 2005), A. Garg.
23. Multifunctional Oxide Thin Films, Condensed Matter Physics Workshop, Department of Physics, Indian Institute of Technology Kanpur (February 2006), A.Garg.
24. Application of TEM and SEM :A few Case Studies, CTMS, Kanpur, December, 2005, Gouthama.
25. Potential of Transmission Electron Microscope in Materials Characterization, RRL, Bhubaneswar, March, 2006, Gouthama.
26. CFD, Modelling and Steelmaking: Approach & Efforts, IIT, Kanpur, 2nd South East Asia USG, Fluent, Pune, 2005, D.Mazumdar.

27. Microgravity Sintering of Liquid Phase Sintering Systems, Presented in the Workshop on National Microgravity Research Program jointly organized by ISRO and IISC, Bangalore (June 05), A.Upadhyaya.
28. Modeling of Sintering Processes, Presented at METFORM Inc., Bangalore (June 05), A.Upadhyaya.
29. Invited to deliver the Daya Swaroop Memorial Lecture on 'P/M Processing of Advanced Composites, The Institution of Engineers, Kanpur Chapter, 2006, A.Upadhyaya