

Director's Report

Honourable President of India Shri Pranab Mukherjee, Honourable Governor of Uttar Pradesh Shri B. L. Joshi, Honourable Chairman, Board of Governors of the Indian Institute of Technology Kanpur, Professor M. Anandakrishnan, Shri N. R. Narayana Murthy, Executive Chairman of Infosys Limited, Professor Ashoke Sen, Harish-Chandra Research Institute, Allahabad, Members of the Board of Governors, Members of the Academic Senate, all graduating students and their family members, members of faculty, staff and students, invited dignitaries, guests, and members of the media: I heartily welcome you all on this occasion of the forty-fifth convocation of the Indian Institute of Technology Kanpur.

Academic Activities

The academic year closing in June 2013 has been momentous, and I consider it a privilege to review our activities pertaining to this period. I am very happy to share with you that 132 Ph. D students have graduated over the last academic year. The number of graduating students at the undergraduate level was 691 and at the postgraduate level it was 636.

Awards and Honours

Reporting about the awards and honors won by our faculty and students is always a proud moment for the Director. It gives me enormous sense of pride to share with you that Professor Sanjay G. Dhande, former Director of the Institute and Professor Manindra Agrawal (CSE) have been conferred Padma Shri by the Government of India.

The many prestigious scholarships and awards received by our students have been a matter of pride and pleasure for us. This year 8 Japanese TODAI scholarships were awarded to IITK students.

I am happy to inform you that during the academic year, several honours were bestowed on the distinguished faculty members of IITK family in the form of various awards and honours, including fellowships of professional societies and editorships of international journals.

Prof. S. A. Ramakrishna (Phy) has been awarded the Swarnajayanti Fellowship by the DST. Dr. Pankaj Wahi (ME) and Dr. Nishant Nair (CHM) have been awarded the prestigious Indian National Science Academy (INSA) Young Scientist Medal. Dr. Bushra Ateeq (BSBE) received Wellcome Trust-DBT India Alliance Intermediate Fellowship Award. Prof. Ashok Kumar (BSBE) has been selected for TATA Innovation

Fellowship by DBT. Prof. Mukesh Sharma (CE) has been awarded Hiyoshi Environmental Award by Hiyoshi Corporation, Japan and Hiyoshi India Ecological Services Pvt. Ltd., Chennai, for his outstanding contribution in fundamental research for Environmental Conservation and Protection. Dr. Yogesh Joshi (CHE) received NASI Scopus Young Scientist Award in Engineering from the National Academy of Sciences, Allahabad. Dr. Raja Angamuthu (CHM) received Young Scientist Research Award of DAE. Prof. S. C. Srivastava (EE) received Academic Excellence Award at the 17th National Power Systems Conference held at IIT BHU Varanasi for his exemplary contributions in the field of power engineering. Dr. Yogesh Singh Chauhan (EE) received Ramanujan Fellowship by DST. Prof. Kalyanmoy Deb (ME) has been awarded TWAS Prize in Engineering Sciences. Prof. Avinash Agarwal (ME) has been chosen for the NASI-Reliance Industries Platinum Jubilee Award for Application Oriented Innovations in Physical Sciences. Dr. Kantesh Balani (MSE) received TMS Young Leader Professional Development Award of the Minerals, Metals and Materials Society. Dr. Krishanu Biswas (MSE) received the DAAD Fellowship and Prof. Dipak Mazumdar (MSE) has been awarded the SAIL Gold Medal of the Indian Institute of Metals for the third time in his career. Dr. Amit Agarwal (Phy) has been awarded the Inspire Fellowship by DST. IIT Kanpur received the Agriculture Leadership Award of Agriculture Today.

Research & Development Overview

During the year, the Institute has witnessed significant growth in its Research and Development activities. The number of externally funded ongoing projects has reached 588 with a sanctioned amount of Rs. 314 crores. During 2012-2013, the Institute got sanctions for 119 sponsored projects worth Rs. 54 crores and 101 consultancy projects of value Rs. 11 crores. Some of the major grants sanctioned by various agencies during the year are DST Rs. 7 crores, SERB Rs. 7 crores, ARDB Rs. 4 crores, DRDO Rs. 6 crores, DAE Rs. 2 crores, UGC Rs. 1 crore and DBT Rs. 1 crore. Some of the major industries which have funded projects are Unilever, HUDCO, CEAT, Intel, Power Grid Corporation of India, BHEL, and GE. At the international level, organizations like Samsung, Boeing, the Finnish Meteorological Institute, Finland have funded our research. A list of major projects is given at the end of the report.

The Institute and consumer goods company Unilever signed a wide ranging partnership agreement to collaborate on several cutting edge research projects in the areas of materials science and engineering. Overall, during the year, the Institute signed around 110 MoUs/agreements with various sponsors and research institutions.



During the year, twelve technologies developed at the Institute were licensed for commercialization while we filed eighteen national patents including two design patents. Three patents were granted and our earnings from intellectual property are US\$ 86,400.

Twenty-two companies are currently being incubated at SIDBI Innovation and Incubation Centre (SIIC) while twenty-one have graduated. SIIC has successfully incubated eight Bio-Tech Companies with two more in the pipeline. BIRAC has sanctioned Rs. 833.716 lacs to SIIC under its Bio-incubator Scheme. SIIC plans to establish the Bio-incubator as per the timeline laid down under the scheme in the next one year.

A novel Zero Discharge Toilet System has been developed in the Department of Civil Engineering. The toilet system eliminates use of fresh water for flushing and converts human excreta into manure and fertilizer. Over 300 such toilets were deployed in Maha Kumbh 2013 at Allahabad which served approximately one million users. Housing and Urban Development Corporation (HUDCO) facilitated this initiative under their Corporate Social Responsibility program.

An Autonomous Mini-Helicopter model was displayed in Bangalore at AERO India 2013. It weighs only a few kilograms and incorporates most of the functions of a real life helicopter and achieves autonomous control in hover and forward flight. This project serves as a platform to test innovative ideas in the design, development, ground/flight testing of autonomous flying vehicles. A laboratory focusing on the fundamentals of design, manufacturing, and testing of systems and sub systems has been



created to assist the development and testing of the mini helicopter. An agreement was also signed with HAL Bangalore for the development of autonomous mini helicopter.

With the growing popularity of Massively Open Online Courses (MOOCs), the problem of automating components of education is the need of the hour. We are developing Intelligent Tutoring Systems to aid online classrooms as well as traditional classrooms. Automated tutoring systems are being developed for topics such as Periodic Table, Limits, Trigonometry, Natural Deduction, Visual Sequences to name a few. These tutoring systems can help instructors in creating sample solutions to assignment problems and new problems along with their solutions and can automatically generate

variants of given seed problems with similar difficulty level. The project is being done in collaboration with Microsoft Research, and was recently showcased at Techfest 2013, Microsoft Research, Redmond, USA.

The contributions of Prof. A. K. Ghosh (AE) towards the successful flight of a supersonic (Mach=3.5) 214 mm PINAKA Mk-II artillery rocket weighing 300 Kg was commended by the Director, ARDE (DRDO). After the first round of rockets failed, modifications were incorporated on the basis of Prof. Ghosh's recommendation and all the rockets exhibited majestic flight.

A new DC power supply has been designed by BSNL-IITK Telecom Centre of Excellence at IIT Kanpur for rural telecom exchanges. It works with one, two or three phase grid input and obviates the need for operating diesel generators during partial grid failure. The product will result in savings in operational cost and an environment friendly telecom exchange. It was showcased in Delhi at India Telecom 2012.

Major projects sanctioned

In a recent high level meeting with DRDO, the Institute has expressed its desire to embark upon mega projects which can lead to the development of challenging products which are challenging and which are required by the country's defence or by society, in general.

I am happy to inform you that DRDO has sanctioned two major projects as part of its nano-photonics program, with a funding of Rs. 309 lakhs. One project targets the development of miniaturized optical devices to function as sources and detectors based on the concept of photonic crystals. The other project concerns the development of large area micro and nano structured meta-materials for visible and infra-red frequencies with a view to developing selective absorbers, detectors and shields.

An Indo-German project-FLEXIPRIDE (Flexible Printed Integrated Disposable Electronics) - has been initiated with one academic Institute and one industrial partner from each country to develop circuits on flexible substrates on which electronic components such as displays, solar cells and transistors can be printed. The main thrust of the project is to improve and integrate components to produce multifunctional system applications such as electronic seals. As a part of the project various printing techniques such as ink-jet and gravure will be used to port ink-based applications from one platform to another. The project spans over three years at a cost of Rs. 4 crores among all the partners.

DBT has sanctioned a project on unraveling the role of Glycogen metabolism in neurodegenerative disorders. Glycogen is the principle storage form of energy in all cell types except the neurons which store either no or negligible amount of glycogen. Intriguingly, neurons in the patients with Alzheimer's disease, Parkinson's disease, Amyotrophic lateral sclerosis or Lafora disease are known to have increased glycogen content, although the significance of the glycogen accumulation in the neurodegeneration is not understood. The outcome of the project is likely to unravel the commonality in the pathological process of diverse set of neurodegenerative disorders and may help to explain the possible role of glycogen metabolism in neurodegenerative disorders.

A project for research and demonstration of the concept of Homogeneous Charge Compression Ignition (HCCI) and Partially Premixed Charge Compression Ignition (PCCI) combustion in Single Cylinder Engine using diesel and biodiesel as test fuels has been sanctioned by DST. It is a three year project with a budgetary allocation of Rs 1.58 crores and Tata Motors, Pune, as the industrial partner. The objective of the project is to develop HCCI/PCCI concept with biodiesel and development of biodiesel PCCI combustion system as an ultra clean combustion system. This advanced combustion seeks to decrease the rate of consumption of conventional fuel-stock and reduce the high pollutant level in exhaust, simultaneously.

The Obama Singh scheme is an Indo-US initiative that aims to form partnerships between US institutions and institutions of higher learning in India. IIT Kanpur partnered with Virginia Tech and was one of the four Indian led partnerships to be funded in the first year of the scheme to create an international program for Sustainable Infrastructure Development. The project with a total funding of Rupees 122.808 lakhs over a three year period seeks to (1) conduct research in areas related to the development, maintenance, and monitoring of infrastructure (2) apply geospatial techniques to infrastructure monitoring (3) develop curriculum in educational institutions and (4) conduct an awareness and sensitization program towards the need for comprehensive planning, development, and maintenance of infrastructure among practicing engineers (5) and contribute to greater mutual understanding among faculty at both the institutions through exchange of scholars, joint publications, and collaborative research.

The state of the art Photovoltaic (PV) Field Performance Test Station has been established under the DST sponsored Indo-UK project Stability and Performance of Photovoltaics. A 50 KWp solar power station having five PV technologies has been created. The power station is unique and first of its kind in the country hosting five PV technologies; mono-crystalline silicon, multi-crystalline silicon, amorphous silicon thin film, copper-indium-gallium-selenide (CIGS) thin film and high concentration high

efficiency triple Junction solar cells in two different configurations, i.e., fixed angle and 2D tracker at 5 KWp levels. An online monitoring system for comprehensive field performance evaluation of various PV system parameters and ambient conditions has been designed. The test station also provides an R&D platform to faculty, research engineers and students of the institute associated with the Solar Energy Research Enclave (SERE). Besides providing opportunity for R&D in PV technologies, the enclave acts as a demonstrator of solar based technologies. The enclave is self sufficient in its electricity needs through 5 KWp battery supported solar panels and is also feeding about 200 units/day to the IITK electricity grid.



Infrastructure Development

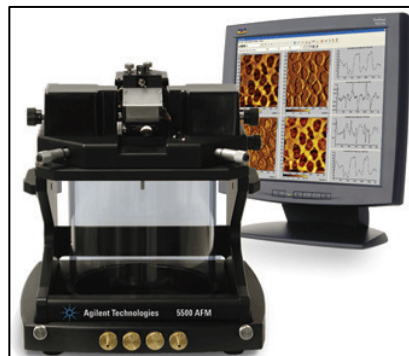
Keeping in view the requirements of the campus community, the institute has embarked upon a major exercise to enhance the infrastructure in the campus. Some of the new facilities that are being planned are a Convention Centre including a Senate Hall, a new Sports' Complex, Vivekananda Youth Centre, TeQIP Nodal Centre, Engineering Core Laboratory, Administrative Block and faculty apartments. As a part of this exercise, some of the existing low usage footprints like Workshop and Aerospace buildings will be converted to multistoreyed buildings.

The Institute strives to provide the state-of-the-art equipments to its faculty, students and staff to facilitate cutting edge research in the frontier areas of science and technology.

During the year, the Institute has procured the following facilities under its CARE scheme: Anechoic Acoustic Chamber, Femto-second Transient Absorption Spectrometer, Laser Micro-pattern Generator, Femto-second Laser based Beam Delivery and Scanning System, Large area nano/micro depth profiling by AFM, Facility for transgenesis of multiple model organisms and a large scale centrifugation facility.



Under the FIST scheme of DST, the Department of Chemistry received a total budget of Rs. 465.00 lakhs and procured several new facilities including Mass Spectrometer, Computer Cluster, Fluorimeter, GA-DSC, Atomic Force Microscopy, Resonance Raman Spectrometer, etc.



Other facilities established in the Institute during this year are listed at the end.

International Academic Collaborations

For promoting scientific and academic co-operation, the Institute has entered into MoUs with the University of Gothenburg, Sweden, National University of Ireland at Galway, Ireland, Singapore Management University, Singapore, University of Applied Sciences, Germany, Ecole Centrale Nantes, France, Ecole Nationale Supérieure D Arts et Metiers, France, Erasmus Mundus Europe Asia (EMEA), Sweden, The University of Melbourne, Australia, RWTH Aachen University, Germany, The University of Tokyo, Japan, Ulsan National Institute of Science and Technology, Korea, University of Malaya, Malaysia, and University of Saskatchewan, Canada.

The Department of Industrial Management and Engineering helped Defence Engineering College, Ethiopia to establish an M.Tech program in Industrial Management.

Financial Resource Mobilization

The year 2012-13 has witnessed significant growth in financial resource of the institute. The total Grant-in-aid received during the financial year from MHRD, Govt. of India, under non-plan was Rs. 169.65 crores and under Plan Rs. 163.80 crores.

The year was good for fund raising as well. The Institute received Rs. 4.54 crores from 701 donations made by 538 donors (334 donors from India and 204 donors from

abroad). A total of 310 donors (169 donors from India and 141 donors from abroad) contributed Rs. 54.8 lakhs under the Annual Gift Programme (AGP). Donations received under AGP have been utilized for providing travel support to the students for attending international conferences, cash award for publication of their research papers in reputed journals, support to community services and other activities encouraging excellence in the Institute.

The class of 1988 has contributed Rs 1,11,20,790.00 (Rs one crore eleven lakhs twenty thousand and seven hundred ninety) during their Silver Jubilee Reunion towards naming of squash court, Community outreach activities, Noida campus, alumni association, merit cum means scholarship, mess workers' pension fund, tinkering lab, various student activities and center for development of soft skills.



Mr. Anil Kumar Singh (BT/AE/1970) has donated for Kunwar Devendra Pratap Singh & Kunwarani Krishna Kumari Memorial Award and Mr. Puneet Prakash (MSC5/MTH/1992) has donated for Shailja Srivastava Award.

Several donors have instituted new scholarships during the financial year 2012-13. Arpita Mahila Mandal, Azad Nagar, Kanpur has instituted two scholarships named as "Arpita Mahila Mandal Scholarship" to provide financial assistance to two poorest girl students during the full degree program. Mr. Rangarajan Vellamore R, B. Tech from Mechanical Engineering (1990) has instituted Sri R & R Chari Scholarship. Mr. Anupam Saronwala, B. Tech from Electrical Engineering (1980) has instituted Dr. K. C. Saronwala Memorial Scholarship. Mr. Rajeev Chopra (B. Tech Metallurgy 1985) and Sandeep Chopra (B. Tech, Electrical 1993) has donated to institute four annual scholarships namely Ram Parkash Chopra Memorial Scholarship. Mr. Satya P. Chauhan (BTech/ChE/1968) has instituted Shri Ranbir and Shrimati Mahadevi Chauhan Scholarship. Mr. Santosh Mehra (BT/EE/1966) & Mrs. Anita Mehra, donors of "Anita and Santosh Mehra Scholarship" instituted in 2010 have instituted four more scholarships and all the four scholarships will be named under "Anita and Santosh Mehra Scholarship".

Mrs. Asha Jadeja, wife of Late Prof. Rajeev Motwani (BT/CSE/1983), has donated US\$ 181,000 towards the Rajeev Motwani Building for CSE department. Mrs. Jadeja has committed to donate 50% cost of Rajeev Motwani building which is presently under construction.

Mr. Jagjeet Singh Bindra has donated US\$ 20,000 towards Mr. & Mrs. Gian Singh Bindra Chair. Mr. Kamlesh Dwivedi has donated US\$ 40,000 towards Pandit Girish Ranjan & Sushama Rani Pathak Chair.

SURGE 2012 program was conducted during summer 2012 which saw student participation of 95 members from 122 Institutes, and faculty participation of 72 members from IIT Kanpur as mentors. The selection of student participants was very competitive as 2600 applications were received from various institutions in the country, which gives a clear indication of its increasing popularity.

The Institute encourages research by providing travel support to students and rewarding students for publishing research papers in high quality journals. The Institute provided travel support of Rs. 68 lakhs to 155 students for attending international conferences, and cash awards of Rs. 18.20 Lakhs to 147 students for publication of their research papers in reputed ISI Web Journals during the financial year 2012-13.

Rs. 1.59 crores from endowment fund account was reimbursed for New Faculty Fellowships during the financial year 2012-13.

The Institute is working on an ambitious plan for raising substantial resources to increase the research and development activities on campus and hopes to launch some new initiatives in the year 2013-14.

Students' Activities

IIT Kanpur continues its striving to encourage an equitable balance between academics and extracurricular activities among its students. Our vision is to create future leaders in their field of interest and not just technically accomplished individuals. The Institute strongly believes that an abiding social and humane engagement is the hallmark of its student body. To translate such a belief into reality, the Institute nurtures social, cultural and sporting activities pursued by the students' gymkhana and other student groups. With a firm belief in self-governance, Students' Gymkhana continues to provide platform to all students to pursue their interest. This year also witnessed the Golden Jubilee of Students' Gymkhana.

A variety of activities are pursued by various clubs coming under the broad ambit of the councils of the Students' Gymkhana. They range from clubs like Prayas, where students teach children coming from socially disadvantaged and economically deprived backgrounds to the Dramatics club which stages thematically inspired and socially relevant plays. This year Institute's technical team won the Overall Championship at

IITM's technical competition. Our dance club also made their impact in Mood Indigo, IITM cultural festival and IITD cultural festival. Music club is actively working on launching a music album of its own, again first of its kind initiative by any student group in India. It has composed three patriotic songs and is working on composing the Anthem for IIT Kanpur. Apart from these, Vox Populi, the campus newspaper provides the news from every aspect of the campus community. A full-fledged studio for photography has come into existence and the last phase of work is under progress. It will be fully operational from the month of July. Other technically oriented student groups as part of the Science and Technology Council are engaged throughout the year in pursuing special interests like robotics, electronics, astronomy, aero-modeling, business, programming, HAM, Rubik's cube to name only a few activities. This year was a landmark for Science and Technology Council. We saw International participation in Techkriti'13 and also our SAE team participated in the International competitions. This time we have successfully completed many engrossing projects such as Microsoft Touch Table, Hexapod (six legged robot bot), and India's first student made in house Planetarium which is all set to enter the Limca Book of Records. Also we have put up a splendid show in IITB's Technical festival and in Intel Embedded Challenge. We have also successfully set up the Society of Automotive Engineers, IIT Kanpur chapter and are all set to take part in Formula SAE 2013 which is going to be held in December.

The overriding objective of the large-scale events of the Institute such as Antaragni (the cultural festival), Techkriti (the technical and entrepreneurship festival) and Udghosh (the sports festival) is to infuse a sense of richness and purpose in the lives of students. All these social, cultural and sporting activities play a crucial role in the transformation of a student into a complete human being. These festivals have seen vastly improved participation levels, both from within the Institute and also from students from other national and international institutions. The revenues generated for conducting these festivals saw an impressive growth last year, which is a tribute to the managerial and logistic skills of our students. Social activists like Medha Patkar, economists like Trilochan Sastry and Mahesh Murthy and veteran journalists like Kuldip Nayar, and many more have visited the campus in the past. The Institute sports teams participated in the Inter IIT Sports meet this year held at IIT Roorkee. The Athletics team was successful in securing Gold Medal. We also secured Silver Medal in Table Tennis (boys) and Squash (boys) and Bronze Medal in Table Tennis (Women). This was the first time when both the Men and Women team won a medal in any Inter-IIT sport. The year also saw the addition of a new Rock Climbing wall and an air-conditioned gymnasium to the Institute Facilities. This year also marked the presence of an Archery, Horse-riding and Boxing Workshop for the students.

The Institute witnessed stiff Inter-Hall competition in the form of Galaxy, Takneek, Spectrum and Inferno, Inter-Hall Cultural, Science & Technology, Films & Media and Sports championships respectively. Fresher Inferno tournament also was organized to find some new talent from the freshers' batch. The sole guiding principle behind organizing these championships is to provide the students of this campus, a much needed platform to compete and showcase their cultural and sports talents and to give them a reason and a motivation, strong enough, to come out of their rooms and participate in group activities.

Significantly, the students also engaged in an Energy Saving Competition amongst hostels through an Inter-Hall Competition called Green Opus. The results were astounding in that the students just by internal competition were able to markedly reduce the average energy consumption. Results from all the five Inter Hall Competitions were then used to identify the winner of the Overall Championship Trophy.

This year, the Gymkhana's Golden Jubilee is being celebrated to commemorate the momentous journey of the Students' Gymkhana. The Golden Jubilee celebrations were inaugurated by Dr. A P J Abdul Kalam on the 25th of October. Dr. Kalam's speech during the ceremony was witnessed by thousands of students despite the event occurring during the mid-semester recess.

The Counselling Service is an active wing of our students. The activities include organizing the orientation programme for UG as well as PG students; providing specific attention to students having academic, financial or personal problems; monitoring the progress of students who need special attention. It enjoys wide appreciation from both faculty and students alike.

Despite the fear of a second recession, several companies actively participated in the Campus placement programme with many old recruiters registering their presence once again after the recession in 2007. Apart from an overwhelming response from the traditional Consulting, FMCG and the core engineering sectors, the e-commerce sector registered a sizeable presence with a total of 30 job offers from companies such as Myntra, Flipkart and Snapdeal.

Around 914 students registered for placements this year, of which 709 received job offers from 200 companies. Thus the overall placement record stands at 78% as on 5th of May, 2013. The break-up is as follows: B. Tech 80%, Dual 98%, M. Tech 70%, M. Des 62%, Integrated M.Sc. 92%, and M.Sc. 2 year 49%, and MBA 90%. Results from several companies that participated in the placement process are still awaited.

The Career Counseling Program continued successfully this year with almost a two-fold rise in the number of students availing this facility. The Institute has put in place the entire infrastructure necessary to meet the requirements of the enhanced student strength. As of now, there are eleven halls of residence, nine for boys and two for girls. The total capacity in these halls is over five thousand.

The Students' Gymkhana of IIT Kanpur was established in the year 1962, with the goal of complementing education through exposure to science, culture and sports and thereby fostering an environment that provides every student that passes through the hallowed halls of IIT Kanpur with an opportunity to develop and have a wholesome college experience.

A number of events like The Golden Jubilee Duathlon, Montage Film Festival, Vivekananda Youth Convention and Stress Buster events like "Laugh it Out" were organized. This year is not just about celebrating and recognizing the 50 years' worth of achievements of the Gymkhana but also to contemplate and look towards the future, to leave behind a legacy that would continue to benefit the student community over the years to come. In this direction, a number of infrastructural projects dealing with every council have been taken up this year, right from establishing our very own in-house recording studio to setting up an archery range on campus. Apart from the infrastructural projects, a number of workshops were organized to introduce the campus to new forms of art, culture and media. A solar tree has been put up in the campus. Many other procedures have started on for IITK Paper Waste Management and Water Harvesting. These, we are told, are long term projects and will take time to complete.

In Hall-2, work on a Mini-Library in the Reading Room has started, if successful it will be implemented in other halls too. An Electronic Voting Machine has been brought to the campus. The mail-quota is also going to be increased. Study kits have been given to all the students in Prayas. A ball-throwing machine is soon to arrive in the campus, much to the enjoyment of the cricket lovers. An exquisite projector has been bought and will be used in the Auditorium for screening movies.

Over the past 50 years, the Gymkhana has developed into one of the finest models of student Governance and Organization in the country and is now an integral part of the life of every student on campus.

It represents, to a student of IIT Kanpur, the most unique feature of our Institute life: the independence that an autonomous student body offers us. The privilege to organize our own student-managed festivals, the privilege to compete with each other in student-organized competitions, the opportunity to perform and participate in a spate of

extracurricular activities and the chance to exemplify the spirit of competition are all offered to us by the institution of the Gymkhana.

While the connectivity of Lucknow airport to major metros has considerably improved, the same cannot be said for the connectivity between IIT Kanpur and Lucknow airport. To address this issue, a helicopter service operated by Pawan Hans has been started from the institute to Amausi airport. While presently it is running on an experimental basis, efforts are being made to explore how it can be operated as a regular service.

I am happy to say that the Institute has also joined hands with the Merchants' Chamber of Uttar Pradesh to provide its services towards improving the traffic and related civic infrastructure in Kanpur city.

Dear graduates, on this occasion of the forty-fifth convocation, I extend my heartiest congratulations and best wishes to the Class of 2013 passing out today. This hard-earned success is a major milestone in your career. I also take this opportunity to salute your parents who have ensured your success and glory in all you have chosen to do through their quiet support.

As individuals you will choose the profession that excites you, that generates intellectual passion within yourself, engages your mind in the best possible way. I fervently hope that you are successful in your endeavors. Today, you will be leaving the protected environment of the Institute to find your place in the larger order of society. Prepare yourselves to evaluate the needs of others and respond to the call for action. It is people like you who keep our flag flying high.

I admire you for your fine accomplishments during your stay at IIT Kanpur. Given your intellectual attainments and breadth of understanding, you are destined to bring cheer, hope, joy and luck in all the lives you touch. Each of you in your own way has internalized the spirit of IIT Kanpur that imbibes commitment, excellence, fellowship, and, importantly, service. No matter where you are, continue to dream and dream big at that! My sincere, good wishes for the productive work you aspire to do in the future.

Jai Hind.

Books Published

1. A book written by Prof. Ashish Tiwari (AE) titled *Atmospheric and Space Flight Dynamics* has been translated into Chinese language by National Defense University Press (Beijing).
2. *Nanomedicine for Drug Delivery and Therapeutics: Multifunctional Nano/Micro Polymer Capsules as Potential Drug Delivery and Bioimaging Agents*, Haider Sami, Jaishree, Ashok Kumar (BSBE), Sri Sivakumar (CHE), Wiley.
3. *El Comercio De Bienes Amigables Con El Ambiente Y Otros Productos Especializados Del Ecuador* (in Spanish), Mathur Somesh K (HSS) with Luis Barreno, Maria Isabel and Rene Vasconez, UTE (Universidad Tecnológica Equinoccial), Ecuador, Quito, Ecuador.
4. *Trade in Climate Smart and Other Specialized Products of Ecuador*, Mathur Somesh K (HSS), E book, bookboon.com, <http://bookboon.com/en/textbooks/economics/trade-in-climate-smart-goods>, UK and Denmark.
5. *Choosing Right Control System for Organization Strategies*, Devjani Chatterjee (IME) and RRK Sharma (IME), LAP Lambert Academic Publishing, Germany, 2012.
6. *Statistical Signal Processing, Frequency Estimation*, Debasis Kundu (Math) and Swagata Nandi, Springer, New York.
7. *Micromanufacturing Processes*, edited by V K Jain (ME), CRC Press (Taylor and Francis, USA), New York.
8. *Nanotribology and Materials in MEMS*, Sujeet K. Sinha (ME), N. Satyanarayana and S. C. Lim, Springer, Germany.
9. *Schlieren and Shadowgraph Methods in Heat and Mass Transfer*, Panigrahi, P K (ME) and Muralidhar, K (ME), Springer, Newyork, Heidelberg, Dordrecht London.
10. *Imaging Heat and Mass Transfer Processes-Visualization and Analysis*, Panigrahi, P K (ME) and Muralidhar, K (ME), Springer, Newyork, Heidelberg, Dordrecht London.

Fellowships

1. Prof. Sanjay Mittal (AE) has been awarded the J C Bose Fellowship by DST.
2. Prof. Sanjay Mittal (AE) has been elected Fellow of National Academy of Sciences, India.
3. Prof. Ashok Kumar (BSBE) has been awarded Tata Innovation Fellowship by Department of Biotechnology, Ministry of Science & Technology, Govt. of India.
4. Dr. Bushra Ateeq (BSBE) has been awarded Wellcome Trust-DBT India Alliance Intermediate Fellowship.
5. Prof. S. Ganesh (BSBE) has been awarded Ramanna Fellowship by Department of Science & Technology.

6. Prof. S. Ganesh (BSBE) has been elected Fellow of the National Academy of Sciences, Allahabad.
7. Prof. Animesh Das (CE) has been awarded Fulbright-Nehru Senior Research Fellowship.
8. Prof. Amalendu Chandra (CHM) has been awarded the J C Bose Fellowship by DST.
9. Prof. Amalendu Chandra (CHM) has been elected Fellow of the Indian National Science Academy (FNA).
10. Prof. Sandeep Verma (CHM) has been awarded the J C Bose Fellowship by DST.
11. Prof. Manindra Agrawal (CSE) has been elected Fellow of the Academy of the Developing World, Trieste, Italy.
12. Dr. Yogesh Singh Chauhan (EE) has been awarded Ramanujan Fellowship by DST.
13. Prof. Arvind K Sinha (HSS) has been elected Fellow of the National Academy of Psychology.
14. Prof. Avinash Kumar Agarwal (ME) has been elected as SAE International Fellow by the Society of Automotive Engineers (International), USA.
15. Dr. Anupam Saxena (ME) has been awarded Alexander von Humboldt Fellowship from Alexander-von-Humboldt Stiftung.
16. Prof. Gautam Biswas (ME) has been elected Fellow of Indian National Science Academy.
17. Dr. Krishanu Biswas (MSE) has been awarded DAAD Fellowship.
18. Prof. S. A. Ramakrishna (Physics) has been awarded Swarnajayanti Fellowship for the year 2012.
19. Dr Amit Agarwal (Physics) has been awarded Inspire Fellowship by DST.
20. Prof. Debashish Chowdhury (Physics) has been awarded the J C Bose Fellowship by the DST.

Awards and Honours

1. Prof. Ashok Kumar (BSBE) received GRO Samsung project award by Global Research Outreach, Samsung Ltd, Korea.
2. Prof. Mukesh Sharma (CE) has been awarded 'Hiyoshi Environmental Award' by Hiyoshi Corporation, Japan and Hiyoshi India Ecological Services Pvt. Ltd., Chennai.
3. Prof. Sudhir Jain (CE) has been elected President of the International Association for Earthquake Engineering (IAEE).
4. Prof. Mukesh Sharma (CE) has been chosen for 2012 Kong Ha Award for Excellence in Air Quality Management.
5. Prof. Ashutosh Sharma (CHE) has been awarded the Syed Husain Zaheer Medal by the Indian National Science Academy.
6. Prof. D. Kunzru (CHE) has been awarded Chinnamaul Memorial Prize and M. H. Shukla 1st Prize by the Indian Institute of Chemical Engineers.

7. Dr. Yogesh Joshi (CHE) has been awarded NASI Scopus Young Scientist Award in Engineering by National Academy of Sciences, Allahabad.
8. Prof. P. K. Bharadwaj (CHM) has been awarded Prof. P. R. Ray Memorial Award by Indian Chemical Society.
9. Prof. Sandeep Verma (CHM) has been awarded Prof. R. C. Mehrotra Commemorative Lecture and Gold Medal by Indian Science Congress Centenary Session, Kolkata.
10. Dr. Raja Angamuthu (CHM) has been awarded Young Scientist Research Award by BRNS, DAE.
11. Prof. Debabrata Goswami (CHM) has been awarded Thathachari Research Award 2012 by Bramhara Trust.
12. Dr. Nisanth N Nair (CHM) has been awarded INSA Medal for Young Scientist.
13. Prof. Vinod Singh (CHM) has received Pt Jawaharlal Nehru Award from the Dept. of Science and Technology, MP Govt.
14. Prof. Vinod Singh (CHM) has received the Distinguished Alumnus Award from the Banaras Hindu University.
15. Prof. Sanjay G. Dhande, former Director IIT Kanpur has been conferred Padma Shri by the Government of India.
16. IIT Kanpur received the Agriculture Leadership Award of Agriculture Today.
17. Prof. Manindra Agrawal (CSE) has been conferred Padma Shri by the Government of India.
18. Prof. S C Srivastava (EE) received Academic Excellence Award at 17th National Power Systems Conference.
19. Prof. S. C. Srivastava (EE) received Power Energy Society (PES) Outstanding Engineer Award by PES/IAS chapter, IEEE Uttar Pradesh Section.
20. Prof. M. Ramamoorthy (Visiting Professor and also former faculty, EE) received Malviya Excellence Award in Power Systems at 17th National Power Systems Conference.
21. Dr. Prashant Bagad (HSS) received the P. N. Pandit Puraskar for his short story collection in Marathi titled 'Vivade Vishade Pramade Pravase' by the Sarvajanic Vachanalay ('Public Library'), Nashik.
22. Dr. Prashant Bagad (HSS) received Baburao Bagul Shabda Puraskar.
23. Prof. Anoop singh (IME) has received Amity Academic Excellence Award in Management & Engineering from Amity University.
24. Prof. Peeyush Chandra (Math) has been elected President, Indian Society of Theoretical and Applied Mechanics.
25. Prof. Avinash Agarwal (ME) has received the NASI-Reliance Industries Platinum Jubilee Award for Application Oriented Innovations in Physical Sciences.
26. Dr. Pankaj Wahi (ME) has been awarded the INSA Medal for Young Scientist.
27. Prof. Kalyanmoy Deb (ME) has been awarded TWAS Prize in Engineering Sciences.

28. Prof. Gautam Biswas (ME) has received Distinguished Alumnus Award from the Bengal Engineering and Science University (BESU) Shibpur.
29. Prof. N. N. Kishore (ME) and Prof. Prabhat Munshi (ME) received ASNT Outstanding Paper Award for the article, "Tomographic Reconstruction of Defects in Composite Plates Using Genetic Algorithms with Cluster Analysis".
30. Prof. Dipak Mazumdar (MSE) has been selected Chair Professor by the Ministry of Steel, Govt. of India.
31. Prof. Dipak Mazumdar (MSE) has been awarded the SAIL Gold Medal of the Indian Institute of Metals.
32. Professor Dipak Mazumdar (MSE) has been selected INAE Distinguished Industry Professor.
33. Prof. R. C. Budhani (Physics) has received the Distinguished Alumnus Award of IIT Delhi.

Editorships

1. Prof. T. K. Sengupta (AE), Regional Editor, *Computers and Fluids*.
2. Prof. T K Sengupta (AE), Associate Editor, *International Journal of Emerging Multi-Disciplinary Fluid Mechanics*, U.K.
3. Prof. T. K. Sengupta (AE), Associate Editor, *Progress in Applied Mathematics*, Canada.
4. Prof. T. K. Sengupta (AE), Editorial Board, *International Journal of Intelligent Unmanned Systems*, Emerald.
5. Prof. Ashok Kumar (BSBE), Advisory Board Member, *Biotechnology Journal*, Elsevier Publications.
6. Prof. Ashutosh Sharma (CHE), Editorial Advisory Board Member, *Industrial and Engineering Chemistry Research*, American Chemical Society (ACS).
7. Prof. Ashutosh Sharma (CHE), Editorial Advisory Board Member, ACS Applied Materials & Interfaces, American Chemical Society (ACS).
8. Prof. D. Kunzru (CHE), Member, Editorial Board, *International Journal of Chemical Engineering*, Hindawi Publishing Corpn.
9. Dr. Jayant K. Singh (CHE), Editor, *Journal of Chemistry*, Hindawi Publishing Cooperation.
10. Dr. Jayant K. Singh (CHE), Editor, *The Scientific World Journal*.
11. Prof. Sandeep Verma (CHM), Member, Editorial Advisory Board, *Chemical Communications*, Royal Society of Chemistry, London, UK.
12. Prof. Sandeep Verma (CHM), Overseas Member, *Ceylon Journal of Science*, Faculty Board of Science, Sri Lanka.
13. Prof. Debabrata Goswami (CHM), Editor-in-chief, *Journal of Spectroscopy & Dynamics*, Cognizure Inc.

14. Prof. Debabrata Goswami (CHM), Editorial Board Member, *Reviews of Scientific Instruments*, American Institute of Physics.
15. Prof. Debabrata Goswami (CHM), Senior Member, *Optical Society of America*.
16. Prof. Binay K Pattnaik (HSS), guest edited *Journal of Sociology of Science and Technology* (Vol. 3, No. 4, 2012), on behalf of the Russian Academy of Sciences, St Petersburg, Russian Federation.
17. Dr. Nishchal K Verma (EE), Guest Editor, *International Journal of Computational Vision and Robotics*, Inderscience Publishers.
18. Prof. Peeyush Chandra (Math), *Review Bulletin of the Calcutta Mathematical Society*.
19. Prof. Debasis Kundu (Math), Associate Editor, *Journal of Statistical Distributions and Applications*, Springer.
20. Prof. Manjul Gupta (Math), Vice President, *Bharat Ganita Parisad*, Lucknow.
21. Dr. Shantanu Bhattacharya (ME), Editorial Board Member, *Trends in Mechanical Engineering & Technology*, STM Journals.
22. Prof. V. K. Jain (ME), Associate Editor, *International Journal of Precision Technology*, Inderscience Publishers (UK).
23. Dr. Sujeet Kumar Sinha (ME), Editorial Board Member, *Tribology International*, Elsevier, UK.
24. Dr. Sujeet Kumar Sinha (ME), Editorial Board Member, *Advances in Tribology*, Hindawi Publishing, USA.
25. Dr. Sujeet Kumar Sinha (ME), Editorial Board Member, *Tribology–Materials, Surfaces and Interfaces*, Maney Publishing and the Institute of Materials, Minerals and Mining, UK.
26. Dr. Sujeet Kumar Sinha (ME), Editorial Advisory Committee member, *Industrial Lubrication and Tribology*, Emerald Group Publishing, UK.
27. Dr. Sameer Khandekar (ME), Associate Editor, *Interfacial Phenomena and Heat Transfer*, Begell House.
28. Prof. P. Venkitanarayanan (ME), Associate Editor, *Experimental Mechanics*, Springer.
29. Dr. Anupam Saxena (ME), Associate Editor, *ASME Journal of Mechanisms and Robotics*, ASME.
30. Prof. V. K. Jain (ME), Editor, *Micro and Nanomanufacturing Series of Taylor and Francis* (CRC Press), USA.
31. Dr. Kantesh Balani (MSE), Associate Editor, *Nanomaterials and Energy*, ICE Publishing.
32. Dr. Kantesh Balani (MSE), Editorial Board, *Recent Patents on Materials Science*, Bentham.
33. Dr. Kantesh Balani (MSE), Editorial Board, *Recent Patents on Nanotechnology*, Bentham.
34. Dr. Kantesh Balani (MSE), Editorial Board, *Journal of Materials & Metallurgical Engineering*, STM Journals.

35. Dr. Kantesh Balani (MSE), Editorial Board, *Journal of NanoScience, NanoEngineering & Applic*, STM Journals.
36. Dr. Kantesh Balani (MSE), Editorial Board, *Journal of Engineering*, Hindawi.
37. Dr. Kantesh Balani (MSE), Key Reader, *Metallurgical and Materials Transactions*, Springer.
38. Prof. Dipak Mazumdar (MSE), *Key Reader* (Sub editor), MMTB, AIST, USA.
39. Prof. Dipak Mazumdar (MSE), Editor, *Transactions of Indian Institute of Metals*, Indian Institute of Metals, Kolkata.
40. Dr. Krishanu Biswas (MSE), Editorial Board, *Indian Journal of Materials Science*, Hindawi.
41. Dr. Bikramjit Basu (MSE), Member, *Journal of Biomaterials Applications and Advances in Ceramic Science and Engineering* (ACSE).
42. Prof. S. Anantha Ramakrishna (PHY) Member, Editorial Board, *Journal of Electromagnetic Optics*, Institut Fresnel, CNRS, French Optical Society.

Students' Awards

1. Mr. Joydeep Bhowmik (AE) won the first prize for Mechanical bird and also 3rd prize in Laws of Motion (Radio Controlled fixed wing aircraft design and flying competition) in ASME-Student Design Exposition held in Techno Management Fest at IIT Kharagpur.
2. Mr. Anjaney Kothari (BSBE) won the first prize for the paper presentation in the Annual Technical Festival, Cognizance held in IIT-Roorkee.
3. Mr. Paritosh Parashar (BSBE) won the BioAsia Innovation Award for 2013.
4. Shamjad P. M (CE) has been awarded the first prize for paper during Indian Aerosol Science and Technology Association (IASTA-2012) Conference.
5. Ms. Jaishree (CHE) won the Best Poster Award in International Conference on Materials Chemistry (ISMC 2012) organized by BARC.
6. Mr. Srikanth Divi and Ms. Paramita Halder (CHE) received Garuda Challenge award at PARCOMPTECH 2013 (National Conference on Parallel Computing Technologies) organized by Center for Development of Advanced Computing.
7. Aman Jain, Bhuvan Gupta, Shilpa Chhippa, Ujjwal Agrawal, (CHE) won the first prize in the competition Prototype, Chemical Engineering, held as a part of the annual technical festival of IIT Roorkee.
8. Sauvik Samanta (CHM) got the 1st prize in poster presentation in the '5th International symposium' on "Drug Development for Orphan/Neglected Diseases" organized by Current Trend in Drug Discovery Research (CTDDR-2013) at CSIR-Central Drug Research Institute (CDRI), Lucknow.
9. Mr. Ashis Kumar Sahoo (CHM) got the Best Poster Award in the conference "Emerging Trends in Development of Drugs and Devices" (ETDDD-2013).

10. Dr. Sandipan Halder (CHM) has been awarded Nehru-Fulbright Post Doctoral Fellowship.
11. Ms. Amrita Chaturvedi (CSE) received best paper award at International Conference on Software Engineering and New Technologies in Hammamet, Tunisia (ICSSENT'12).
12. Mr. Pranay Dighe (CSE) and Anurag Kumar (EE) have won the Samsung Innovation Award in the Product Design Category.
13. Mr. Somak Bhattacharyya, Saptarshi Ghosh, Debdeep Sarkar (EE) received the best paper award of their respective sessions in Sixth Annual Conference of Antenna Test and Measurement Society of India (ATMS) held in Kolkata.
14. Mr. Somak Bhattacharyya (EE) has received Young Scientist Award at the International Symposium on Electromagnetic Theory, 2013 by International Union of Radio Sciences (URSI).
15. Power System Operation Corporation (POSOCO) in partnership with the Foundation for Innovation & Technology Transfer (FITT), IIT Delhi awarded POSOCO Power System Award (PPSA 2013) to the PhD theses of Dr. Seethalekshmi, Dr. Sachin Jain, and Dr. Naveen Jain (EE).
16. Power System Operation Corporation (POSOCO) in partnership with the Foundation for Innovation & Technology Transfer (FITT), IIT Delhi awarded POSOCO Power System Award (PPSA 2013) to the M.Tech theses of Mr. Dongare Kapil Subhash, Sivanagaraju Gangavarapu (EE).
17. Mr. Kunal (IME) has received the Best Paper Award at 6th Doctoral Colloquim 2013 at IIM Ahmedabad.
18. Mr. Dhananjay Kumar Srivastava (ME), Mr. Ajay M. Sidpara (ME), Kewal Dharmashi (ME) and Ms. Shanu Sharma (MDes) have been awarded Gandhian Young Technological Innovation Award.
19. Mr. Ambreen Nisar and Rajeev Kumar Sharma (MSE) received First Prize for their poster in Advanced Functional Materials and Structures workshop.
20. Mr. Abhijeet Moon (MSE) received the Best Paper Award in CORCON 2012.
21. Mr. A. P. Moon, A. Barman, C. Chattopadhyay, S. T. Anand, N. Balaji (MSE) received the best poster award at ADNAN 2013, Chennai.
22. Mr. Raghunandan Sharma (MSP) received the Poster Award in the National conference on Carbon Materials (CCM12) organized by Indian Carbon Society, Mumbai.
23. Ms. Soma Banerjee (MSE) received the Poster Award for in the National conference on Carbon Materials (CCM12) organized by the Indian Carbon Society, Mumbai.
24. Mr. Raghunandan Sharma and Charchit Kumar (MSE) won the third prize in the 4th International Exhibition and Conference 'GRIDTECH 2013'.
25. Mr. Rajeev Kumar Sharma (MSE) bagged the First Prize in a poster competition of Advanced Functional Materials And Structures workshop.

26. Arun Kumar (MSE) received a special prize in International Conference on Advances in Materials and Processing: Challenges and Opportunities.
27. Mr. Anup Patel (MSE) received the Best Paper Award during ISRS 2012.
28. Mr. Amit Banerjee (Physics) won the best poster award at the International Conference on Material Science and Technology (ICMST 2012).
29. Mr. Gautam Nandi's (CHM) poster was among the winners of the IUPAC Scholarships.
30. Mr. Sanchit Singhal (MSE) was awarded the 'Promising Young Asian Leader' award at Asia'99 Conference, at NUS, Singapore.
31. Mr. Ankit Sahu finished 3rd place representing IIT Kanpur in the first ever Inter IIT Messier Marathon organized in the GMRT campus, Pune.
32. Ms. Vatsal and Saumya were selected for Honda Young Engineer and Scientist Award in India 2012.

Major Projects Sanctioned

- Characterization and Modeling of Uncertainties in Composites (ARDB).
- Multi-Scale Damage Modeling, Testing and Analysis For Life Prediction of Fibrous Composite Structures (ARDB).
- Design of Composite Structures: Methodologies and Criteria (ARDB).
- Understanding Nanoparticle Internalization by Mammalian Cells (DST).
- Flexible Printed Integrated Disposable Electronics (FLEXIPRIDE) (IGSTC).
- Development and Demonstration of Nano-Sized Tio₂-Based Photo Catalytic Oxidation Technology for Controlling Volatile Organic Compound (VOCS) at Source and In Situ Ambient Air (MOEF).
- Organic Functional Materials with a Rational Design of Molecular Building Blocks (SERB).
- Understanding Plant Nematode Interaction: Identification of Plant and Nematode Genes Involved in Disease Development (ICAR).
- Dynamics and Phase Behaviour of Anisotropic Soft Materials (DAE).
- Metamaterials and Plasmonic Structured Materials for Controlling Radiation (DRDO).
- Photonic Crystal Based Devices for Light Contr (DRDO).
- Femtosecond Study of Metal Complexes, Green Fluroscent Protein and related Molecules (SERB).
- Creating a International Program for Sustainable Infrastructure Development under Obama-Singh 21st Century Knowledge Initiative (OSI) grant (UGC).
- Aakash Lab (MHRD).
- Unraveling the Role of Glucose Metabolism in Neurodegenerative Disorders (DBT).
- CNT Reinforced Composites for Structural Application (STC).

- Development of NB-Based High Strength Ultrafine In-Situ Composites for High Temperature Application (BRNS).
- India-UK Advanced Technology Centre (IU-ATC PHASE 2) of Excellence in Next Generation Networks Systems and Services (DST).
- Complex Bioinspired Systems (DAE).
- Nano-Patterned Conductive Adhesive for Metal-Polymer Inter-Connectors in Solar Cell (DST).
- Understanding the Self Assembly Behaviour of Amphiphilic Molecules on Surfaces (SERB).
- Developing Low Carbon Cities in India: Focus on Urban Infrastructures, Climate Risks & Vulnerability (USAID).
- Installation of Zero Discharge Toilet System (ZDTS) at Kumbh 2013, Allahabad (HUDCO).
- Experimental Investigations of HCCI/PCCI Combustion in a Single Cylinder Research Engine using Biodiesel (DST).
- Bio-Incubator Facility at SIDBI Innovation & Incubation Centre (BIRAC).

Labs/Facilities Developed

- Interferometric technique for fracture analysis in thin films (AE).
- Buckling characterization in heterogeneous and FGM beams (AE).
- Single-Crystal and Powder X-ray Diffraction Facility (CHM).
- RF and Microwave characterization lab (EE).
- Transducers and instrumentation virtual laboratory (EE).
- Brain computer interface laboratory (EE).
- Acoustic and vibration data acquisition facility (EE).
- Facility for measuring the impact strength of nuclear grade concrete (ME).
- Surface and Tribology Laboratory (MSE).
- High Temperature Fuel Cell Laboratory (MSE).
- Full scale corrosion labs with potentiostat, in-house built salt fog test machine and other test facilities (MSE).
- Oxidation test facility like in-house developed DTA/TGA and Netzsch DSC-TGA (upto 1500C) (MSE).
- A virtual laboratory on oscillations and phenomena experiments in mechanics (Physics)
- Vibrating sample magnetometer and heat capacity set up for measurements in the temperature range 2K-400K and in magnetic field up to 14 Teslan (added as a part of PPMS) (Physics).
- Helium reliquifier for PPMS (Physics).
- E-beam lithography set up (Physics).

Softwares Developed

- Monte Carlo software for heavy metal ion-solvent system Department of Atomic Energy (CHE).
- CPMD-GULP Hybrid Quantum Mechanical-Quantum Mechanical Interface (CHM).
- BSIM6.0 SPICE model for bulk MOSFET (EE).
- 3D Multipactin Analysis Code for BRNS (EE).
- Network Diagnostic and Optimizatin Tool (NetDOT) for BSNL (EE).
- Point of Use Kit Trays and Parts Tracking System for the Boeing Company (EE).
- Microwave material measurement code for thin samples for DRDO /DMSRDE (EE).
- Sensitive position finder for DAQ for the Boeing Company (EE).
- Android Application software for CBM for the Boeing Company (EE).
- Electronic Fuel Injection System For Diesel Locomotives (Technology Released for Serial Production) for RDSO, Lucknow (ME).

Technologies Developed

- Design and development of a deployable flight data recorder unit (DFDRU) for HAL, Korwa, which is ready for testing on Dornier DO-228 aircraft at HAL Kanpur (AE).
- Blood filter for leukocyte depletion for HLL-Life care, India (BSBE).
- Frequency Hopping UHF RFID Reader for the Boeing Company (EE).
- Smartphone Based Intelligent Condition Based Monitoring System for the Boeing Company (EE).
- Sensitive Position finder for Data Acquisition System for the Boeing Company (EE).
- Future Image Frame Generator (EE).
- An integrated microchip for the detection of a microorganism for Department of Biotechnology (ME).
- System with peristaltic motion for National Program of Micro and Smart Structures (ME).
- Nano-template based synthesis of high aspect ratio Zinc Oxide nano-bundle and their applications in Hydrogen detection for National Program of Micro and Smart Structures (ME).
- Passive vibration damping using polymer pads with micro-channel arrays for Possibility of US patent with Boeing Corporation (ME).

Organization

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Government of India
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137, South Avenue,
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Smt. Vasanthi Stanley,
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Bhubaneswar (Orissa)

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Chairman, Board of Governors, IIT Gandhinagar
CSIR Bhatnagar Fellow, National Chemical Laboratory
Dr. Homi Bhabha Road
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Shri Ajai Choudhary
Chairman, Board of Governors, IIT Hyderabad
Founder-HCL & Chairman, HCL Infosystems Ltd.,
E-4, 5, 6, Sector-XI, Noida-201 301 (U.P.)

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Indian Institute of Technology, Delhi
Hauz Khas, New Delhi - 110 016

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Director
Indian Institute of Technology, Kanpur
Kanpur- 208016

Prof. Sankar Kumar Som
Director (Officiating)
Indian Institute of Technology, Kharagpur
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Indian Institute of Technology, Madras
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IIT Rajasthan Camp Office
Deptt. of CSE, MBM Engineering College
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Prof. Anil K. Bhowmick
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Prof. U. B. Desai
Director, IIT Hyderabad
Ordnance Factory Estate
Yeddumailaram, -502 205 (Andhra Pradesh)

Prof. M. K. Surappa
Director, IIT Ropar
Nangal Road, Rupnagar
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Prof. Madhusudan Chakraborty
Director, IIT Bhubaneswar
Samantpuri (Rear side of Hotel Swosti Plaza)
Jaydev Vihar, Bhubaneswar - 751 013 (Odisha)

Prof. Timothy Gonsalves
Director, IIT Mandi
PWD Rest House, 2nd Floor
Near Bust Stand, Mandi -175 001 (H.P.)

Prof. Pradeep Mathur
Director, IIT Indore
Institute of Engineering & Technology
DAVV Campus, Khandwa Road
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Director, IIT (BHU)
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Prof. Ved Prakash
Chairman (Actg.)
University Grant Commission
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Prof. Samir K. Brahmachari,
Director General (DG),
Council of Scientific and Industrial Research (CSIR),
Anusandhan Bhawan, 2 Rafi Marg, New Delhi-110001

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

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Ministry of Finance
Department of Expenditure
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(As on 31.03.2013)

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Director
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Kanpur Upto 06.11.2012

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Kanpur w.e.f 07.11.2012

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Director
Indian Institute of Science Education & Research
Trivandrum-695016, Kerala

Shri Harsh Manglik
Former Senior Advisor & Former Chairman
& Geography Managing Director, Accenture
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Chairman, Mirza International Limited
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Department of Mathematics and Statistics
Indian Institute of Technology, Kanpur
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Professor Dheeraj Sanghi
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Professor A. K. Ghosh
Dean of Student Affairs
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Professor Prabhat Munshi
Dean of Resources & Alumni
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SECRETARY:

Dr. Rakesh Kumar Sachan
Acting Registrar
Indian Institute of Technology, Kanpur
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LIST OF MEMBERS OF THE FINANCE COMMITTEE
(As on 31.03.2013)

CHAIRMAN:

Prof. M. Anandkrishnan
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Prof. Sanjay G. Dhande
Director
Indian Institute of Technology Kanpur
Kanpur

Upto 06.11.2012

Prof. Indranil Manna
Director
Indian Institute of Technology Kanpur
Kanpur

w.e.f 07.11.2012

Shri Harsh Manglik
Former Senior Advisor & Former Chairman
& Geography Managing Director, Accenture
26, Crescent Park
2B, Rest House, Crescent Road,
Bangalore-560 001 (Karnataka)

Shri Ashok Thakur
Special Secretary
Government of India
Department of Secondary Education & Higher Education
Ministry of Human Resource Development
Shastri Bhawan
New Delhi - 110 001

Shri C. Vishwanathan
Additional Secretary & Financial Adviser
GOI, Department of Higher Education
Ministry of Human Resource Development
Shastri Bhawan
New Delhi-110001

Prof. Neeraj Misra
Department of Mathematics and Statistics
Indian Institute of Technology Kanpur
Kanpur - 208 016

SECRETARY:

Dr. Rakesh Kumar Sachan
Acting Registrar
Indian Institute of Technology, Kanpur
Kanpur - 208016

LIST OF MEMBERS OF THE BUILDING & WORKS COMMITTEE
(As on 31.03.2013)

CHAIRMAN:

Prof. Sanjay G. Dhande
Director
Indian Institute of Technology Kanpur
Kanpur Upto 06.11.2012

Prof. Indranil Manna
Director
Indian Institute of Technology Kanpur
Kanpur w.e.f 07.11.2012

MEMBERS:

Prof. S. C. Srivastava
Dy. Director
Indian Institute of Technology, Kanpur
Kanpur - 208 016

Prof. S. N. Singh
Department of Electrical Engineering
Indian Institute of Technology, Kanpur
Kanpur - 208 016

Prof. S. Y. Kulkarni
Head, Deptt. of Planning & Architecture
Indian Institute of Technology, Roorkee
Roorkee - 247 667

Shri Mohan Swaroop
Addl. Director General (Retd.), CPWD
H-Block, 54-A, Sector-22
Noida- 201 301

Shri B. M. Agarwal
Retd. Engineer-in-Chief, UP Irrigation
102, Ravinder Garden
Sector-E, Aliganj
Lucknow - 226 024

Shri R. K. Govil
Chief Engineer (Northern Zone-II), CPWD
3rd Floor, Kendriya Bhawan
Sector-H, Aliganj
Lucknow - 226 024

SECRETARY:

Dr. Rakesh Kumar Sachan
Acting Registrar
Indian Institute of Technology Kanpur
Kanpur - 208016

LIST OF MEMBERS OF THE BOARD STANDING COMMITTEE (GRIEVANCES)
(As on 31.03.2013)

CHAIRMAN:

Prof. Sanjay G. Dhande
Director
Indian Institute of Technology Kanpur
Kanpur Upto 06.11.2012

Prof. Indranil Manna
Director
Indian Institute of Technology Kanpur
Kanpur w.e.f 07.11.2012

MEMBERS:

Professor R. S. Nirjar
Former Vice Chancellor
House No. M-118, Sector - Delta- 3
Greater Noida
Gautam Buddha Nagar- 201 310
Uttar Pradesh

Shri Irshad Mirza
Chairman, Mirza International Limited
H.No. 7/21, Parvati Bangla Road
Kanpur-208 001

Professor Neeraj Misra
Department of Mathematics and Statistics
Indian Institute of Technology Kanpur
Kanpur - 208016

Professor S. N. Singh
Department of Electrical Engineering
Indian Institute of Technology Kanpur
Kanpur - 208016

SECRETARY:

Dr. Rakesh Kumar Sachan
Acting Registrar
Indian Institute of Technology Kanpur
Kanpur - 208016

SENATE

[From 01.04.2012 to 31.3.2013]

Director & Chairman Senate:

Prof. Sanjay G. Dhande
Director
Indian Institute of Technology Kanpur
Kanpur

Upto 06.11.2012

Prof. Indranil Manna
Director
Indian Institute of Technology Kanpur
Kanpur

w.e.f 07.11.2012

Dy. Director

Prof. S.C. Srivastava

Members of the Senate:

AEROSPACE ENGINEERING (AE):

Prof. E.Rathakrishnan
Prof. Sanjay Mittal
Prof. C. Venkatesan
Prof. T. K. Sengupta
Prof. Sudhir Kamle
Prof. Kamal Poddar
Prof. Ashish Tewari
Prof. A. K. Ghosh
Prof. C. S. Upadhyay
Prof. D. P. Mishra

BIOLOGICAL SCIENCE & BIO-ENGINEERING (BSBE):

Prof. Pradip Sinha
Prof. R. Sankararamakrishnan
Prof. K. Subramaniam
Prof. Subramaniam Ganesh
Prof. Balaji Prakash
Prof. Ashok Kumar
Prof. Dharendra S Katti
Dr. Jonaki Sen

w.e.f 01.12.2012

CHEMICAL ENGINEERING (CHE):

Prof. Deepak Kunzru
Prof. P. K. Bhattacharya
Prof. Ashok Khanna
Prof. R. P. Chhabra
Prof. Ashutosh Sharma
Prof. Goutam Deo
Prof. Nishith Verma
Prof. V Shankar
Prof. Nitin Kaistha

CHEMISTRY (CHM):

Prof. N Sathyamurthy

Prof. S. Sarkar	Upto 31.05.2012
Prof. Y. D. Vankar	
Prof. V. Chandrasekhar	
Prof. R. N. Mukherjee	
Prof. Vinod K. Singh	
Prof. Amalendu Chandra	
Prof. P. K. Bharadwaj	
Prof. N. S. Gajbhiye	
Prof. S. Manogaran	
Prof. Veejendra K Yadav	
Prof. Faiz Ahmed Khan	Upto 31.07.2012
Prof. S. S. Manoharan	
Prof. Sandeep Verma	
Prof. J. N. Moorthy	
Prof. S. R. Gadre	
Prof. K. Srihari	
Prof. Debabrata Goswami	
Prof. R. Gurunath	
Prof. Manas Kumar Ghorai	
Prof. Jitendra K Bera	
Prof. M. L. N. Rao	

CIVIL ENGINEERING (CE):

Prof. Ashwini Kumar	Upto 02.07.2012
Prof. Sudhir K. Jain	
Prof. Vinod Tare	
Prof. Sarvesh Chandra	
Prof. V. K. Gupta	
Prof. S K Chakrabarti	
Prof. Mukesh Sharma	
Prof. Onkar Dikshit	
Prof. Partha Chakroborty	
Prof. Rajiv Sinha	
Prof. Sudhir Misra	
Prof. Rajesh Srivastava	
Prof. Purnendu Bose	
Prof. Soumyen Guha	
Prof. Ashu Jain	
Prof. Durgesh C. Rai	
Prof. Animesh Das	
Prof. Sachidanand Tripathi	

Dr. J. N. Malik

w.e.f. 08.01.2013

COMPUTER SCIENCE & ENGINEERING (CSE):

Prof. Somenath Biswas
Prof. H. C. Karnick
Prof. T. V. Prabhakar
Prof. Manindra Agrawal
Prof. S. K. Aggarwal
Prof. Sanjeev Saxena
Prof. Rajat Moona
Prof. Amitabha Mukerjee
Prof. Ratan Kumar Ghosh
Prof. Phalguni Gupta
Prof. Ajai K Jain
Prof. Dheeraj Sanghi
Prof. Sumit Ganguly
Prof. Shashank K. Mehta
Prof. Anil Seth

ELECTRICAL ENGINEERING (EE):

Prof. Avinash Joshi
Prof. M. Sachidananda
Prof. Prem Kumar Kalra
Prof. S. C. Srivastava
Prof. Shafi Qureshi
Prof. (Ms) Sumana Gupta
Prof. Govind Sharma
Prof. Utpal Das
Prof. A. K. Dutta
Prof. Animesh Biswas
Prof. Pradip Sircar
Prof. Baquer Mazhari
Prof. A. K. Chaturvedi
Prof. R. K. Bansal
Prof. S. N. Singh
Prof. Shyama P. Das
Prof. Yatindra N. Singh
Prof. Laxmidhar Behera
Prof. K. S. Venkatesh

Upto 31.12.2012

Prof. A. R. Harish
Prof. S. Sundar Kumar Iyer
Dr. A. K. Jagannatham Upto 30.09.2012

HUMANITIES & SOCIAL SCIENCES (HSS)

Prof. (Ms) Lilavati Krishnan
Prof. Binayak Rath Upto 31.01.2012
Prof. A. K. Sharma
Prof. A. K. Sinha
Prof. K. K. Saxena
Prof. B. K. Pattnaik
Prof. G. Neelakantan
Prof. Surajit Sinha
Prof. (Ms) Achla M Raina
Prof. (Ms) Shikha Dixit
Prof. Munmun Jha
Dr. P. M. Prasad w.e.f. 01.10.2012
Dr. Satyaki Roy w.e.f. 01.12.2012

INDUSTRIAL & MANAGEMENT ENGINEERING (IME)

Prof. A. K. Mittal
Prof. Kripa Shanker
Prof. N. K. Sharma
Prof. Arun P Sinha
Prof. R. R. K. Sharma
Prof. Jayanta Chatterjee
Prof. Rahul Varman
Prof. Uday Shankar Racherla w.e.f. 25.07.2012
Dr. Anoop Singh w.e.f. 01.10.2012 to 07.01.2013

MATERIALS SCIENCE AND ENGINEERING (MSE):

Prof. S. P. Mehrotra Upto 30.4.2012
Prof. R. C. Sharma
Prof. Dipak Mazumdar
Prof. Rajiv Shekhar
Prof. Sandeep Sangal
Prof. Deepak Gupta
Prof. (Ms) Monica Katiyar
Prof. Anish Upadhyaya

Prof. Bikramjit Basu

MATERIALS SCIENCE PROGRAMME (MSP):

Prof. Jitendra Kumar

MATHEMATICS & STATISTICS DEPARTMENT (MTH & STATS):

Prof. R. K. S. Rathore

Prof. M. K. Kadalbajoo

Prof. (Ms) Manjul Gupta

Prof. Prawal Sinha

Prof. G. P. Kapoor

Prof. I. D. Dhariyal

Prof. Peeyush Chandra

Prof. (Ms) Shobha Madan

Prof. Debasis Kundu

Prof. Pravir Kumar Dutt

Prof. V. Raghavendra

Upto 31.10.2012

Prof. Neeraj Misra

Prof. B. V. Rathish Kumar

Prof. D. Bahuguna

Prof. P. Shunmugaraj

Prof. Arbind Kumar Lal

Prof. Alok Kumar Maloo

Prof. (Ms) Mohua Banerjee

Prof. (Mrs) Rama Rawat

Prof. S. Ghorai

Prof. Joydeep Dutta

Prof. Amit Mitra

Dr. Shalabh

w.e.f 01.12.2012

MECHANICAL ENGINEERING (ME):

Prof. M. S. Kalra

Prof. V. K. Jain

Prof. Prabhat Munshi

Prof. P. M. Dixit

Prof. N. N. Kishore

Prof. Himanshu Hatwal

Prof. K. Muralidhar

Prof. Kalyanmoy Deb
Prof. Subrata Sarkar
Prof. Bhaskar Dasgupta
Prof. Gautam Biswas
Prof. S. K. Choudhury
Prof. N. S. Vyas
Prof. P. S. Ghoshdastidar
Prof. P. K. Panigrahi
Prof. N. Venkata Reddy
Prof. Bishakh Bhattacharya
Prof. Kamal K. Kar
Prof. Avinash Kumar Agarwal
Prof. Sumit Basu
Prof. Ashish Datta
Prof. P. Venkitanarayanan
Prof. Annidya Chatterjee
Dr. J. Ramkumar

w.e.f. 02.07.2012

w.e.f. 01.12.2012

PHYSICS (PHY):

Prof. R. K. Thareja
Prof. Keshawa Shahi
Prof. Rajendra Prasad
Prof. Debashish Chowdhury
Prof. R. C. Budhani
Prof. Y. N. Mohapatra
Prof. Avinash Singh
Prof. Deshdeep Sahdev
Prof. V. Ravishankar
Prof. Pankaj Jain
Prof. H. C. Verma
Prof. M. K. Harbola
Prof. K. P. Rajeev
Prof. Mahendra K Verma
Prof. (Ms) Asima Pradhan
Prof. (Ms) R. Vijaya
Prof. S. Anantha Ramakrishna
Prof. Amit Dutta
Prof. Satyajit Banerjee

LIBRARIAN

Dr. V. D. Shrivastava

Secretary, Senate

Dr. Rakesh Kumar Sachan
Acting Registrar
Indian Institute of Technology Kanpur
Kanpur

**THREE NOMINEES OF THE CHAIRMAN, BOARD OF GOVERNORS
(FROM 01.11.2011 TO 31.10.2012)**

1. Prof. Manoj K. Mishra
Vice Chancellor
University of Lucknow
Lucknow
2. Dr. A. K. Verma
General Manager
H.A.L Lucknow,
Lucknow
3. Mr. Najeeb Jung
Vice Chancellor
Jamia Millia Islamia
Jamia Nagar
New Delhi

**THREE NOMINEES OF THE CHAIRMAN, BOARD OF GOVERNORS
(FROM 01.11.2012 TO 31.10.2013)**

- 1 Prof. J. S. P. Rai
Director
H.B.T.I.,
Nawabganj
Kanpur - 208002
- 2 Dr. N. Nadarajan
Director
Indian Institute of Pulses Research (IIPR)
Kanpur

- 3 Prof. Prithvi Yadav
Director
Guar Hari Singhania Institute of Management
Kanpur

SENATE STANDING COMMITTEES
[FROM 01.10.2011 TO 30.09.2012]

(1) SENATE EDUCATIONAL POLICY COMMITTEE:

(a) MEMBERS (EX-OFFICIO):

- | | | |
|---------------------|---|-----------------|
| 1. Chairman, Senate | : | Chairman |
| 2. Chairman, SPGC | | |
| 3. Chairman, SUGC | | |

(b) SENATE NOMINEES:

1. Prof. K Muralidhar, ME
2. Prof. Anish Upadhayaya, MSE
3. Prof. Yogesh Joshi, ChE

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Shantanu Misra (Y7027410) shanm@iitk.ac.in
2. Mr. Rishant Singh (Y8419) rishant@iitk.ac.in

(2) SENATE ELECTIONS COMMITTEE:

SENATE NOMINEES:

1. Prof. Sudhir Mishra, CE
2. Prof. Pankaj Jain, Phy
3. Prof. K. Srihari, Chem

(3) SENATE LIBRARY COMMITTEE:

(a) LIBRARY:

Librarian : Dr. V. D. Shrivastva

(b) SENATE NOMINEES:

1. Prof. R. Prasad, Phy
2. Prof. S. Ganesh, BSBE
3. Prof. Deepu Philip, IME
4. Prof. Monica Katiyar, MSE

(c) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. D. P. Mishra	AE
2. Prof. Balaji Prakash	BSBE
3. Dr. Sri Sivakumar	CHE
4. Dr. S. P. Rath	CHM
5. Dr. Animesh Das	CE
6. Dr. Tarun Gupta	EEM
6. Prof. Amitabha Mukerjee	CSE
7. Prof. L. Behera	EE
8. Dr. Koumudi P Patil	HSS
9. Prof. A. K. Mittal	IME
10. Prof. Y. N. Singh(EE)	LTP
11. Dr. I. Sharma	ME
12. Dr. Vivek Verma	MSE
13. Dr. Rajeev Gupta(PHY)	MSP
14. Dr. Mohua Banerjee	MTH & STAT.
15. Dr. M. S. Kalra (ME)	NET
16. Dr. T. K. Ghosh	PHY
17. Dr. Koumudi P. Patil (HSS)	MDES

(d) STUDENTS' SENATE NOMINEES:

1. Mr. Puneet Singh (Y8378), punsingh@iitk.ac.in
2. Mr. Mohammad Ashiq (Y9106064) mdashiq@iitk.ac.in

(4) SENATE POST-GRADUATE COMMITTEE:**(a) SENATE NOMINEE:**

1. Dr. Zakir Hossain PHY - Outgoing Chairman
2. Prof. Phalguni Gupta, CSE

(b) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. P. M. Mohite	AE
2. Dr. Mainak Das	BSBE
3. Dr. Jayant K Singh	CHE
4. Dr. Manas K Ghorai	CHM
5. Prof. Rajiv Sinha	CE
6. Dr. S. N. Tripathi	EEMP

7. Dr. Anil Seth	CSE
8. Dr. P. Sensarma	EE
9. Dr. Sarani Saha	HSS
10. Dr. R. N. Sengupta	IME
11. Dr. P. Kumar (EE)	LTP
12. Dr. P. Venkitanarayanan	ME
13. Dr. Krishanu Biswas	MSE
14. Prof. K. Shahi (PHY)	MSP
15. Dr. Amit Mitra	MTHS & STAT.
16. Dr. P. Munshi (ME)	NET
17. Dr. Satyajit Banerjee	PHY
18. Dr. Nachiketa Tiwari (ME)	M DES

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Vinod Parmar (10114017) vinodp@iitk.ac.in
2. Mr. Ruchir Gupta (Y10104121) rgupta@iitk.ac.in
3. Mr. Karthik Balasundaram (10103066) karthikb@iitk.ac.in
4. Mr. Kanwar Deep Singh (11125025) kanwar@iitk.ac.in

(5) SENATE RULES COMMITTEE:

(a) MEMBER (EX-OFFICIO):

Parliamentarian of the Senate

(b) SENATE NOMINEES:

1. Prof. Neeraj Mishra, Maths
2. Prof. Somenath Biswas, CSE
3. Prof. P. Bose, CE

(6) SENATE SCHOLARSHIPS & PRIZES COMMITTEE:

(a) MEMBERS (EX-OFFICIO):

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

(b) SENATE NOMINEES:

1. Prof. D. Goswami, Chem upto 22.08.2012
Prof. B. Lohani, CE w.e.f 23.08.2013
2. Prof. S. Guha, CE
3. Prof. Sanjeev Garg, ChE
4. Prof. Sandeep Verma, Chem

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Meet Pathak (Y8291), meetp@iitk.ac.in
2. Mr. Vibhav Agarwal (Y8558), vibhav@iitk.ac.in
3. Mr. Jyoti Gupta (Y9265), gyoti@iitk.ac.in

(7) SENATE STUDENTS' AFFAIRS COMMITTEE:

(a) MEMBERS (EX-OFFICIO):

Head Institute Counselling Service
One member of the APEC nominated by Chairman, APEC
One Warden of students; Hall of Residence nominated Chairman, COW
Dean of Students' Affairs : Chairman, Ex-Officio

(b) SENATE NOMINEES:

1. Prof. Rama Rawat, Maths
2. Prof. Jayant Singh, ChE
3. Prof. Mukesh Sharma, CE

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Aditya Gupta (Y8036) gaditya@iitk.ac.in
2. Mr. Sanchit Singhal (Y8442), sanset@iitk.ac.in
3. Mr. Abdullah Bin Abu Baker (Y7108061), abduallah@iitk.ac.in
4. Mr. Vivek Agarwal (Y7513), agvivek@iitk.ac.in

(8) SENATE UNDERGRADUATE COMMITTEE:

(a) SENATE NOMINEE:

1. Dr. Brijesh Eshpuniyani AE - Outgoing Chairman
2. Prof. K Subramaniam, BSBE

(b) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. A. Kushari	AE
2. Prof. Pradip Sinha	BSBE
3. Dr. Pankaj A Apte	CHE
4. Dr. Nisanth Nair	CHM
5. Prof. Purnendu Bose	CE
6. Prof. Sumit Ganguly	CSE
7. Dr. A. Jagannatham	EE
8. Dr. Suchitra Mathur	HSS
9. Prof. A. P. Sinha	IME
10. Dr. Asima Pradhan (PHY)	LTP
11. Dr. A. K. Saha	ME
12. Dr. Kantesh Balani	MSE
13. Prof. Jitendra Kumar	MSP
14. Prof. A. K. Lal	MATHS & STAT.
15. Dr. P. Munshi (ME)	NET
16. Dr. Sudeep Bhattacharjee	PHY
17. Dr. Braj Bhusan (HSS)	M. DES.

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Keshav Goel (Y7196) keshavg@iit.ac.in
2. Mr. Aditya Gupta (Y8036) gaditya@iitk.ac.in
3. Mr. Apoorva Agarwal (Y9125), apoorvag@iitk.ac.in
4. Mr. Mihir Jha (10399), mihirj@iitk.ac.in

**SENATE STANDING COMMITTEES
[FROM 01.10.2012 TO 30.09.2013]**

(1) SENATE EDUCATIONAL POLICY COMMITTEE:

(a) MEMBERS (EX-OFFICIO) :

- | | | |
|---------------------|---|-----------------|
| 1. Chairman, Senate | : | Chairman |
| 2. Chairman, SPGC | | |
| 3. Chairman, SUGC | | |

(b) SENATE NOMINEES :

1. Prof. Y N Mohapatra, PHY

2. Prof. Partha Chakroborty, CE
3. Prof. P Munshi, ME

(c) STUDENTS' SENATE NOMINEES :

1. Mr. Sumit Bhagwani (Y8127515) sumitb@iitk.ac.in
2. Mr. Ruchir Gupta (10104121) rgupta@iitk.ac.in

(2) SENATE ELECTIONS COMMITTEE :

SENATE NOMINEES:

1. Prof. S. S. K. Iyer, EE
2. Dr. A. Garg, MSE
3. Prof. A. K. Agarwal, ME

(3) SENATE LIBRARY COMMITTEE:

(a) LIBRARY:

Librarian : Dr. V D Shrivastva

(b) SENATE NOMINEES:

1. Prof. Mohua Banerjee, MTH & STAT- Outgoing Chairman
(Included as approved in the Senate in its 2012-13/7th meeting held on 02.4.2013)
2. Dr. B. Lohani, CE
3. Prof. S. Sinha, HSS
4. Dr. S. Garg, CHE
5. Dr. R. Potluri, EE

(c) NOMINEES OF DEPARTMENTS/PROGRAMMES :

- | | |
|-----------------------------|------|
| 1. Prof. D. P. Mishra | AE |
| 2. Prof. Dhierendra S Katti | BSBE |
| 3. Dr. Sri Sivakumar | CHE |
| 4. Prof. Manas K. Ghorai | CHM |
| 5. Dr. Debajyoti Paul | CE |
| 6. Dr. Tarun Gupta | EEM |
| 7. Prof. Amitabha Mukerjee | CSE |
| 8. Prof. S. S. K Iyer | EE |

9. Dr. Vineet Sahu	HSS
10. Prof. R. R. K. Sharma	IME
11. Prof. Asima Pradhan	LTP
12. Prof. B. Dasgupta	ME
13. Dr. Gouthama	MSE
14. Prof. Y. N. Mohapatra (PHY)	MSP
15. Dr. Nandini Nilakantan	MTH & STAT.
16. Prof. M. S. Kalra (ME)	NET
17. Prof. R. Vijaya	PHY
18. Dr. Shatarupa T. Roy (HSS)	M. DES.

(d) STUDENTS' SENATE NOMINEES :

1. Mr. Srinivasan V. (11103167) vsrini@iitk.ac.in
2. Mr. Arjun Ravichandran (11112004) arjunr@iitk.ac.in

(4) SENATE POST-GRADUATE COMMITTEE**(a) SENATE NOMINEE:**

1. Prof. Rajiv Sinha, CE **-Outgoing Chairman**
2. Prof. A. K. Sharma, HSS

(b) NOMINEES OF DEPARTMENTS/PROGRAMMES:

1. Dr. P. M. Mohite	AE
2. Prof. K. Subramaniam	BSBE
3. Prof. V. Shankar	CHE
4. Dr. Madhav Ranganathan	CHM
5. Dr. N. R. Patra	CE
6. Dr. P. M. Prasad(HSS)	EEM
7. Prof. Anil Seth	CSE
8. Dr. N. Naik	EE
9. Dr. A. V. Ravishanker Sarma	HSS
10. Dr. Veena Bansal	IME
11. Dr. H. Wanare(PHY)	LTP
12. Dr. P. Wahi	ME
13. Dr. Ashish Garg	MSE
14. Dr. Rajeev Gupta (PHY)	MSP
15. Prof. Amit Mitra	MTHS & STATS
16. Prof. P. Munshi (ME)	NET

- | | |
|-----------------------------|-------|
| 17. Prof. Satyajit Banerjee | PHY |
| 18. Dr. Satyaki Roy (HSS) | M DES |

(c) STUDENTS' SENATE NOMINEE:

1. Mr. Sumit Kumar (11125058) sumitiit@iitk.ac.in
2. Mr. KoushikRoy (10103075) koushik@iitk.ac.in
3. Mr. Karthik Balasundaram (10103066) karthikb@iitk.ac.in
4. Mr. Charchit Chauhan (11112005) charchit@iitk.ac.in

(5) SENATE RULES COMMITTEE:

(a) MEMBER (EX-OFFICIO):

Parliamentarian of the Senate

(b) SENATE NOMINEES:

1. Prof. D. Majumdar, MSE
2. Prof. A. Jain, CSE
3. Prof. G. Neelakanthan, HSS

(6) SENATE SCHOLARSHIP AND PRIZES COMMITTEE:

(a) MEMBERS (EX-OFFICIO):

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

(b) SENATE NOMINEES:

1. Prof. A. K. Dutta, EE
2. Prof. S. Ghorai, MATHS
3. Dr. A. Singh, IME upto 07.01.2012
 Dr. Debopam Das, IME w.e.f 08.01.2012
4. Dr. J. N. Malik, CE

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Ravi Ranjan (Y9480) ravirj@iitk.ac.in
2. Mr. Ayush Gupta (11180) gayush@iitk.ac.in

3. Ms. Nidhi Pashine (Y9367) nidhip@iitk.ac.in

(7) SENATE STUDENTS' AFFAIRS COMMITTEE:

(a) MEMBERS (EX-OFFICIO):

Head Institute Counseling Service
One member of the APEC nominated by Chairman, APEC
One Warden of students' Hall of Residence nominated by Chairman, COW
Dean of Students' Affairs : **Chairman, Ex-Officio**

(b) SENATE NOMINEES:

1. Dr. Nandini Gupta, EE
2. Prof. Shikha Dixit, HSS
3. Prof. Asima Pradhan, PHY

(c) STUDENTS' SENATE NOMINEES:

1. Mr. Aditya Gupta (Y8127036) gaditya@iitk.ac.in
2. Mr. Abhay Jain (Y9009) abhayjan@iitk.ac.in
3. Mr. Abdullah Bin Abu Baker (Y7108061), abdullah@iitk.ac.in
4. Mr. Ahmed Sameer (11100061) asameer@iitk.ac.in

(8) SENATE UNDERGRADUATE COMMITTEE:

(a) SENATE NOMINEE:

1. Dr. A. K. Jagannatham, EE - **Outgoing Chairman**
2. Prof. A. K. Lal, MATHS

(b) NOMINEES OF DEPARTMENTS/PROGRAMMES:

- | | |
|--------------------------|---------------------|
| 1. Prof. C. S. Upadhyay | AE |
| 2. Prof. Pradip Sinha | BSBE |
| 3. Dr. Raj G. S. Pala | CHE |
| 4. Dr. Nisanth N. Nair | CHM |
| 5. Prof. Ashu Jain | CE |
| 6. Prof. Ajai Jain | CSE |
| 7. Dr. A. K. Jagannatham | EE |
| 8. Dr. Nirmalya Guha | HSS Upto 14.12.2012 |

9. Dr. Prasahant Bagad, HSS	w.e.f 15.12.2012
10. Prof. Arun P Sinha	IME
11. Dr. B. Lohani (CE)	LTP
12. Dr. Anurag Gupta	ME
13. Dr. Kantesh Balani	MSE
14. Dr. Malay K Das (ME)	MSP
15. Prof. Shakti Ghorai	MATHS & STAT.
16. Prof. M. S. Kalra (ME)	NET
17. Prof. Amit Dutta	PHY
18. Dr. J. Ramkumar(ME)	M. DES.
19. Prof. Purnendu Bose	EEM

(c) STUDENTS' SENATE NOMINEES :

1. Mr. Aditya Gupta (Y8127036) gaditya@iitk.ac.in
2. Mr. Ankit Bhutani (Y9094) ankitbhu@iitk.ac.in
3. Mr. Ankur Pandey (10113), ankurpan@iitk.ac.in
4. Mr. Anurag Sahay (11141), asahay@iitk.ac.in

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5288 Dr. Preetamkumar Marutrao Mohite
2. 5366 Dr. Rajesh Kitey

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5403 Dr. Ashoke De

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

1. 5396 Dr. Abhishek
2. 5431 Dr. Rakesh Kumar
3. 5452 Dr. Alakesh Chandra Mandal

ASSISTANT PROFESSOR AGP-6000 (Contract) PB-3 (15600-39100)

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**BIOLOGICAL SCIENCE & BIO-ENGINEERING SANCTIONED STRENGTH: 15
EXISTING STRENGTH : 11**

PROFESSOR AGP-10500 PB-4 (67000-79000)

1. 4959 Dr. Pradip Sinha
2. 5005 Dr. Sankararamakrishnan Ramasubbu
3. 5009 Dr. Kuppaswamy Subramaniam
4. 5020 Dr. Subramaniam Ganesh
5. 5023 Dr. Balaji Prakash
6. 5103 Dr. Dharendra Sushilendra Katti
7. 5119 Dr. Ashok Kumar

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

- 1 5206 Dr. Amitabha Bandyopadhyay
- 2 5207 Dr. (Ms) Jonaki Sen

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

- 1 5376 Dr. Mainak Das
- 2 5378 Dr. Ashwani Kumar Thakur

**CHEMICAL ENGINEERING DEPARTMENT SANCTIONED STRENGTH: 32
EXISTING STRENGTH : 20**

PROFESSOR HAG SCALE (67000-79000)

1. 3754 Dr. Prashant Kumar Bhattacharya
2. 4045 Dr. Ashok Khanna
3. 4244 Dr. Rajendra Prasad Chhabra
4. 4562 Dr. Ashutosh Sharma

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4750 Dr. Goutam Deo
2. 4794 Dr. Nishith Verma
3. 5011 Dr. Viswanathan Shankar
4. 5016 Dr. Nitin Kaistha

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 5196 Dr. Siddharta Panda
2. 5106 Dr. Animangsu Ghatak
3. 5114 Dr. Yogesh Moreshwar Joshi
4. 5021 Dr. Sanjeev Garg
5. 5175 Dr. Jayant Kumar Singh

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

- 1 5208 Dr. Pankaj Arvind Apte
- 2 5298 Dr. Raj Ganesh Santharam Pala
- 3 5303 Dr. Sri Sivakumar
- 4 5337 Dr. Raghvendra Singh
5. 5362 Dr. Abhijit Chatterjee

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

- 1 5484 Dr. Naveen Tiwari

ASSISTANT PROFESSOR AGP-7000 Regular PB-3 (15600-39100)

1. 5465 Dr. Raju Kumar Gupta

CHEMISTRY DEPARTMENT

SANCTIONED STRENGTH: 30

EXISTING STRENGTH : 29

PROFESSOR HAG SCALE (67000-79000)

1. 3827 Dr. Narayanasami Sathyamurthy
2. 4008 Dr. Yashwant D Vankar
3. 4394 Dr. Vadapalli Chandrasekhar
4. 4448 Dr. Rabindra Nath Mukherjee
5. 4596 Dr. Vinod Kumar Singh
6. 4676 Dr. Amalendu Chandra

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4462 Dr. Parimal Kumar
2. 4047 Dr. Namdeo Shriramji Gajbhiye
3. 4460 Dr. Sadasivam Manogaran
4. 4583 Dr. Veejendra Kumar Yadav

5. 4759 Dr. Sundar Soloman Manoharan
6. 4789 Dr. Sandeep Verma
7. 4816 Dr. Jarugu Narasimha Moorthy
8. 5389 Dr. Shridhar Ramachandra Gadre
9. 4760 Dr. Srihari Keshavarmurthy
10. 5071 Dr. Debabrata Goswami
11. 4876 Dr. Ramanathan Gurunath
12. 5024 Dr. Manas Kumar Ghorai
13. 5038 Dr. Jitendra Kumar Bera
14. 5056 Dr. Maddali Lakshmi Narayana Rao

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 5127 Dr. Sankar Prasad Rath

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5236 Dr. Madhav V Ranganathan
2. 5091 Dr. Anantharaman Ganapathi
3. 5304 Dr. Nishanth Narayanan Nair
4. 5305 Dr. Pratik Sen

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5427 Dr. Dattatraya Hanumant Dethe
2. 5369 Dr. Ramesh Ramapanicker
3. 5432 Dr. Ashis Kumar Patra
4. 5456 Dr. Raja Angamuthu

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

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CIVIL ENGINEERING DEPARTMENT SANCTIONED STRENGTH: 33
EXISTING STRENGTH : 32

PROFESSOR HAG Scale (67000-79000)

1. 4209 Dr. Sudhir Kumar Jain
2. 4295 Dr. Vinod Tare
3. 4399 Dr. Sarvesh Chandra

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4586 Dr. Vinay Kumar Gupta
2. 4464 Dr. Sekhar Kumar Chakrabarti
3. 4799 Dr. Mukesh Sharma
4. 4662 Dr. Onkar Dikshit

5. 4663 Dr. Partha Chakroborty
6. 4695 Dr. Rajiv Sinha
7. 4690 Dr. Sudhir Misra
8. 4798 Dr. Rajesh Srivastava
9. 4775 Dr. Purnendu Bose
10. 4784 Dr. Soumyen Guha
11. 4793 Dr. Ashu Jain
12. 4995 Dr. Durgesh Chandra Rai
13. 4871 Dr. Animesh Das
14. 5057 Dr. Sachidanand Tripathi

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 4978 Dr. Javed Noormohamed Malik
2. 5026 Dr. Bharat Lohani
3. 5079 Dr. Pranab Kumar Mohapatra
4. 5037 Dr. Nihar Ranjan Patra
5. 5192 Dr. Tarun Gupta
6. 5230 Dr. Priyanka Ghosh
7. 5307 Dr. Debajyoti Paul

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5152 Dr. Amit Prashant
2. 5346 Dr. Samit Ray Chaudhuri
3. 5347 Dr. (Ms) Prishati Raychowdhury

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5386 Dr. (Ms) Anubha Goel
2. 5393 Dr. Sudib Kumar Mishra

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

1. 5387 Dr. Vinod Vasudevan
2. 5388 Dr. Shivam Tripathi
3. 5405 Dr. Rajesh Sathiyamoorthy

ASSISTANT PROFESSOR AGP-6000 (Contract) PB-3 (15600-39100) -- --

COMPUTER SCIENCE & ENGINEERING SANCTIONED STRENGTH: 18
EXISTING STRENGTH :24

PROFESSOR HAG Scale (67000-79000)

1. 3972 Dr. Somenath Biswas

2. 4297 Dr. Harish Chandra Karnick
3. 4370 Dr. Prabhakar Venkata Tadinada
4. 4754 Dr. Manindra Agrawal

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4563 Dr. Sanjeev Kumar Aggarwal
2. 4490 Dr. Sanjeev Saxena
3. 4628 Dr. Rajat Moona
4. 4627 Dr. Amitabha Mukerjee
5. 4300 Dr. Ratan Kumar Ghosh
6. 4385 Dr. Phalguni Gupta
7. 4645 Dr. Ajai Jain
8. 4668 Dr. Dheeraj Sanghi
9. 4762 Dr. Sumit Ganguly
10. 5010 Dr. Shashank Kantilal Mehta
11. 4934 Dr. Anil Seth

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 5112 Dr. Mainak Chaudhuri
2. 5197 Dr. Surender Baswana
3. 5222 Dr. Peeyush Parameswaran Kurur

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5268 Dr. Arnab Bhattacharya

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5372 Dr. (Ms) Krithika Venkataramani
2. 5383 Dr. Amey Karkare
3. 5382 Dr. Satyadev Nandakumar

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

1. 5392 Dr. Subhajit Roy
2. 5429 Dr. Raghunath Tewari

ELECTRICAL ENGINEERING

SANCTIONED STRENGTH: 53
EXISTING STRENGTH : 35 +1 HT

PROFESSOR HAG SCALE (67000-79000)

1. 3927 Dr. Avinash Joshi
2. 4486 Dr. Prem Kumar Kalra
3. 4495 Dr. Suresh Chandra Srivastava
4. 4691 Dr. Shafi Qureshi

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4372 Dr. Govind Sharma
2. *4687 Dr. Utpal Das
3. 4566 Dr. Alope Kumar Dutta
4. 4652 Dr. Animesh Biswas
5. 4478 Dr. Pradip Sircar
6. 4670 Dr. Baquer Mazhari
7. 4827 Dr. Ajit Kumar Chaturvedi
8. 4489 Dr. Rakesh Kumar Bansal
9. 5003 Dr. Sri Niwas Singh
10. 4776 Dr. Shyama Prasad Das
11. 4771 Dr. Yatindra Nath Singh
12. 4988 Dr. Laxmidhar Behera
13. 4833 Dr. Venkatesh K Subramanian
14. 5013 Dr. A Ranganath Harish
15. 5113 Dr. Subramaniam Sundar Kumar Iyer

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 4938 Dr. Kasturi Vasudevan
2. 5012 Dr. Parthasarathi Sensarma
3. 5015 Dr. (Ms) Nandini Gupta
4. 5111 Dr. Adrish Banerjee
5. 5162 Dr. Ramprasad Potluri
6. 5293 Dr. Santanu Kumar Mishra
7. 5295 Dr. Rajesh Mahanand Hegde

ASSISTANT PROFESSOR AGP-9000 after 3 years experience PB-4 (37400-67000)

1. 5309 Dr. Kumar Vaibhav Srivastava
2. 5321 Dr. Naren Naik
3. 5326 Dr. Mohammad Jaleel Akhtar
4. 5327 Dr. Nishchal Kumar Verma
5. 5344 Dr. Bahniman Ghosh
6. 5343 Dr. Aditya Kiran Jagannatham
7. 5357 Dr. Pradeep Kumar Krishnamurthy
8. 5363 Dr. Saikat Chakrabarti

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5458 Dr. Yogesh Singh Chauhan

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100)

1. 5478 Dr. Ketan Rajawat

HUMANITIES & SOCIAL SCIENCES

SANCTIONED STRENGTH : 31

EXISTING STRENGTH : 29+ 2

PROFESSOR HAG SCALE (67000-79000)

1. 3838 Dr. (Ms) Lilavati Krishnan
2. 3983 Dr. Arun Kumar Sharma
3. 4016 Dr. Arvind Kumar Sinha
4. 4373 Dr. Kaushal Kumar Saxena

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4791 Dr. Binay Kumar Pattnaik
2. 4729 Dr. Gurumurthy Neelakantan
3. 4488 Dr. Surajit Sinha
4. 4700 Dr. (Ms) Achla Misri Raina
5. 4702 Dr. (Ms) Shikha Dixit
6. 4773 Dr. Munmun Jha

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 4957 Dr. (Ms) Suchitra Mathur
2. 5076 Dr. Thangamani Ravichandran
3. 5310 Dr. Praveen Kulshrestha
4. 4927 Dr. (Ms) Mini Chandran
5. 5075 Dr. Murli Prasad Panta
6. 5181 Dr. Braj Bhusan
7. *4976 Dr. Satyaki Roy DP
8. 5231 Dr. Kumar Ravi Priya
9. 5296 Dr. Somesh Kumar Mathur

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5270 Dr. (Ms) Sarani Saha
2. 5237 Dr. Ravishankar Sarma Ayyadevara
3. 5287 Dr. Anindita Chakrabarti
4. 5332 Dr. Vineet Sahu
5. 5333 Dr. Vimal Kumar
6. 5335 Dr. Prashant Bhalchandra Bagad
7. 5354 Dr. (Ms) Chaithra Puttaswamy

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5410 Dr. (Ms) Tanika Chakraborty

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

1. 5367 Dr. (Ms) Sohini Sahu
2. 5409 Dr. Anirban Mukherjee

ASSISTANT PROFESSOR AGP-6000 (Contract) B-3 (15600-39100)

1. *5183 (Ms) Koumudi Prakash Patil DP.
2. 5331 (Mrs) Shatarupa Thakurta Roy

INDUSTRIAL & MANAGEMENT ENGINEERING

SANCTIONED STRENGTH: 18

EXISTING STRENGTH : 18

PROFESSOR HAG SCALE (67000-79000)

1. 3432 Dr. Ashok Kumar Mittal
2. 3792 Dr. Kripa Shanker
3. 3977 Dr. Narendra Kumar Sharma
4. 4042 Dr. Arun Pradeep Sinha

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4525 Dr. Renovchintala Raghavendr Kumar Sharma
2. 4961 Dr. Jayanta Chatterjee
3. 4701 Dr. Rahul Varman
4. 5462 Dr. Uday Shankar Racherla

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 4865 Dr. (Ms) Veena Bansal
2. 4968 Dr. Anoop Singh
3. 5073 Dr. Raghu Nandan Sengupta
4. 5147 Dr. Bollempalli Venkata Phani
5. 5488 Dr. Puneet Prakash

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5302 Dr. Subhas Chandra Misra
2. 5348 Dr. Deepu Philip

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5430 Dr. Sri Vanamalla Venkataraman

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

1. 5428 Dr. Shashi Shekhar Mishra
2. 5449 Dr. Devlina Chatterjee

MATERIALS SCIENCE & ENGINEERING **SANCTIONED STRENGTH: 32**
EXISTING STRENGTH : 23

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 3845 Dr. Romesh Chand Sharma
2. 4382 Dr. Dipak Mazumdar
3. 4565 Dr. Rajiv Shekhar
4. 4597 Dr. Sandeep Sangal
5. 4790 Dr. Deepak Gupta
6. 4796 Dr. (Ms) Monica Katiyar
7. 4919 Dr. Anish Upadhyaya
8. 4977 Dr. Bikramjit Basu

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 5034 Dr. Ashish Garg
2. 5072 Dr. Gouthama
3. 5269 Dr. Kallol Mondal
4. 5273 Dr. Krishanu Biswas
5. 5289 Dr. Anandh Subramaniam

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5297 Dr. Kantesh Balani
2. 5336 Dr. Vivek Verma

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5385 Dr. Tanmoy Maiti
2. 5404 Dr. Shashank Shekhar
3. 5381 Dr. Sarang Ingole
4. 5400 Dr. Shobit Omar
5. 5461 Dr. Anshu Gaur
6. 5463 Dr. Kaustubh Narhar Kulkarni

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

1. 5475 Dr. Somnath Bhowmick
2. 5480 Dr. Nilesh Prakash Gurao

MATHEMATICS & STATISTICS DEPARTMENT **SANCTIONED STRENGTH: 36**
EXISTING STRENGTH : 32

PROFESSOR HAG SCALE (67000-79000)

1. 3407 Dr. Ram Kishore Singh Rathore
2. 3739 Dr. Mohan Krishen Kadalbajoo
3. 3772 Dr. (Ms) Manjul Gupta
4. 3773 Dr. Prawal Sinha
5. 3776 Dr. Govind Prakash Kapoor
6. 3824 Dr. Ishwari Dutt Dhariyal
7. 4058 Dr. Peeyush Chandra
8. 4290 Dr. (Ms) Shobha Madan
9. 4584 Dr. Debasis Kundu

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4449 Dr. Pravir Kumar Dutt
2. 4726 Dr. Neeraj Misra
3. 4707 Dr. B Venkatesulu Rathish Kumar
4. 4782 Dr. Dharendra Bahuguna
5. 4656 Dr. Palani Shunmugaraj
6. 4734 Dr. Arbind Kumar Lal
7. 4803 Dr. Alok Kumar Maloo
8. 4781 Dr. (Ms) Mohua Banerjee
9. 4832 Dr. (Mrs) Rama Rawat
10. 4870 Dr. Saktipada Ghorai
11. 5029 Dr. Joydeep Dutta
12. 5153 Dr. Amit Mitra

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 4822 Dr. Gopalapuram Santhanam
2. 4537 Dr. (Ms) Aparna Dar
3. 5189 Dr. Parasar Mohanty
4. 5036 Dr. Shalabh
5. 5121 Dr. (Ms) Nandini Nilakantan
6. 5229 Dr. Sharmistha Mitra
7. 5235 Dr. Sudipta Dutta

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5291 Dr. Malay Banerjee
2. 5314 Dr. Sameer Laxman Chavan
3. 5361 Dr. Thirumalai Muthukumar
4. 5370 Dr. Akash Anand

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

MECHANICAL ENGINEERING

**SANCTIONED STRENGTH: 42
EXISTING STRENGTH: 35+ 2 HT**

PROFESSOR HAG Scale (67000-79000)

1. 4061 Dr. Prabhat Munshi
2. 4210 Dr. Prakash Mahadeo Dixit
3. 4224 Dr. Nanda Nandivada Kishore
4. 4286 Dr. Himanshu Hatwal
5. 4398 Dr. Krishnamurthy Muralidhar
6. 4650 Dr. Kalyanmoy Deb
7. 4788 Dr. Subrata Sarkar
8. 4779 Dr. Bhaskar Dasgupta

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. 4560 Dr. Gautam Biswas
2. 4452 Dr. Saunak Kumar Choudhury
3. 4459 Dr. Nalinaksh ShardchandraVyas
4. 4288 Dr. Partha Sarathi Ghoshdastidar
5. 4801 Dr. Pradipta Kumar Panigrahi
6. 4823 Dr. Nallagundla Venkata Reddy
7. 4890 Dr. Bishakh Bhattacharya
8. *4928 Dr. Kamal Krishna Kar MSP
9. 4931 Dr. Avinash Kumar Agarwal
10. 5014 Dr. Sumit Basu
11. 5022 Dr. Ashish Datta
12. 5054 Dr. Parameswaran Venkitanarayanan
13. 5455 Dr. Annidya Chatterjee

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 4956 Dr. Anupam Saxena
2. 5120 Dr. Sameer Khandekar
3. 5074 Dr. Janakarajan Ramkumar
4. 5122 Dr. Arun Kumar Saha
5. *5129 Dr. Sivasambu Mahesh AE
6. 5394 Dr. Nachiketa Tiwari
7. 5399 Dr. Shakti Singh Gupta

8. 5199 Dr. Ishan Sharma
9. 5234 Dr. Shantanu Bhattacharya
10. 5299 Dr. Pankaj Wahi
11. 5477 Dr. Sujeet Kumar Sinha

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5267 Dr. Basant Lal Sharma
2. 5294 Dr. Malay Kumar Das
3. 5300 Dr. Anurag Gupta
4. 5358 Dr. Sovan Das

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5447 Dr. Arvind Kumar

PHYSICS DEPARTMENT

**SANCTIONED STRENGTH: 38
EXISTING STRENGTH: 33 + 3 HT**

PROFESSOR HAG Scale (67000-79000)

1. 3980 Dr. Raj Kumar Thareja
2. 4254 Dr. Rajendra Prasad
3. 4642 Dr. Debashish Chowdhury
4. 4688 Dr. Ramesh Chandra Budhani

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. *4559 Dr. Yashowanta Narayan Mohapatra MSP
2. 4651 Dr. Avinash Singh
3. 4527 Dr. Deshdeep Sahdev
4. 4504 Dr. Venkataramu Ravishankar
5. 4708 Dr. Pankaj Jain
6. 4723 Dr. Harish Chandra Verma
7. 4881 Dr. Manoj Kumar Harbola
8. 4653 Dr. Kocheri Parampan Rajeev
9. 4692 Dr. Mahendra Kumar Verma
10. *4679 Dr. (Ms) Asima Pradhan LTP
11. 5407 Dr. (Ms) Ramarao Vijaya
12. 5040 Dr. Subramaniam Anantha Ramakrishna
13. 5041 Dr. Amit Dutta
14. 5117 Dr. Satyajit Banerjee

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. 4755 Dr. Vemuru Subrahmanyam

2. 4797 Dr. Gautam Sengupta
 3. 4893 Dr. Harshwardhan Wanare
 4. 5028 Dr. (Ms) Sutapa Mukherji
 5. 5046 Dr. Anjan Kumar Gupta
 6. 5102 Dr. Zakir Hossain
 7. 5115 Dr. Tapobrata Sarkar
 8. 5123 Dr. Sudeep Bhattacharjee
 9. *5167 Dr. Rajeev Gupta
- MSP

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

1. 5284 Dr. Tarun Kanti Ghosh
2. 5290 Dr. Kaushik Bhattacharya
3. 5306 Dr. Dipankar Chakrabarti

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

1. 5355 Dr. Krishnacharya
2. 5417 Dr. Soumik Mukhopadhyay
3. 5454 Dr. Saikat Ghosh
4. 5467 Dr. Amit Kumar Agarwal
5. 5481 Dr. Sagar Chakraborty
6. 5503 Dr. Anand Kumar Jha

ASSISTANT PROFESSOR AGP-7000 Contract PB-3 (15600-39100) Ph D + 1 year experience

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MATERIALS SCIENCE PROGRAMME **SANCTIONED STRENGTH: 06**
EXISTING STRENGTH: 00 + 3 HT

PROFESSOR AGP-10500 PB-4 (37400-67000P)

1. *4559 Dr. Yashowanta Narayan Mohapatra Phy
2. *4928 Dr. Kamal Krishna Kar ME

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. *5167 Dr. Rajeev Gupta Phy

ASSISTANT PROFESSOR AGP-9000 After 3 years experience PB-4 (37400-67000)

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LASER TECHNOLOGY PROGRAMME **SANCTIONED STRENGTH:**
EXISTING STRENGTH: + 02 HT

PROFESSOR AGP-10500 PB-4 (37400-67000)

1. *4687 Dr. Utpal Das EE
2. *4679 Dr. (Ms) Asima Pradhan PHY

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

DESIGN PROGRAMME

**SANCTIONED STRENGTH:
EXISTING STRENGTH: +2 HT**

ASSOCIATE PROFESSOR AGP-9500 Direct Recruitment PB-4 (37400-67000)

1. *4976 Dr. Satyaki Roy

HSS

ASSISTANT PROFESSOR AGP-8000 Regular PB-3 (15600-39100)

ASSISTANT PROFESSOR AGP-6000 (Contract) PB-3 (15600-39100)

1. *5183 (Ms) Koumudi Prakash Patil

HSS

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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 APRIL 01, 2012

Sl No.	Name & Designation (Ms/Shri/Dr)	Department/ Programme
1. 4983	Alok Gupta	A E
2. 4616	Susmit Sen	Robotics
3. 4824	(Ms) Anjali V Kulkarni	Mechatronics
4. 4078	Chaturi Singh	NWTF
5. 5278	Neeru Chhabra	E.E.
6. 4318	Amitabha Roy	E E
7. 4807	Brajesh Chandra	A E (NWTF)
8. 4056	V. Raghuram	M E
9. 4777	Rajeev Gupta	AE(NWTF)
10. 4955	Raghubir Singh Anand	E E
11. 4921	Aurobinda Chatterjee	M E
12. 5460	K. N. Narayanan Unni	SAMTEL
13. 4015	A. L. Bhavsar	CHEM
14. 4815	K. K. Bajpai	C E
15. 3780	Sanjay Gupta	ACMS

16. 5285	Saikat Hira	CC
17. 4578	Md Aftab Alam	CC
18. 4821	Brajesh Pande	CC
19. 4820	Gopesh Tewari	CC
20. 5019	(Ms) Soma Sengupta	CC
21. 4721	Md K. Ahmad	CC
22. 4920	(Ms) Anju Tewari	CC
23. 3868	K. S. Singh	CC
24. 4817	Navpreet Singh	CC
25. 4541	B. M. Shukla	CC
26. 5312	V. D. Shrivastava	P.K.Kelkar Lib.
27. 3969	Umed Singh	Kelkar Lib
28. 3974	Neelam Prasad	Kelkar Lib
29. 5148	S. K. Vijaiand	Kelkar Lib
30. 5030	Vipul Mathur	AE

Academic Programmes

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 programmes are:

- to provide the highest level of education in technology and science and to produce competent, creative and imaginative engineers and scientists,
- to promote a spirit of free and objective enquiry in different fields of knowledge,
- to make a significant contribution towards the development of skilled technical manpower, and
- to create an intellectual reservoir to meet the growing demands of the nation.

The programmes are designed to achieve the above goals and also try to inculcate in the student, concepts and intellectual skills, courage and integrity, awareness of and sensitivity to the needs and aspirations of the society.

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 micro-management of these programmes is carried out by the Senate Undergraduate Committee (SUGC) and the Senate Post-graduate Committee (SPGC), respectively.

Undergraduate Programme

The undergraduate programme is a Bachelor's programme and consists of the following:

- Bachelor of Technology (B. Tech.) in Aerospace Engineering, Biological Sciences & Bio Engineering, Chemical Engineering, Civil Engineering, Computer Science Engineering, Electrical Engineering, Material Science and Engineering and Mechanical Engineering.

- Bachelor of Science (B.S.) in Physics, Chemistry, Mathematics & Scientific Computing and Economics.
- Master of Science (M.Sc.) in Physics, Chemistry, Mathematics & Scientific Computing and Mathematical Statistics.

The programmes, B.Tech. and B.S., are of four years duration or 8 semesters. The entry to these programmes is through Joint Entrance Examination (JEE). The first 3 semesters, of these programmes, consist of the Core Programme that is 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 last 5 semesters consists of the Professional/Departmental courses.

The M. Sc. Programme is a two year programme. The admission to these programmes is through Joint Admission to M.Sc. Programmes (JAM). These programmes have been largely responsible for providing the scientific manpower in Indian research institutes and universities.

M.Sc.-Ph.D. (Dual Degree)

The Department of Physics offers an M.Sc.-Ph. D. dual degree program. The admission is through an interview, in addition to the candidates having qualified in JAM.

In this programme, a student shall be considered to be in the UG stream during the first four semesters, or until all the prescribed courses of the first four semesters are completed. If a student, after being shifted to the Ph.D. part of the programme, is not able to clear the Comprehensive Examination, then he/she, may be permitted, depending on the merits of the case, to change his/her programme to the M. Sc. (two-year) programme, subject to a minimum residence requirement of 6 semesters.

Postgraduate Programme

The postgraduate programme is intended to prepare students to enter their profession 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 in 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

IIT Kanpur has **M. Tech. Programmes** in all the Engineering Branches, mentioned above. In addition, there are M. Tech. Programmes in the interdisciplinary areas, such as, Nuclear Engineering, Laser Technology, Environmental Engineering, Materials Science,

and Industrial and Management Engineering. The M. Tech. students are chosen through interview, in addition to their having a qualifying mark in GATE, an all-India examination.

MBA and MDES Programme

The programmes, Master of Business Administration and Master of Design, are mainly interdisciplinary in nature. The selection of students is again through interview, in addition to their having qualified in CAT Examination 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 four interdisciplinary programmes, namely, Materials Science, Nuclear Engineering & Technology, Photonics Science & Engineering (earlier known as Laser Technology Programme) & Design Programme. The Ph.D. programmes also exist in Chemistry, Mathematics & Statistics, Physics, Economics, English, Philosophy, Psychology and Sociology.

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

D.I.I.T. Programme

The Institute has a D.I.I.T. programme in Video Communications Systems. The duration of the programme is one year. The D.I.I.T. 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 in 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) is formed in order to monitor the curriculum continually. The Committee solicits a report at the beginning of every semester 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. Based on the feedbacks of the subcommittees, the committee discusses the matter with the department and reviews the syllabus and/or teaching methodologies, if required.

Environmental Science and Environmental Engineering

The Scope of Environmental Science and Environmental Engineering are 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 needs to 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 proposed to be purchased will also be utilized for the on-going research activities in other Departments of the Institute.

National Programme on Earthquake Engineering Education

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

Outreach and National Program on Technology Enhanced Learning

Meaningful growth of an Institution depends on the kind of commitment it has made to the society at large. Benefits of academic excellence cannot remain restricted to the boundaries of the academic wall. In an electronic age that has seen walls razed across 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 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 endeavour. 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.

Research and Development

During the year, the Institute has witnessed significant growth in its Research and Development activities. The number of externally funded ongoing projects has reached 588 with a sanctioned amount of Rs. 314 crores. During 2012-2013, the Institute got sanctions for 119 sponsored projects worth Rs. 54 crores and 101 consultancy projects of value Rs. 11 crores. Some of the major grants sanctioned by various agencies during the year are DST Rs. 7 crores, SERB Rs. 7 crores, ARDB Rs. 4 crores, DRDO Rs. 6 crores, DAE Rs. 2 crores, UGC Rs. 1 crore and DBT Rs. 1 crore. Some of the major industries which have funded projects are Unilever, HUDCO, CEAT, Intel, Power Grid Corporation of India, BHEL, and GE. At the international level, organizations like Samsung, Boeing, the Finnish Meteorological Institute, Finland have funded our research. A list of major projects is given at the end of the report.

The Institute and consumer goods company Unilever signed a wide ranging partnership agreement to collaborate on several cutting edge research projects in the areas of materials science and engineering. Overall, during the year, the Institute signed around 110 MoUs/agreements with various sponsors and research institutions.

During the year, twelve technologies developed at the Institute were licensed for commercialization while we filed eighteen national patents including two design patents. Three patents were granted and our earnings from intellectual property are US\$ 86,400.

Twenty-two companies are currently being incubated at SIDBI Innovation and Incubation Centre (SIIC) while twenty-one have graduated. SIIC has successfully incubated eight Bio-Tech Companies with two more in the pipeline. BIRAC has sanctioned Rs. 833.716 lacs to SIIC under its Bio-incubator Scheme. SIIC plans to establish the Bio-incubator as per the timeline laid down under the scheme in the next one year.

Following technologies developed at the Institute have been recognized and launched at the national level:

A novel **Zero Discharge Toilet System** has been developed in the Department of Civil Engineering. The toilet system eliminates use of fresh water for flushing and converts human excreta into manure and fertilizer. Over 300 such toilets were deployed in Maha Kumbh 2013 at Allahabad which served approximately one million users. Housing and Urban Development Corporation (HUDCO) facilitated this initiative under their Corporate Social Responsibility program.

An **Autonomous Mini-Helicopter model** was displayed in Bangalore at AERO India 2013. It weighs only a few kilograms and incorporates most of the functions of a real life helicopter and achieves autonomous control in hover and forward flight. This project serves as a platform to test innovative ideas in the design, development, ground/flight testing of autonomous flying vehicles. A laboratory focusing on the fundamentals of design, manufacturing, and testing of systems and sub systems has been created to assist the development and testing of the mini helicopter. An agreement was also signed with HAL Bangalore for the development of autonomous mini helicopter.

With the growing popularity of Massively Open Online Courses (MOOCs), the problem of automating components of education is the need of the hour. We are developing Intelligent Tutoring Systems to aid online classrooms as well as traditional classrooms. Automated tutoring systems are being developed for topics such as Periodic Table, Limits, Trigonometry, Natural Deduction, Visual Sequences to name a few. These tutoring systems can help instructors in creating sample solutions to assignment problems and new problems along with their solutions and can automatically generate variants of given seed problems with similar difficulty level. The project is being done in collaboration with Microsoft Research, and was recently showcased at Techfest 2013, Microsoft Research, Redmond, USA.

The contributions of Prof. A K Ghosh (AE) towards the successful flight of a supersonic (Mach=3.5) 214 mm PINAKA Mk-II artillery rocket weighing 300 Kg was commended by the Director, ARDE (DRDO). After the first round of rockets failed, modifications were incorporated on the basis of Prof. Ghosh's recommendation latter, and all the rockets exhibited majestic flight.

A new DC power supply has been designed by BSNL-IITK Telecom Centre of Excellence at IIT Kanpur for rural telecom exchanges. It works with one, two or three phase grid input and obviates the need for operating diesel generators during partial grid failure. The product will result in savings in operational cost and an environment friendly telecom exchange. It was showcased in Delhi at India Telecom 2012.

Major projects sanctioned

In a recent high level meeting with DRDO, the Institute has expressed its desire to embark upon mega projects which can lead to the development of challenging products which are challenging and which are required by the country's defence or by society, in general.

DRDO has sanctioned two major projects as part of its nano-photonics program, with a funding of Rs. 309 lakhs. One project targets the development of miniaturized optical

devices to function as sources and detectors based on the concept of photonic crystals. The other project concerns the development of large area micro and nano structured meta-materials for visible and infra-red frequencies with a view to developing selective absorbers, detectors and shields.

Flexible Printed Integrated Disposable Electronics (Flexipride)

An Indo-German project-FLEXIPRIDE (Flexible Printed Integrated Disposable Electronics)-has been initiated with one academic Institute and one industrial partner from each country to develop circuits on flexible substrates on which electronic components such as displays, solar cells and transistors can be printed. The main thrust of the project is to improve and integrate components to produce multifunctional system applications such as electronic seals. As a part of the project various printing techniques such as ink-jet and gravure will be used to port ink-based applications from one platform to another. The project spans over three years at a cost of Rs. 4 crores among all the partners.

Unraveling the Role of Glucose Metabolism in Neurodegenerative Disorders

DBT has sanctioned a project on unraveling the role of Glycogen metabolism in neurodegenerative disorders. Glycogen is the principle storage form of energy in all cell types except the neurons which store either no or negligible amount of glycogen. Intriguingly, neurons in the patients with Alzheimer's disease, Parkinson's disease, Amyotrophic lateral sclerosis or Lafora disease are known to have increased glycogen content, although the significance of the glycogen accumulation in the neurodegeneration is not understood. The outcome of the project is likely to unravel the commonality in the pathological process of diverse set of neurodegenerative disorders and may help to explain the possible role of glycogen metabolism in neurodegenerative disorders.

Experimental Investigations of HCCI/PCCI Combustion in a Single Cylinder Research Engine Using Biodiesel

A project for research and demonstration of the concept of Homogeneous Charge Compression Ignition (HCCI) and Partially Premixed Charge Compression Ignition (PCCI) combustion in Single Cylinder Engine using diesel and biodiesel as test fuels has been sanctioned by DST. It is a three year project with a budgetary allocation of Rs 1.58 crores and Tata Motors, Pune, as the industrial partner. The objective of the project is to develop HCCI/PCCI concept with biodiesel and development of biodiesel PCCI combustion system as an ultra clean combustion system. This advanced combustion

seeks to decrease the rate of consumption of conventional fuel-stock and reduce the high pollutant level in exhaust, simultaneously.

Creating an International Program for Sustainable Infrastructure Development under Obama-Singh 21st Century Knowledge Initiative (OSI) Grant

The Obama Singh scheme is an Indo-US initiative that aims to form partnerships between US institutions and institutions of higher learning in India. IIT Kanpur partnered with Virginia Tech and was one of the four Indian led partnerships to be funded in the first year of the scheme to create an international program for Sustainable Infrastructure Development. The project with a total funding of Rupees 122.808 lakhs over a three year period seeks to (1) conduct research in areas related to the development, maintenance, and monitoring of infrastructure (2) apply geospatial techniques to infrastructure monitoring (3) develop curriculum in educational institutions and (4) conduct an awareness and sensitization program towards the need for comprehensive planning, development, and maintenance of infrastructure among practicing engineers (5) and contribute to greater mutual understanding among faculty at both the institutions through exchange of scholars, joint publications, and collaborative research.

State-of-the-art Photovoltaic Field Performance Test Station

The Station has been established under the DST sponsored Indo-UK project Stability and Performance of Photovoltaics. A 50 KWp solar power station having five PV technologies has been created. The power station is unique and first of its kind in the country hosting five PV technologies; mono-crystalline silicon, multi-crystalline silicon, amorphous silicon thin film, copper-indium-gallium-selenide (CIGS) thin film and high concentration high efficiency triple Junction solar cells in two different configurations, i.e., fixed angle and 2D tracker at 5 KWp levels. An online monitoring system for comprehensive field performance evaluation of various PV system parameters and ambient conditions has been designed. The test station also provides an R&D platform to faculty, research engineers and students of the institute associated with the Solar Energy Research Enclave (SERE). Besides providing opportunity for R&D in PV technologies, the enclave acts as a demonstrator of solar based technologies. The enclave is self sufficient in its electricity needs through 5 KWp battery supported solar panels and is also feeding about 200 units/day to the IITK electricity grid.

Infrastructure Development

Keeping in view the requirements of the campus community, the institute has embarked upon a major exercise to enhance the infrastructure in the campus. Some of the new facilities that are being planned are a Convention Centre including a Senate

Hall, a new Sports' Complex, Vivekananda Youth Centre, TeQIP Nodal Centre, Engineering Core Laboratory, Administrative Block and faculty apartments. As a part of this exercise, some of the existing low usage footprints like Workshop and Aerospace buildings will be converted to multistoreyed buildings.

- **Facilities under CARE scheme** During the year, the Institute has procured the following facilities under its CARE scheme: Anechoic Acoustic Chamber, Femto-second Transient Absorption Spectrometer, Laser Micro-pattern Generator, Femto-second Laser based Beam Delivery and Scanning System, Large area nano/micro depth profiling by AFM, Facility for transgenesis of multiple model organisms and a large scale centrifugation facility.
- Under the FIST scheme of DST, the Department of Chemistry received a total budget of Rs. 465.00 lakhs and procured several new facilities including Mass Spectrometer, Computer Cluster, Fluorimeter, GA-DSC, Atomic Force Microscopy, Resonance Raman Spectrometer, etc.
- Other facilities established in the Institute during this year are Interferometric technique for fracture analysis in thin films; Buckling characterization in heterogeneous and FGM beams; Single-Crystal and Powder X-ray Diffraction Facility; RF and Microwave characterization lab; Transducers and instrumentation virtual laboratory; Brain computer interface laboratory; Acoustic and vibration data acquisition facility; Facility for measuring the impact strength of nuclear grade concrete; Surface and Tribology Laboratory; High Temperature Fuel Cell Laboratory; Full scale corrosion labs with potentiostat, in-house built salt fog test machine and other test facilities; Oxidation test facility like in-house developed DTA/TGA and Netzsch DSC-TGA (upto 1500C); A virtual laboratory on oscillations and phenomena experiments in mechanics; Vibrating sample magnetometer and heat capacity set up for measurements in the temperature range 2K-400K and in magnetic field up to 14 Teslan (added as a part of PPMS); Helium reliquifier for PPMS; E-beam lithigraphy set up.

Patents filed by the faculty during the financial year 2012-2013

- A method of measuring BMP signaling using BMP responsive reported cell line.
- A hybrid ink formulation and a method for preparing the same.
- Ball Mill.
- Vein Visualization Device.
- New processing technique of photolithography to make defect free organic light emitting diode display.
- A Versatile tube-well hand pump with energy harvested water filtration.

- A method for tumoroid generation using 3-D chitosan-gelatin scaffolds for anti-cancer drug screening.
- A nanotextured surface immobilized structure-modified enzyme biocatalyst.
- Flight Planning for Airborne data acquisition.
- Finishing Apparatus.
- Identification of Vascular Deformation.
- System and Method for Nanofinishing of a workpiece.
- Millimetre level measuring ruler for fully/partially visually impaired.
- Polymers blended rheological abrasive medium.
- Affordable In- house Modular Planetarium.
- Process for Generation of a Nano-Wrinkled Substrate and its Applications thereof.
- A biodegradable smoke filter material.
- Novel Fly Tumor Model and Methods of Screening Drugs Thereon.
- Analod Maximum Power Point Tracker for Solar Photovoltaic.
- Surface Functionalization unit.
- Electrolyte- Insulator-Semiconductor based microfluidic immunosensor.

Patents filed through Intellectual Ventures during the financial year 2012-2013

- Measurement of submicron focused charged particles beams using a current flux grating: spider probe.
- Bi-Metal Nanoadsorbents and Methods for their preparation and use.
- Systems and methods for dry processing fabrication of binary masks with arbitrary shapes for ultra-violet laser micromachining.
- Multiple Criteria Decision Analysis.
- Polymeric nanocomposites and methods for their preparation and use.
- Metamaterial Structures for Q-Switching in Lasers.
- A Green process for fabrication of Binary Masks with Isolated features for Micromachining and Photolithography.
- Fabrication of organic thin film transistor using single drops of organic of hybrid insulator, conductor and semiconductor materials.
- A Current-induced channel organic thin film transistor.
- Multielement focused ion beam system using an intense microwave plasma.
- Microbes based printing for fabrication of electronic devices.
- A Four terminal Gate-Controlled Thin Film Organic Thyristo.

Design Patent:

- Interactive Board Game
- Hand Pump

Memorandum of Understanding:

During the year 2012-13, IIT Kanpur strengthened its relations with many national and International institutes and organizations through research collaborations and signed several Memoranda of Understanding. During the year, the following institutes/universities/organizations have joined hands with IIT Kanpur for the purpose of research work in the diverse fields of science and technology. Some of such organizations are:

1. German Institute for Economic Research, Germany for Consortium agreement for follow up work of a research project.
2. Council of Scientific and Industrial Research, Lucknow for release of grant under the OSDD Chem initiative to Non CSIR Institutes.
3. Institute of Pesticide Formulation Technology, Gurgaon for project titled Measurement of Pesticide residues in Air after Pesticide Application.
4. Council of Scientific and Industrial Research, Lucknow for Release of grant under the OSDD Chem initiative to Non CSIR Institutes.
5. National Academy of Sciences, USA to work towards stated research objectives
6. Research Design and Standard Organisation, Lucknow for economical construction of railway embankment on urban areas using reinforced earth wall and reinforced steep slope development of methods.
7. Council of Scientific and Industrial Research, Lucknow for Release of grant under the OSDD Chem initiative to Non CSIR Institutes.
8. Department of Biotechnology, New Delhi for project titled Targeted, multifunctional Nanomaterials-loaded polymer capsules.
9. Department of Biotechnology, New Delhi for project titled Understanding basic self assembly mechanism and characteristic of protein aggregation for nonmaterial applications.
10. BARC, Mumbai, IIT Guwahati, IIT Hyderabad, BRNS for project titled Development of a general purpose CFD solver over a hybrid unstructured grid.
11. The Finnish Meteorological Institute, Finland For establishment of a joint project which includes studies of air pollutants, capacity building support, facilitation of information exchange, guidelines for climate change mitigation analysis.
12. Virginia Polytechnic Institute and State University Creating an international Program for Sustainable Infrastructure Development Under Obama-Singh 21st Century Knowledge Initiative (OSI) Grant.
13. International Crops Research Institute for the semi-Arid Tropics, Patancheru for VDSA Data Management & Warehousing.
14. University of Petroleum and Energy Studies (UPES) for transfer of money to execute the project sanctioned under Indo-Korean bilateral program.

During the year 2012-13, Memoranda of Understanding have also been signed with many companies such as:

1. Unilever Industries Ltd., Bangalore for Sponsored Research.
2. Indian Oil Corporation Limited, Faridabad to collaborate for promotion of education, research and innovation in downstream petroleum research projects.
3. M/S Urbane Industries, Chennai for the Project titled Wide spread deployment of the Zero Discharge Toilet system in rural and urban areas.
4. Knowledge Corporation Pvt. Ltd., Gurgaon for Development of novel industry orientation curriculum and pedagogy.
5. Samsung India Software Operations Pvt Ltd, Bangalore for project titled Structural stabilities, spectrum and optical properties of core and core-shell nanoclusters using molecular tailoring approach (MTA).
6. Crompton Greaves Limited, Mumbai for R&D agreement to undertake and jointly work on projects in the area of Power Systems, Industrial Systems.
7. Minda Industries Ltd., Delhi for a feasibility analysis of goals.
8. CEAT Limited, Mumbai for project titled Tyre Noise Reduction Technology Development Initiative.
9. Unilever Industries Pvt Ltd, Mumbai for project titled Rheology of Surfactant Pastes.
10. ETI Dynamics, UK to organize an international conference/symposium as a follow-up to the International Workshop.
11. Invention Development Management Company, LLC, USA for Fabrication, testing and characterization of two 200 micron spider probes.
12. AngloAmerican Norte S.A., Chile for project titled Design of a Solar Still for water softening.
13. Regional Resource Center for Asia and the Pacific, Thailand for Evaluation of Project Atmospheric Brown Clouds.
14. Intel Corporation, USA for project titled a deductive Verification Tool for low level software.
15. Electrohms Private Limited, Bangalore for technology transfer: Sensor device for measurement of electrical potential difference between two points in an electrical circuit with no common potential between the said electrical circuit and the output terminals of the device.
16. Knowledge Corporation Pvt. Ltd., Gurgaon for Development of novel industry orientation curriculum and pedagogy.
17. Sahasra Electronics Private Ltd., Noida for Participation in R&D of organic light emitting diode based solid state lighting and passive matrix displays.
18. World Wide Fund for Nature - India for project titled Hydraulic modelling and facilitation for assessment of E-Flows for Kumbh 2013 at Sangam- Allahabad.
19. Unilever Industries Private Ltd., Bangalore for Umbrella Consultancy Agreement

20. GE India Technology Centre private Limited, Bangalore for Consultancy agreement wide area monitoring systems.
21. WESEE, New Delhi for Consultancy on optimization of higher layer network management modules.
22. Bharat Heavy Electrical Ltd., Bhopal for work entitled complete environmental management inclusive of assessment and remediation at BHEL, Bhopal.
23. Housing and Urban Development Corporation Ltd., Allahabad for HUDCO CSR activities for installation of pre-fabricates Zero discharge toilet systems at Kumbh mela.
24. Instalaciones Inabensa, S.A. for Consortium agreement related to project titled OxyMem: New CO₂ stable oxygen-permeable membranes for sustainable oxycombustion processes.
25. Samsung Electronics Co Ltd., Korea for project titled Supermacroporous hybrid polymeric for efficient removal of endocrine disruptors and other water pollutants.
26. Indo-French Centre for the Promotion of Advanced Research, for project titled Reversals of a large scale fire on a turbulent background.
27. Rotary Wing Research and Development Centre, HAL for Technology Cooperation Initiative.
28. WESEE, Ministry of Defence, GoI for Consultancy on 'Feasibility study and waveform design of spread spectrum based physical layer for advanced data link'.
29. Power Grid Corporation of India, New Delhi for establishment of smart grid in IIT Kanpur campus.
30. The Boeing Company, USA for RFID and Intelligent Condition based monitoring of air compressors and motors research.
31. Greenmantra Recycling Technologies Limited, Canada for Patent Licensing Agreement.
32. Sahajanand Technologies Pvt Ltd., Surat to execute the design of the diamond colorimeter project.
33. Unilever Industries Pvt. Ltd., Bangalore to carry out the Project titled 'Correlate qualitative tactile feel of substrates with quantitative, measurable parameters'.
34. Unilever Industries Pvt. Ltd., Bangalore to carry out the Project titled 'Developing a connection between formulation rheology and long-term stability'.
35. Department of Environment, GoI and Delhi Pollution Control Board, Delhi for conducting the Project titled 'Comprehensive study on air pollution and green house gases in Delhi'.
36. Power Grid Corporation of India Ltd, Gurgaon to design and design verification, operation in the areas of HVDC, FACTS, protective Relays, PMUs etc. using RTDS and other simulation and/or design tools in order to enhance the performance of the Grid.

37. Intel Technology India Pvt Ltd., Bangalore for Heterogeneous advanced cache and memory architectures for emerging applications and systems.
38. Unilever Industries Pvt. Ltd., Bangalore to carry out the Project titled Study of adhesion of soot and soils on metals and derive a correlation between extent of adhesion of carbon and polymerized soil with aluminum and steel substrate.

A list of major sponsored and consultancy projects sanctioned during the financial year 2012-13 is provided below.

Sponsored Projects:

A. National Projects:

1. AN INNOVATION IN DISTRACTION OSTEOGENESIS FOR MANDIBULAR REGENERATION USING A REFINED TRANSPORT DISTRACTER, Funded by DST, Total Cost Rs. 1473000.
2. MULTI-SCALE DAMAGE MODELING, TESTING AND ANALYSIS FOR LIFE PREDICTION OF FIBROUS COMPOSITE STRUCTURES, Funded by ARDB, Total Cost Rs. 17748000.
3. DESIGN OF COMPOSITE STRUCTURES: METHODOLOGIES AND CRITERIA, Funded by ARDB, Total Cost Rs. 6560000.
4. CHARACTERIZATION AND MODELING OF UNCERTAINTIES IN COMPOSITES, Funded by ARDB, Total Cost Rs. 5300000.
5. UNDERSTANDING NANOPARTICLE INTERNALIZATION BY MAMMALIAN CELLS, Funded by DST, Total Cost Rs. 9242600.
6. LOCK-IN-THERMOGRAPHY FOR SOLAR CELL AND MODULE CHARACTERIZATION, Funded by DST, Total Cost Rs. 2440600.
7. QUANTUM CHEMICAL INVESTIGATION ON EXPLICIT HYDRATION OF MOLECULAR SYSTEMS, Funded by DST, Total Cost Rs. 3528080.
8. MOTION AND INTERACTIONS OF DOMAINS IN FLUID LIPID MEMBRANES, Funded by DST, Total Cost Rs. 2436000.
9. HOUSING AND URBAN DEVELOPMENT CORPORATION LTD. CHAIR, Funded by HUDCO, Total Cost Rs. 6000000.
10. FLEXIBLE PRINTED INTEGRATED DISPOSABLE ELECTRONICS (FLEXIPRIDE), Funded by IGSTC, Total Cost Rs. 10725000.
11. ALGORITHMS FOR DATA STREAM PROCESSING, Funded by DST, Total Cost Rs. 975120.
12. REDUCTION OF CHROMIUM TOXICITY USING NANOPARTICLES: LABORATORY AND FIELD SCALE STUDY, Funded by MOEF, Total Cost Rs. 2816080.

13. DEVELOPMENT OF A LOW COST PIV SYSTEM, Funded by BARC, Total Cost Rs. 4810000.
14. DEVELOPMENT AND DEMONSTRATION OF NANO-SIZED TIO₂-BASED PHOTO CATALYTIC OXIDATION TECHNOLOGY FOR CONTROLLING VOLATILE ORGANIC COMPOUND (VOCS) AT SOURCE AND IN SITU AMBIENT AIR, Funded by MOEF, Total Cost Rs. 6078000.
15. SAFETY CODE MODIFICATION, VALIDATION AND SAFETY ANALYSIS OF INDIAN TEST BLANKET MODULE FOR ITER, Funded by IPR, Total Cost Rs. 2304000.
16. PLASMA SPRAYED NANO-CERIA-ALUMINA COMPOSITE COATINGS FOR CATALYTIC CONVERSION OF COMBUSTION GASES, Funded by ONRG, Total Cost Rs. 2144878.
17. DEVELOPMENT OF BRAZING ALLOYS AND TECHNIQUES FOR TI-BASED ALLOYS, Funded by STC, Total Cost Rs. 1495200.
18. ROLE OF PARTICLE SIZE OF YTTRIA STABILIZED ZIRCONIA ON THE WEAR RESISTANCE OF THE PLASMA SPRAYED ALUMINIUM OXIDE COATINGS, Funded by STC, Total Cost Rs. 1358400.
19. SATELLITE FORMATION-KEEPING CONTROL, Funded by STC, Total Cost Rs. 2157600.
20. TOTAL VARIATION AND COMPRESSIVE SENSING FOR L1 REGULARIZATION BASED IMAGE/VIDEO RESTORATION, Funded by STC, Total Cost Rs. 1467600.
21. EXCIMER LASER MICROMACHINING FOR MHMIC, Funded by STC, Total Cost Rs. 3453600.
22. CREATION OF HETEROGENEOUS PINNING IN IRON PNICTIDES AND CUPRATE SUPERCONDUCTORS BY INTRODUCING NANOPATTERNED PINS, Funded by DST, Total Cost Rs. 257000.
23. ORGANIC FUNCTIONAL MATERIALS WITH A RATIONAL DESIGN OF MOLECULAR BUILDING BLOCKS, Funded by SERB, Total Cost Rs. 8282000.
24. DEVELOPMENT OF A COMMON RAIL INJECTION SYSTEM FOR A CONSTANT SPEED COMPRESSION IGNITION ENGINE, Funded by CSIR, Total Cost Rs. 1468000.
25. LASER IGNITION OF NATURAL GAS FUELLED SINGLE CYLINDER ENGINE, Funded by SERB, Total Cost Rs. 3800000.
26. SELF ASSEMBLY OF TWO DIMENSIONAL COLLOIDAL CRYSTALS IN LANGMUIR MONOLAYERS AT THE AIR WATER INTERFACE, Funded by DST, Total Cost Rs. 2310000.
27. UNDERSTANDING PLANT NEMATODE INTERACTION: IDENTIFICATION OF PLANT AND NEMATODE GENES INVOLVED IN DISEASE DEVELOPMENT, Funded by ICAR, Total Cost Rs. 6341280.

28. MECHNAISTIC INVESTIGATION OF PLANT GROWTH STIMULATION BY WATER SOLUBLE CARBON NANOTUBES, Funded by SERB, Total Cost Rs. 2000000.
29. DESIGN AND SYNTHESIS OF FUNCTIONALIZED PEPTIDE SCAFFOLS FOR PROTEIN PRENYLTRANSFERASES INHIBITION: POTENTIAL CANCER CHEMOTHERAPEUTICS, Funded by SERB, Total Cost Rs. 2690000.
30. SYNTHETIC JET ACTUATOR FOR DRAG REDUCTION OF UNDERWATER VEHICLES, Funded by NRB, Total Cost Rs. 4910000.
31. UTILIZATION OF WASTED GROUNDNUT SHELL FOR THE DEVELOPMENT OF NATURAL POLYMERIC COMPOSITES AND THEIR MECHANICAL PROPERTIES, DRILLING AND TRIBOLOGICAL STUDIES, Funded by DST, Total Cost Rs. 412000.
32. DEVELOPMENT OF A 3-D PARALLELIZED COMPRESSIBLE FVM CODE FOR SIMULATION OF MULTISPECIES NON REACTING FLOWS IN GAS TURBINE COMBUSTOR, Funded by AERB, Total Cost Rs. 1200800.
33. COMMERCIAL PROTOTYPE DEVELOPMENT AND TESTING OF RURAL POWER PLANT WITH VMC, Funded by BITCOE, Total Cost Rs. 1125000.
34. SYNTHESIS OF HIGHLY SUBSTITUTED INDOLE DERIVATIVES, Funded by CDRI, Total Cost Rs. 550000.
35. PHYSICO-CHEMICAL CHARACTERIZATION OF NANO PARTICLE EMANATING FROM DIESEL ENGINES (MINERAL DIESEL AND B20 FUELLED) AND THEIR CONTROL USING DIESEL OXIDATION CATALYSTS, Funded by SERB, Total Cost Rs. 4100000.
36. GENERATION OF TOOLS TO FACILITATE THE STUDY OF VISUAL PATHWAY DEVELOPMENT IN EMBRYONIC CHICKEN, Funded by CSIR, Total Cost Rs. 1400000.
37. STATICS AND DYNAMICS OF MICRO DROPLETS FORMED ON TEXTURED SURFACES DURING CONDENSATION, Funded by BRNS, Total Cost Rs. 2500000.
38. PREVENTION OF ANTIBIOTIC RESISTANT BACTERIAL BIOFILM FORMATION BY USING LYTIC BACTERIOPHAGES ON A TOPOGRAPHICALLY PATTERNED SUBSTRATE, Funded by SERB, Total Cost Rs. 2500000.
39. DESIGN OF A LAYERED 3-D COMPOSITE SCAFFOLD FOR AETICULAR CARTILAGE TISSUE ENGINEERING, Funded by SERB, Total Cost Rs. 4661000.
40. DYNAMICS AND PHASE BEHAVIOUR OF ANISOTROPIC SOFT MATERIALS, Funded by DAE, Total Cost Rs. 9996400.
41. MODEL BASED TOMOGRAPHIC SUBSURFACE SOIL CHARACTERIZATION, Funded by STC, Total Cost Rs. 968400.
42. METAMATERIALS AND PLASMONIC STRUCTURED MATERIALS FOR CONTROLLING RADIATION, Funded by DRDO, Total Cost Rs. 28100000.

43. PHOTONIC CRYSTAL BASED DEVICES FOR LIGHT CONTROL, Funded by DRDO, Total Cost Rs. 29800000.
44. FEMTOSECOND STUDY OF METAL COMPLEXES, GREEN FLUORESCENT PROTEIN AND RELATED MOLECULES, Funded by SERB, Total Cost Rs. 10140400.
45. CREATING A INTERNATIONAL PROGRAM FOR SUSTAINABLE INFRASTRUCTURE DEVELOPMENT UNDER OBAMA-SINGH 21ST CENTURY KNOWLEDGE INITIATIVE (OSI) GRANT, Funded by UGC, Total Cost Rs. 12280800.
46. AAKASH LAB, Funded by MHRD, Total Cost Rs. 7500000.
47. DEVELOPMENT OF VIDEO AND ANIMATED SCENARIOS FOR SJT AS PART OF DE-NOVO SELECTION SYSTEM FOR SELECTION OF OFFICERS FOR THE INDIAN ARMED FORCES UNDER SUB PROGRAMME-I, Funded by DIPR, Total Cost Rs. 1123200.
48. A NOVEL EFFICIENCY MICRO-SCALE GENE TRANSFECTION SYSTEM USING NANOENERGETIC MATERIALS, Funded by SERB, Total Cost Rs. 3011490.
49. A NOVEL BIOSENSOR FOR RAPID AND SENSITIVE DETECTION OF MICRO-ORGANISMS IN FOOD AND WATER SAMPLES USING NOVEL NONMATERIAL, Funded by DBT, Total Cost Rs. 4441900.
50. WIND TUNNEL TEST ON RLV-TD-FADS, Funded by VSSC, Total Cost Rs. 997000.
51. DEVELOPMENT OF A HIGH VOLUME IMPACTION BASED PM2.5 SAMPLER, Funded by BRNS, Total Cost Rs. 2374100.
52. WIND TUNNEL TEST ON PSLV-XL, Funded by VSSC, Total Cost Rs. 1372000.
53. FLOOD DISASTER AND MANAGEMENT INDIAN SCENARIO, Funded by BSDMA, Total Cost Rs. 94300.
54. INVESTIGATION OF SLIP-LENGTH OF NEWTONIAN FLUIDS FROM DEWETTING DYNAMICS IN TRIANGULAR GROOVES, Funded by SERB, Total Cost Rs. 2244000.
55. MULTI-LAYER MULTI-PERMITTIVITY DIELECTRIC ANTENNA FOR WIDEBAND APPLICATIONS, Funded by SERB, Total Cost Rs. 4126300.
56. INTERFACE STRENGTH CHARACTERIZATION OF THIN FILM USING LASER INDUCED STRESS WAVES, Funded by ARDB, Total Cost Rs. 2651800.
57. SYNTHESIS AND CHARACTERIZATION OF CELLULOSE CLAY NANOCOMPOSITES, Funded by SERB, Total Cost Rs. 3517500.
58. UNRAVELING THE ROLE OF GLUCOSE METABOLISM IN NEURODEGENERATIVE DISORDERS, Funded by DBT, Total Cost Rs. 5848000.
59. HIGH LIFT AERODYNAMICS PROJECT YEAR-4, Funded by BOEING, Total Cost Rs. 2435643.

60. DEVELOPMENT AND ANALYSIS OF NOVEL INHIBITORS AGAINST M.TUBERCULOSIS GLMU, Funded by OSDDU, Total Cost Rs. 3832000.
61. WATER QUALITY SURVEILLANCE AND SUPPORTIVE SUPERVISION IN DRINKING WATER SECTOR IN UP, Funded by UNICEF, Total Cost Rs. 1555000.
62. SPATIO-TEMPORAL FACE RECOGNITION USING KEY-FRAMES IN VIDEO FOR SURVEILLANCE, Funded by BRNS, Total Cost Rs. 2136300.
63. CNT REINFORCED COMPOSITES FOR STRUCTURAL APPLICATIONS, Funded by STC, Total Cost Rs. 5899000.
64. ORGANIZING A WORKSHOP OF THE INSTITUTE/ COLLEGES, Funded by MHRD, Total Cost Rs. 200000.
65. LOW SPEED WIND TUNNEL TESTING OF PDV MISSILE AT HIGH ANGLES OF ATTACK, Funded by DRDL, Total Cost Rs. 1955000.
66. DEVELOPMENT OF NB-BASED HIGH STRENGTH ULTRAFINE IN-SITU COMPOSITES FOR HIGH TEMPERATURE APPLICATION, Funded by BRNS, Total Cost Rs. 5016000.
67. INDIA-UK ADVANCED TECHNOLOGY CENTRE (IUATC) PHASE II, Funded by DST, Total Cost Rs. 3124000.
68. INDIA-UK ADVANCED TECHNOLOGY CENTRE (IU-ATC PHASE 2) OF EXCELLENCE IN NEXT GENERATION NETWORKS SYSTEMS AND SERVICES, Funded by DST, Total Cost Rs. 5769000.
69. ROLE OF SHAPE IN DAMPING OF METALLIC COMPONENTS, Funded by SERB, Total Cost Rs. 600000.
70. J.C.BOSE FELLOWSHIP, Funded by SERB, Total Cost Rs. 6625000.
71. INDIA-UK ADVANCED TECHNOLOGY CENTRE (IU-ATC PHASE 2) OF EXCELLENCE IN NEXT GENERATION NETWORKS SYSTEMS AND SERVICES, Funded by DST, Total Cost Rs. 1281000.
72. INDIA-UK ADVANCED TECHNOLOGY CENTRE (IU-ATC PHASE 2) OF EXCELLENCE IN NEXT GENERATION NETWORKS SYSTEMS AND SERVICES, Funded by DST.
73. DEVELOPMENT OF NEW GENERATION PALLADIUM CATALYZED COUPLING REACTIONS USING TRIARYLBISMUTHS AND THEIR APPLICATIONS TO ORGANIC SYNTHESIS, Funded by CSIR, Total Cost Rs. 1800000.
74. VIBRATION MITIGATION OF POWER PLANT CHIMNEYS: ANALYTICAL AND WIND TUNNEL STUDY, Funded by TCE, Total Cost Rs. 1820232.
75. COMPLEX BIOINSPIRED SYSTEMS, Funded by DAE, Total Cost Rs. 10000000.
76. SYNTHESIS OF MARINE BIOACTIVE PEPTIDES/ BIOMOLECULES AND THEIR ANALOGS, Funded by MOES, Total Cost Rs. 4496000.
77. RAMANUJAN FELLOWSHIP, Funded by SERB, Total Cost Rs. 2800000.

78. DESIGN, SYNTHESIS AND INVESTIGATIONS OF NOVEL SUPERCONDUCTING AND MAGNETIC MATERIALS, Funded by CSIR, Total Cost Rs. 4292000.
79. FABRICATION OF MICROCHANNELS WITH NANOFINISH ON SS304, Funded by BARC, Total Cost Rs. 4376350.
80. OPTIMAL STRATEGIES FOR RELIABLE SERVICE IN MIMO-OFDM MULTIUSER CELLULAR BROADCAST SYSTEMS, Funded by IITCOE, Total Cost Rs. 600000.
81. DEVELOPMENT OF MODIFIED IBXS WITH ENHANCED REACTIVITY AND CHIRAL IBXS FOR ASYMMETRIC SYNTHESIS, Funded by CSIR, Total Cost Rs. 2200000.
82. HYBRID SOURCES FOR POWERING BASE STATIONS: A FEASIBILITY STUDY, Funded by BITCOE, Total Cost Rs. 585000.
83. TESTING AND TRAJECTORY ANALYSIS OF DFDR, Funded by HAL, Total Cost Rs. 625000.
84. PHOTORESPONSIVE METAL-ORGANIC FRAMEWORKS (MOFS) BASED ON DE NOVO DESIGN OF ORGANIC MOLECULAR BUILDING BLOCKS (MBBS), Funded by DAE, Total Cost Rs. 2452500.
85. DEVELOPMENT OF HIGH STRENGTH IN-SITU NANOCOMPOSITE FOR AEROSPACE AND DEFENSE APPLICATIONS, Funded by INSA, Total Cost Rs. 500000.
86. DESIGN AND SYNTHESIS OF NEW MOLECULES FOR THE DETECTION OF CHEMICAL WARFARE AGENTS AND FOR THE REACTIVATION OF ENZYMES INHIBITED BY ORGANOPHOSPHONATES, Funded by ER&IPR, Total Cost Rs. 2550000.
87. HYBRID CONVERTER TOPOLOGIES FOR A DC BASED POWER DISTRIBUTION, Funded by SERB, Total Cost Rs. 1872000.
88. RAILWAY TECHNOLOGY CELL (MECHANICAL), Funded by RDSO, Total Cost Rs. 2885496.
89. DEVELOPMENT OF THERMAL HYDRAULICS MODEL AND COUPLING OF 3D KINETICS CODE, Funded by AERB, Total Cost Rs. 1967740.
90. INTER DIFFUSION BETWEEN THERMAL BARRIER COATING & BOND COATS: GROWTH KINETICS OF THERMALLY GROWN OXIDES, Funded by GE, Total Cost Rs. 1100000.
91. INSPIRE FACULTY FELLOWSHIP: QUANTUM TRANSPORT AND MANY BODY PHYSICS IN LOW DIMENSIONAL SYSTEMS, Funded by DST, Total Cost Rs. 3500000.
92. FEASIBILITY ANALYSIS FOR FLAW DETECTION IN ROTORS USING ACOUSTIC IMPEDANCE APPROACH, Funded by DAE, Total Cost Rs. 2292200.

93. GEO-TECHNICAL ENGINEERING WITH REFERENCE TO FORMATION, Funded by RDSO, Total Cost Rs. 2581347.
94. DELINEATING THE LINK BETWEEN CONNEXINS AND TOLL LIKE RECEPTORS IN DELAYED DIABETIC WOUND HEALING, Funded by DST, Total Cost Rs. 1900000.
95. AN INDEPENDENT STAIR CLIMBING WHEEL CHAIR (MANUAL) FOR UP/DOWN CLIMBING, Funded by DST, Total Cost Rs. 4923312.
96. NANO-PATTERNED CONDUCTIVE ADHESIVE FOR METAL-POLYMER INTER-CONNECTORS IN SOLAR CELL, Funded by DST, Total Cost Rs. 6944000.
97. UNDERSTANDING THE SELF ASSEMBLY BEHAVIOUR OF AMPHIPHILIC MOLECULES ON SURFACES, Funded by SERB, Total Cost Rs. 5494400.
98. PERFORMANCE EVALUATION AND ROBUST DESIGN OPTIMIZATION OF SHAPE MEMORY ALLOY BASED ISOLATION SYSTEM, Funded by SERB, Total Cost Rs. 1764000.
99. EXHIBITION CUM SCIENTIFIC DISPLAY ON THE OCCASION OF KUMBH-2013, Funded by MOEF, Total Cost Rs. 400000.
100. INSTALLATION OF ZERO DISCHARGE TOILET SYSTEM (ZDTS) AT KUMBH 2013, ALLAHABAD, Funded by HUDCO, Total Cost Rs. 6545000.
101. INTELLIGENT DEVICES AND SMART ACTUATORS, Funded by CMERI, Total Cost Rs. 2174000.
102. EXPERIMENTAL INVESTIGATIONS OF HCCI/PCCI COMBUSTION IN A SINGLE CYLINDER RESEARCH ENGINE USING BIODIESEL, Funded by DST, Total Cost Rs. 15748000.
103. DEVELOPMENT OF FLUIDIC THRUST VECTORING CAPABILITY FOR AURA HIGH ASPECT RATION FIXED NOZZLE, Funded by ADA, Total Cost Rs. 3840000.
104. MODELLING RELATIVE IMPACT OF AEROSOL AND LULC CHANGES ON REGIONAL CLIMATE OF GANGA BASIN, Funded by DST, Total Cost Rs. 4080400.
105. REVERSALS OF A LARGE SCALE FIELD ON A TURBULENT BACKGROUND, Funded by IFCPAR, Total Cost Rs. 1417000.
106. DEVELOPMENT OF PERSONALISED AND PERFORMANCE BASED E-LEARNING TOOL FOR EXISTING E-RESOURCES, Funded by DEITY, Total Cost Rs. 3000000.
107. BIO-INCUBATOR FACILITY AT SIDBI INNOVATION & INCUBATION CENTRE, Funded by BIRAC, Total Cost Rs. 88371600.
108. PHASE-II EXPANDED PROPOSAL ON DESIGN OF ACTIVE FLEXIBLE AND RE-CONFIGURABLE PARABOLIC ANTENNA USING SMA BASED SMART ACTUATORS, Funded by STC, Total Cost Rs. 2161000.

109. EFFECTS OF HEAT TREATMENT ON THE MECHANICALLY PROCESSED RUSSIAN GRADE 12X21H5T DUPLEX-STEEL, Funded by STC, Total Cost Rs. 1456000.
110. TRUST INFORMATION PRIVACY AND SYSTEM SECURITY IN ERP PROJECTS, Funded by RCI, Total Cost Rs. 876000.
111. INDNOR: HYDROLOGIC SENSITIVITY TO CRYOSPHERE-AEROSOL INTERACTION IN MOUNTAIN PROCESSES (HYCAMP) , Funded by DST, Total Cost Rs. 3849760.
112. EXPERIMENTAL DATA GENERATION ON A FLYING WING CONFIGURATION FOR VALIDATION OF INDIGENEOUS CFD CODES, Funded by ARDB, Total Cost Rs. 3474000.
113. FRACTURE INTRANSVERSELY LAYERED AND GRADED PLATES UNDER STATIC AND DYNAMIC LOADING, Funded by ARDB, Total Cost Rs. 1613000.
114. AERODYNAMIC SHAPE OPTIMIZATION FOR UNSTEADY FLOWS, Funded by ARDB, Total Cost Rs. 1851000.
115. LOCALIZED SUBSURFACE MODIFICATION USING LOW ENERGY MULTIPLE ION BEAMLETS FOR TAILORING ELECTRICAL AND OPTICAL PROPERTIES OF MATERIALS AT MICRON SCALES, Funded by SERB, Total Cost Rs. 3566000.
116. HELICENES AND THEIR IMPORTANCE AS APPLIED TO BIOLOGICAL ACTIVITY, Funded by CDRI, Total Cost Rs. 550000.

B. International Projects:

1. SUSTAINABLE MANAGEMENT OF THE GANGA RIVER BASIN THROUGH SCIENTIFIC INNOVATION, Funded by UKIERI, Total Cost Rs. 1591606.
2. PRECIPITATION IN ALUMINIUM ALLOYS FOR ELEVATED TEMPERATURE STRENGTH, Funded by GMMOTO, Total Cost Rs. 1090584.
3. DEVELOPING LOW CARBON CITIES IN INDIA: FOCUS ON URBAN INFRASTRUCTURES, CLIMATE RISKS & VULNERABILITY, Funded by USAID, Total Cost Rs. 6479510.

Consultancy Projects:

A. National Projects:

1. GROUND PENETRATING RADAR (GPR) INVESTIGATION ON WELL FOUNDATION OF BRIDGE OVER YAMUNA RIVER NEAR SHERGARH, DISTRICT-MATHURA, Funded by PWD, Total Cost Rs. 1483838.
2. WIND TUNNEL MODEL STUDY FOR NCDT PRAYAGRAJ TPS, Funded by Paharpur Cooling Towers, Total Cost Rs. 2696640.

3. WIND TUNNEL STUDY OF CHIMNEY FOR SKS TPS, Funded by Cethar Constructions, Total Cost Rs. 1220098.
4. WIND TUNNEL STUDY OF CHIMNEY FOR KRISHNAPATNAM TPS, Funded by BGR Energy Systems, Total Cost Rs. 1323600.
5. WIND TUNNEL STUDY OF CHIMNEY FOR HALDIA TPS, Funded by Bharat Forge, Total Cost Rs. 764379.
6. LOW SPEED WIND TUNNEL TEST ON HELINA MISSILE, Funded by DRDL, Total Cost Rs. 1320000.
7. EVALUATION OF IN-SITU CONCRETE OF PRE-STRESSED CONCRETE SILO, Funded by Prism Cement, Total Cost Rs. 898880.
8. CARBON CAPTURE AND STORAGE, Funded by Siva Ventures, Total Cost Rs. 150000.
9. ANALYSIS OF COMBUSTION PRODUCTS FROM BURNING OF INCENSE, Funded by Damodar Threads Ltd, Total Cost Rs. 20000.
10. WIND TUNNEL STUDY OF NDCT FOR JAYPEE NIGRIE SUPER TPP MP, Funded by Gammon India Ltd, Total Cost Rs. 463260.
11. WIND TUNNEL STUDY OF NDCT FOR GMR CHATTISGARH, RAIGARH, Funded by Gammon India Ltd, Total Cost Rs. 463260.
12. HIGH SPEED WIND TUNNEL TESTING OF 120MM FSAPDS MK-II AMMUNITION, Funded by ARDE, Total Cost Rs. 868000.
13. WIND TUNNEL MODEL STUDY OF CHIMNEY FOR TUTICORIN TPS, Funded by Ind Bharat Power Ltd, Total Cost Rs. 1179780.
14. CONSULTANCY FOR RAISING OF ASH DYKES AT STPS, SARNI, Funded by MPPGCL, Total Cost Rs. 344688.
15. HYDRAULIC MODEL STUDIES OF THE PIPRA GHAT BRIDGE PROPOSED ON RIVER RAPTI IN BALRAMPUR, Funded by PWD, Total Cost Rs. 1654500.
16. DEVELOPING TECHNOLOGY FOR MOTION CORRECTION DURING LASER SCANNING, Funded by DRDO, Total Cost Rs. 2274938.
17. ANALYSIS FOR GUN BARREL AND BULGE PROBLEM, Funded by Ordnance Factory, Total Cost Rs. 776800.
18. SITE VISIT TO SAURASHTRA CEMENTS LIMITED, RANAVAV, GUJARAT REGARDING INITIATION OF A CONSULTING PROJECT ON MASONRY CEMENT & READY-MIX MORTAR, Funded by Saurashtra Cements, Total Cost Rs. 112360.
19. EXPERT OPINION ON I-SBR TECHNOLOGY, Funded by Delhi Jal Board, Total Cost Rs. 544946.
20. DEVELOPMENT OF ENGINEERING CURRICULUM, Funded by Limitless Education Foundation, Total Cost Rs. 600000.
21. CONSULTANCY ON ACADEMIC PROCESSES, Funded by Limitless Education Foundation, Total Cost Rs. 127405.

22. WIND TUNNEL STUDY OF CHIMNEY FOR SINGRAULI, Funded by Gammon India Ltd, Total Cost Rs. 489732.
23. FEASIBILITY STUDY TO RUN THE STATE TUBEWELLS IN UP BY USING SCADA, Funded by Irrigation, Total Cost Rs. 137875.
24. PROTECTIVE ENVIRONMENT IN SCHOOLS: A STUDY OF SONBHADRA, MIRZAPUR, JAUNPUR AND MORADABAD, Funded by WIZMIN Management Consultant, Total Cost Rs. 25000.
25. AGGREGATE JOB MIX FORMULA, Funded by IRCON International, Total Cost Rs. 59000.
26. WIND TUNNEL MODEL STUDY OF GAIL INDIA COMPLEX, Funded by Specialities Aluminium Grills, Total Cost Rs. 1797760.
27. APPROACHES TO RURAL DEVELOPMENT, Funded by WIZMIN Management Consultant, Total Cost Rs. 150000.
28. PROTECTIVE ENVIRONMENT IN SCHOOLS, Funded by WIZMIN Management Consultant, Total Cost Rs. 25000.
29. WIND TUNNEL STUDY OF NCDT FOR 2 X 685 MW GMR, CHATTISGARH, Funded by Gammon India Ltd, Total Cost Rs. 1080940.
30. WIND TUNNEL STUDY OF CHIMNEY FOR 4X600 MW OP JINDAL TPP, Funded by Gammon India Ltd, Total Cost Rs. 1125060.
31. WIND TUNNEL STUDY OF NDCT FOR 4X600 MW OP JINDAL TPP, Funded by Gammon India Ltd, Total Cost Rs. 2625140.
32. WIND TUNNEL STUDY OF CHIMNEY FOR GMR TPP AT CHATTISGARH, Funded by Gammon India Ltd, Total Cost Rs. 849310.
33. STRUCTURAL STABILITIES, SPECTRAL AND OPTICAL PROPERTIES OF CORE AND SHELL NANOCCLUSERS USING MOLECULAR TAILORING APPROACH (MTA), Funded by Samsung, Total Cost Rs. 561800.
34. NON-LINEAR MODELING, SIMULATION AND INSTRUMENTATION THROUGH FLIGHT TRIAL DATA ACQUISITION AND DATA ANALYSIS AND TRIAL OF 2000 CUM AEROSTAT, Funded by ADRDE, Total Cost Rs. 8708000.
35. WIND TUNNEL STUDY OF WBL PANTOGRAPH AT NWTF IIT KANPUR, Funded by Schunk Metal and Carbon, Total Cost Rs. 308990.
36. WIND TUNNEL STUDY OF TWENTY SIDED HIGH MAST STANDARD, Funded by Valmont Structures, Total Cost Rs. 533710.
37. WIND TUNNEL STUDY OF CHIMNEY FOR SINGRAULI, Funded by Gammon India Ltd, Total Cost Rs. 833868.
38. PEER REVIEW OF 14-STOREYED BUILDINGS AT CUTTAK, Funded by Dion Infratech, Total Cost Rs. 180000.
39. WIND TUNNEL STUDY OF NDCT FOR KRISHNAPATNAM SUPER CRITICAL TPP, NELLORE, Funded by BGR Energy Systems, Total Cost Rs. 1654500.

40. ASSESSMENT OF THE ONLINE SERVICES UNDER MISSION MODE PROGRAMME OF COMMERCIAL TAXES DEPARTMENT OF UP, Funded by National Information Centre Services, Total Cost Rs. 1094500.
41. CONSULTANCY REGARDING 8 LANING OF LOHIA PATH AT LUCKNOW, Funded by PWD, Total Cost Rs. 30000.
42. CONSULTANCY FOR STRENGTHENING OF EOT CRANE STRUCTURE (CLINKER YARD) TO MINIMIZE THE VIBRATIONS AT THE JK CEMENT WORKS, NIMBAHERA RAJASTHAN, Funded by JK Cement, Total Cost Rs. 1334275.
43. WIND TUNNEL STUDY OF CHIMNEY FOR 2X660 MW TPS AT BANKA, Funded by Simple Infrastructures, Total Cost Rs. 1235960.
44. WIND TUNNEL STUDY OF CHIMNEY OF BSEB, BARAUNI TPS, Funded by BHEL, Total Cost Rs. 1213300.
45. SKIN REPLICAS, Funded by UNILEVER, Total Cost Rs. 2809000.
46. LIDAR DATA SPECIFICATION AND ACCURACY METHODOLOGY, Funded by NGRI, Total Cost Rs. 331813.
47. PEER REVIEW OF STRUCTURAL DESIGN AND RETROFIT OPTIONS FOR 1200 BED NEW CIVIL HOSPITAL, AHMEDABAD, Funded by PIU, Total Cost Rs. 4044960.
48. WIND TUNNEL STUDY OF CHIMNEY FOR CUDDALORE AT NWTF, IIT KANPUR, Funded by L&T, Total Cost Rs. 1061802.
49. GPR SURVEY AT SUBHASH PARK, DELHI, Funded by ASI, Total Cost Rs. 1404500.
50. DESIGN & ANALYSIS OF TRUMPETS, Funded by MINDA, Total Cost Rs. 386238.
51. AUDIT FOR IPV6 READINESS IN CVC, Funded by BITCOE, Total Cost Rs. 74157.
52. WIND TUNNEL STUDY OF CHIMNEY FOR LALITPUR, Funded by Simple Infrastructures, Total Cost Rs. 1323600.
53. WIND TUNNEL STUDY OF KRESCENT HOMES RESIDENTAL AT NOIDA, Funded by Jaiprakash Associates, Total Cost Rs. 2217030.
54. WIND TUNNEL STUDY OF CHIMNEY FOR L&T A/C ONGC, URAN MUMBAI, Funded by Thermax, Total Cost Rs. 1103000.
55. WIND TUNNEL STUDY OF NDCT & CHIMNEY FOR NELLORE TPS, Funded by Nagarjun Construction Company, Total Cost Rs. 2921360.
56. MODEL DESIGN, DATA ANALYSIS AND REPORTING FOR L&T VISA POWER TPS AT CHATTISGARH, Funded by L&T, Total Cost Rs. 404496.
57. GENERATING 3D CITY MODEL FOR REQUIREMENT OF ANURAG, Funded by ANURAG, Total Cost Rs. 873745.
58. IMPROVING AGRICULTURE PRODUCTIVITY THROUGH INFORMATION SYSTEM, Funded by Swiss KFH-DC, Total Cost Rs. 921827.

59. VILLAGE LEVEL DEVELOPMENT STUDIES SOUTH ASIA-VDSA, Funded by ICRISAT, Total Cost Rs. 750000.
60. BSNL MOBILE CELLULAR NETWORK OPTIMIZATION, Funded by BITCOE, Total Cost Rs. 988768.
61. PERFORMANCE OF ACCESS POINTS AND SHIELDED CHAMBER, Funded by Air Tight Networks, Total Cost Rs. 200000.
62. SIMULATION OF CONSTANT V/F CONTROL OF INDUCTION MOTOR DRIVE, Funded by Lohia Sterlinger Limited, Total Cost Rs. 276000.
63. OPTIMIZATION OF MELTING PARAMETERS FOR THE SYNTHESIS OF AB5 TYPE BINARY ALLOYS, Funded by Thermax, Total Cost Rs. 101124.
64. TYRE NOISE REDUCTION INITIATIVE, Funded by CEAT, Total Cost Rs. 1601130.
65. RHEOLOGY OF SURFACTANT PASTE, Funded by UNILEVER, Total Cost Rs. 1123600.
66. STUDIES ON VOLTAGE STABILITY AND SMALL SIGNAL OSCILLATION MONITORING OF POWER SYSTEMS, Funded by GE, Total Cost Rs. 1039330.
67. WIND TUNNEL STUDY OF CHIMNEY FOR SIKKA TPS, Funded by BHEL, Total Cost Rs. 1213300.
68. DEVELOPMENT OF MASONRY CEMENT & READY-MIX MORTAR, Funded by Saurashtra Cements Ltd, Total Cost Rs. 1123600.
69. TECHNOLOGY AND MANAGEMENT ROADMAP FOR UPSRTC CENTRAL WORKSHOP, Funded by UPSRTC, Total Cost Rs. 3623610.
70. EVALUATION OF DESIGN PARAMETERS FOR BRICK MASONRY, Funded by IITG, Total Cost Rs. 280900.
71. RETROFITTING OF TRAUMA CENTER OF CIVIL HOSPITAL, AHMEDABAD, Funded by PIU, Total Cost Rs. 3370800.
72. SITE VISIT TO LOHIA PATH LUCKNOW, Funded by PWD, Total Cost Rs. 25000.
73. ASSESSMENT OF ENVIRONMENTAL FLOWS FOR KUMBH 2013 AT ALLAHABAD, Funded by WWF, Total Cost Rs. 867690.
74. STUDY OF MEDIUM VOLTAGE UPS TOPOLOGIES, Funded by GE Global Research, Total Cost Rs. 442418.
75. TOPOGRAPHICAL MAPPING AND HYDRAULIC DESIGN, Funded by NTPC, Total Cost Rs. 1123600.
76. REPORT ON NAPHTHA PRODUCED AS BYE-PRODUCT OF THE MAIN PRODUCT LPG, Funded by GAIL, Total Cost Rs. 250000.
77. APPROVAL OF POLE & TOWER DRAWING, Funded by JPC, Total Cost Rs. 46415.
78. EVALUATION OF BUILDING USING REINFORCED CONCRETE BLOCKS (RCB), Funded by Sahara Prime City Ltd, Total Cost Rs. 898880.

79. OPTIMIZATION OF HIGHER LAYER NETWORK MANAGEMENT, Funded by WESEE, Total Cost Rs. 400283.
80. A STUDY FOR THE SELF SUSTAINABILITY OF A WATER BODY PROPOSED IN THE JANESWAR MISHRA LUCKNOW PARK, Funded by LDA, Total Cost Rs. 724426.
81. SITE VISIT IN CONNECTION WITH SUBSOIL INVESTIGATION AT YOJANA NO.3 KANPUR, Funded by UPAV, Total Cost Rs. 16143.
82. WIND INDUCED STRUCTURAL RESPONSES & CLADDING PRESSURES OF HIGH-RISE (145M) RESIDENTIAL INTER CONNECTED TOWERS, Funded by IREO, Total Cost Rs. 2449448.
83. CONSULTANCY FOR CAPACITY VERIFICATION TESTS ON POT CUM PTFE BEARINGS OF CHAMBAL BRIDGE, DHOLPUR, Funded by PNC, Total Cost Rs. 449440.
84. WIND TUNNEL STUDY ON A RIGID MODEL OF NDCT FOR 1X500 MW BHEL/DVC BOKARO, JHARKHAND, Funded by PAHarpur Cooling Towers, Total Cost Rs. 1123600.
85. SITE VISIT FOR SUBSOIL INVESTIGATION ON RAPTI MAIN CANAL (KM 75-126) AT BASTI, Funded by RNNM, Total Cost Rs. 14537.
86. CLARIFICATION ON NATIONAL BUILDING CODE OF INDIA, Funded by Mukesh & Associates, Total Cost Rs. 28090.
87. CONSULTANCY FOR VETTING OF ESTIMATED COST FOR THE CONSTRUCTION OF PROPOSED HOSPITAL BUILDING OF CANTMENT BOARD, KANPUR, Funded by CB, Total Cost Rs. 54073.
88. CONCRETE MIX DESIGN STUDIES, Total Cost Rs. 1500000.
89. FEASIBILITY STUDY FOR RIVERFRONT DEVELOPMENT ALONG THE BANK OF RIVER GANGA IN KANPUR, Funded by KDA, Total Cost Rs. 1467703.
90. HYDRAULIC MODEL STUDY OF THE PROPOSED EMBANKMENT PARALLEL TO THE EXISTING RIGHT EMBANKMENT UPSTREAM OF THE GANGA BARRAGE IN KANPUR, Funded by UPIRRI, Total Cost Rs. 1685400.
91. STUDY OF PAVEMENT DISTRESS ON STATE HIGHWAY NO-13 A FROM KM 312-320, Funded by PWD, Total Cost Rs. 30000.
92. AIR QUALITY MODELLING OF 355 MW POWER PLANT, Funded by Green Circle Inc, Total Cost Rs. 157304.
93. ANALYSIS FOR RAISING OF ASH DYKE NO.7, Funded by BALCO, Total Cost Rs. 421350.

B. International Projects:

1. DATA FOR JETS AND SPRAYS IN CROSS FLOW, Funded by P&W, Total Cost Rs. 3634165.

2. A DEDUCTIVE VERIFICATION TOOL FOR LOW LEVEL SOFTWARE, Funded by INTEL, Total Cost Rs. 19000.
3. FABRICATION OF TWO SPIDER PROBES FOR MEASUREMENT OF ION BEAMS AND CHARACTERIZATION, Funded by IDMC, Total Cost Rs. 72500.
4. ATMOSPHERIC BROWN CLOUDS (ABC), Funded by RRCAP, Total Cost Rs. 267526.
5. DESIGN OF A SOLAR STILL FOR WATER SOFTENING, Funded by ANGLO, Total Cost Rs. 560000.
6. PARAMETER ESTIMATION THROUGH INFILTRATION EXPERIMENTS AND ELECTRICAL RESISTIVITY MEASUREMENTS, Funded by HGS, Total Cost Rs. 274575.
7. SUPERMACROPOROUS HYBRID POLYMERICS FOR EFFICIENT REMOVAL OF ENDOCRINE DISRUPTORS AND OTHER WATER POLLUTANTS, Funded by SAMSUNG, Total Cost Rs. 6875000.

Alumni Association Activities

Major Activities

1. Reunions

i. Golden Jubilee Reunion Batch-of-1962

The Golden Jubilee Reunion of the Batch-of-'62 was held from November 23 to 25, 2012. All alumni who entered the Institute in 1962 and graduated in 1967 were invited. Around 50 alumni of the third batch visited the Institute along with their family members. The reunion was inaugurated Director, Prof. Indranil Manna. The Deans, HODs and faculty members also interacted with the alumni. They had earlier donated funds for the creation of Park '67 and they erected an iron plate engraved with the names of all donors.

ii. Silver Jubilee Reunion Class-of-1988

The Silver Jubilee Reunion of the class-of-'88 was held from December 27-29, 2012. Around 75 alumni with their family members visited the Institute on this occasion. They had a formal meeting at Outreach Auditorium with the Deputy Director Prof S. C. Srivastava, former Dean Resource Planning and Generation, Prof. Manindra Agrawal and Secretary, Alumni Association, Prof. Sudhir Misra. They also interacted with faculty, students and staff, visited their respective departments and other facilities like new SAC. The batch had created a souvenir book, of their era. The batch had gave a donation of one crore to their alma mater and donated around 15 lakhs to the Alumni Association also.

iii. 35th Year Reunion Class-of-1978

The 35th Year Reunion of the Class-of-78 was held from January 4-6, 2013. Around 30 alumni with their family members visited the Institute on this occasion. Deputy Director, Prof. S. C. Srivastava welcomed the alumni, Prof. Sudhir Misra, Dean of Resource, Planning and Generation, Prof. Manindra Agrawal joined the Deputy Director in extending a warm welcome to them.

iv. Golden Jubilee Reunion Batch-of-1963

Golden Jubilee Reunion Batch-of-63 was held from March 8-10, 2013 at IIT Kanpur. All the graduates of the Class-of-67, all those who entered in 1963 had been invited. They had brought out a '63 Batch Book, "The Frontier Batch: Early days of Kanpur" which

was unveiled in the flyer of Visitor's Hostel by Prof. Anandakrishnan, Chairman, IIT Kanpur BOG, who had joined as a faculty member in 1963.

2. Nostalgia

The farewell function of the graduating batch of 2012 was held on May 3, 2012. The former Director, Prof. S. G. Dhande, Secretary of Alumni Association, Prof. Sudhir Misra and Treasurer of Alumni Association, Prof. Mukesh Sharma addressed the gathering of students. Prof. Misra read out a message from Prof. Ashok Gupta, the President, Alumni Association, Prof Manindra Agrawal, DRPG, Prof A. K. Ghosh, DOSA and Mr. Abhay Jain, President Student Gymkhana also addressed the outgoing students. All of them wished the students very best for their careers. A video film of the achievements of the graduating students was played on the occasion. All the attendees enjoyed Hi-Tea after the function.

3. Distinguished Alumnus Award, 2012-13

The Distinguished Alumnus Awards (DAA) are given to alumni for their exemplary achievements in their area of work. It is the highest award conferred by the Indian Institute of Technology Kanpur upon its alumni. From among a total of 64 nominations that were considered for the DAA the following are the recipients of these awards for this year.

i. Distinguished Alumnus Award (2012-13)

Dr. Kamal K Sharma (BT/CHE/69), Managing Director, Lupin Limited, Mumbai for Outstanding Managerial Career and contributions to the pharmaceutical industry.

Mr. Bhadersh K Shah (BT/MSE/75), Executive Director, Ahmedabad Induction Alloys (AIA) Engineering Ltd for excellence in Entrepreneurship.

Prof. Keshav Pingali (BT/EE/78), W.A.'Tex' Moncrief Chair of Grid and Distributed Computing and Professor, Computer Science, University of Texas, Austin for his outstanding and seminal Contributions in the field of Computer Science and Engineering

Prof. Sumant Nigam (MSC5/PHY/79), Professor of Atmospheric & Oceanic Sciences, University of Maryland for his outstanding contributions and academic achievements in the area of atmospheric and ocean sciences.

Mr. Naveen Tewari (BT/ME/00), CEO and Founder, InMobi Inc., for his excellence in Entrepreneurship.

Mr. Amit Gupta (BT/EE/00), Co-Founder & VP of Revenue & Operations, InMobi Inc., for his excellence in Entrepreneurship.

Mr. Abhay Singhal (BT/EE/01), Co-founder, VP of Global Sales & MD EMEA, InMobi Inc., for his excellence in Entrepreneurship.

4. Satyendra K Dubey Memorial Award, 2012-13

Satyendra K Dubey (SKD) Memorial Award, instituted in the memory of Mr. Satyendra K. Dubey (BT/CE/1994/IITK) is given for exemplary service and displaying highest professional integrity for upholding human values to an alumnus from any of the IITs. Out of 44 nominations that were considered for Satyendra K Dubey Award, the following is the recipient for this year.

Prof. Trilochan Sastry (BT/IITD/80), Professor of Quantitative Methods & Information Systems, Indian Institute of Management Bangalore for his contributions to bringing about transparency in public life.

5. Chapter activities during 2010-12

i Chapter formation guidelines

The Board of the Alumni Association with the help from Mr Anurag Goel has drafted Chapter formation guidelines, which are acting as pivotal point in activating the chapters and giving them accreditation.

The chapters of Jamshedpur, Chandigarh and Bhubaneswar were successfully launched under this process. The Jamshedpur Chapter also got accreditation and had organized the first chapter get-to-gather on 16th March, 2013. The formation of Gurgaon - Faridabad Chapter is also underway.

ii Chapter Activities

Chapter activities give alumni an opportunity to reconnect, network, and get inspired from the accomplishments of fellow alumni. At the same time, participants get to enjoy great food, games and music. The following chapters had their meeting.

- **Outer Delhi Chapter:** The Outer Delhi Chapter had organized a Felicitation Function of the elected members of the Board of Directors, Alumni Association, IIT Kanpur on Sunday, April 1, 2012 at Vishwakarma Pratham, Faridabad. It had also organized an enlightening and interesting National Seminar on "Innovating with Global Perspective" on Saturday, 3rd November, 2012 at Babu Banarsi Das Institute of Technology. Many distinguished IITK alumni attended this meet.
- **Lucknow Chapter:** Lucknow Chapter had its meet on July 29, 2012 at MB club Lucknow. Around 50 alumni along with their family members had attended this meet. Prof Kripa Shanker, and Prof Sudhir Misra, graced the occasion.

- **Kanpur Chapter:** Mr Yadupati Singhania (BT/CE/75) MD and CEO, J K White Cement Ltd. hosted a get-together and dinner for the Kanpur based alumni on October 20, 2012 at Kamal Retreat, Kanpur. Many alumni from the Kanpur region as well as the faculty members of IIT Kanpur attended the meet.
- **Silicon Valley Chapter:** The West Coast Silicon Valley chapter of Alumni Association IIT Kanpur, in association with IIT Kanpur Foundation, hosted its 10th "Annual Leadership Award Banquet Event" on 16th June 2012 at the Computer History Museum in Mountain View, CA, to provide peer recognition to IITK alumni who have demonstrated leadership and with stellar achievements. The former Director, Prof. Sanjay Dhande, the DRPG, Prof. Manindra Agarwal, President IITKAA, Dr. Ashok Gupta and the Secretary IITKAA, Prof. Sudhir Misra graced the event. They presented the "Institute Fellow Award", "Distinguished Alumnus Awards", as well as the "Alumni Leadership Awards".
- **Pune Chapter:** The Pune Chapter of the Alumni Association had a dinner meet on February 2, 2013. The former Director, Prof. Dhande was felicitated and was the chief guest. About 80 Alumni along with their families attended.

6. Alumni Newsletters

Alumni Newsletter, a Newsletter, published in-house by the Alumni Association office has released 6 issues of newsletters during the financial year.

7. Souvenir shop

The alumni Association office has been running a souvenir shop in the premises of Outreach Building, which have grown in terms of the number, quality, and the revenue it generated from the souvenir shop. Looking at the overwhelming response received for the souvenir shop, the alumni association has signed a formal memorandum of understanding with Kansas Manufacturing Private Limited who has been running the shop for the past two and a half year.

8. PAN IIT

The PanIIT Global Conference 2012 was held in Kolkata from December 7-9, 2012. Alumni Association, IIT Kanpur had contributed extensively for the success of this PAN IIT Global conference, right from disseminating information, frequently requesting alumni to register, setting up of stall in the pavilion for showcasing the services being provided to IITK alumni and distributing souvenirs to the delegates who had come from all parts of world. The IITKAA BOD members Prof. Sudhir Misra, Mr. Salil Dave,

Mr. Dharam Vir and Prof Manindra Agarwal along with the staff members from the Alumni Association and the DRPG offices attended the meet.

9. Alumni Database

Alumni Association has made significant progress in enhancing the coverage of Alumni Membership in the Database and updating their contact information. More than 900 members who graduated in 2012 were added into database. The AA office had kept in touch with the graduating batch through emails and posters, informing them about the procedure and benefits of becoming its Life Members. Memorabilia such as Bags, Coffee mugs, Departmental Group photographs of students and faculty members along with Photoframe were gifted to all new members who joined the Association. There are about 17,000 registered members. There are more than 21,000 alumni who are connected either through email-ids or postal address.

10. Auditing

The Auditing of the accounts for the financial year 2011-2012 has been done by M/s Sanjeev Bhargava and Associates. The Balance Sheet has been prepared and the returns have been filed with the Income Tax Dept. as per the law of the land.

II New Initiatives

1. Alumni Networking:

i. Convention 2013

A Convention of Alumni Association IIT Kanpur was organized on Sunday 3rd March 2013 at IIT Delhi. The Convention was designed to be a common platform where IITK alumni (with families) from all over the world will be able to get together to network and explore how Alumni Association can be more vibrant, relevant and useful for the alumni, IIT Kanpur and the nation. The convention is being organized by Alumni Association IIT Kanpur Outer Delhi Chapter on behalf of the Alumni Association IIT Kanpur.

Nearly 800 alumni including many Distinguished Alumnus Awardees, Padma Awardees, Directors and former Directors of IITs, Board members, Alumni Association and alumni who are leading functionaries in government, public, private and corporate sectors and distinguished in their own fields attended the programme. They met with the current and former faculty members and shared their feelings of their alma mater. DRPG had extended travel support to the retired faculty attending the convention. Dr. D. Subbarao (IITKgp/69, and IITK/71), the RBI Governor was the Chief Guest.

The highlight of the programme was the Felicitation of 2012 Padma Awardees and Past Distinguished Alumnus Awardees. The IIT K alumni who were honored with Padma Bhushan, Prof. Sanjay G Dhande, Prof. Manindra Agrawal and Prof. VijayRaghavan were felicitated. Prof. Rakesh Agrawal, Mr. Sudhir Vyas and Dr. D Subbarao who were awarded with DAAs in the past but were not able to attend the award ceremonies then were also felicitated. They were honored with the awards carrying citations, silver plaque and silk sashes. Prof. Sudhir Misra readout the citations and the awardees gave their acceptance speed.

ii. Mobile Application

The IIT Kanpur Mobile Application was launched in December 2012 during the PAN IIT in Kolkata. This is available on iOS and Android platforms. Using this novel application, the members of AA will be able to access and search alumni directory, carry out a local search - search alumni around any location, read the latest news from IITK, connect with institute events, link with Social networking sites - Twitter, Facebook and LinkedIn, update their profiles. Finally, donations to the Institute or Alumni Association can also be made from this mobile application. IIT Kanpur becomes perhaps the first institute in India to launch such an application for its alumni and the facility will be extended to faculty and students.

iii. Website development

Mr Salil Dave, the Vice President of the Alumni Association has taken up the charge of revamping the Alumni Association website, Mr Santosh Khare from Unsocial Inc has taken up as the Project Manager for the new website. The AA Office is coordinating with Unsocial Inc. and Computer Centre for all technical and managerial concerns. The aim is to make the IITK Alumni website alumni-centric, user-friendly to search and motivate alumni to regularly visit the site.

iv. Tea with faculty

To promote greater interaction among the faculty and the students, representatives of Student Gymkhana and other student bodies of the institute, had a tea session with some faculty members in CCD.

v. Distinguished Alumni Awards ceremony in USA

The Distinguished Alumnus Award ceremony for the year 2011-12 was held on June 16, 2012 in the Bay Area, USA to give away awards and to provide more visibility to Alumni Association activities. The recipients were Mr. Sunil Singhal (BT/CHE/71),

Prof. Rakesh Agarwal (BT/CHE/75), Mr Vasdev Chanchlani (MT/IME/76) and Prof. Jayathi Y Murthy (BT/ME/79). The Distinguished Alumnus Award Shri Sunil Singhal and Shri Vasdev Chanchlani collected the award in person. Prof. Sanjay G. Dhande, Prof. Manindra Agrawal and some functionaries of the Alumni Association were present.

2. Financial:

i. IIT Kanpur Foundation and Alumni Association connection

IIT Kanpur Foundation meeting was held on the morning of June 16, 2012. The President, Alumni Association, Prof. Ashok Gupta and the Secretary, AA, Prof. Sudhir Misra attended as a special invitees and briefed the Foundation about the financial position of the AA and mentioned that the funds available are grossly inadequate to carry out even the basic activities such as salaries of AA staff, chapter development, etc. It was agreed, that the Foundation would include 'AA activities' as one of the items for which funds from the US alumnus are raised.

ii. Fund Raising for the Alumni Association Activities

To better serve alumni, the AA needs more funds and Alumni Association has initiated its own fund raising drive from 2012 onwards. Initially, the following four heads have been proposed and more activities will be added in due course:

- **Chapter development and growth** - a corpus, the interest of which enables travel, and other expenses for initiating and nurturing chapters of the AA.
- **Student Alumni Interaction programme** - corpus, the interest of which will help in strengthening the different activities related to Student Alumni Interaction including the Student Alumni Interaction day, Student Alumni carrier awareness programme and the student Placement Office.
- **Strengthening Alumni Association** - for the general activities of the AA office.
- **Social Initiatives** - The Alumni Association is registered an 80 G registration with the Income Tax department. The donors donating to Alumni Association will get 50% income tax exemption from the taxable income under section 80G of Income Tax. We have already received a positive response from our alumni in terms of AA has received few lakhs from fund rising activity this financial year.

3. Amendments to Constitution and By-laws

The IITKAA constitution and the by-laws are being revised by a committee consisting of Mr Dharam Vir, Prof Kripa Shanker, Mr Anil Srivastava and Prof Y. N. Singh. Initial work has been completed and the new constitution has placed for wider circulation and comments.

4. E-magazine

The first issue of Alumni E-Magazine VOICES has been released. This magazine is to act as a catalyst to keep our bonds with alma mater strong irrespective of location and vocation. Alumni can use this platform to share and enjoy heritage and happenings in IITK and beyond. Special acknowledgment has to be made of the efforts made by Mr Arun Srivastava (BT/EE/72) for the support shown in this regard.

III. Board of Directors, Alumni Association, IIT Kanpur

The present Board of Directors (BOD) of IITKAA was elected under the constitution of the Alumni Association, by a global electorate of alumni on March 18, 2012. The following members constitute the BOD, Alumni Association for the year 2012 - 2014.

i. Board of Directors

• Elected Members

1. President: Ashok Kumar Gupta (BT/ME/72)
2. Vice President -1: Sashi Kumar Singhania (BT/ME/67)
3. Vice President -2: Salil Dave (BT/EE/86)
4. Secretary: Sudhir Misra (BT/CE/81)
5. Treasurer: Mukesh Sharma (MT/CE/81)
6. Member-1: Ajay Kumar Shukla (BT/MME/95)
7. Member 2: Saurabh Sharma (MT/NET/10)
8. Member-3: Dharam Vir (MSC2/PHY/71)
9. Member-4: Mr. Nikhil Padhye (MT(DUAL)/ME/10) (nominated)

• The Director, IIT Kanpur is also the Patron of the Association.

• Ex-Officio / Nominated Members

1. A distinguished alumnus/alumna: Mr. David B K Thomas (BT/ME/77)
2. President/Nominee of IITK Foundation or an equivalent body: Dr. Ram B Misra (BT/ME/68)
3. Past-President: Mr Rakesh Pandey (has resigned from the Board)
4. Past-Secretary: Prof. Kripa Shanker (MT/ME/72),

5. Nominee of the Patron: Prof. Prabhat Munshi (BT/CSE/86), Dean Resource Planning and Generation

- **Permanent Invitee**

Mr. Mustan Abdalhusein Tambawala (BT/CHE/74)

Mr. Anurag Goel (BT/ME/71)

ii Board Meetings

There have been regular meetings of this BOD using teleconferencing; 10 such meetings have taken place to discuss various issues.

iii AGBM

The Annual General Body Meeting of Alumni Association, IIT Kanpur was held on March 3, 2013 during Alumni Convocation at IIT Delhi. It was attended by 37 members including Prof Ashok Gupta, President; Prof Sudhir Misra, Secretary; Prof Mukesh Sharma, Treasurer; Mr. Dharam Vir, Member; Prof. Kripa Shanker, Past Secretary, Prof Manindra Agrawal, Member. Prof. Sudhir Misra, presented the Annual Report. Balance Sheet for the Financial year that ended on 31st March 2012 was presented by Prof. Mukesh Sharma, Treasurer and was duly approved by the General Body. Amendments to the Alumni Association constitution were discussed. Prof. Ashok Gupta, President, informed about the new initiatives taken up by the Board and answered various queries from the attendees.

Central Facilities

P. K. Kelkar Library

The P. K. Kelkar Library is a creative partner and essential force in the IITK learning community. Since its inception, it has been rendering essential support to the Institute's teaching, research and development programs. The Library plans, develops and implements programs to provide latest information, learning resources and information competencies to students, faculty, and staff. Using appropriate technology, the Library delivers resources to satisfy information needs, promote lifelong learning and create productive environments for the scholarly community.

P. K. Kelkar Library is housed with all modern amenities, in a magnificent three-storied building covering an area of 5730 square meters. The Library 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.

ACQUISITION UNIT

During the period under report the P. K. Kelkar Library received 2963 volumes of books out of which 214 volumes were received as Gratis, 13 annual reports and 11 Technical Reports. The total expenditure on books was Rs.1,53,91,864/-

PERIODICALS UNIT

Subscription to Periodicals and Binding: The periodicals expenditure for 2012-13 was Rs. 10,47,62,199/- Apart from it, Rs. 24,22,639/- was also paid for SAGE Journals after taking the prior approval from the competent authority. The library subscribed 1998 current periodicals and 476 e-books for the period under report. Out of these journals, 192 are print, 741 are print + online, 1052 only online, 11 databases and 02 CDs. The library added 2755 bound volumes of periodicals and 999 damaged books were bound during the FY year. The library continued its focus on the acquisition of electronic and print products. The archival volumes of 38 journals were procured and previously procured all the volumes were maintained.

NEW RESOURCES ADDED

SL.NO	NAME OF THE JOURNAL	NO. OF RESOURCES
1	Chemical Society Reviews	01

2	Journal of Solid State Science and Technology	01
3	Electrochemistry Letters	01
4	Solid State Letters	01
5	Journal of Modern Crafts	01
6	Dialectica	01
7	Impact Assessment and Project Appraisal	01
8	Journal of European Economic Association	01
9	Journal of Economic History	01
10	Survey Review	01
11	Journal of Geophysical Research Atmospheres	01
12	Reviews of Geophysics	01
13	Journal of Climate	01
14	Proceedings of the National Academy of Sciences	01
15	Small	01
16	Journal of Hydrometeorology	01
17	Monthly Weather Review	01
18	American Journal of Homeopathic Medicine	01
19	Journal of Alternative and Complementary Medicine	01
20	Laser Physics	01
21	Laser Physics Letters	01

E-Books and Backfiles

01	Blackwell Reference Online (E-Books)	476
02	Institute of Physics Backfile (Year 1999-2008)	38

E-resources through INDEST-AICTE

As a core member of INDEST-AICTE Consortium, IITK academic community continued to access electronic versions more than 10000 + full-text journals on different publishers and database platform.

TECHNICAL PROCESSING UNIT

Current Awareness Service (Weekly List of Additions): The books added to the library collection were disseminated to academic community through 52 weekly lists of new additions on every Monday. These were also released on library OPAC. The unit processed 7248 new and old books in 2012-13.

CIRCULATION

During the year 2012-2013, 23183 publications were circulated for home study. A large number of books and journals from reference, textbooks (37788) and general collection areas were also consulted by users within the Library.

COMPUTER AIDED REFERENCE SERVICE UNIT (CARS)

Document Delivery Services and Consultation Facility to External Users: The Inter-Library Loan (ILL) services are extended free to sister IITs, IISc, TIFR, BARC, INDEST-AICTE members and other technical institutions & universities. During 2012-13, ILL requests for 187 articles/chapters/books were received and document delivery made to outside institutions whereas IITK users' requests for 40 articles/chapters/books were sent to other libraries.

Consulting facility of the library was extended to 1336 for external users including programme participants of various courses/programmes organized by the Institute. Library conducted 4 official tours for various colleges and universities of India. 151 CD-ROM/DVDs were added to its collection.

LIBRARY AUTOMATION

Library has already installed and implemented LibSys LSPremia, a web centric integrated library management software package. During the period several problem solving sessions were organized in consultation with the Libsys Ltd. Now all housekeeping operations are running through LibSys. Some of the advanced customizations are in the pipeline with the LibSys.

DIGITAL LIBRARY INITIATIVES

The following digital library initiatives continued: This year 191 theses were added and the repository of Electronic Theses and Dissertations (ETD) online submission has reached 12676 whereas **Institutional Repository (IR) for digitization of Faculty/Academic Staff Publications** has 9341 for Bibliographic data and 5353 for full Text.

SEMINARS/ CONFERENCES/ MEETINGS CHAIRED/ ATTENDED/ VISITS ABROAD

1. Attended the Meeting of the National Steering Committee of INDEST-AICTE Consortium of MHRD, GOI on 30 April 2012 at IIT, New Delhi, Dr. V. D. Shrivastava, Librarian.
2. Was the external examiner for Ph.D in Library and Information Science at Makhanlal Sukhadia University, Udaipur on 1st May 2012, Dr V D Shrivastava, Librarian.
3. Attended the Meeting as Member of Price Negotiation Committee of INDEST-AICTE Consortium of MHRD, GOI on 22nd June 2012, New Delhi, Dr. V. D. Shrivastava, Librarian.
4. Attended the Meeting as Member of Resource Finalization Committee of National Library and Information Services for Infrastructure for Scholarly Content (N- LIST) MHRD, GOI, New Delhi on 22nd June 2012, Dr. V. D. Shrivastava, Librarian.
5. Attended the Meeting as Member of National Steering Committee of INDEST and National Library and Information Services for Infrastructure for Scholarly Content (N-LIST) MHRD, GOI, New Delhi on 25th July 2012, Dr. V. D. Shrivastava, Librarian.
6. Attended the Meeting as Member of Purchase Finalization Committee of INDEST and UGC-INFONET, IIT, New Delhi on 25th July 2012, Dr. V. D. Shrivastava, Librarian.
7. Attended the Interface Meeting for the post of Director, INFLIBNET Centre, Ahmedabad at UGC, New Delhi on 25th August 2012, Dr. V. D. Shrivastava, Librarian.
8. Attended the IEEE Annual Advisory Council Conference as International Advisory Council Member at Westin Times Square in New York City, USA during 22-28 October 2012, Dr V. D. Shrivastava, Librarian.
9. Attended the Meeting as Member of Purchase Finalization Committee of INDEST-AICTE Consortium at IIT, New Delhi on 21 December 2012, Dr. V. D. Shrivastava, Librarian.
10. Attended the Library Committee Meeting of National Academy of Sciences, India, Allahabad on 26th December 2012 at NASI, Allahabad, Dr V. D. Shrivastava, Librarian.

11. Attended the Meeting as Member of Purchase Finalization Committee of INDEST-AICTE Consortium at IIT, New Delhi on 15th February 2013, Dr. V. D. Shrivastava, Librarian.
12. Attended 9th Annual Meet and Workshop of INDEST-AICTE Consortium Meet held at IIM Ahmedabad during January 18-19, 2013. Dr. Anjana Bhatnagar.

Computer Center

Computer Centre at IIT Kanpur is a central facility that caters to the computing needs of the faculty, staff and students for their research, development and teaching. It also manages Internet and campus local network and wireless infrastructure. It provides several services like e-mail and web access. It currently supports more than 10000 users. Computer Centre has been upgrading its computing, mail, network, Internet, PC lab and overall infrastructural facilities in a major way over past few years. In 2012-13, significant upgradation took place in the areas of servers, PC labs, software, mail, network and Internet. The newly constructed Data Centre's are nearing commissioning after final testing and inspection.

For the High Performance Computing (HPC) facility, orders have been placed for adding 96 more compute nodes to augment the existing 373 node HP cluster. The number of users of the HPC facility has increased significantly over the past one year. On the PC lab front, the Facility Management Services for the computer labs in New core labs and IME/ME Autocad lab has been handed over to Wipro Infotech Ltd. All lab bookings, maintenance of software on PCs and overall coordination is now done by Wipro Infotech Ltd.

On the software side, several general purpose and HPC application software have been either renewed or procured afresh. New software such as Maple 17, FactSage, Bentley Microstation, and Adobe Acrobat Pro have been deployed. The list of some of the key software that has been renewed includes: Matlab, Parallel Numerical Algorithms Group (NAG), Mathematica, SPSS, Origin, BeCN, COMSOL, Accelrys, MedeAVASP, AMBER, Tecplot, Turbomole, Gaussian, Ansys, Fluent etc. The webservers have been upgraded to latest version of RHEL.

Currently, the Centre handles more than 10000 e-mail users of the institute. It also provided e-mail and web facilities to a large number of conferences, symposia and workshops that took place in the campus in 2012-13. Support for sending/receiving mails on mobile phones has been added for Linux platform. A significant expansion of the campus local area network (LAN) and wireless network also took place over the past one year to cover the new buildings and residential areas. The total number of

internet access points now stands at more than 18000. Network backbone switch has been upgraded to 2 TBPS from the earlier switching speed of 720 GBPS.

In addition to the above upgradations in compute servers and PC labs, a modern Data Centre with state-of-the-art precision air conditioning and fire safety features has been completed and is nearing commissioning after final testing and inspection in 2012-13. Once the operation of this new Data Centre is started, Computer Centre will be in a position to house substantially bigger HPC and other servers of the Institute and PIs.

Centre for Development of Technical Education

Since its inception in 1971, Ministry of Human Resource Development, All India Council for Technical Education has always strived for the development of technical education in the country. The main objective of the Centre for Development of Technical Education (CDTE) is dissemination of knowledge resources of IITK. In a way CDTE is a coordinating facility for the various activities connected with development of curricula, preparation of resource material, administering the continuing education programme and providing in-service training to the teachers of engineering colleges. This is carried out through activities under Curriculum Development Cell (CDC), Quality Improvement Programme (QIP) and Continuing Education Cell (CEC).

Summary of various activities during the year 2012-2013

1. QIP Students
 - (a) M.Tech Candidates admitted 07
 - (b) Ph.D. Candidates admitted 02
2. Book-Writing Projects
 - (a) Book-writing projects continued - 35
 - (b) Book-writing projects approved - 05
 - (c) Book-writing projects completed -05
3. Short term courses conducted under QIP - 10
4. Short term self-financed courses conducted - 26
5. Workshops/ Conferences/ Seminars conducted - 16
6. New Courses Developed by CDTE:
 - (I) Communication Course for PG Students: a Ten lectures Course an Effective Communication was conducted by CDTE. Two batches of PG Students 25 per batch took it.
 - (II) Com 200, a semester long Course on English Communication was designed by CDTE. CDTE also coordinated its teaching in 2012-2013 Ist Semesters. The Course has now been transferred to the institute.

Centre for Creative Writing and Publication

An evening of dramatic performance and discussion was organized on Wednesday, 13 February 2013, at 6:00 pm in the Outreach Auditorium. Ms. Laxmi Chandrashekar, an internationally acclaimed theatre artiste, performed her solo-play, "Just a Woman". Scripted by Ms. Chandrashekar herself, "Just a Woman" has been performed more than 150 times to major acclaim across cities in India and abroad. The play talks about women in a man's world, where the playwright has blended in the stories of seven women from mythology such as Gandhari, Sita, and Draupadi to the contemporary real-life characters such as Roop Kanwar and Bhanwari Devi. It is about how each of these women, irrespective of their status, fought the injustice meted out to them in their own way, be it child marriage, rape, dowry death, widowhood, sexual repression, lack of freedom, or loss of identity. The play ends with the story of Bhanwari Devi, with the narrator asking the audience, "If an illiterate woman can fight the injustice, why can't we" Ms. Chandrashekar held a discussion on the play and related gender issues with members of the audience after the performance.

Staff Training Unit

As per the prevailing practice, workshop/ training/ induction programme etc. are organized by the Administration Section. Administration Section after approval of the Competent Authority had conducted the following workshop/ training programme during the year 2012-2013.

Workshop on 'Contract Labour through Outsourcing'

The Institute organized a workshop on Contract Labour through Outsourcing on 21.04.2012 in conjunction with the ISTM, DoPT, Govt. of India. Shri S N Singh, Ex-official, ISTM was the guest faculty for the workshop. 47 staff members including officials of the Institute and 10 officials from various IITs attended the workshop.

Workshop on 'E-Procurement'

The Institute organized a workshop on E-Procurement on 14.07.2012 in conjunction with the ISTM, DoPT, Govt. of India. Shri K S Samarendra Nath, Joint Director, ISTM was the guest faculty for the workshop. 47 staff members including officials of the Institute and 03 officials from various IISERs and IIT attended the above said workshop.

Induction Programme

The Institute organized an Induction Programme for newcomers on 15 – 16 March 2013. 56 staff members attended the above said programme. The aforesaid Induction course has been designed to impart the knowledge of functioning of all Departments/ Sections/ Units of this Institute.

SC/ST and OBC Cell

The cell consists of Prof. B. Mazhari (Deptt. of Electrical Engineering), Liaison Officer (w.e.f. August 16, 2011) and Shri RR Dohare, Assistant Registrar, Recruitment Section, in addition to their normal duties. Prof. B. Mazhari is available on Phone No. 2597924 and Shri Dohare is available in Room No. 224, 2nd Floor, Faculty Building at the Institute on Phone No. 2597391.

Implementation of reservation orders:

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

Maintenance of rosters/ Percentage of reservation:

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

On the basis of 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) has considered and approved the proposal for grouping of staff for the purpose of reservation and separate grouping of technical and non-technical posts. The proposal was as follows – the posts under Group-A, B, C & D would be grouped separately for technical and non-technical posts. However, there would be a single

group under Group-D. Under this dispensation, there would be seven groups in all and as 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

The Modified Assured Career Progression Scheme (MACPS) is in operation at present.

Concessions/ Relaxations:

- (a) For Regular employees of IITs who are educationally qualified and otherwise eligible, 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;
- (b) SC/ST and PH candidates are fully exempted from payment of application and registration fees;
- (c) To and fro TA is being paid to the candidates of all categories out of Kanpur to attend the interview [for Group-A- AC-II rail fare (Rajdhani Exp. also) / Chair car in Shatabdi Exp., for Group-B- AC-III rail fare (Rajdhani Exp. also) / Chair car in Shatabdi Exp. and for Group-C-2nd class sleeper rail fare];
- (d) Experience requirement is relax able at the discretion of competent authority.

Employment notification etc.:

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

Advt. No.	Name of Post(s)	Pay Band with Grade Pay	No. of Vacancies				Total	Published in
			SC	ST	OBC	UR		
4/2012 [Internal]	Deputy Registrar	PB-3; GP: Rs.7600	-	-	01	01	02	Institute's Notice Board
5/2012	Deputy Registrar	PB-3; GP: Rs.7600	-	-	-	02	02	All Editions of Dainik Jagran (Nai Rahein), Times of India(Ascent), University News & Employment News
	Medical Officer	PB-3; GP: Rs.5400	01	-	01	02	04	
	Assistant Physical Education Officer	PB-3; GP: Rs.5400	-	-	01	-	01	

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6/2012	Registrar	PB-4; GP: Rs.10000	-	-	-	01	01	All Editions of Dainik Jagran (Nai Rahein), Times of India(Ascent), University News & Employment News
7/2012	Finance Officer	PB-4; GP: Rs.10000	-	-	-	01	01	All Editions of Dainik Jagran (Nai Rahein), Times of India(Ascent), University News & Employment News
8/2012	Assistant Executive Engineer	PB-3; GP: Rs.5400	-	-	01	-	01	All Editions of Dainik Jagran (Nai Rahein), Hindustan Times, University News & Employment News
	Assistant Engineers	PB-2; GP: Rs.4600	-	01	-	01	02	
	Junior Engineers	PB-2; GP: Rs.4200	-	01	02	01	04	
1/2013	Assistant Security Officer	PB-2; GP: Rs.4200	-	-	01	-	01	All Editions of Dainik Bhaskar, Hindustan Times
	Junior Superintendent		-	01	-	-	01	
	Jr. Technical Supdt.		-	-	-	01*	01*	
	Jr. Technical Supdt.		-	01	-	-	01	
	Jr. Technical Supdt.		-	01	01*	-	01+ 01*	
	Jr. Technical Supdt.		-	-	01	-	01	
	Jr. Technical Supdt.		-	02	-	-	02	
	Jr. Technical Supdt.		-	01	-	-	01	
	Assistant Coach	PB-1; GP: Rs.2000	01	-	01	-	02	
Junior Assistants	01		-	-	01+01*	02+01*		
2/2013	Safety Officer	PB-3; GP: Rs.5400	-	-	-	01	01	All Editions of Dainik Jagran (Nai Rahein), Times of India
	Medical Officers		01	-	02	-	03	
	Security Officer		-	-	01	-	01	
3/2013	Registrar	PB-4; GP:Rs.10000	-	-	-	01	01	All Editions of Dainik Jagran (Nai Rahein), Times of India(Ascent), University News & Employment News
Total			04	08	12+01*	12+02*	36+03*	* PH Candidates

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

Inclusion of SC/ST Member:

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

For Selection	<p>Total 23 Selection Committee meetings:</p> <p>03 S/C meeting, wherein SCT and OBC representatives included</p> <p>09 S/C meeting, wherein SC and OBC representative included</p> <p>02 S/C meeting, wherein ST and OBC representative included</p> <p>08 S/C meeting, wherein OBC representative included</p> <p>01 S/C meeting, wherein ST representative included</p>
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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 ordinary/registered/speed post or courier to ensure delivery.
2. Normally for interviews a minimum of three weeks' time and for appointments a minimum of one month's period of interval is being provided.

Reservation of Quarters:

1. The Institute has been allotting 1st in every ten qrs. to SC/ST employees, out of Type-1A, Type-1B Type-1 and Type-II Qrs. & 1st 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		GE N	Total
	As per Reservation	As per Seniority		
Type-IA	-	-	-	-
Type-1B	-	02	02	04
Type-I	-	03	38	41
Type-II	-	02	38	40
Type-III	-	-	34	34
Type-IV	-	01	16	17
Faculty Apartment	-	-	47	47
Type - V	No reservation	03	03	

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

Complaints/ Grievances:

No letter received for redressal of grievance of a SC/ST/OBC employee under the period of report.

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	-	-	-	22	22
Retirement	-	-	-	09	09
Deaths	-	-	-	-	-
Resignation	-	-	-	10	10
Resignation (Technical)	-	-	-	-	-
Termination	-	-	-	-	-
V/Retirement	-	-	-	03	03
Compulsory Retirement	-	-	-	-	-
Dismissal	-	-	-	-	-
Term Over	-	-	-	-	-
Total	-	-	-	44	44

B: Non-Academic:

Area(s)	SC	ST	OBC	GEN	TOTAL
Appointments	08	03	19	33	63
Retirement	07	-	-	32	39
Deaths	-	-	-	02	02
Resignation	-	01	02	01	04
V/Retirement	-	-	-	-	-
C/Retirement	-	-	-	-	-

SVRS	-	-	-	-	-
Deputationists repatriated	-	-	01	-	01
Termination	-	-	-	-	-
Dismissal	-	-	-	-	-
End of contract	-	-	-	-	-
On Long Leave	01	-	-	03	04
Grand Total	16	04	22	71	113

Financial up-gradation under MACPS during 2012-2013

Sl. No.	Grade Pay		SC	ST	OBC	GEN	TOTAL
	From	To					
1	7600	8700	01	-	-	01	02
2	6600	7600	01	-	-	-	01
3	5400	6600	01	-	-	-	01
4	4800	5400	01	-	-	01	02
5	4600	4800	02	-	-	01	03
6	4200	4600	04	-	01	03	08
7	2800	4200	-	02	01	-	03
8	2400	2800	01	-	-	01	02
9	2000	2400	-	-	02	01	03
10	1900	2000	02	-	-	12	14
11	1800	1900	-	-	02	03	05
Total			13	02	06	23	44

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

A. Existing Strength of Academic Staff (Teaching/Non-teaching) as on 01.04.2013:

Recruited through DOFA Office

Academic	SC	ST	OBC	GEN	Total
Teaching	02	-	-	346	348
Non-Teaching	02	-	01	27	30
Total	04	-	01	373	378

B. Existing Strength of Non-Academic Staff as on 01.04.2013

Recruited through Recruitment Section

Group	SC		ST		OBC		GEN	Total
A	06	17.14	01	2.85	04	11.42	24	35
B	57	21.11	10	3.70	30	11.11	173	270
C	36	20.45	02	1.13	39	22.15	99	176
D	28	28.28	0	0.00	09	9.09	62	99
TOTAL	127	21.89	13	2.24	82	14.13	358	580+3*

* Cleaners, not counted towards reservation

The detailed summary of existing strength of non-academic staff
as on 01.04.2013 and representation of SC/ST/OBC

Group/ Stream/ Mode	SC		ST		OBC		GEN	TOTAL
ANR	02	11.76	01	5.88	02	11.76	12	17
ANU	02	22.22	0	0.00	01	11.11	06	09
ATR	01	14.28	0	0.00	01	14.28	05	07
ATU	01	50.00	0	0.00	0	0.00	01	02
A	06	17.14	01	2.85	04	11.42	24	35
BNR	02	10.52	02	10.52	06	84.21	09	19
BNU	19	23.75	02	2.50	01	1.25	58	80
BTR	11	16.41	04	5.97	15	22.38	37	67
BTU	25	24.03	02	1.92	08	7.69	69	104
B	57	21.11	10	3.70	30	11.11	173	270
CNR	08	15.68	0	0.00	13	25.49	30	51
CNU	07	25.92	0	0.00	04	14.81	16	27
CTR	15	23.07	01	1.53	16	24.6	33	65
CTU	06	18.18	01	3.03	06	18.18	20	33
C	36	20.45	02	1.13	39	22.15	98	176
DR	03	25.00	0	0.00	06	50.00	03	12
DU	25	28.73	0	0.00	03	3.44	59	87
D	28	28.28	0	0.00	09	9.09	62	99
CLEANERS	3*		0		0		0	3*
TOTAL	127	21.89	13	2.24	82	14.13	358	580 + 03*

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

C. Existing Strength of Account-II Employees as on 01.04.2013:

Recruited Through DORD Office

Group	SC	ST	OBC	GEN	Total
B	01	-	01	19	21
C	-	-	-	-	-
D	02	01	03	05	11
Total	03	01	04	24	32

D. Existing Strength of Mess Employees as on 01.04.2013:

Recruited through COW Office

Group	SC	ST	OBC	GEN	Total
B	-	-	01	01	02
C	-	-	01	02	03
D	13	-	14	34	61
Total	13	-	16	37	66

The data as available for showing the representation of SCs/ STs/ OBCs/ PH related to the new students admitted in the year 2012-13 in various programmes/ disciplines at the Institute is given below:

Programmes	Registration Data in the 2012-13 - 1 st Semester				
	SC	ST	OBC	GEN	Total
B.Tech					
AE	06	04	13	24	47
BSBE	06	03	11	21	41
ChE	11	06	21	39	77
CE	16	08	28	54	106
CSE	14	07	28	44	93
EE	20	09	35	67	131
ME	15	06	29	49	99
MSE	14	07	24	48	93
TOTAL	102	50	189	346	687

M.Sc. (5 yrs)/ BS (4 Yrs)	SC	ST	OBC	GEN	Total
Chemistry	04	02	05	14	25
Economics	06	05	10	20	41

Mathematics & Scientific Comp	06	06	13	24	49
Physics	03	01	08	14	26
Total	19	14	36	72	141

M.Sc.-PhD (Dual Degree)	SC	ST	OBC	GEN	Total
Physics	01	01	04	07	13
Total	01	01	04	07	13

M.Sc. (2 yrs)	SC	ST	OBC	GEN	Total
Chemistry	06	-	11	21	38
Mathematics	06	03	13	17	39
Statistics	03	-	02	10	15
Physics	05	-	09	09	23
Total	20	03	35	57	115

Registration Data of M. Tech. / MBA // VLFM/ M.Des. Students of 2012-13- 1st Semester

Dept.	SC	ST	OBC	GEN	Total
AE	10	02	19	38	69
CHE	07	08	19	18	52
CE	11	02	14	62	89
EE	14	01	59	129	203
ME	16	-	31	68	115
MSE	12	05	08	15	40
CSE	04	-	10	78	92
MSP	02	-	06	16	24
IME	03	-	06	21	30
MBA	18	01	24	58	101
VLFM	-	-	-	33	33
NET	-	-	01	16	17
LT	-	-	02	17	19
EEM	05	01	08	26	40
BSBE	02	-	04	12	18
DES	09	02	04	17	32
TOTAL	113	22	215	624	974

Registration Data of Ph D students of 2012-13- Ist Semester

Dept.	SC	ST	OBC	GEN	Total
AE	05	-	12	20	37
CHE	15	-	17	49	81
CE	03	-	11	60	74
EE	04	-	19	103	126
ME	12	01	20	77	110
MSE	08	01	08	51	68
CHM	11	02	36	161	210
MATH & STAT	04	-	07	37	48
PHY	09	03	18	42	72
PHY M.Sc.-Ph.D.(Dual)	02	-	04	28	34
HSS	02	01	06	35	44
CSE	01	-	-	25	26
MSP	01	-	04	18	23
IME	03	-	-	20	23
NET	-	-	02	07	09
LTP	-	-	01	-	01
BSBE	05	-	07	60	72
DES	-	-	-	02	02
TOTAL	85	08	172	795	1060

**Registration Data of PG Students in 2012-13- Ist Semester
PhD**

Dept.	SC	ST	OBC	GEN	Total
AE	-	-	08	-	08
CHE	01	-	06	02	09
CE	-	-	06	07	13
EE	01	-	03	17	21
ME	06	-	08	09	23
MSE	02	-	05	07	14
CHM	-	-	09	13	22
MATH & STAT	-	-	-	05	05
PHY	-	01	03	03	07
PHY M.Sc.-Ph.D.(Dual)	-	-	03	04	07
HSS	-	-	03	04	07
CSE	-	-	-	-	-
MS	-	-	02	02	04
IME	02	-	-	03	05
NET	-	-	-	01	01
LTP	-	-	01	-	01

BSBE	-	-	01	03	04
DES	-	-	-	02	02
TOTAL	12	01	58	82	153

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 its own office which is equipped with three computers with bilingual software for smooth and efficient working. It is managed by Deputy Registrar & Liaison Officer (Hindi), two Junior Technical Superintendent (Translation) and one Dy. Project Manager. The Rajbhasha Prakoshtha doing its all possible efforts in creating awareness of Hindi among the Institute employees. Sansthan Rajbhasha Karyanvayan Samiti which was constituted by the Director, monitors and provides guidelines to the Rajbhasha Prakoshtha in its planning performance and activities. The said Committee holds meetings for promoting the atmosphere of Rajbhasha in the Institute throughout the year. In view of disseminate Rajbhasha Hindi in the Institute, Rajbhasha Prakoshtha performs various activities like organization of Hindi Diwas, Hindi fortnight, Hindi workshops/seminars/Kavi Sammelan, etc.

Quarterly news letter SAJAG and half yearly Hindi Magazine "Antas" are published in Hindi. The press release and invitation cards of the Institute Programs are made & issued bilingually. All periodical reports are sent to the Ministry and the Nagar Rajbhasha Karyanvayan Samiti timely.

In compliance with the directives of Official Language Department, Ministry for Home Affairs, Hindi fortnight was observed by conducting various competitions in the month of September 2012 along with grand Hindi Diwas samaroh held on 25th September 2012, in which winners of the various competitions were honored by presenting Hindi literary/grammatical books. On the occasion of Hindi Diwas samaroh, fifteen employees of the Institute also honored who are working in Official Language (Hindi) in their Department/Section.

Rajbhasha Prakoshtha is dedicated for the upliftment of Hindi in the Institute. Prakoshtha is always ready to co-ordinate with each and every Department/Section of the Institute in implementing the orders and directives received time to time from Department of Official Language, Ministry for Home Affairs and Ministry for Human Resources & Development, Govt. of India.

Media Technology Centre

The Media Technology Centre is an attempt to encourage and cultivate a sense of appreciation and explores the skills involved in the new media for creative expressions. Centre 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.

NPTEL Phase II

One of the major ongoing projects of the centre involves faculty across the Institute in production of quality video/web 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 auspices of National Program on Technology Enhanced Learning (NPTEL). In the long term, Media Technology Centre aims to create a digital portal as an archive of supportive materials to serve educational purposes and research references in the field of Engineering, Science and Technology, Humanities and Management studies as well as in the relevant areas of National Heritage and Culture. The relevant information / knowledge can be disseminated using this facility and utilize for classroom teaching, student references and research aid. NPTEL has proposed to provide open course materials for engineering and science students and teachers freely through the internet. Out of 600 courses in phase-II, 165 courses are being developed by IIT Kanpur. Of these 165, 100 courses are already complete. NPTEL courses are taken to the teachers through workshops that are organised by the Media Technology Centre.

Institute Website

A dedicated web team with seven members in the Media Technology Centre is developing a new website of the Institute with better features in the graphic interface and usability matters. The aim of the project was to appropriately organize the information and work towards creating a good visual branding for the Institute through its website.

90.4 FM Community Radio Station

It has been a sincere effort of IIT K Community Radio, since its inception in September 2010, to unite the community within the campus, with the communities outside. This is an initiative by IIT Kanpur to focus on social and educational issues for the development of rural and semi urban areas. As a non-profit, non-commercial setup the focus of IIT community radio is to engage the campus community along with the students, to educate the rural areas by generating interest through our programs on

agriculture, health and hygiene, education and counseling and providing information on courses run in the neighbouring areas, women related issues, moral values through story narration and giving a platform to local people for personality development.

As far as possible we try to engage the campus community, students and faculty members in programme production and reach out to them through mails and regular radio announcements. The programs are informative, entertaining and interesting to the community within and outside the campus.

Beginning of the year 2012, saw the launch of our website, internet radio and an online archive of our recorded data. This has immensely helped us in gaining popularity, increasing listenership, bringing in more transparency and effectively engaging the community.

As a large agricultural community outside expressed a desire to directly interact with the experts, we introduced a live phone-in facility in October 2012, where experts from the field of health, counseling and agriculture, answer queries and problems of the people.

Besides this through a DST project titled 'Radio Mathematics' we are developing a series of 90 episodes on mathematics for students of classes IX to XII.

A work shop of 15 days was organized by the students Radio club IIT Kanpur and the Radio Station, where lectures were given and students were taught content building and radio presentation, by eminent radio personalities.

Design Programme and HSS

Student of the Communication Design in the Design Program have an academic relevance to the resources of the centre. Students continue to exhibit their ample creative talents by producing social ad campaigns, documentary films, radio jingles and various web applications exploiting the varied domains of media arts. Besides, there are undergraduate students of HSS Level 1 and 2 courses who utilize the resources to work on the video assignments.

Revamping of the Production Studios and Editing facilities:

We have adopted a multiple-camera mode of production for shooting our programs. It is typically a three camera set up employed on the set that simultaneously record a scene. Generally, the two outer cameras shoot close shots on the set at any given time, while the central camera shoots a wider master shot to capture the overall action. In this way, multiple shots are obtained in a single take without having to start and stop the action. The live audio and video feed from the cameras of the production floor are send to the production control room that ensures mixing and switching of the multiple footage at the original, highest-quality through the Video Switchers and Audio Mixers

and recorded on HD Recorders. The digitized video and audio data is then imported to hard disks from the digital tapes through these recorders. Once on disk they are edited on a computer using wide range of software. Compared to the linear method of tape-to-tape editing, the non-linear editing offers a flexibility of film editing, with random access on the source material and easy project organization. The non-linear editing platforms provide numerous options and effect for assembling video clips, audio tracks, graphics and other source material into a presentable package. Once this process is over the edit footage is recorded back to tape or disk and delivered to the clients. The recordings of video lectures created under the auspicious of NPTEL are now being converted into a streaming format for the benefit of students of the institute and the process of conversion shall be over in the next three months.

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

Institute Archives Unit

Following a formal approval for setting up archives for the institute in the Boards meeting held on August 25, 2007, an Archives Unit was set up vide Office Order no. DIR/IITK/2012/27 dated March 26, 2012. The unit is presently set up in room nos. 330, 331, 332 on the third floor of the Faculty Building. A committee has been set up vide Office Order no. DIR/IITK/2012/24 dated March 20, 2012. It will provide overall guidance and support with policy matters of the unit. Members of the committee are as follows:

Prof S C Srivastava, Dy Director	Chairman
Prof A K Mittal, Dept of IME	Advisor, Member
Prof D Sanghi, DOAA	Member
Dr V D Srivastava, Librarian	Member
Dr R K Sachan, Actg. Registrar	Member

Dr. Neelam Prasad, Assistant Librarian, is designated Officer-in-charge of the unit. She will be responsible for day-to-day functioning of the unit. The officer-in-charge and other staff members of the unit will reports to the advisor for functional and administrative purposes. An announcement on the Archives Unit, detailing the purpose and functions of the unit, committee members and contact person, is posted on the IIT Kanpur website.

Work of collecting material started with personal files from Dean of Faculty (DOFA) Affairs' Office. Some papers, photos, CDs and files were transferred from the History project to the unit.

A meeting of the Archives Committee was held on Jan 07, 2013 where decision was taken regarding preservation of following documents from the files received from DOFA office: (i) Initial bio-date (ii) Appointment letter (iii) Subsequent promotions (iv) Major awards.

The unit has initiated the process of preserving the requisite documents along with arranging other materials received from the History project. The unit has also procured an overhead scanner to requisite documents.

Finance

The Ministry of Human Resources & Development (MHRD) released Rs. 16965.00 lakh as Non-Plan Grant and Rs. 16380.00 lakh as Normal Plan Grant in the financial year 2012-2013.

NON-PLAN

Total receipts under Non-Plan during the financial year 2012-2013 from Ministry of Human Resources & Development, Government of India were Rs. 16965.00 lakh. The Internal Receipts of Institute were Rs. 4130.65 lakh. Balance of Rs. 1323.36 lakh towards Pension and Pensionary Benefits will be utilized in FY 2013-2014 for the same purpose.

Total Non Plan expenditure during the financial year 2012-2013 therefore comes out to Rs. 19772.29 lakh.

NORMAL PLAN

A total receipts under Normal Plan during the financial year 2012-2013 were Rs. 16892.82 lakh, out of which Rs. 16380.00 lakh was received under Plan from the MHRD, Government of India, and Rs. 512.82 lakh were Internal Receipts.

Total expenditure under Normal Plan was Rs. 16892.82 lakh. This expenditure included Rs. 7610.80 lakh on Building & Works and Central AC Facility; Rs. 5730.19 lakh on Non-Consumable purchases including Equipment, Furniture & Fixtures etc.; Rs. 551.83 lakh on Library Books, and Periodicals & Journals and Rs. 3000.00 lakh on Recurring Expenditure including expenditure on Scholarships and Periodicals & Journals.

INCOME AND EXPENDITURE FOR THE YEAR 2012-2013 UNDER MAJOR HEADS

Sl. No.	Particulars	Income (Rs. in lakh)	Expenditure (Rs. in lakh)
1	Non- Plan	19772.29	19772.29
2	Normal Plan	16892.82	16892.82
3	JEE	337.42	188.97 (Non Plan)*
4	GATE	736.14	287.78 (Non Plan)* 0.92 (Plan)
5	JAM	22.79	38.37 (Non Plan)*
6	Research & Development	1921.17	976.32 (Non Plan)* 42.26 (Plan)

7	Deans Capital Fund	97.70	26.42 (Non Plan)* 18.45 (Plan)
8	Hall Management	1161.23	1196.46 (Non Plan)*
9	Fund Hall Management	96.61	122.67 (Non Plan)*
10	Pension Hall Management	222.41	208.94 (Non Plan)*
11	Student Gymkhana	53.68	57.52 (Non Plan)*
12	Visitors Hostel	130.95	119.08 (Non Plan)*
13	Endowment Fund	1832.60	884.66 (Non Plan)

Endowment Fund Report

The year 2012-13 has witnessed significant growth in financial resource of the institute. The total Grant-in-aid received during the financial year from MHRD, Govt. of India, under non-plan was 169.65 crore and under Plan 163.80 crore.

The year was good for fund raising as well. The Institute received 4.54 crores from 701 donations made by 538 donors (334 donors from India and 204 donors from abroad). A total of 310 donors (169 donors from India and 141 donors from abroad) contributed 54.94 lakhs under the Annual Gift Programme. Donations received under AGP have been utilized for providing travel support to the students for attending international conferences, cash award for publication of their research papers in reputed journals, support to community services and other activities encouraging excellence in the Institute.

Class of 1988 has contributed Rs 1,11,20,790.00 (Rs. one crore eleven lakhs twenty thousand and seven hundred ninety) during their Silver Jubilee Reunion towards naming of squash court, Community outreach activities, Noida campus, alumni association, merit cum means scholarship, mess workers' pension fund, tinkering lab, various student activities and center for development of soft skills.

Mr. Anil Kumar Singh (BT/AE/1970) has donated for Kunwar Devendra Pratap Singh & Kunwarani Krishna Kumari Memorial Award and Mr. Puneet Prakash (MSC5/MTH/1992) has donated for Shailja Srivastava Award.

Several donors have instituted new scholarships during the financial year 2012-13. Arpita Mahila Mandal, Azad Nagar, Kanpur has instituted two scholarships named as “ Arpita Mahila Mandal Scholarship” to provide financial assistance to two poorest girl students during the full degree program. Mr. Rangarajan Vellamore R, BTech from Mechanical Engineering (1990) has instituted Sri R & R Chari Scholarship. Mr. Anupam Saronwala, BTech from Electrical Engineering (1980) has instituted Dr. K.C. Saronwala Memorial Scholarship. Mr. Rajeev Chopra (BTech Metallurgy 1985) and Sandeep Chopra (BTech, Electrical 1993) has donated to institute four annual scholarships namely Ram Parkash Chopra Memorial Scholarship. Mr. Satya P. Chauhan (B.Tech/ChE/1968) has instituted Shri Ranbir and Shrimati Mahadevi Chauhan Scholarship. Mr. Santosh Mehra (BT/EE/1966) & Mrs. Anita Mehra, donors of "Anita and Santosh Mehra Scholarship" instituted in 2010 have instituted four more scholarships and all the four scholarships will be named under "Anita and Santosh Mehra Scholarship".

Mrs. Asha Jadeja wife of late Rajeev Motwani (BT/CSE/1983) has donated US\$ 181,868 towards the Rajeev Motwani Building for CSE department. Mrs. Jadeja has committed to donate 50% cost of Rajeev Motwani building which is presently under construction. Mr. Jagjeet Singh Bindra has donated US\$ 20,000 towards Mr. & Mrs. Gian Singh Bindra Chair. Mr. Kamlesh Dwivedi has donated US\$ 40,000 towards Pandit Girish Ranjan & Sushama Rani Pathak Chair.

SURGE 2012 program was conducted during summer 2012 which saw student participation of 95 members from 122 Institutes, and faculty participation of 72 members from IIT Kanpur as mentors. The selection of student participants was very competitive as 2600 applications were received from various institutions in the country, which gives a clear indication of its increasing popularity.

The Institute encourages research by providing travel support to students and rewarding students for publishing research papers in high quality journals. Institute provided travel support of Rs 68 lakh to 155 students for attending international conferences, and cash awards of Rs 18.20 Lakh to 147 students for publication of their research papers in reputed ISI Web Journals during the financial year 2012-13.

Rs. 1.59 crores/- from endowment fund a/c was reimbursed for New Faculty Fellowships during F.Y. 2012-2013.

The institute is working on an ambitious plan for raising substantial resources to increase the research and development activities on campus and hopes to launch new initiatives in the year 2013-14.

The following expenditure was made from Endowment Fund Account towards support of major activities of the Institute during the FY2012-13.

S.No.	Project Title	Total Amount (in lakhs)
1-	Development & Operational activities in this Institute	337.14
2-	Awards	6.65
3-	Scholarships	2.28
4-	Faculty Chairs	50.13
5-	Young Faculty Research Fellowship	3.10
6-	N Narayana Murthy Foundation	164.12
7-	Poonam & Prabhu Goel Foundation	21.03
8-	Joy & Gill Endowment Foundation	92.55
9-	Ranjit Singh Foundation	1.80
10-	Distinguished Lecture Series	0.84
11-	Batch Funds	29.02
12-	Departmental Fund	14.02
13-	Student Activities	66.03
14-	Community Services	11.26

Facilities to Students

1. 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, as a special case, are permitted to stay with their parents on the campus.

The Institute has nine Halls of Residence for boys, namely Hall-1 to Hall-5 & Hall-7, Hall-10, Hall-11 is under construction and two for girls (GH) and a multistoried tower for Girls is also under construction with total capacities of 4000 and 484 for boys and girls respectively. In addition, there is accommodation for 72 students in single bedroom apartments (SBRA).

The Halls have single and double-seated rooms. Presently, most of the senior undergraduate and all post graduate students are given single-seated rooms, while most of first and second year and some third year B. Tech. and M. Sc., (Integrated) students and Ist year M. Sc. (2-Yrs.) are living in double seated rooms. Each Hall has a mess of which every hall resident is a member. The Halls of Residence also have a well subscribed reading room, TV room, TT rooms, PC room, badminton and volley ball

courts, canteen, library (with the books on general topics) and several hobby clubs. The affairs of these amenities in each Hall are managed by (i) the respective committee of students for the amenities and (ii) a central Hall Executive Committee (HEC) under the overall guidance and supervision of three wardens (two for Hall-VI). The overall management of the Halls of residence is through the central Hall Management Council (HMC). The Council of Wardens (COW) looks after the affairs of mess workers.

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

Single Bed Room Apartments (SBRAs)

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

2. FINANCIAL ASSISTANCE TO STUDENTS

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

Loan	Short Term	Long Term
Short Term/Long Term	52	4

Student's Benefit Fund (SBF) also provides scholarships of the value of Rs. 1500/- per month to the needy students. Total 59 students were provided scholarships from the SBF during the year 2012-13.

3. SCHOLARSHIPS FOR UNDERGRADUATE STUDENTS

Merit-cum-Means scholarships of the value of Rs. 1000/- per month with tuition fee waiver are awarded per semester to students up to 25% of the total strength enrolled in each of the batches of the B. Tech., M. Sc. (Integrated), B. Tech-M. Tech. Dual degree and M. Sc. (2-year) programmes provided that the incomes of their parents do not exceed Rs. 4,50,000.00 per annum. SC/ST students not in receipt of scholarships from any other

source including the State Governments or Directorate of Harijan and Social Welfare are eligible for the Free Basic Mess (scholarships).

In addition, several students of the B. Tech. /M. Sc. (Integrated) and M. Sc. (2-year) programmes are in receipt of the financial assistance through scholarships, stipends and grants from Central and State Governments, Directorate of Education and other organizations. Table-I shows various scholarships awarded to undergraduate students during 2012-13.

TABLE-I (A): Scholarships for B. Tech. / B. Tech.-M. Tech. (Dual degree)/ M. Sc. (Integrated) M. Sc. (02Year) & M.Sc. - Ph.D. (Dual Degree) for the year 2012-13

Undergraduate Scholarships	Year				
	I	II	III	IV	V
MCM @ Rs. 1000/- p.m. with Freeship	187	148	158	125	8
Freeship		30	7	8	1
Free Basic mess plus Pocket Allowance @ Rs.250/- p.m.	97	86	70	58	14
Ram Prakash Chopra Scholarship	---	---	1	---	---
R and R. Chari Scholarship	---	---	1	---	---
Indra Dhanush Award	---	1	---	---	---
BGM Kumar Foundation	---	---	1	---	---
Bhuwan and Indira Joshi	1	---	---	---	---
Bishambar Gupta & Anguri Gupta	---	---	1	---	---
Balasubramaniam & Visalakshi	--	---	1	---	---
Biswanath Jha Memorial	1	---	---	---	---
Dr. Gurcharan Singh Kainth	---	1	1	1	---
Guru Ji Ghasit Ram	1	---	1	---	---
Harish and Sushila Chandra	1	---	---	---	---
Vinay Kapoor Memorial Scholarhsip	1	---	---	---	---
Khem Chandra Yadav	1	---	1	---	---
Sudarshan Kasturia Memorial Scholarship	1	---	---	---	---
Kunta Jha	1	---	---	---	---
Mahesh & Shashi Chandra	1	---	---	---	---
Prof. Girdhar Gopal Shukla Scholarship	---	1	---	---	---
Neta Ji Balwan Singh	1	---	---	1	---
Nita Goyal and Ashish Gupta	1	1	1	1	---
Dr. K. C. Saronwala Scholarship	1	---	---	---	---
Padma Kapoor Memorial Scholarship	1	---	---	---	---
Prof. Netarlal Kapur	---	---	1	---	---

Steel Scholarship	---	---	---	2	---
Sarpanch Salik Ram Katiyar	1	---	1	---	---
Shiv Kumari Shukla	---	1	---	---	---
Shiv Prakash and Dayawanti Sharma	1	---	---	---	---
Shri D.P. Shukla	1	---	---	---	---
Smt. Jagat Kaur Memorial	1	---	---	---	---
Sri Jamuna Prasad and Basanti Gupta	1	---	---	---	---
Sri Temasek@iitk	1	---	---	---	---
Tapan Kumar and Swapna Bandhyopadgyay	1	---	---	---	---
Yasodha Yadav	1	---	1	---	---
Yogendra Nath and Sushma Gupta	1	---	---	---	---
Shri Shankar Lal Shrimati Prema Debi	1	---	---	---	---
Tarun Sondhi Memorial Scholarship	1	---	---	---	---
Kemchand Memorial Scholarship	---	1	---	---	---
Dr. M. Anantaswamy and Mrs. Vijayalakshmi Rau	---	1	---	---	---
Shri Bihari Lal Srivastava and smt. Nalini Srivastava Memorial Scholarship	---	---	---	1	---
Pushpa Garg	1	---	---	---	---
Aviation Development Award	---	---	12	---	---
Dr. D.R. Bhagat Scholarship	---	---	1	---	---
Anil and Reshma Nigam Scholarship	---	---	1	---	---
Pratima Ghosh Memorial	1	---	---	---	---
Ramesh Chandra Yadav	---	1	1	---	---
ACC Fellowship	2	---	---	---	---
Shanti & Ram Kishore sahai	---	1	---	---	---
Smt. Padmavathy & Prof. R. Sankar	---	1	---	---	---

Scholarships from outside agencies

TABLE-I (B): Scholarships for B. Tech. / B. Tech.-M. Tech. (Dual degree)/ M. Sc. (Integrated) M. Sc. (02Year) & M.Sc.-Ph.D. (Dual Degree) for the year 2012-13

Undergraduate Scholarships	Year				
	I	II	III	IV	V
Post Matric Scholarship	---	---	---	1	---
NTS Scholarships	---	4	2	6	1
Inspire in 2012-13 Ist Semester	77	45	48	39	26
Inspire in 2012-13 IInd Semester	51	40	54	41	32
TODAI Scholarship	02	02	02	02	---
O.P. Jindal Scholarship	---	01	---	02	---
State Scholarship	---	2	3	2	1

NBHM	1	2	1	---	---
Departmental Scholarship	---	1	---	---	1
MCM Minorities	1	---	4	---	---
PG Indira Gandhi Scholarship for Single Girl Child	---	---	2	---	---

All the SC/ST category students get tuition fee waiver irrespective of their parents' income. Concession of free messing (basic menu only) plus pocket allowance of Rs. 250/- per month is provided to SC/ST category students whose parents' income do not exceed Rs. 4,50,000/- per annum, in the previous financial year.

All the SC/ST category students get tuition fee waiver irrespective of their parents' income. Concession of free messing (basic menu only) plus pocket allowance of Rs. 250/- per month is provided to SC/ST category students whose parents' income do not exceed Rs. 4,50,000/- per annum, in the previous financial year.

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 2012-13. In addition, top 7% students in order of merit in each year are given a Certificate of Merit and a cash prize of Rs. 400/- for UG and Rs. 600/- for PG students.

TABLE-III: AWARDS AND PRIZES (2012-13)

S. No.	Awards and Prizes	B. Tech./ M. Sc. (Intg.)/Dual degree	M. Sc. (2-Year) / Dual degree
1	President Gold Medal	1	---
2	Directors Gold Medal	1	---
3	General Proficiency Medal	19	5
4	Proficiency Medal	27	2
5	Cadence Gold Medal	01 (M.Tech)	---
6	Cadence Silver Medal	1	---
7	Prof. Adidam S. R. Sai Memorial Gold Medal	01 (M.Tech.)	---
8	Prof. Adidam Sri Ranga Sai Memorial Medal	1	---
9	Ratan Swarup Memorial Prize	1	---
10	Banco Foundation Prize (ME)	1	---
11	Dr. Shanker Dayal Sharma Medal	01 (M.Tech.)	---
12	Prof. Vijay Mahajan Gold Medal	01 (MBA)	---
13	Batra Gold Medal	1	---

14	IEEE/Pedes'96 Award	01 (M.Tech.)	---
15	Bhagwani Devi Maheshwari Gold Medal	1	---
16	Prof. Bal Deva Upadhayaya Memorial Gold Medal	01 (M.Tech.)	---
17	Mars G. Fontana Prize (MME)	1	---
18	Sangeeta Pradhan Memorial Medal	1	---
19	Best Software Award	1	---
20	Binay Kumar Sinha Award	3	---
21	Kunwar Devendra Pratap Singh & Kunwarani Krishna Kumari Memorial Award	1	---
22	Dr. S. D. Bokil Memorial Medal	01 (M.Tech.)	
23	Mehta M.Tech. Gold Medal	02 (M.Tech.)	
24	IITK Excellance Award for Leadership	4	---
25	IITK Excellance Award for Art & Cultural	1	---
26	IITK Excellance Award in Community Services	2	---
27	Suman Gupta Gold Medal	1	---
28	Bogineni Chenchu Rama Naidu Gold Medal	01 (M.Tech.)	---
29	S. N. Mittal Gold Medal	01 (M.Tech.)	---
30	Gopal Das Bhandari Memorial Distinguished Teacher Award	01 (Faculty)	---
31	Notional Prizes (UG)	201	10
32	Notional Prizes (PG)	66	
33	N. Balakrishnan Award	---	1
34	Prof. J. N. Kapur Prizes	1	1
35	Smt. P. K. Subbulakshmi Memorial Award	01 (M.Tech.)	---
36	Gargi, Kritika & Maitreyi Awards	4	---
37	Sridhar Memorial Prize (EE)	1	---
38	Ajai Agarwal Memorial Prize	2	---
39	Dr. Sangeeta Goel Memorial Award	1	---
40	O. P. Bajaj Memorial Award	1	---
41	Amit Saxena Memorial Award	1	---
42	Dr. R. C. Srivastava Memorial Scholarship	---	1
43	Jayesh Memorial Award	3	---
44	Dr. V. Rajaraman Scholarship	2	---

POSTGRADUATE STUDENTS

The amount of teaching/research assistantship or fellowship for M. Tech. students is Rs. 8000/- per month while that for Ph. D. students in engineering disciplines is (a) Rs. 18000/- for first two years and (b) Rs. 20,000/- for subsequent years. The amount of

assistantship or fellowship for Ph. D. students in Sciences and Humanities & Social Science is (a) Rs. 16000/- per month for the first two years of their programmes and (b) Rs. 18000/-per month for subsequent years.

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

4. SPECIAL ASSISTANCE TO SC/ST& OBC 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), 7.5% for the Scheduled Tribes (ST) students & 18% seats are reserve for OBC (for non-creamy layer). A separate merit list is drawn for those OBC & 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 criteria.

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

All the SC/ST category students get tuition fee waiver irrespective of their parent's income. Concession of free messing (basic menu only) plus pocket allowance of Rs. 250/- per month and room rent exemption are admissible to these SC/ST category students whose parents income does not exceed Rs. 4,50,000/- per annum, in the previous financial year.

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

5. ACTIVITIES OF STUDENTS' GYMKHANA

As mentioned above, academic activities are only one facet of student's life at IIT Kanpur. Our students actively participate in various extra and co-curricular activities focused towards the holistic development of their mind and body. The year 2012-2013 also saw a very active calendar in the form of various games, cultural events, films and

media and science and technology. The students are also involved in various activities towards the development of society and social well being

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

The year became a bench mark for the future generation as it celebrated the Golden Jubilee of students' gymklhana. With the pioneering event having Ex- President of India, Dr. A P J Abdul Kalam as the guest of honour, the student community was thrilled for the upcoming days. With the view of providing better infrastructure in a sustained and wise manner of capital usage, the whole year was dedicated to event/activities/developments which will provide a boost to the upcoming years and set new trends. With the purchase of Electronics voting machines, cricket ball throwing machine, projectors for auditorium and many more the aim has been nicely achieved. A plethora of workshops and new forms of arts and skills were imparted like horse riding, archery, mime and health happiness. First even duathalon of IIT Kanpur also became a part of the golden jubilee year. The infrastructural development is clearly visible in the SAC area.

The year saw the development of the new student activity centre which provides the basic infrastructure for all the activities of the students. It was also positive to see new food avenues like food court in new SAC and CCD lounge in academic area.

A variety of activities are pursued by various clubs coming under the broad ambit of the councils of the Gymkhana.

Prayas, where students teach children coming from socially disadvantaged and economically deprived backgrounds, organized various health camps for the benefit of students and also provided study kits for them. Vivekanand samiti carried its name to even greater heights with the celebration of 150th year anniversary of swamy vivekanad. The environmental inclination shown by students was clearly visible by event like celebration of earth day and creation of a symbolic structure of solar tree. Students took the initiative of helping the society by having a cell dedicated towards conducting blood donation and making a network for providing immediate help to those in need of blood.

The multifaceted culture of IIT Kanpur has blossomed over the years and the exuberant participation, volunteerism, outstanding creativity and progressively constructive actions of students has resulted in new benchmarks of excellence. We have seen improvement both in number of participants and quality of performance in various events organized last year starting with Fresher's Night, Impressions, Dance Extravaganza, Dramatics Eve, Musical Extravaganza, regular activities of Fine Arts Club, Quiz Club and Literary Society. The year culminated with a series of marvellous displays in the successfully organized Galaxy, the inter hall cultural competition. The students also continued the tradition of bring laurels in prestigious national level inter-college cultural competitions like Antaragni, Rendezvous, Mood Indigo, Nihilanth and Desh Raag. We are also in the process of completely soundproofing the music room and getting a recording studio of our own.

Films & Media Council (FMC) aims to provide high quality entertainment to the students through various extra-curricular activities throughout the year such as photography, videography, print and video journalism, etc. A film festival was organized as a part of Gymkhana Golden Jubilee celebrations in which famous actors and directors like Sudhir Mishra, Atul Tiwari and Unni Vijayan were invited to share their experiences and provide insights in the field of film making. Many workshops were conducted throughout the year covering almost every dimension under Films and Media council. Film making and documentation workshop by Mr. Nitin Chandra, Radio Jockeying workshop by six RJs from Radio Mirchi 98.3 FM to impart communication skills, voice modulation, script writing etc. to campus community, photography workshop by Mr. Bobby Roy (famous automobile photographer), animation workshop by MAAC institute which help students generate 3D models of various buildings of our campus are some examples of learning imparted to the students.

Since its inception Science and Technolgy Council, IIT Kanpur has been striving towards providing the platform to encourage the future scientists, engineers and techno-entrepreneurs of this nation. Today, the council has attained a maturity where it can accomplish things never imagined before-Be it the first student planetarium, the installation of the first ever Tinkering Lab, the first supercomputing event, the first Inter-IIT Technical Meet: JUGAAD, or the council's greatest ever external glory, be it at Techfest, IIT Bombay or at Texas, SAE Aerodesign. But more than that 2012-13 was surely a landmark year for the council in terms of redefining its vision: "I invent the future".

The Institute witnessed stiff inter-hall competition in the form of Galaxy, Takneek, Spectrum, Inferno and green Opus, inter- hall Cultural, Science & Technology, Films & Media, Sports and energy championships respectively. Fresher inferno tournament also

had been organized to find some new talent from the incoming batch. The sole guiding principle to organize these championships is to provide the students of this campus, a much needed platform to compete and showcase their talents and to give them a reason and a motivation, strong enough, to come out of their rooms and participate in group activities.

The Games and Sports Council, IIT Kanpur directed its efforts of to ensure that each and every person chooses a sport irrespective of the fact whether he/she is a part of the institute team or not. An atmosphere where playing in the evening is an integral part of each person's schedule. The diverse activities organized during the year aimed at broadening the outreach of 'sporting activities' among various segments of campus community. Some of the initiatives taken by the Games and Sports Council were one Week One Sport, horse Riding Workshop, tour de Force (5km run), archery Workshop, shooting workshop, institute Pool Tournament, boxing Workshop and Girls Aquatics Day. The unique activities introduced, will bear great value addition and connect with many who have yet stayed away from pre-existing sporting activities.

Our team had a wonderful performance at the Inter-IIT sports meet held at IIT Roorkee this year from the 17th to 24th December. The contingent as a whole stood up to the occasion helping us improve our standing as compared to last year. It was a splendid display of sportsmanship and there were a lot of intensely competed matches where we managed to emerge victorious. The summarized results are as follows:

Gold - Athletics

Silver - Squash boys' team

Table Tennis boys' team

Badminton girls' team

Volleyball girls' team

Bronze - Tennis boys' team

Swimming boys' team

Basketball girls' team

Table Tennis girls' team

Swimming boys' team

It was for the first time in the history of Inter-IIT that we won the athletics overall championship. We stood 4th in the race for General Championship boys with a total of 47.16 points trailing behind the third by 7 points. In the General Championship for girls too we stood 4th trailing behind the third by a mere 0.76 points.

The overriding objective of the large-scale events of the Institute such as Antaragni (the cultural festival), Techkriti (the technical and entrepreneurship festival) and Udghosh (the sports festival) is to infuse a sense of richness and purpose in the lives of students. All these social, cultural and sporting activities play a crucial role in the transformation of a student into a complete human being. These festivals have seen vastly improved participation levels, both from within the Institute and also from students from other national and international institutions.

Techkriti 2013, the annual technical and entrepreneurial festival of IIT Kanpur (14th to 17th March, 2013) witnessed a plethora of events ranging from Robotics, electronics, aeromodelling etc and also some of the very inspirational talks from leading personalities in the field of technology and entrepreneurship. For the first time in the history of IIT Kanpur we had some international teams visiting the campus and participating in the events. Techkriti witnessed talks by likes of Michael J Foreman (Nasa Astronaut), Dr R. Chidambaram (scientific advisor to Government of India), Dr John Mather (Nobel Laureate in Physics) and others. Various national and international exhibitions were invited and for the first time an Inter IIT techmeet, Jugaad, was also organized. Among the other major highlights about 2,000 people participated in the Guinness world record attempt of mass Rubik Cube solving.

UDGHOSH'12, Annual sports festival IIT Kanpur, offered a platform for students from all over India to showcase their talent and compete with the best upcoming sport persons in the country in a highly charged and competitive ambience with highly equipped sports facilities. The festival witnessed a plethora of events from Motivational Talks, Gymnastic Shows and Sport Quizzes to various sports events like Athletics, Cricket, Football, Hockey, Volleyball, Basketball, Badminton, Tennis, Table Tennis, Weightlifting and Cycling Events. A torch run followed by stunning performances by Yogi's Angels (International Acrobats Group), Vipul Garg (Stand up Comedian) and Simon Juggler stole the show. The most eye catching were Marathon-run for a cause with the motto of "THINK POSITIVE, STOP AIDS" and motivational talks by Mrs. Seema Antil and Mrs. Deepa Malik.

Antaragni 2012 saw increased involvement from the student community, both in organisation and participation. New incentives such as internships and workshops under the 'Dream On' campaign augmented the prize money and attracted quality participants from outside. There was a focus on reviving the intellectual aspect of the festival with events like 'Antaragni Leadership Initiative', 'India Inspired' (panel discussion) and 'Director's Cut' (sessions with movie directors). The festival had an international flavour and hosted artists from 6 different countries. Organizationally, the festival team comprised of about 1200 students and was conducted without any major incident. A number of deals were signed with prominent companies, media houses,

embassies and cultural organizations. A new technical initiative was the use of LED screens in professional shows

Counselling Service

The Student Counselling Service is an active wing of our students. The activities include organizing the orientation programme for UG and as well as PG students; providing specific attention to students having academic, financial or personal problems; monitoring the progress of students who need special attention. It enjoys wide appreciation from both faculty and students alike.

PHYSICAL EDUCATION ACTIVITIES

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

The streams of activities are:

1. Games and Sports
2. National Cadet Corps (NCC)
3. National Service Scheme (NSS)
4. Yoga
5. Tae-Kwando
6. Aerobics (To be Introduced this year)
7. Skating (To be Introduced this year)

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

GAMES AND SPORTS

Under the Games and Sports stream, a student has an option to choose one of the following sports disciplines: Athletics, Basketball, Badminton, Cricket, Foot ball, Hockey, Squash, Swimming, Tennis, Table Tennis, Volleyball and weight-lifting. The institute has excellent facilities for these disciplines. Besides the responsibility of running the PE courses, Physical Education Section is responsible to supervise and provide Games & Sports facilities to all registered students of the institute and also to organize various games and sports tournaments and meets. The PE section is also

responsible for preparing institute teams to participate in various sports tournaments. The outstanding players (students) have an opportunity to represent the institute team in various sports meets/festivals, such as, Inter IIT Sports Meet and District level tournaments. To encourage the participation in the Games and Sports, meritorious players are awarded prizes and medals at the Annual function of the Student Gymkhana. The achievements of the meritorious players are also considered for some institute awards and sports scholarships are also given to the best sports persons.

NATIONAL CADET CORPS (NCC)

It is a matter of great pride that the National Cadet Corps (NCC) has been spearheading the youth movement in the country. It has played an important role in propagating the ideals of secularism, national integration and selfless service, which are ever so essential in the present day context. During the past 56 years, the NCC has come a long way. It has grown into a vibrant youth organization and has made substantial contribution for creation of disciplined, and well- motivated citizens, ready for service of the nation. Its credentials as the largest youth organization engaged in grooming the youth and endowing them with qualities of character, comradeship and leadership are unquestionable.

The NCC is authorized and administered by the Govt. of India as an integral part of its National Plan. For the successful implementation of the NCC Programme, the scheme has been inter-woven with the National Education Programme. In order to thoroughly groom the NCC cadets to be tomorrow leaders, they are exposed to every facet of the multi-dimensional training programme in as realistic a manner as possible. Due emphasis is given to constantly update and refine training method and ensure its proper implementation. The NCC training strives to inculcate in cadet the qualities of leadership, discipline, courage and corporate living, which stand them in good stead in whatever vocation they choose. The various activities undertaken by the NCC cadets, such as mountain craft, rock climbing, skiing/jumping, camping, gliding and flying and sea faring provide students an immense opportunity to be nature friendly and helps in self discovery.

NATIONAL SERVICE SCHEME (NSS)

The Scheme provides the most diversified opportunities to the students to upgrade their personality through social and community service of different variety, suiting different aptitudes and needs. Special emphasis is laid on tutorial assistance to the weaker sections of the campus. The students' volunteers participated in teaching at the opportunity school. Some volunteers visited non-formal schools. NSS volunteers visited nearby villages for distributing books and demonstrating science experiments.

YOGA

Classes to train students in Yoga, as one of the stream of PE courses, are conducted during both the semesters as part of PE 101 & PE 102 Courses. These classes included Joints and Glands exercises, Asanas (Postures) in standing, sitting and lying positions, Mudras (Gestures), Bandhas (Locks), body cleansing Kriyas (techniques); Pranayama (Breathing exercises) and Meditation. Counseling is also provided to students for solving their personal physical, mental and emotional problems through yoga.

TAE-KWON-DO

Classes of Tae-Kwon-Do to train students under the CPA activities are conducted during both the semesters as part of PE 101 & PE 102 Course.

SWIMMING POOL

Institute has a full size (50x20 meters) Swimming Pool for its students, faculty and staff and also for their family members. The membership is open to all on payment of a nominal fee. Arrangements have been made to coach beginners in swimming. To ensure maximum safety of the members, life-guards are engaged. The exact rates for these sessions are fixed and notified by the Swimming Pool Management Committee, for regular memberships as well as guest charges. The Pool has been operating for 7 months in a year, i.e. from April to October on monthly basis. Pool is operating in the morning as well as evening hours i.e. 5:30 am to 8:15 am and 3:30 pm to 8:00 pm divided into 45 minutes slots with 15 minutes free time in between. Swimmers and non-swimmers are separated.

AEROBICS

Aerobics which is a form of rhythmic physical exercise with stretching and strength training is taught to the students by a certified instructor in one of the streams of PE courses for improving the main elements of fitness: flexibility, strength, endurance and cardio-vascular fitness. The institute has a well equipped indoor aerobics hall.

SKATING

Skating, a fascinating sport is one of the streams in the PE courses. The students are going to be taught this sport by a qualified instructor. The students would be taught the basic skills initially and later introduced to the higher levels. The students in this stream will have an opportunity to join the Skating Hockey Team. A proper skating hockey rink with flood lights is under construction in the institute.

GYMNASIUMS

The institute has two gymnasiums equipped with the latest cardio and strength equipment. A professional gym trainer has been employed for motivating the users, setting goals, providing feedbacks and measuring the users strength and weakness with fitness assessments. The membership for the gym is open to all the campus residents on payment of a nominal fee. The exact rates for these facilities are fixed and notified by the Sports & Physical Education Committee (SPEC).

Contact No.

PHYSICAL EDUCATION SECTION: 4705 & 4703
 NEW INDOOR SPORTS COMPLEX: 4541
 OLD INDOOR SPORTS COMPLEX: 4299
 SWIMMING POOL: 4662

6. FACULTY INCHARGES OF STUDENTS'S AFFAIRS

Dean, Students Affairs	Dr. A. K. Ghosh
Head, Counseling Service	Dr. Mukesh Sharma
Chairman, Council of Wardens	Dr. M. K. Ghorai
Vice-Chairman, Council of Wardens	Dr. Sanjeev Garg

Counsellors, Students' Gymkhana

Chief Counsellor	Dr. A. K. Ghosh
Cultural Counsellor	Dr. Satyaki Roy
Games Counsellor	Dr. B. V. Phani
Films Counsellor	Dr. Satyaki Roy
Science & Technology Counsellor	Dr. Anurag Gupta
Treasurer	Dr. A. V. R. Sarma
Chairman Students Benefit Fund	Dr. Mukesh Sharma
Chairman Students' Placement Committee	Dr. Vimal Kumar
Chairman SPEC	Dr. N. R. Patra
Faculty Advisor, NSS	Dr. H. C. Verma
Chairman, Swimming Pool Management Committee	Dr. Shunmugaraj
Faculty Advisor, Yoga	Dr. S. C. Misra
Faculty Advisor, Tae-kwon-do	Dr. T. Ravichandran

7. WARDENS

<i>HALL OF RESIDENCE No. I</i>
Dr. Sudeep Bhattacharjee, Warden I/C
Dr. Krishnacharya, Warden
Dr. M. Jaleel Akhtar, Warden
<i>HALL OF RESIDENCE No. II</i>
Dr. Somesh K Mathur, Warden I/C
Dr. Debajyoti Paul, Warden
Dr. Anurag Gupta, Warden
<i>HALL OF RESIDENCE No. III</i>
Dr. M. K. Harbola, Warden I/C
Dr. Vimal Kumar, Warden
Dr. Tarun Gupta, Warden
<i>HALL OF RESIDENCE No. IV</i>
Dr. Anish Upadhyaya, Warden I/C
Dr. Deepu Philip, Warden
Dr. Kantesh Balani, Warden
<i>HALL OF RESIDENCE No. V</i>
Dr. Vineet Sahu, Warden I/C
Dr. Pradeep Kumar, Warden
Dr. Sivakumar, Warden
<i>HALL OF RESIDENCE No. VII</i>
Dr. Kamal K. Kar, Warden I/C
Dr. Saikat Chakrabarti, Warden
Dr. Shaktipada Ghorai, Warden
<i>HALL OF RESIDENCE No. VIII</i>
Dr. D. Bahuguna, Warden I/C
Dr. Priyanka Ghosh, Warden
Dr. Javed Malik, Warden
<i>HALL OF RESIDENCE No. IX</i>
Dr. Malay K Das, Warden I/C
Dr. Ashok De, Warden
Dr. P. M. Mohite, Warden
<i>HALL OF RESIDENCE No. X</i>
Dr. J. Ramkumar, Warden I/C
Dr. Vaibhav Kr. Srivastava, Warden
Dr. Ashwani K. Thakur, Warden
<i>HALL OF RESIDENCE No. XI</i>
Dr. Satyaki Ray, Warden I/C

<i>HALL OF RESIDENCE for Girls (GH-1)</i>
Dr. Jonaki Sen, Warden I/C
Ms. Sarani Sha Bhattacharya, Warden
Dr. Chaithra Puttaswamy, Warden
<i>HALL OF RESIDENCE for Girls (GH-2)</i>
Dr. Nishchal Verma, Warden I/C
Dr. Sohini Sahu, Warden
Dr. Veena Bansal, Warden
SBRA
Dr. Mukesh Sharma, Warden I/C
Mr. Jitendra Narayan Gangawar, Convener

8. 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. Abhay Jain upto (Feb. 2013) and Mr. Himanshu Pandey (from March 2013)

Chairman, Students Senate

Mr. Ankit Bhutani (upto Feb. 2013) and Mr. V Srinivasa (from 2013)

General Secretary (Cultural)

Ms. Sonal Kumari (upto Feb. 2013) and Mr. Rishav Garg (from March 2013)

General Secretary (Games)

Mr. Yuvraj Dhillon (upto Feb. 2013) and Mr. Anant G Mundra (from March 2013)

General Secretary (Films)

Mr. Yashovardhan Bhagat (upto Feb. 2013) and Mr. Sohil Banshal (from March 2012)

General Secretary (Science & Technology)

Mr. Subhojit Ghosh (upto Feb. 2013) and Mr. Rudra Pratap Singh (from March 2013).



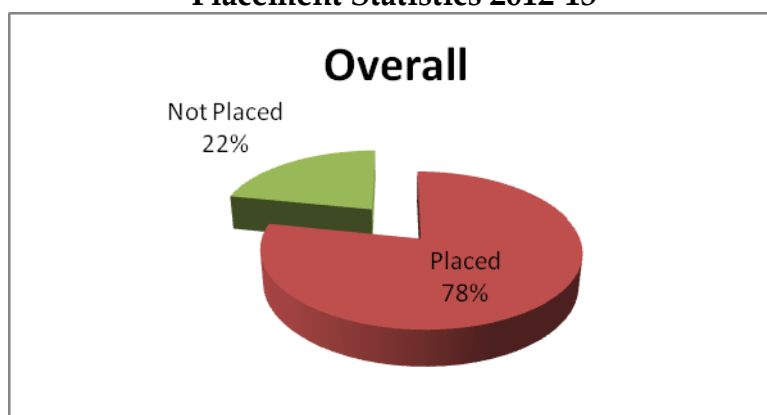
Students' Placement Office

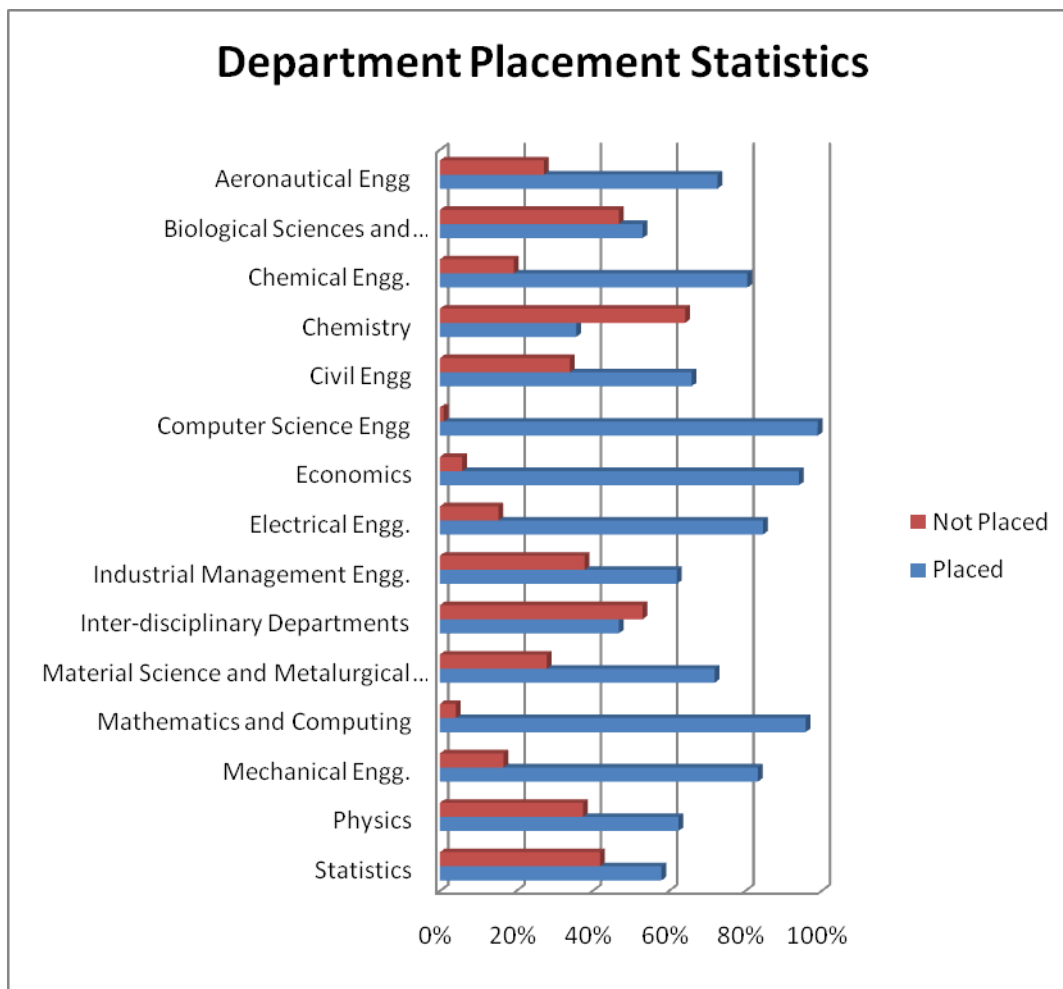
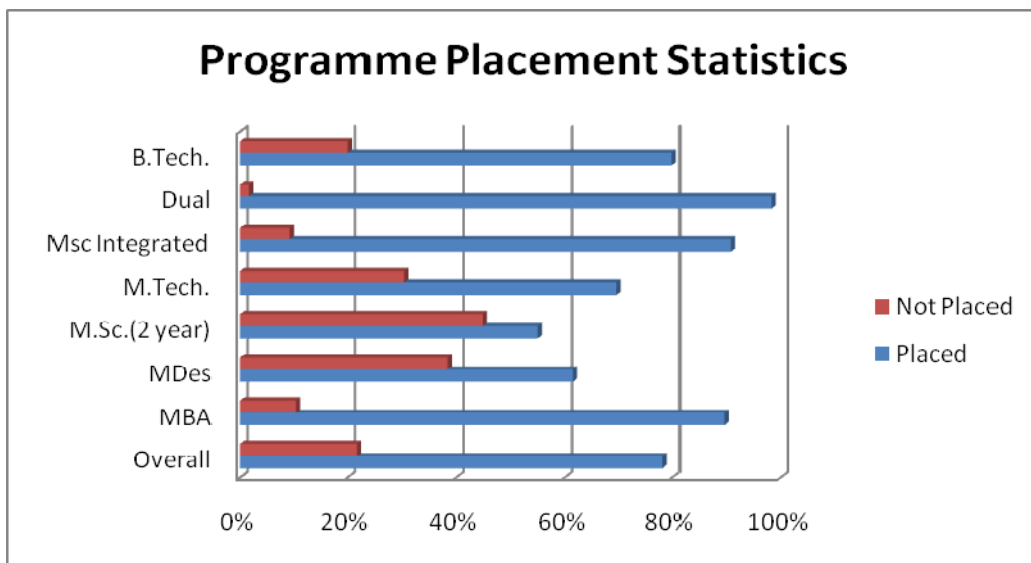
Introduction

Students' Placement Office (SPO) continues its role as facilitator and counsellor for placements and placement preparation to all students registered with the Office. There is an advisory Students' Placement Committee headed by a Chairman. The Placement Committee comprises a Faculty Representative from each Department and Programme. The SPO staff is assisted by a team of student volunteers. During the initial months the major task of these volunteers is to contact companies and organise the Pre-placement Talks (PPTs). Once the Placements start this team along with other volunteers take care of logistics, hospitality, etc.

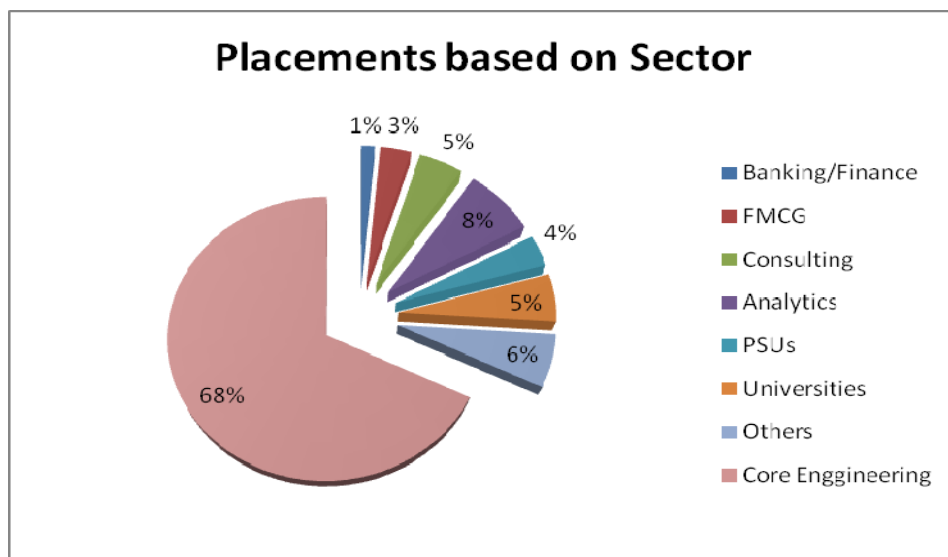
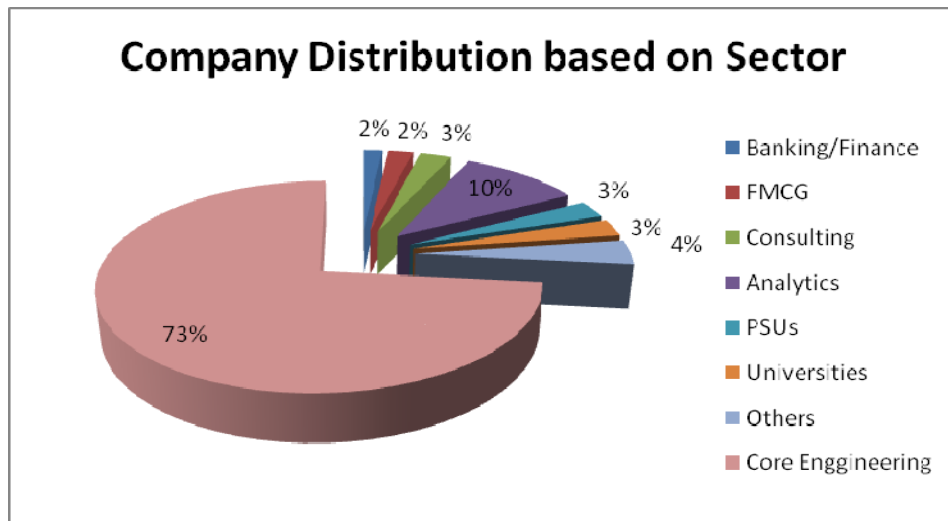
This year 914 students registered for placements. A four tier team of 100 students lead by four Overall Placement Coordinators and two Head Preparations took the lead in calling companies and helping students prepare. Placements started on 1st December. 21 companies visited the campus on the first day and hired 126 students. Till date 78% of the registered students have got jobs through SPO. Around 200 companies including 50 new companies took part in the recruitment process this year. Core placement suffered due to the change in recruitment policy of PSUs. As per a Madras High Court ruling, they are now not hiring direct from campus. Amongst the various programmes, the Dual Degree had the highest percentage of placement at 98%, followed by M.Sc.(I) at 92%, MBA at 90%, B.Tech. at 80% , M.Tech. at 70%, M.Des at 62% and M.Sc. (2yr) at 49%.

Placement Statistics 2012-13





Mitsubishi Heavy Industries, Britannia, Rocket Fuel, Times Internet, Philips and LinkedIn were some of the first timer recruiters. Several companies revisited the campus after a gap of few years. There was an increase of companies in the IT sector, Analytics and FMCG. Tower Research gave the highest domestic package this year at 46 Lakhs per annum while the average for the batch is approximately 7.32 LPA. LinkedIn, Facebook, Google, Microsoft, Mitsubishi Heavy Industries, Schlumberger, Rocket Fuel, were some companies that offered overseas profiles. Highest overseas package was USD 1, 40,000 (INR 77, 00,000 per annum) offered by Rocket Fuel. Amongst the recruiters, Reliance made 28 offers which was the highest intake by a company. EXL Services, Schlumberger, Mitsubishi Heavy Industries, Flipkart, Fractal Analytics, Mirosoft also recruited in good numbers.



Placement Preparation

Preparation for final placements focused on Resume Writing, Aptitude Tests, and Mock GD and Interviews. Professionals like Seniors on Call, ProAvenues and Amcat conducted some of these sessions. Students were provided with Question Banks which were compiled with inputs from faculty. Core technical tests were conducted. A preparation portal has been developed to record interview experiences of students hired by visiting companies. Alumni working in different sectors were invited to share their experiences and also provide students an insight into the professional world.

Internships

2012-13 saw an increase in the number of Pre-Placement Offers (PPOs) given to students after their internship. A total of 46 students got PPOs which is 15% more than the previous year. This year SPO facilitated internship of 264 pre-final year students. It is expected that the number of PPO will increase next year.

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 the 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, under the control of the Superintending Engineer.

SI. No.	Unit	Responsibility	Unit-in-charge
1	Civil Division-I	Maintenance, up-gradation and development works, Water supply, furniture, roads.	Executive Engineer
2	Civil Division-II	Maintenance & development works	Executive Engineer
3	Electrical & Air-conditioning Division	Electrical maintenance Domestic/Central AC maintenance	Superintending Engineer
4	Horticulture	Development & maintenance	Superintending Engineer
5	Sanitation Unit	House Keeping of various building	Superintending Engineer

The following works completed during 2012-2013

SI. No.	Name of Work	Plinth Area (In Sqm)
1	Construction of Multistoried Residential Flats (Block A & B)	12362

The following works are under execution:-

Sl. No.	Name of Work	Plinth Area (In Sqm)
1	Construction of Hall of Residence for Boys No. XI.	15876
2	Construction of new Hall of Residence for Girls (Phase-I).	6311
3	Construction of Rajeev Motwani Building.	3510
4	Extension of Research Associate Hostel	13455
5	Construction of Microscope facility	1030
6	Construction of lecture Halls.	3750
7	Extension Centre of NOIDA.	4310

The following works are under planning:

Sl. No.	Name of Work
1	Construction of Hall of Residence for Girls (Phase-II).
2	Construction of Hall of Residence for Boys No. XII.
3	Construction of Research Complex.
4	Construction of Faculty Club.

STORES & PURCHASE SECTION

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

The Import Section handles customs clearance of all foreign consignments and matters relating to Import Licenses/Custom Duty Exemption Certificate/ Excise Duty Exemption Certificate 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 2012-2013 the Purchase Section placed 1158 orders valued Rs. 86,26,08,074=00 which includes import order numbering 270 costing Rs. 51,03,67,461=00 and indigenous order numbering 888 Costing 35,22,40,613=00. The purchase orders and their values under various categories are as follows:

<i>Category</i>	No. of P.O.	Amount (in Rs.)
Import :-		
(A) Institute fund		
Consumable	13	19,25,437
Non consumable	75	35,80,59,157
(B) Project fund		
Consumable	59	1,19,57,820
Non consumable	123	13,84,25,047
Total Import (A&B)	270	51,03,67,461
(C) Indigenous		
Institute fund		
Consumable	150	1,41,81,586
Non consumable	329	18,52,17,022
(D) Project fund		
Consumable	157	1,69,66,476
Non consumable	252	1,35,875,529
Total Indigenous (C&D)	888	35,22,40,613
Total Value	1158	86,26,08,074

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 four units, namely Purchase Unit, Import Unit, Bill Unit and Receipt/Issue Unit. This section is headed by a professionally competent person and he is also assisted by a professionally competent team of 19 personnel.

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

This Section also started reconditioning of wooden & steel furniture. During The Financial year 2012-2013 we have reconditioned different type of furniture and issued to various departments. The details of reconditioned furniture are as follows. (1) Chair 223 nos (2) Office Table 146 nos (3) Almira 36 nos (4) Racks 9 nos (5) Filling Cabinet & Misc. items 17 nos. In this way we have saved lot of money of the institute.

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. 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. Stores 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 fifteen thousand. Being a residential campus with 1289 houses (including 213 SBRA and ACES Quarters) 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, shopping complexes and similar other facilities, which are required for day-to-day living.

The estate office is entrusted with various kinds of activities including house allotment, commercial shop management, eviction of unauthorized occupants, realization of license fee and electric/water charges from shopkeepers & house allottees, estate management and civic amenities.

The Institute has various types of residential accommodation, i.e. Type-1A, IB, I, II, III, IV, Faculty Apartment & V for Faculty members, Scientists, Research Engineers, Group-A Officers and other staff members of this Institute. We have mainly five shopping complexes at various locations, one of which is in the heart of campus called as main shopping complex., the others are at Type-II complex, at security crossing, at new SAC and at Type-I area consisting of various kinds of shops, which fulfill the basic needs of the residents.

Besides the above shopping complexes, we have 11 hostels for students' accommodation out of which nine are for boys and two are for girls. Every hostel has shop like which mainly fulfills the immediate needs of students.

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

There was no decent canteen/lounge facility available in the campus for faculty and officers and their guests. They were to go at staff canteen alongwith their guests. 1968

batch donated 50% cost of the lounge (Rupees 25.00 lakhs) for creating a decent lounge facility in the campus, known as "Lounge - 68" and rest of the money was added by the Institute. The Lounge - 68 is now to be operational by M/s. Cafe Coffee Day.

Besides, the estate office is also managing different types of activities related to the estate successfully and cautiously by way of taking precautions to solve various types of problems. During the financial year 2012-13, the office has realized about Rs.98,42,328/- (Ninty Eight Lakh Forty Two Thousand Three Hundred Twenty Eight Only) from the different sources (it is notable that the tendering process of unserviceable materials has already shifted to central stores from August 2009.)

The breakup of the above amount is as follows:

Sl. No.	Particulars	Amount in Rs.
1-	Amount collected through temporary houses allotment and temporary stalls at Shop C	
A	Rent From Temporary House allotment	24100
B	Electricity Charges of Temporary House Allotment	9700
C	Rent From Temporary Stall	50500
D	Electricity Charges of Temporary Stall	21800
E	Lawn Booking	3500
F	Community Centre Type-II FF rooms	68778
2-	Amount collected towards rent and electricity charges for Shops, Canteen & Non Instt. Employee Houses	
A	Charges for electricity	5096523
B	Rent for Shops, Canteen and House to Non-Institute employees & Administrative charges for delayed payment of L.E.	3039418
3-	Tender Process	
A	Sale of Tender forms (Rs.9,700/-) + VAT (Rs.485/-)	10185
B	Auction of Old and Irresperably damaged article of Scrap of ESA	35072
C	Sale of Amla (Rs.2,247/-), Oxidation (Rs.12,000/-) Mango (Rs.16,786/-) & Beri Fruits (Rs.3,005/-)	34038
D	Amount from Raddi & Kabad contractor (Rs. 71,300/-)	71300

4-	Amount collected towards Panel Charges, Eviction, Retirement, Death & Resignation	
A	Licence Fee + Water Charges	383895
B	Electricity Charges	316609
C	Damage Charges of Divider (Rs. 6,250/-) +Misc. Charges (900/-)	7150
5-	Amount collected through issue of Mobile Passes & Collection of amount at Cycle Stand, IIT/K	
A	Amount collected at Cycle Stand	438380
B	Charges for Entry passes, Rickshaw pullers, Supplier and vendor	168080
C	Amount of shopkeeper passes	63300
	Grand Total	9842328

CAMPUS SCHOOL

Marching slowly but steadily towards the goals set in the previous academic session we tried hard to develop the school as a social space because conceptual development is a continuous process of deepening and acquiring new layers of meaningful perceptions.

The new entrants of K.G., Class I and other classes were given a warm reception and the new session started on Wednesday, 4 April, 2012. A parent orientation programme was held in the school. Continuous Comprehensive Evaluation (CCE) was introduced and Report Cards incorporating the CCE pattern were introduced. A well balanced Curriculum and Evaluation System was framed and continuous evaluation of identified aspects of students growth spread over the entire span of the academic session, diagnosis of learning gaps, use of corrective measures, retesting and feedback of evidence to teachers and students for their self evaluation was implemented.

To inculcate good reading habits in the children, the concept of class room library was re-emphasized. Specially designed wooden cabinets were installed in one section of each grade to store books related to each grade. Books were circulated amongst the students and were encouraged to read extensively. Books worth Rs.10,000/- were purchased from the Endowment Fund.

Creative programme of arts with music, dance, craft, clay modeling, dramatics were introduced. A detailed list of Intra School Competitions is attached for ready reference. Various days like Carpenter's day, Mother's day, Yellow & Red day, and Gardener's day were celebrated with the children. To develop life skills various activities like tying

of the shoe lace, buttoning & unbuttoning of the shirt, combing of the hair were also undertaken. To make the concept of right and left clear to the children red and yellow coloured ribbons were tied on the right & left wrist respectively.

Field trips to Nursery, Air Strip, Design Labs, Health Centre, Bank, Post Office were undertaken to give the children firsthand knowledge of their working.

Deep Shikha - a cultural fiesta and display of art & craft work was organized on Nov. 10th 2012. The event was inaugurated by Director IIT Kanpur, Prof. Indranil Manna. The august gathering of Prof. S. C. Srivastava, Prof. A.K. Ghosh, Prof. Dheeraj Shanghi, Institutes Nominee Prof. Anish Upadhyaya, members of the CS Governing Board were collectively appreciative of the effort put in by the teachers and the students of Campus School. Besides this Independence Day, Republic Day, Teachers Day and festivals such as Dusshera, Diwali, Christmas, Eid were celebrated with great enthusiasm.

For the first time the students of Campus School participated in the Inter school Collage making Competition held at Sir Padampat Singhanian Education Centre on 24th Nov. 2012 where 44 different CBSE and ISC schools of the city participated. Paint a Stamp Competition was organized by the Indian Postal Services Dept. at G.P.O, Bara Churaha on 26th Nov. 2013.. The students of Campus School made their presence felt and the result of the same is still awaited.

For the first time the children of Campus School were also exposed to the International English and Science Olympiad. A total of 5 Gold, 5 Silver and 5 Bronze medals were rewarded in Maths Olympiad. Rahul Yadav Cl I, Jonathan Paul Cl II, Prachi Singh Cl III, Gargi Ghorai Cl IV and Nitya Gupta Cl V qualified for the Second Round. A total of 5 Gold, 3 Silver and 3 Bronze medals were bagged in the English Olympiad. The students won laurels for the school by securing good positions both nationally and internationally. The medals, certificates and individual performance report was given to the children in a special assembly by Prof. Sanjay Mittal, Aerospace Engineering Dept. IIT Kanpur.

The academic session was a very eventful one as there was a change in the governance set up of Campus School. A governing board was set up with the Director IIT Kanpur as its Chairman. The School Governing Board comprises of Prof. Anish Upadhaya as Institute Nominee to Campus School Governing Board, Dean of Resources and Alumni, Dean R&D, two Parent representatives and one teachers representative. Financial Sub Committee headed by Deputy Director and Academic Sub Committee headed by Prof. A. Upadhyaya were constituted to regulate the fee structure, admission policy, school timings, academic calendar and salary structure/designation of the teachers.

Suggestions of both the Committees have been incorporated in formulating the new set of guide lines for the school.

Various steps were taken for proper maintenance of the school. Halogens, lamp shades, lights were installed at various places like entrance gate, school lawn and the corridors. Adequate illumination has been specially provided in the front lawn for the Badminton Court. Store room for tools and extension of the Computer Room has also been done. 10 Monitors, 2 Scanners and 1 Printer has been procured under the up gradation of the existing Computer Lab. Internet connectivity has been provided at various points like dance room, library, English lab, K.G. Activity room so that the children can have access to it.

In a special PTM organized in the month of February, 2013 activities done throughout the year were displayed in the form of Quasi Open House. Intra Section games were held at regular intervals throughout the year. Farewell to the outgoing Class V was also given. Final Prize Distribution along with the Report Cards for the session were given on Saturday, March 30th 2013. Principal KV, IIT Kanpur was the Chief Guest for the day.

All the existing Project Employees applied afresh for the 21 posts advertised for the designation of Asst. Project Manager. The existing strength of the Campus School staff is: 5 permanent teachers, 21 project employees; supporting staff: permanent 8 and 4 on work assignment mode. The present strength of the school is nearly 400 students with admissions still taking place. The most encouraging development is the faith shown by the community in the school.

I would like to sum up by thanking the immense support & guidance rendered to us by our Chairman Prof. Manna, the Institute Nominee Prof, A. Upadhyaya, members of the Governing Board, Prof. S. C. Srivastava D. Director and Mr. K. Tiwari, Principal KV IIT Kanpur. I would also like to acknowledge the support received from Dean R&D and DORA.

We at Campus School will strive for Education, as a planned endeavour, at personal level on a small or institutional level, on a large scale, aims at making children capable of becoming active, responsible, productive, and caring member of society. They are made familiar with the various practices of the community by imparting the relevant skills and ideas. Ideally, education is supposed to encourage the student to analyse and evaluate and their experiences to doubt, to question to investigate - in other words, to be inquisitive and to think independently.

HEALTH CENTRE

Health Centre has been established with the objective of addressing health needs of the Institute Community. Health Centre provides services round the clock to meet out the objective. Health Centre is manned by 13 Medical Officers and a Medical Advisor of the Institute.

The details of the Health Centre services provided for the period with effect from 01.04.2012 to 31.3.2013 are as follows:

Sl.No.	Particulars	Number
01.	Number of patients treated in OPD	68105
02.	Number of students treated	22594
03.	Number of patients manually registered	2012
04.	Number of patients treated in Indoor	900
05.	Number of patients treated in Homeopathy including students	9011
06.	Number of patients treated in Physiotherapy	7013
07.	Number of Plastering	54
08.	Number of Surgical Dressing	5913
09.	Number of Injections	33402
10.	Number of Tetvac	1315
11.	Number of babies attended in Well Baby Clinic	551
12.	Number of X-Ray done	2071
13.	Number of babies attended-National Pulse Polio Programme	66
14.	Number of Anti Rabies Injections	292
15.	Numbers of ECG done	370

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

VISITORS' HOSTEL

Housed in an imposing double storied building and located at a central place, Visitors' Hostel provides boarding and lodging facilities for the Institute's guests, newly appointed faculty and staff members, delegates and participants attending various conferences, seminars, symposia and workshops. The Visitors' Hostel has some allied facilities on the campus and in Chittaranjan Park Colony, New Delhi also for the benefit of the Institute's Visitors.

Allied Facilities are:

- Visiting Faculty Apartment at IIT Kanpur
- Visitors' Hostel Extension
- Outreach 69 & 80 Building, IIT Kanpur
- Main Auditorium
- VH Service Apartment at Chittaranjan park, New Delhi

The Visitors' Hostel and allied facilities are operated as a non-profit activity to mainly support the academic and research activity on the campus with a homely atmosphere and ambience, traditionally acclaimed for its environs of hygiene and food of homely relish and richness. The following are the various activities undertaken by the team managing the affairs of the Visitors' Hostel and allied facilities.

1. Accommodation: Visitors' Hostel has been equipped with fully furnished 70 Standard rooms, of which 55 are AC and 15 are Non-AC. Further, there are 15 Deluxe AC rooms. It can accommodate a maximum of 170 guests at a time on twin sharing basis. All the rooms have attached bathrooms with modern amenities.

Visitors' Hostel Extension has 44 guest rooms in which 16 are AC (with LCD and Cable connections) and 28 are standard rooms, which can accommodate 88 guests on twin sharing basis. Kitchen facility is also open only for breakfast at VH Extension

2. Dining Facility: Visitors' Hostel provides dining facilities to in-house guests of Visitors' Hostel, VH Extension, Visiting Faculty Apartment and for important Institute activities. The Visitors' Hostel has 2 air-conditioned dining halls with capacity of 30 and 70 guests respectively. One of the dining halls has a well furnished sitting room attached with it.

3. Conferencing Facilities: A. Pioneer Batch Continuing Education Center:

A. Pioneer Batch Continuing Education Center

S.No.	Name of Facility	Max-Capacity
1	VH Lounge (round table)	16
2	PBCEC Lawns	250
3	PBCEC Conference Room (U shaped)	18
4	PBCEC Small Class Room	36
5	PBCEC Big Class Room	65
6	PBCEC Committee Room	11

B. Outreach 69 & 80

S.No.	Name of Facility	Max-Capacity
1	Auditorium	210
2	Seminar Room	40
3	Video-Conferencing Room	30

C. Main Auditorium

S.No.	Name of Facility	Max-Capacity
1	Main Auditorium	1250

4. Additional Facilities:

- Centralized booking system for all facilities at VH and Allied Services through a common requisition form. All the forms are made available in departmental offices as well as downloadable from the website of VH at <http://www.iitk.ac.in/vh>.
- All the Deluxe AC rooms have a PC.
- All the rooms, Meeting Lounge, PBCEC and Dining Hall have Wi-fi connectivity
- DHCP: All the guest rooms have DHCP (Dynamic Host Control Protocol) for direct Internet Connection, i.e. No IP Address, no User ID or password is required for accessing the Wi-Fi enabled internet services through their laptop.
- All the rooms have cable connections with Color Television Set.
- All the deluxe rooms have a small pantry and a small refrigerator.
- Intimation of confirmation of bookings through e-mail.
- For detailed information, website of Visitors' hostel can be accessed at <http://www.iitk.ac.in/vh>.

Management of day-to-day hospitality service has been outsourced to a private agency. An increase in facilities, services and a more professional approach has led to more transparency in day-to-day functioning of the system and increased occupancy rate, thus achieving more financial viability in terms of operational expenditure.

Publication and Outreach Activities

Books

Aerospace Engineering

1. "Fundamentals of Helicopter Dynamics" a book under preparation for publication by CRC press (Prof. C. Venkatesan)
2. **Instabilities of Flows and Transition to Turbulence** T. K. Sengupta (CRC Press/ Taylor & Francis, USA, April 2012) (Prof. Tapan K. Sengupta)
3. **High Accuracy Computing Methods: Fluid Flow and Wave Phenomena** T. K. Sengupta (Cambridge Univ. Press, USA, July 2013) (Prof. Tapan K. Sengupta)
4. **Aerodynamics: T. K. Sengupta** (Wiley, Chichester, U.K.) Under preparation (Prof. Tapan K. Sengupta)
5. Guest Edited a special issue of Journal of Fluids and Structures for the IUTAM Symposium, Bluff Body Flows (Blubof2011) held at IIT Kanpur in December 2011 (Prof. Sanjay Mittal)
6. Mobile Computing and Wireless Networking (in progress) (Prof. R. K. Ghosh)
7. Introduction to Integral calculus: Systematic studies with Engineering Application for Beginners, Authors: UL Rohde, G.C. Jain, A.K. Poddar, and A.K. Ghosh, 2012. (Prof. A. K. Ghosh)
8. Introduction to Differential calculus: Systematic studies with Engineering Application for Beginners, Authors: UL Rohde, G.C. Jain, A.K. Poddar, and A.K. Ghosh, 2012. (Prof. A. K. Ghosh)

Books Translated into Chinese Language: (Prof. Ashish Tiwari)

9. Tewari, A., *Atmospheric and Space Flight Dynamics – Modeling and Simulation*, Nov. 2012, National Defense Industry Press, Beijing, China (under contract with Springer (Birkhäuser), Boston, USA). (Prof. Ashish Tiwari)
10. Tewari, A., *Advanced Control of Aircraft, Spacecraft, and Rockets*, April 2013, National Defense Industry Press, Beijing, China (under contract with John Wiley & Sons, Chichester, UK). (Prof. Ashish Tiwari)

Books Adoption (Prof Ashish Tiwari)

The following book was adopted for course work in Fall 2012 at the Department of Mechanical Engineering, Ohio State University, USA: (Prof. Ashish Tiwari)

11. Tewari, A., *Modern Control Design with MATLAB & Simulink*, John Wiley & Sons, Chichester, UK, 2002. (Prof. Ashish Tiwari)

The following two books were adopted for graduate level course at US Army Armament Research, Development and Engineering Center (ARDEC), Picatinny, NJ, in March 2013:

12. Tewari, A., *Atmospheric and Space Flight Dynamics – Modeling and Simulation*, Springer (Birkhäuser), Boston, 2006. (Prof. Ashish Tiwari)
13. Tewari, A., *Automatic Control of Aerospace Vehicles*, Springer (Birkhäuser), Boston, 2011. (Prof. Ashish Tiwari)
E-Book Downloads (Prof. Ashish Tiwari)
 The following book was among top 25% to be downloaded in e-book format from SpringerLink in the year 2011-12: (Prof. Ashish Tiwari)
14. Tewari, A., *Automatic Control of Aerospace Vehicles*, Springer (Birkhäuser), Boston, 2011. (Prof. Ashish Tiwari)

Biological Sciences and Bio-engineering

Chemical Engineering

Chemistry

15. Transition-metal catalyzed C-C bond formation using organobismuth compounds Shimada, S. and Rao, M. L. N. *Topics in Current Chemistry* 2012, 311, 199-228 (**Publisher:** Springer Verlag)
16. Triphenylbismuthane (Invited) Maddali L. N. Rao *Encyclopedia of Reagents for Organic Synthesis* (John & Wiley, 2012)
17. "Asymmetric hydroamination and reductive amination in total synthesis" (Chapter 39) in "Stereoselective Synthesis of Drugs and Natural Products." Andrushko, V.; Andrushko, N. (Eds.); Wiley-Blackwell, John Wiley & Sons Inc., 1st Edition, 2013, 1173-1210 (ISBN-10: 1118032179; ISBN-13: 978-1118032176).
18. "Carboamination and alkylative cyclization with C-N bond formation in stereoselective syntheses" (Chapter 40) in "Stereoselective Synthesis of Drugs and Natural Products." Andrushko, V.; Andrushko, N. (Eds.); Wiley-Blackwell, John Wiley & Sons Inc., 1st Edition, 2013, 1211-1250 (ISBN-10: 1118032179; ISBN-13: 978-1118032176).
19. Book: D. Goswami, "Quantum Information Processing with Light", *CRC Press* (in progress).
 Invited Review Article: "Spatiotemporal control with Femtosecond Laser Pulses", *Advances in Chemical Physics* (in progress)
20. NPTEL course: "Mathematics for Chemistry", completed (Prof. Madhav)
21. ICT course: "Chemical Kinetics and Molecular Reaction Dynamics", in progress (Prof. Madhav).
22. PRESENTLY WRITING A BOOK AT POSTGRADUATE LEVEL. DISCUSSIONS ON FOUR DIFFERENT ISSUES COMPLETED. DISCUSSION ON FIFTH ISSUE CURRENTLY IN PROGRESS. TWO MORE ISSUES OF MUCH RELEVANCE YET TO BE COVERED (Prof. Veejendra Yadav).

Civil Engineering

23. Patra, N. R. (July 2012) "**Ground Improvement Techniques**" Vikash Publishing House Pvt Ltd, Noida, India, ISBN 978-93-259-6001-5 (Prof. Nihar Ranjan Patra)
24. Raymahashay, B.C. and **Sinha, R.** (2012). Popular Book titled "Flood Disasters and Management: Indian Scenario" Bihar State Disaster Management Authority, Patna and Ministry of Earth Sciences, New Delhi, 44p. (both English and Hindi) (Prof. Rajiv Sinha)
25. **Sinha, R.**, Jain, V. and Tandon, S.K. (2012) River Systems and River Science in India: major drivers and challenges. In R. Sinha, R. Rasik (Eds) Earth Systems and Hazards, Springer-Verlag Berlin and Heidelberg, 244p. (Prof. Rajiv Sinha)

Computer Science and Engineering

26. De-S Huang, Yong Gan, Phalguni Gupta, Zhang, X.; Premaratne, P. (Eds.): Emerging Intelligent Computing Technology and Applications, 8th International Conference, ICIC 2012, Huangshan, China, July 25-29, 2012, Proceedings Series: Communications in Computer and Information Science (CCIS), Springer, Vol. 304, 509 p. ISBN 978-3-642-31836-8, 2012 (Prof. Phalguni Gupta)
27. De-S Huang, P. Gupta, L Wang, M. Gromiha, M. (Eds.): Emerging Intelligent Computing Technology and Applications, 9th International Conference, ICIC 2013, Nanning, China, July 25-29, 2013. Proceedings Series: Communications in Computer and Information Science (Prof. Phalguni Gupta)

Electrical Engineering

28. M Phanikumar, Lalan Kumar , and Rajesh M Hegde, "An Unsupervised Approach to Multiple Speaker Tracking for Robust Multimedia Retrieval", In The Era of Interactive Media, Editors : Jin et. al, pp. 519--529, Springer New York, 2013 (Prof. Rajesh M. Hegde)
29. Rajesh M. Hegde, Multi modal signal processing and delivery systems for intelligent human computer communication, Directions, Vol. 11, No.1, pp.68--83, June 2010 (Prof. Rajesh M. Hegde)
30. Naveen Ashish, Rajesh Hegde, Charles Huyck, Dmitri Kalashnikov, Sharad Mehrotra, Padhraic Smyth and Nalini Venkatasubramanian, "Situational Awareness Technologies for Disaster Response", In Terrorism Informatics: Knowledge Management and Data Mining for Homeland Security, Editors : Hsinchun Chen et. al, 2007. (Prof. Rajesh M. Hegde)
31. R. K. Chauhan, Bharat Singh, S. N. Singh and F. M. Gonzalez-Longatt, *DC Grid Interconnection for Conversion Losses and Cost Optimization* in the book entitled,

- Renewable Energy Integration: Challenges and Solutions**, Springer-Verlag (2014)
(Prof. S. N. Singh)
32. Introduction to Electronics, in progress (Prof. Aloke Dutta)
 33. "Power Electronics- An Undergraduate Text," in progress (Prof. P. Sensarma)
 34. NPTEL-II Course on "Semiconductor Devices for Optical Communications" (Prof. Utpal Das)
 35. A.K. Jagannatham 2013 Wireless Multimedia (4G and Beyond) in *Wireless Technologies: 3G and Beyond* Springer-Verlag London Ltd., London, *Published Editors* - Naveen Chilamkurti, Sherali Zeadally and Hakima Chaouchi . (Prof. A. K. Jagannatham)
 36. A.K. Jagannatham, 2013 Game Theory and Networks" in *Decision Sciences: Theory and Practice* [ISBN: 9781466564305, Cat No.: K16034] to be published by CRC Press, Taylor & Francis Group, *in preparation* Vimal Kumar (Prof. A. K. Jagannatham)
 37. A.K. Jagannatham, 2013 Modern Wireless Communication *To be published by Tata McGraw-Hill, in preparation.* (Prof. A. K. Jagannatham)
 38. Dielectric Resonator in progress (Prof. Animesh Biswas)
 39. Book: Antennas and Wave Propagation, Co-author: Prof. M. Sachidananda, 2nd edition in progress (Prof. A. R. Harish)
 40. Power system analysis. (Prof. Saikat Chakrabarti)
 41. Synchrophasor applications in power systems. (Prof. Saikat Chakrabarti)
 42. Development of NPTEL - Web based course on Video Signal Processing in progress. (Prof. Sumana Gupta)
 43. EE629 Digital Switching - lectures recording completed for NPTEL. (Prof. Y. N .Singh)
 44. EE646 Optical Networks and Switching - lecture recording in progress for NPTEL. (Prof. Y. N .Singh)
 45. Health Monitoring of Rotating Machines (In Progress) (Prof. Nishchal K. Verma)

Humanities and Social Sciences

46. Philip Roth's Heroic Ideal in *Indignation* and *Nemesis*. **Critical Insights: Philip Roth.** Ed. Aimee Pozorski. Massachusetts: Salem Press, 2013, 200-19. (Prof. Gurusurthy Neelakantan)
47. Book manuscript *Freedom to Read, Freedom to Write: Literary Censorship in India* is complete and with Orient Blackswan. The book is getting ready for publication. **(Prof. Mini Chandran)**
48. Edited along with Dr. Suchitra Mathur an anthology of essays on translation, *Mapping Textual Travels: The Practice and Theory of Translation in India*. The manuscript is complete and getting ready for publication by Routledge India. This also has my essay, " In the Marketplace: Publication of Translations in India". **(Prof. Mini Chandran)**

49. Translation of Malayalam book *Kozhinja Ilakal* by Joseph Mundasserry for Cosmo Books, Thrissur is in progress. **(Prof. Mini Chandran)**
50. On causal and constructive modeling of belief revision with cambridge scholars publishers (Due date November 30, 2013). **(Prof. A. V. Ravishankar Sarma)**
51. NPTEL: Video course on Introduction to logic (Due Date: October 31) **(Prof. A. V. Ravishankar Sarma)**
52. NPTEL: Web Course on Philosophy of science (Yet to be finished). **(Prof. A. V. Ravishankar Sarma)**
53. Book in progress: *Distributive Justice in India – A social-psychological perspective*. (Publisher yet to be decided- most likely, Springer). **(Prof. Lilavati Krishnan)**
54. Priya, K. R. & Dalal, A. K. (Eds.). (in press). *Qualitative research on illness, well-being and self-growth: Contemporary Indian Perspectives*. New Delhi: Routledge **(Prof. Kumar Ravi Priya)**
55. NPTEL Phase II course on Introductory Sociology/ reviewed. **(Prof. A. K. Sharma)**
56. NPTEL Phase II course on Exploring Human Values: Visions of Happiness and Perfect Society/ completed. **(Prof. A. K. Sharma)**
57. Saxena K.K. (2012) "Output Growth during Post-liberalized India: An Input-Output Structural Decomposition Analysis" in *Recession and Its Aftermath*, ed by N M P Verma , Springer (Co-author Rahul Arora and Srabjit Singh) **(Prof. K. K. Saxena)**
58. A contribution on "Livelihood" as part of the WWF-India and HSCB study on "Living Ganga Programme for E-Flows Assessment" (Project No. WWF-I/HSS/20090085 & 86) has been published as a Report "Assessment of Environmental Flows for the Upper Ganga Basin" by the WWF-India, 2012. (Jay O' Keeffe et al.) **(Prof. P. Murali Prasad)**
59. Mathur Somesh K with Luis Barreno, Maria Isabel and Rene Vasconez(2012), *El Comercio De Bienes Amigables Con El Ambiente Y Otros Productos Especializados Del Ecuador*(2012), UTE Press, UTE, Quito, Ecuador in Spanish **(Prof. Somesh K. Mathur)**
60. Mathur Somesh K (2012), *Trade in Climate Smart and Other Specialized Products of Ecuador*, E book, bookboon.com, Denmark and UK. <http://bookboon.com/en/textbooks/economics/trade-in-climate-smart-goods> **(Prof. Somesh K. Mathur)**
61. Game Theory and Networks with A. Jagannatham of EE in a handbook titled 'Decision Analysis: Concepts, Techniques and Application' edited by R. Sengupta of IITK, A. Gupta of RPI, USA and J. Dutta of IITK. **(Prof. Vimal Kumar)**
62. Creating two courses on 'Ethics' in web and video mode for NPTEL, MHRD, GoI. **(Prof. Vineet Sahu)**

Industrial and Management Engineering

63. *Services Marketing*, Published by Pearson India , 8th Edition, in Editorial process (Prof. Jayant Chatterjee)

64. Decision Sciences: Theory and Practice; Raghu Nandan Sengupta, Aparna Gupta and Joydeep Dutta (Edited), CRC Taylor & Francis, ISBN (10): 146656430X; ISBN (13): 9781466564305. (Prof. R. N. Sengupta)
65. Other Decision Making Methods; Subhas C. Ray, Praveen Kulshrestha and Raghu Nandan Sengupta in Decision Sciences: Theory and Practice; (Edited: Raghu Nandan Sengupta, Aparna Gupta and Joydeep Dutta), CRC Taylor & Francis, ISBN (10): 146656430X; ISBN (13): 9781466564305. (Prof. R. N. Sengupta)
66. Statistical Methods; Raghu Nandan Sengupta and Debasis Kundu in Decision Sciences: Theory and Practice; (Edited: Raghu Nandan Sengupta, Aparna Gupta and Joydeep Dutta), CRC Taylor & Francis, ISBN (10): 146656430X; ISBN (13): 9781466564305. (Prof. R. N. Sengupta)
67. Philip D., Tracy, W., Phani B. V., Lois, P., and Markovitch, D., "Chapter 15: Web enabled decision support systems", **Decision Sciences: Theory and Practice - Handbook**, 2013 (Prof. B.V. Phani)
68. B V Phani & Supriya Katti, "Chapter 23: Private Equity and Governance Structure in Emerging and Developing Markets", **Private Equity-Opportunities and Risk**, Financial Market Investment Series, 2014 (Prof. B.V. Phani)
69. Enterprise Resource Planning: A Managerial Perspective, Pearson Education, 2013 (Prof. (Ms) Veena Bansal)
70. Text book for a graduate level course on ERP (in progress) (Prof. (Ms) Veena Bansal)

Materials Science and Engineering

71. "Simulations of Dislocations and Coherent Nanostructures" Anandh Subramaniam and Arun Kumar Chapter contributed to *Computational Finite Element Methods in Nanotechnology* (Ed. Sarhan Musa), CRC Press-Taylor and Francis Group, Boca Raton, 2013. (Prof. Anandh Subramaniam)
72. "Materials Science and Engineering" Anandh Subramaniam and Kantesh Balani E-book (Part-II), MHRD (NMEICT) (*in progress*). (Prof. Anandh Subramaniam)
73. "Introduction to Nanotechnology" Kantesh Balani, Anandh Subramaniam, Arvind Agarwal Cengage learning, New Delhi (*in progress*). (Prof. Anandh Subramaniam)
74. NPTEL Course Development: Web and Video course on Electroceramics (Prof. Ashish Garg)
75. Kantesh Balani, "The Science and Engineering of Materials", by Donald R. Askeland, Pradeep P. Fulay, and Wendelin Wright *Cengage Learning*, ISBN-13: 9788131516416. (Book Adaptation). (Prof. Kantesh Balani)
76. Proceedings 16th International workshop on physics of semiconductors and devices, edited by Y.N. Mohapatra, B. Mazhari, and M.Katiyar, Proceedings of SPIE 0277-786-786X, V 8549, SPIE, 2012 (Prof. (Ms) Monica Katiyar)

77. Deepak, Vikram Verma, Monica Katiyar, **Fabrication of Microelectronic Devices** in "Micromanufacturing Processes", CRC press (Taylor and Francis) (Prof. (Ms) Monica Katiyar)
78. Development of Microstructures and Textures by cross rolling in Comprehensive Materials Processing Technology 2014 (Prof. Nilesh Prakash Gurao)
79. NPTEL Course on "Stereology" – In-Progress (Prof. Sandeep Sangal)

Mathematics and Statistics

80. Lecture notes on Discrete Mathematics (under NPTEL – II). (Prof. Arbind k. Lal)
81. Monograph : Vector Optimization : A View through Variational Analysis. The work is jointly in progress. Co-authored with Prof. Christiane Tammer (Germany) and Prof. Marius Durea (Romania). The work is expected to be finished by October 2014. Contract has been signed with Springer. (Prof. Joydeep Dutta)
82. Statistical Signal Processing: Frequency Estimation, D. Kundu and S. Nandi, Springer, ISBN 978-81-322-0627-9, 2012.
83. Book Chapter (with Khan, M.A.): *Algebras for information systems*. In: *Rough Sets and Intelligent Systems - Professor Zdzisław Pawlak in Memoriam*, Eds. Skowron, A. and Suraj, Z., *Intelligent Systems Reference Library (ISRL) 42*, Springer-Verlag, Berlin, 2013, 381-407. (Prof. (Mrs) Mohua Banerjee)
84. About to complete a NPTEL course on Probability & Distributions. A book based on this course is in progress. (Prof. (Ms.) Nandini Nilakantan)
85. A book on *ALGEBRA* is in progress. (Prof. G. Santhanam)
86. Book writing in progress: A book on the topic "Calculus of Single and Several Variables" is in progress. (Prof. P. Shunmugaraj)
87. *Magnetic Resonance Imaging of Neurological Diseases in Tropics*, (Editor in Chief Rakesh K Gupta, Director and Head, Department of Radiology and Imaging, Fortis Memorial Research Institute, Gurgaon, Haryana, India, (Editor) Sunil Kumar, Professor Department of Radiodiagnosis, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh, India). Jaypee Brothers Medical Publishers (P) Ltd, New Delhi, London, Philadelphia, Panama, Chapter 8 – Preprocessing Tools for Magnetic Resonance Quantification. RKS Rathore, Rakesh K Gupta. pp. 89-118., (Prof. R. K. S. Rathore)

Mechanical Engineering

88. "Industrial Robotics: Technology, Programming and Applications." M. P. Groover, Mitchel Weiss, Roger Nagel, Nicholas G.Odrey and Ashish Dutta, Tata McGraw Hill, 2012. (Published) (Prof. Ashish Dutta)

89. "Robotic Systems - Applications, Control and Programming". **Edited** by Ashish Dutta, ISBN 978- 953-307-941-7, InTech Open Access, 2012, (Published) (Prof. Ashish Dutta)
90. Anurag Gupta and David Steigmann, Chapters on 'Kinematics' and 'Balance Laws', in Continuum Mechanics: Encyclopedia of Life Support Systems (EOLSS), Developed under the auspices of the UNESCO, Eolss Publishers, Oxford ,UK, 2012. (Prof. Anurag Gupta)
91. NPTEL web course on introduction to plasticity/in progress (Prof. Anurag Gupta)
92. **Avinash Kumar Agarwal**, Atul Dhar, "Performance, Emission and Combustion Characteristics of Preheated and Blended Jatropha Oil", Published in **Jatropha, Challenges for a New Energy Crop, Vol. 1, Farming, Economics and Biofuel**, Chapter 26, pp 491-508 (Editors: N. Carels, M. Sujatha, B Bahadur), Springer Science, New York, (2012). (ISBN # 978-1-4614-4805-1) (Prof. Avinash Kumar Agarwal)
93. Book: Compliant Mechanisms (in progress) (Prof. Anupam Saxena)
94. Pipe Inspection Robots for SHM [Structural Health Monitoring], jointly with Prof. Harutoshi Ogai, IPS Waseda University, the composition is in progress and is expected to be over by 2014. (Prof. Bishakh Bhattacharya)
95. Books on "Mathematics for Engineers" and "Mechanics for Engineers" are in Progress. (Prof. Basant Lal Sharma)
96. P.K. Panigrahi and K. Muralidhar, **Schlieren and Shadowgraph Methods in Heat and Mass Transfer**, Springer Briefs in Thermal Engineering and Applied Science, Series New York, USA, (August, 2012) ISBN 978-1-4614-4534-0. (Prof. K. Muralidhar)
97. P.K. Panigrahi and K. Muralidhar, **Imaging Heat and Mass Transfer Processes - Visualization and Analysis**, Springer Briefs in Thermal Engineering and Applied Science, New York, USA, (October, 2012) ISBN 978-1-4614-4790-0. (Prof. K. Muralidhar)
98. Sameer Khandekar and K. Muralidhar, **Dropwise Condensation on Inclined Textured Surfaces**, Springer Briefs in Thermal Engineering and Applied Science, New York, USA, ISBN 978-1-4614-8446-2 (September 2013). (Prof. K. Muralidhar)
99. Book Chapter: Hydrogen generation via photoelectrochemical water splitting of water: in progress, jointly with Dr. P. Mukherjee, Texas A&M
100. *A Book on FEM is under Progress (Prof. N. N. Kishore)*
101. NPTEL Courses deployed (Prof. Nachiketa Tiwari)
 - o Acoustics (video course)
 - o Fundamentals of Composites (web course)
 - o Composites (web course)
 - o Smart Materials, Adaptive Structures, and Intelligent Mechanical Systems (codeveloped with Bishakh Bhattacharya)

102. M Bajpai, B Pande, P Gupta, P Munshi, "Climate Change and Tomography", Environmental Science and Engineering 2013, Springer, pp 183-187. (Prof. Prabhat Munshi)
103. Plasticity: Fundamentals and Applications, Co-Author: U.S. Dixit, ME Dept, IIT Guwahati, To be Published by CRC Press, Taylor and Francis Group, Florida, USA/ In Progress, likely to be published in March 2014. (Prof. P. M. Dixit)
104. Title: **Heat Transfer (Second Edition, Enlarged, Reformatted, includes a CD-ROM)** Author: **P.S. Ghoshdastidar** Year of Publication: **April, 2012 (ISBN 0-19-807997-4)** Number of Pages: **642** Publisher: **Oxford University Press, New Delhi, India (Prof. P. S. Ghoshdastidar)**
105. **MONOGRAPHS:** Title: **Nanofinishing Process using Magnetorheological Polishing Medium** Author(s): **Manas Das, V.K. Jain and P.S. Ghoshdastidar** Year of Publication: **July, 2012 (ISBN 978-3-8484-9496-5)** Number of Pages: **185** Publisher: **Lap Lambert Academic Publishing GmbH & Co. KG, Germany (Prof. P. S. Ghoshdastidar)**
106. **Shantanu Bhattacharya 2013 NPTEL Lectures on Microfluidic systems and design (Under preparation) NPTEL, IIT Kanpur (Prof. Shantanu Bhattacharya)**
107. **Shantanu Bhattacharya 2013 NPTEL Lectures on Microsystems Fabrication by using Advanced Manufacturing processes (under review) NPTEL, IIT Kanpur (Prof. Shantanu Bhattacharya)**
108. **Edited book:** S. K. Sinha, N. Satyanarayana and S. C. Lim (co-editors.), Nanotribology and Materials in MEMS,2013, Springer (ISBN 978-3-642-36934-6). (Prof. Sujeet Kumar Sinha)
109. A book on Theory of Turbomachinery is under progress. (Prof. Subrata Sarkar)
110. **"Micromanufacturing Processes"** (Edited), Taylor and Francis (USA) (October, 2012) (I have contributed four chapters in this book). (Prof.V. K. Jain)
111. **Nanofinishing Process using magnetorheological polishing medium** by Manas Das, V.K.Jain, P.S.Ghoshdastidar, Published by Lambert Academic Publishing, Germany, 2012. (Prof. V. K Jain)
112. Sharma, I., Jenkins, J.T., and Burns J. A. *Dynamics of Deformable Bodies: An Approximate Approach,With Applications To Solar System Bodies*. Monograph in the Springer series on Advances in Geophysical and Environmental Mechanics and Mathematics. Due Dec. 2013. (Prof. Ishan Sharma)
113. Mamilla Ravi Sankar , J. Ramkumar, and V.K.Jain (2012), "Abrasive flow finishing for Micromanufacturing" Micromanufacturing Processes,Editor(s): V. K. Jain, Taylor and Francis Publishers, London, United Kingdom (Prof. J. Ramkumar)
114. Khandekar S and Muralidhar K., Dropwise Condensation on Inclined Textured Surfaces, ISBN 978-1-4614-8446-2, Springer, 2013. (Prof. Sameer Khandekar)
115. Khandekar S. and Moharana M. K., Some Applications of Micromachining in Thermal-Fluid Engineering, Chapter in Introduction to Micromachining, 2nd

Edition, Editor: Dr. V. K. Jain, Narosa Publishing House, 2013. (Prof. Sameer Khandekar)

Physics

116. I am writing a book that will be published from **Cambridge University Press, UK**. The agreement is already signed. The manuscript will be submitted before 31st May, 2014. (Prof. Amit Dutta)
 117. "Molecular Machines" (a book) (draft prepared; negotiations with international publishers in progress). (Prof. Debashish Chowdhury)
 118. Learning Physics from Traditional Indian Stories, produced by Shiksha Sopan (Prof. H. C. Verma)
 119. Second Edition of Introduction to Mechanics, In progress. (Prof. Mahendra Kumar Verma) Solution manual to Introduction to Mechanics, In progress. (Prof. Mahendra Kumar Verma)
- Web-based courses for Sakshat + PPTs**
120. Introductory Mechanics (Prof. Mahendra Kumar Verma) Nonlinear Dynamics (Prof. Mahendra Kumar Verma)
Animations for mechanics (with Prof. Gaurav Dar, BITS Pilani at Goa) (Prof. Mahendra Kumar Verma)
 121. Introduction to the Universe (in progress) (Prof. Pankaj Jain)
 122. Book: / Electronic Structure of Materials / in progress / (Published in August 2013) (Prof. R. Prasad)
 123. Compact plasma and focused ion beams, Sudeep Bhattacharjee 2013 CRC Press - **Francis and Taylor, LLC, USA** In press (To appear in December, 2013) (Prof. Sudeep Bhattacharjee)
 124. M.Srinivas Reddy and R.Vijaya, *Modeling the band structure of Photonic crystals: a tutorial* (Chapter 1) in "Novel features and Perspectives of Photonic Crystals", (Ed. Narendra Kumar and Ali Rostami), Chapter 1, pp. 1-32, Lambert Academic Publishing, Saarbrücken, Oct 2012.
 125. Sunita Kedia, M.Srinivas Reddy and R.Vijaya, *Self-assembled photonic crystal heterostructures* (Chapter 6) in "Novel features and Perspectives of Photonic Crystals", (Ed. Narendra Kumar and Ali Rostami), Chapter 6, pp. 161-188, Lambert Academic Publishing, Saarbrücken, Oct 2012.
 126. Sunita Kedia and R.Vijaya, *Study of emission in self-assembled photonic crystals* (Chapter 9) in "Novel features and Perspectives of Photonic Crystals", (Ed. Narendra Kumar and Ali Rostami), Chapter 9, pp. 219-252, Lambert Academic Publishing, Saarbrücken, Oct 2012.
 127. Aditi Ghosh, Deepa Venkitesh and R.Vijaya, *Erbium-doped fiber lasers* (Chapter 7) in "Guided Wave Optics and Photonic Devices", (Eds. S.K.Bhadra and A.Ghatak), CRC Press, USA, ISBN 978- 1-4665-0613-8, May 2013

128. NPTEL Lecture on Laser Physics is in progress. (Prof. Harshawardhan Wanare)
129. Our research results are published in international journals and also on cond-mat arXiv. (Prof. Zakir Hossain)

Materials Science Program

Laser Technology Program

Design Program

Book chapters

Aerospace Engineering

Biological Sciences and Bio-engineering

Chemical Engineering

Chemistry

1. "Electron Transport Materials (ETMs) in Organic Light Emitting Diodes (OLEDs): Design Considerations and Structural Diversity" Jhulki, S.; Neogi, I.; Moorthy, J. N. In *Organic Structures Design - Applications in Optical and Electronic Devices*; Chow, T. J., Ed.; Pan Stanford Publishing, 2013. (Prof. Rajesh M. Hegde)
2. Book Chapter: A. Chandra, "Vibrational spectral diffusion and hydrogen bonds in normal and supercritical water" in *Concepts and Methods in Modern Theoretical Chemistry*, Eds. P.K. Chattaraj and S.K. Ghosh, CRC Press (2013). (Prof. Rajesh M. Hegde)
3. A book chapter on SC-SC Transformations in Metal Organic Frameworks in progress (Prof. P. K Bharadwaj) (Prof. Rajesh M. Hegde)

Civil Engineering

4. Srivastava, A.K., Sagnik Dey and S.N. Tripathi, 2012, Aerosol characteristics over the Indo-Gangetic basin: Implications to regional climate, In Hayder Abdul-Ruzzak (eds.), *Atmospheric Aerosol-Regional Characteristics-Chemistry and Physics*, *InTech*, <http://dx.doi.org/10.5772/47782>, 47-80.

Computer Science and Engineering

5. In progress: Chapter on Text mining for biology applications (Prof. H. C. Karnick)
6. **Book Chapter:** *The Discrete Time Behavior of Restricted Linear Hybrid Automata* (with F. Stephan, P. S. Thiagarajan, S. Yang), *Modern Applications of Automata Theory*, World Scientific, pages 437-453, 2012 (Prof. Manindra Agrawal).
7. Manish Bajpai, P Munshi, P Gupta, B Pandey, *Climate change and Tomography, Knowledge Systems of Societies for Adaptation and Mitigation of Impacts of*

Climate Change, Environmental Science and Engineering (Springer) Editors: Sunil Nautiyal, K.S. Rao, Harald Kaechele, K.V. Raju, Ruediger Schaldach 2013, pp 183-187 (Prof. Phalguni Gupta)

Electrical Engineering

8. M Phanikumar, Lalan Kumar , and Rajesh M Hegde, "An Unsupervised Approach to Multiple Speaker Tracking for Robust Multimedia Retrieval", In The Era of Interactive Media, Editors : Jin et. al, pp. 519--529, Springer New York, 2013
9. Rajesh M. Hegde, Multi modal signal processing and delivery systems for intelligent human computer communication, Directions, Vol. 11, No.1, pp.68--83, June 2010
10. Naveen Ashish, **Rajesh Hegde**, Charles Huyck, Dmitri Kalashnikov, Sharad Mehrotra, Padhraic Smyth and Nalini Venkatasubramanian, "Situational Awareness Technologies for Disaster Response", In Terrorism Informatics: Knowledge Management and Data Mining for Homeland Security, Editors : Hsinchun Chen et. al, 2007.
11. J Devi, M J Akhtar, M Mahmoud, G Link and M Thumm 2013 Proceedings of the 2nd Global Congress on Microwave Energy Applications (selected papers) edited by R. L. Schulz, D.C. Folz. The Microwave Working Group Ltd., USA, 2013, pp. 159-176. ISBN: 10:0978622219 (Prof. M. J. Akhtar)
12. S. Choudhary and S. Qureshi, " Impact of Defects and Doping on Electronic Transport Properties of Silicon Carbide Nanotubes", Springer Series : Lecture Notes on Nanoscale Science and Technology, 2013 (Prof. S. Qureshi)

Humanities and Social Sciences

13. **Book Chapter:** "Other Decision Making Methods", in *Decision Analysis: Concepts, Techniques and Applications* (Taylor and Francis/CRC Press), in progress. (**Prof. Praveen Kulshreshtha**)
14. Krishnan, L. (2013) Research on Distributive Justice : Implications for Social Policy. In R.C. Tripathi & Y.Sinha (Eds.). *Psychology, Development and Social Policy in India*. pp.223-255. New Delhi : Springer. (e-book, 2013; print version, 2014). (**Prof. Lilavati Krishnan**)
15. Krishnan, L. (2013). Deservingness in Justice and 'Giving'. In G.Misra (Ed.) *Psychology and Psychoanalysis: Volume XIII, Part 3: (Series on History of Science, Philosophy and Culture in Indian Civilization - General Editor: D.P.Chattopadhyay)*. pp.915-933. New Delhi: Centre for Studies in Civilizations. (**Prof. Lilavati Krishnan**)
16. Krishnan, L. How do Indians perceive fairness ? Some puzzles for the researcher. To appear in Ajit K.Dalal (Ed.) *Social Justice and Human Development - Proceedings of the Conference on "Social Justice and Human Development"* held at Allahabad University. (**Prof. Lilavati Krishnan**)

17. Krishnan, L. Justice Research In India : What Do We Know Now ? To appear in G. Misra (Ed.) *Applied Social Psychology in India* (2nd Edition). **(Prof. Lilavati Krishnan)**
18. Krishnan, L. Some Key Factors in Teaching Effectiveness. To appear in Vinod Yadav (Ed.) *Essentials of the Teaching-Learning Process*. **(Prof. Lilavati Krishnan)**
19. Side bias and Indian sculptures. In T. Dutta, M. K. Mandal & S. Kumar (Eds.) *Bias in human behaviour*. Nova Science, New York Completed **(Prof. Braj Bhusan)**
20. PTSD assessment in armed forces: Present status and issues. In G. Kaur, S., Awasthy & M. K. Mandal (Eds.) *Psychometric testing in armed forces: Issues & challenges*. Pentagon Press, New Delhi, pp. 193-209 Completed **(Prof. Braj Bhusan)**
21. Ageing, religiosity and mental health: Some reflections. In Francis, A. (Ed.) *Social work practice in mental health*. Sage, New Delhi In progress **(Prof. Braj Bhusan)**
22. Sociological Investigation of Palliative Care: A Study in Kerala, in Raju, S. Siva, Somayajulu, Ulimiri V., and Prakasam, C.P. (eds.), *Ageing, Health and Development*, B.R.Publishing Corporation, Delhi, 2013 (jointly with T. Shukkoor).

Industrial and Management Engineering

23. Chapter 15: Web enabled decision support systems (Book Name: Decision Sciences: Theory and Practice – Handbook) 2013 (Working) Co- author Philip, D., Tracy, W., Phani, B. V., Lois, P., and Markovitch, D.
24. Chapter 7: Queuing Theory, Sequencing and Scheduling (Book Name: Decision Sciences: Theory and Practice – Handbook) 2013 (Working) Co-author Gurler, U., and Berk, E.

Materials Science and Engineering

25. Amit S. Sharma, **Krishanu Biswas** and B.Basu; “ Fabrication of Nanocrystalline Materials by Mechanical Treatments” , *Book Chapter* for Handbook of Mechanical Nanostructuring, Wiley-VCH (2013) (in progress) (Prof. Krishanu Biswas)

Mathematics and Statistics

26. T. Romano, M. Banerjee, E. Venturino: A comparison of several plankton models for red tides, In `Zooplankton: Species Diversity, Distribution and Seasonal Dynamics, Nova Science Publishers, New York, in progress.
27. M. Banerjee: Turing and non-Turing patterns in two-dimensional prey-predator models, In `Applications of Nonlinear Dynamics and Chaos in Science and Engineering', Springer, in progress.
28. Book Chapter in Progress: Convergence of slices, geometric aspects in Banach spaces and proximality, (To be published by Springer; the chapter is being revised). (Prof. P. Shunmugaraj)

Mechanical Engineering

29. *Book chapter: Optical interferometers: Principles and Applications in Transport Phenomena*, S. Verma, Y.M. Joshi, K. Muralidhar, in **Interferometry - Principles and Applications**, Edited by Mark E. Russo, ISBN: 978-1-61209-347-5, Chapter 13, pp. 353-414 (2012). (K. Muralidhar)
30. Book Chapter titled "Flange Wrinkling in Deep Drawing" in the Book titled 'Metal Forming: Technology and Process Modelling, Co-Author: R.K. Saxena, ME Dept., SLIET, Longowal, Edited by U.S. Dixit and R.G. Narayanan, ME Dept, IIT Guwahati, Published by McGraw-Hill Education (India) Pvt. Ltd., New Delhi, 2013/ Completed. (Prof. P. M. Dixit)
31. C. S. Bhatia, E. Rismani-Yazdi and S. K. Sinha, "Application of DLC in magnetic recording Tribology", in *Encyclopedia of Tribology*, 2013, Pages 86-95, Springer (Editors- Q Jane Wang, Yip-Wah Chung) (Prof. Sujeet Kumar Sinha)
32. NalamSatyanarayana, MyoMinn, Mohammed Abdul Samad and Sujeet K. Sinha, Tribology of Polymer Coatings/Thin Films, in *Encyclopedia of Tribology*, 2013, Springer (Editors- Q Jane Wang, Yip-Wah Chung) (Prof. Sujeet Kumar Sinha)

Physics

Materials Science Program

Laser Technology Program

Design Program

JOURNAL PAPERS

Aerospace Engineering

1. Raj, N., and Abhishek, "Autonomous Hovering of Coaxial Micro Air Vehicle," under review with Defence Science Journal.
2. Abhishek, "Prediction of Helicopter Blade Loads for an Unsteady Pull-up Maneuver Using Lifting-line and CFD/CSD Analyses," Journal of Aerospace Sciences and Technologies, Vol. 65, No. 2, May 2013, pp. 178-195.
3. V. Pandey, A. De, A. [Kushari](#), " Reacting flow and emission characteristics in a liquid fuelled aircraft engine combustor ", *International Journal of ChemTech Research* , 5 (2) , 2013, pp. 912-917.
4. RakeshYadav, [A. Kushari](#), V. Eswaran, Atul K. Verma, "Weighted Sum of Gray Gas Modeling for Non Gray Radiation in Combusting Environment using Hybrid Solution Methodology", *Numerical Heat Transfer, Part B: Fundamentals*, 64(2), 2013, pp. 174-197.

5. Suresh Lal, Meenakshi Gupta, A. Kushari, J. C. Kapoor and S. Maji, "Suppression of Pool Fire in a Large Enclosure with Water Mist", *International Journal of Spray and Combustion Dynamics*, Vol. 5(3), 2013, pp. 181-199.
6. S. M. Ananth and A. Kushari, "Effect of Throttle Conditions on Fluid Dynamic Instabilities in Axial Compression Systems", *Journal of the Institution of Engineers (India): Series C*, Vol. 94(1), 2013, pp. 65-74.
7. S. M. Ananth and A. Kushari, "Quasi Steady Prediction of Coupled Bending - Torsion Flutter of Turbo-machinery blades under Classic Surge", *Journal of Applied Mechanics - Transaction ASME*, Vol. 80, 2013, 051010-1 - 051010-15.
8. N. P. yadav and A. Kushari, "Identification of the Cold Flow Perturbation Sources in a Dump Combustor with Tapered Exit", *Journal of Fluids Engineering - Transaction ASME*, Vol. 135(1), 2013, 014502-1 - 014502-5.
9. RakeshYadav,A. Kushari, V. Eswaran, Atul K. Verma, "A Numerical Investigation of the Eulerian PDF Transport approach for Modeling of Turbulent Non-Premixed Pilot Stabilized Flames", *Combustion and Flame*, Vol. 160(3), 2013, pp. 618-634
10. S. M. Ananth and A. Kushari, "A simple feedback control strategy for controlling the axial compressor surge", *International Journal of Flow Control*, Vol. 4, no. 3-4, 2012, pp 109-123.
11. S. M. Ananth and A. Kushari, "A Parametric Investigation of Geometric Variation on Fluid Dynamic Instabilities in Axial Compression Systems", *International Journal of Rotating Machinery*, Volume 2012(2012), Article ID 687354, doi:10.1155/2012/687354.
12. Sushant Chandra, M.C. Keerthi, A. Kushari, and R. K. Sullerey, "Flow control in serpentine inlet duct using vortex generator jets", *Journal of Aerospace Sciences and Technologies*, Vol. 64, No. 3, 2012, pp. 169-175.
13. N. P. Yadav and A. Kushari, "Passive Control of lifted flame in a dump combustor", *Fuel*, Vol. 93, 2012, pp. 67-74.
14. S. Dirbude, V. Eswaran and A. Kushari, "Droplet Vaporization Modeling of Rapeseed and Sunflower Methyl Esters", *Fuel*, Vol. 92, 2012, pp. 171-179.
15. RakeshYadav,Atul K. Verma, A. Kushari, V. Eswaran, Effect of Including Non Gray Radiation on Flame Characteristics of a Turbulent H₂ Jet Flame, HMTTC1300527, Proceedings of the 22thNational and 11th International ISHMT-ASME Heat and Mass Transfer Conference December 28-31, 2013, IIT Kharagpur, India.
16. RakeshYadav,A. Kushari, V. Eswaran, Atul K. Verma, "A Detailed Validation Study of Multi-Environment Eulerian PDF Transport method for modeling Turbulent Non-premixed combustion", GTIndia2012-9640, Proceedings of ASME Gas turbine India Conference 2012, December 1, 2012, Mumbai, Maharashtra, India.
17. VivekPandey, Ashoke De, AbhijitKushari, " Numerical Investigation of Combustion Characteristics in a Liquid Fueled Can Combustor", GTIndia2012-9719, Proceedings of ASME Gas turbine India Conference 2012, December 1, 2012, Mumbai, Maharashtra, India.

18. K. NareshBabu, A. Kushari and C. Venkatesan, "Effect of Adjacent Blade Motion on the Aerodynamics of a Linear Cascade Blade", GT2012-68666, Proceedings of ASME Turbo Expo 2012, June 11-15, 2012, Copenhagen, Denmark.
19. ArunRajpoot, TusharSikroria and A. Kushari, "Experimental investigation of Flow Field in a Curved 2D Nozzle", NPC-2013-Paper no.17005, National Propulsion Conference, 21-23 Feb. 2013, IIT Madras, Chennai, India.
20. S. N. Masutage and A. Kushari, "Fluidic Control of Flow Turning in a Curved Nozzle", NPC-2013-Paper no.17002, National Propulsion Conference, 21-23 Feb. 2013, IIT Madras, Chennai, India.
21. VivekPandey, Ashoke De and A. Kushari, Parametric Study of Flow and combustion Characteristics in a Liquid Fueled Aircraft Engine Gas Turbine Combustor", NPC-2013-23006, National Propulsion Conference, 21-23 Feb. 2013, IIT Madras, Chennai, India
22. Prasanna Kumar I, Mohite PM and Kamle S. Axial tensile testing of single fibres. *Modern Mechanical Engineering*, Vol. 2(4), 2012; 151-156.
23. Mohite PM and Upadhyay CS. A generalized adaptive analysis of laminated plates. *Computers and Structures*, Vol. 112-113, December 2012, 217-234.
24. Prasanna Kumar I, Mohite PM and Kamle S. Axial compressive strength testing of single carbon fibres. *Archives of Mechanics*, Vol. 65, 2013, 27-43.
25. Prasanna Kumar I, Mohite PM and Kamle S. Longitudinal shear modulus of single aramid, carbon and glass fibres by torsion pendulum tests. *International Journal of Aerospace and Mechanical Engineering*.
26. Jain A, Upadhyay CS and Mohite PM. Micromechanics based fibre breaking damage mesomodel for unidirectional fibrous laminated composites, *Aerospace Science and Technology*.
27. A. De, S. Acharya, "Parametric study of upstream flame propagation in hydrogen-enriched premixed combustion: Effects of swirl, geometry and premixedness", *International Journal of Hydrogen Energy*, 2012, 37, 14649-14668.
28. A. De, S. Acharya, "Dynamics of upstream flame propagation in a hydrogen enriched premixed flame", *International Journal of Hydrogen Energy*, 2012, 37, 17294-17309.
29. S. K. Mishra, A. De, "Coupling of reaction and hydrodynamics around a reacting block modeled by Lattice Boltzman Method (LBM)", *Computers and Fluids*, 2013, 71, 91-97.
30. V. Pandey, A. De, A. Kushari, "Reacting flows and emission characteristics in a liquid fuelled Aircraft engine combustor", *International Journal of Chem Tech Research*, 2013, 5(2), 912-917.
31. A. De, S. K. Mishra, "Simulation of Chemical Reactions Induced by Droplet in a Phase Separating Media Using Lattice Boltzmann-kinetic Monte-Carlo Framework", *Computers and Fluids*, (under review).
32. [Contact of a Rigid Cylindrical Punch with an Adhesive Elastic Layer](#)

- The Journal of Adhesion*, 88 (1), 2012, Pages 1-31 R Dalmeya, I Sharma, C Upadhyay, A Anand
33. [A generalized adaptive finite element analysis of laminated plates](#)
Computers & Structures, Volumes 112–113, December 2012, Pages 217-234 P.M. Mohite, C.S. Upadhyay
 34. [Micromechanics based ply level material degradation model for unidirectional composites](#)
Composite Structures, Volume 94, Issue 2, January 2012, Pages 671-680 V. Murari, C.S. Upadhyay
 35. [Micromechanics based diffuse damage model for unidirectional composites](#)
Composite Structures, Volume 96, February 2013, Pages 419-432 V. Murari, C.S. Upadhyay
 36. Venkatesan, C., Swaroop, B.B., Haritha, P., and Gupta, R., "Development of autonomous mini helicopter: Challenges faced ", *Journal of Aerospace Sciences and Technologies*, Vol. 65, No. 1A, Feb. 2013.
 37. V. Laxman, Venkatesan, C. and Byun, Y., "Influence of Blade Geometric Parameters on Aeroelastic Response of a Helicopter Rotor System ", *Journal of Aerospace Engineering*, Vol. 26, No. 3, 2013.
 38. Puneet Singh, and Venkatesan, C., "Aerodynamic Performance of a Coaxial Rotor System for Micro Air Vehicles ", *International Conference on Intelligent Unmanned Systems*, Singapore, October 2012.
 39. Swaroop, B.B., Haritha, P., and Venkatesan, C., "Flight Testing of a Mini Helicopter in Hover ", *International Conference on Intelligent Unmanned Systems*, Singapore, October 2012.
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127. **High Accuracy Silhouette Based Reconstruction with Conventional Optics** Koteswara Rao Gadde, Priya Singh and K S Venkatesh 2nd International Conference on Computing and Computer Vision (ICCCV 2013) June 1-2, 2013, Paris, France.
128. **Self Localization with Edge Detection in 3D Space** Vaishali Ailani, Disha Prakash and K S Venkatesh 2nd International Conference on Computing and Computer Vision (ICCCV 2013) June 1-2, 2013, Paris, France.
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Materials Science Program
Laser Technology Program
Design Program

**PAPERS PRESENTED IN
SEMINARS/CONFERENCE/WORKSHOPS/SYMPOSIA (SUBMITTED)**

Aerospace Engineering

1. Reddy, S.P., and Tewari, A., *Optimal Aeroassisted Orbital Transfer using Predictive Time- Linear Control with Adaptation*, submitted to J. Spacecraft & Rockets, June 2013.
2. Singla, A., and Tewari, A., *Command Shaped Closed-Loop Control of Flexible Robotic Manipulators*, submitted to Advanced Robotics, Robotics Society of Japan, Aug. 2013.

Biological Sciences and Bio-engineering

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8. P K Ezhil Kumar and D P Mishra, "Experimental Investigation of Combustion Noise in a 2D Trapped Vortex Combustor", Proceedings of 22nd National Conference on IC Engine and Combustion, NIT Calicut, India, pp. 421- 423, 2011.

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Chemical Engineering

1. Tapas Palai, Avaneesh K. Singh and Prashant K. Bhattacharya, "Enzyme, β -galactosidase immobilized on membrane surface for galacto-oligosaccharides formation from lactose: kinetic study with feed flow under recirculation loop"
2. Tapas Palai, Ashok Kumar and Prashant K. Bhattacharya, "Synthesis and characterization of thermo-responsive poly-N-isopropylacrylamide bioconjugates for application in the formation of galacto-oligosaccharides"
3. Gunjan K. Agrahari, Nishith Verma and Prashant K. Bhattacharya, "Removal of benzoic acid from water by reactive extraction using hollow fiber membrane contactor: experiment and modeling"
4. Gunjan K. Agrahari, Niharika Pandey, Nishith Verma and Prashant K. Bhattacharya, "Membrane contactor for reactive extraction of succinic acid from aqueous solution by tertiary amine"
5. Vinay K Sachan, Aruna Devi, Abhishek Agrawal, Rajaram K Nagarale and Prashant K. Bhattacharya, "Proton Transport Properties of Sulphanilic Acid Tethered Poly(Methyl Vinyl Ether-alt-Maleic Anhydride)-PVA Blend Membranes" Vinay K. Sachan, Raj G S. Pala, Rajaram. K. Nagarale, Prashant K. Bhattacharya,

Electrochemical characterization of sulfonated poly(phenylene oxide)/poly(vinyl alcohol) composite membrane

Chemistry

1. A lecture entitled "Chemistry of C-2 Substituted Glycals en route to Some Glycosidase Inhibitors" was delivered in "CRSI Mid year meeting Symposium" at CDRI, Lucknow on July 21, 2012.
2. Delivered two lectures at "Sikkim Government College, Tedong, Gangtok," on April 12, and April 13, 2013 (i) Selected reagents for transformations addressing selectivity in organic synthesis and (ii) "Carbohydrates: Much more than mere source of energy" in a Science Academies' workshop titled "Modern Trends in Chemistry" sponsored by the Academies of Sciences, India".
3. D. Sil, S. Bhowmik, S. K. Ghosh, S. P. Rath* A Novel Series of Oxo- and Hydroxo-Bridged Bisiron(III) Porphyrins: Synthesis, Structure and Properties 15th CRSI National Symposium in Chemistry (NSC-15) 1st to 3rd February, 2013 and the 7th CRSI-RSC Symposium in Chemistry on 31st January, 2013 organized by the Department of Chemistry, Banaras Hindu University, Varanasi
4. S. A. Iqbal, S. Brahma, S. P. Rath* Supramolecular Chirality in Dimeric Metalloporphyrin Hosts: Synthesis, Structure and its Rationalization" 15th CRSI National Symposium in Chemistry, Varanasi, from February, 1-3, 2013
5. S. A. Iqbal, S. Brahma, S. P. Rath* Supramolecular Chirality in Dimeric Metalloporphyrin Hosts: Synthesis, Structure and its Rationalization. CHEM-FEST held at IIT Kanpur, 2012
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7. Sudharsan Pandiyan, Priya V. Parandekar, Om Prakash, Thomas K. Tsotsis, Nisanth N. Nair, and Sumit Basu, *Chem. Phys. Lett.* (Submitted).
8. "The curious role of solvated molecular radical anions in the prebiotic synthesis of sugars", A. Banerjee, R. Tripathi, Nisanth N. Nair, Ankan Paul (submitted)
9. V. Karthik, I. A. Bhat and G. Anantharaman, "Backbone Thio-Functionalized Imidazol-2-ylidene-Metal Complexes: Synthesis, Structure, Electronic Property and Catalytic Activity" Submitted (accepted recently)

Civil Engineering

Computer Science and Engineering

1. Rajeev Rathore, Surya Prakash, Phalguni Gupta, Efficient Human Recognition System using Ear and Profile Face, *Proceedings of IEEE International Conference on*

Biometrics Theory: Applications and Systems (BTAS), Washington DC, USA, September- October, 2013

2. Aditya Nigam, Phalguni Gupta, Quality Assessment of Knuckleprint Biometric Images, IEEE International Conference on Image Processing (IEEE ICIP 2013), Melbourne, Australia, September 2013.
3. Manish Bajpai, P Gupta, P Munshi, Multi-core CPU based three-dimensional image reconstruction for limited view tomography, The 7th world congress on industrial process tomography, Karkov, Poland, 2013
4. Kamlesh Tiwari, Soumya Mandi, Phalguni Gupta, A Heuristic Technique for Performance Improvement of Fingerprint Based Integrated Biometric System, 9th International Conference on Intelligent Computing, Nanning, China, July 2013
5. Rajesh R Pillai, Vandana Dixit Kaushik, Phalguni Gupta, An Efficient Natural Image Deblurring Algorithm, 9th International Conference on Intelligent Computing, Nanning, China, July 2013
6. Shubham Jain, Aditya Nigam and Phalguni Gupta, Age-Invariant Face Recognition using Shape Transformation 9th International Conference on Intelligent Computing, Nanning, China, July 2013
7. Aditya Nigam, Anvesh T and Phalguni Gupta, Iris Classification Based on its Quality, 9th International Conference on Intelligent Computing, Nanning, China, July 2013
8. Mangat Rai Modi, Saiful Islam and Phalguni Gupta, Edge based Steganography on Coloured Images, 9th International Conference on Intelligent Computing, Nanning, China, July 2013
9. Kamlesh Tiwari, Joyeeta Mandal, Phalguni Gupta, Segmentation of Slap Fingerprint Images, 9th International Conference on Intelligent Computing, Nanning, China, July 2013
10. Aditya Nigam and Phalguni Gupta, Multimodal Personal Authentication System Fusing Palmprint and Knuckleprint, 9th International Conference on Intelligent Computing, Nanning, China, July 2013

Electrical Engineering

1. D. Jain and U. Das, "SiC light emitting quantized structures on silicon by spin-on technique", submitted Aug. 05, 2012 to IEEE Trans. on Nanotech. (TNANO-00250-2012)[currently being revised]
2. V. S. Nair and U. Das, "QCSE Tuned Embedded Ring Modulator", JLT-14820-2013.R1, IEEE/OSA Journal of Lightwave Technology.
3. S. Das and U. Das, "Pixel isolation and dark current reduction in Type-II InAs/GaSb superlattice photodiodes by femto-second laser annealing", assigned the number 423682, The Scientific World Journal, special issue on "Narrow-Gap Semiconductors and Low-Dimensional Structures for Optoelectronic Applications"

4. A. Jha and M. J. Akhtar 2013 A generalized rectangular cavity approach for determination of complex permittivity of materials IEEE Transactions on Instrumentation and Measurement (Submitted)
5. H.B. Baskey, M. J. Akhtar and T.C.Shami 2013 Measurement of permittivity and permeability of thin dielectric and composite sheets placed at the center of a rectangular waveguide To be Submitted
6. M. J. Akhtar, J. Devi, N. K. Tiwari, M. Mahmoud, G. Link and M. Thumm 2013 Microwave thermal modeling of metal powders at 2.45 GHz using their effective constitutive properties IEEE Transactions on Magnetics (to be submitted)
7. H. B. Baskey and M J Akhtar 2013 Dielectric Mixing Model for Slab Shaped Samples Placed in Rectangular Waveguide IEEE Geoscience and Remote Sensing Letters (to be submitted)
8. **N.K. Verma.**, A. Agarwal, R.Sevakula.,D. Prakash "Improvement in preprocessing for machine fault diagnosis", IEEE 8th International Conference on Industrial and Information Systems(ICIIS), Universi Kandy, Sri Lanka, (Submitted)
9. A.Kumar, J.Ramkumar, **N.K.Verma**, S. Dixit, "Detection and Classification of faults in Drilling using Vibration Analysis" The 2014 International Conference on Computational Science and Computational Intelligence (CSCI) Las Vegas, USA(Submitted)
10. Mukesh Kumar Singh, Govind Sharma and Naren Naik, "Joint optimization of SINR and power allocation to relays in cluster-based wireless sensor networks".
11. Ashish Vyas, Rishabh Maheshwari, Pradeep Kumar, and Naren Naik, "Dual antenna array for radiolocation of RCIED trigger".
12. R. Singh, K. Rajawat, "Decentralized Tracking in Wireless Sensor Networks," ICASSP, 2014
13. A. Jalan, K. Rajawat, R. Hegde, "Encoding Schemes for Text Messages in Indian Languages," NCC 2014
14. K. Rajawat, E. Dall'Anese, and G. B. Giannakis, "Dynamic network delay cartography," *IEEE Transactions on Information Theory*, 2013

Humanities and Social Sciences

1. Archana Srivastava and Somesh K Mathur(2012),"Contribution of Trade Cost, Transportation Cost and Income Similarity on India's Trade: A Gravity Model Approach", paper presented at the IIFT Conference entitled 'Empirical Issues in International Trade and Finance', Kolkata,Jan.10-11,2013
2. Archana Srivastava and Somesh K Mathur(2012),"Heckscher Ohlin Vanek Theorem: An Excess Supply Approach", paper presented at the IIFT Conference entitled 'Empirical Issues in International Trade and Finance', Kolkata,Jan.10-11,2013

3. Prabhjot Kaur and Somesh K Mathur(2012), Does Trade Cause Inequality : An Empirical Analysis of Developing Countries, Paper Presented at the Indian Econometric Society Conference, Pondicherry, January, 2012
4. Hershita gupta and Somesh K Mathur(2012), Estimation of Poverty Measures from Lorenz Curves , Paper Presented at the Indian Econometric Society Conference, Pondicherry, January, 2012
5. Dynamic Emergence of Property Rights from Anarchy (Submitted)
6. Product Cycle and Wage Inequality (Submitted)
7. Experiences of family caregivers in the context of mental illness: Suffering, Acceptance and Resilience, *3rd Global Conference on Making Sense Suffering*, organized by the Inter-disciplinary.Net, Salzburg, Austria , 13th - 15th November 2012 (jointly with B. Banerjee)
8. Caregiving experiences of family members of relatives with paranoid schizophrenia: Abio-psychosocial approach , *International Conference on Schizophrenia*, organized by SCARF, Chennai , 21st -23rd September, 2012 (jointly with B. Banerjee)
9. Socio-cultural structuring of health beliefs: Implications for health behaviour and clinical practice. *Tenth Conference of Indian Association for Social Sciences and Health on Health, Regional Disparities and Social Development*, organized by Centre of Social Medicine and Community Health, School of Social Sciences, Jawaharlal Nehru University, New Delhi, 21 - 23 November, 2012 (jointly with B. Banerjee)
10. Illness perception: Narratives and social representations. *4th Global Conference: Storytelling Global reflections on narrative*, organized by the Inter-Disciplinary.Net, U.K, 21 - 24 May, 2013, Prague, Czech Republic (The paper was part of a panel titled, 'In sickness and in health: Individual/community dynamics in Indian cultural narratives' that was jointly proposed along with two other colleagues)
11. Rane, M. & Bhushan. B. Exploring the effect of imagery on visual identity: An eye-tracking study

Industrial and Management Engineering

1. Reliability in Portfolio Optimization using Uncertain Estimates: Raghu Nandan Sengupta, Rachit Seth, Akshit Awasthi and Peter Winker; OMEGA, (Under 1st stage of re-work after 1st review).
2. Multi-Objective Portfolio Modelling using Reliability Based Design Optimization: Raghu Nandan Sengupta and Siddharth Sahoo; Computational Management Science, (submitted after 1st review).
3. Robust and Reliable Portfolio Optimization Formulation of a Chance Constrained Problem. Raghu Nandan Sengupta and Rakesh Kumar; Computational Management Science, (submitted).
4. Bayesian Estimation under Asymmetric Loss Function: Raghu Nandan Sengupta, Deborshi Mallick and Angana Sengupta; Statistics and Probability Letters, (submitted).

Materials Science and Engineering

1. Ashish Garg, Shailendra Kumar Gupta, Jacek J. Jasieniak, Th. Birendra Singh and Scott E. Watkins, Improved lifetimes of Organic Solar Cells with Solution-Processed Molybdenum Oxide Anode Modifying Layers, *Progress in Photovoltaics: Research and Applications* (2013)
2. Deepa Singh, Deepak Gupta and Ashish Garg, Interface Morphology Driven Control of Electrical Properties of PVDF-TrFE and PMMA Blend M-I-M Capacitors
3. Tapendu Mandal, B.K. Mishra and **Ashish Garg** and D. Chaira, Optimization of process variables for the mechanosynthesis of nanocrystalline hydroxyapatite
4. A. Roy, S. Auluck, R. Prasad and Ashish Garg, Orientation Dependence of Optical Properties of epitaxial $\text{Bi}_4\text{Ti}_3\text{O}_{12}$ thin films: an experimental and theoretical study
5. P.Yousaf Khan and **Krishanu Biswas**, "Melting and Solidification Behaviour of Bi-Pb Multiphase Alloy Nanoparticles Embedded in Aluminum Matrix", *J. Nanscience and Nanotechnology* (2013)
6. Sumanta Samal, Ajit Misra, **Krishanu Biswas** and Govind; "Mechanical Properties of Novel Ti-Al-Cu-Co-Fe High Entropy Alloys", *Materials Science Forum* (2013)
7. P.Yousaf Khan and **Krishanu Biswas**, "Effect of Matrix on Melting and Solidification Behaviour of Pb-Sn Embedded Alloy Nanoparticles", *Phil Magz..* (2013)
8. H,Kumar, P.Ghosh and **Krishanu Biswas**, "Fly ash and kaolinite-based geopolymer: processing and geotechnical property", *J. Materials in Civil Engg.*(2013)
9. Sumanta Samal, Priya Gautam, Swapnil Agarwal **Krishanu Biswas** and Govind; "Microstructural evolution of ultrafine Ti-Fe-Co alloys", *Materials Science Forum*(2013)
10. Sumata Samal and **Krishanu Biswas**; "Microstructural evolution in novel suction cast Ti-Fe-Co alloys", *Mater. and Metall. Trans. A.* (2013)
11. Development and Investigation of Agarose Bioplastic as a Drug-delivery Vehicle (September, 2013)
12. Enhancing Beta-Phase of Poly (Vinylidene Fluoride) by Filler Addition: Comparison Between Cellulose, Nanotubes and Clay (October 2013)

Mathematics and Statistics

1. Completely bounded λ_p -sets that are not Sidon (with K.E. Hare) submitted
2. M.K. Panda, S. Ghorai; Penetrative phototactic bioconvection in an isotropic scattering suspension; (submitted)
3. A. Ganguly, D. Kundu and Sharmishtha Mitra. "Bayesian Analysis of Simple Step-Stress Model under Weibull Lifetimes";

4. D. Samanta, A. Ganguly, D. Kundu and Sharmishtha Mitra. "Order Restricted Bayesian Inference for Exponential Simple Step-Stress Model".
5. Convergence of Cubic Spline Super Fractal Interpolation Functions (with Srijanani Anurag Prasad), uploaded in arxiv: 1201.3997v1 (Math. DS), Submitted.
6. Multiresolution Analysis Based on Coalescence Hidden Variable FIF (with Srijanani Anurag Prasad), uploaded in arxiv: 1201.3550v1 (Math. DS), Submitted.
7. Super Fractal Interpolation Functions (with Srijanani Anurag Prasad), uploaded in arxiv: 1201.3491v1 (Math. DS), Submitted.
8. Chaos in Dynamics of a family of Transcendental Meromorphic Functions (with M. Sajid), Submitted.

Mechanical Engineering

1. R.K. Jain, S. M. Majumder and Ashish Dutta, "Active 4 DOF based RCC wrist using segmented IPMCs for robotic peg-in-hole assembly". SICE International conference, Nagoya , 2013 (Submitted)
2. **Avinash Kumar Agarwal**, Rakesh Kumar Maurya, Pravesh Chandra Shukla, Akhilendra Pratap Singh, Atul Dhar, Dhananjay Kumar Srivastava, "Effect of Injection Parameters on Combustion Characteristics of Common Rail Direct Injection Single Cylinder Research Engine", submitted to **Fuel processing technology** on 29th June 2013 (Ref. No. FUPROC-S-13-00635).
3. **Avinash Kumar Agarwal**, Tanmay Kar, "Development of a Single Cylinder CNG Direct Injection Engine and Its Performance, Emissions and Combustion Characteristics", submitted to **International Journal of Oil Gas and Coal Technologies** on 25th July 2013. (Ref. No. IJOGCT-62337)
4. Gajendra Singh, Akhilendra Pratap Singh, **Avinash Kumar Agarwal**, "Experimental Investigation of Combustion, Performance and Emission Characterization of Biodiesel Fuelled HCCI Engine Using External Mixture Formation Technique", submitted to **Sustainable Energy Technologies and Assessment** on 8th July 2013 (ref. No. SETA-S-13-00191.pdf).
5. **Avinash Kumar Agarwal**, Prakhar Bothra, Tarun Gupta, Pravesh Chandra Shukla, "Evaluation of Emission Profile of Two-Wheelers at a Traffic Junction", submitted to **Particuology** on 27th July 2013 (Ref. No. PARTIC-S-13-00194.pdf)
6. Rakesh Kumar Maurya, **Avinash Kumar Agarwal**, "Experimental Investigations of Particulate Size and Number Distribution in a Ethanol and Methanol Fuelled HCCI Engine", submitted to **Journal of Energy Resource Technology** on 9th August (Ref. No. JERT-13-1231)
7. **Avinash Kumar Agarwal**, Himanshu Karare, Atul Dhar, "Particulate Characterization of a Methanol-Gasoline Blend (Gasohol) Fuelled Medium Duty Spark Ignition Transportation Engine", submitted to **Fuel Processing Technology** on 25th July 2013 (ref. No. FUPROC-S-13-00749.pdf)

8. **Avinash Kumar Agarwal**, Tarun Gupta, Prakhar Bothra, Pravesh Chandra Shukla, "Emission Profile Evaluation of Four-Wheelers at a Traffic Junction" submitted to **Environmental Science and Technology** on 7th September 2013 (Ref. No. es-2013-037397).
9. Atul Dhar, **Avinash Kumar Agarwal**, "Effect of Karanja Biodiesel Blends on Engine Wear in a Transportation Engine", submitted to **FUEL** on 24th October 2013 (Ref. No. JFUE-D-13-01768.pdf)
10. **Avinash Kumar Agarwal**, Paras Gupta, Atul Dhar, "Combustion, Performance and Emission Characteristics of a Newly Developed CRDI Single Cylinder Diesel Engine", submitted to **Sadhana** on 14th October 2013 (Ref. No. SADH-S-13-00759.pdf).
11. **Avinash Kumar Agarwal**, Anuj Agarwal, Akhilendra Pratap Singh, "Time Resolved Spatial Combustion Visualization and Diagnostics for Biodiesel Blends Using Engine Endoscopy", submitted to **Applied Energy** on 15th October 2013 (Ref. No. PEN-S-13-04917.pdf).
12. Kewal Dharamshi, **Avinash Kumar Agarwal**, "Parametric Study of a Laser Ignited Hydrogen-Air Mixture in a Constant Volume Combustion Chamber", submitted to **International Journal of Hydrogen Energy** on 15th October (Ref. No. HE-S-13-03845.pdf).
13. **Avinash Kumar Agarwal**, Jithin Lukose, Akhilendra Pratap Singh, Gajendra Singh, "Exhaust Particulate Characterization of Gasoline Fuelled Homogenous Charge Compression Ignition (HCCI) Combustion Engine" submitted to **Carbon** on 22nd October 2013 (Ref. No. CARBON-D-13-02481.pdf).
14. Atul Dhar, **Avinash Kumar Agarwal**, "Effect of Karanja Biodiesel Blends on Particulate Emissions from a Transportation Engine", submitted to **FUEL** on 23rd October (Ref. No. JFUE-S-13-02363.pdf).
15. Deepak Khurana, **Avinash Kumar Agarwal**, "Experimental Evaluation of Oxidation Stability and Effect of Various Antioxidants on Biodiesel from Karanja (*Pongamia pinnata*), Neem (*Azadirachta indica*) and Jatropha (*Jatropha curcas*) Oils", submitted to **FUEL** on 24th October 2013 (Ref. No. JFUE-S-13-02374.pdf).
16. Mergel, J. C., Sauer, R. A., and Saxena, A., 2013, "Computational optimization of adhesive microstructures based on a nonlinear beam formulation," *Structural and Multidisciplinary Optimization*, submitted.
17. Goswami, M., Saxena, A. and Munshi, P., 2012, "On Optimal, Efficient and Reliable Reconstruction from LVT Data using the PI grid," *Measurement Sciences and Technology*, revised
18. Nath D. and Kalra M. S., "Solution of Grad-Shafranov Equation by Method of Fundamental Solutions" *Journal of Plasma Physics*, Manuscript ID PLA-RA-2013-0109.

Physics

1. A.K. Sharma and **D. Chowdhury**, "First-passage problems in DNA replication: effects of template tension on stepping and exonuclease activities of a DNA polymerase motor". JOURNAL of PHYSICS: CONDENSED MATTER (*IOP, UK*), SUBMITTED (2013).
2. **D. Chowdhury** "Centenary of "Researches on irritability of plants" by Jagadis Chandra Bose". Current Science (Current Science Association, in collaboration with Indian Academy of Sciences), SUBMITTED (2013).
3. **D. Chowdhury** Book Review (Invited): "Simple Brownian Diffusion: An Introduction to the Standard Theoretical Models", by Daniel T. Gillespie and Effrosyni Seitaridou (Oxford University Press, 2013). **Physics Today** (American Institute of Physics, USA), SUBMITTED (2013).
4. **D. Chowdhury** "Michaelis-Menten at 100 and allostereism at 50: driving molecular motors in a hailstorm with noisy ATPase engines and allosteric transmission", SUBMITTED (2013).
5. A. K. Sharma, B. Shtylla and **D. Chowdhury** "Distribution of lifetimes of kinetochore-microtubule attachments: interplay of energy landscape, molecular motors and microtubule (de-)polymerization". SUBMITTED (2013).
6. Dynamics of electrically polarized magnetic monopoles in spin ice.
7. Revisiting Second Law of thermodynamics in a reversible magnetic refrigeration cycle.
8. **Heavy Fermion Behavior in Kondo Lattice Itinerant Ferromagnet CeCrGe₃** D. Das, T. Gruner, H. Pfau, U.B. Paramanik, U. Bukhardt, C. Geibel, **Z. Hossain**

Materials Science Program

Laser Technology Program

Design Program

INVITED TALKS DELIVERED

Aerospace Engineering

Biological Sciences and Bio-engineering

1. Dharendra S Katti In vitro tumor engineering using 3D scaffolds [Invited Talk] International Conference on Design of Biomaterials 2012, IISc Bengaluru, India 9-11th December, 2012

Chemical Engineering

Chemistry

1. Department of Organic Chemistry, IISc Bangalore, April 26, **2012**
2. School of Chemistry, University of Hyderabad, Hyderabad (July 31, **2012**)
3. Department of Chemistry, IIT Kharagpur, Kharagpur (December 21, **2012**)
4. Institute Colloquium at Department of Chemistry and Earth Sciences, Heidelberg University, Germany on July 1, 2013.
5. Institute of Chemistry and Biochemistry, Freie Universität, Berlin, Germany on June 03, 2013.
6. Institut für Anorganische und Analytische Chemie, Technische Universität, Braunschweig, Germany on May 29, 2013.
7. Department of Chemistry and Pharmacy, Friedrich-Alexander-University Erlangen-Nuremberg, Germany on May 13, 2013.
8. Institut für Anorganische Chemie, Georg-August-Universität Göttingen Tammannstrasse 4, Göttingen, Germany on April 23, 2013
9. Institut für Anorganische Chemie, Technische Universität Kaiserslautern, Germany on March 07, 2013.
10. Institut für Anorganische Chemie, Karlsruher Institut für Technologie, Germany on February 04, 2013.
11. Department of Chemistry and Earth Sciences, Heidelberg University, Germany on January 08, 2013.
12. Bioinorganic Chemistry Zing Conference held on Lanzarote, Spain during February 19-22, 2013.
13. Lecture Workshop on Bioinorganic Chemistry and its Application sponsored by National Science Academies held on School of Chemistry, Madurai Kamaraj University, Madurai-625021 during September 28-30, 2012.
14. *ChemFest*, Department of Chemistry, IIT Kanpur on September 1, 2012.

Civil Engineering

Computer Science and Engineering

Electrical Engineering

1. Invited talks on 'Smart Grid Activities at IIT Kanpur' and 'Indian Power Sector: Present Scenario & Smart Grid Initiatives' in DST-EPSRC Indo-UK Joint workshop on 'Smart Energy Grids and Storage', 27-29 June, 2012, Bath, UK.
2. Invited talk on 'Smart Grid Initiatives in India and Research on Synchrophasor Based WAMPCS At IIT Kanpur' in DST-NWO Indo-Dutch Joint Workshop on 'Smart Grid', TU Delft, Netherlands, 24-27 September, 2012.

3. Invited talk on 'Synchrophasor Based Wide Area Monitoring & Control System' in 17th National Power Systems Conference (NPSC), 12-14 December, 2012, at IIT(BHU), Varanasi.

Humanities and Social Sciences

Industrial and Management Engineering

Materials Science and Engineering

1. Monica Katiyar, "Materials engineering in daily life: Case for organic electronics", **7th National Frontiers of Engineering Symposium organized by INAE, 12 - 14 October 2012, Guwahati**
2. Monica Katiyar, "Inkjet printed organic thin film transistors: Achievements and Challenges", **International conference on advanced materials processing-challenges and opportunities (AMPCO2012), 2-3 November 2012, Roorkee,**

Mathematics and Statistics

Mechanical Engineering

1. Lecture 1: INTRODUCTION TO INVERSE METHODS; Lecture 2: APPLICATIONS OF INVERSE TECHNIQUES, presented at the Department of Mechanical Engineering, IIT Roorkee, 2nd July 2012.
2. EXTRACTING DATA FROM IMAGE SEQUENCES USING INVERSE TECHNIQUES, Plenary Lecture at the National Workshop on Image Processing Applications in Industry, Medicine, and Aerospace, organized by DRDL Hyderabad held at the Research and Innovation Center, IITM research Park during 28-29 December 2012.
3. MODELING METHANE PRODUCTION FROM A HYDRATE RESERVOIR VIA SIMULTANEOUS DEPRESSURIZATION AND CO₂ SEQUESTRATION, Keynote Lecture at the Gas Hydrates Symposium held at National Institute of Oceanography, Goa on 18th January 2013
4. IMAGING UNSTEADY THREE DIMENSIONAL FLUID FLOW AND TRANSPORT PHENOMENA, Plenary lecture at the National Laser Symposium-21 held at BARC Mumbai during 6-8 February 2013.
5. OPTICAL MEASUREMENT TECHNIQUES IN THERMAL SCIENCES, Invited Lecture delivered at BR Ambedkar NIT-Jalandhar, 22nd April 2013.
6. FUNDAMENTALS AND MODELING OF DROPWISE CONDENSATION, three Invited Lectures delivered at IIT Roorkee, 24th June 2013.
7. HEAT CONDUCTION FUNDAMENTALS, ten Invited Lectures delivered at SVNIT Surat, 1-2 July 2013.

8. CASE STUDIES IN EXPERIMENTAL FLUID MECHANICS AND HEAT TRANSFER; CARRYING OUT LITERATURE SURVEY AND PROBLEM DEFINITION IN RESEARCH, Lectures delivered in the NSF-MFP-sponsored workshop on Research Methodology, held at NMMIT Allahabad during 27-28 September 2013.
9. FLOW AND TRANSPORT IN POROUS MEDIA WITH APPLICATIONS, presented at the TEQIP workshop (*Pravartana*) held at IIT Kanpur during 5-7 October 2013.

Physics

1. International Conference on Nuclear Theory in Supercomputing Era-2013 (NTSE-2013), Iowa State Univ, Ames, USA, May 13-17, 2013.
2. International Conference on Light Cone Physics (LC-2012): Hadron and Particle Physics, Delhi, India, 10-15 Dec, 2012.
3. Pande, M. K. Verma, and P. K. Mishra, Scaling of heat flux and energy spectrum for "very large" Prandtl number convection, Submitted to Phys. Rev. E (2013).
4. R. Kumar, M. K. Verma, and R. Samtaney, Energy transfers and magnetic energy growth in small-scale dynamo, submitted to EPL (2013).
5. K. S. Reddy and M. K. Verma, Strong anisotropy in quasi-static MHD turbulence for high interaction parameters, submitted to Phys. Fluids (2013).
6. Invited Talk "Competition between magnetism and superconductivity in an underdoped Iron Pnictide Superconductor" 14th International Workshop in Vortex Matter in Superconductors, May 21 - 28, Nanjing, China.
7. Invited Talk "Detecting ultra small changes in magnetization associated with phase transition in superconductors and the development of sensitive metallic nanocantilevers" 6th India - Singapore Joint Physics Symposium (ISJPS - 2013) at IIT Kharagpur, between February 25 -27, 2013.
8. Invited Talk "Advances in magneto-optical imaging" at Punjab University 7th Chandigarh Science congress (CHASCON), from March 1-3, 2013.
9. Invited Talk "Magneto-Optical imaging of competing order parameters in pnictide superconductor", at the 5th Indo - Singapore Joint Symposium at IIT Delhi 20th - 22nd Feb. 2012.
10. Invited Talk "Competition between magnetism and superconductivity in an underdoped iron arsenide superconductor" at International Conference on Functional Oxides and New carbon materials, S. N. Bose Center for Basic Sciences, Kolkata, May 8th, 2012.
11. Colloquium, "Exploring the coexistence of order parameter and a search for broken symmetry in the vortex state of superconductors", Department of Physics, IIT Kanpur, Jan. 20, 2012.

Materials Science Program
Laser Technology Program
Design Program

OTHER ACTIVITIES (PROFESSIONAL VISITS TO UNIVERSITIES/RESEARCH ORGANIZATIONS/INDUSTRIES)

Aerospace Engineering
Biological Sciences and Bio-engineering
Chemical Engineering
Chemistry
Civil Engineering
Computer Science and Engineering
Electrical Engineering
Humanities and Social Sciences
Industrial and Management Engineering
Materials Science and Engineering
Mathematics and Statistics
Mechanical Engineering
Physics
Materials Science Program
Laser Technology Program
Design Program

CONTINUING EDUCATION ACTIVITIES

Aerospace Engineering
Biological Sciences and Bio-engineering
Chemical Engineering
Chemistry

Civil Engineering

1. Kaul, D.S., Tarun Gupta and S.N. Tripathi, 2012, Chemical and microphysical properties of the aerosol during foggy and nonfoggy episodes: A relationship between organic and inorganic content of the aerosol, *Atmospheric Chemistry and Physics Discussion*, 12, 14483-14524.
2. Michael, M., A. Yadav, S.N. Tripathi, V.P. Kanawade, A. Gaur, P. Sadavarte and C. Venkataraman, 2013, Simulation of trace gases and aerosols over the Indian Domain: Evaluation of the WRF-Chem model, *Atmospheric Chemistry and Physics Discussion*,

13, 12287-12336. Renard, J.B., S.N. Tripathi, et al., 2013, In situ detection of electrified aerosols in the upper troposphere and in the stratosphere, *Atmospheric Chemistry and Physics Discussion*, 13, 7061-7079.

Computer Science and Engineering

1. **Problem Generation and Solution Generation for Natural Deduction** presented at Microsoft Research Redmond Lab Open House, June 18, 2013.
2. **Functional SMT solving with Z3 and Racket**, Siddharth Agarwal and Amey Karkare, *2012 Symposium on Trends in Functional Programming (TFP 2012)*, University of St Andrews, UK, June 12-14, 2012.
3. **Heap Reference Analysis using Access Graphs** presented at Workshop on Formal Methods for Design and Analysis of Software, October 7-8, 2005, Microsoft Research India, Bangalore.

Electrical Engineering

Humanities and Social Sciences

Industrial and Management Engineering

Materials Science and Engineering

Mathematics and Statistics

Mechanical Engineering

Physics

Materials Science Program

Laser Technology Program

Design Program