

Vision

To be the fountainhead of new ideas and innovations in science and technology and continue to be a source of pride for all Indians.

Mission

To create an environment that shall foster the growth of intellectually capable, innovative and entrepreneurial professionals, who shall contribute to the growth of Science and Technology in partnership with industry and develop and harness it for the welfare of the nation and mankind.

वार्षिक प्रतिवेदन

ANNUAL REPORT

2014 - 2015

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भारतीय प्रौद्योगिकी संस्थान रुड़की

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

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Chairman, IIT Council
Hon'ble Smriti Zubin Irani

Minister of Human Resource Development
Government of India

Chairman, Board of Governors

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ANNUAL REPORT : AT A GLANCE

2014-2015

DEPARTMENTS/CENTRES/UNITS

Academic Departments/Centres	22
Centres of Excellence	08
Service Centres	06
Other Units	05

GRANTS

<i>(Amount in Lacs of Rs.)</i>	
MHRD	31531.76
• Plan Grant	- 10311.76
• Non-Plan Grant	- 21220.00
UGC	660.91
Others	7402.98
• CSIR	- 256.92
• Research & Consultancy	- 7146.06
Total	39595.65

STUDENTS ADMITTED

B.Tech./B.Arch./IDD	980
PG Degree	1025
Research Scholars	430
Total	2435

STUDENTS STRENGTH

B.Tech./B.Arch./IDD	4472
PG Degree	2087
Research Scholars	1575
Total	8134

NUMBER OF DEGREES AWARDED

B.Tech./B.Arch.	926
PG Degree/P.G. Diploma	935
Ph.D.	161
Total	2022

FACULTY/STAFF STRENGTH

Faculty in Position	488
Scientist/Others in Position	21
Non-Teaching Staff in Position	
• Group A	46
• Others	768

RESEARCH PAPERS

Journals	1209
Conference/Symposia	648
Total	1857

CONSULTANCY PROJECTS

Number of New Projects	656
Outlay (Lacs of Rs.)	3805.36

SPONSORED RESEARCH PROJECTS

Number of New Projects	68
Outlay (Lacs of Rs.)	1967.91

Director's Report



Indian Institute of Technology Roorkee is among the foremost of Institutes of national importance in higher education and research in engineering science and technology with a global exposure through considerable international linkages. The Institution started in 1847. During the period Institution was known as Roorkee College (1847), Thomason College of Civil Engineering (1854), Thomason College of Engineering (1947) and University of Roorkee (1947). On September 21, 2001, the University was converted into Indian Institute of Technology Roorkee by the Government of India through an Act of Parliament and it was recognized as a seventh Technical Institution of National importance.

Since its establishment as the first technological university in Asia in 1847, the Institute has played a vital role in providing the technical manpower and know-how to the country and international society as a whole. IIT Roorkee has seen the test of time before independence, after independence and the global economic liberation. In continuation of the previous years, the academic pursuit and excellence in basic and applied research of the institute are significantly fostered further by large number of international cooperation in the year 2014. More than 38 distinguished professors and scientists visited the Institute from abroad and 137 faculty members and officers went abroad to attend various programmes. The Institute ranks amongst the best technological institutions in the world and has contributed to all sectors of technological development. The institute has also been considered a trend-setter in education and research in science and technology and corporate leadership in technology driven international companies in recognition of the achievements of its alumnus holding the most coveted positions as Chairman, Hindustan Aeronautics Limited, Chairman, VSNL, Secretary, University Grants Commission, Chairman, Telecom Regulatory Authority of India, Chairman, Airports Authority of India, Director General, EME, Director Vikram Sarabahi Space Centre-Material & Metallurgy Group.

Chairman, Railway Board and Member Engineering Railway Board of Indian Railways, CMD Mineral Exploration Corpn. Ltd., Railtel, NBCC and Rail Vikas Nigam Ltd., MD, Delhi Metro Rail Corporation and Greaves Cotton Ltd. and many others. Spanning over an alumni history of more than 168 years, we have our presence in every aspect of global significance. A task force constituting of distinguished Alumni was constituted. This task force comprising of Alumni and faculty members has identified 12 focus areas and is working towards modification in management at the Institute.

We are aware of the enhanced expectations of student community and public at large and strive to live up to our image that has been so assiduously built up over the years. It is our continuous endeavor to work towards attaining higher standards of excellence in all spheres of activities. We are committed to achieve our goals to create an environment wherein intellectually capable, innovative and entrepreneurial professionals are nurtured and trained to work unceasingly to serve the nation and society. We intend to keep pace with the continual progress in the fields of science and technology.

The institute has witnessed a substantial increase in students' intake and we have made every possible effort to timely develop the infrastructure and necessary facilities to meet the needs of the students.

India has a vast number of young, enthusiastic and talented minds. They eagerly look forward to joining institution like ours to get nurtured, trained and prepared for technological challenges that lie ahead on path of their professional development. The development of the nation depends upon their technical competence and work ethics that they have imbibed during their formative years as students.

Core Values

- Academic integrity and accountability
- Respect and tolerance for the views of every individual
- Attention to issues of national relevance as well as of global concern

- Holistic understanding, including knowledge of the human sciences
- Appreciation of intellectual excellence and creativity
- An unfettered spirit of learning exploration, rationality and enterprise
- Sensitivity to social responsibilities

In order to increase collaborative learning and experience sharing, 76 MoUs have been signed with several institutions of higher learning and research within India and abroad. These MoUs, are mutually beneficial and rewarding and provide new avenues of growth in teaching and research for the faculty and the students. These initiatives also help us to contribute to the development of leading technologies.

In recent times, the institute has played important role in projects which are directly related to development of the nation, e.g., Development of Small and Micro Hydro Power Projects, Solar Water Heating System, Seismological and Ground Motion Studies, RFID and Sensor Networks, Design Fire Facility of Atomic Energy, Rural Technology Action Group, Prime Minister Gramin Sadak Yojna, Development of Projects on River Brahmaputra, Waste-to-Energy Plants to name a few. A lot of digital strong motion accelerographs deployed in the cities of north and north east India lying in seismic zones V, IV & III. Extensive work has been done by the Institute faculty through projects supported by the UNDP, Government of India and the State Governments for providing benefits of technological developments in the field of Information and Communication Technology (ICT), especially to the poor and marginalized masses living in remote areas through e-governance and e-learning. The institute is the national coordinator of two projects under the MHRD sponsored National Mission on Education through ICT, one on providing education through VSAT Enabled Mobile e-Learning Terminals (MeLTs), and the other on "Software Tools, Open Source Tools and Simulation Tools". These projects aim at bridging the gap between "educational divide" and the "digital divide" and meet the challenges of providing quality education and better governance for the masses in all parts of the country.

In order to meet the requirement of producing high quality graduates, we also have to carry out research and be a part of the latest developments in different fields of science and technology and incorporate them in our curriculum by constantly revisiting our course contents and provide greater flexibility to make the system more learner centric as compared to the institution centric. We have therefore, made conscious efforts to increase the number of postgraduate and research students also.

Annual Report

The annual report highlights the work that the I.I.T. Roorkee has done during 2014–15. It

includes the contributions made by different departments and units, and their main achievements. This comprehensive document is a compendium of work done by various departments and centres of the institute which becomes an authoritative record of its activities and available for ready reference. It helps to identify and encourage those who have done well, and to determine areas where scope for further improvement exists.

Admission

JEE (Advanced)-2014 was conducted on Sunday, May 5, 2014. It had 2 papers of 3 hours duration. The papers were of objective type and both papers had questions in Physics, Chemistry and Mathematics.

In IIT Roorkee zone, the examination was conducted at 33 centres in twenty one cities of a Union Territory and five states, viz., Chandigarh, Haryana, Himachal Pradesh, Punjab, Uttarakhand and Uttar Pradesh. The total number of registered candidates in IIT Roorkee zone was 12,081, out of which 11,653 appeared and 2607 selected candidates got seats in various IITs/ISM Dhanbad.

For the year 2014, IIT Kharagpur was the organizing Institute for JEE (Advanced) 2014 and in all 1,26,995 candidates registered, out of which 1,19,580 appeared at 365 centres spread across the country.

The students are admitted to various postgraduate programmes of the Institute through All India Entrance Examinations viz, Graduate Aptitude Test in Engineering (GATE) for admission to postgraduate courses with scholarships from Ministry of Human Resources and Development (MHRD), Govt. of India in Engineering, Technology, Architecture and Science and Joint Admission Test for M.Sc. (JAM) for Admission to M.Sc.-PhD, M.Sc.-PhD. Dual Degree and other Post-B.Sc. programmes at IITs, IISc and participating Institutions.

GATE 2015 ONLINE examination was conducted this year for the second time as fully computer based test in all 22 papers (AE, AG, AR, BT, CE, CH, CS, CY, EC, EE, EY, GG, IN, MA, ME, MN, MT, PH, PI, TF, XE and XL) on two weekends i.e. January 31, 2015, February 01, 2015 and February 07, 2015 and February 08, 2015 in 8 sessions.

IIT Roorkee coordinated the examination in its zone covering Delhi-NCR, Haryana, Himachal Pradesh, Punjab, Uttar Pradesh and Uttarakhand across 24 cities and utilized 44 to 48 centres in each weekend. The number of candidates registered in IITR zone was 83,839. 12,809 candidates qualified from IITR zone out of 71,286 candidates who appeared for the examination.

JAM 2015 ONLINE examination was conducted this year for the first time as fully computer based test in 07 cities and utilized 09 centres in 07 papers (BT, CY, GG, MS, BL, MA and PH) on February 08, 2015 in two sessions. 2773

candidates registered in IIT Roorkee Zone. 531 candidates qualified out of 2404 appeared candidates for JAM 2015.

Currently the Institute offers Bachelor's Degree courses in 11 disciplines of Engineering and Architecture 01 Integrated Dual Degree 02 Integrated M.Tech. & 02 Integrated M.Sc., Postgraduate's Degree in 48 disciplines of Engineering, Applied Science, Architecture and Planning. The Institute presently has 8036 students that include 6565 UG/PG students and 1471 Ph.D. scholars enrolled in different Departments & Centres.

Academic Infrastructure

The Bachelor of Architecture (B. Arch.) course was started in 1956. The Department has the singular distinction of being the first in India in instituting a Masters Degree course in Architecture (M. Arch.) in the year 1969-70. Masters Degree course in Urban & Rural Planning (MURP) was started in 1973-74. The department of Architecture and Planning imparts high quality education in the professional fields of Architecture and Planning and offers Bachelor of Architecture, Master of Architecture, Master of Urban and Rural Planning and Ph.D. programmes. At present, 29 Ph.D. scholars are pursuing research in the department. The department has unique facilities like Climatology Lab, Computer Lab and Computerized Design Studios equipped with the state-of-art equipment and software and an Art Lab and a Workshop. During the year 2014-15, many faculty earned various honors and awards; visited a number of institutions in India and abroad; and participated in seminar, symposia and Conferences. Faculty members of the department are engaged in sponsored research and consultancy projects; have published number of research papers in National and International Journals and Conference Proceedings; and have also published books and monographs.

During the period, in the Department of Biotechnology Eleven students were awarded Ph.D. Degree in the convocation held in 2014. The 9th batch of students in the B.Tech. (Biotechnology) programme with a sanctioned intake of 45 students was admitted. M. Sc. Biotechnology programme with a sanction strength of 37 students has also been successfully running with annual finance aided Rs. 59.40 lacs by DBT Govt. of India, New Delhi. Two DST, One DBT, Two CSIR & One DRDO sponsored research project were successfully completed and Six new research projects with funding from Science and Engineering Research Board, Department of Biotechnology, Govt. of India, for a total outlay of Rs. 313.66 lacs have been sanctioned during 2014-15.

During the year, the Department of Chemical Engineering made significant growth in research and publication in last decade. Many Ph.D. and M.Tech. research projects were in collaboration

with widely acclaimed national and international institutions like IIP Dehradun, EIL, CBRI, BARC, etc. 66 research papers have been published in high Impact Factor journals and 36 research papers were presented in National and International Conferences.

Department of Chemistry is equipped with state-of-the-art facilities like UV-Vis, UV-Vis-NIR, FT-IR, Gas Chromatograph, ESI-MS, GC-Mass, 400 MHz NMR, HPLC, AAS, elemental analyzer, flame photometer, cyclic voltammeter, LC-MS-MS, Raman spectrometer, surface area analyzer, rheometer, VSM dynamic light scattering set-up, advance electrochemical system and microwave synthesizer to provide academic as well as industry oriented training to the post-graduate students. The department took several initiatives for the betterment of its teaching and research facilities. The faculty members visited a number of institutions and participated/ delivered talks in seminar/ symposia / conferences. The number of papers published in referred journals is 166 and 41 research papers were presented in various conferences/ symposia. A large number of students of the department have qualified NET - CSIR-JRF, GATE, UGC- JRF and other national level competitions. Moreover few students participated in summer project in abroad.

The Department of Civil Engg. provides education at Bachelor's, Master's and Ph.D. levels in various disciplines of civil engineering. The Department is known for its internationally reputed faculty having expertise in diverse fields. It has built up a wide research potential. The Department has unique facilities like Boundary Layer, Wind Tunnel, Asphalt Rheometer and Electronic Total Stations, Flex 2D Software, 1000 KN Electro-hydraulic actuators, Electronic bed level recorder, Water Hammer and Surge Tank Experimental set-up, Data Acquisition System and Universal Testing Machine. During the year 2014-15, the faculty earned honours and awards for their achievements. The faculty visited a number of Institutions and participated in Seminar / Symposium/ Conferences and short-term specialist courses during the year 18 Ph.D. degree were awarded.

The Department of Computer Science & Engineering is one of the major departments of the Institute in terms of the number of students and number of programmes. It offers a wide spectrum of academic programmes at undergraduate and postgraduate level. Undergraduate programmes lead to B.Tech. in Computer Sciences and Engineering. Postgraduate programmes lead to M.Tech. and Ph.D. in Computer Science and Engineering. In addition, the department offers two integrated Dual Degree (IDD) programmes, There are more than 14 full time research students working in Data Mining, Cloud Computing, Security and Wireless Network.

Department of Earthquake Engineering have four major areas of earthquake engineering viz., Structural Dynamics, Soil Dynamics, Engineering Seismology, Seismotectonics, and Instrumentation have been nurtured for the last fifty years. The major functions of the Department include teaching and research and rendering expert advice to various organizations in the area of earthquake resistant design of structures and systems, such as dams, bridges, power plants etc. The Department has played a key role at the national level in the formulation of Indian Standard Codes of Practice for earthquake resistant design of Structures. Several major facilities have been developed in the department to conduct experiments related to earthquake engineering. Some of the major facilities include: a low cost railway wagon shock table for dynamic testing of structural models, a computer controlled shake table to stimulate strong ground motion, a quasi static testing laboratory having servo-controlled dynamic actuator systems and servo-controlled compression testing machine, a soil dynamics laboratory equipped with liquefaction table and cyclic triaxial testing system, a seismological observatory having state of the art broadband seismograph to record earthquake ground motion, a strong motion network of 300 digital accelerographs deployed in the Himalayan region to measure strong ground motion due to moderate and major earthquakes and a state-of-the-art 12 station telemetered network to monitor local seismicity in the environs of Tehri Dam.

Department of Earth Sciences runs three courses viz. M.Sc. in Applied Geology of two years duration, Integrated M.Tech Geological Technology and Integrated M.Tech. in Geophysical Technology of five years duration. Research work leading to Ph.D degree in several interdisciplinary areas and research and consultancy programmes constitute an integral part of the departmental activities. The faculty is engaged in a number of research projects sponsored by the Govt. of India agencies like Min. of Earth Sciences, CSIR, DST, ONGC, BRNS etc, and the consultancy projects sponsored by various industries and government agencies. The department has Hamrock Society in which all faculty and students are members.

The Electrical Engg. Department has modified few laboratories and upgraded them. The department established a new laboratory named as "Standard and Calibration laboratory" where various calibrating equipments are installed. which can provide service to industry and will be used for in-house calibration of the equipments and also be used by the U.G., P.G. and Ph.D. scholars. The department also procured RTDS capable of operating continuously in real-time to support research programmes as well as U.G. and P.G. students.

The Department of Electronics & Communication Engineering offers a wide spectrum of academic programmes at undergraduate and postgraduate level. Undergraduate programmes lead to B.Tech. in Electronics and Communication Engineering. Postgraduate programmes offered by the department Communication Systems RF and Microwave Engineering, System Modeling and Control and Microelectronics & VLSI. In addition, the department offers two Integrated Dual Degree (IDD) programmes, one leading to B.Tech. (Electronics & Communication) & M.Tech. (Wireless Communication). The department has always been on a high growth path and has experienced faculty with a strong commitment to teaching and sponsored research. A number of new sponsored research projects have been received in the current year in diverse areas like RF and Microwave Engineering and VLSI design. A new computer laboratory with about nineteen computers has been built to cater the needs of B.Tech. Programmes.

The Department of Humanities & Social Sciences contributes significantly to teaching and research by teaching several core and elective courses to students of all branches of B.Tech. and B.Arch. It also offers an evening course on German Language. The Department has Ph.D. programs in the disciplines of Economics, English, Psychology, Sociology and Philosophy and encourages students to undertake interdisciplinary research. The Department has a state-of-the-art Language Lab to train students in LSRW; a Psychology Lab which contains tests and research material in the area of Organizational Behavior; as well as an Economic Data Base containing Data about various macro-economic indicators of the economy. The department has introduced many new courses in the year under review both at the core level and elective level to meet the requirements of the new curricula.

Department of Hydrology, like previous years, the 43rd International P.G. Diploma/M.Tech. Hydrology course commenced from July 2014 with 17 nos. of participants including 03 sponsored candidates from abroad. The M. Tech. final year programme also continued with 17 students. At present 19 students are pursuing their doctoral research in the Department.

The Department of Management Studies awarded with the B-School Leadership Award by DNA & Stars of the Industry Group - Innovative B-School Awards 2014. The department organized XVIII Annual International conference of society of Operations management (SOM-2014) jointly with ABV-IIITM, Gwalior on 12-14 Dec. 2014. The theme of the conference was "Operations Management in Digital Economy". The highest package offered to students is Rs. 19.96 lacs, an increase of 59% from the previous year. The median stands at 8.25 lacs per annum.

The Department of Mathematics has established a new computer lab for research students from the grant received under FIST program of DST. The department received two international and few Indian distinguished visitor for research collaboration. Five new research projects started, four sponsored research projects completed in this year and five research projects are continuing. In current year 10 students were awarded Ph. D. Degree.

The Department of Mechanical and Industrial engineering offers two undergraduate and five post graduate courses. The expertise by the faculty members of the department developed through research is being effectively utilized by providing solution to industrial problems in the form of design, analysis, testing and training through numerous industrial consultancy projects from reputed private and government organizations. The undergraduate students of the department are actively involved in student initiative activities like development of all-terrain vehicle, formula racing cars, wheel chair for disabled and elderly, robots etc. These developed products are showcased at various national and international forums.

The department of Metallurgical and Materials Engineering has done significant work in the area of failure analysis, development of ultrafine grained materials, nanostructured coatings for corrosion resistance and tribological applications, metallic foams, electroless coatings for RADAR, Metallic and Polymer matrix composites, Spray forming, Powder Metallurgy, Friction Stir Processing of Al alloys, Development of materials for hydroelectric power plants and mini hydel projects. NML Jamshedpur has recently associated us in the development of wear resistant material for hydro tubines. Department is in the process of getting 300kV high resolution transmission electron microscope (JEOL) very soon. Department has recently procured spark plasma sintering (SPS) instrument from Japan. This instrument will help in sintering of ceramic materials and other difficult-to-sinter materials in a controlled atmosphere at high pressure and temperature.

The Saharanpur Campus has three departments viz. Department of Paper Technology, Department of Polymer & Process Engineering and Department of Applied Sciences & Engineering.

Department of Paper Technology offers academic programs at various levels in Pulp & Paper Technology. The Department has a well developed academic infrastructure. The courses aim to cater to the needs of Paper Industries across the country.

Department of Polymer & Process Engineering (DPPE) offers academic courses leading to B. Tech in Polymer Science & Technology, and a Dual Degree Program of B. Tech in Process Engineering with MBA. The Department also

performs fundamental and applied research in the areas of Polymer Science and Technology, Process Engineering and Management. The courses aim to cater to the needs of the vastly developing and much demanded **Polymer and Process** industries across the globe.

The Department of Applied Science and Engineering comprises multi-disciplinary faculty members mainly related to the disciplines like Physics, Chemistry, Mathematics, Humanities (English literature), Electrical /Electronic Engineering to cater the academic requirements of multi-disciplinary students of the Campus. The department also have a state of art educational/Research laboratories for both, Basic as well as Applied Science and Engineering.

The centre of Excellence in Packaging Technology was started in 2014 with the intake of 20 students per year in two year Mater of Technology in Saharanpur Campus. The Centre is being supported by leading experts from outside Institutes in academics and research such as Michigan University, Pepsico, USA and Packging Institutions and Industries in India. The course is aimed to cater to the needs of highly demanding Packaging Industries across the globe.

The structure for the recently proposed four-year B.Tech. program in Engineering Physics (EP) has been prepared by the faculty members of the Department of Physics. The undergraduate program in EP, to be introduced in Autumn Semester 2015-16 and administered by the Department of Physics, has been designed for the ever changing technologies and opportunities of the 21st century. This program will develop sufficient depth in both engineering and physics skills to produce engineers who can relate fundamental physics to practical engineering problems, and will possess the versatility to address new problems in our rapidly changing technological base. The structure of the EP program is on the B.Tech. (Engineering Physics) link. The students have options to choose technological areas from –Applied optics, nuclear engineering, space technology, nano engineering, superconductivity and modern particle physics along with B.Tech. (Honours) in Engineering Physics.

A new laboratory, named as “Radiation Detectors and Spectroscopy (RDS)” has been developed to perform small scale experiments in laboratory to familiarize the students the handling of high-end nuclear physics experiments. The idea is to generate a bridge between the theory and experiments in advanced Nuclear Physics for Masters’ students and research scholars. All the purchased instruments have been installed successfully.

The Department of WRD&M is a balanced blend of academicians and field engineers. The faculty is experienced in planning, design, construction, operation, and maintenance of water resources

development projects (viz., hydropower, Irrigation management, and flood control management). It helps in implementation of application oriented academic programs. Since its creation in 1955, the Department has trained over 2606 serving engineers from 50 countries. The Department is offering post graduate training (P.G. Dip. / M.Tech.) in Water Resources Development and Irrigation Water Management.

In AHEC various activities related to education, research and technical expertise are undertaken during the year in the area of small hydro power and other renewable energy development as well as environmental management of water bodies. The planning, design, and vetting of SHP projects in various states of the country has been undertaken. Technical Assistance & support was provided to Govt. of Arunachal Pradesh for development of SHP projects and also in the border areas of Arunachal Pradesh with the support from Ministry of New and Renewable Energy, Govt. of India. AHEC provided the technical support to the public utilities of the state of Uttarakhand, Bihar, HP and Arunachal Pradesh for development of small hydropower projects. The setting up of Small hydro power hydraulic turbine R&D laboratory with the support of Ministry of New and Renewable energy, Government of India is in advanced stage.

CTRANS aims to promote multidisciplinary and high quality research and education in Transportation Systems with collective participation of Engineers, Scientists and Researchers from Science & Technology, Humanities and Social Sciences, Architecture & Planning and Management Studies background. The Centre is equipped with a number of modern equipments i.e., Road Measuring Data Acquisition System (ROMDAS), Portable Automatic Traffic Counter-cum-Classifer, Trimble IR 5600 Robotic Total Station, Electrodynamic Vibration System, Falcon Handheld Stationary Radar with Data Logger for Measurement of Vehicular Speeds, Integrating-averaging Noise Level Meter, 50" Plasma TV for Traffic Analysis study, Portable Falling Weight Deflectometer, Diamond Core Drilling System, Portable Reference Measurement System, Ground Penetration Radar (GPR) for Utility Detection and High Cell Density Bio-Reactor, Electronic Portable Static Wheel/Axle Weight Scale, Hand held Analyser with Sound Level meter for Aircraft Noise measurement and Electronic Portable Static Wheel/Axle Weight Scale. The CTRANS has developed Transport Asset Management, Biofuels for Automobiles, LUDAT, Sustainable Transportation Lab and Electrodynamic Vibration Simulation laboratories. Centre of Nanotechnology (CON) has successfully admitted students to the seventh batch of M.Tech program. Labs are equipped with several state-of-the art facilities namely, Chemical Vapour Deposition (CVD), Differential

Scanning Calorimeter (DSC), Fluorimeter, Gel-doc system, High speed refrigerated centrifuge, LCR meter with magnetic measurements set up, Pulse Laser Deposition Spin coater, Surface profiler, Orbital shaking incubator, Molecular modeling software, UV-VIS-NIR spectrophotometer, Upright microscope with fluorescent attachment, Zetasizer, Vector Network Analyzer, TGMS, Vacuum annealing microwave furnace, Nabetherm Tubular furnace, Lenton muffle furnace. Apart from these equipments other newly arrived facilities are Photo-electrochemical workstation, Rotary Evaporator with accessories, HPLC (Analytical), ICP-AES, Clean Room, Microwave digester, High Energy Mill having high RPM with accessories, Multimode Microwave Reaction system, Stem cell culture set up, Ultracentrifuge. The Centre of Excellence in Disaster Mitigation and Management is very young Centre. This draws strength of faculty members of other Departments to solve important problems. The Centre has already prepared the syllabus of a new M.Tech program in Disaster Mitigation and Management.

Service Centres

The Institute Computer Centre (ICC) and information superhighway centre (ISC) have been merged into one entity vide notification No. Estt(A)/1828/E-2281 dated 25-04-2014. It is now known as the Institute Computer Centre. ICC is an academic service centre providing the following:

- (i) Facilities for B.Tech/ M.Tech/MCA computer related laboratory classes
- (ii) Special needs for hardware/software of Research Scholars
- (iii) Central bulk licensing of Engineering/Scientific software
- (iv) High-Performance Computing
- (v) Central data storage facility
- (vi) Campus Wide Network
- (vii) E-mail, Internet and Intranet facility

The Centre maintains a comfortable environment, conducive for research & training for both students and faculty. It has eight job-specific labs with about 250 workstations/desktops/ thin clients of latest configuration in 100/1000 mbps CAT 6 based structured network having Gigabit Managed Switches with Internet connectivity at every system. The range of servers covers from Intel based servers to high-end Blade Servers with SAN (Storage Area Network), RISC servers from SUN with NAS and SAN. Centre is also equipped with colour laser printer, network laser printers and scanners. PARAM, Linux based HPC Cluster, and all the other servers (including software licensing servers) can be accessed within the campus including DPT Saharanpur Campus. ICC has state-of-the-art hardware and software for applications such as: CAD/MCAD, Computational Fluid Dynamics (CFD), FEM &

FEA Image Processing / Scientific Visualization, 3DAnimation/ Visual Simulation/ Geospatial imaging and analysis. Centre has mid-range to high-end configured graphics workstations. ICC's software licensing facilities provide the major engineering and scientific software available throughout the campus over LAN. The ICC also is a nodal centre for outside/inside connectivity to the campus and serves as an Information Technology Center for promoting the effective use of IT, IT Systems, resource management and facilities for modernization/automation of the IP Infrastructure of the Campus. The Institute has a star topology Gigabit Ethernet Switch based, state-of-the-art Enterprise class network with data, voice and video communication capabilities. All department and centres are connected to the Information Superhighway through Optical Fiber. The network covers 365 acres of area through 35 Km of OFC and 70 km of CAT6/E CAT 5 UTP, connecting all Departments/Centres, Hostels and Saharanpur Campus. The Intranet has 3000+ wired-line I/Os and 3200+ points through Wireless access, providing internet/intranet and e-mail facility to all faculty, students, staff, library and laboratories. Institute Instrumentation Centre runs & maintains Twenty Analytical Laboratories with modern Equipment for research and teaching of UG, PG and Ph. D students, which includes AAS, DTA-TGA, EPMA, FE-SEM, FLS, ICP-MS, Laser Ablation Micro-Analyzer, MCU, Powder X-RD, Single Crystal X-RD, Small Angle X-RD, SEM, SPM, SQUID, TEM, TIMS, UTM, VSM and Liquid Nitrogen Plant. Besides these, Electronics Repair Laboratory takes care of in-house repair and maintenance of equipment at IIC and other departments. As support facilities, a Mechanical Workshop and a Refrigeration/Air Conditioning Workshop are also maintained.

Under QIP scheme, three principal activities are being carried out. The programmes are being implemented and monitored by the All India Council for Technical Education. (i) Providing opportunities for faculty members of AICTE – recognized degree level engineering Colleges/institutes to improve their qualifications, i.e., Masters and Ph.D. degree programmes. (ii) Organizing Short Term Courses for faculty working in engineering institutes/colleges. (iii) C.D. cell activities which include curriculum development (CD) as well as its revision, preparation of monographs and text books, laboratory manuals, examination reforms, undertaking of inter-institutional programmes, holding of seminars, one day workshops and panel discussions, developing educational technology, preparation of resource materials and undertaking of any other activity which helps to improve classroom teaching. This year the QIP Center at IIT Roorkee has offered admission to 33 engineering college teachers for Ph.D

programme and 18 teachers for M.Tech programme.

Centre of Continuing Education is a pioneering Centre in the area of continuing education. It has completed more than 56 years of service and has played a very important role in the promotion of knowledge up gradation activity in our country by organizing refresher/specialist courses and workshops for in-service technocrats and professionals. This centre acts as a single window to disseminate information and technology on latest developments. The activities organized by this centre are innovative, refreshing and stimulating and address to the current needs of the participants. Apart from the technical expertise available in the departments and centres of the Institute, experts from industries and R&D organizations are also invited to deliver talks/ lectures wherever necessary. Around 70 to 80 short term training programme are being conducted every year in various disciplines of management, engineering, science and technology for participants from all parts of the country as well as from the neighboring countries. This year the centre has conducted 78 courses including 02 International courses in which about 1509 participants have been trained.

Students Activities (2014-15)

During the year 2014-2015, the students performed extremely well in academics, and they also excelled in organizing extra curricular activities. The predominant student activities included participation in Student's Club, National Cadets Corps, Hobbies Club, NSS, Cinema Club, Sports Council, etc.

The Elections of Student's Affairs Council (SAC) for the session 2014-2015 were held on 30.8.2014. The Student's Senate was elected and other bodies of SAC were constituted. Mr. Madala Vamshi Chowdhary, was elected as General Secretary of the SAC for 2014-2015. During the year 2014-15, 32 students were given aid under the scheme "Students Loan and Aid Fund" and a sum of Rs.48,00,000/- was distributed to the deserving and needy students. Yoga activities and community services have been started as alternative to punishment for in disciplinary action on the part of student NCC camp will be organized on the occasion of International Yoga Day during 18 June to 27 June, 2015. To provide reimbursement of medical expenses and compensation for laptop and cycle theft, insurance policy has been taken from leading public sector insurance companies. NCC training was imparted to NCC cadets of IIT Roorkee and the cadets took keen interest. About 420 students under various categories were enrolled for the academic year 2014-15. The NCC cadets presented Guard of Honour to Director, IIT Roorkee on Independence Day (2014) and Republic Day (2015). Various events such as Annual Training Camp, Inter Company Games/Competitions, Cultural Training, Social

Service, Competitions, Awareness Lectures were held during 2014-15.

Institute's Sports Council conducted Intramural (Internal) tournaments and Annual Athletic Meet. The winner students were awarded trophies/cup in various student sports activities. During 2014-15, several external or extramural tournaments for Volley Ball, Hockey, Football, etc. were organized. IIT Roorkee team performed excellent in these tournaments. Various coaching camps were conducted for IIT Roorkee students.

Student's Club of IIT Roorkee is a hub of various activities related to students on the campus. It has improved in Club ambience and various facilities offered to the students. Certain other important students activities such as Cognizance, Srishti and Thomso were organized as per practice. Hobbies Club has been involved in the activities like Software development, Gardening, Philately & Numismatics, Fine Arts, Star Gazing, Model and Robotics, etc.

IIT Roorkee Cultural Council conducted several cultural activities such as Pahla Nasha, Jashn, Hindi Play, Cultural Night, Cultural Week, etc. during the year 2014-15. The Himalayan Explorers Club organized Annual Cycle Race, Skiing Camp, Rafting and Photographic Competition during 2014-15.

The Cinema Club started UFO Based Digital Cinema System which has been purchased and installed in the Convocation Hall. During the year 2014-15. The Spic Macay organized many Cultural events during 2014-15, i.e. Virasat-14, Makar fiesta, Kathak Workshop, Cinema Classics and many concerts etc.

Placement

The Training and Placement office continued to play key role as facilitator and counselor to graduating students for their suitable placements and internships in companies of various sectors. Similar to previous years, this year also the placement season was quite vibrant. A total of 229 companies visited the institute for campus recruitment and a total of 1195 offers were made. Some key companies from across various sectors which visited the campus during this academic year were Microsoft (Redmond), Samsung Research India, Schlumberger, Google Inc, Shell, Reliance Industries Ltd., ITC Ltd., Steel Strips Wheels Ltd. Exl Services Pvt. Ltd., Morgan Stanley Advantage Services Pvt. Ltd., Citicorp Services India Limited, Eaton Technologies Pvt. Ltd., United Health Group, Bharti Airtel Ltd., Calypto Design Systems, Michelin Tyres Pvt. Ltd., KLA Tencor, Analytics Quotient India Services Pvt. Ltd., Lenskart.com, NEPA Ltd., SRF Limited, Asian Oilfield Services Ltd., Works Applications Co. Ltd etc.

Convocation and Other Events

The Annual Convocation 2014 of the Institute was held on Sept. 20, 2014. On this occasion, 2019 students were awarded degrees at Bachelor's (926), Master's (932) and Doctoral

(161) levels in various disciplines. Hon'ble Mr. Hari S. Bhartia was the Chief Guest and was conferred Honoris Causa Degree of IIT Roorkee. Distinguished Alumni Awards were presented to four alumni who have made major contributions in their respective fields. The recipients of these awards were Dr. Satyendra K. Gupta, under the Academic Research and Sri Rajendra Kumar Bahugauna under the category Corporate development, Shri Subodh Kumar Jain and Dr. Sharad Chandra Sharma under the category Engineering services and Shri Shankar Agarwal under the category Administration.

Faculty

The Institute has 435 highly qualified faculty members, 20 Emeritus Fellows, 33 Visiting faculty/PDF/IF and 21 scientific & other Academic Staff.

The faculty members are internationally recognized for their quality of research publications which appear in international refereed journals. Faculty members are associated with various decision making bodies providing advice on policy matters and technical issues at the national level. At the same time, they serve on editorial boards of different reputed international journals, review papers, serve on committees for recruitment of professionals, and are on the boards of certain organizations. Faculty members were recognized in the country and abroad for their distinctive contributions as academicians, scientist, engineer, or expert consultant. With a view to achieve the objective of attaining academic excellence through healthy competition, the Institute has adopted a scheme of rewarding outstanding teachers and researchers on the basis of students' feedback of their performance in research and administration. Outstanding teacher awards were given to Dr. Satish Chandra, Professor, Deptt. of Civil Engg. Deptt., Dr. Partha Roy, Professor, Deptt. of Biotechnology, Dr. Deepak Khare, Professor, Deptt. of W.R.D.M.

Initiation Grant to Faculty

The Institute took an initiative of providing seed money to the new faculty members for initiating research projects under Faculty Initiation Grant-Scheme-A. Using the seed money, the new faculty members can initiate the feasibility study related to their research field and apply for major funds, thereafter, to other agencies. 38 Projects for Faculty Initiation Grant under Scheme 'A' have been sanctioned out of SRIC Fund, with a total allocation of Rs. 368.00 Lacs.

Sponsored Research and Industrial Consultancy

The total numbers of New Sponsored Research Projects were 68 with annual turnover of Rs. 1967.91 lakhs. The numbers of new Consultancy projects have been 656 with a total outlay Rs. 3805.36 lakhs.

National and International Collaboration

The Institute has signed five MoUs with the following Institutes/Universities/Organizations for academic interactions, students and faculty exchange, and collaborative R&D work: Memorandum of understanding was signed between IIT Roorkee and Asian Institute of Technology, Thailand; Colorado State University, United states of America; University of Stuttgart, Germany and Universiti Teknologi Mara, Malaysia on 24th December 2014 for promotion of friendship, co-operation and mutual understanding of academic, scientific thought and personnel Exchange, to share their expertise and enhance their academic links and co-operation and endeavor to strengthen, promote and develop international and research co-operation between them on them on the basis of equality and mutual benefit. The memorandum of understanding was renewed between IIT Roorkee and The Ecole Speciale des Travaux Publics, du Batiment et de l'industrie (ESTP), France on 26th December 2014 with the aim to promote exchange of people, experience and activities in the domains of higher education and research, to promote student exchanges and work towards establishing a process of academic recognition. A Memorandum of understanding was signed between IIT Roorkee, Arba Minch University and Wollega University of Ethiopia on 5th Feb. 2015 for exchange of scientific, academic and technical information and identifying opportunities for exchanges and cooperation in disciplines of mutual interest and commercialization of technology.

Finance and Accounts

In 2014-15, I.I.T. Roorkee received a sum of Rs. 31,531.76 lakhs from MHRD to meet plan and non-plan expenditure; MHRD contributed Rs. 21,220.00 lakhs towards Non-plan Grant, and Rs.10,311.76 lakhs towards Plan grant. Institute receipts totaled Rs. 5,756.71 lakhs, contribution from UGC & CSIR are Rs. 660.91 & 256.92 lakhs was also received respectively. Auditing of annual accounts for the year 2014-15 was completed. The Institute continued to receive funds from MHRD and other government agencies for plan and non-plan commitments and R&D activities.

Director's Activities

The Director has visited at University of Southampton for signing of MoU on May 12 – 14, 2014. Meeting with Alumni at USA, June 01, 2014. Plenary talk at the India-Conclave at the University of Edinburgh and india talk at Edinburgh, May 15-16, 2014. Meetings with University of Alberta Functionaries to discuss the way forward for collaboration between IIT Roorkee and University of Alberta at Edmonton, May 26-30, 2014. Meeting at the World Bank with regards to IIT engagement for Sub-Saharan Africa, June 2-5, 2014. IIT Alumni Canada event in Toronto, June 6-8, 2014. 2nd PASET at Dakar, Senegal at World Bank invitation, June 9-13,

2014. Mc Master University, University of Waterloo and York University in the Greater Toronto for research collaborations on their invitation, June 13-19, 2014. Young Investigator Meeting, Boston, October 11-13, 2014. India-New Zealand Joint Networking Scientific workshop at University of Centerbury as head of DST Delegation, New Zealand, December 1 – 6, 2014.

Awards

Indian Institute of Technology Roorkee honored with the Outstanding Engineering Institute ABP News National Education Award on 27-06-2014 at Taj Lands End (Room: Ball Room), Bandra (W) Mumbai.

Acknowledgement

The Institute places on record its grateful acknowledgment of the financial support provided by MHRD, MNRE, DST, CSIR, DBT, MCIT, NAIP, DRDO, BMTPC, BARC, Max Planck Society, Germany, UNDP, UKIERI, Uttarakhand and other State Governments and other governmental and non-governmental agencies. Sincere thanks are due to all faculty members, scientific staff, officials, employees, students and alumni of the institute for their devotion and hard work in taking the Institute to greater heights. With their continued support, it is hoped that IIT Roorkee will continue to contribute significantly to the national cause of providing excellent technical education.

I am deeply indebted to the Hon'ble Ms. Smriti Zubin Irani Minister of Human Resource Development and Chairman, IIT Council for his guidance, support and co-operation in making this Institution move towards attaining its goal.

I take this opportunity to thank Secretary, Additional Secretary (Technical), Additional Secretary and Financial Advisor, Joint Secretary (Distance Learning), Director (Technical), Director (Finance), Under Secretary (Technical Section) and Under Secretary (IFD), Department of Higher Education, Govt. of India, Ministry of Human Resource Development for their continued cooperation in providing grants and for their interest in the development of this Institute.

I am grateful to Hon'ble Prof. Ashok Misra, Chairman, Board of Governors, IIT Roorkee, for his support and guidance.

I place on record my sincere gratitude to the Members of Board of Governors, Finance Committee, Building and Works Committee, the Senate and other Committees of the Institute for their valuable contributions towards making the Institution to realize its mission. I compliment the Editorial team of the Annual Report for their untiring efforts in compiling this report.

October ,2015

Pradipta Banerji
Director



(L to R) Mr. Hari S. Bhartia, Chief Guest; Hon'ble Prof. Ashok Misra, Chairman, Board of Governors and Prof. Pradipta Banerji, Director, IIT Roorkee on the occasion of Annual Convocation held on September 20, 2014. All the degree recipients received the degree in person by the Director.



Mr. Hari S. Bhartia, Chairman, BoG, Indian Institute of Management Raipur, Co-Chairman and Managing Director, Jubilant Bhartia Group, Chief Guest.



Prof. Pradipta Banerji, Director, IIT Roorkee awarding degree on the occasion of Annual convocation held on September 20, 2014.



After taking degree the students are coming outside the convocation hall and throwing their caps in air with cheers.



"OUR'S IS THE SMARTEST TEAM



IIT ROORKEE CONTINGENT, INTER-IIT MUMBAI-2014

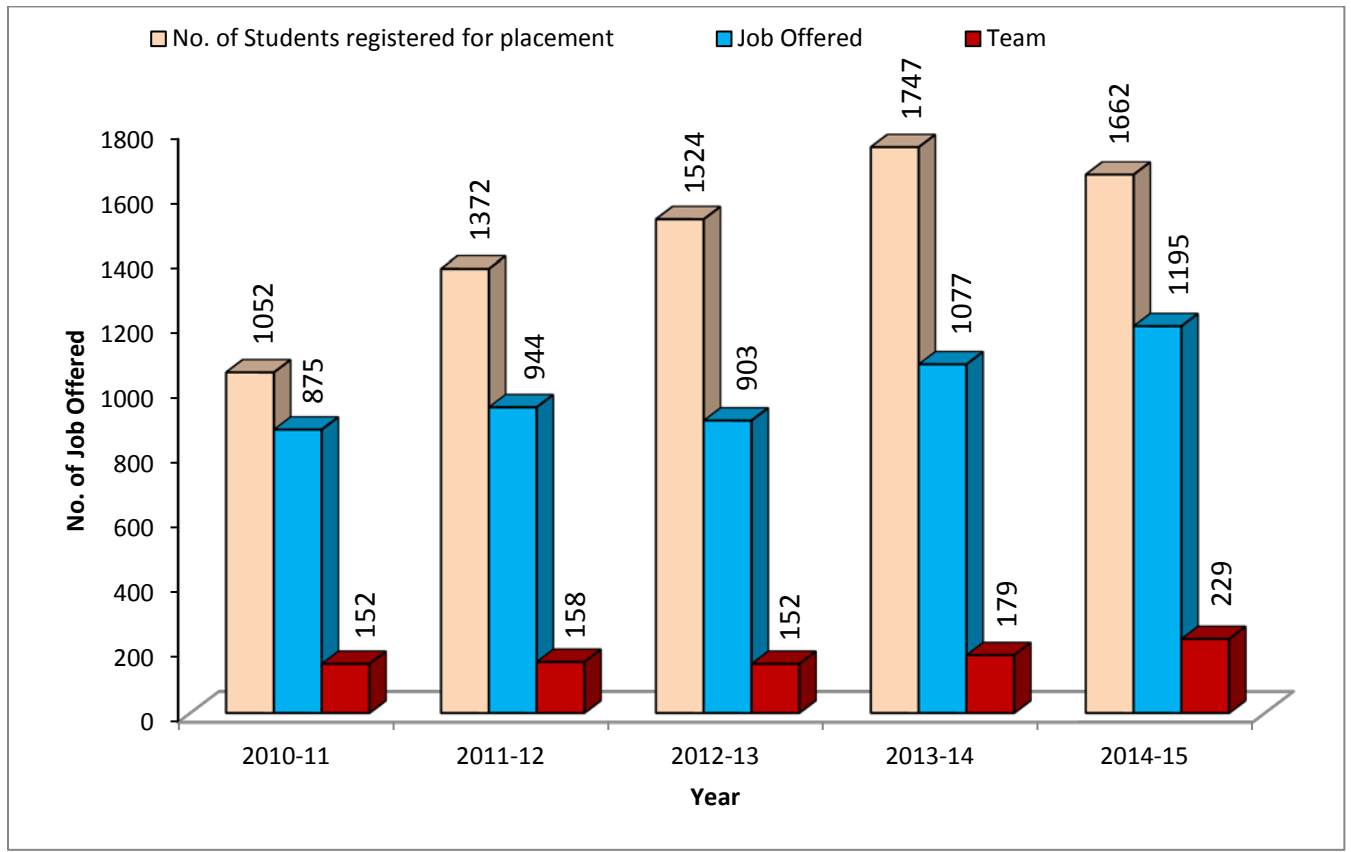


Figure 1: Effective placement of students and selection team visited

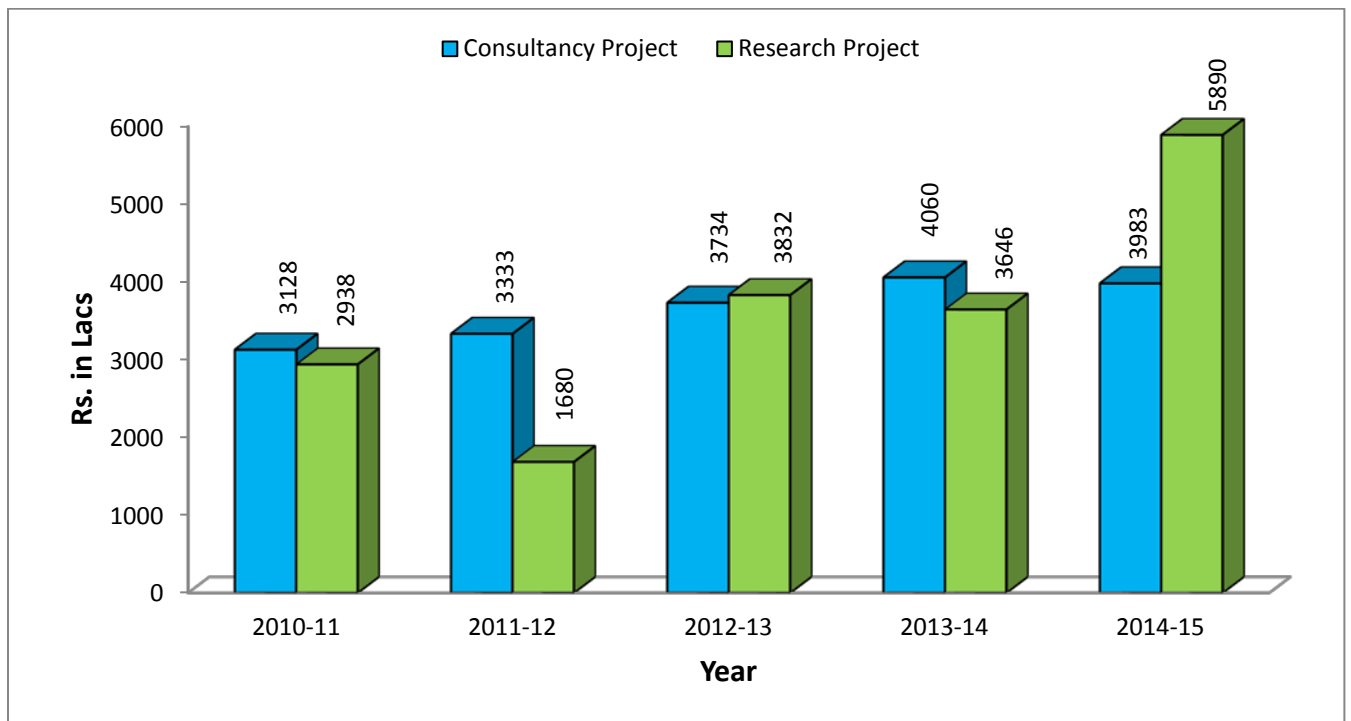


Figure 2. Total Receipt from Sponsored research & Consultancy Project

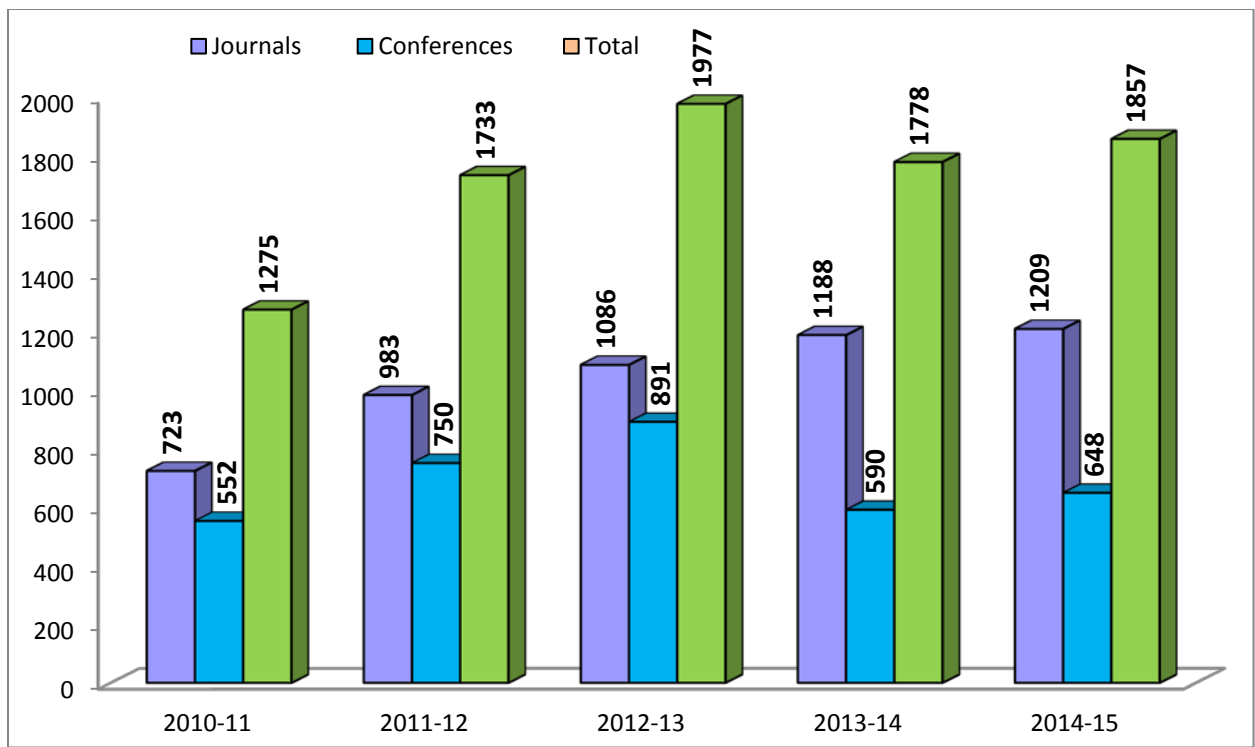


Figure 3. Research Papers published

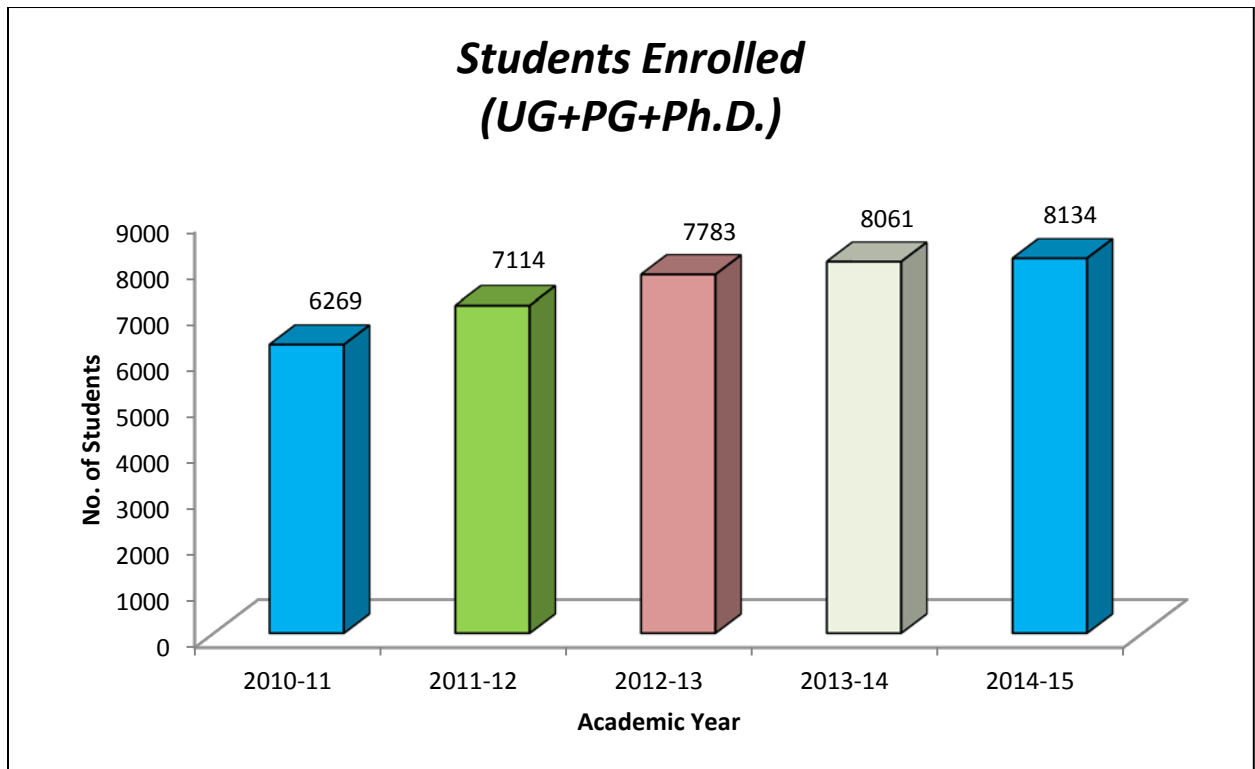


Figure 4. Students Enrolled

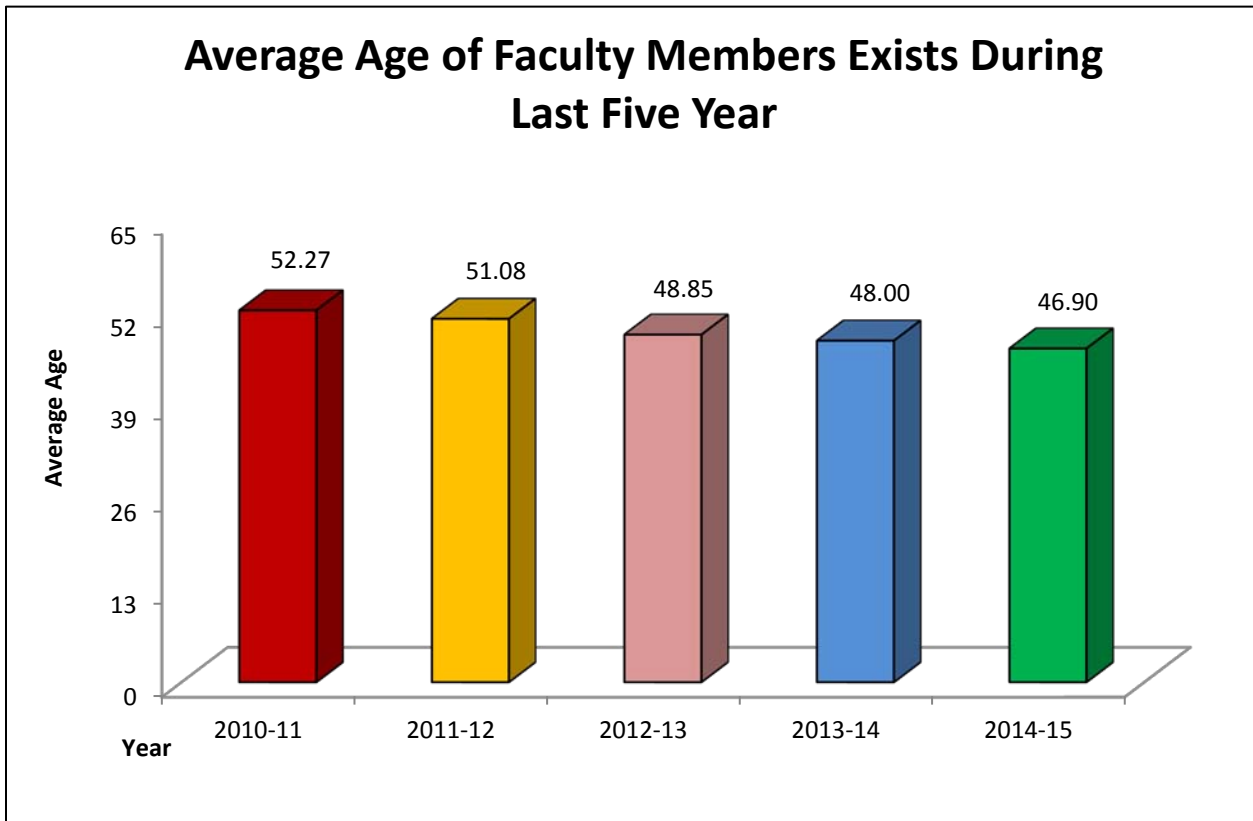


Figure 5. Average Age of Faculty Members Exist During Last Five Years

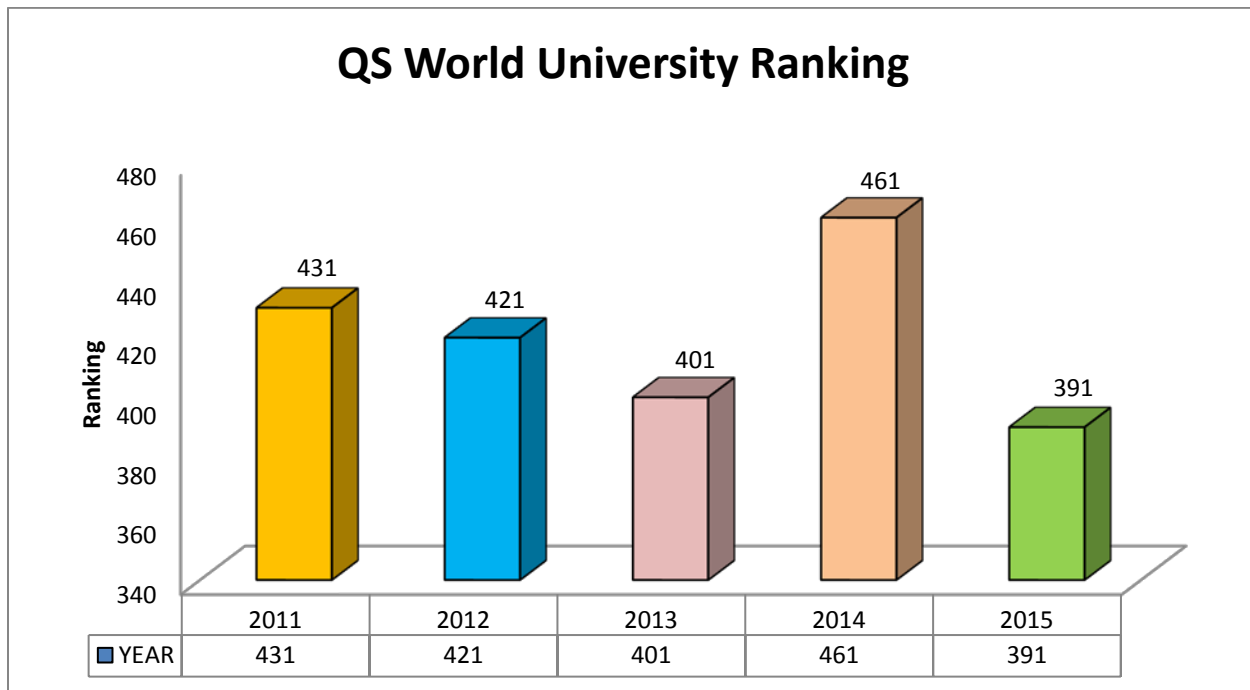


Figure 6. QS World University Ranking

1.1	IIT Council	1.6	Administration
1.2	Board of Governors	1.7	Academic Departments and Centres, Centres of Excellence, Service Centres & Other Units
1.3	Finance Committee		
1.4	Building & Works Committee		
1.5	Senate		

Indian Institute of Technology Roorkee, created on 21st September 2001, is the successor Institute of the University of Roorkee, chartered in 1949 and the Roorkee College founded in 1847, which was later renamed as the Thomason College of Civil Engineering. The Roorkee College was the first engineering college to be established in the whole of the British Commonwealth, or the British Empire, as it was known at that time.

The Institute has a glorious past of more than 167 years and has been widely acclaimed for its excellence in education, research and training. A special emphasis is laid on total personality development along with the quality education and technical training of the students. The present chapter describes the organization and administrative structure of the Institute during the period between 1 April 2014 to 31 March 2015.

1.1 IIT COUNCIL

CHAIRMAN:

The Minister in Charge of Technical Education in the Central Government (Ex-officio)

Hon'ble Smt. Smriti Zubin Irani, (Chairperson)

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Jaydev Vihar,
Bhubaneswar – 751 013, Odisha.
Tele: 0674-230 6200/1291/1292
Fax No. : 0674-230 6203,
E-mail : director@iitbbs.ac.in.

Prof. Timothy Gonsalves,
Director, I.I.T. Mandi,
PWD Rest House, 2nd Floor, Near Bus Stand
Mandi, Mandi - 175 001 (Himachal Pradesh)
Ph.: 01905-237943
Fax: 01905-237945
Mob.: 9418047732
Email: director@iitmandi.ac.in

Prof. Pradeep Mathur,
Director, I.I.T. Indore,
Institute of Engineering and Technology,
DAVV Campus, Khandwa Road,
Indore - 452 017
Fax: 0731-2368282, 2361482
Mob.: 9820153234
Email: director@iiti.ac.in

Prof. Ved Prakash
Chairman,
University Grants Commission,
Bahadurshah Zafar Marg,
New Delhi -110 002
Ph. 2323 4019/6350
Fax: 2223 9659
Email: vedprakash@ugc.ac.in

Dr. P.S. Ahuja,
Director General (DG) of Council of
Scientific and Industrial Research (CSIR),
Anusandhan Bhawan, 2 Rafi Marg, New Delhi –
110 001.
Tel : 23710472/ 23717053 , Fax : 23710618
e-mail : dgcsir@csir.res.in, dg@csir.res.in

Dr. P. Rama Rao,
Chairman, Governing Council of Indian Institute of
Science, Bangalore and
Former Vice Chancellor,
University of Hyderabad,
Balapur, Hyderabad-500005.
Email: pallerama_rao@yahoo.co.in (M)
09849765123

Prof. Anurag Kumar
Director, Indian Institute of Science, Bangalore
Bangalore - 560 012,
Ph. (080) 23600960/ 3600411,
Fax: 080-23600936
~~Email: dir@admin.iisc.ernet.in~~

Secretary (Expenditure),
Ministry of Finance,
Department of Expenditure,
North Block, New Delhi - I
Ph. 23092929, 23092663
Fax: 23092546, Email: secyexp@nic.in

Secretary, Department of Information Technology,
Electronics Niketan, CGO Complex, Lodhi Road,
New Delhi - 110 003
Ph. : 24364041
Fax: 24363134
Email: secretary@mit.gov.in,
secyoffice@mit.gov.in

Chairman, AICTE,
7th Floor, Chanderlok Building, Janpath,
New Delhi -110 001,
Ph. 23724188
Fax: 23724189
Email: chairman@aicte.ernet.in
ssmantha@aicte-india.org.

Prof. Ashok Jhunjhunwala,
Professor Deptt. of Elct. Engineering (Te Ne T)
Group, Indian Institute of Technolgy Madras
Chennai - 600 036 (T.N.)
Fax: 044-22570120
Email: ashok@nimbus.ee.iitm.ernet.in
ashok@tenet.res.in

Prof. Vijayalakshmi Ravindranath,
Professor & Chair,
Centre For Neuroscience,
Indian Institute of Science,
C.V. Raman Avenue,
Bangalore-560012.
Ph.080-2293 3433, Fax.No:080-23603323
E-Mail: viji@cns.iisc.ernet.in

Dr. (Mrs.) Tessy Thomas
Outstanding Scientist' & Director
Advanced Systems Laboratory (ASL)
Hyderabad.
(Office) : 040-24188004
Phone (Fax) : 040-24343779 (M): 09441208877
Email : director@asl.drdo.in,
tessy_1963@yahoo.com

Prof. S.K. Joshi,
250-National Physical Laboratory,
Dr. K.S. Krishnan Marg,
South Patel Nagar, Pusa,

New Delhi - 110 012
Email: skjoshinpl@gmail.com

Prof. R.C. Budhani,
Director, Director's Secretariat,
National Physical Laboratory,
Dr. K S Krishnan Marg, South Patel Nagar,
Pusa, New Delhi - 110 012
Fax: 011-45609310
Email: dnpl@nplindia.org
rcb@iitk.ac.in

Shri Satyanarayanan Mohanty,
Secretary (Higher Education),
Ministry of Human Resource Development
New Delhi. E-mail:- secy.dhe@nic.in

Shri Rakesh Ranjan (IITs Council)
Joint Secretary (TE),
Additional Secretary
Ministry of Human Resource Development,
Department of Higher Education,
New Delhi
Email: amarjeetsinha@hotmail.com

Shri Yogendra Tripathi
Joint Secretary & Financial Advisor (JS&FA),
Ministry of Human Resource Development,
Department of Higher Education,
New Delhi
Email: yogendra.tripathi@nic.in
M:8527576222

1.2 BOARD OF GOVERNORS

CHAIRMAN :

Mr. Analjit Singh upto 23.5.2014
Chairman, Board of Governors, IIT Roorkee
Chairman, Max India Limited,
Max House,
1, Dr. Jha Marg, Okhla Phase III,
New Delhi-110 020

Prof. Ashok Misra w.e.f. 24.5.2014
Chairman, BOG, IIT Roorkee &
68, Adarsh Vista, Basavanagar
Bangalore 560037

MEMBERS:

Prof. Pradipta Banerji
Director,
Indian Institute of Technology Roorkee,
Roorkee – 247 667

Shri Sameer Dhingra
15-A, New Road
Dehradun 248 001

Additional Chief Secretary/Principal Secretary
to Government of Haryana,
Technical Education Department
Room No.39, 7th Floor, Haryana Civil Secretariat
Chandigarh - 160001

Prof. B.N. Jain
Vice-Chancellor
Birla Institute of Technology & Science (BITS-
Pilani)
Vidya Vihar Campus
Pilani 333031(Raj)

Sri Pawan Munjal
Managing Director, & CEO
Hero MotoCorp Ltd.
34, Community Centre
Basant Lok, Vasant Vihar,
New Delhi - 110 057

Sri R.S.T. Sai
Chairman & Managing Director
Tehri Hydro Development Corporation Ltd.
Pragatipuram, By Pass Road,
Rishikesh- 249 201
Uttarakhand

Prof. (Mrs.) Rama Bhargava
Department of Mathematics
Indian Institute of Technology, Roorkee

Prof. S.S. Jain
Department of Civil Engineering
Indian Institute of Technology, Roorkee
Dy. Director Permanent Invitee
Indian Institute of Technology, Roorkee

Lt. Col. (Retd.) A.K. Srivastava Secretary
Registrar
Indian Institute of Technology Roorkee

1.3 FINANCE COMMITTEE

CHAIRMAN :

Mr. Analjit Singh upto 23.5.2014
Chairman, Board of Governors,
IIT Roorkee

Chairman, Max India Limited,
Max House,

Dr. Jha Marg, Okhla Phase III,
New Delhi-110 020

Prof. Ashok Misra w.e.f. 24.5.2014
Chairman, BOG, IIT Roorkee &
68, Adarsh Vista, Basavanagar
Bangalore 560037

Prof. Pradipta Banerji
Director Indian Institute of Technology Roorkee
Roorkee

Addl. Secretary (TE)
Government of India
Ministry of Human Resource Development
Department of Secondary & Higher Education
Shastri Bhawan
New Delhi – 110 001

Addl. Secretary & Financial Advisor
Ministry of Human Resource Development
Government of India
Department of Secondary & Higher Education
Technical Section I, Shastri Bhawan ,New Delhi

Shri R.S.T. Sai
Chairman & Managing Director
Tehri Hydro Development Corporation Ltd.

Pragtipuram, Bypass Road
Rishikesh – 249 201 (Uttarakhand)

Prof. Ravi Bhushan (upto 31.12.2014)
Department of Chemistry
Indian Institute of Technology Roorkee
Roorkee

Prof. Rama Bhargava (w.e.f. 1.1.2015)
Department of Mathematics
Indian Institute of Technology Roorkee
Roorkee

Prof. P.K. Ghosh
Dean, Finance & Planning (Ex-Officio)
Indian Institute of Technology Roorkee
Roorkee

Dy. Director, Permanent Invitee
Indian Institute of Technology Roorkee
Roorkee

Lt. Col. (Retd.) A.K. Srivastava Secretary
Registrar
Indian Institute of Technology Roorkee
Roorkee

1.4 BUILDING & WORKS COMMITTEE

CHAIRMAN :

Prof. Pradipta Banerji
Director
Indian Institute of Technology, Roorkee

MEMBER :

Dy. Director
Indian Institute of Technology Roorkee
Chairman, Estate & Works
Indian Institute of Technology Roorkee

Er. H.K. Upreti (upto 31.12.2014)
Chief Engineer, National Highway
Uttarakhand PWD,
Dehradun-248 001 (Uttarakhand)

Er. Pravendra Kumar
(w.e.f. 1.1.2015)
Superintending Engineer
U.P. Housing & Development Board
Ghaziabad

Dy. General Manager,
Uttarakhand Power Corporation Ltd.,
Roorkee – 247 667

Prof. Ravi Kumar (upto 31.12.2014)
Department of Mechanical & Indl. Engg.
Indian Institute of Technology Roorkee

Prof. Rajendra Prasad (upto 31.12.2014)
Department of Electrical Engineering
Indian Institute of Technology Roorkee

Prof. Pradeep Kumar (upto 31.12.2014)
Department of Civil Engineering
Indian Institute of Technology Roorkee

Prof. Pushplata (w.e.f. 1.1.2015)
Department of Architecture & Planning
Indian Institute of Technology Roorkee

Prof. Pramod Agarwal (w.e.f. 1.1.2015)
Department of Electrical Engineering
Indian Institute of Technology Roorkee

Prof. Zulfequar Ahmad (w.e.f. 1.1.2015)
Department of Civil Engineering
Indian Institute of Technology Roorkee Officiating
Superintending Engineer
Indian Institute of Technology Roorkee

Er. Salek Chand - Special Permanent Invitee
Chief Engineer, Level-I
P.W.D. Bareilly Zone
Bareilly

Prof. P.K. Ghosh - Special Invitee
Dean, Finance & Planning
Indian Institute of Technology of Roorkee
**Lt. Col. (Retd.) A. K. Srivastava-Member
Secretary**
Registrar
Indian Institute of Technology Roorkee

1.5 SENATE

CHAIRMAN:

Prof. Pratipta Banerji
Director

MEMBERS :

Prof. S.P. Gupta
Dy. Director

All Professors of the Institute:

1. Architecture & Planning

Prof. (Mrs) Pushplata
Prof. V. Devdas w.e.f. 4.4.2014
Prof. ILA Gupta w.e.f. 4.4.2014

2. Biotechnology

Prof. (Mrs.) Ritu Barthwal
Prof. G.S. Randhawa
Prof. R.P. Singh
Prof. Ramasare Prasad
Prof. Vikas Pruthi w.e.f. 4.4.2014
Prof. Partha Roy w.e.f. 4.4.2014

3. Chemical Engineering

Prof. I.M. Mishra upto 31.7.2014
Prof. Bikash Mohanty
Prof. Shri Chand
Prof. Vijay Kumar Agarwal
Prof. B. Prasad
Prof. Shishir Sinha w.e.f. 4.4.2014
Prof. C.B. Majumdar w.e.f. 4.4.2014

4. Chemistry

Prof. R.N. Goyal
Prof. Ravi Bhushan
Prof. Kamaluddin upto 31.5.2014
Prof. V.K. Gupta
Prof. Anil Kumar
Prof. (Mrs) Mala Nath
Prof. A.K. Singh
Prof. S.M. Sondhi upto 30.4.2014
Prof. U.P. Singh
Prof. M.R. Maurya
Prof. K.C. Gupta w.e.f. 4.4.2014
Prof. Bina Gupta w.e.f. 4.4.2014

5. Civil Engineering

Prof. A.K. Jain
Prof. S.S. Jain
Prof. M.N. Viladkar upto 31.12.2014
Prof. Deepak Kashyap
Prof. Pradeep Kumar
Prof. P.K. Garg
Prof. C.S.P. Ojha
Prof. Pradeep Bhargava
Prof. Satish Chandra
Prof. S.K. Ghosh

Prof. Mahender Singh
Prof. Manoj K. Arora
Prof. Manoranjan Parida
Prof. Praveen Kumar
Prof. N.K. Samadhiya
Prof. A.K. Ahuja
Prof. K.S. Hari Prasad
Prof. Akhil Upadhyay
Prof. Z. Ahmad
Prof. Kamal Jain w.e.f. 4.4.2014
Prof. Ajay Gairola w.e.f. 4.4.2014
Prof. A.A. Kazmi w.e.f. 4.4.2014
Prof. B.R. Gurjar w.e.f. 4.4.2014
Prof. P.K. Gupta w.e.f. 4.4.2014
Prof. Vipul Prakash w.e.f. 4.4.2014

6. Computer Science & Engineering

Prof. Padam Kumar upto 30.9.2014
Prof. Manoj Misra

7. Earthquake Engineering

Prof. M.L. Sharma
Prof. Ashok Kumar
Prof. (Mrs.) Amita Sinvhal
Prof. Yogendra Singh
Prof. Kirat Pal
Prof. B.K. Maheshwari w.e.f. 4.4.2014
Prof. Pankaj Agarwal w.e.f. 4.4.2014
Prof. J.P. Narayan w.e.f. 4.4.2014
Prof. M. Shrikhande w.e.f. 4.4.2014

8. Earth Sciences

Prof. D.C. Srivastava
Prof. P.K. Gupta
Prof. D.K. Mukhopadhyay
Prof. Rathinam Anbalagan
Prof. Rambhatla Gourishankar Sastry
Prof. A.K. Saraf
Prof. Mohd. Israil
Prof. Sunil Bajpai
Prof. G.J. Chakrapani
Prof. (Mrs). Sagarika Mukhopadhyay
Prof. Sandeep Singh
Prof. A.K. Sen
Prof. Anand Joshi w.e.f. 4.4.2014
Prof. R. Krishnamurthi w.e.f. 4.4.2014

9. ELECTRICAL ENGINEERING

Prof. S.P. Gupta upto 28.2.2015
Prof. Vinod Kumar
Prof. Pramod Agarwal
Prof. Girish Kumar Singh
Prof. Sajjan Pal Singh
Prof. R.P. Maheshwari
Prof. S.P. Srivastava
Prof. N.P. Padhy
Prof. Biswarup Das

- Prof. R.S. Anand
 Prof. Rajendra Prasad
 Prof. G.N. Pillai w.e.f. 4.4.2014
 Prof. M.L. Dewal w.e.f. 4.4.2014 to 31.7.2014
- 10. ELECTRONICS & COMMUNICATION ENGINEERING**
- Prof. A.K. Saxena
 Prof. M.J. Nigam
 Prof. M.V. Kartikeyan
 Prof. Dharmendra Singh
- 11. HYDROLOGY**
- Prof. N.K. Goel
 Prof. Himanshu Joshi
 Prof. M. Perumal
- 12. HUMANITIES & SOCIAL SCIENCES**
- Prof. Pashupati Jha
 Prof. D.K. Nauriyal
 Prof. (Mrs.) Renu Rastogi
 Prof. Sukh Pal Singh
 Prof. (Mrs.) Rashmi Gaur
 Prof. Nagendra Kumar w.e.f. 4.4.2014
- 13. PAPER TECHNOLOGY, SAHARANPUR CAMPUS**
- Prof. A.K. Singh
 Prof. Satish Kumar
 Prof. S.P. Singh
 Prof. Y.S. Negi
 Prof. Dharam Dutt
 Prof. S.C. Sharma w.e.f. 4.4.2014
- 14. MANAGEMENT STUDIES**
- Prof. V.K. Nangia
 Prof. J.P. Singh
- 15. MATHEMATICS**
- Prof. (Ms.) R. R. Bhargava upto 30.6.2014
 Prof. S.P. Sharma
 Prof. (Mrs.) Rama Bhargava
 Prof. R.C. Mittal
 Prof. P.N. Agarwal
 Prof. V.K. Katiyar
 Prof. Roshan Lal
 Prof. (Mrs.) Sunita Gakkhar
 Prof. M.L. Mittal
 Prof. (Mrs.) Kusum Deep
 Prof. (Mrs.) Tanuja Srivastava
 Prof. N. Sukavanam
 Prof. S.P. Yadav
- 16. MECHANICAL & INDUSTRIAL ENGINEERING**
- Prof. Pradeep Kumar
 Prof. Satish C. Sharma
 Prof. Dinesh Kumar
 Prof. P.K. Jain
 Prof. Akhilesh Gupta
- Prof. B.K. Gandhi
 Prof. Bhanu Kumar Mishra
 Prof. Ravi Kumar
 Prof. Pradeep K. Sahoo
 Prof. R.P. Gakkhar upto 30.11.2014
 Prof. D.K. Dwivedi w.e.f. 4.4.2014
 Prof. Navneet Arora w.e.f. 4.4.2014
- 17. METTALLURGICAL & MATERIALS ENGINEERING**
- Prof. P.K. Ghosh
 Prof. (Mrs.) Vijaya Agarwala upto 31.8.2014
 Prof. S.K. Nath
 Prof. Anjan Sil
 Prof. B.S.S. Daniel w.e.f. 4.4.2014
 Prof. R. Jayaganathan w.e.f. 4.4.2014
- 18. PHYSICS**
- Prof. B.D. Indu
 Prof. A.K. Jain
 Prof. Ravindra Nath
 Prof. Rajesh Srivastava
 Prof. G.S. Singh
 Prof. Vir Singh
 Prof. (Mrs.) Tashi Nautiyal
 Prof. K.L. Yadav
 Prof. Davinder Kaur Walia
 Prof. G.D. Varma
- 19. WATER RESOURCE DEVELOPMENT & MANAGEMENT**
- Prof. S.K. Tripathi
 Prof. Nayan Sharma upto 28.2.2015
 Prof. M.L. Kansal
 Prof. Deepak Khare
 Prof. S.K. Mishra
- 20. INSTITUTE INSTRUMENTATION CENTRE**
- Prof. Ashwini K. Choudhry upto 30.9.2014
 Prof. Ramesh Chandra
- Three persons other than employees of the Institute nominated by the Chairman of Board of Governors for a period of two years:**
1. Prof. Bhim Singh
 Department of Electrical Engineering,
 Indian Institute of Technology Delhi
 Hauz Khas, New Delhi.
 2. Prof. Bodh Raj Mehta,
 Department of Physics,
 Indian Institute of Technology Delhi,
 Hauz Khas, New Delhi.
 3. Prof. Girishwar Misra,
 Department of Psychology and
 Dean, Research (Humanities and Social
 Sciences),
 Arts Faculty Extension Building,
 University of Delhi, Delhi – 110007

Heads of the Departments/Academic Centres/Schools (other than Professors)

Dr. R.P. Saini, Head, Alternate Hydro Energy Centre upto 1.1.2015

Dr. M.P. Sharma, Head, Alternate Hydro Energy Centre w.e.f. 1.2.2015

Dr. D.S. Arya, Head, Hydrology w.e.f. 1.2.2015

Dr. R. Balasubramanian, Head, I.C.C. w.e.f. 1.2.2015

Dr. S.N. Rangnekar, Head, Department of Management Studies

Deans & Associate Deans (other than Professors):

Dr. P. Jeevanandam, Associate Dean of Students' Welfare (International Students)

Dr. Apurbba Kumar Sharma, Associate Dean (Academic Studies)

Dr. R.K. Peddinti, Associate Dean (Academic Research)

The Librarian of the Institute:

Mr. Yogendra Singh

One Chief Warden of the Institute:

Dr. Kamal
Chief Warden, Radhakrishnan Bhawan

Six Members of the Staff for their special knowledge appointed by the Chairman of Board of Governors:

- (i) Dr. (Mrs.) Smita Jha, Associate Professor, Department of Humanities & Social Sciences
- (ii) Dr. Pravindra Kumar, Associate Professor, Department of Biotechnology
- (iii) Dr. Anil K. Gourishetty, Assistant Professor, Department of Physics
- (iv) Dr. Rajat Rastogi, Associate Professor, Department of Civil Engineering
- (v) Dr. Inderdeep Singh, Associate Professor, Department of Mechanical & Industrial Engineering

Secretary

Lt.Col. (Retd.) A.K. Srivastava
Registrar
Indian Institute of Technology Roorkee
Roorkee – 247 667

1.6 ADMINISTRATION

CHAIRMAN, BOARD OF GOVERNORS	Shri Analjit Singh upto 23.5.2014
CHAIRMAN, BOARD OF GOVERNORS	Professor Ashok Misra w.e.f. 24.5.2014
DIRECTOR	Prof. Pradipta Banerji
Dy. Director	Prof. S.P. Gupta upto 31.01.2015
Dy. Director	Prof. Vinod Kumar w.e.f. 05.02.2015
DEANS	
Administration	Prof. U.P. Singh
Alumni Affairs & International Relations	Prof. S.C. Sharma (upto 08.5.2014)
	Prof. Sandeep Singh (w.e.f. 09.5.2014)
Finance & Planning	Prof. P.K. Ghosh
Faculty Affairs	Prof. Vinod Kumar (upto 31.01.2015)
	Prof. Deepak Kashyap (w.e.f. 01.02.2015)
Academics	Prof. Pramod Agarwal
Sponsored Research & Industrial Consultancy	Prof. Pradeep Bhargava (upto 31.01.2015)
	Prof. Manoranjan Parida (w.e.f. 01.02.2015)
Students' Welfare	Prof. Ravi Bhushan (upto 08.5.2014)
	Prof. D.K. Nauriyal (w.e.f. 09.5.2014)
ASSOCIATE DEANS	
Faculty Affairs	Prof. Yogendra Singh
SRIC	Dr. C.B. Majumder (upto 31.01.2015)
	Prof. M. Shrikhande (w.e.f. 01.02.2015)
Bhawans	Dr. Inderdeep Singh (upto 09.06.2014)
	D. N.K. Navani (w.e.f. 10.06.2014)
Discipline	Dr. Indradeep Singh (w.e.f. 10.6.2014)
Foreign Students	Dr. P. Jeevanandam

Academic Studies	Dr. Apurbba Kumar Sharma
Academic Research	Dr. Rama Krishna Peddinti
REGISTRARS	
Registrar	Lt. Col. (Retd.) A.K.Srivastava
Dy. Registrar	Dr. Shyam Narayann (On lien till 08/07/2013)
Dy. Registrar (Administration)	Sh. Prashant Garg
Asstt. Registrar (Services)	Sh. Pradeep Sharma
Asstt. Registrar (Recruitment)	Sh. N.K. Verma
Dy. Registrar (General Administration)	Shri S.K. Saini
Asstt. Registrar (Meeting)	Sh. C.S. Verma
Asstt. Registrar (Legal)	Sh. Subhash Chand
Dy. Registrar (Finance & Account)	Sh. G.K. Rastogi
Asstt. Registrar (Finance & Account)	Sh. Pramod Kumar
Dy. Registrar (Academics)	Dr. Ajay Kumar Sharma
Asstt. Registrar (Academic Research) & (SRIC in charge)	Sh. R.K. Sharma
Asstt. Registrar (Academic Studies)	Sh. Subhash Chand Sharma
Dy. Registrar (Material Management & Liaison Cell)	Sh. Raman Lal
Deputy Registrar Officiating, (Internal Audit)	Dr. Suman Kumar
Asstt. Registrar (Director Office) & PS to Director	Smt. Marget Cilamkoti
Asstt. Registrar (Saharanpur Campus)	Shri Rajvir Singh Khatri

1.7 ACADEMIC DEPARTMENTS & CENTRES, CENTRES OF EXCELLENCE, SERVICE CENTRES & OTHER UNITS

Academic Departments

- Architecture & Planning
- Biotechnology
- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science and Engineering
- Earthquake Engineering
- Earth Sciences
- Electrical Engineering
- Electronics & Communication Engineering
- Humanities & Social Sciences
- Hydrology
- Management Studies
- Mathematics
- Mechanical & Industrial Engineering
- Metallurgical & Materials Engineering
- Paper Technology
- Polymer and Process Engineering
- Applied Sciences and Engineering
- Physics
- Water Resources Development & Management

Academic Centres

- Alternate Hydro Energy Centre

Centres of Excellence

- Centre for Transportation System (CTRANS)
- Centre for Nano Technology
- Centre for Disaster Mitigation and Management

Academic Service Centers

- Mahatma Gandhi Central Library
- Continuing Education Centre (CEC)
- Quality Improvement Programme Centre
- Institute Computer Centre (ICC)/ Information Super Highway Centre (ISC)
- Institute Instrumentation Centre (IIC)

Other Supporting Units

- Education Technology Cell
- Intellectual Property Rights Cell
- Training & Placement Cell
- Institute Hospital
- Estate & Work

2. Academic & Non-academic Staff

- | | |
|---|--|
| 2.1 Academic Staff | 2.5 Non-Academic Officers/Staff |
| 2.2 New Appointments and Selections to Higher Posts | 2.6 Recipients of Incentive (Non-Teaching Staff) on Foundation Day |
| 2.3 Appointments under SC/ST and OBC Categories | 2.7 Recipients of Outstanding Teachers Award on Teacher's Day |
| 2.4 Faculty / Officers / Staff Superannuated | |

2.1 ACADEMIC STAFF (01.4.2014 to 31.3.2015)

Sl. No.	Department	Prof.	Assoc. Prof.	Asstt. Prof.	Asstt. Prof. (on contract)	Emeritus Fellow	Visiting Faculty/ PDF/IF etc.	Others	Total
1.	Arch. & Planning	03	03	08	01	00	02	00	17
2.	Applied Sc. & Engg.	01	03	04	00	00	00	00	08
3.	Biotechnology	06	07	14	00	00	02	00	29
4.	Chemical Engg.	07	06	07	03	02	02	00	27
5.	Chemistry	12	07	08	00	00	03	00	30
6.	Civil Engg.	25	13	07	02	02	06	01	56
7.	Computer Sc. & Engg.	02	04	06	02	01	00	00	15
8.	Earthquake Engg.	09	01	04	00	03	02	01	20
9.	Earth Sciences	14	01	07	00	00	03	00	25
10.	Electrical Engg.	13	05	13	00	00	00	00	31
11.	Electronics & Comm. Engg.	04	08	07	03	02	00	00	24
12.	Hum. & Soc. Sc.	06	01	07	00	00	00	00	14
13.	Hydrology	03	02	02	00	01	00	00	08
14.	Management Studies	02	05	07	00	00	01	00	15
15.	Mathematics	13	07	08	00	02	02	00	32
16.	Mech. & Ind. Engg.	12	16	12	01	01	01	01	44
17.	Mett. & Matl.Engg.	06	04	10	00	02	01	00	23
18.	Paper Technology	04	02	01	00	00	02	00	09
19.	Polymer & Process Engg.	01	03	07	00	01	00	00	12
20.	Physics	10	07	12	00	01	03	00	33
21.	WRD&M	05	01	01	01	02	00	01	11
22.	A.H.E.C.	00	02	01	00	00	00	04	07
23.	I.I.C.	02	00	00	00	00	00	03	05
24.	I.C.C.	00	00	01	00	00	00	05	06
25.	Centre of Nanotechnology	00	00	00	00	00	03	00	03
26.	M.G. Central Library	00	00	00	00	00	00	04	04
27.	Director Office	00	00	00	00	00	00	01	01
	Total	160	108	154	13	20	33	21	509

2.2 (A). NEW APPOINTMENTS AND SELECTIONS TO HIGHER POSTS
(April 1, 2014 to 31st March 2015)

SI. No.	Name	Designation	DOJ
Arch. & Planning			
1.	Dr. V. Devdas	Professor	04.04.2014
2.	Dr.(Mrs.) Ila Gupta	Professor	04.04.2014
3.	Dr. Gaurav Raheja	Assoc. Prof.	04.04.2014
4.	Dr. E. Rajsekhar	Asstt. Prof.	02.02.2015
Biotechnology			
1.	Dr. Vikash Pruthi	Professor	04.04.2014
2.	Dr. Partha Roy	Professor	04.04.2014
3.	Dr.(Mrs.) Ranjana Pathania	Assoc. Prof.	04.04.2014
4.	Dr. Naveen Kumar	Assoc. Prof.	04.04.2014
5.	Dr.(Mrs.) Saily Tomar	Assoc. Prof.	04.04.2014
6.	Dr. Saurav Datta	Asstt. Prof.	08.05.2014
7.	Dr. Saugta Hazra	Asstt. Prof.	30.05.2014
8.	Dr. Harsh	Asstt. Prof.	07.07.2014
9.	Dr. Sulakshana Pradyot Mukherjee	Asstt. Prof.	07.07.2014
10.	Dr. Deepak Sharma	Asstt. Prof.	22.12.2014
11.	Dr. (Ms.) Soma Rohatgi	Asstt. Prof.	30.12.2014
Chemical			
1.	Dr. C.B. Mazumdar	Professor	04.04.2014
2.	Dr. Shishir Sinha	Professor	04.04.2014
3.	Dr. Prasanjit Mondal	Assoc. Prof.	04.04.2014
4.	Dr. Vimal Chandra Srivastava	Assoc. Prof.	04.04.2014
5.	Dr. Amit Kumar Dhiman	Assoc. Prof.	04.04.2014
6.	Dr. Sumana Ghosh	Asstt. Prof.	13.06.2014
7.	Dr. Prateek Kumar Jha	Asstt. Prof. (OC)	11.07.2014
8.	Dr. Taraknath Das	Asstt. Prof. (OC)	24.12.2014
9.	Dr. N. Siva Mohan Reddy	Asstt. Prof. (OC)	12.01.2015
Chemistry			
1.	Dr. K.C. Gupta	Professor	04.04.2014
2.	Dr.(Mrs.) Bina Gupta	Professor	04.04.2014
3.	Dr. Naseem Ahmad	Assoc. Prof.	04.04.2014
4.	Dr. Kalyan Kumar Sadhu	Asstt. Prof.	14.07.2014
5.	Dr. Debasis Banerjee	Asstt. Prof.	31.03.2015
Civil Engg.			
1.	Dr. Ajay Gairola	Professor	04.04.2014
2.	Dr. Vipul Prakash	Professor	04.04.2014
3.	Dr. Absar Ahmad Kazmi	Professor	04.04.2014
4.	Dr. B.R. Gurjar	Professor	04.04.2014
5.	Dr. Pramod Kumar Gupta	Professor	04.04.2014

6.	Dr. Kamal Jain	Professor	04.04.2014
7.	Dr. Mohd. Ashraf Iqbal	Assoc. Prof.	04.04.2014
8.	Dr. Pramod Kumar Sharma	Assoc. Prof.	04.04.2014
9.	Dr. G.D. Ransinchung R.N.	Assoc. Prof.	04.04.2014
10.	Dr. Raja Chowdhury	Asstt. Prof.	23.04.2014
11.	Dr. Shantiram Chatterjee	Asstt. Prof.	23.04.2014
12.	Dr. Bhanu Prakash Vellanki	Asstt. Prof. (OC)	31.12.2014
Computer Sciences & Engg.			
1.	Dr. Partha Pratim Roy	Asstt. Prof.	01.08.2014
2.	Dr. Debashis Sen	Asstt. Prof.	12.09.2014
3.	Dr. Sudip Roy	Asstt. Prof. (OC)	28.07.2014
4.	Dr. Bhatt Chidansh Amitkumar	Asstt. Prof. (OC)	30.10.2014
DOMS			
1.	Dr. Vinay Sharma	Assoc. Prof.	04.04.2014
2.	Dr. Mukesh Kumar Barua	Assoc. Prof.	04.04.2014
3.	Dr. Gaurav Dixit	Asstt. Prof.	02.01.2015
Electrical Engg.			
1.	Dr. M.L. Dewal	Professor	04.04.2014
2.	Dr. G.N. Pillai	Professor	04.04.2014
3.	Dr. B.R. Bhalja	Asstt. Prof.	17.06.2014
4.	Dr. Anubrata Dey	Asstt. Prof.	28.01.2015
Earthquake Engg.			
1.	Dr. J.P. Narayan	Professor	04.04.2014
2.	Dr. Manish Shrikhande	Professor	04.04.2014
3.	Dr. B.K. Maheshwari	Professor	04.04.2014
4.	Dr. Pankaj Agarwal	Professor	04.04.2014
5.	Dr. Jashodhir Das	Assoc. Prof.	04.04.2014
Earth Sciences			
1.	Dr. R. Krishnamurthy	Professor	04.04.2014
2.	Dr. Anand Joshi	Professor	04.04.2014
3.	Dr. Ashutosh Chamoli	Asstt. Prof.	15.04.2014
4.	Dr. Pallavi Chattopadhyay	Asstt. Prof.	27.01.2015
5.	Dr. Ajanta Goswami	Asstt. Prof.	30.01.2015
E&CE			
1.	Dr. Amalendu Patnaik	Assoc. Prof.	04.04.2014
2.	Dr. Sanjeev Kumar Manhas	Assoc. Prof.	04.04.2014
3.	Dr. Anand Bulusu	Assoc. Prof.	04.04.2014
4.	Dr. Brajesh Kumar Kaushik	Assoc. Prof.	04.04.2014
5.	Dr. Bishnu Prasad Das	Asstt. Prof.	09.05.2014
6.	Dr. Karan Rawat	Asstt. Prof.	31.12.2014
7.	Dr. Brijesh Kumar	Asstt. Prof. (OC)	21.04.2014
8.	Dr. Meenakshi Rawat	Asstt. Prof. (OC)	30.06.2014
9.	Dr. Pyari Mohan Pradhan	Asstt. Prof. (OC)	01.07.2014

Hum. & Social Sciences			
1.	Dr. Nagendra Kumar	Professor	04.04.2014
2.	Dr. Subir Sen	Asstt. Prof.	19.05.2014
3.	Dr. Falguni Pattanaik	Asstt. Prof.	29.01.2015
4.	Dr. Ram Manohar Singh	Asstt. Prof.	16.02.2015
Mathematics			
1.	Dr.(Mrs.) Aditi Gangoupadhyay	Assoc. Prof.	04.04.2014
2.	Dr. (Mrs.) Pratibha	Assoc. Prof.	04.04.2014
3.	Dr. Shiv Kumar Gupta	Assoc. Prof.	04.04.2014
4.	Dr. Ram Krishna Pandey	Asstt. Prof.	06.05.2014
5.	Dr. Ram Jiwari	Asstt. Prof.	03.06.2014
6.	Dr. Ankik Kumar Giri	Asstt. Prof.	23.06.2014
Mech. & Ind. Engg.			
1.	Dr. D.K. Dwivedi	Professor	04.04.2014
2.	Dr. Navneet Arora	Professor	04.04.2014
3.	Dr. P.K. Jha	Assoc. Prof.	04.04.2014
4.	Dr. Sushanta Dutta	Assoc. Prof.	04.04.2014
5.	Dr. Andallib Tariq	Assoc. Prof.	04.04.2014
6.	Dr. U.S. Hariharbhai	Assoc. Prof.	04.04.2014
7.	Dr. Manas Mohan Mahapatra	Assoc. Prof.	04.04.2014
8.	Dr. Arup Kumar Das	Asstt. Prof.	13.06.2014
9.	Dr. Siladitya Pal	Asstt. Prof.	03.03.2015
10.	Dr. Avinash Prashar	Asstt. Prof. (OC)	02.06.2014
M.M.E.D.			
1.	Dr. B. S. Sundar Daniel	Professor	04.04.2014
2.	Dr. R. Jayaganthan	Professor	04.04.2014
3.	Dr. Devendra Singh	Assoc. Prof.	04.04.2014
4.	Dr. Vivek Pancholi	Assoc. Prof.	04.04.2014
5.	Dr. Nikhil Dhawan	Asstt. Prof.	30.01.2015
Saharanpur Campus			
1.	Dr. S.C. Sharma	Professor	04.04.2014
2.	Dr. Rajan Arora	Assoc. Prof.	04.04.2014
3.	Dr. Sanjeet Kumar Mishra	Assoc. Prof.	04.04.2014
4.	Dr. N.C. Mishra	Assoc. Prof.	04.04.2014
5.	Dr. Pradip Kumar Maji	Asstt. Prof.	22.07.2014
6.	Dr. Sam Sunder Das	Asstt. Prof.	27.03.2015
Physics			
1.	Dr. K.L. Yadav	Professor	04.04.2014
2.	Dr.(Mrs.) Davinder Kaur	Professor	04.04.2014
3.	Dr. Ghanshyam Das Verma	Professor	04.04.2014
4.	Dr. Ajay Wasan	Assoc. Prof.	04.04.2014
5.	Dr. P. Arumugam	Assoc. Prof.	04.04.2014

6.	Dr.(Mrs.) Tulika Maitra	Assoc. Prof.	04.04.2014
7.	Dr. Rajdeep Chatterjee	Assoc. Prof.	04.04.2014
8.	Dr. Puneet Jain	Asstt. Prof.	09.04.2014
9.	Dr. Vivek Kumar Malik	Asstt. Prof.	20.05.2014
10.	Dr. Sumanta Sarkhel	Asstt. Prof.	11.08.2014
11.	Dr. Soumitra Satapathi	Asstt. Prof. (OC)	04.09.2014
WRD&M			
1.	Dr. S.K. Mishra	Professor	04.04.2014
2.	Dr. Ashish Pandey	Assoc. Prof.	04.04.2014
IIC			
1.	Dr. Ramesh Chandra	Professor	04.04.2014

**2.2 (B). NEW COMPASSIONATE APPOINTMENTS AND SELECTIONS
(NON-ACADEMIC STAFF) (April 1, 2014 to 31st March 2015)**

Sl. No.	Name of staff	Designation	Nature of Appointment	Date of Joining	Category
1.	Sri Mohd. Danish	Multi Skill Lab/Office work	Compassionate	05.11.2014	OBC

**2.3 COMPASSIONATE APPOINTMENT/PROMOTIONS UNDER SC/ST AND OBC CATEGORIES
(April 1, 2014 to March 31, 2015)**

Sl.No.	Name of staff	Designation	Department	Category
1.	Shri Dileep Kumar Toppo	Asstt. Registrar	Material Management	S.T.
2.	Shri Jain Singh	Asstt. Registrar (on contract)	Finance & Accounts	O.B.C.
3.	Shri Ashwani Kumar Sharma	Asstt. Registrar (on contract)	GNEC	O.B.C.
4.	Sri Lalit Kumar	Asstt. Registrar (on contract)	Establishment Services	S.C.
5.	Shri N.T. Diheung	Asstt. Registrar (on contract)	Academic	S.T.
6.	Dr. Akhilesh Kumar	Medical Officer (On Contract)	Institute Hospital	S.C.
7.	Shri Duli Chand Meena	Technical Officer	Chemistry	S.T.
8.	Shri K.N. Manohar	Technical Officer	Chemical	O.B.C.
9.	Shri Ravindra Saini	Technical Officer	IIC	O.B.C.
10.	Shri K. Chandra Shekhar	Technical Officer	MMED	O.B.C.

**2.4 FACULTY / OFFICERS / STAFF SUPERANNUATED
(April 1, 2014 to 31st March 2015)**

(a) Faculty/Officers

Sl. No.	Name	Designation	Department	Date of Birth	Date of Superannuation/ Resignation	Remarks
1.	Dr. S.M. Sondhi	Professor	Chemistry	30.04.1949	30.04.2014	Retired
2.	Dr. Kamaluddin	Professor	Chemistry	11.05.1949	31.05.2014	Retired
3.	Dr. (Mrs.) R.R. Bhargava	Professor	Mathematics	15.06.1949	30.06.2014	Retired
4.	Dr. Ashok Kumar	Assoc. Prof.	MIED	26.06.1949	30.06.2014	Retired
5.	Dr. Shantiram	Asstt. Prof.	CED	06.12.1979	01.07.2014	Resigned

	Chatterjee					
6.	Dr. I.M. Mishra	Professor	Chemical	26.07.1949	31.07.2014	Retired
7.	Dr. M.L. Dewal	Professor	EED	12.07.1949	31.07.2014	Retired
8.	Dr.(Mrs.) V. Agarwala	Professor	MMED	24.08.1949	31.08.2014	Retired
9.	Dr. Padam Kumar	Professor	CS&E	07.09.1949	30.09.2014	Retired
10.	Dr. Ashwani K. Chaudhry	Professor	IIC	19.09.1949	30.09.2014	Retired
11.	Dr. Indivar Misra	Asstt. Prof.	HSS	14.11.1973	20.11.2014	Resigned
12.	Dr. R.P. Gakkhar	Professor	MIED	03.11.1949	30.11.2014	Retired
13.	Dr. Vineet Kumar	Assoc. Prof.	Chemical	12.08.1958	19.12.2014	Resigned
14.	Dr.M.N. Viladkar	Professor	CED	09.12.1949	31.12.2014	Retired
15.	Shri S. Chakravorty	Asstt. Prof.	E&CE	18.01.1950	31.01.2015	Retired
16.	Dr. S.P. Gupta	Professor	EED	24.02.1950	28.02.2015	Retired
17.	Dr. Nayan Sharma	Professor	WRD&M	20.02.1950	28.02.2015	Retired
18.	Sri Vijay Kumar Singh	Asstt. Registrar (On Contract)	Administration	12.05.1954	31.05.2014	Retired
19.	Smt. Sushma Gupta	Dy. Librarian	M.G. Central Library	03.11.1954	30.11.2014	Retired
20.	Shri P.C. Pant	Technical Officer	IIC	01.12.1954	30.11.2014	Retired
21.	Dr. G.R. Singh	Scientific Officer Grade-II	Civil Engg.	10.01.1953	31.01.2015	Retired

b) Retirement of Non Teaching Staff

Sl. No.	Name	Designation	Department	Date of Retirement	Remarks
1.	Sri Mange Ram	Attendant (Helper)	Estate & Works	30.04.2014	Retired
2.	Sri Vijay Pal	Senior Attendant(S.G)	Mahatma Gandhi Central Library	30.04.2014	Retired
3.	Sri Sushil Kumar	Senior Attendant, S.G.(Peon)	Electrical Engg.	30.04.2014	Retired
4.	Sri Tirlok Singh-I	Senior Attendant, S.G.(Peon)	Mathematics	30.04.2014	Retired
5.	Sri Jagdish Narain	Superintendent	Civil Engg.	31.05.2014	Retired
6.	Sri A.K. Singh	Senior Superintendent (S.G)	DD Office	31.05.2014	Retired
7.	Sri Rishi Raj Singh	Superintendent	Earth Science	31.05.2014	Retired
8.	Sri Surendra kumar	Senior Technical Superintendent (S.G.)	IIC	31.05.2014	Retired
9.	Sri S.C. Sharma	A.E.E.	DPT	31.05.2014	Retired
10.	Sri Prem Chand Sharma	Senior Lab Assistant	DPT	31.05.2014	Retired
11.	Sri Mustqeem	Technical Superintendent	Estate & Works	30.06.2014	Retired
12.	Sri Sushil Kumar Sharma	Junior Technical Superintendent	Estate & Works	30.06.2014	Retired
13.	Sri Halu Ram	Senior Attendant, S.G.(Safai Karamchari)	DOSW	30.06.2014	Retired
14.	Sri S.C. Bajaj	Senior Superintendent (S.G)	DOSW	30.06.2014	Retired
15.	Sri Dinesh Kumar Gupta	Senior Technical Superintendent (S.G.)	IIC	30.06.2014	Retired
16.	Sri Devi Chand	Senior Technical Superintendent	MIED	31.06.2014	Retired

17.	Sri Sheel Priya Garg	Senior Technical Superintendent (S.G.)	MIED	31.06.2014	Retired
18.	Sri R.S. Goswami	Superintendent	Account Section	31.07.2014	Retired
19.	Sri Ilam Chand	Senior Attendant(S.G) Peon	Security Office	31.07.2014	Retired
20.	Sri Iqbal Ahmed	Attendant (Mali)	Hospital	31.07.2014	Retired
21.	Sri Ganesh Das	Senior Attendant(S.G) (Security Guard)	Hospital	31.07.2014	Retired
22.	Sri Ambuj Kumar	Senior Technical Superintendent (S.G.)	MIED	31.07.2014	Retired
23.	Dr. Surendra Kumar Saini	Senior Technical Superintendent (S.G.)	Physics	31.07.2014	Retired
24.	Mohd. Haneef	Superintendent	SRIC	31.07.2014	Retired
25.	Sri Gulzar Hussain	Superintendent	Arch. & Planning	31.07.2014	Retired
26.	Sri K.B. Srivastava	Senior Technical Superintendent	DPT	31.07.2014	Retired
27.	Sri Kashi Ram Karnwal	Senior Lab Assistant Gr-II	E&C	31.08.2014	Retired
28.	Sri Loti Ram	Senior Assistant Gr-II	MIED	31.08.2014	Retired
29.	Mohd. Anis	Senior Attendant(S.G)	MIED	31.08.2014	Retired
30.	Sri Kamesh Gupta	Senior Technical Superintendent (S.G.)	Earth Science	30.09.2014	Retired
31.	Sri Anil Kumar Gupta	Senior Superintendent	Earthquake Engg.	30.09.2014	Retired
32.	Sri Satish Kumar	Senior Superintendent (S.G.)	MMED	30.09.2014	Retired
33.	Sri Jai Prakash Yadav	Senior Security Inspector Grade II	Security Office	30.09.2014	Retired
34.	Sri K.K. Tyagi	Junior Superintendent	AHEC	31.10.2014	Retired
35.	Sri Nandan Singh	Senior Attendant(S.G) Peon	Earth Science	31.10.2014	Retired
36.	Sri Ved Pal Singh	Senior Lab Assistt	Biotechnology	30.11.2014	Retired
37.	Sri Mahendra Singh	Technical Superintendent	E&C	30.11.2014	Retired
38.	Sri D.M. Sharma	Superintendent	Accounts	30.11.2014	Retired
39.	Sri Chandra Pal Singh	Senior Assistant Gr-II	Physics	30.11.2014	Retired
40.	Sri Yogendra Pal	Superintendent	SRIC	30.11.2014	Retired
41.	Sri Zishan Khan	Attendant	DPT	30.11.2014	Retired
42.	Sri Rajendra Kumar Handa	Technical officer	IIC	31.12.2014	Retired
43.	Sri Naresh Chand	Attendant Peon	Physics	31.12.2014	Retired
44.	Sri Ananta Panda	Senior Attendant	DPT	31.12.2014	Retired
45.	Sri Jai Prakash	Senior Attendant Grade II	Earth Science	31.12.2014	Retired
46.	Sri Ram Singh Yadav	Junior Superintendent	Estate & Works	31.01.2015	Retired
47.	Sri Ram Prakash	Senior Attendant(S.G) I	IIC	31.01.2015	Retired
48.	Sri Yamuna Pandit	Senior Attendant II	MIED	31.01.2015	Retired
49.	Km. Vijay Laxmi	Superintendent	Establishment 'A'	28.02.2015	Retired
50.	Sri Ahsaan Ali	Senior Attendant (S.G) I	Telephone Exchange	31.03.2015	Retired
51.	Sri Yogesh Kumar	Superintendent	Account Section	31.03.2015	Retired
52.	Sri Bijendra Kumar Sharma	Junior Technical Superintendent	MIED	31.03.2015	Retired
53.	Sri Ramesh Chand	Senior Technical Superintendent	Earth Science	31.03.2015	Retired

Expired from 1-4-2014 to 31-03-2015

Sl. No.	Name	Designation	Department	Date of Expired
1.	Sri Sushil Kumar	Attendant	MIED	13.04.2014
2.	Sri Charan Singh	Jr. Tech. Supdt.	IIC	20.06.2014
3.	Sri Telu Ram	Sr. Pharmacist	Hospital	21.06.2014
4.	Sri Naresh Chand	Sr. Attendant SG-IV	ICC	02.08.2014
5.	Sri Ashok Kumar	Sr. Asstt.	Jawahar Bhawan	19.08.2014
6.	Sri Mange Ram	Sr. Attendant	Earth Sciences	23.11.2014
7.	Sri Rajesh	Sr. Attendant (SG)	E&W	14.11.2014
8.	Sri Jwala Prasad	Sr. Attendant	Civil Engg.	03.11.2014

Voluntary Retirement from 1-4-2014 to 31-03-2015

Sl. No.	Name	Designation	Department	Date of Voluntary Retirement
1.	Sri Kallu	Sr. Attdt.SG (III)	DPT	30.09.2014
2.	Sri Sumer Chand	Sr. Attendant	DPT	04.10.2014

**2.5 NON-ACADEMIC OFFICERS / STAFF
(As on 31st March, 2015)**

Administrative Block		Non-Technical			Technical			Total
		B	C	D	B	C	D	
1.	Director's Office	00	01	04	00	01	00	06
2.	Deputy Director's Office	00	01	01	00	00	00	02
3.	Dean, Administration	00	01	00	00	00	00	01
4.	Dean, Faculty Affairs	00	01	01	00	00	00	02
5.	Dean, Student Welfare	01	08	42	00	00	02	53
6.	Dean, SRIC	01	02	02	00	00	00	05
7.	Dean , Academic Research	01	04	01	00	00	00	06
8.	Dean, UG	00	06	04	00	00	00	10
9.	Dean, Finance and Planning (Accounts, Audit & Planning)	02	14	05	00	00	00	21
10.	Professor In-charge (Comm.)	00	00	00	00	05	01	06
11.	Professor In-charge (Alumni)	00	00	01	00	00	00	01
12.	Registrar's Office	00	01	05	00	00	00	06
13.	Deputy Registrar (Admn.)	00	00	02	00	00	00	02
14.	Establishment 'A'	01	05	01	00	00	00	07
15.	Establishment 'B'	01	05	02	00	00	00	08
16.	General Section	00	04	03	00	00	00	07
17.	Stationery Section	00	01	01	00	00	00	02
18.	Meeting Section	01	00	02	00	00	00	03
19.	Legal Cell	00	01	01	00	00	00	02
20.	Pension Cell	00	02	01	00	00	00	03
21.	CPC	01	01	02	00	00	00	04
22.	Hindi Cell	00	02	01	00	00	00	03
23.	NC Nigam Guest House	00	01	01	00	00	00	02
24.	SC/ST Liaison Cell	00	00	00	00	00	00	00
25.	SC/ST Student Cell	00	00	00	00	00	00	00
26.	GATE Office	00	01	01	00	00	00	02
27.	Entrance Cell	00	01	01	00	00	00	02
28.	IPR Cell	00	01	00	00	00	00	01
29.	Placement Office	00	01	00	00	00	00	01

30.	AHEC	00	02	04	05	01	02	14
31.	Arch & Planning	00	02	06	02	03	03	16
32.	Bio Technology	00	02	03	02	03	02	12
33.	Centre for Continuing Education	00	02	03	00	00	00	05
34.	Centre for Disaster Mitigation	00	00	00	00	00	01	01
35.	Centre for Neno Technology	00	01	01	00	00	01	03
36.	Centre for Transportation System	00	00	00	00	00	01	01
37.	Chemical Engineering	01	03	08	02	04	08	26
38.	Chemistry	01	01	05	00	02	04	13
39.	Civil Engineering	00	04	11	03	05	35	58
40.	DOMS	00	01	04	01	00	00	06
41.	Earth Science	00	04	04	02	03	02	15
42.	Earthquake Engineering	00	02	04	03	06	04	19
43.	Electrical Engineering	01	03	07	06	02	09	28
44.	Electronics & Computer	00	04	07	02	08	07	28
45.	Estate and Works	02	02	42	14	09	06	75
46.	Hobbies Club	00	00	01	01	01	00	03
47.	Hospital	01	00	03	01	13	08	26
48.	Humanities & Social Sc.	00	03	02	00	00	01	06
49.	Hydrology	00	03	05	00	01	02	11
50.	Instt. Computer Centre	00	02	06	03	01	00	12
51.	Instt. Instrumentation Centre	00	02	02	06	02	03	15
52.	Mathematics	01	02	07	01	00	00	11
53.	Mech. & Ind. Engineering	00	05	07	05	15	27	59
54.	Met. & Mat. Engineering	01	02	06	01	07	03	20
55.	MG Central Library	00	00	02	14	02	04	22
56.	NMR Facilities	00	00	00	00	00	00	00
57.	Physics	00	02	04	02	03	05	16
58.	Security	00	01	01	03	02	10	17
59.	Sports	00	00	00	01	01	00	02
60.	Vehicle Section	00	00	00	00	02	04	06
61.	WRD&M	00	02	03	03	03	00	11
62.	DPT	01	07	10	04	08	10	40
63.	QIP	00	01	00	00	00	00	01
64.	ET Cell	00	00	02	00	00	00	02
	Total	18	130	255	87	113	165	768

**2.6 NON-TEACHING OFFICERS
(01.4.2014 to 31.3.2015)**

Department/Centre/Office	Post	No. of Group 'A' Officers
Academic Studies	Dy. Registrar	01
	Asstt. Registrars	03
Chemical Engineering	Technical Officer	01
Chemistry	Technical Officer	01
Civil Engineering	Scientific Officer Grade-II	01
Director Office	Senior Scientific Officer on contract	01
	Asstt. Registrar	01
Dean of Students' Welfare	Counselor	01
	Assistant Registrar	01
Earthquake Engineering	Scientific Officer Grade-II	01
Establishment Services	Dy. Registrar	01+1(on lien)

(Including Pension, Recruitment & Training)	Asstt. Registrar	03
Estate & Works	Executive Engineer	02
	Asstt. Executive Engineer	02
Finance & Accounts/ Internal Audit/Material Management	Dy. Registrar	02
	Asstt. Registrar	04
General Section/Legal/Meeting Section/RTI Cell	Dy. Registrar	01
	Asstt. Registrar	02
Institute Computer Centre	Programmer	01
	Jr. Programmer	01
	System Programmers	02
	Scientific Officer Grade-II	01
Institute Instrumentation Centre	Scientific Officer Grade-II	02
	Scientific Officer Grade-I	01
	Technical Officer	04
Institute Hospital	Chief Medical Officer	01
	Institute Medical Officer	01
	Medical Officer	03
M.G. Central Library	Librarian	01
	Dy. Librarian	01
	Asstt. Librarian	02
	Scientific Officer Grade.II (OC)	01
M.I.E.D.	Asstt. Workshop Supdt.	01
M.M.E.D.	Technical Officer	01
Registrar Office	Registrar	01
Saharanpur Campus	Asstt. Registrar	01
	Institute Medical Officer (On Contract)	01
SC/ST Cell	Dy. Registrar	01
Security Office	Security Officer	01
SRIC Office	Asstt. Registrar (On Contract)	02
Sports Association	Sports Officer	01
	Asstt. Sports Officers	02
W.R.D.&M.	Programmer	01
Physics	Technical Officer	01
GNEC	Assistant Registrar on contract	01
Total		67

2.7 Recipients of Outstanding Teacher Award on Teachers' Day for the year 2015

Sl. No.	Name	Designation	Department
1.	Dr. Satish Chandra	Professor	Civil Engineering
2.	Dr. Partha Roy	Professor	Biotechnology
3.	Dr. Deepak Khare	Professor	W.R.D. & M.

2.8 RECIPIENTS OF INCENTIVE ON FOUNDATION DAY

Sl. No.	Name	Designation	Department/Centre & Office
Group 'A' (Administration)			
1.	Shri Prashant Garg	Deputy Registrar (Admn.)	Administration
Group 'B' (Non-Technical)			
1.	Sh. Rashid Hussain	Superintendent	CPO
2.	Sh. Vinod Kumar	Superintendent	Estate & Works
3.	Sh. B.P. Singh	Junior Superintendent	Establishment Services
4.	Sh. Ved Prakash	Superintendent	Mathematics
Group 'B' (Technical)			
1.	Sh. B.S. Chauhan	STA	WRD&M
2.	Sh. A.K. Gupta	STA	Physics
3.	Sh. S.K. Sharma	STA	AHEC
Group 'C' (Ministerial)			
1.	Sh. Yashpal	Superintendent	Registrar Office
2.	Sh. D.K. Upadhyay	Senior Assistant	SRIC Office
3.	Sh. A.P. Jakhmola	Superintendent	Saharanpur Campus
4.	Sh. Mohd. Aslam	Superintendent	Earth Sciences
5.	Sh. V.K. Goel	Sr. Asstt.	DOSW Office
6.	Sh. Jyoti Gurung	Jr. Supdt.	Establishment Services
7.	Sh. Gopal Sharma	Jr. Supdt.	Establishment Services
Group 'C' (Technical)			
1.	Sh. Narendra Kumar	Tech. Supdt.	Estate & Works
2.	Sh. N.K. Sharma	Jr. Tech. Supdt.	Earthquake Engg.
MTS (Non-Technical)			
1.	Sh. Ramesh Chand-IV	Attendant	M.G. Central Library
2.	Sh. S.P. Giri	Attendant	Chemical Engg.
3.	Sh. Pahal Singh	Attendant	Dy. Director Office
MTS (Technical)			
1.	Sh. Dungar Singh	Sr. Attendant (S.G.)	Physics
2.	Sh. Mohd. Altaf	Sr. Asstendant Gr.-II	Estate & Works

OFFICERS OF I.I.T. ROORKEE (w.e.f. 1.4.2014 to 31.3.2015)

Chairman, Board of Governors	Shri Analjit Singh ji (upto 23.05.2014) Prof. Ashok Misra ji (w.e.f. 24.05.2014)
Director	Prof. Pradipta Banerji
Dy. Director	Prof. S.P. Gupta (upto 31.01.2015) Prof. Vinod Kumar (w.e.f. 05.02.2015)
Dean, Administration	Prof. U.P. Singh
Dean, Faculty Affairs	Prof. Vinod Kumar (upto 31.01.2015) Prof. Deepak Kashyap (w.e.f. 01.02.2015)
Dean, Sponsored Research and Industrial Consultancy	Prof. Pradeep Bhargava (upto 31.01.2015) Prof. Manoranjan Parida (w.e.f. 01.02.2015)
Dean, Academic	Prof. Pramod Agarwal
Dean of Students Welfare	Prof. Ravi Bhushan (upto 08.5.2014) Prof. D.K. Nauriyal (w.e.f. 09.5.2014)
Dean, Finance & Planning,	Prof. P.K. Ghosh
Dean, Alumni Affairs and International Relations	Prof. S.C. Sharma (upto 08.5.2014)

Associate Dean, Faculty Affairs	Prof. Sandeep Singh (w.e.f. 09.5.2014)
Associate Dean (Academic Studies)	Prof. Yogendra Singh
Associate Dean (Academic Research)	Dr. Apurbba Kumar Sharma
Associate Dean, SRIC	Dr. R.K. Peddinti
	Dr. C.B. Majumder (upto 31.01.2015)
	Prof. M. Shrikhande (w.e.f. 01.02.2015)
Associate, DOSW (Foreign Students)	Dr. P. Jeevanandam
Associate, DOSW (Bhawan)	Dr. Inderdeep Singh (upto 09.06.2014)
	D. N.K. Navani (w.e.f. 10.6.2014)
Associate, DOSW (Discipline)	Dr. Indradeep Singh (w.e.f. 10.6.2014)
Co-ordinator, Educational Technology Cell	Prof. Bikash Mohanty (upto 31.01.2015)
	Prof. B.K. Gandhi (w.e.f. 06.2.2015)
Co-ordinator, Intellectual Property Rights Cell	Prof. Himanshu Joshi
Co-ordinator, Quality Improvement Programme	Prof. Rama Bhargava (upto 31.01.2015)
	Prof. B.K. Gandhi (w.e.f. 06.2.2015)
Co-ordinator, STEP/TIEDA	Prof. Ravi Kumar
Professor-in-Charge, Saharanpur Campus	Prof. Y.S. Negi
Professor/Faculty-in-Charge, Transportation	Prof. R.P. Gakkhar (upto 30.4.2014)
	Dr. Sandip Banerjee (w.e.f. 01.5.2014)
Professor-in-Charge, Training and Placement	rof. N.P. Padhy
Professor-in-Charge, Guest House	Prof. Shishir Sinha
Professor-in-Charge, Communications	Prof. M.J. Nigam
Professor/Faculty-in-Charge, Security	Prof. Sandeep Singh (upto 31.7.2014)
	Dr. Barjeev Tyagi (w.e.f. 01.8.2014)
Head, Hindi Cell	Prof. I.M. Mishra (upto 20.5.2014)
	Dr. Nagendra Kumar (w.e.f. 21.5.2014)
Chief Vigilance Officer	Prof. A.K. Singh (upto 17.12.2014)
	Prof. Satish Chandra (w.e.f. 18.12.2014)
Liaison Officer (SC/ST)	Prof. B.D. Indu (upto 07.5.2014)
	Prof. Vikas Pruthi (w.e.f. 08.5.2014)
Staff Advisor (SC/ST Student)	Dr. Mukesh Kumar Barua (w.e.f 01.10.2014)
Liaison Officer (OBC)	Prof. Shri Chand
Registrar	Lt. Col. (Retd.) A.K. Srivastava
Dy. Registrar	Shri Prashant Garg
	Dr. Shyam Narayan (on lien)
	Shri G.K. Rastogi
	Dr. Ajay Kumar Sharma
	Shri Raman Lal
	Shri S.K. Saini
Officiating Dy. Registrar	Dr. Suman Kumar

Assistant Registrar

Shri Rajvir Singh Khatri
Shri Pradeep Kumar Sharma
Shri N.K. Verma
Shri S.C. Sharma
Shri C.S. Verma
Smt. Margret C.
Shri Subhash Chand
Shri Pramod Kumar
Shri Rajkumar Sharma
Smt. Sheeba Ramola (w.e.f. 12.9.2014)
Miss. Bibi M. Barbhuiya (w.e.f. 07.11.2014)
Shri D.K. Toppo (w.e.f. 01.12.2014)
Shri V.K. Singh (upto 31.05.2014)
Shri Jain Singh (w.e.f. 25.8.2014)
Shri A.K. Sharma (w.e.f. 26.9.2014)
Shri Lalit Kumar (w.e.f. 29.9.2014)
Shri N.T. Diheung (w.e.f. 07.10.2014)
Shri Rishi Sirohi (w.e.f. 10.01.2015)

Assistant Registrar (on contract)

Hospital

Chairman, Hospital Advisory Committee
Chief Medical Officer
Institute Medical Officer
Medical Officer

Prof. N.K. Goel
Dr. M.K. Jha (w.e.f. 29.6.2014)
Dr. (Smt.) Vandana Suhas Khobragade
Dr. (Miss.) Anjula Roy
Dr. Monical Agarwal (w.e.f. 30.10.2014)
Dr. Manoj Kumar Jain
Dr. Akhilesh Kumar (w.e.f. 01.5.2014)

Medical Officer (on contract)

Estate & Works

Chairman (Estate and Works)
Vice Chairman, Estate & Works (Civil)
Vice Chairman, Estate & Works (Electrical)

Institute Architect
Executive Engineer (Civil)
Executive Engineer (Electrical) (on deputation)
Assistant Executive Engineer

Prof. Mahendra Singh (upto 10.02.2015)
Dr. Umesh Kumar Sharma
Dr. Vinay Pant (upto 09.12.2014)
Dr. M.K. Pathak (w.e.f. 10.12.2014)
Dr.(Mrs.) Mahua Mukherjee
Shri Nepal Singh
Shri Shyam Mohan Garg (w.e.f. 01.7.2014)
Shri B.P. Singh (w.e.f. 09.5.2014)
Shri Rajiv Agarwal (w.e.f. 09.5.2014)

3. Academic Programmes

- 3.1 Courses of Study
- 3.2 Admissions
- 3.2.1 Undergraduate Degree Courses
- 3.2.2 Postgraduate Degree Courses
- 3.2.3 Ph.D. Programmes
- 3.2.4 Student Strength
- 3.2.5 Scholarships to Students
- 3.2.6 Fellowships to Postgraduate Students
- 3.2.7 Special Facilities available to SC/ST Students
- 3.3 Institute Results
- 3.4 Annual Convocation

3.1 COURSES OF STUDY

Alternate Hydro Energy Centre

- Master of Technology
 - Alternate Hydro Energy Systems
 - Environmental Management of Rivers and Lakes
- Doctor of Philosophy

Architecture and Planning

- Bachelor of Architecture
- Master of Architecture
- Master of Urban & Rural Planning
- Doctor of Philosophy

Biotechnology

- Bachelor of Technology
- Master of Science
- Doctor of Philosophy

Chemical Engineering

- Bachelor of Technology
- Integrated Dual Degree CH/HC*
- Master of Technology
 - Computer Aided Process Plant Design
 - Industrial Pollution Abatement
- Doctor of Philosophy

Chemistry

- Integrated M.Sc Chemistry*
- M.Tech. Advanced Chemical Analysis
- Master of Science
- Doctor of Philosophy

Civil Engineering

- Bachelor of Technology
- Integrated Dual Degree CE/ST*
- Master of Technology
 - Environmental Engineering
 - Geomatics Engineering
 - Geotechnical Engineering
 - Hydraulic Engineering
 - Structural Engineering
 - Transportation Engineering
- Doctor of Philosophy

Earthquake Engineering

- Master of Technology
 - Soil Dynamics
 - Structural Dynamics
 - Seismic Vulnerability and Risk Assessment
- Doctor of Philosophy

Earth Sciences

- Master of Science
 - Applied Geology
- Integrated Master of Technology
 - Geophysical Technology
 - Geological Technology
- Doctor of Philosophy

Electrical Engineering

- Bachelor of Technology
- Integrated Dual Degree EE/PE*
- Master of Technology
 - Electric Drives and Power Electronics
 - Instrumentation and Signal Processing
 - Power System Engineering
 - Systems and Control
- Doctor of Philosophy

Centre for Nanotechnology

- M.Tech (Nanotechnology)
- Doctor of Philosophy

Centre of Excellence-Disaster Mitigation & Management

- M.Tech (Disaster Mitigation and Management)
- Doctor of Philosophy

Centre for Transportation Systems

- M.Tech (Infrastructure Systems)
- Doctor of Philosophy

Electronics and Communication Engineering

- Bachelor of Technology

- Electronics and Communication Engineering
- Integrated Dual Degree E&C/WC*
- Master of Technology
 - Communication Systems
 - R.F. & Microwave Engineering
 - Microelectronics & VLSI
- Doctor of Philosophy

Computer Science and Engineering

- Bachelor of Technology
 - Computer Science and Engineering
- Integrated Dual Degree CSE/IT*
- Master of Technology
 - Computer Science and Engineering
- Doctor of Philosophy

Humanities and Social Sciences

- Doctor of Philosophy

Hydrology

- Postgraduate Diploma /Master of Technology
- Doctor of Philosophy

Management Studies

- Master in Business Administration
- Doctor of Philosophy

Mathematics

- Integrated M.Sc Mathematics
- Master of Science
 - Applied Mathematics
 - Industrial Mathematics and Informatics
- Master of Computer Applications
- Doctor of Philosophy

Mechanical and Industrial Engineering

- Bachelor of Technology
 - Mechanical Engineering

- Production & Industrial Engineering

- Master of Technology
 - Machine Design Engineering
 - Production and Industrial System Engineering
 - Thermal Engineering
 - Welding Engineering
 - CAD,CAM & Robotics
- Doctor of Philosophy

Metallurgical and Materials Engineering

- Bachelor of Technology
- Integrated Dual Degree MT/ME*
- Master of Technology
 - Industrial Metallurgy
 - Materials Metallurgy
- Doctor of Philosophy

Paper Technology

- Bachelor of Technology
 - Polymer Science
- Master of Technology
 - Pulp and Paper Engineering
- Doctor of Philosophy
- Integrated M.Tech Polymer Science & Technology*
- Integrated Dual Degree Process Engineering and M.B.A

Physics

- Integrated M.Sc Physics
- Master of Science
- M.Tech.
 - Solid State Electronic Materials
- Doctor of Philosophy

Water Resources Development & Management

- Master of Technology/Postgraduate Diploma.
- Irrigation Water Management
 - Water Resources Development
- Doctor of Philosophy

3.2 ADMISSIONS

During the year 2014-15 the number of students admitted to various courses is as given below:

Ph.D.	430
M.Tech.	785
M. Arch./MURP	36
M.Sc./M.Tech. (E.S.)	118
MBA	86
B. Tech. (Including IDD)	946
B. Arch.	34
TOTAL	2435

Gender wise Distribution of Admitted Students in Different Categories is given below:

(i) Undergraduate			
Categories	Male	Female	Total
General	448	43	491
OBC	255	16	271
SC	141	12	153
ST	63	14	77
Total	907	85	992

(ii) Postgraduate			
Categories	Male	Female	Total
General	441	133	574
OBC	217	56	273
SC	120	21	141
ST	31	6	37
Total	809	216	1025

The number of foreign students admitted to various courses is as given below:

	Male	Female	Total
UG	-	-	-
PG	24	03	27
PhD	02	00	02
Total	26	03	29

3.2.1. Undergraduate Courses (2013-14)*

Sl. No.	Course	Sanctioned Strength	Students Admitted
1.	B.Arch.	40	34
2.	B.Tech. (Biotechnology)	45	39
3.	B.Tech. (Chemical)*	110	106
4.	B.Tech. (Civil Engg.)	135	136
5.	B.Tech.Comp.Sc.& Engg.)	75	75
6.	B.Tech. (Electrical Engg.)	140	138
7.	B.Tech. (E&C Engg.)*	75	76
8.	B.Tech. (Prod. Indl. Engg.)*	60	60
9.	B.Tech. (Mech. Engg.)*	80	81
10.	B.Tech. (Met. & Mat. Engg.)*	110	106
11.	B.Tech. (Polymer Science)*	40	26
12.	Integrated Dual Degree Process Eng. M.B.A*	35	20
13.	Integrated M.Sc Mathematics*	30	29
14.	Integrated M.Sc Physics	30	15
15.	Integrated M.Tech GPT*	30	25

16.	Integrated M.Tech GT*	30	25
	Total	1065	991

* including through preparatory course
* 12th Students Re admitted

3.2.2 Postgraduate Degree Courses (2014-15)

Sl. No.	Course	Sanctioned Strength	Students Admitted
(i) M.Tech.			
1.	Chemical	56	55
2.	Civil*	144	151
3.	Earthquake	49	48
4.	Electrical*	92	90
5.	Elec. & Comp.*	48	50
6.	Hydrology*	15	17
7.	Mechanical*	87	92
8.	Metallurgical	36	36
9.	W.R.D.&M.*	15	30
10.	A.H.E.C.*	40	55
11.	M.Arch/MURP*	36	36
12.	Pulp & Paper	18	16
13.	Comp. Sc. & Engg.*	54	54
14.	Nanotechnology	15	10
15.	Disaster Mitigation & Management	15	13
16.	Seismic Vulnerability & Risk Assess	15	11
17.	Infrastructure Systems*	15	18
18.	Packaging Technology	20	13
(ii) M.Tech. (Sciences)			
1.	Physics (S.S.E.M.)*	18	16
2.	Chemistry (A.C.A.)	15	10
3.	Geophysical Technology	12	09
4.	Geological Technology	12	12
(iii) M.Sc.			
1.	Industrial Maths & informatics	15	12
2.	Applied Geology	15	16
3.	Applied Maths	15	14
4.	Bio. Tech.	37	28
5.	Chemistry	25	24
6.	Physics	25	24
7.	M.B.A.	95	86
	TOTAL	1130	1025

* Including Sponsored Candidates

3.2.3 Ph.D. Programmes (2014-15)

Sl. No.	Course	Students Admitted
1.	Biotechnology	41
2.	Chemical Engg.	14
3.	Chemistry	30
4.	Civil Engg.	50
5.	Earth Sciences	29
6.	Electrical Engg.	21
7.	Elect. & Comp. Engg.	31
8.	Mathematics	22
9.	Metallurgical & Materials	13
10.	Mech. & Ind. Engg.	35
11.	Hydrology	10
12.	Physics	18
13.	Earthquake Engg.	10
14.	Architecture & Planning	06
15.	W.R.D.&M.	12
16.	Hum. & Social Sciences	12
17.	Paper Technology	06
18.	MBA	11
19.	AHEC	07
20.	Centre for Transportation	02
21.	IIC	03
22.	Nanotechnology	09
23.	Disaster Mitigation	04
24.	Computer Science	20
25.	Applied Science & Engg.	06
26.	Polymer & Process Engg.	08
TOTAL		430

3.2.4 Student Strength (2014-15)

Sl. No.	Course	Registered Students
1.	B. Tech. / B. Arch / IDD	4472
2.	M. Tech. / M.Arch. /MURP	1579
3.	M. Sc. / M. Tech. (E.S.)	254
4.	M.C.A.	85
5.	M.B.A.	169
6.	Ph.D.	1575
TOTAL		8134

3.2.5 Scholarships to Students (2014-15)

S. No.	Courses	Institute Merit - Cum-Means Scholarships	Trust Scholarships
1.	B.Tech. / B.Arch. I Yr.	259	5
2.	B.Tech. / B.Arch. II Yr.	263	4
3.	B.Tech. / B.Arch. III Yr.	271	4
4.	B.Tech. / B.Arch. IV Yr.	251	10
5.	B.Arch. V Yr.	13	0
6.	M.Sc. (Chemistry) I Yr.	5	-
7.	M.Sc.(Chemistry) II Yr.	5	-
8.	M.Sc. (Physics) I Yr.	5	-
9.	M.Sc. (Physics) II Yr.	5	-
10.	M.Sc.Applied (Maths.) IYr	4	1
11.	M.Sc. Applied (Maths.) ILYr.	3	1
12.	M.Sc. (Industrial Maths & Informatics) I Yr.	4	1
13.	M.Sc. (Industrial Maths & Informatics) II Yr.	3	1
14.	MCA I Yr.	5	-
15.	MCA II Yr.	4	-
16.	MCA III Yr.	5	-
17.	M.Sc. (Applied Geology) I Yr.	4	-
18.	M.Sc. (App. Geo.) II Yr.	4	-
19.	M. Tech. (Applied Geophysics) II Yr.	3	-
20.	M. Tech. (Applied Geophysics) III year	3	-
21.	M. Tech (App. Geo.) II yr.	3	-
22.	M.Tech. (App.Geo.) III yr.	2	-
23.	M.Sc Biotechnology IYr	26	-
24.	M.Sc Biotechnology ILYr	29	-
TOTAL		1179	27

3.2.6 Postgraduate Students admitted with Scholarship / Assistantship (2014-15)

The number of fellowships made available to the PG Students are as under:

Sl. No.	Course	No. of Students
1.	MURP & M.Arch.	36
2.	M. Tech. (Chemical)	53

Sl. No.	Course	No. of Students
3.	M. Tech. (Civil)	133
4.	M. Tech. (Earthquake)	59
5.	M. Tech. (Electrical)	84
6.	M. Tech. (Elect. & Comp.)	46
7.	M. Tech. (Mechanical)	81
8.	M. Tech. (Metallurgical)	33
9.	M. Tech. (Comp. Sci. & Engg.)	52
10.	M. Sc. (Biotechnology) I Yr	26
11.	M. Sc. (Biotechnology) II yr	29
12.	M. Tech. (A.H.E.S.)	37
13.	M. Tech. (P&P)	16
14.	M. Tech. SSEM (Physics)	14
15.	M. Tech (DISASTER MITIGATION & MANAGEMENT)	12
16.	Hydrology	13
17.	M. Tech Advance Chemical Analysis (Chemistry)	9
18.	M. Tech. WRDM	15
19.	M.Tech. Nanotechnology	10
20.	M.Tech (C. Trans)	15
21.	M.Tech. (Packaging)	13
TOTAL		786

3.2.7 Special facilities available to SC/ST Students

The following special facilities are available for the applicants of SC/ST categories for admission to the various courses:

1. Application fee for Entrance Examination, which is charged from SC/ST categories, is only 50% of the fee fixed for candidates of the general category.
2. The cut-off percentage in the qualifying paper for admission to B. Tech. / B. Arch. courses is relaxed for SC/ST candidates.
3. Minimum percentage of marks fixed for admission in all undergraduate courses on the basis of the entrance examination is again relaxed for SC / ST candidates.
4. Minimum qualification for admission to M.Sc. and M. Tech. in Earth Sciences is a graduate with minimum 55% marks. This is lowered for SC / ST candidates by 50%.
5. The following facilities are given to all SC/ST candidates (UG, PG, Sciences including MCA).
 - (a) No tuition fee is charged. This exemption is irrespective of parents/guardians income.
 - (b) Room rent is exempted.

(c) The Institute provides a scholarship of Rs. 1000/- p.m. or free messing (basic menu only) and Rs. 250/- p.m. as pocket allowance.

Eligibility

SC/ST students whose parents/ guardians' income does not exceed the limit prescribed by the Government of India from time to time can opt for free messing (basic menu only) and Rs. 250/- per month as pocket allowance, in lieu of full amount of scholarship of Rs. 1000/- P. M. At present, the ceiling of gross income for such awards is Rs. 4.5 lakhs per annum. Students of reserved categories are provided text books from the Library under the 'Text Book Loan Scheme' against a nominal security deposit. Additional books are also provided. Financial assistance is also provided to them from Samaj Kalyan Vibhag. Number of students belonging to SC/ST in B.Tech. / B.Arch. courses at the Institute during the Academic Session 2014-2015 is as given below:

Class	SC / ST		
	Total	Male	Female
B.Tech./B.Arch I	200	179	21
B.Tech / B.Arch II	207	186	21
B.Tech./B.Arch III	185	169	16
B.Tech /B.Arch IV	219	201	18
B.Arch V	8	4	4
Integrated Dual Degree I	7	7	0
Integrated Dual Degree II	7	5	2
Integrated Dual Degree III	29	23	6
Integrated Dual Degree IV	24	23	1
Integrated Dual Degree V	29	27	2
Integrated M.Sc I	11	8	3
Integrated M.Sc II	8	6	2
Integrated M.Sc III	14	13	1
Integrated M.Sc IV	13	12	1
Integrated M.Sc V	8	5	3
Integrated M.Tech I	12	10	2
Integrated M.Tech II	12	11	1
Integrated M.Tech III	15	12	3
Integrated	19	18	1

M.Tech IV			
Integrated M.Tech V	22	18	4
TOTAL	1049	937	112

Number of students belonging to SC / ST at the Institute during the academic session 2014-15 in P.G. courses is as given below :

Class	SC / ST		
	Total	Male	Female
M. Tech./ M.Arch I year	137	119	18
M.Tech. / M.Arch II year	125	102	23
TOTAL	262	221	41

M.Sc./M.Tech.(E.S.) Iyr.	26	18	8
M.Sc./M.Tech.(E.S.)II yr	25	15	10
M.Tech. (E.S.) III year	02	01	01
M.B.A. Ist year	15	14	01
M.B.A. IInd year	15	10	05
M.C.A. IInd year	07	06	01
M.C.A. IIIrd year	09	07	02
TOTAL	99	71	28

3.3 INSTITUTE RESULTS

The number of students who have been declared successful in diploma/degree examinations during the year 2013-14 is as given below:

Ph.D.	161
M.Tech. (Earth Sciences) Final year	21
M.Sc. Final year	97
M.B.A. Final year	87
M.C.A. Final year	47
B. Tech. / B. Arch. Final year/IDD/IMT/M.Sc	926
M. Tech./M. Arch. / MURP Final year	656
M.Tech. (S.S.E.M) Final year (Physics)	16
M.Tech. (Chemistry)Final year	11
PG. Diploma	-
TOTAL	2022

The names of scholars who were awarded Ph.D. degree at the Annual Convocation of the Institute held on 20 September 2014 and their thesis titles are given under respective departments (Chapter - 4) Summary of results is given in Tables 3.3.1 and 3.3.2, and further details are given in Appendix-A1.

3.3.1 Summary of Final Year Examination Results (2014-15)

Sl.	Name of Class	Appeared	Passed	Remarks
1.	B. Tech. / B. Arch. Final Year	1030	926	104 Students not earned required credits
2.	M. Tech. (Earth Sciences) Final Year	21	21	-
3.	M. Sc. Final Year	97	97	-
4.	M.B.A. Final Year	87	87	-
5.	M.C.A. Final Year	47	47	-
6.	M. Tech./M. Arch./MURP Final Year	683	683	-
7.	P.G. Diploma	-	-	-
	TOTAL	1965	1861	104 Students not earned required credits

3.3.2 Summary of other Examination Results (2014-15)

Sl.	Name of Class	Appeared	Passed	Remarks
1.	B. Tech. / B. Arch. I Yr.	872	816	56 Students not earned required credits
2.	B. Tech. / B. Arch. II Yr.	896	894	2 Students not earned required credits
3.	B. Tech. / B. Arch. III Yr.	827	827	-
4.	IDD I Yr.	20	19	1 Students not earned required credits
5.	IDD II Yr.	20	20	-
6.	IDD III Yr.	130	130	-
7.	IDD IV Yr.	109	109	-
8.	IMSc. I Yr.	44	40	4 Students not earned required credits
9.	IMSc. II Yr.	43	43	-
10.	IMSc. III Yr.	62	62	-
11.	IMSc. IV Yr.	62	62	-
12.	IMTech. I Yr.	50	44	6 Students not earned required credits
13.	IMTech. II Yr.	52	52	-
14.	IMTech. III Yr.	59	59	-
15.	IMTech. IV Yr.	79	79	-
16.	M. Tech. II Yr. (E.Sc.)	17	17	-
17.	M.B.A. I Yr.	85	84	1 Students not earned required credits
18.	M.C.A. II Yr.	42	42	-
19.	M.Sc. I Yr.	108	108	-
20.	M. Arch. / MURP I Yr.	36	36	-
21.	M.Tech. I Yr	685	683	2 Students not earned required credits
		4298	4226	72 Students not earned required credits

3.4 ANNUAL CONVOCATION - 2014

The 14th Annual Convocation of the Indian Institute of Technology Roorkee was held on September 20, 2014. Hon'ble **Mr. Hari S. Bhartia, Vice President CII, Co- Chairman & Managing Director, Jubilant Organosys Ltd.** was the Chief Guest. In the Convocation, **926** Degrees of B.Tech. /B.Arch., **683** Degrees of M. Tech. (Engg.)/ M. Arch./MURP/ P.G. Diploma and **252** Degrees of M.Sc / M. Tech. (Science) /MCA/MBA were awarded. In addition, **161** PhD Degrees were conferred in various disciplines.

- | | |
|---|---|
| 4.1 Architecture and Planning | 4.11 Humanities and Social Sciences |
| 4.2 Biotechnology | 4.12 Hydrology |
| 4.3 Chemical Engineering | 4.13 Management Studies |
| 4.4 Chemistry | 4.14 Mathematics |
| 4.5 Civil Engineering | 4.15 Mechanical and Industrial Engineering |
| 4.6 Computer Science & Engineering | 4.16 Metallurgical and Materials Engineering |
| 4.7 Earthquake Engineering | 4.17 Saharanpur Campus |
| 4.8 Earth Sciences | 4.18 Physics |
| 4.9 Electrical Engineering | 4.19 Water Resources Development and Management |
| 4.10 Electronics and Computer Engineering | 4.20 Alternate Hydro Energy Centre |

4.1 DEPARTMENT OF ARCHITECTURE AND PLANNING

***Academic Staff : 17; Students Admitted : UG-34, PG-36, Ph.D.-05;
Publications : Conferences : 6; Journals : 23, Research Projects: Rs.142.00 Lacs,
Consultancy Projects: 22.00 Lacs***

1. SALIENT FEATURES

The department of Architecture and Planning imparts high quality education in the professional fields of Architecture and Planning and offers Bachelor of Architecture(B. Arch.), Master of Architecture(M. Arch.), Master of Urban and Rural Planning(MURP) and Ph.D. programmes. The B. Arch. was started in 1956. The department has singular distinction of being the first in India in instituting a Masters Degree program M. Arch. in the year 1969-70 and later another one, MURP in 1973-74. At present, 29 Ph.D. scholars are pursuing research in the department. The department has facilities like Climatology Lab, Computer Lab and Computerized Design Studios equipped with the state-of-art equipment and software, an Art Lab and a Workshop. During the year 2014-15, many faculty members visited a number of institutions in India and abroad and participated in seminars, symposia and Conferences. Faculty members of the department were also engaged in sponsored research and consultancy projects. They published a number of research papers in National and International Journals and Conference Proceedings and also published books and monographs.

The department has added, during the year, more than 300 books in the departmental library, upgraded studios with the improved drafting tables, air conditioners and LCD projection systems. The construction yard has been upgraded and the departmental lawns have been rekindled. Besides, the entire department was made Wi Fi enabled.

A peer review of the B. Arch. program was done by an Expert team of the Council of Architecture. The department had the privilege of hosting a number of visitors from India and abroad, including the legendary Christopher Benninger. The department bade farewell to one faculty member on his retirement and welcomed a newly appointed one.

2. LIST OF FACULTY MEMBERS

Professors

Pushplata (Mrs), PhD(Roorkee)
Urban Design, Architecture, Planning and Design of Hill Settlements

Devadas, V., Ph.D.(IIT Kharagpur)
Energy System, Development Planning, Infrastructure

Gupta, Ila (Mrs), Ph.D. (Meerut)
Applied Arts, Art application in Architecture & Planning, History of Art & Culture, Visual Communication and Design

Associate Professors

Chani, P S., Ph.D.(Roorkee)
Architecture, Energy Estimated in Building

Mukherjee, M (Mrs), Ph.D. (Jadavpur)
Building Science, Sustainable Settlement

Raheja, Gaurav, Ph.D. (Roorkee)
Architecture Design, Accessibility Design

Assistant Professors

Ahuja Rita (Mrs), M.Arch.(Roorkee)
Architecture, Building Science

Pujara, Tina (Ms), MAUD(Singapore)
Urban Design, Sustainable Urban Development, Urban Social Sustainability

Roy Kumar, Uttam, M. Planning (SPA, New Delhi) New Township Planning, Affordable Housing & Architecture

Lakra, Harshit Sosan (Mrs), MURP,(Cornell University, U.S.A.)

Culture Based Planning, Tribal Architecture & Technology, Low Cost & Affordable Housing
Agarwal, Avlokita (Ms), Ph.D (Roorkee)
Energy efficiency in Buildings, Sustainability, Traditional Passive Systems

Saraswat, Smriti (Ms), Master of Interior-Architecture and Design (CEPT, Ahmadabad)
Interior-Architecture, Craft & Technology, Visual Communication and Design

Biswas, Arindam, Ph.D. (University of Tokyo, Japan)
Urban & Regional Planning, Regional Science, Inclusive Growth, Governance, Policy Analysis, Economic & Development Studies, Urbanization & Economic Growth, Urban Development, Architectural Design

Rajasekar, E., Ph.D. (IIT Madras)
Thermal comfort, Energy efficiency and Carbon foot print of built environment; Architectural Acoustics and Lighting Design; Building Information Modeling and Simulation; GIS Integration for Sustainable Development; GIS Based Noise Mapping and Mitigation

Asstt. Prof. (on Contract)

Kolay, Saptarshi (Mr), Masters (IIT Kanpur)
Architecture, Visual Communication, User-Experience Design, Craft

Visiting Faculty

Kulkarni, S.Y.,
Shankar, R.

3. PARTICIPATION OF FACULTY IN CONFERENCES/ SEMINAR / SYMPOSIA / WORKSHOP/ GUEST LECTURES

S. No	Name of Faculty	Details of Conf./ Semi./ Symp./ Workshop/ Guest Lecture	Venue	Date
1.	Prof. Pushplata	Visit to Indian Institute of Public Administration to attend National Workshop on UDPFI Guidelines	New Delhi	04 th April 2014
		Invited by Lucknow Development Authority to attend Hi-Tech Township meeting	Lucknow	24 th April 2014
		Invited at DCR University of Science and Technology to conduct M. Arch & MURP Viva voce examinations	Murthal, Sonapat	07 th May 2014
		Invited at DIT Dehradun as part of Faculty Selection Committee	Dehradun	09 th May 2014
		Invited at Integral University as part of UGC Inspection Committee	Lucknow	16 th – 17 th May 2014

S. No	Name of Faculty	Details of Conf./ Semi./ Symp./ Workshop/ Guest Lecture	Venue	Date
		Invited at IEC Baddi as part of UGC Inspection Committee	Solan, HP	19 th – 20 th May 2014
		Invited by TIFAC, DST to attend TIFAC meeting	New Delhi	22 nd May 2014
		Paper presented at Global Conference on Contemporary Issues and Education on – “Contemporary Issues in Education in Planning and Design of Urban Built Environment”	Las Vegas, USA	12 th -14 th July 2014
		Invited at UP Technical University to attend RDC meeting	Lucknow	28 th July 2014
		Invited by UPSC as part of Interview Board for Deputy Architects	New Delhi	31 st July-1 st Aug 2014
		CEPT University to conduct PhD Viva	Ahmedabad	3 rd Nov. 2014
		Experiencing a Living Heritage Through Character of Public Realm and Built Form Heritage of the City; Case Study- Jaipur, Rajasthan, 18th ICOMOS General Assembly and Symposium “Heritage and Landscape as Human Values”	Florence Italy	9 th -14 th Nov. 2014
		CES University to deliver invited key lectures	Kurukshetra	5 th January 2015
		Visited DCRUST to attend DRC meeting	Murthal	6 th January 2015
		Indian Institute for Remote Sensing to deliver invited key lecture	Dehradun	9 th February 2015
		Noida International University for UGC Inspection	Gr. Noida	23 rd – 24 th March 2015
2.	Dr. Devadas	Presented a paper on Analysis of Inter-regional Disparity in India, India Business Academy	New Delhi	6 th January 2015
		Presented a paper on Transit Oriented Development and Neighborhoods	MNIT, Jaipur	2014
3.	Dr. Mahua Mukherjee	Workshop on Environment Friendly Siting and Site Master Planning of New Industrial Parks	Auroville	12 th -15 th June 2014
		Conducted 2-day workshop on “Thermal comfort in warm Humid Climate” for Architecture students of	Gitam University, Vishkhapatnam	7 th -8 th August 2014
		Delivered lecture on “Motivational Practices to unlocking creativity” in Training of Trainers (ToT) program on “Harnessing the Researcher to Promote sustainable Innovation” organized by IPR Cell	IIT Roorkee	02 nd – 06 th September 2014
		Training program for Master Trainers on ECBC	Jaipur	12 th - 13 th September 2014
		Project Monitoring Member for the Consortium on Center for Building Energy Efficiency Research & Development (CBERD) Project under Joint Clean Research and Development Center (JCERDC), Indo-US S&T Forum	Ahmedabad	October 2014
		Programme Coordinator for 3- Day National Workshop on “Research Methodologies for Sustainable Built Environment”	IIT Roorkee	16 th -18 th October, 2014
		Jury for Periodic Valuation of Sessional Records in Architectural Design-III of B. Arch. V Semester (Section A)	SPA, New Delhi	03 rd December 2014

S. No	Name of Faculty	Details of Conf./ Semi./ Symp./ Workshop/ Guest Lecture	Venue	Date
		Delivered Lecture on "Prototype design and planning of Affordable Green Housing" in Kolkata meet organized by Bengal Chamber of Commerce and Industry (BCCI) and Building Materials and Technology Prevention Council (BMTPC)	Kolkata	23 rd December 2014
		Examiner for Open Defense & Viva Voce Examination of Ph. D. on "Urban Design & Complexity Science-Emergent Properties of Public Realm in Urban Environment" by candidate Mr. A. Patil	VNIT Nagpur	21 st February 2015
4	Dr. Gaurav Reheja	School of Planning & Architecture, New Delhi	Design Jury, B.Arch. 1st year	1 st May 2014
		Meeting for Harmonising Standards of Barrier Free Environment at Ministry of Urban Development	Nirman Bhawan New Delhi	6 th May 2014
		To attend workshop on Full Scale modeling	IKDC, Lund University, Lund, Sweden	15 th June 2014
		To participate in an International Conference on Universal Design	Lund University, Sweden	16 th -18 th June 2014
		Professional visit to Contemporary Architectural Projects like Turning Torso	Malmo	19 th -21 st June 2014
		Professional visit at Danish Architecture Centre	Copenhagen	21 st – 24 th June 2014
		Professional visit at Danish Design Centre	Copenhagen	21 st – 24 th June 2014
		To meet Secretary, MUD for Academy of Urban Design proposal for IIT Roorkee	MoUD New Delhi	August, 2014
		To attend an International Summer School on Smart Cities, SYNCITY, 2015 at Technical University of Dresden,	Germany	17 th – 30 th September 2014
		Professional visit cum Architectural Photography	Bauhaus, Dessau, Germany	16 th September 2014
		Professional visit	Max Planck Institute, Dresden, Germany	September 2014
		Professional visit	Technical University of Prague, Czech Republic	September 2014
		Meeting of Screening Committee for National Awards on Barrier Free Environment by Ministry of Social Justice & Empowerment	Shastri Bhawan	October 2014
		Anushruti Silver Jubilee Event	IITR Greater Noida Extension Centre, Greater Noida	08 th November 2014
		Design Jury, B.Arch. 1st year	SPA, New Delhi	3 rd December 2015
		To attend the National award ceremony of Persons with Disabilities, Ministry of Social Justice & Empowerment, Govt. of India	Vigyan Bhawan, New Delhi	3 rd December 2015

S. No	Name of Faculty	Details of Conf./ Semi./ Symp./ Workshop/ Guest Lecture	Venue	Date
		B.Arch. Thesis Jury Stage - I	PTU, GZS campus, Bathinda	January 2015
		Universal Design Workshop	PTU, GZS campus, Bathinda	20 th -21 st February 2015
		B.Arch. Thesis Jury Stage - II	PTU, GZS campus, Bathinda	March 2015
		Invited Talk at a Conference on Universal Design and Development	DJ Academy of Design, Coimbatore	March 2015
		Keynote address in a National Workshop on Disability, Global Warming and Sustainable Development in North and South	Indian Spinal Injuries Centre, New Delhi	20 th March 2015
		Invited Expert Talk in a National Symposium on Sustainable Development in Agribusiness for Persons with Disabilities in Rural India	Rajendra Agriculture University, Pusa, Samastipur, Bihar	23 rd -24 th March 2015
5.	Mr. Uttam K Roy	visited to deliver three expert lectures on Building Construction in the Faculty of Architecture	Moradabad Institute of Technology, Moradabad	April 2014 4 th -5 th May 2014
		Visited Jadavpur University, Bengal Engineering and Science University, as a part of FIG research project	Shibpur	2014
		Presented a Paper on Essential Dimensions of Inclusive Urban Planning, National Town and Country Planning Congress Co – Author: Atul Biltoria	Pune	2014
6.	Ms. Harshit Sosan Lakara	visited to deliver four expert lectures on Building Construction and Landscape Architecture in the Faculty of Architecture	Moradabad Institute of Technology, Moradabad	5 th April 2014 8 th -9 th April 2014 13 th April 2014 4 th -5 th May 2014
		Anushruti Silver Jubilee Event	IITR Greater Noida Extension Centre, Greater Noida	08 th November 2014
		Chaired session in National Campaign on Adivasi Development Rights organized by Jawaharlal Nehru University	JNU Delhi	20 th - 21 st January 2015
7.	Dr. Avlokita Agarwal	Presented at PLEA on “Development of Single Parameter to Rate Architectural Design for Green Building Certifications”	CEPT University, Ahmedabad	16 th -18 th December 2014
		Attended One-day National Seminar on ‘National Building Code of India: New Directions for Revision’ jointly by BIS and School of Planning and Architecture	SPA, New Delhi	18 th March 2015

S. No	Name of Faculty	Details of Conf./ Semi./ Symp./ Workshop/ Guest Lecture	Venue	Date
		Presented "Role of Spatial Design in Green Buildings- A Critical Review of Green Building Rating Systems", at National Conference on "Green Buildings for Sustainable Development"	MITS, Gwalior	19 th -20 th March 2015
		Presented "The Ecological Resonance In Himalayan Architecture: Factors and Influence of Natural Parameters Defining the Built Environment" at National Conference on "Green Buildings for Sustainable Development" ; Co-authored with Ankit Gusain	MITS, Gwalior	19 th -20 th March 2015
8.	Ms. Smriti Saraswat	Workshop on Indo-Finnish Collaborations for Higher Education and Research, Organized by IIT Bombay along with Aalto University	IIT Bombay, Bombay	07 th - 09 th April 2014
		Anushruti Silver Jubilee Event	IITR Greater Noida Extension Centre	08 th November 2014
		Visited to deliver four expert lectures on Building Construction in the Faculty of Architecture	Moradabad Institute of Technology, Moradabad	15 th April 2014 19 th -20 th April 2014 23 rd April 2014
		Presented paper at International Conference on Research into Design – ICORD 2015	IISC Bangalore	07 th – 09 th January 2015
		Visited Design Innovation and Craft Resource Centre to have a post seminar discussion on 'Crafting Future'	CEPT University	09 th February 2015
		DAAD IIT MSP Supervisor Visit	Germany	28 th February – 11 th March 2015
9.	E. Rajasekar	Talk on " Smart Cities - concepts, challenges and way ahead" at the "100 Smart Cities" Conference organized by Indian Chamber of Commerce	New Delhi	10 th February 2015
10.	Saptarshi Kolay	Presented a paper on "Designing Alternative Paradigm for Traditional Visual Storytelling" at ICORD 15	IISC, Bangalore	07 th – 09 th January 2015
		Invited as an External Expert for the workshop on Frugal Innovation, Design Programme	IIT Kanpur	09 th – 12 th March 2015
		Invited for Jury of Basic Design at SPA Bhopal	Bhopal	November 2014

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

S. No	Name of Faculty	Name of the course	Venue	Dates
1.	Dr. Gaurav Reheja	Inclusive Planning And Affordable Housing Course Coordinator: Mr. Uttam K. Roy	QIP, IIT Roorkee	02 nd – 06 th June 2014
2.	Ms. Harshit Lakra	Inclusive Planning And Affordable Housing Course Coordinator: Mr. Uttam K. Roy	QIP, IIT Roorkee	02 nd – 06 th June 2014
3.	Smriti Saraswat	Fundamentals of Sociolinguistics Course Coordinator: Dr. Smita Jha	QIP, IIT Roorkee	10 th June 2014
4.	Arindam Biswas	Inclusive Planning And Affordable Housing Course Coordinator: Mr. Uttam K. Roy	QIP, IIT Roorkee	02 nd – 06 th June 2014
5.	Mr. Saptarshi Kolay	Inclusive Planning And Affordable Housing Course Coordinator: Mr. Uttam K. Roy	QIP, IIT Roorkee	02 nd – 06 th June 2014

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL / INTERNATIONAL)

* Department/Institute Lectures/Talks (not class specific activities – open to all)

S. No	Name	Designation and Affiliation	Purpose of Visit	Dates
01	Prof. Maarit Salolainen,	Aalto University, Finland	Presentation and Talk on 'Materials and Structures'	04 th August 2014
02	Ar. Anil Sharma	Anil Sharma Associates, New Delhi	Presentation and Talk on 'My Beginning of Discovering Architecture'	11 th August 2014
03	Ulrich Otto Walner,	BAMBUTEC International GmbH, Germany	Presentation and Talk on – 'Green Wall Infill'	26 th August 2014
04	Mr. Christopher Charles Benninger	CCBA, Pune	Presentation and Talk on 'Architecture, Technology and Society'	16 th September 2014
05	Prof. Ar. Ravindra Pratap Prof. Dr. Alok Ranjan Ar. Raja CP Singh	Architects and COA Expert Committee Members	Inspection done by the Council of Architecture (COA), for approval of the B. Arch. Program	13 th – 14 th October 2014
06	Ar. Yatin Pandya	Footprints E.A.R.T.H, Ahmedabad	Talk on his work experiences and projects	29 th October 2014
07	Mr. Prashant Das	Ecole Hotelere de Lausanne (EHL),, Switzerland	Presentation and Talk on 'A Primer on Real Estate Finance'	01 st January 2015
08	Ms. Sujata Singh	IPS, Lucknow	Presentation and Talk on 'Beyond Architecture'	05 th January 2015
09	Alumni of the Department	Varied professionals	Visiting Department during Coral Jubilee Alumni	25 th January 2015
10	Ar. Amit Hajela	Architect, Interior & Urban Design Consultant, Visiting Faculty, SPA	Lecture on – "Recent Advances in Construction Management" and "Fundamentals of Mega Structures"	31 st January 2015
11	Ar. Anil Sharma	Anil Sharma Associates, New Delhi	Presentation and Talk on "Basics of Hotel Design"	02 nd February 2015
12	Prof. Ashwani Kumar	CEPT University, Ahmedabad	"Mind Tree on Urban Planning"	11 th February 2015
13	Prof. R Jaiswal	Consulting Architect, New Delhi	Lecture on "Housing"	20 th February 2015
14	Ar. Vijay Kumar	Consulting Architect, New Delhi	Motivational Lecture on "Architectural Design"	20 th February 2015
15	Prof. R Kiri	Consulting Architect, New Delhi	Lecture on – "Teaching and Learning in Architecture in Present Context"	24 th February 2015
16	Ar. Vaibhav Shivhare	Consulting Architect, Bhopal	Special Lecture on – "Affordable Housing and Innovation"	25 th March 2015

7. INTERNSHIPS BY STUDENTS OF IIT ROORKEE

S. No.	Name of the student	Name of the Internship Programme	Undergraduate	Post Graduate	Name of the Institute	Period
01	Murtaza Mohamadi	B.Arch. Internship	B.Arch. III Yr.		StudioX Mumbai, Kitab Mahal, Fort MUMBAI	2 Months
02	Nishi Jain	B.Arch. Internship	B.Arch. IV Yr.		RMS Architects Malaysia	3 Months
03	Raghav Mundra	B.Arch. Internship	B.Arch. IV Yr.		DMA, Mumbai	2 Months
			B.Arch. V Yr.		HPA Spaces, Mumbai	4 and half Months
04	Arpit Gupta	B.Arch. Internship	B.Arch. III Yr.		HPA Spaces, Mumbai	1 Month
			B.Arch. IV Yr.		Ar. Rushikesh, Mumbai	2 Months
05	Aahna Nawab	B.Arch. Internship	B.Arch. IV Yr.		RMS Architects Malaysia	3 Months
06	Rishabh Garodia	B.Arch. Internship	B.Arch. III Yr.		Puran Kumar Architects, Mumbai	2 Months
07	Vishal Kesarwani	B.Arch. Internship	B.Arch. III Yr.		Lim Laurent Architects, Kuala Lumpur Malaysia	2 Months
					Srajan Architects and Consultants kanpur	1 Month
08	Utkarsh Mathur	B.Arch. Internship	B.Arch. III Yr.		Arya Architects, Ahmadabad	2 Months
			B.Arch. IV Yr.		Lim Laurent Architects , Kuala Lumpur, Malaysia	2 Months
09	Akash Garg	B.Arch. Internship	B.Arch. III Yr.		architectureRED, Chennai	2 Months
			B.Arch. IV Yr.		HPA Spaces, Mumbai	2 Months
10	Siddhesh Sardal	B.Arch. Internship	B.Arch. IV Yr.		Ajit Bhuta Architects, Mumbai	2 Months
			B.Arch. III Yr.		DPA Bangalore	2 Months
11	Gurusharan Singh	B.Arch. Internship	B.Arch. IV Yr.		Lim Laurent Architects , Kuala Lumpur, Malaysia	1 Month
12	Dewesh Agrawal	B.Arch. Internship	B.Arch. III Yr.		ArchitectureRED, Chennai	2 Months
13	Ranjeeth Mahankali	B.Arch. Internship	B.Arch. III Yr.		Ar. Richard Belho Zynorique initiatives, kohima, Nagaland	2 Months
14	Abhishek Mandal	B.Arch. Internship	B.Arch. III Yr.		Ar. Richard Belho Zynorique initiatives, kohima, Nagaland	2 Months

S. No.	Name of the student	Name of the Internship Programme	Undergraduate	Post Graduate	Name of the Institute	Period
15	Ujjwal Vashisht	B.Arch. Internship	B.Arch. III Yr.		Lim Laurent Architects , Kuala Lumpur, Malaysia	2 Months
16	Raunak Tiberwala	B.Arch. Internship	B.Arch. III Yr.		HPA Spaces,Mumbai	1 Month
			B.Arch. IV Yr.		Ar. Rushikesh, Mumbai	2 Months
17	Abhishek Dutta	B.Arch. Internship	B.Arch. IV Yr.		RedBee Infrastructure, Gurgaon	2 Months
18	Siddharth Agrawal	B.Arch. Internship	B.Arch. III Yr.		Design Horizon, Delhi	2 Months
19	Nishant Borthakur	B.Arch. Internship	B.Arch. III Yr.		Brahmaputra Group, Guwahati	2 Months
20	Apoorva Mudgal	B.Arch. Internship	B.Arch. IV Yr.		Gensler, Bangalore	2 Months
			B.Arch. III Yr.		ARH, Mumbai	1 Month
21	Divya Khandelwal	B.Arch. Internship	B.Arch. IV Yr.		Alpine Dynamics, Malaysia	2 Months
22	Aman Awasthy	B.Arch. Internship	B.Arch. III Yr.		Planning Systems, Mumbai	2 Months
			B.Arch. IV Yr.		Lim Laurent Architects, Kuala Lumpur	2 Months
23	Praveen Kumar	M.Arch. Internship	M.Arch. I Yr.		Design Evolution, Delhi	2 Months
24	Sagnik Das	M.Arch. Internship	M.Arch. I Yr.		Design Evolution, Delhi	2 Months
25	Ahmad Mazhari	M.Arch. Internship	M.Arch. I Yr.		ADA, Aligarh	2 Months
26	Suryendu Dasgupta	M.Arch. Internship	M.Arch. I Yr.		Salient Design Studio, Kolkata	2 Months
27	Piyush Soni	MURP Internship	MURP I Yr.		Gwalior Development Authority	2 Months
28	Sana Javaid	M.Arch. Internship	M.Arch. I Yr.		TERI, New Delhi	2 Months
29	Riyan Habeeb	MURP Internship	MURP I Yr.		TERI, New Delhi	2 Months
30	Akriti Singh	M.Arch. Internship	M.Arch. II Yr.		TERI, New Delhi	2 Months
31	Gautam Mayuresh	M.Arch. Internship	M.Arch. I Yr.		Design Style Studio New Delhi	2 Months
32	Anukrati Srivastava	M.Arch. Internship	M.Arch. I Yr.		Civil Consultants - Architects, Planners & Interior Designers', Lucknow UP	2 Months

8. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

* This is a chronological account (class specific activities)

S. No	Details of Conf./ Seminar/ Symp./ Workshop/ Guest Lecture	Name of the Chairman	Sponsored by	Dates
1.	Special Lecture for B. Arch. II Yr. on 'Design Considerations for Community Buildings' by Ar. Manilla Jain	Dr. P.S. Chani	IIT Roorkee	05 th – 06 th April 2014
2.	Special Lecture for B. Arch. III Yr., B.Arch. IV Yr., M. Arch. & MURP I Yr. on 'A Code of Human Habitat' and 'Important Planning and Design projects' by Prof. Utpal Sharma, Ahmedabad	Dr. (Prof.) Pushplata	IIT Roorkee	12 th April 2014
3.	Special Lecture for B. Arch. IV Yr. on 'Urban Design Considerations of Built Form' by Ar. Amit Hajela	Dr. (Prof.) Pushplata	IIT Roorkee	13 th April 2014
4.	Creative Workshop on "Material Explorations and Applications in Construction Industry: Papier Mache, a Medium"	Smriti Saraswat and Saptarshi Kolay	IIT Roorkee	26 th – 27 th August 2014
5.	Creative Workshop on "Terracotta: Transformation through Time and Technology"	Smriti Saraswat and Saptarshi Kolay	IIT Roorkee	26 th – 27 th September 2014
6.	Special Lecture for B. Arch. I Yr on "Internal Motivation in Architecture" by Ar. R. Kiri	Dr. (Prof.) Pushplata	IIT Roorkee	16 th October 2014
7.	Creative Workshop on "Material Explorations and New Paradigms of Design"	Saptarshi Kolay and Smriti Saraswat	IIT Roorkee	09 th – 11 th November 2014
8.	Special Lecture for M. Arch. II Yr on "Urban Design – Research and Project Implementation" by Ar. Amit Hajela	Dr. Mahua Mukherjee	IIT Roorkee	18 th November 2014
9.	Special Lecture for M. Arch. II Yr on "Research Methodology for Architectural Study" by Dr. V.K. Paul	Dr. Mahua Mukherjee	IIT Roorkee	19 th November 2014
10.	Workshop on Urban Dialogues: The Global City and the Local Village	Dr. Gaurav Raheja and Henrik Valeur	IIT Roorkee	08 th – 15 th December 2014
11.	Creative Workshop on 'Poster Design'	Smriti Saraswat and Dr. Ila Gupta	IIT Roorkee	23 rd January 2015
12.	Reviews of B.Arch. III Yr. Studio by Ar. Anil Sharma	Dr. Mahua Mukherjee	IIT Roorkee	02 nd February 2015 19 th February 2015 19 th March 2015
13.	Creative Workshop on 'Screen Printing'	Dr. Ila Gupta and Smriti Saraswat	IIT Roorkee	27 th February 2015

S. No	Details of Conf./ Seminar/ Symp./ Workshop/ Guest Lecture	Name of the Chairman	Sponsored by	Dates
14.	Creative Workshop on 'Clay Craft'	Dr. Ila Gupta	IIT Roorkee	March 2015
15.	Ar. Amit Hajela and Dr. Virendra Paul for M. Arch. Theses Juries	Dr. Mahua Mukherjee	IIT Roorkee	13 th April 2014 09 th – 10 th March 2015
16.	M. Arch. I Yr. Discussion and Jury On – “Urban Renewal of Old City Core Area: A Case of Roorkee”	Dr. (Prof.) Pushplata and Dr. Avlokita Agarwal	IIT Roorkee	11 th March 2015
17.	Project related workshop and exhibition titled “ Model Village Development with Public and Private Partnership” under the project “ Model Village Development for Juang Tribe of Odisha through Public and Private Partnership” for M. Arch. And MURP students	Harshit S. Lakra (Principal Investigator) along with Smriti Saraswat (Co-investigator)	HUDCO/HSMI	24 th -25 th March 2015
18.	Awareness Workshop on IGBC Green Building Rating Systems” - Speaker Mr. M Anand from IGBC Established Student Chapter of IGBC at IIT Roorkee. Serving as Faculty Co-ordinator of the same	Dr. Avlokita Agarwal	IIT Roorkee and Saint Gobain	28 th March 2015

9. Short Term /Sponsored Courses Organized by the Department

SI No	Name of the Coordinator	Name of the Course	Source of Funding	No. of Participants	Dates
01	Mr. Uttam K. Roy	Inclusive Planning And Affordable Housing	QIP, IIT Roorkee	25	02 nd – 06 th June 2014

10. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

S. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1	Uttam K Roy	Monograph on Affordable Housing	Quality Improvement Programme Centre , IIT Roorkee	0.2
2	Harshit Lakra	Monograph on Measure Drawing Manual	Quality Improvement Programme Centre , IIT Roorkee	0.2
3	Avlokita Agarwal	Monograph on Shekhawati: Colorful Urbanism in the Semi Desert of India	Quality Improvement Programme Centre , IIT Roorkee	0.2
4	Smriti Saraswat	Monograph on ‘Dharohar’ – Understanding the Importance of Art in Interior-Architecture	Quality Improvement Programme Centre , IIT Roorkee	0.2

ii. CONTINUING SPONSORED RESEARCH PROJECTS

S. No	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1	Dr. P.S. Chani	Monograph Writing	Quality Improvement Programme Centre , IIT Roorkee	0.2
2	Dr. Mahua Mukherjee	Preparation of Standards & Specifications for Design and Planning of Affordable Innovative Green Housing	BMTPC	6.75
		Documentation on Traditional Earthquake Resistant Building Technology available with SAARC Countries	SDMC	5.5
		Technical inputs for establishment of State Institute of Hydrology and water management, Bikaner PI: Dr. N K Goel	State Institute of Hydrology and water management, Bikaner Project No. Hyd 1009/11-12	-
3	Tina Pujara	Assesment and Evolution of Sustainable Urban Form in the Indian context	Faculty initiation grant IIT Roorkee	3.0
		Documentary Film	Quality Improvement Programme Centre , IIT Roorkee	0.16
4	Uttam K Roy	Process standardization for inclusive urban planning	Faculty Initiation Grant IIT Roorkee	8.25
5	Ms. Lakra Harshit Sosan	Case Studies of Ethnic Settlements of Jharkhand for Culture Based Planning	Faculty Initiation Grant IIT Roorkee	7.5
6	Dr. Avlokita Agarwal	"Development of Roadmap for Sustainability Audit of IIT Roorkee Campus"	Faculty Initiation Grant , IIT Roorkee	10.0
7	Smriti Saraswat	Documenting Space Making Crafts of Uttarakhand: Proposing Craft-Design Innovations for Contemporary Interior-Architecture	Faculty Initiation Grant IIT Roorkee	7.5

iii. NEW SPONSORED RESEARCH PROJECTS

S. No	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1	Dr. Arindam Biswas	Measuring Inclusiveness of Indian Metropolitan Cities and Establish Inclusive Growth Index for Indian Cities within the Diversified Governance Framework	FIG, IIT Roorkee	10.0
2	Saptarshi Kolay	Connecting Third Age and Childhood through Indian Cultural Roots and Contemporary Technology	FIG, IIT Roorkee	10.0

**11. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS
(RS.10 LACS)(A brief Write-up upto 100 words) (New Projects during the year 2014-15)**

S. No	Principal Investigators	Title of Projects	Scheme	Date	Amount (Rs. in Lacs)
1	PI: Sudipto Sarkar Co PI: Uttam K Roy	An Enterprise-Driven High Quality Community Toilet System Sustaining on Commercial Values Generated by Black Soldier Fly Larvae Grown on Human Feces and by Fertilizer Derived from Urine	Department of Biotechnology (DBT), Ministry of Science and Technology, Government of India & Bill & Melinda Gates Foundation	2014	50.0
2	Dr. M. Parida (PI) Dr. SS Jain Dr. PK Garg Dr. Ila Gupta Dr. PK Gupta	Design of Noise Barrier for Reduction of Noise Level at Panchsheel Park, New Delhi	PWD, New Delhi	Feb. 2015	20.22
2	Ms. Lakra Harshit Sosan Ms. Smriti Saraswat	Model Village Development for <i>Juang</i> Tribe in Odisha through Public and Private Partnership	HUDCO	March 2014	22.25
3	Harshit Lakra Prof Pushplata Dr. G. Raheja Dr. S. Chikermane Smriti Saraswat Dr. A. Biswas	Heritage Preservation of Solani Aqueduct (as Gateway to Upper Ganga Eco-System and Culture) with Community and Institute Partnership	NMCG	Yet to start Award of Project is under final stages of consideration	6 Crores (03 Years)

4.2 DEPARTMENT OF BIOTECHNOLOGY

Academic Staff: 29, Students Admitted: UG : 45 ; PG : 26; Ph.D : 41 Publications in: Journals 57, Conferences 36, Book 02, Books Chapters 04 Projects: Research (Rs. in Lacs) : 313.66

1. SALIENT FEATURES

The Eleven students were awarded Ph.D. Degree in the convocation held in 2014. The 9th batch of students in the B. Tech. (Biotechnology) programme with a sanctioned intake of 45 students was admitted. M. Sc. Biotechnology programme with a sanction strength of 37 students has also been successfully running with annual finance aided Rs 59.40 lacs by DBT Govt. of India, New Delhi. One DST, Two DBT, Two CSIR & One DRDO sponsored research project were successfully completed and Six new research projects with funding from Science and Engineering Research Board, Department of Biotechnology, Govt. of India for a total outlay of Rs. 313.66 lacs have been sanctioned during 2014-15.

2. LIST OF FACULTY MEMBERS

Professors

Roy, P., Ph.D (VBU, Kolkata)
Head (from Feb. 01, 2015)
Molecular Endocrinology

Barthwal, Ritu, (Mrs.),
Ph.D (IIT Delhi) Biophysics

Randhawa, G. S.,
Ph.D (PAU, Ludhiana) Genetics

Singh, R.P., Ph.D (CDRI, LKO.,
Degree by Kanpur University)
Microbial Technology

Prasad, R., Ph.D (JNU, New Delhi)
Molecular Biology & Proteomics

Pruthi, V., Ph.D
(Imtech, Chd. Degree by PU, Chandigarh)
Molecular Microbiology

Associate Professors

Sharma, A.K., Ph.D (AIIMS, New Delhi)
Biochemistry, Structural Biology

Kumar, P., Ph.D (AIIMS, New Delhi)
Structural Biology

Ghosh, S., Ph.D (IIT Madras)
Biochemical Engineering

Chaudhuri, B., Ph.D (IIT Madras)
Biochemical Engineering

Navani, N.K., Ph.D (Imtech, Chd. Degree by
PU, Chandigarh)
Protein Engineering & Molecular Biology

Pathania R., (Mrs.), Ph.D (Imtech Chd.
Degree by JNU, New Delhi), Molecular biology
& Molecular Microbiology

Tomar S., (Mrs.), Ph.D (Purdue University)

Assistant Professors

Nair M.S., (Mrs.), Ph.D (CSJM Univ, Kanpur)
Biophysics & Fluorescence spectroscopy

Molecular Biology & Virology

Sircar D., PhD. (IIT kharagpur)
Plant Functional Genomics & Metabolic
Phytochemistry

Krishna Mohan P.M., PhD (TIFR, Bombay)
Biophysics & Biomolecular NMR

Packirisamy Gopinath., PhD (IIT Guwahati)
Nano-Biotechnology

Yadav Shri Ram., PhD (IISc Bangalore)
Plant Developmental Biology

Mandal P.K., PhD (JNU, New Delhi)
Molecular Parsitology

Ambatipudi Srinivas Kiran., PhD (Macquarie
University, Australia)
Marsupial Immunoproteomics

Sarangi P.P., (Mrs.), PhD (University of Kroxville,
USA) Viral Immunology& Immunopathology

Datta S., PhD (University of Kentucky, USA)
Chemical Engineering

Hazra Saugata., Ph.D (University of Illilions,
Chicago) Structural Biology, Biochemistry,
Structural Based Drug Designing

Harsh., PhD (University of Delhi South Campus)
Plant Molecular Biology

Mukherjee S. P., PhD (Tata Institute of
Fundamental Research, Mumbai)
Chemical Science

Rohtagi Soma., PhD (NII, New Delhi)
Molecular Immunology

Sharma Deepak., PhD (AIIMS, New Delhi)
Computational Biology

Post-Doctoral Fellow

Kumar, Piyush
Naqvi, Saba

3. HONOURS AND AWARDS TO FACULTY MEMBERS

Prof. Partha Roy	1. Professor Partha Roy was awarded the Outstanding Teachers Award for 2014.
Prof. R. P. Singh	1. Member-Expert Committee, Biotechnology and Bioremediation, Life Science Research Board (LSRB), DRDO, Govt. of India. 2. Coordinator IIT Roorkee, PAN IIT Centre for Bioenergy, DBT, Govt. of India. 3. Member-Pan IIT Executive Committee, PAN IIT Centre for Bioenergy, DBT, Govt. of India. 4. Scientific Committee Member, International Conference on Bioengineering and Biotechnology, Barcelona, Spain.
Prof. R. Prasad	1. Nominated External Expert for Departmental Academic Committee (DAC) and Departmental Visiting Committee (DVC), by Board of Governor, NIT, Raipur, for the department of Biotechnology for three years with effect from 27.11.2014. 2. Member Biotechnology Council Uttarakhand, Govt. of Uttarakhand.
Dr. Krishan Mohan Poluri	1. Selected for “ NASI Platinum Jubilee Young Scientist Award ” for the year 2014 from National Academy of Sciences India.
Dr. Shri Ram Yadav	1. Dr. Shri Ram Yadav was awarded for “ Innovative Young Biotechnologist Award-2014 (IYBA-2014) ” from Department of Biotechnology (DBT), Govt. of INDIA.
Dr. Kiran Ambatipudi	1. 2nd prize in oral presentation at the Genomics and Proteomics Conference-2014, Bareilly.
Dr. Pranita P. Sarangi	1 Best oral presentation at the Immunocon-2014, Madurai.
Dr. Saurabh Datta	1. Ramanujan Fellowship Award.
Dr. Soma Rohtagi	1. AWARDED DBT RAMALINGASWAMI FELLOWSHIP AWARD 2014-15, DEPT OF BIOTECHNOLOGY, GOVT OF INDIA. 2. AWARDED “EARLY CAREER FACULTY TRAVEL GRANT AWARD” from THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS, MARYLAND, USA, 2015.
Dr. Deepak Sharma	1. Selected as a Founding Member of INYAS (Indian National Young Academy of Science).

4. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/SYMPOSIA/WORKSHOP/GUEST LECTURES.

Sl. No.	Name of Faculty	Inst. /Organization/ Purpose of Visit	Venue	Dates of visit
1.	Prof. Partha Roy	Technical Workshop IIT- Aalto University Collaborative Research Activities” supported by MHRD.	Indian Institute of Technology Bombay	April 7-9, 2014
2.	Prof. Partha Roy	DHR/ICMR – HRD Medical Diagnostics & Devices Innovation Partnership Workshop” by ICMR	India International Center, New Delhi	Sept. 19-20, 2014
3.	Prof. Partha Roy	International Conference/WORKSHOP on “Recent Advances in Structure Biology & Drug Discovery	Department of Biotechnology, Indian Institute of Technology, Roorkee, Roorkee 247 667	October 9-11, 2014
4.	Prof. Partha Roy	Workshop on Advances in Biotechnology and its Application in Conservation Biology”	Dolphin (P.G.) Institute of Biomedical & Natural Sciences, Dehradun	October 16, 2014
5.	Prof. Partha Roy	International Conference on Life Science and Bioengineering (ICLSBE-2014)	Institute of Advanced Management and Research, Gaziabad	November 23, 2014

Sl. No.	Name of Faculty	Inst. /Organization/ Purpose of Visit	Venue	Dates of visit
6.	Prof. Partha Roy	International Conference on Molecular Signalling: Recent Trends in Biomedical and Translational Research ICMS: RTBTR-2014	Department of Biotechnology, Indian Institute of Technology, Roorkee, Roorkee 247 667	December 17-19, 2014
7.	Prof. Partha Roy	2nd International Congress of Society for Ethnopharmacology, India with a theme of "Validation of Medicinal Plants and Traditional Medicine – Global Perspectives	Department of Pharmaceutical Sciences, R T M Nagpur University, Maharashtra	February 22-24, 2015
8.	Prof. R. P. Singh	International Conference on Recent Advances in Structural Biology and Drug Discovery	IIT Roorkee	Oct 9-11, 2014
9.	Prof. R. P. Singh	India-US Technology Summit	Gr. Noida, Delhi NCR	Nov 18-19, 2014
10.	Prof. R. P. Singh	International Conference on Molecular Signaling : Recent Trends in Biomedical and Translational Research	IIT Roorkee	Dec 17-19, 2014
11.	Prof. R. P. Singh	Workshop on Nano Drug Delivery Systems (Industry Academia Interaction)	IIT Roorkee	Jan 10, 2015
12.	Prof. R. Prasad	International conference workshop on "Recent Advances in Structural Biology and Drug discovery	Department of Biotechnology, IIT Roorkee	Oct 9-11, 2014
13.	Prof. R. Prasad	International Conference on Molecular Signaling: Recent Trends in Biomedical and Translational Research	Department of Biotechnology, IIT Roorkee	Dec 17-19, 2014
14.	Prof. R. Prasad	Invited specialized guest lecture	Shobhit University, Gnagoh, Saharanpur	Nov, 23, 2014
15.	Dr. Pravindra Kumar	Indo-US conference at IIT Roorkee	Roorkee	Oct 9-11, 2014
16.	Dr. Naveen K Navani	Recent Trends in Biomedical and Transitional Research-ICMR-RTBTR, 2014	Department of Biotechnology, IIT Roorkee, Roorkee	December 17-19, 2014
17.	Dr. Naveen K Navani	Quick detection of urea adulteration in milk: All is not white in milk. 2015. Poster presentation in National Innovation Clubs held at Rashtrapati Bhavan, New Delhi, India	Rashtrapati Bhavan, New Delhi, India	March 10, 2015
18.	Dr. Ranjana Pathania	Indo-US International Conference On Recent advances in structural biology & drug discovery. IIT Roorkee, Purdue Univ. & Schrodinger	IIT Roorkee	Oct. 9 -11, 2014
19.	Dr. Ranjana Pathania	International conference on Recent Trends in Molecular Signaling: Recent Trends in Biomedical and Translational Research. Sponsored by DBT	IIT Roorkee	Dec. 17-19, 2014

Sl. No.	Name of Faculty	Inst. /Organization/ Purpose of Visit	Venue	Dates of visit
20.	Dr. Ranjana Pathania	National conference of Traditional Knowledge and Contemporary innovations. By MHRD	IIT Roorkee	March 13-14, 2015
21.	Dr. Maya S. Nair	XXVIth International Conference on Magnetic Resonance in Biological System (ICMRBS)	Dallas, Texas, USA	August 24-29, 2014
22.	Dr. Shailly Tomar	Fourteenth Annual Structure-Based Drug Design Conference	Boston, MA, USA,	May 21-22, 2014
23.	Dr. Shailly Tomar	43rd National Seminar on Crystallography	CDRI, Lucknow, India.	Nov. 12-14, 2014,
24.	Dr. Shailly Tomar	Indo-US international conference on "Recent advances in Structural Biology and Drug Discovery (RASBDD-IIT-2014),	IIT Roorkee	Oct. 9-11, 2014.
25.	Dr. Shailly Tomar	9th Symposium on Frontiers in Biomedical Research (FBR -2014)	University of Delhi, Delhi	April 14-16, 2014
26.	Dr. Debabrata Sircar	Workshop on "Plant Metabolomics brain Storming session"	Dept of Plant Sciences, University of Hyderabad	Dec. 20, 2014
27.	Dr. Krishna Mohan Poluri	Invited Speaker: Recent Trends in Chemical Sciences, Engineering and Technology (RTCET-2014)	NIT-Hamirpur, Himachal Pradesh	May 29-30, 2014
28.	Dr. Krishna Mohan Poluri	Oral Presentation: 18th International Biophysics Congress (IUPAB)	Brisbane, Australia	Aug. 3-7, 2014
29.	Dr. Krishna Mohan Poluri	Award Presentation: 84th Annual Session of NASI, India	JNV University, Jodhpur, Rajasthan	Dec. 4-6, 2014
30.	Dr. Krishna Mohan Poluri	Guest Lecture: DST-INSPIRE Program	HNB Garhwal University, Uttarakhand	Nov. 22-23, 2014 Dec. 13-14, 2014 Jan. 17-18, 2015
31.	Dr. Krishna Mohan Poluri	Invited Lecture: BIOTIKOS-2015	TERI University, New Delhi	Jan. 19-20, 2015
32.	Dr. Krishna Mohan Poluri	Invited Speaker: National symposium on Biophysics & Golden jubilee meeting of Indian Biophysical Society.	Jamia Milla Islamia, New Delhi	Feb. 14-17, 2015
33.	Dr. Krishna Mohan Poluri	Invited speaker, Nuclear Magnetic Resonance Symposium (NMRS-2014)	JNDU, Amritsar, Punjab	Mar. 6-9, 2015
34.	Dr. Prabhat K Mandal	Recent Advances in Structural Biology and Drug Design	IIT Roorkee	Oct. 9-11, 2014
35.	Dr. Prabhat K Mandal	Molecular Signaling: Recent Trends in Biomedical and Translation Research	IIT Roorkee	Dec. 17-19, 2014
36.	Dr. Shri Ram Yadav	International Conference on New Plant Breeding Molecular Technologies – Technology Development and Regulation	Hotel Le Meriden, Jaipur, Rajasthan	Oct. 9-10, 2014

Sl. No.	Name of Faculty	Inst. /Organization/ Purpose of Visit	Venue	Dates of visit
37.	Dr. Shri Ram Yadav	International Conference on Molecular Signalling: Recent Trends in Biomedical and Translational Research	Department of Biotechnology, IIT Roorkee	Dec. 17-19, 2014
38.	Dr. Shri Ram Yadav	Seminar: Phloem differentiation and symplastic cell-cell communication during root vascular development in Arabidopsis	Microbiology and Cell Biology, Indian Institute of Science (IISc), Bangalore	June 27, 2014
39.	Dr. Shri Ram Yadav	Guest Lecture: A near-death experience during phloem cell specialization and symplastic cell-cell communication during Arabidopsis vascular development	School of Biotechnology, University of Jammu, Jammu, J & K	May 6-7, 2015
40.	Dr. P.Gopinath	Delivered an invited lecture at the "International Conference on Nanotoxicology" (ICNanotox- 2015)	SASTRA University	Feb. 13, 2015.
41.	Dr. P.Gopinath	Oral presentation at the "Indo-Australian conference BiTERM 2015"	Anna University, Chennai, India	Feb. 5-7, 2015.
42.	Dr. P.Gopinath	Presented three posters at the "TechConnect World 2014 Innovation Conference".	Washington, DC, United States of America.	June 16-18, 2014
43.	Dr. Kiran Ambatipudi	Genomics and proteomics -2014 (Invited Talk)	Bareilly	Sept. 26-27, 2014
44.	Dr. Kiran Ambatipudi	6th Annual International Conference "Proteomics from Discovery to Function"-Poster and Judge	IIT Mumbai	Dec. 6-9, 2014
45.	Dr. Kiran Ambatipudi	5th Annual International Conference on Advances in Biotechnology-Invited Talk	IIT Kanpur	March 13-15, 2015
46.	Dr. Pranita P. Sarangi	Immunocon -2014 (Annual conference of Indian Immunology Society- Invited Talk	Madurai	Dec. 12-14, 2014
47.	Dr. Pranita P. Sarangi	1st International Conference on Translational Research- Invited Talk	Bhubaneswar	Feb. 5-7, 2015
48.	Dr. Harsh Chauhan	Indo-US conference and workshop on "Recent Advances on Structural Biology and Drug Discovery".	IIT Roorkee	Oct. 9-11, 2014
49.	Dr. Harsh Chauhan	International Conference on 'Molecular Signaling: Recent Trends in Biomedical and Translational Research' (ICMS: RTBTR-2014).	IIT Roorkee	Dec. 17-19, 2014
50.	Dr. S.P. Mukherjee	INDO-US International Conference And Workshop: Recent advances in Structural Biology and Drug Discovery	Biotech. Dept., IIT-R	Oct. 9-11, 2014
51.	Dr. S.P. Mukherjee	International Conference on Molecular Signaling: Recent Trends in Biomedical and Translational Research	Biotech. Dept., IIT-R	Dec. 17-19, 2014

Sl. No.	Name of Faculty	Inst. /Organization/ Purpose of Visit	Venue	Dates of visit
52.	Dr. Soma rohatgi	Annual aai meeting, 2015	New orleans, USA	May 8 –12, 2015
53.	Dr. Deepak Sharma	Guest Lectures (Bioinformatics) to M. Biotechnology (AIIMS) students	Dept. of Biotechnology, AIIMS	Feb. 21, 2015 April 4, 2015 April 11, 2015

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of Course	Venue	Date
1.	Dr. Soma Rohatgi	European society of clinical microbiology and infectious diseases (escmid course)	Vp chest institute, delhi university, maurice nagar, delhi	March 20-21, 2015

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
1.	Prof. Jack Johnson	Professor, Scrips Research Institute, USA	Deliver a lecture in the conference	Oct 9-11, 2014
2.	Prof. Richard Kuhn	Prof & Head, Dept of Biological Sc. Purdue University, USA	Deliver a lecture in the conference	Oct 9-11, 2014
3.	Prof. Ludger Beerhues	Prof. & Head Institute for Pharmaceutical Biology	To attend International conference on cell signaling (RTBTR2014)	Dec.16-19, 2014
4.	Prof. Bandana Chatterjee	TU-Braunschweig, Germany Professor University of Texas, USA	To attend International conference on cell signaling (RTBTR2014)	Dec.16-19, 2014
5.	Prof. Gourisankar Ghosh	University of California San Diego, USA	To attend International conference on cell signaling (RTBTR2014)	Dec.16-19, 2014
6.	Dr. Mukul Jain	Senior Vice President, Zyduscadila, Ahmedabad	To attend International conference on cell signaling (RTBTR2014)	Dec. 16-19, 2014

7. INTERNSHIPPS TO OTHERS STUDENTS IN IIT-ROORKEE

Sl. No.	Name of Students	Name of Supervisor	Under Graduate	Post Graduate	Name of Institute	Period
1.	Tanya Garg	Dr. Ranjana Pathania	B-Tech. – III year	-	NIT Calicut	May 2014 to June 2014

8. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./ symp./workshop	Name of the Chairman	Sponsored by	Dates
1.	International Conference/ WORKSHOP on "Recent Advances in Structure Biology & Drug Discovery	Prof. R. Prasad		October 9-11, 2014
2.	International Conference on Molecular Signalling: Recent Trends in Biomedical and Translational Research ICMS: RTBTR-2014	Prof. R. Prasad	DST, DBT, CSIR, DRDO, ICMR, INSA, NRDC	December 17-19, 2014
3.	International Conference on 'Molecular Signaling: Recent Trends in Biomedical and Translational Research' (ICMS: RTBTR-2014)	Convener: Prof. Partha Roy Org. Secretary: Dr. D. Sircar	Government, non-government and Private sponsors.	December 17-19, 2014

9. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. R. P. Singh	Evaluation of Antimicrobial Ingredients of Some Indian Ethnomedicinal Plants Mainly From Compositae, Verbanaceae, Apocynaceae and Liliaceae Families From Outer Himalayan Region	DRL, Tezpur, Govt. of India	9.47
2.	Dr. Naveen K Navani	Detection and mitigation of Dairy pathogen and detection of adulterants using chemical biology	NAIP-ICAR	557.351
3.	Dr. Shailly Tomar	Three Dimensional Analysis of Alphavirus Capsid Protease	DRDO	37.97
4.	Dr. P. Gopinath	Chitosan as nanocarrier for gene delivery	MHRD	5.00

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. R. P. Singh	Cloning and production of a genetically improved L-Asparaginase from Escherichia coli	DBT, Govt. of India	26.49
2.	Dr. Naveen K Navani	Development of aptamer based biosensing system for detection of water borne pathogen Escherichia coli O157:H7.	DBT	46.73
3.	Dr. Naveen K Navani	Microbial community identification of tapovan geothermal spring through culture based and culture independent approach	USB	7.50
4.	Dr. Ranjana Pathania	Chemical genetic approach for discovery of new chemical entities against multiple drug resistant (MDR) Gram negative bacteria. (Continuing)	Indian Council of Medical Research (ICMR), New Delhi	49.90
5.	Dr. Ranjana Pathania	Development of a bacterial pesticide degrading system for bioremediation of pesticides accumulated in the local environment (UST-625-DMC) (Completed April,2015)	Uttarakhand Council of Science and Technology	2.46
6.	Dr. Shailly Tomar	Structural analysis of chitinase from Tamarindus indica	DST	37.34
7.	Dr. D. Sircar	Biosynthesis of xanthenes from Swertia Chirata Molecular analysis of the phytoalexin biosynthesis in	IITR (under "FIG" Grant) SERB	10.00 23.00
8.	Dr. Krishna Mohan Poluri	Unraveling the molecular basis of chemokine oligomerization: mechanistic insights into interaction with glycosaminoglycans	FIG-MHRD (2013-2016)	10.00
9.	Dr. Krishna Mohan Poluri	Structural basis for differential receptor recognition of neutrophil activating protein-2.	SERB-DST (2014-2017)	24.70
10.	Dr. Krishna Mohan Poluri	Decoding the molecular recognition principles underlying CXCL1-GAG interactions	DBT-IYBA (2014-17)	40.60
11.	Dr. Prabhat K Mandal	Biology of Human L1 Retrotransposition	SRIC, IIT Roorkee	10.00

12.	Dr. Shri Ram Yadav	Functional genomics of root system architecture (RSA) in rice: crown root development	IIT Roorkee	10.00
13.	Dr. P. Gopinath (P.I) Dr. P.Roy (Co-P.I)	Cancer Nanotheranostics: Development of Multifunctional Nanocomposite for Tumor Targeted Delivery of Suicide Gene and Imaging Probe.	DBT (RGYI -2011-12), India	29.30
14.	Dr. P. Gopinath	Tumor targeted multifunctional chitosan nanocomposite for cancer theranostic applications	SERB (Fast track scheme for young scientists)	21.90
15.	Dr. P. Gopinath Dr. P.Roy (Co-P.I)	Overexpression of Superoxide Dismutase in Mesenchymal Stem Cells for Therapeutic Applications of Chronic Obstructive Pulmonary Disease.	ICMR, India	28.875
16.	Prof. V. Agarwala (P.I) Dr. P. Gopinath (Co-PI)	Low Cost Technology for Purification of Arsenic and Microbes Contaminated Water using Nanotechnology	DST-Water Technology Initiative, India	46.638
17.	Dr. Pranita P Sarangi	Cell- Matrix Interaction in Inflammation and sepsis	DBT	31.35

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. R. P. Singh	Development of Engineered Microalgae for Enhanced Lipid Accumulation	DBT Govt. of India	71.68
2.	Dr. Shailly Tomar	Structural functional characterization of Chikungunya virus nsP2 protease and protease inhibitor screening	DBT	50.00
3.	Dr. Shailly Tomar	In silico development of anti-amoebic molecules based on the structure of E. histolytica ornithine decarboxylase	ICMR	49.00
4.	Dr. Prabhat K Mandal	Cellular Factors with a Role in Human L1 Retrotransposition	DST	50.00
5.	Dr. Shri Ram Yadav	Auxin-cytokinin interaction and its functional significance during rice crown root development	DBT, Govt. of India	48.25
6.	Dr. Pravindra Kumar	Structural characterization of Moraxella catarrhalis Enoyl-Acyl Carrier Protein Reductase (FabI) and in-silico inhibitor	ICMR	40.00

10. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (Rs. 10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2013-14).

Prof. R.P. Singh

Development of Engineered Microalgae ----- Accumulation: Biosynthesis of triacylglycerols (TAGs) involves several key regulatory enzymes which can be useful for engineering metabolic pathways for biofuel production. Advanced metabolic engineering approaches not only permit for the increased production of endogenous carbon storage compounds such as TAGs and starch but also direct production, and perhaps secretion of designer hydrocarbons that may be used directly as fuels. It is expected that modification of the selected regulatory enzymes of the lipid metabolic pathway may lead into increased lipid accumulation in the engineered microalgae. Targeting and modifying the key metabolomic constituents of the lipid biosynthetic cascade may possibly therefore boost TAG storage levels in microalgae, thus rendering these as suitable resources for biofuel production.

11. SCIENTIFIC AND TECHNICAL REPORTS

Sl. No.	Title of the Projects	Participants	Authors	Remarks
1.	Cloning and production of a genetically improved L-Asparaginase from Escherichia coli	Dr. R. P. Singh	Dr. R. P. Singh	
2.	Evaluation of Antimicrobial Ingredients of Some Indian Ethnomedicinal Plants ----- From Outer Himalayan Region	Dr. R. P. Singh	Dr. R. P. Singh	
3.	Detection and mitigation of dairy pathogens and milk adulterants using chemical biology.	Sponsored R&D National Agricultural Innovation Project, ICAR	Dr. Naveen K Navani	External Report to world bank funded NAIP project
4.	Chemical genetic approach for discovery of new chemical entities against multiple drug resistant (MDR) Gram negative bacteria.	ICMR Project-annual report	Dr. Ranjana Pathania	(External) Submitted to Indian Council of Medical Research

Patents Filed:

1. Naveen Kumar Navani, Ranjana Pathania, Tarun K Sharma, Mahak Sapra. 2014. A SYSTEM AND METHOD OF COLORIMETRIC SENSOR FOR UREA DETECTION" Indian Patent Application No. 900/DEL/2014
2. Naveen Kumar Navani, Piyush Kumar, Paramesh R. Lambadi. 2014. "NUCLEOTIDE SEQUENCES BASED COLORIMETRIC NANOSENSOR FOR DETECTION OF UREA" Indian Patent Application No. 901/DEL/2014
3. Ranjana Pathania, Naveen Kumar Navani, Atin Shama, Abin, Rajnikant Sharma. 2014. "OLIGONUCLEOTIDE SEQUENCES FOR SPECIFIC DETECTION OF ACINETOBACTER BAUMANNII". Indian Patent Application No. 906/DEL/2014
4. Naveen Kumar Navani, Ranjana Pathania, Tarun Kumar Sharma, Aradhana Chopra, Manish Rana. 2014. "A SYSTEM AND METHOD FOR THE DETECTION OF BACTERIAL PATHOGEN" Indian Patent Application No. 907/DEL/2014.

4.3 DEPARTMENT OF CHEMICAL ENGINEERING

Academic Staff: 27; Students Admitted: B.Tech.- 110; M.Tech.-56; Publications: Journals- 66; Conferences- 31; Projects: Research- Rs. 101 Lacs.

1. SALIENT FEATURES

During last year, the Department of Chemical Engineering made significant growth in research and publication in last decade. Prof. Indra Mani Mishra got retired on August 31, 2014 and four new faculty members joined the department and 5 faculty members got promoted to higher positions. Many Ph.D. and M.Tech. research projects were in collaboration with widely acclaimed national and international institutions like IIP Dehradun, EIL, CBRI, BARC, etc. 66 research papers have been published in high Impact Factor journals and 36 research papers were presented in National and International Conferences.

Placement of UG students has been impressive as almost all UG students got attractive job offers in the core as well as software companies. Department also organized one short term course during this period with large participation from Faculty members of other Academic Institutions.

2. LIST OF FACULTY MEMBERS

Professors

Mishra, Indra M., Ph.D. (Banaras Hindu University, Varanasi)

Transport Phenomena, Environmental Engineering Biotechnology

Mohanty, Bikash, Ph.D. (IIT Roorkee)

Heat Transfer, Process Integration Simulation, Process Int. & Control

Chand, Shri, Ph.D. (Banaras Hindu University, Varanasi)

Catalysis, Pollution Abatement

Agarwal, Vijay K., Ph.D. (IIT Roorkee)

Process Modelling & Simulation, CAD, Process Control & Heat Transfer

Prasad, Baseshwar, Ph.D. (IIT Roorkee)

Energy Engineering, Pollution Abatement & Biochemical Engineering

Balomajumder, Chandrajit, Ph.D. (IIT Roorkee) Industrial Pollution Abatement, Bio-Chemical Engineering, Simulation and Modelling

Sinha, Shishir, Ph.D. (IIT Kanpur)

Polymer Surface Modification, Bio Fuels

Associate Professors

Kumar, Vineet, Ph.D.

(Banaras Hindu University, Varanasi)

[Left on Dec. 19, 2014]

CFD, Process Simulation,

Petroleum Processing, Bioseparation

Shashi, Ph.D. (IIT Roorkee)

Modelling & Simulation, Computer Aided Design

Bhargava, Ravindra, Ph.D. (IIT Roorkee)

Process Simulation, Optimization, Design & Control

Mondal, P., Ph.D. (IIT Roorkee)

Environmental Engineering, Bio-Chemical Engineering

Srivastava, V.C., Ph.D. (IIT Roorkee)

Industrial Pollution Abatement

Dhiman, A.K., Ph.D. (IIT Kanpur)

Modelling & Simulation

Assistant Professors

Bharti, R.P., Ph.D. (IIT Kanpur)

CFD, Non-Newtonian Fluid, Flow & Heat Transfer

Biswas, P., Ph.D. (IIT Kanpur)

Heterogeneous Catalysis, Chemical Reaction Engg.

Kumar, Vimal, Ph.D. (IIT Delhi)

Heat Transfer, Process Intensification, Renewable Feedstocks, CFD

Khanam, Shabina, Ph.D. (IIT Roorkee)

Process Integration Simulation, Process Int. & Control

Nathan, V.C., Ph.D. (University of Alberta)

Multi-Phase Flows, CFD, Finite Element Method, Transport Phenomenon

Gaurav, Ph.D. (IIT Kanpur)

Hydrodynamic Instability, Fluid Mechanics, Interfacial Phenomenon

Ghosh, Sumana, Ph.D. (IIT Kharagpur)

Two-phase flow, Hydrodynamic Cavitation, Proton exchange membrane fuel cell

Jha, Prateek, Ph.D. (Northwestern University, USA) Molecular Simulations, Polymer Physics, Drug Delivery, Charged systems

Das, Taraknath, Ph.D. (IIT Kanpur)

Heterogeneous catalysis and spectroscopy, Hydrogenation reaction

Reddy, N. Siva Mohan, Ph.D. (ISC, Bangalore) Advanced Oxidation Process, Wastewater Treatment

Emeritus Fellow

Kumar, Surendra, Ph.D. (University of Hannover) Mathematical Modelling & Control, Numerical Simulation

Mall, Indra D., Ph.D. (Banaras Hindu University, Varanasi) Pollution Abatement Engineering, Chemical Technology

Visiting Faculty/ PDF

Mall, I.D,
Das, Susmita

3. HONOURS AND AWARDS TO FACULTY MEMBERS (during the year 2013-2014):

Dr. Vimal Chandra Srivastav	<ol style="list-style-type: none"> 1. Member, The National Academy of Sciences, India (NASI). 2. Member, Editorial Board, ISST Journal of Applied Chemistry. 3. Received full financial-support from The American Association for the Advancement of Science (AAAS) and The World Academy of Sciences (TWAS) to attend a course on 'Science Diplomacy' organized by AAAS and TWAS) in Trieste, Italy during June 8-13, 2014.
Dr. Amit Kumar Dhiman	<ol style="list-style-type: none"> 1. Editorial board member, Journal of Nonlinear Dynamics, Hindawi Publishing Cooperation (since 2013) 2. Session Chair, Computational Fluid Dynamics Session C, 5th International and 41st National Conference on Fluid Mechanics and Fluid Power (FMFP 2014), IIT Kanpur, Dec. 13, 2014.
Dr. Vimal Kumar	<ol style="list-style-type: none"> 1. Received best paper award for the paper entitled "2015 A perspective of fast pyrolysis oil processing in refinery FCC unit" at Suscon IV organized by Indian Institute of Management Shillong, Meghalaya, 11–13th March, 2015.
Dr. Ram Prakash Bharti	<ol style="list-style-type: none"> 1. Bharti RP. Member, Editorial Board, International Journal of Aerospace Sciences, Scientific and Academic Publishing.
Dr. Surendra Kumar	<ol style="list-style-type: none"> 1. Surendra Kumar, Member, Editorial Board, International Journal of Chemical Product and Process Modeling.

4. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/ SYMPOSIA/ WORKSHOP/ GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop /Guest Lecture	Venue	Date
1.	Dr. A.K. Dhiman	International Conference on Advances in Engineering and Technology (ICAET2014)	Roorkee Institute of Technology (RIT), Roorkee	May 24-25, 2014
2.	Dr. V.C. Srivastava	World Environment Day 2014, Jointly organized by CBRI, Roorkee & Institution of Engineers (India) Roorkee Local Centre (IEI-RLC)	CBRI, Roorkee	June 05, 2014
3.	Dr. V.C. Srivastava	Science Diplomacy, Course Organized by The American Association for the Advancement of Science (AAAS), Washington DC, USA, and The World Academy of Sciences (TWAS), Trieste, Italy	Trieste, Italy.	June 08-13, 2014
4.	Dr. I.M. Mishra, Dr. V.C. Srivastava	Ganga Manthan, Organized by National Mission for Clean Ganga (NMCG), under National Ganga River Basin Authority (NGRBA)	Vigyan Bhavan, New Delhi.	July 07, 2014
5.	Dr. P. Mondal	Innovation to Entrepreneurial Eco-System	IIT Roorkee	July 19-20, 2014
6.	Dr. P. Mondal	Treatment of wastewater using microorganisms to macro plants: Some studies	UTS, Sydney	September 04, 2014
7.	Dr. Shabina Khanam	1st International conference on Electrical, Electronics, Engineering Trends, Communication, Optimization and Sciences (E3COS)	Vijayawada, Andhra Pradesh, India.	Oct. 11-12, 2014

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop /Guest Lecture	Venue	Date
8.	Dr. P. Mondal	Utilization of stranded resources and wastes: Some studies	Univ. of Saskatchewan, Canada	Oct. 17, 2014
9.	Dr. P. Mondal	Energy potential of sludge and scum generated during the electro coagulation of pulp and paper industry wastewater and distillery effluent, 64th Canadian Chemical Engineering Conference	Niagara Falls, Canada, Canada	Oct. 19–22, 2014
10.	Dr. A.K. Dhiman	13th Indo-European Winter Academy	IIT Kanpur	Dec. 03-09, 2014
11.	Dr. V.C. Srivastava	84th Annual Session of The National Academy of Sciences, India (NASI) & the National Symposium on “Desert Science-Opportunities and Challenges”	Jai Narain Vyas University, Jodhpur & IIT Jodhpur	December 04-06, 2014
12.	Dr. A.K. Dhiman	5th International and 41st National Conference on Fluid Mechanics and Fluid Power	Mechanical Engineering Department, IIT Kanpur	Dec. 12-14, 2014
13.	Dr. P. K. Jha	Attended workshop on “Introduction to Gaussian: Theory and Practice”,	Pune	Dec. 12-16, 2014
14.	Dr. A.K. Dhiman	67th Annual Session of Indian Institute of Chemical Engineers, CHEMCON 2014	Chandigarh Regional Centre IChE, Chandigarh	Dec. 26-28, 2014
15.	Dr. V.C. Srivastava, Dr. Vimal Kumar	SusCON 2015, 4th Annual International Conference on Sustainability	Indian Institute of Management, Shillong.	March 11-13, 2015.

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of Course	Venue	Date
1.	Dr. I.M. Mishra, Dr. I.D. Mall, Dr. C.B. Mazumder, Dr. V.C. Srivastava, Dr. Vimal Kumar	Environment Health and Safety Management in Process Industries	IIT Roorkee	November 27-29, 2014

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/ INTERNATIONAL)

Sl. No.	Name	Designation & Affiliation	Purpose	Dates
1.	Dr. Ajay Mathur	Director General, Bureau of Energy Efficiency Ministry of Power, Govt. of India	For review of the Department	April 12, 2014
2.	Dr. S.K. Gupta	Professor, UPES, Dehradun, & Ex-Professor, Department of Chemical Engineering, IIT Kanpur	For review of the Department	April 12, 2014
3.	Dr. V.K. Srivastava	Ex-Professor, Department of Chemical Engineering, IIT Delhi	For review of the Department	April 12, 2014
4.	Mr. Akhilesh Kumar	President, Engineering, Jaypee Fertilizers & Industries Limited JA Annexe, Wazidpur, Noida	To interact with students	Nov., 2014
5.	Dr. Deepak Kunzaru	Professor, Department of Chemical Engineering, IIT Kanpur	To deliver lecture in Cognizance-2015 and interact with faculty members & students	March 27, 2015

Sl. No.	Name	Designation & Affiliation	Purpose	Dates
6.	Dr. K.D.P. Nigam	Professor, Department of Chemical Engineering, IIT Delhi	-do-	March 27, 2015
7.	Dr. K.K. Pant	Professor, Department of Chemical Engineering, IIT Delhi	-do-	March 27, 2015
8.	Dr. Goutam Deo	Professor, Department of Chemical Engineering, IIT Kanpur	-do-	March 27, 2015
9.	Shri Sanjeev Singh	Director, Refineries, Indian Oil Corporation Limited	-do-	March 28, 2015

7(a). INTERNSHIPS BY IIT – ROORKEE STUDENTS

Sl. No.	Name of student	Name of the Internship Programme	Under Graduate	Post Graduate	Name of Institute	Period
1.	Akhil Mehta	Summer Internship	B.Tech.	-	RIL	May 15- July 15, 2014
2.	Ankit Agarwal	-do-	B.Tech.	-	IOCL Mathura	-do-
3.	Anshul Singh	-do-	B.Tech.	-	IG Petro Mumbai	-do-
4.	Anshuman Goswami	-do-	B.Tech.	-	IOCL Mathura	-do-
5.	Anuj Kumar	-do-	B.Tech.	-	IOCL Haldia	-do-
6.	Anurag Anand	-do-	B.Tech.	-	RIL Surat	-do-
7.	Ashok Kumar Meena	-do-	B.Tech.	-	IFFCO Phulpur	-do-
8.	Buddi Prakash Meena	-do-	B.Tech.	-	IFFCO Phulpur	-do-
9.	Chandrakant Verma	-do-	B.Tech.	-	Asahi Glass	-do-
10.	Dharpal Yadav	-do-	B.Tech.	-	India Glycol Kashipur	-do-
11.	E Sunil Nair	-do-	B.Tech.	-	BPCL Mumbai	-do-
12.	Gopal Singh	-do-	B.Tech.	-	IOCL Vadodra	-do-
13.	Hemraj Meena	-do-	B.Tech.	-	NFL Bhatinda	-do-
14.	Himanshu Agarwal	-do-	B.Tech.	-	NFL Bhatinda	-do-
15.	Jasvinder Singh	-do-	B.Tech.	-	GAIL Noida	-do-
16.	Jitendra Kumar Prabhakar	-do-	B.Tech.	-	IFFCO Phulpur	-do-
17.	Joyal Dubey	-do-	B.Tech.	-	RCF Mumbai	-do-
18.	Kshitij Jain	-do-	B.Tech.	-	IOCL Panipat	-do-
19.	Lokendra Kumar Verma	-do-	B.Tech.	-	IFFCO Phulpur	-do-
20.	Maanik Gupta	-do-	B.Tech.	-	Asahi Glass	-do-
21.	Manohar	-do-	B.Tech.	-	NFL Bhatinda	-do-
22.	MD Aqib	-do-	B.Tech.	-	Goodyear	-do-
23.	Meenakshi Verma	-do-	B.Tech.	-	IOCL Haldia	-do-
24.	Mohan	-do-	B.Tech.	-	Asahi Glass	-do-
25.	Mudit Kumar Kanaujia	-do-	B.Tech.	-	NFL Bhatinda	-do-
26.	Mukul Goyal	-do-	B.Tech.	-	Schlumberger	-do-
27.	Neelabh Upadhyay	-do-	B.Tech.	-	DAAD	-do-
28.	Nishant Bansal	-do-	B.Tech.	-	Asahi Glass	-do-
29.	Nishish Agrawal	-do-	B.Tech.	-	RIL	-do-
30.	Pawan Kumar Yadav	-do-	B.Tech.	-	Asahi Glass	-do-
31.	Pooja Kumari	-do-	B.Tech.	-	RIL	-do-
32.	Prachi Sahu	-do-	B.Tech.	-	IG Petro Mumbai	-do-
33.	Pramil Anand	-do-	B.Tech.	-	RIL	-do-

Sl. No.	Name of student	Name of the Internship Programme	Under Graduate	Post Graduate	Name of Institute	Period
34.	Pranay Sumbly	-do-	B.Tech.	-	Goldman Sachs	-do-
35.	Satyendra Kumar	-do-	B.Tech.	-	IOCL Mathura	-do-
36.	Saurav Garg	-do-	B.Tech.	-	IOCL Panipat	-do-
37.	Shankey Jain	-do-	B.Tech.	-	RIL	-do-
38.	Shashank Arora	-do-	B.Tech.	-	Indogulf Jagdishpur	-do-
39.	Shruti Lal	-do-	B.Tech.	-	IOCL Panipat	-do-
40.	Shubham Bawa	-do-	B.Tech.	-	IOCL Mathura	-do-
41.	Shubham Choudhary	-do-	B.Tech.	-	CFCL Kota	-do-
42.	Shubham Taunk	-do-	B.Tech.	-	RCF Mumbai	-do-
43.	Siddharth Saraswat	-do-	B.Tech.	-	RCF Mumbai	-do-
44.	Siva Samhit Vaddiparthi	-do-	B.Tech.	-	Petrofac	-do-
45.	Sonal Maheshwari	-do-	B.Tech.	-	IG Petro Mumbai	-do-
46.	Shubha Pathak	-do-	B.Tech.	-	India Glycol Kashipur	-do-
47.	Surya Pratap Singh Solanki	-do-	B.Tech.	-	Indogulf Jagdishpur	-do-
48.	Trishank	-do-	B.Tech.	-	DAAD	-do-
49.	Uday Singh Meena	-do-	B.Tech.	-	BPCL Mumbai	-do-
50.	Vikram	-do-	B.Tech.	-	Asahi Glass	-do-
51.	Vikrant Yadav	-do-	B.Tech.	-	Indogulf Jagdishpur	-do-
52.	Virender Pratap Singh	-do-	B.Tech.	-	Reinnovasun	-do-
53.	Gaurav Kumar	-do-	B.Tech.	-	ITC	-do-
54.	Ali Abbas Zaidi	-do-	I.D.D.	-	GAIL Noida	-do-
55.	Ankush Jindal	-do-	I.D.D.	-	GAIL Noida	-do-
56.	Banvari	-do-	I.D.D.	-	IOCL Haldia	-do-
57.	D Ravi Shankar	-do-	I.D.D.	-	NFL Bhatinda	-do-
58.	Harshal Ingole	-do-	I.D.D.	-	NFL Bhatinda	-do-
59.	J Mohan	-do-	I.D.D.	-	NFL Nayanangal	-do-
60.	Lekhank Patil	-do-	I.D.D.	-	NFL Nayanangal	-do-
61.	Manish Kumar	-do-	I.D.D.	-	IOCL Haldia	-do-
62.	Mukesh	-do-	I.D.D.	-	NFL Nayanangal	-do-
63.	Neelesh Bhalla	-do-	I.D.D.	-	BPCL Mumbai	-do-
64.	P Chakradhar	-do-	I.D.D.	-	IOCL Mathura	-do-
65.	Pramanshu Rajput	-do-	I.D.D.	-	Jubilant Lifescience	-do-
66.	Pratik Toshniwal	-do-	I.D.D.	-	ITC	-do-
67.	Rahul Gurjar	-do-	I.D.D.	-	RCF Mumbai	-do-
68.	Shailendra Kumar Sharma	-do-	I.D.D.	-	CFCL Kota	-do-
69.	Shakendra Jain	-do-	I.D.D.	-	IOCL Haldia	-do-
70.	Swati Dhaka	-do-	I.D.D.	-	IG Petro Mumbai	-do-
71.	Vidit Bansal	-do-	I.D.D.	-	IOCL Panipat	-do-
72.	Vishal Meena	-do-	I.D.D.	-	NFL Nayanangal	-do-
73.	Yogita	-do-	I.D.D.	-	IG Petro Mumbai	-do-

7(b). INTERNSHIPS TO OTHER STUDENTS IN IIT – ROORKEE

Sl. No.	Name of student	Name of Supervisor	Under Graduate	Post Graduate	Name of Institute	Period
1.	Ms. Rupali Mittal	Dr. V.C. Srivastava	B.Tech. (Chemical Engg) II Year	-	Rajiv Gandhi Institute of Petroleum Technology, Raebareli (U.P)	May 19, 2014 to June 30, 2014
2.	Ms. Sonam Giri	Dr. C.B. Majumder	B.Tech. (Biotechnology) II Year	-	Govind Ballabh Pant Engineering College, Pauri-Garhwal	May 20, 2014 to June 30, 2014

8. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Source of funding	No. of Participants	Dates
	Dr. V.C. Srivastava	Environment Health and Safety Management in Process Industries.	Central Pollution Control Board, New Delhi	30	November 27-29, 2014

9. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Vimal Kumar	Design and Development of Mixer for Fatty Acid Methyl Ester Production	FIG-SRIC-IITR/MHRD	3.05

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigator	Name of Project	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Head, Deptt. of Chemical Engg.	FIST program from DST for strengthening of post-graduate teaching and research in the department	DST	128.00
2.	Dr. B. Mohanty	NPTEL –Phase –II	MHRD	58.00
3.	Dr. I.M. Mishra as PI along-with other faculty members from IITR	Ganga River Basin Management Plan	Ministry of Environment & Forest, New Delhi	25.00
4.	Dr. B. Mohanty as PI / Dr. P. Mondal as Co-PI	Studies on Effectiveness of Iodine and Heat Removal from PHWR Primary Containment During Loca by Spray System	Nuclear Power Corporation of India Limited (NPCIL) Mumbai	111.89
5.	Dr. P. Mondal	Development of low cost system for the treatment of arsenic and fluoride contaminated groundwater for rural communities	Ministry of Drinking water and sanitation, Govt. of India	8.514

Sl. No.	Principal Investigator	Name of Project	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
6.	Dr. P. Mondal	Mini DME: A custom designed solution to bring stranded gas to the energy markets	DST (AISRF)	12.5
7.	Dr. Prakash Biswas	Hydrogenolysis of Glycerol over Supported Cu-Ni, Cu-Ru bimetallic nanoparticle catalysts	DST	26.58
8.	Dr. Shabina Khanam	Energy and mass integration studies on coal based sponge iron production process using process integration principles	FIG-SRIC-IITR/MHRD	9.0
9.	Dr. Veeramani C. Nathan	Computational and Experimental Investigation of Multiphase flows arising in industrial equipments	FIG-SRIC-IITR/MHRD	9.0

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. V.C. Srivastava	Catalytic oxidation of nitrogenous aromatic compounds bearing wastewater.	DST 15/05/2014	26.00
2.	Dr. Sumana Ghosh	Hydrodynamic cavitation assisted biodiesel production.	FIG-SRIC-IITR/MHRD	10.00
3.	Dr. Prateek Kumar Jha	Molecular Simulations of Stimuli-Responsive Materials for Drug Delivery Applications	FIG-SRIC-IITR/MHRD	10.00
4.	Dr. Prateek Kumar Jha	Stimulus response of "Smart" polymers for drug delivery	DST-INSPIRE faculty fellowship	35.00
5.	Dr. N. Siva Mohan Reddy	Adsorption of organics in Supercritical Carbon dioxide	FIG-SRIC-IITR/MHRD	10.00
6.	Dr. Taraknath Das	Dry reforming of hydrocarbons (methanol/ethanol) over supported metal catalysts for the production of hydrogen: An ex-situ FTIR study	FIG-SRIC-IITR/MHRD	10.00

10. SCIENTIFIC AND TECHNICAL REPORTS

Title of the Projects	Participants	Authors	Remarks
Study of effectiveness of spray system for iodine and heat removal from primary containment during LOCA	NPCIL , Mumbai	B. Mohanty, P. Mondal, R. Kumar	

4.4 DEPARTMENT OF CHEMISTRY

Academic Staff: 29, Students Admitted: M.Sc.:19, M.Tech:10, Ph.D:28, Publications in Journals: 166, Conferences...41... Book/Books Chapters: Nil, Projects: Research Rs. 520.16 Lakhs

1. SALIENT FEATURES.

Department of Chemistry was established in the year 1960 and has contributed significantly to the growth of chemical sciences in the Institute. Distinguished faculty members of the department provide an environment where the students of B. Tech., M. Tech., M. Sc. and Ph.D. programs could explore and develop frontier areas of chemistry. General areas covered include physical, organic, inorganic and analytical chemistry. Faculty members are also involved in interdisciplinary research. The department is aiming to be one of the major centers for teaching and research in chemical sciences in India.

The department is equipped with state-of-the-art facilities like UV-Vis, UV-Vis-NIR, FT-IR, Gas Chromatograph, ESI-MS, GC-Mass, 400 MHz NMR, HPLC, AAS, elemental analyzer, flame photometer, cyclic voltammeter, LC-MS-MS, Raman spectrometer, surface area analyzer, rheometer, VSM, dynamic light scattering set-up, advance electrochemical system and microwave synthesizer to provide academic as well as industry oriented training to the post-graduate students. The department took several initiatives for the betterment of its teaching and research by introducing new courses and equipment facilities. The faculty members visited a number of institutions and participated/ delivered talks in seminar/ symposia / conferences. The number of papers published in referred journals is 166 and 41 research papers were presented in various conferences/ symposia. A large number of students of the department have qualified NET -CSIR-JRF, GATE, UGC- JRF and other national level competitions. Moreover few students participated in summer project in abroad

2. LIST OF FACULTY MEMBERS

Professors

Goyal, R.N., PhD, DSc (Agra)

Org. Electro Chem

Bhushan, R., PhD (Jodhpur)

Proteins, Liq. Chromatogr., Org.

Gupta, V.K., PhD (Roorkee)

Chemical Sensors, Adsorption

Kamaluddin, Ph.D. (Aligarh)

Phys. – Org. Chem

Kumar, A., PhD (Roorkee)

Kinetics, Photocatal

Maurya, M.R., PhD (Kurukshetra)

Coord. Chem., Catal

Nath, M. (Ms), PhD (Lucknow)

Organomet., Bio-inorg.

Singh, A.K., PhD (BHU)

Macrocyclic Chem

Singh, U.P., PhD (BHU)

Bio-Inorg., Coord., Chem

Sondhi, S.M., Ph.D. (Patiala)

Synth Heterocycl. Chem.

Gupta, K.C., DPhil (Allahabad)

Phys., Polym

Gupta, Bina (Ms), PhD (Roorkee)

Solvent extraction chem

Associate Professors

Thankachan, P.P., PhD, (IIT Kanpur)

Theor. Chem

Peddinti, R.K., PhD, (Univ. of Hyderabad)

Synthetic Organic Chemistry

Ghosh, K., PhD (IACS, Jadavpur)

Inorganic Biochemistry

Justin Thomas, K.R. PhD (IIT Kanpur)

Synthetic Organic Chemistry

Dutta, R.K., PhD (IUC, Kolkata)

Radiochemistry

Jeevanandam, P., PhD (IISc Bangalore)

Nanomaterials

Ahmed, Naseem, PhD (Aligarh)

Organic Chemistry

Assistant Professors

Debnath, P., PhD (IISc Bangalore)

Theoretical Chem.

Mandal, T., PhD (IISc Bangalore)

Solid-state and material Chemistry

Sharma, A., PhD, (HBT, Palampur)

Organic Chemistry

Sankar, M., PhD, (IIT Madras)

Inorganic, Supramolecules

Kandpal H.C., PhD, (Mainz, Germany)

Computational and Mat. Sc.

Ramachandran C.N., PhD, (IIT Kanpur)

Quantum chem., Mol. Modeling

Kar Prasenjit, PhD, (CSMCRI, Bhavnagar)

Sadhu, Kalyan

Banerjee, Debasis (31.03.2015)

IF/PDF

Singh, A.P.

Kaur, Tanpreet

3. HONORS AND AWARDS TO FACULTY MEMBERS

Prof. Anil Kumar	Our paper, entitled "Viscoelastic Properties of Superparamagnetic 5-Adenosine Monophosphate Mediated Porous –FeOOH Hydrogel – Its Loading, and Release Capabilities" by Anil Kumar and Sudhir K. Gupta and presented by Sudhir K. Gupta won the best poster award in 9th India Japan Bilateral Conference (BICON-2014) on Advanced Material Science and Engineering.
Prof. R. N. Goyal	Japan Society for Promotion of Science Invitation Research Fellowship 2014 -15 for working in Kyoto University, Japan.
Prof. Ravi Bhushan	Member, Finance Committee, IITRoorkee, up to 31st Dec 2014
	Dean, Students' Welfare, IITRoorkee, up to 30th April 2014.
	Received 'Best Paper Award' at the 'International Conference on Chemical, Food and Environment Engineering (ICCFEE'15)', at Dubai, 11-12 Jan 2015.
	Reviewer for research papers published in various international journals: J. Chromatogr. A; J. Chromatogr. B; Anal. Bioanal Chem.; J. Pharm. Biomed Anal.; Chromatographia; Chirality; Biomed. Chromatogr.; J. Planar Chromatogr.; Acta Chromatographica;
Prof. U. P. Singh	Member: Inorganic Biological Society, USA
	Member: Editorial Advisory Board of the Open Catalysis Journal, Bentham Science Publishers
Dr. Kaushik Ghosh	ICMR Fellowship
Dr. R. K. Dutta	Our research group received best oral and best poster in the NUCAR-2015 conference held during February 2015 at BARC.

4. PARTICIPATION IN CONFERENCES/SEMINARS/SYMPOSIA/WORKSHOP/GUEST LECTURES

Sl. No.	Name of faculty	Details of conferences/seminars/symposia/workshop/guest lectures	Venue	Date
1.	Prof. Anil Kumar	Plenary Lecture, 9th India Japan Bilateral Conference (BICON-2014) on Advanced Material Science and Engineering	Biyani Group of Colleges, Jaipur, Rajasthan	Oct. 12-13, 2014
		Invited Talk in Inaugural Session, National Conference on Green Nanotechnology in the Inauguration function	Chandigarh University, Punjab	June 5, 2014
2.	Prof. R. N. Goyal	Kyoto University, Japan – Guest lecture	Japan	Dec. 10, 2014
3.	Prof. Ravi Bhushan	Thapar Univ, Delhi Univ, Kurukshetra Univ, Garhwal Univ-Srinagar, MIT-Gwalior for selection committee/RDC/BOS meetings/ PhD viva/ invited lecture		
		41st International Conference & Exhibit on High Performance Liquid Phase Separations and Related Techniques, HPLC 2014, Presented a research paper	New Orleans, Louisiana, USA	May 11-15 2014
		ISAET, IAAST 2015 International Conference, (delivered a keynote address)	Dubai	Jan. 12, 2015
		Science Innovation Camp sponsored by Department of Science & Technology, New Delhi	Gharwal University, Srinagar	Jan. 22, 2015
4.	Prof. Mala Nath	Oral presentation of a research paper, entitled, "Metal-based Anticancer Agents: In Vitro DNA Binding, Cleavage and Cytotoxicity" in International Conference on Metallurgy, Materials Science and Engineering, ICMMSSE 2014.	Venice, Italy	Aug.14-15 2014
5.	Prof. A. K. Singh	225th ECS MEETING	Orlando, Florida	11-15 May, 2014
6.	Prof. U. P. Singh	Chemistry, B.H.U. For discussion and Ph.D. Viva IIT Delhi for discussion with Prof. A. K. Singh about research		
7.	Prof. Bina Gupta	Title: Iron Oxide Mediated Degradation of Mutagen Pyrene and Determination of Degradation Products	Amsterdam, Netherland	Feb. 14 - 16, 2015

Sl. No.	Name of faculty	Details of conferences/seminars/symposia/workshop/guest lectures	Venue	Date
8.	Dr. R. K. Peddinti	Indo-US Conference and workshop on "Recent Advances in Structural Biology & Drug Discovery" (RASBDD-2014) by Purdue University-IIT Roorkee	IIT Roorkee	Oct. 9-11, 2014
9.	Dr. R. K. Peddinti	International Conference on Molecular Signaling: Recent Trends in Biomedical and Translational Research (RTBTR-2014)	IIT Roorkee	Dec.17-19, 2014
10.	Dr. R. K. Dutta	12th National Symposium on Nuclear and Radiochemistry (NUCAR – 2015)	NPCIL Complex, Mumbai	Feb.9-13, 2015
11.	Dr. Naseem Ahmed	Training Programme on Water Quality Monitoring and Assessment, Principle & operation of GC-MS in Pesticide analysis and health effects of pesticides, National River Water Quality Laboratory	Central Water Commission, New Delhi	Mar.23 - 27 2015.
		Training Programme on Advanced Instruments of Water Quality Testing, Gas Chromatography-Mass Spectrometry (GC-MS): A hyphenated Technique	CSIR-National Institute of Hydrology Roorkee	Jan. 12-16, 2015.
		Gas Chromatography-Mass Spectrometry (GC-MS): A hyphenated Technique	CSIR-National Institute of Hydrology Roorkee	Dec. 8-10, 2014
		Studies on Microbial Communities Role and Removal of Trace Organic Pesticides during In-vessel Composting, 3rd International Laboratory Technology Conference and Exhibition (KFUPM, LabTech, 2014)	Manama, Bahrain	Oct. 28-30, 2014
12.	Dr. Anuj Sharma	Delivered a guest lecture on, "Drug Discovery: opportunity at the bottom of the pyramid" in DST sponsored Inspire Science Camp.	Central University Garhwal	Jan. 17, 2015
		A guest Plenary lecture on, "Rational Drug Design: A Paradigm of New Hope in Drug Discovery" in National conference in Chemical Sciences, Engineering and Technology (RTCET 2014).	NIT Hamirpur, Himachal Pradesh	May 29-30, 2014
		A guest Plenary lecture on, "Rational Drug Design in quest for novel putative drug candidates against tropical diseases" in 2nd Annual National conference on Science: Emerging Scenario and Future Challenges.	FRI Shimla, Himachal Pradesh	May 17-18, 2014
13.	Dr. C. N. Ramachandran	Theoretical Chemistry Symposium	NCL Pune & IISER Pune	Dec. 18-21, 2014
		JSPS-DST Asian Academic Seminar	IACS Kokota & IISER Kolkota	March 6-10, 2015
14.	Dr. Prasenjit Kar	NSRP	IIT Kanpur	March 08, 2015
15.	Dr. K. K. Sadhu	9th CRSI-RSC Symposium	Pune	Feb. 05, 2015
		17th CRSI National Symposium in Chemistry	Pune	06.02.2015-08.08.2015
16.	Dr. M. Sankar	8th International Conference on Porphyrins and Phthalocyanines (ICPP-8) held at Istanbul, Turkey during June 22-27, 2014.	Istanbul, Turkey	June 22-27, 2014

5. (a). INTERNSHIPS BY IIT – ROORKEE STUDENTS

Sl. No.	Name of student	Name of the Internship Programme	Under Graduate	Post Graduate	Name of Institute	Period	
						From	To
1.	Kriti Seth	None	UG		JNCASR Bangalore, India	05-07-2014	07-09-2014
2.	Kanchan Aggarwal	None	UG		Simon Fraser Uni., Canada	01-05-2014	26/07/2014
3.	Sheela Kumari	None	UG		IIT Gandhinagar, India	05-06-2014	07-11-2014
4.	Rashmi Kothari	None	UG		Technion Israel Institute of Technology, Israel	15/05/2014	15/07/2014
5.	Rashmi Kothari	None	UG		Technion Israel Institute of Technology, Israel	25/11/2014	01-11-2015
6.	Komal Malik	None	UG		JNCASR Bangalore, India	05-07-2014	07-09-2014
7.	Uday Chopra	None	UG		Max Planck Institute for Chemical Physics of Solids, Dresden, Germany	05-06-2014	24/07/2014
8.	Nidhi	None	UG		Indra Gandhi Centre for Atomic Research Tamilnadu, India	26/05/14	04-07-2014
9.	Amit Yadav	None	UG		IISC Bangalore, India	06-04-2014	15/7/2014
10.	Nidhi Gupta	None	UG		IISC Bangalore, India	05-09-2014	07-09-2014
11.	Omkar Kulkarni	None	UG		University of Nottingham, United Kingdom	05-06-2014	04-07-2014
12.	Omkar Kulkarni	None	UG		Monash University, Melbourne, Australia	24/11/2014	08-01-2015
13.	Mohina Gidwani	None	UG		IISC Bangalore	1/5/2014	31/06/2014
14.	Vipul Chaturvedi	None	UG		Mcgill University, Canada	01-05-2014	05-08-2014
15.	Rahul Sharma	None	UG		Hebrew University of Jerusalem, Israel	02-05-2014	17/07/2014
16.	Rahul Sharma	None	UG		Melbourne University, Australia	22-11-2014	11-1-2015
17.	Swati Verma	None	UG		IIT Roorkee	05-12-2014	20-12-2014

6. Seminar/Symp./Workshop organized by the Department.

Name of Conf./Seminar/Sym./Workshop Org. Secretary Sponsored by Dates

Sl. No.	Name of Conf./Seminar/Sym./Workshop	Org. Secretary	Sponsored by	Dates
1.	Workshop on laboratory safety	Anuj Sharma & Prof. Ravi Bhushan	IIT Roorkee	Autumn 2014-15
2.	Presented talk on Nuclear Science and Technology, DST Inspire Science Camp	Dr. R. K. Dutta	Srinagar, Uttarakhand	24 th Nov 2014

7. Sponsored Research Projects

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigator/ Co-investigator	Title of the projects	Sponsoring Agency	Outlay Amt. (Rs. In lacs)
1.	Prof. R. N. Goyal	Development of voltammetric sensors	CSIR, New Delhi	14.66
		Sensors based on nanomaterials	DBT, New Delhi	25.47
2.	Dr. Pallavi Debnath	Rupture Dynamics in Polymers with Interconnecting Bonds under Constant Force	SRIC, IITR; under Faculty Initiation Grant (Scheme A)	1.5
3.	Dr. Anuj Sharma	Glyoxalic acid as an effective formaldehyde equivalent in imine-mediated isocyanide based multicomponent reaction cascades	DST	26.6

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigator/ Co-investigator	Title of the projects	Sponsoring Agency	Outlay Amt. (Rs. In lacs)
1.	Dr. R. K. Peddinti	Domino Reactions and Asymmetric Synthesis	SERB (DST)	39.0
2.	Dr. R. K. Dutta	Bio accessibility of heavy metals ...	BRNS	24.8
		Low energy Ion implantation	UGC-DAE, Kolkata Centre	8.0
3.	Dr. P. Jeevanandam	Synthesis and characterization of optically interesting nanocomposites	CSIR, New Delhi	~ 18
4.	Dr. Naseem Ahmed	Design, Synthesis and Their Estrogen Receptors Binding Study of Some Novel Flavone, Flavone-Estradiol Adduct and Indanone based Ligands against Breast Cancer Cell Lines	DST	37.0
		Radiopharmaceutical Chemistry and Molecular Imaging Research	BRNS	24.85
5.	Dr. Anuj Sharma	Design and synthesis of novel small molecules as a putative Pf-DHFR antagonist in malarial Chemotherapy	CSIR	14.0
6.	Dr. M. Sankar	Photophysical and Photovoltaic Properties of Novel Porphyrin-Fullerenes Host-Guest Assemblies	CSIR	23.42
		Synthesis of Electron Donors appended Carboxyphenyl Substituted Porphyrinato Zn(II) complexes (D- -A) for Dye-Sensitized Solar Cells (DSSC) Applications	SERB	25.92
		Porphyrin-based Novel Donor- -Linker-Acceptor Systems for Dye-Sensitized Solar Cell (DSSC) Applications	BRNS	23.785
7.	Dr. H. C. Kandpal	Discovery of new half-metal ferromagnetic compounds for applications in spin based technology	MHRD	10.00
8.	Dr. C. N. Ramachandran	Formation, Structure, Stability and thermodynamic properties of mixed gashydrates	Science & Engineering Research Board, DST, India	28.75
		Effect of cage substitution and endohedral doping on the alignment and the properties of fullerenes and carbon nanotubes	SRIC, IIT Roorkee	9.0

Sl. No.	Principal Investigator/ Co-investigator	Title of the projects	Sponsoring Agency	Outlay Amt. (Rs. In lacs)
9.	Dr. K. K. Sadhu	Metal ion assisted artificial base pairing: an alternative approach for the nucleic acid templated chemistry	FIG, IIT Roorkee	10.0
10	Dr. Prasenjit Kar		DST	14.0

C. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigator/ Co-investigator	Title of the projects	Sponsoring Agency	Outlay Amt. (Rs. In lacs)
1.	Prof. Anil Kumar	Synthesis of Biotemplated Colloidal Nanostructures of Iron Oxide(s) - Analysis of Correlation between their Morphologies and Properties.	CSIR, New Delhi	17.42
2.	Dr. Kaushik Ghosh	Chemistry of non-innocent ligands: Synthesis of phenoxyl radical and related complexes and their applications	DST, New Delhi, INDIA	34.5
		Synthesis and characterization of novel ruthenium nitrosyl complexes and their biological activity studies	CSIR, New Delhi, INDIA	21.92
3.	Dr. Justin Thomas	New Materials and Methods for Efficient Organic Photovoltaic Devices (Phase II)	DST, New Delhi	79.296
4.	Dr. Tapas Kumar Mandal	Catalytic oxidation of nitrogenous aromatic compounds containing wastewater	DST	26
5.	Dr. Pallavi Debnath	Theory and Mechanism of Polymer Melt Dynamics	SERB/DST	24.5
6.	Dr. Prasenjit Kar		CSIR	6.0

10. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (Rs. 10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2014-15).

Prof. Anil Kumar

Synthesis of Biotemplated Colloidal Nanostructures of Iron Oxide(s) - Analysis of Correlation between their Morphologies and Properties: We propose to develop new biotemplated colloidal iron oxide nanostructures of varied morphologies and dimensionalities. This work would also involve the synthesis of integrated nanocomposites for enhancing their physicochemical properties. Their sol-gel transformation will be analyzed by recording their viscoelastic behavior along with optical and magnetic properties. A correlation between their properties and morphologies will also be analyzed.

Dr. Kaushik Ghosh

Synthesis and characterization of novel ruthenium nitrosyl complexes and their biological activity studies: There has been considerable current interest in studies on the interaction of nitric oxide (NO) with transition-metal complexes. In 1998 Nobel prize was given for the research in NO. Nitric oxide, a diatomic radical species, is an important signaling molecule in a variety of biological processes such as vasodilatation, immune response, neurotransmission, apoptosis, etc. in different cells and tissues. In biosystems, NO is synthesized by nitric oxide synthase (NOS) enzyme and several concentration-dependent activities of NO were discovered. Hence, a particular amount of and target specific delivery of nitric oxide and scavenging of nitric oxide by transition-metal complexes are important areas in chemical research. Complexes which could deliver NO upon illumination with light are important for photodynamic therapy (PDT). We are trying to synthesize such molecules which would be useful for PDT.

Dr. Kaushik Ghosh

Chemistry of non-innocent ligands: Synthesis of phenoxyl radical and related complexes and their applications: Galactose oxidase (GO) is a mononuclear copper enzyme that catalyzes the two-electron oxidation of a large number of primary alcohols to their corresponding aldehydes, coupled with the reduction of dioxygen to hydrogen peroxide. Cu (II) and tyrosyl radical, the intermediate state is extremely important for the conversion of primary alcohol to aldehyde. Complexes having ligands containing phenolato donors are extremely important for several biological activities like nuclease, protease, catalase etc. We are exploring the non-innocent behavior of phenolato function and studying bioinorganic coordination chemistry.

Dr. Tapas Kumar Mandal (Co-investigator)

Catalytic oxidation of nitrogenous aromatic compounds containing wastewater: The main objective of this research is to investigate the applicability and effectiveness of impregnated mesoporous catalysts (SBA-15 & MCM-45) for catalytic oxidation of nitrogenous organic wastewater. Specific objectives were to prepare SBA-15 & MCM-45 and immobilize metal ions (Zr, Ce, Co, Cu and V) on them. To characterize the prepared catalyst by their physical (such as, surface area, pore size, pore size distribution, pore volume) and chemical (composition, structure and morphology etc.) properties. To study the oxidation of nitrogenous organic wastewater with metal loaded SBA-15 composite catalyst using air or oxygen as oxidant at sub-critical and supercritical conditions.

Dr. Anuj Sharma

OSDD project entitled, “Rationale guided Design and preparation of novel anti-Tuberculosis chemotherapeutic agents through contemporary Synthetic interventions.”

The entitled project provides an easy access to some very important class of heterocyclic scaffolds, imidazoazines through an isocyanide based novel multi component cascades. If successful, the methods can be used to generate libraries of the above compounds which can be then analysed for their biological applications.

Dr. Pallavi Debnath

Theory and Mechanism of Polymer Melt Dynamics: In this proposal we propose a many chain formulation for the dynamics of entangled polymer systems. First the mechanism of anomalous dynamics of entangled polymer melts will be explored by thorough analysis of united atom molecular dynamics (UA-MD) simulation trajectories in the light of the fact that polymer liquids are dynamically heterogeneous even far from their glass transition, due to the interplay between excluded-volume interactions and chain connectivity. With the insights from this study a microscopic theory of entangled polymer melts will be developed based on the Generalized Langevin Equation for cooperative dynamics that includes entanglement points as additional slow variables. Finally the dynamics from the resulting theory will be tested with UA-MD simulation data for entangled melts, specifically the scaling of transport coefficients with molecular weight.

Dr. Kalyan Sadhu

Metal ion assisted artificial base pairing: an alternative approach for the nucleic acid templated chemistry: Introduction of metal ion in the artificial base pairing can be used in absence of the natural nucleic acid base pairings in the double helical structure of the nucleic acids. The newly joined Ph.D. student in the PI's group has started working on this project from January 2015. He has already synthesized some of the starting materials required for this project. We bought some DNAs for the study of nucleic acid templated chemistry. In the next step, the modifications of those DNAs with our probe are essential to study the effect of metal ion in the mismatch base pairing.

11. SCIENTIFIC AND TECHNICAL REPORTS

Sl. No.	Title of the Projects	Participants	Authors	Remarks
1.	Theory and Mechanism of Polymer Melt Dynamics	NIL	Dr. P. Debnath	Technical Progress Report at the end 1 st year (18.6.2014-31.3.2015)

4.5 DEPARTMENT OF CIVIL ENGINEERING

Academic Staff: 56; Students Admitted: UG-137, PG-146, Ph.D.-53; Publications : Books/Book Chapters: 01; Journals -106, Conferences – 49, Projects: Research – Rs. 1708 Lacs,

1. SALIENT FEATURES

The Department of Civil Engineering at IIT Roorkee was established as Roorkee College in 1847 with Civil Engineering as the only discipline and, thereafter, re-designated as Thomason College of Civil Engineering in 1854. This college was, then, elevated to the status of technical university and, thus, the University of Roorkee came into existence in 1949. The Department and the University celebrated 150 years of imparting civil engineering education in India during 1997-98. The University of Roorkee was merged into the IIT system of India and thus, renamed as Indian Institute of Technology Roorkee by the Government of India on Sept. 21, 2001. It is hailed as one of the best and most outstanding Civil Engineering Educational complexes of the world, with glorious past traditions.

The Department offers a four-year course leading to the Bachelor's Degree in Civil Engineering. It provides information about the latest developments in civil engineering to its students from India and abroad. The Department also provides education at Master's and Ph.D. levels in eight disciplines of civil engineering. At present, around 112 Ph.D. scholars are pursuing their doctoral research. The academic and research activities are coordinated by six major groups of specialization. These are Structural Engineering, Hydraulic Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering and Geomatics Engineering. The Department is known for its internationally reputed faculty having expertise in diverse fields. It has built up a wide research potential. The Department has unique facilities like Boundary Layer Wind Tunnel, Asphalt Rheometer, and Electronic Total Stations, Flex 2D Software, 1000 KN Electro-hydraulic actuators, Electronic bed level recorder, Water Hammer and Surge Tank Experimental set-up, Data Acquisition System and Universal Testing Machine. During the year 2014-2015, the faculty earned honours and awards for their achievements. The faculty visited a number of Institutions and participated in Seminar / Symposium/ Conferences and short-term specialist courses. During the year 18 Ph.D. degrees were awarded. Academic Staff at present is 56.

LIST OF FACULTY MEMBERS

Professors

Ahmad, Z., Ph.D. (Patiala)
Hydraulic Engg. Computational Hydraulics, Pollutants, Pollutants Transport

Ahuja, A.K., Ph.D. (Roorkee)
Structural Engg.

Arora, M.K., Ph.D. (Swansea)
Remote Sensing

Bhargava, Pradeep, Ph.D. (Wales)
Finite Element Applications, Structural Engg.

Chandra, Satish, Ph.D. (Roorkee)
Highway Capacity, Traffic Flow Modeling, Pavement Materials

Garg, P.K., Ph.D. (Bristol)
Surveying & GPS, Remote Sensing & GIS

Ghosh, S.K., Ph.D. (Glasgow)
Surveying & GPS, Remote Sensing & GIS

Gairola, Ajay, Ph.D. (Roorkee)
Hydraulics & Wind Engineering (on leave)

Gurjar, B.R., Ph.D. (IIT Delhi)
Air/water pollution, Environmental risk and impact assessment, Climate change

Gupta, P.K., Ph.D. (IIT Delhi)
Computational Mechanics, Large Deformations, Plasticity, Impact Mechanics

Jain A.K., Ph.D. (USA),
Reinforced Concrete, Structural Dynamics, Rehabilitation

Jain, S.S., Ph.D. (Roorkee)
Pavement Management System, Road Traffic Safety, Transport Environment Interaction

Jain, Kamal, Ph.D. (Roorkee)
Geomatics Engineering, Analytical & Digital Photogrammetry

Kashyap Deepak, Ph.D. (Roorkee) Head Ground Water

Kumar, Pradeep, Ph.D. (Roorkee)
Biological Methods of Waste Water Treatment

Kumar, Praveen, Ph.D. (Roorkee)
Rural Roads, Intelligent Transport System, Highway Materials

Kazmi, A.A., D. Eng. (Tokyo University)
Water & Wastewater Treatment, Water Quality Management

Ojha, C.S.P., Ph.D. (London)
Environmental Hydraulics

Parida, M., Ph.D. (Roorkee)
Urban Transport Planning, Highway Safety, Transport Environment Interaction

Prakash, Vipul, Ph.D. (Berkeley)
Performance Based Engg. Structural Dynamics

Prasad Hari, K.S., Ph.D. (IISc. Bangalore)
Ground Water Modelling, Parameter Estimation, Stochastic Hydrology

Samadhiya, N.K., Ph.D. (Roorkee)
Rock Engineering & Underground Space Technology, Soil Structure Concrete Technology Interaction

Singh, Mahendra, Ph.D. (IIT Delhi)
Rock Mechanics, Tunnel Engineering, Soil and Rock Slopes

Upadhyay, A., Ph.D. (IIT Madras)
Application of GA and ANN in Structural Engg., Laminated Composite Structures, Bridges

Viladkar, M.N., Ph.D. (Roorkee)
Rock Engineering, Numerical Methods, Static & Dynamic Soil Structure Interaction

Associate Professors

Chakrabarti, Anupam, Ph.D. (IIT Kharagpur)
Structural Engineering

Garg, R. D., Ph.D. (Roorkee)
GPS, Remote Sensing, Surveying.

Ghosh, J.K., Ph.D. (Roorkee)
GPS, Remote Sensing, Surveying (Land & Geodetic)

Iqbal, M.A., Ph.D. (IIT Delhi)
Impact Behaviour of Materials, Finite Element Analysis of Structural Impact

Kumar, Pramod, Ph.D. (Roorkee)
Environmental Risk Assessment, Air Pollution, Environmental System Modelling

Maheshwari, Priti, Ph.D. (IIT Kanpur)
Soil-Structure Interaction, Numerical Method in Geomechanics, Ground Improvement

Mittal, S., Ph.D. (Roorkee)
Ground Improvement, Soil Dynamics, Geotechnical Engg. Foundation Design

Ransinchung G.D.R.N., Ph.D. (IIT-BHU, Varanasi)
Transportation Engineering (Flexible and rigid pavements)

Rastogi, Rajat, Ph.D. (IIT Bombay)
Non -Motorized and Motorized Modes Integration, Urban Transport Planning, Policy Analysis

Savant, V. A. Ph.D. (IIT Bombay)

Sharma, P.K., Ph.D. (IIT Kanpur) Delhi
Sub-Surface Flow
Geotechnical Engineering

Sharma, Umesh, Ph.D. (Roorkee)
Structural Engineering

Singh, Bhupinder, Ph.D. (Roorkee)
Concrete Technology

Assistant Professors

Chowdhary, Raja
Transportation Engineering

Chowdhary, Rajib
Transportation Engineering

Chikermane Sanjay
Transportation Engineering

Ghosh, Indrajit
Transportation Engineering

Sahoo, J.P.
Sarkar, Sudipta, PhD (BESU)
Trace contamination removal processes, Environmental Nanotechnology, Water and Waste water Engineering

Chatterjee, Shantiram, Ph.D.
(23.04.2014 to 30.06.2014)

Assistant Professors (on Contract)

Ray, Sonalisa
Structural Engineering

Vellanki, Bhanu P.

Emeritus Fellows

Bhandari, N.M., Ph.D. (Roorkee)
Structural Engg., Non-linear Mechanics, Rehabilitation of Structures

Mehrotra, Indu (Ms.), Ph.D. (IIT Kanpur)
Waste Water Treatment, Metal Speciation, Water Chemistry

Visiting Professor

Chaturvedi, M.C.,

Dubey, O.P.,

Gupta, V.K.,

Prakash, Samsher,

Singh, M.P.,

Scientific Officer Grade – II

Singh Gajraj, Ph.D. (Roorkee)
Numerical Solution of Structure

3. HONORS AND AWARDS TO FACULTY MEMBERS

Satish Chandra,	<ul style="list-style-type: none"> Member, Research Council, NATPAC, Trivendrum Outstanding teacher award by IIT Roorkee for the year 2014
R.D. Garg	<ul style="list-style-type: none"> Best Paper Award for research paper "Estimation of Rainfall Variability from TRMM Satellite Data over Upper Ganga River Basin, Uttarakhand, India" 9th Uttarakhand State Science and Technology Congress, Feb. 26-28, 2015.
A.A. Kazmi	<ul style="list-style-type: none"> BEST POSTER AWARD, IWA Specialist Conference Global Challenges: Sustainable Wastewater Treatment and Resource Recovery, 26-28 Oct 2014, Kathmandu, Nepal. SESSION CHAIRMAN, 2ND International Workshop on on-site wastewater treatment in Asia, 2nd December 2014, AIT Conference Centre, Bangkok, Thailand. MEMBER, EXPERT COMMITTEE, Uttarakhand Urban Sector Development Investment Program, Govt. of Uttarakhand. Oct 2014. MEMBER, ADVISORY COMMITTEE, Symposium on Management and Procurement of Integrated Waste Management System, Feb 6-7, 2015 Guwahati, Assam.
P. Kumar,	<ul style="list-style-type: none"> Member, Board of Studies (Civil Engg), Harcourt Butler Technical Institute (HBTI), Kanpur. Convener, Research Degree Committee (Civil Engineering), Uttar Pradesh Technical University, Lucknow. Vice Chancellor's Nominee, Selection Committee, B.I.T. Engineering College, Meerut Member, National Executive Committee, National Rural Roads Development Agency (NRRDA) responsible for Pradhan Mantri Gram Sadak Yojna (PMGSY) at National

	<ul style="list-style-type: none"> level. Member, Empanelment Committee, NRRDA responsible for monitoring of National Quality Monitors of PMGSY. Coordinator, Principal Technical Agency, PMGSY for Uttar Pradesh, Bihar, Jharkhand and West Bengal. Coordinator, State Technical Agency, PMGSY for Uttar Pradesh and Uttarakhand.
S. Mittal,	<ul style="list-style-type: none"> Uttarakhand best Engineer Award (given by chief Minister of Uttarakhand on 16 Jan 2015), Instituted by the Institution of Engineers Dehradun state centre
R. Rastogi,	<ul style="list-style-type: none"> Best Paper Award in National Conference on Emerging VISTAS of Technology in 21st Century (NCEVT), April 2014
A. Upadhyay,	<ul style="list-style-type: none"> Awarded the position of Indian Railway Chair Professor in the area of Bridge Engineering from 25/09/14
M.N. Viladkar,	<ul style="list-style-type: none"> Awarded for 'Outstanding Contribution to Rock Mechanics' in recognition of my remarkable contribution to Rock Mechanics for the Year 2013' by "Indian Society for Rock Mechanics and Tunnelling Technology (ISRMTT) during INDOROCK 2014, New Delhi, Nov. 2014.

4. PARTICIPATION OF FACULTY IN CONFERENCES/ SEMINAR/ SYMPOSIA/ WORKSHOP/ GUEST LECTURE

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
1.	A. Chakrabarti	Guest Lecture in a workshop in Mechanics of Composite Materials	NIT, Patna	Nov. 26-29, 2014
2.	A. Chakrabarti	Int. Conference on Mechanics of Composites (MECHCOMP 2014)	Stony Brook university, NY, USA	June 8-12, 2014
3.	A. Chakrabarti	6th National Conference on WMVC	Siliguri, West Bengal	Nov. 1-4, 2014
4.	Garg R.D.	University of New South Wales	Sydney, Australia. Delivered lecture on Geomatics Techniques	30 Mar. – 02 April 2015
5.	I. Ghosh,	TEQIP Sponsored three day workshop on Mitigation of Road Disasters	NIT Karnataka, Surathkal	Sept. 15 - 17, 2014
6.	I. Ghosh	NRRDA sponsored research project entitled Impact of PMGSY Roads on Accessibility in Rural Areas	BITS Pilani, Pilani, Rajasthan	Sept. 5-6, 2014
7.	P.K. Gupta	Earthquake Resistant Structures	Continuing Education Centre, IIT Roorkee	July 24-26, 2014
8.	P.K. Gupta	Earthquake Resistant Structures	Continuing Education Centre, IIT Roorkee	Aug. 21-23, 2014
9.	P.K. Gupta	Earthquake Resistant Structures	Continuing Education Centre, IIT Roorkee	Sept. 11 – 13, 2014
10.	P.K. Gupta	Earthquake Resistant Structures	Continuing Education Centre, IIT Roorkee	Oct. 16-18, 2014
11.	A.A. Kazmi	Symposium on Management and Procurement of Integrated Waste Management System	IIT Guwahati	Feb. 07, 2015
12.	A.A. Kazmi	Water Supply in Growing Cities. Issues and Challenges, India Water Weeks-2015	New Delhi,	Jan. 17, 2015
13.	A.A. Kazmi	2nd International Workshop on On-Site Domestic Wastewater Treatment in Asia	AIT Conference Centre, Bangkok Thailand	Dec. 02, 2014,
14.	A.A. Kazmi	Water & Cities – Wastewater Management for Sustainable Cities” Organized by Japan Sanitation Consortium (JSC) in collaboration with the Asian Development Bank, IWA, JICA, Korea and SNV,	AIT Conference Centre, Bangkok Thailand	Dec.03, 2014,
15.	A.A. Kazmi	International Workshop on “UASB-DHS integrated system– a sustainable sewage treatment technology	New Delhi	Oct. 16, 2014,

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
16.	S. Mittal	Workshop on Ground Improvement Techniques	Roorkee	28 Feb - 1 Mar 2015
17.	S. Mittal	Indian Geotechnical conference	Kakinada	Dec 2014
18.	R. Rastogi	International Conference TPMDC 2014	IIT Bombay	Dec. 10-12, 2014
19.	R. Rastogi	75th Annual Session of Indian Roads Congress	Bhubaneshwar	Jan. 18 - 22, 2015
20.	R. Rastogi	16th Internal Conference CODATU 2015	ITU, Istanbul	Feb. 2 – 5, 2015
21.	S. Sarkar	Lecture Topic: Hybrid adsorbent for selective recovery of phosphorus from contaminated water In International Conference in Innovations in Chemical and Agricultural Engineering	Kuala Lumpur, Malaysia	Feb. 8-10, 2015
22.	S. Sarkar	Lecture Topic: Addressing the Global Water-Energy Challenge through Energy-Efficient Desalination In DST-Royal Society (UK) Seminar on Energy, Water and Food nexus	IIT Gandhinagar	March 2 – 4, 2015
23.	V.A. Sawant	GEPSID-2014 Conference	GNDEC Ludhiana	October 11 – 12, 2014
24.	U.K. Sharma,	Edinburgh-India Institute Inaugural Conference	Edinburgh (U.K.)	May 15 - 16, 2014
25.	U.K. Sharma	Structural Engineering Convention	I.I.T. Delhi	Dec. 22 - 24, 2014
26.	M. Singh	Indian Geotechnical Conference, IGC-2014; Kakinada	JNTU, Kakinada	Dec 18 - 20, 2014
27.	M. Singh	National Conf. on Geo-environment; GEN-2014, Allahabad	MNNIT Allahabad	Oct 11 - 12, 2014
28.	M. Singh	National Conf. on Geo Innovations, GI-2014, Bangalore	IISC Bangalore	Oct 30 - 31, 2014

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of the Course	Venue	Date
1.	R. Rastogi	Executive course on Transportation and Development	Altoo University, Espoo, Finland	Aug. 11–15, 2014
2.	V.A. Sawant	STTP on FEM for NHPC	IIT Roorkee	Oct. 7 – 9, 2014

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
1.	Mr. Ajit Singh	Geodesist , National Geodetic Survey, USA	Delivered an expert lecture & Visit GEG Labs	Dec. 09, 2014
2.	Dr. Devanjan Bhattacharyaa	Assistant Professor, Bulent Ecevit University, Turkey	Delivered an expert lecture & interact with students on career development on Geomatics	Feb. 12, 2015

7. INTERSHIPS BYIIT – ROORKEE STUDENTS

Sl. No.	Name of student	Name of the Internship Programme	Under Graduate	Post Graduate	Name of Institute	Period
1	Prakhar Gupta	Umesh K. Sharma	B.Tech. (Civil)		A.M.U. Aligarh	June-July, 2014

8. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Sources of funding	Nos. of Participants	Dates
1.	P. Kumar S. Chandra	First training course for Rural Engineering Department	U.P. Govt.	25	July 24-26, 2014
		Second training course for Rural Engineering Department	U.P. Govt.	25	Aug. 21-23, 2014
		Third training course for Rural Engineering Department	U.P. Govt.	25	Sep 11-13, 2014
		Fourth training course for Rural Engineering Department	U.P. Govt.	25	Oct. 16-18, 2014
2.	R.D. Garg,	Course on GIS Applications	Ministry of Power, New Delhi	12	Nov. 12-14, 2014
		Course on GIS Applications	Ministry of Power, New Delhi	19	Dec. 16-18, 2014
		Course on GIS Applications	Ministry of Power, New Delhi	19	Jan. 13-15, 2015
		Course on GIS Applications	Ministry of Power, New Delhi	19	Feb. 19-21, 2015
3.	R. Rastogi	Experimentation in Civil Engineering	RTU, Kota Thr. TEQIP	04	June 9 – 21, 2014

9 SPONSORED RESEARCH PROJECTS

(i) COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigator	Title of the Project	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	A. Chakrabarti	Behaviour of FRP Laminated Smart Sandwich Structures having Interlaminar Imperfections under Hydro-Thermo-Electro-Mechanical Loading	Ministry of Shipping and Road Transport, New Delhi	24.432
2.	A. Iqbal	Experimental and Numerical Investigations of Ballistic Resistance of Ductile Targets Subjected to Oblique Impact by Sharp Nosed Projectiles	DRDO	23.02
3.	A.A. Kazmi	Development of Vermireactor for Co-Treatment of Wastewater and Biodegradable Solid Waste for small Communities.	DST	35
4.	A.A. Kazmi	Development of Effective Decentralized sewage treatment system for Rural Communities	Ministry of Drinking Water and Sanitation	14.44
5.	Sahrma U.K.	Toward establishing a framework for collaborative research in structural engineering	The Royal Academy of Engineering Award under the Scheme of Research Exchanges with China and India	16500 Pounds

9 (ii) CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigator	Title of the Project	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	S. Chandra	Development of INDO-HCM.	CSIR, New Delhi	100.00
		Development of Specifications of WMA for Indian Conditions.	DST, New Delhi	13.50
2.	I. Ghosh	Effect of Countdown Display on Traffic Flow Characteristics and Driver Behaviour at Signalised Intersections.	DST, SERB, New Delhi	16.25
3.	J.K. Ghosh	Dimensionality Reduction of Hyper-spectral Remote Sensing Data.	ISRO, Bangalore	14.12

4.	P.K. Gupta	Precast Concrete Columns for Low Cost Housing.	Building Materials & Technology Promotion Council (BMTPC), GOI, New Delhi	11.00
		Durability and Strength Enhancement of Reinforced Concrete Columns using Unplasticised Poly Vinyl Chyloride (UPVC) Tubes in Ports, Harbours and Offshore Structures.	Ministry of Shipping, GOI, New Delhi	20.4
5.	A.A. Kazmi	Supporting consolidation, replication and up-scaling of sustainable wastewater treatment and reuse technologies for India.	DST and European Commission	266
		Enhanced Nutrient Removal under Shock Loads through Integrated Upflow Anaerobic Sludge Blanket (UASB) and Sequencing Batch Reactor (SBR) System for Sewage Treatment & Reuse.	PCRA	6.5
6.	S. Sarkar	Development of Novel Adsorbent for Fluoride Removal.	IITR, FIG	10
7.	U.K. Sharma	A Collaborative Research Framework for Structures Subjected to Extreme Loads” Sponsored by UK India Education and Research Initiative (UKIERI),	UKIERI	39000 Pounds
		Strength and Deformability of RCC frames under Earthquake and Fire” BRNS, Sanctioned amount.	BRNS, Mumbai	78.24
		Mechanical Properties of Nano-Silica Based High Performance Concrete” Sanctioned Amount.	NBCC	24

9 (iii). NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	P. Bhargava	Performance Evaluation of cracked / damaged concrete structures under fire	Bhabha Atomic Research Centre (BARC), BRNS, Mumbai	49.98
2.	A. Iqbal	Energy Absorption Characteristics of Prestressed Concrete Elements under Drop Weight and Ballistic Impact-Phase I	DST	28.9
3.	A. A. Kazmi	Performance Evaluation of Sewage Treatment Plants	IIT Madras	20.0
4.	P. Kumar	World Bank Assisted Technical Education Quality Improvement Programme of Government of India (TEQIP) for the Year 2014-2015 (General)	Ministry of Human Resource Development, New Delhi	93.60
5.	S. Mittal	Soil investigation (field & Laboratory) for proposed marginal bunds at various locations	Irrigation Roorkee	20,22,480
		Soil Investigation (Field & Laboratory) for proposed marginal bunds at various location	Irrigation Haridwar	24,71,920
		Extra Raising of dyke (upto 283.55m) in Yamuna Nagar	Yamuna Nagar Thermal	24,71,920
6.	S. Ray	Development of Agriculture Waste-based Accelerator for Enhanced Concrete Hardening (AgWACH)	NBCC	30.46

7.	S. Sarkar	An enterprise Driven High Quality Community Toilet System Sustaining on Commercial values Generated by Black Soldier Fly Larvae Grown on Human Faeces and By Fertilizer Derived from Urine	BIRAC (DBT) and The Bill and Melinda Gates Foundation (BMGF)	51.2
		Development of Agricultural Waste-based Accelerator for Enhanced Concrete Hardening (AgWACH)	NBCC	30.5
8.	V.A. Sawant	Innovative Materials and Technologies for Next Generation Green Buildings	CSIR-CBRI Roorkee	5.0

10. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (>Rs. 10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2014-15).

Experimental and Numerical Investigations of the Ballistic Resistance of Ductile Targets Subjected To Oblique Projectile Impact

P.I. : Dr. Md. Ashraf Iqbal

The research proposal was based on the material characterization and ballistic evaluation of high strength armor steel and aerospace aluminium alloys at normal and oblique impact until the occurrence of projectile ricochet. The ArmoX 500T steel and 7075-T651 aluminium alloys were identified to be studied based on a detailed literature survey. The threats identified were 7.62 API and 12.7 API projectiles. The identification of the threats was based on the recommendation of the MAA Panel as well as the fact that they have rarely been studied in the available literature.

The material characterization was carried out under varying stress states, stress triaxiality, strain rate and temperature. The specimens of various size and shapes were extracted from 20 mm thick plates for the characterization of material. The smooth cylindrical specimens were tested under tension for obtaining the stress-strain relationship at low strain rate. The notched cylindrical specimens of varying notch radii were tested under tension for studying the effect of stress triaxiality on the stress-strain relationship. The notch radius was varied as 0.4, 0.8, 2.0, 3.0 and 4.0 mm for ArmoX 500T steel and 0.4, 0.8, 2.0, 4.0 and 6.0 mm for 7075-T651 aluminium. The high strain rate tests were carried out on the sub size smooth cylindrical specimens under tension. The strain rate in the range 0.0001 s⁻¹ - 1500 s⁻¹ was obtained on UTM and the Hopkinson pressure bar apparatus. The material tests at elevated temperature were carried out using a portable furnace which enabled the variation of temperature from 27 °C to 900 °C. The material of 7.62 API and 12.7 API projectiles was also characterized at varying stress triaxiality, strain rate and temperature. The material coupons were extracted from the hardened steel core of the bullet. The material of bullet was also calibrated for obtaining the parameters of Johnson-Cook model.

The ballistic tests were conducted on various thicknesses of ArmoX 500T steel and 7075-T651 aluminium alloy plates at Terminal Ballistic Research Laboratory, Chandigarh. The steel plates of thicknesses 6, 8 and 10 mm were impacted by 7.62 API and 5, 10, 15 and 20 mm thicknesses by 12.7 API projectiles. The aluminium plates of thicknesses 20, 32, 40 and 50 mm were impacted by 12.7 API projectiles. The angle of incidence was varied until the occurrence of projectile ricochet. The incidence velocity of the projectiles was measured with the help of infrared optical measurement device. The residual velocities were measured through a set of aluminium foil screen. The high speed video camera was also employed to measure the incidence and residual velocities as well as the penetration and perforation mechanics.

In general the ballistic resistance of the target increased with increase in the angle of obliquity. Against 7.62 API projectile the steel targets experienced perforation up to 40° for 6 mm and 25° for 8 mm thickness. For 10 mm thickness however, the perforation has been found to occur only at the normal impact. On the other hand, against 12.7 API projectiles, the target experienced perforation up to 61°, 46° and 25° for 5, 10 and 15 mm thicknesses respectively while for 20 mm thickness the perforation has been found to occur only at the normal impact. The ricochet of the 7.62 API projectile occurred at 45° obliquity for 6, 8 and 10 mm thicknesses. The 12.7 API projectiles also experienced ricochet at 45° obliquity for 15 and 20 mm thick targets.

The finite element simulations were carried out using the ABAQUS/Explicit finite element code. The target as well as the projectile were modelled as deformable bodies. The flow and fracture material behaviour of the target as well as the projectile was predicted employing the Johnson-Cook elasto-viscoplastic material model. The effect of mesh sensitivity of the target was studied by varying the size of element in the influenced region as 0.55, 0.45, 0.35 and 0.25 mm³. An element of 0.25 mm³ was finally adopted for all the

simulations of steel as well as aluminium targets. For projectiles, however, the size of element was considered to be uniform, 1 x 1 x 1 mm³, throughout its body. The numerical results closely predicted the failure mechanism, residual projectile velocities and critical angle of ricochet.

Energy Absorption Characteristics of Prestressed Concrete Elements under Drop Weight and Ballistic Impact-Phase I; P.I. : Dr. Md.

Ashraf Iqbal

This research proposal aims to explore the mechanics of deformation and energy absorption characteristics of prestressed concrete elements under drop weight and ballistic impact. A drop hammer will be fabricated for the application of loading of variable intensity. The experiments will be conducted on prestressed concrete beams and plates of varying strength, geometry, reinforcement ratio and prestressing force. The loading and reaction, acceleration, deflection, strain rate, energy absorption capacity and the induced local and global deformations will be studied. The results thus obtained will be compared with those of the equivalent reinforced concrete elements.

The ballistic experiments will be carried out using the existing pressure gun capable of launching 50 g – 1 kg projectiles at velocities 20-100 m/s. However, some modifications will be carried out in the existing pneumatic gun setup for attaining a better velocity range (20 - 300 m/s) with higher projectile mass (5 kg). The progress of deformation will be recorded through an available high speed video camera. The incidence and residual velocities will be measured with an optical velocity measurement device. The effect of different prestressing levels, impact velocity and projectile mass will be studied on the damage mechanics and energy absorption capacity of the plates. The results will be compared with the ordinary reinforced concrete plates.

The experimental results will be reproduced through finite element simulations using Autodyn/ Abaqus explicit code employing an appropriate constitutive model to incorporate material behavior.

The outcome of the project will enable to understand the performance of existing prestressed concrete structures under different situations of impact loadings. It will also enable the validation of the current design methodology of these structures under impact loading.

P.I. : Dr. Sudipta Sarkar

- a) An enterprise Driven High Quality Community Toilet System Sustaining on Commercial values Generated by Black Soldier Fly Larvae Grown on Human Faeces and By Fertilizer Derived from Urine: This is a proof-of-concept project to show that Black soldier fly larvae can be used for stabilization of human feces into body fat and protein of the mature larvae at an amazingly fast rate. We are trying to find out the growth kinetics of the black soldier fly larvae at different environmental conditions on different substrates containing human feces as well as other organic domestic wastes at different proportions and also, effect of environmental variables on the BSFs ability for egg laying and hatching of eggs. Once the project objectives are realized, it will show a new way of sanitizing human waste, producing commercial end products from such so called waste products.
- b) Development of Agricultural Waste-based Accelerator for Enhanced Concrete Hardening (AgWACH): Bagasse and rice husk are common agricultural byproduct which are normally used for secondary fuel/ non-conventional fuel for boilers and furnaces in small scale industries. We plan to use the ash and synthesize calcium silicate hydrate nanocrystals, which when added to a concrete mix shall help the nucleation and precipitation of further CSH nanocrystals from the CSH gel, thereby enhancing the process of initial strength gain or hardening of concrete. In this proof-of-concept project we seek to develop a commercially viable product that shall have high demand in the pre-fabricated concrete materials industry.
- c) Consultancy Project: Detailed Project Report for Sewerage System in Thermal Power Station at Obra, Uttar Pradesh. (value: Rs. 10 Lac)

P.I. : Dr. Akhil Upadhyay

Proof checking of structural design of bridge super structures and substructures of flyover along UER-I across Delhi Karnal Railway Line, FCI Godowns and Alipur Road at Narela- sponsored by RITES, Gurgaon

11. SCIENTIFIC AND TECHNICAL REPORTS

Sl. No.	Title of the Projects	Participants	Authors	Remarks
1.	The Strengthening of Existing Anti-Infiltration Obstacle System	Dr. Mohd. Ashraf Iqbal, Associate Professor, Department of Civil Engineering, IIT Roorkee, Uttarakhand Shri A. P. Joshi, Additional DG, CPWD (Border) Shri S. C. Karol, Director (K-III), MHA Shri Vinayak Rai SE (Civil)/Comdt. (Works), Engg Branch, FHQ, BSF Shri Rashid Mustafa, XEN, PCD, PHQ, J&K, Srinagar Shri Shiekh Zulfikar Azad, AIG (Buildings), J&K Shri Ashok Kumar Gupta, Suptd. Eng., Hydraulic Circle (Poonch), Irrigation & F. C. Deptt.	Dr. Mohd. Ashraf Iqbal, Associate Professor, Department of Civil Engineering, IIT Roorkee, Uttarakhand Shri Sudhir Kumar Shah, SE, PHEC, J&K PHC, ZPHQ Srinagar Shri Rashid Mustafa, XEN, PCD, PHQ, J&K, Srinagar Shri Shiekh Zulfikar Azad, AIG (Buildings), J&K	Submitted to Ministry of Home Affairs, Govt. of India
2.	Soil testing for Signature building, Lucknow	Mahendra Singh, M.N. Viladkar N.K. samadhiya, V.A. Sawant Priti Maheshwari, J.P. Sahoo	Mahendra Singh, M.N. Viladkar N.K. samadhiya, V.A. Sawant Priti Maheshwari, J.P. Sahoo	

4.6 COMPUTER SCIENCE & ENGINEERING

**Academic Staff: 15 Students Admitted: UG – 77, M.Tech. – 54, Ph.D - 20
Publications in: Journals - 24, Conferences Paper - 46, Book/Books Chapters 2,
Projects: Research Rs.285.4 (in Lacs)**

1. SALIENT FEATURES

The Department of Computer Science & Engineering is one of the major departments of the Institute in terms of the number of students and number of programmes. It offers a wide spectrum of academic programmes at undergraduate and postgraduate level. Undergraduate programmes lead to B.Tech. in Computer Science and Engineering. Postgraduate programmes lead to M.Tech and PhD in Computer Science and Engineering. In addition, the department offers two Integrated Dual Degree (IDD) programmes, leading to B.Tech. (Computer Science and Engineering) and M.Tech. (Information Technology). There are more than 14 full time research students working in Data Mining, Cloud Computing, Security, and Wireless Network.

2. LIST OF FACULTY MEMBERS

Professor

Kumar, Padam, PhD (University of Roorkee, India), Parallel & Distributed Systems, Real-Time Systems, Fault-Tolerant Computing

Misra, Manoj, PhD (Univ. of Newcastle, UK)
Distributed Computing, Performance Evaluation

Associate Professors

Balasubramanian, R., PhD (IIT Madras, India)
Computer Vision-Optical Flow Problems, Fractional Transform Theory, Wavelet Analysis, Image and Video Processing, Multimedia Security: Digital Image Watermarking and Encryption, Biometrics, Content Based Image and Video Retrieval, Hyper spectral and Microwave Imaging, Visualization, Volume Graphics

Gangopadhyay, Sugata, PhD (IIT Kharagpur, India) Cryptology, Cryptographic Boolean functions; Stream Cipher Cryptanalysis

Niyogi, Rajdeep, PhD (IIT Kharagpur, India)
Automated Planning, Distributed Systems, Formal Methods

Toshniwal, Durga, PhD (IIT Roorkee, India)
Data Mining and Warehousing, Databases, Machine Learning

Assistant Professors

Bhatt, Chidansh Amitkumar, PhD (National University of Singapore, Singapore)
Big Multimedia Data Analytics, data mining, machine learning, computer vision, natural language processing, visualization, IoT, HCI

Kumar, Sandeep, PhD (IIT BHU, India)
Semantic Web, Semantic Web Services, Web Services, Multi-Agent Systems, Software Engineering

Patel, Dhaval, PhD (NUS, Singapore)

Big Data Analysis, Map Reduce Programming, Database and Data Mining, Database, Data Mining, Spatio-Temporal Data Analysis, Geo-Visualization

Peddoju, Sateesh Kumar, PhD (Osmania University, India) Cloud Computing, Grid Computing, Mobile Communications, Mobile Ad-hoc Networks

Raychoudhury, Vaskar, PhD (Hong Kong Polytechnic University, HK) Distributed, Mobile and Pervasive Computing, Computer Networks, Wireless Sensor Networks, Mobile and Online Social Networks, Internet of Things

Roy, Partha Pratim, PhD (Autonomous University of Barcelona, Spain) Pattern Recognition, Multilingual Text Recognition, Biometrics, Identification and Verification of Signature, Fingerprint, etc., Computer Vision, Image Segmentation, Machine Learning, Hidden Markov Model

Roy, Sudip, PhD (IIT Kharagpur, India)
Algorithmic Microfluidics, EDA for Emerging Technologies, High-Performance Computing, Parallel Computing, CAD for VLSI, High-Level Synthesis and Physical Design

Sen, Debashis, PhD (Jadavpur University, India)
Image Processing and Analysis, Video Processing and Analysis, Vision, Uncertainty Handling, Bio-inspired Computation, Computational Visual Perception, Eye Movement Analysis, Multimedia

Emeritus Faculty

Sarje, Anil K., PhD (IISc. Bangalore, India)
Distributed Systems, Computer Networks, MANETs, Network Security

3. HONOURS AND AWARDS TO FACULTY MEMBERS

Sl. No.	Name of Faculty	Award
1.	Dr. Padam Kumar	Reviewer of IEEE Transactions on Parallel and Distributed Systems in 2014-15
2.	Dr Rajdeep Niyogi	Invited by the Department of Computer Science, University of Perugia, Italy as a visiting faculty during 1.7.2014 to 31.7.2014.
3.	Dr Rajdeep Niyogi	Invited by IMSc, Chennai as a visiting researcher during 1.11.2014 to 15.11.2014.
4.	Dr Rajdeep Niyogi	Invited to be a Session Chair in the National Conference on Recent Advances in Electronics and Computer Engineering (RAECE 2015), 13-15 February 2015, IIT Roorkee
5.	Dr Rajdeep Niyogi	Reviewer of IEEE Transactions on Fuzzy Systems
6.	Dr Rajdeep Niyogi	Technical Program Committee (PC) member of the following international conferences: 1. TENSYP 2015 2. SRF-ICDCN2015 3. ICDCIT 2014 4. ICACNI 2014
7.	Dr. P. Sateesh Kumar	Vice-Chair, IEEE Computer Society, India Council
8.	Dr. P. Sateesh Kumar	Founder Faculty Sponsor, ACM IITR Students Chapter
9.	Dr. Sandeep Kumar	Session Chair, SCSE-2015, UC Berkeley (USA)
10.	Dr. Sandeep Kumar	NSF Early Adopter Award-2014
11.	Dr. Vaskar Raychoudhury	Elevated to the Senior Member of IEEE (Computer Society) in April 2014
12.	Dr. Vaskar Raychoudhury	Received the Humboldt Post-doctoral Research Fellowship on March 2015
13.	Dr. Vaskar Raychoudhury	Summer research visit to the Dept. Of Computing, The Hong kong Polytechnic University during May 12 to June 11, 2014.
14.	Dr. Sudip Roy	Nominated for Best Paper Award in the 20th Asia and South Pacific Design Automation Conference (ASP-DAC), 2015 for the paper: Ta-Yang Huang, Chia-Jui Chang, Chung-Wei Lin, Sudip Roy and Tsung-Yi Ho, "Intra-Vehicle Network Routing Algorithm for Weight and Wireless Transmit Power Minimization", in proceedings of the 20th Asia and South Pacific Design Automation Conference (ASP-DAC), Japan, 2015.
15.	Dr. Partha Pratim Roy	"Top 10%" papers award in International Conference on Image Processing (ICIP), 2014 for the paper: Y. Chherawala, P. P. Roy, M. Chenet, "Context-dependent blstm models. Application to offline handwriting recognition", ICIP, pp. 2565-2569, France, October 27-30, 2014.
16.	Dr. Chidansh Bhatt	Program committee member of 12th International Conference on Signal Processing and Multimedia Applications (SIGMAP) 2015
17.	Dr. Chidansh Bhatt	Reviewer of Springer Multimedia Tools and Applications in 2014-2015
18.	Dr. Chidansh Bhatt	Reviewer of IEEE Transactions on Parallel and Distributed Systems in 2015

4. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/SYMPOSIA/ WORKSHOP/GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
1.	Dr. R. Balasubramanian	Visited SeSaMe Research Centre at National University of Singapore, SINGAPORE to have a technical discussion with Prof. Mohan S. Kankanhalli, Department of Computer Science, School of Computing, in the areas of Visual Saliency in watermarking, Multi-camera/Multi-sensor surveillance, Multi-agent systems and PTZ camera networks.	National University of Singapore, SINGAPORE	Jul 02-07, 2014

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./Workshop/Guest Lecture	Venue	Date
2.	Dr. R. Balasubramanian	Conducted a workshop on "Digital Image Watermarking and Optical flow problems" and have a technical discussion with Prof. C. Eswaran, Faculty of Computing and Informatics, Multimedia University, Cyberjaya Campus, MALAYSIA in the area of Multimedia Security.	Faculty of Computing and Informatics, Multimedia University, Cyberjaya Campus, MALAYSIA	Jul 08-10, 2014
3.	Dr. R. Balasubramanian	Visited iLink Systems at Seattle, Washington, USA to have a technical discussion in the areas of Data Science and Machine learning	iLink Systems at Seattle, Washington, USA	Nov 27, to Dec 3, 2014
4.	Dr. R. Balasubramanian	Visited University at Albany - State University of New York (SUNY), NY, USA to have a technical discussion with Dr. Pradeep Atrey's research group and Delivered an invited talk on " Applications of Fractional and Multi-resolution Transforms in Information Security, Optical flow Problems and Content Based Image Retrieval"	Department of Computer Science, University at Albany - State University of New York (SUNY), NY, USA	Dec 4-6, 2014
5.	Dr. R. Balasubramanian	Delivered Series of Lectures (1) Watermarking Algorithms Based on Fractional Transformations and Visual Cryptography, (2) Chaos Based Cryptosystem for Still Visual Data and (3) Information Security in Multi-resolution Transformations in the Workshop on "Cryptography and Information Security" conducted by Department of Electronics and Communication Engineering, NIT Calicut	Department of Electronics and Communication Engineering, NIT Calicut	Jan 23-25, 2015
6.	Dr. Sugata Gangopadhyay	India-Russia workshop on Number Theory, Combinatorics, Cryptology	Lomonosov Moscow State University	15 – 17 October 2014
7.	Dr. Durga Toshniwal	Invited Talk at Women in Engineering Chapter, IEEE Affinity group and ACM-W Chapter	Thapar University, Patiala.	20th Aug 2014
8.	Dr. Rajdeep Niyogi	Guest lecture: "Advanced concepts of functional programming in Haskell" at the Summer exchange program of University of Perugia and Hong Kong Baptist University 2014.	Department of Computer Science, University of Perugia, Italy	16.7.2014 to 17.7.2014
9.	Dr. Rajdeep Niyogi	Invited Talk: "A method for generating knowledge based programs as conditional plans".	Department of Computer Science, University of Perugia, Italy	29.7.2014
10.	Dr. Rajdeep Niyogi	Int. Conf. on High Performance Computing and Simulation (HPCS 2014).	Bologna, Italy	21.7.14 to 25.7. 2014

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
11.	Dr. Rajdeep Niyogi	Invited Tutorial: "Planning in multi agent systems" at Instructional Seminar on Logical Aspects of Multi Agent Systems (ISLAMAS 2015)	IMSc, Chennai	1.2.2015 to 3.2.2015
12.	Dr. P. Sateesh Kumar	Delivered One-Day Tutorial Session on "How to do Research with Cloud Computing? A Case Study based Analysis!" in International Conference on Computing and Communication technologies (ICCCT) organized by UCE, Osmania University, Hyderabad	Hyderabad, India	December 11- 13, 2014
13.	Dr. P. Sateesh Kumar	Delivered one-day expert session on Cloud Computing and Cloudsim at Faculty of Engineering and Technology, Gurukul Kangri University (Deemed Central University), Haridwar	Haridwar, India	October 11, 2014
14.	Dr. P. Sateesh Kumar	Chief Guest and Chairperson of a Technical Session" and Plenary Session on "Cloud Computing Research" of International Conference on Science and Technology 2015 for its conference track "Computer Science" organized by SRMS College of Engineering and Technology Bareilly, UP	Bareilly, UP	February 27-28, 2015
15.	Dr. Sandeep Kumar	Int. Conf. on Soft Computing and Software Engineering (SCSE), 2015	UC Berkeley, USA	March 5-6, 2015
16.	Dr. Vaskar Raychoudhury	Attending and presenting a paper in IEEE Healthcom 2014 conference	Natal, Brazil	October 15-18, 2014
17.	Dr. Vaskar Raychoudhury	Invited to hold a special track (IoT Architecture in IEEE TENSYP 2015),	Ahmedabad, Gujrat	Track operations completed on February 12, 2015
18.	Dr. Vaskar Raychoudhury	Invited to hold a special track (Privacy Preservation in the Internet of Things) in The 12th IEEE International Conference on Advanced and Trusted Computing (ATC 2015)	Beijing, China	Track operations completed on May 20, 2015
19.	Dr. Vaskar Raychoudhury	Invited to hold a special track (Hardware /Software for Internet of Things (IOT)) in IEEE International Symposium on Nano-electronic And Information Systems (INIS 2015)	Indore, India	Track operations ongoing
20.	Dr. Sudip Roy	Invited to visit Nanotechnology Research Laboratory, Advanced Computing and Microelectronics Unit, Indian Statistical Institute, Kolkata, India for technical discussion with Prof. Bhargab B. Bhattacharya (Head) and other faculties, in the area of computer-aided-design (CAD) algorithms for microfluidic biochips and application of computational geometry.	Indian Statistical Institute, Kolkata, India	March 24-28, 2015

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of Course	Venue	Date
1.	Dr. Vaskar Raychoudhury	Tools and Techniques for Social Network Analysis	IIT Roorkee	Jan. 9, 2015
2.	Dr. Sugata Gangopadhyay	Targeted Training Program for the Scientists of DRDO	Indian Statistical Institute, Delhi Center	17 – 27 March 2015

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
1.	Prof. Janakiram D	Professor, Indian Institute of Technology Roorkee	To deliver a guest lecture "Emerging Trends in Big Data and Cloud Computing", as part of Inaugural session of ACM IITR Students chapter invited by Dr. P. Sateesh Kumar	April 12, 2014
2.	Prof. Tsung-Yi Ho	Professor, National Chiao Tung University, Hsinchu, Taiwan	Invited talk and interaction with all the faculties of the Department invited by Dr. Sudip Roy	October 15, 2014
3.	Dr. Suprakash Datta	Assistant Professor, Dept. of EE & CS, Lassonde School of Engineering, York University, Canada	Collaborations Discussions with Dr. P. Sateesh Kumar	Nov 15, 2014
4.	Prof. D. S. Broca	Professor, XLRI Institute, Tatanagar	To deliver a guest lecture on "Business Process Simulation" as part of ACM IITR Students Chapter invited by Dr. P. Sateesh Kumar	Jan 17, 2015
5.	Mr. Muni Pulipalyam	Senior Architect, Microsoft India Ltd., Bangalore	To deliver a guest lecture on "Azure for Technical students-improve your agility and productivity with cloud computing" due to CS-520 Cloud Computing Course and invited talk on "Microsoft Azure For Research", due to RAECE-2015 invited by Dr. P. Sateesh Kumar	Feb 13, 2015 (Guest Lecture) Feb 14, 2015 (Conference)
6.	Prof. Deo Prakash Vidyarthi	Professor, JN University, New Delhi	To deliver an Invited Talk on "Energy Efficient Channel Allocation in Mobile Computing", due to RAECE-2015 invited by Dr. P. Sateesh Kumar	Feb 14, 2015
7.	Dr. Vikram Goyal	Assistant Professor, Dept. of CSE, IIIT New Delhi	To deliver an Invited Talk on "Efficient Mining of High Utility Itemset Patterns" due to RAECE-2015 invited by Dr. Dhaval Patel and Dr. P. Sateesh Kumar	Feb 15, 2015
8.	Dr. Arti Noor	Associate Manager, C-DAC, Noida	To deliver an Invited Talk on "Hardware and Software Security" due to RAECE-2015 invited by Prof. Manoj Misra and Dr. P. Sateesh Kumar	Feb 15, 2015
9.	Dr. Amod Anandkumar	Senior Application Engg. – Signal Processing & Communications, MathWorks India Private Limited	Presentation on "Signal Processing and Computer Vision Application Development using MATLAB"	Feb 19, 2015

7. INTERNSHIPS BY IIT ROORKEE STUDENTS

Sl. No.	Name of Student	Name of the Internship Programme	Under Graduate	Post Graduate	Name of the Institute	Period
1.	Harshita Panda	IBM internship		MTech	IBM Bangalore	July 2014 - May 2015
2.	Alka Yadav	Cisco Academic-Industry Collaboration Programme 2014-15		MTech	Cisco, USA	July 28, 2014 - August 8, 2015
3.	Ronak Lakhwani	Cisco Academic-Industry Collaboration Programme 2014-15		MTech	Cisco, USA	July 28, 2014 - August 8, 2015
4.	Rishabh Jain	Cisco Academic-Industry Collaboration Programme 2014-15		IDD	Cisco, USA	July 28, 2014 - August 8, 2015
5.	Sarvesh Ranjan	Cisco Academic-Industry Collaboration Programme 2014-15		IDD	Cisco, USA	July 28, 2014 - August 8, 2015
6.	Swati Maheshwari	Cisco Academic-Industry Collaboration Programme 2014-15		MTech	Cisco, USA	July 28, 2014 - August 8, 2015
7.	Ashish Kumar Singh	Cisco Academic-Industry Collaboration Programme 2014-15		IDD	Cisco, USA	July 28, 2014 - August 8, 2015
8.	Hamender Singh	IBM Internship		M.Tech	IBM Bangalore	July 2014 - May 2015

8. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./seminar/ symp./workshop	Name of the Chairman	Sponsored by	Dates
1.	Conference on Recent Advances in Electronics and Computer Engineering (RAECE)	Organizing Committee (P. Sateesh Kumar)	Dept. of CSE & ECE	Feb 14-15, 2015
2.	Code.fun.do – 24-hour hackathon	Faculty Sponsor (P. Sateesh Kumar)	Microsoft, ACM IITR Students Chapter, Dept. of CSE	Feb 6-8, 2015
3.	One-day Workshop on Business Process Simulation	Faculty Sponsor (P. Sateesh Kumar)	ACM IITR Students Chapter, Dept. of CSE	Jan 17, 2015
4.	Asian Programming Contest - 2014	Faculty Sponsor (P. Sateesh Kumar)	ACM IITR Students Chapter, Dept. of CSE	Mar 29, 2014
5.	Workshop on Agile Software Engineering Practices in Product Development	Dr. Sandeep Kumar	Microsoft	Sept 13, 2014

9. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Source of funding	Nos. of Participants	Dates
1.	Prof. Rama Bhargava, Prof. V. K. Katiyar and Dr. R. Balasubramanian	Mathematical Modelling and Numerical Computation Using Matlab	AICTE	40	Feb 9-13, 2015

10. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. R. Balasubramanian	3D Reconstruction and Software Development for City Model Generation from Satellite Images	ISRO, SAC Ahmedabad	7.73 Lacs
2.	Dr. Sandeep Kumar	Investigating and analyzing the program and course structure with respect to its conformance with the international standards and research and industry needs	Govt. of Yemen, Yemen	USD 8427 5.4 Lacs
3.	Dr. Sandeep Kumar	Customized Content Delivery on Social Platform	Sponsoring Agency: Adobe Research	3.6 Lacs

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Durga Toshniwal	Establishing Data Mining Research Laboratory at IIT Roorkee	IBM Corporation, USA	USD 60,000 38.3 Lacs
2.	Dr. Durga Toshniwal	Applying Data Mining Techniques on NPP Data for Predictive Maintenance	BRNS, DAE, Mumbai	22.5 Lacs
3.	Dr. Durga Toshniwal	Finding Semantic Relationships in Text Documents Using Clustering	IBM Corporation, USA	USD 10,000 6.4 Lacs
4.	Dr. Durga Toshniwal	International Business Machines Corp	IBM Corporation, USA	USD 7,000 4.5 Lacs
5.	Dr. Rajdeep Niyogi	LAPUE: Logical analysis of plans in uncertain environments	DST	25.96 Lacs
6.	Dr. P. Sateesh Kumar	Energy Efficient Multimedia Cloud Services for Mobile Devices	IBM, USA	15000 USD 9.6 Lacs
7.	Dr. P. Sateesh Kumar	Delivering Secured and Energy Efficient Multimedia streaming services anywhere and anytime for Mobile Broadband Users	Railtel, India (RICTE)	33.72 Lacs
8.	Dr. Vaskar Raychoudhury	SPIN: Socio-Physical Interaction Network to facilitate searching, tracking, and socializing between smart entities	Fast Track Research Grant, Department of Science and Technology (DST), Govt. of India	15.42 Lacs
9.	Dr. Dhaval Patel (PI) and Dr. Manoj Misra (Co-PI)	TirthaYatriSahayak	RaiTel	23 Lacs

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Asha Rani and Dr. R. Balasubramanian (Mentor)	Multimodal Biometric based person Authentication and Identification System	DST, New Delhi	21.9 Lacs
2.	Dr. Sandeep Kumar (along with two other PIs)	Agricultural Information System for ICT	RailTel	72 Lacs
3.	Dr. Sandeep Kumar	Early Adopter Proposal-Core Curriculum Initiative	NSF/CDER	USD 2000 + USD 2500 (Travel support) 2.3 Lacs
4.	Dr. Sugata Gangopadhyay	Construction of Cryptographically Good Feedback Shift Registers	Center for Artificial Intelligence and Robotics (DRDO)	9.8 Lacs

11. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (>Rs. 10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2013-14).

Project Title: Multimodal Biometric based person Authentication and Identification System, PI: Dr. Asha Rani and Dr. R. Balasubramanian (Mentor)

The development of multimodal biometric based person authentication systems is the approved objective of this project. To achieve this adjective various biometric traits will be studied and fusion techniques will be developed to achieve lowest possible errors made by system to authenticate a person. A list of approved objectives is as follows:

- Study of different biometric traits such as iris, face, palmprints, finger prints, finger knuckle prints, finger vein structure, ear structure etc.
- Developing robust authentication system either fusing two or more types of biometric trait or fusing a biometric trait using different types of representations.
- Developing machine learning techniques for better identification (classification) of features extracted from biometric data.
- Developing biometric database using biometric data capturing devices.

Several methodologies have been used at different stages of biometrics based authentication system. A short description of methodologies used or to be used is as given below:

- Feature extraction: Feature extraction is very basic and important step for designing a robust and secure user authentication system. After data acquisition, the raw data is huge enough in size to be processed by computers; moreover storage requirements are also big. The other problem is, there is redundant information contained in biometric data which degrades the authentication rate. So this is important to extract some adequate features from the raw data. For this purpose appearance based techniques such as linear discriminant analysis, principal component analysis, Gabor filters, wavelet transforms and their variants are used for feature extraction. Further, structure based techniques such as local binary pattern, sub-manifold learning, and their variants are used for feature extraction.
- Sometimes the biometric images are affected by the environmental conditions, such as illumination variation, occlusion, etc. Sometimes removal of background information is needed. To cope up such problems image enhancement techniques will be used and developed. A method for automatic cropping will also be developed.

A good pattern recognition technique is needed to improve the authentication results. The simplest and widely used is k-nearest neighborhood classifier. Other than this we are planning to develop some neural network based, tree based and decision based techniques for pattern recognition

Project Title: Delivering Secured and Energy Efficient Multimedia streaming services anywhere and anytime for Mobile Broadband Users, PI: Dr. P. Sateesh Kumar

Due to inherent hardware constraints, particularly batter power, mobile devices can't support rich multimedia applications or games. Mobile Cloud computing provides the apt solution for such limitation as the computations are done on Cloud and the result is transmitted to client. Further, the broadband access is more prone for insecure transmission. This project addresses these problems in addition to providing quality services

to meet the standards of HDTV in terms of user experience. Hence, the project aims at designing and developing a model for delivering secured and energy efficient multimedia streaming services anywhere and anytime for mobile broadband users.

Project Title: Agricultural Information System for ICT PI: Dr. Sandeep Kumar

This project deals with development of an information system based on information and communication technology that can be used for dissemination of information to end users.

12. SCIENTIFIC AND TECHNICAL REPORTS

Sl. No.	Title of the Projects	Participants	Authors	Remarks
1.	Enhancement of teaching laboratory-I at MTech CSE level by addition of four computational and experimental projects	-	Dr. Sandeep Kumar	Funded by QIP
2.	Automatic Recommendation of Lectures and Snippets (ARoLeS)	Dr. Andrei Popescu-Belis, Dr. Chidansh Bhatt, Dr. Sandy Ingram, Nikolaos Pappas, Maryam Habibi	Chidansh Bhatt, Andrei Popescu-Belis, Maël Guillemot, Sandy Ingram,	AROLES project funded by Swiss National Science Foundation. A final project report is submitted on 20/02/2015.
3.	Evaluating Graph-based A/V Summarization with or without a Reference	Dr. Andrei Popescu-Belis, Dr. Chidansh Bhatt,	Chidansh Bhatt and Andrei Popescu-Belis	Submitted at SIGdial Meeting on Discourse and Dialogue (SIGDIAL 2015).
4.	Big Data Analytics for Student's Well-Being	Dr. Chidansh Bhatt and Pradeep Kumar	Chidansh Bhatt and Pradeep Kumar	Technical report submitted at IIT-R
5.	Beyond the Fragment based music recommendation	Dr. Chidansh Bhatt and Vijay Patidar	Vijay Patidar and Chidansh Bhatt	Technical report submitted at IIT-R
6.	Sentiment Analysis and Opinion Mining On Social Media Data	Dr. Chidansh Bhatt and Balkar Lathwal	Balkar Lathwal and Chidansh Bhatt	Technical report submitted at IIT-R
7.	Context Aware Recommendation System for Technology Enhanced Learning	Dr. Chidansh Bhatt and Sachin	Sachin and Chidansh Bhatt	Technical report submitted at IIT-R
8.	Instructional Videos Re-ranking	Dr. Chidansh Bhatt and Tarun Garg	Chidansh Bhatt and Tarun Garg	Technical report submitted at IIT-R
9.	Deep Learning Based Recommendation System	Dr. Chidansh Bhatt and Sarvesh Gupta	Sarvesh Gupta and Chidansh Bhatt	Technical report submitted at IIT-R

4.7 DEPARTMENT OF EARTHQUAKE ENGINEERING

Academic Staff :21; Students Admitted : PG-59, Ph.D.-10; Publications : Journals -38, Conferences –52, Project Research: Rs. 412.034

1. SALIENT FEATURES

Department of Earthquake Engineering at the Indian Institute of Technology Roorkee (erstwhile University of Roorkee) was established in 1960 as School of Research and Training in Earthquake Engineering. Four major areas of earthquake engineering viz., Structural Dynamics, Soil Dynamics, Engineering Seismology and Seismotectonics, and Instrumentation have been nurtured for the last fifty years. The department provides Master's degree in three specializations namely, Structural Dynamics, Soil Dynamics, and Seismic Vulnerability and Risk Assessment. The major functions of the Department include teaching and research, and rendering expert advice to various organizations in the area of earthquake resistant design of structures and systems, such as dams, bridges, power plants, etc. The Department has played a key role at the national level in the formulation of Indian Standard Codes of Practice for earthquake resistant design of Structures.

Several major facilities have been developed in the Department to conduct experiments related to earthquake engineering. Some of the major facilities include: a low cost railway wagon shock table for dynamic testing of structural models, a computer controlled shake table to stimulate strong ground motion, a quasi static testing laboratory having servo-controlled dynamic actuator systems and servo-controlled compression testing machine, a soil dynamics laboratory equipped with liquefaction table and cyclic triaxial testing system, a seismological observatory having state of the art broadband seismograph to record earthquake ground motion, a strong motion network of 300 digital accelerographs deployed in the Himalayan region to measure strong ground motion due to moderate and major earthquakes and a state-of-the-art 12-station telemetered network to monitor local seismicity in the environs of Tehri Dam.

2. LIST OF FACULTY MEMBERS

Professors

Sharma M. L., Ph. D. (IITR)
Head
Engineering Seismology & Seismotectonics
Sinvhal Amita (Ms.), Ph. D. (IITR)
Engineering Seismology & Seismotectonics
Kumar Ashok, Ph. D. (IITR)
Instrumentation
Singh Yogendra, Ph. D. (IITD)
Structural Earthquake Engineering, Performance Based Design, Seismic Risk Assessment
Pal Kirat, Ph. D. (IITR)
Instrumentation
Maheshwari B. K., Ph. D. (Japan)
Soil Dynamics
Agarwal Pankaj, Ph. D. (IITR)
Structural Dynamics
Narayan J. P., Ph. D. (BHU)
Engineering Seismology & Seismotectonics
Shrikhande M., Ph. D. (IIT K)
Structural Dynamics

Associate Professors

Das, Josodhir, Ph.D. (IITR)
Seismotectonics and Remote Sensing

Assistant Professors

Jakka, Ravi Shankar, Ph.D. (IITD)

Soil Dynamics

Pandey, A.D., ME(IITR)

Structural Dynamics

Shankar, Daya, Ph.D.(BHU)

Seismology

Dubey, Ramanand, Ph.D.(IIR)

Structural Dynamics

Scientists

Gupta, S.C., Ph.D. (IITR)

Seismology and Seismotectonics

Emeritus Fellow

Paul D. K., Ph. D. (Swansea)

Soil Dynamics, Earthquake Risk Mitigation,

Structural Earthquake Engineering

Kumar Ashwani, Ph.D. (IITR)

Engineering Seismology & Seismotectonics

Wason H. R., Ph. D. (KU)

Engineering Seismology & Seismotectonics

Emeritus Professor

Arya. A. S., Ph.D. (Illinois)

Structural Dynamics

Visiting Faculty

Mukerjee, Shyamal, Ph.D.(IITR)

Soil Dynamics

Gupta, I. D., Ph.D. (Pune)

Seismic Hazard Assessment, Engineering

Seismology

3. HONOURS AND AWARDS TO FACULTY MEMBERS (EARNED DURING THE YEAR UNDER REPORT).

Sl. No.	Name of Faculty	Award
1.	Dr. M.L. Sharma,	Elected as Fellow of Indian Geophysical Union during 51st Annual Convention held at Kurukshetra University during Nov. 19-21, 2014 and also chaired a session on Seismic Hazard in the Convention.
		Appointed Convener of BIS Sub Committee of CED-39 for "Guidelines for seismic microzonation".
2.	Dr. B. K. Maheswari	Presented IACMAG Award of "Excellent Regional Contributions" during 14th Int. Conference of the International Association for Computer Methods & Advances in Geomechanics, Kyoto, Japan, Sept. 2014.
		Invited to deliver a talk entitled "Recent Advances in Seismic Soil-Structure Interaction" in a Preliminary Session during Indian Geotechnical Conference, Kakinada, Andhra Pradesh, December 18, 2014.
		Appointed convener of the BIS Sub-committee of CED-39 for "Liquefaction Potential of Soils during Earthquakes".
3.	Dr. Ravi Sankar Jakka	Dr. Ravi Sankar Jakka, Asst. Professor, Deptt. of Earthquake Engg. has been conferred upon 'Young Geotechnical Engineer Best Paper Award' on 18th December, 2014 from Indian Geotechnical Society.
4.	Dr. Manish Shrikhande	Dr. Manish Shrikhande published a book on "Finite Element Method and Computational Structural Dynamics" published by PHI Learning Pvt. Ltd., New Delhi.
		Dr. Manish Shrikhande is appointed Convener of the BIS Sub-committee of CED-39 for Dams.
5.	Dr. D.K. Paul	Chairman, Working Group on Seismic Microzonation of Delhi Region constituted by DST, New Delhi.
		Member of STEERING COMMITTEE for Involvement of Science and Technology Community in DM work constituted by National Disaster Management Authority, Government of India.
		Member of Group Monitoring Committee (GMC) for the National Coordinated Programme on Seismicity constituted by Ministry of Earth Sciences.
		Member of the Governing Council (GC) of Central Soil and Material Research Station, New Delhi constituted by Ministry of Water Resources, Government of India, (August 2008 – August 2011).
		Member Program Advisory Committee (PAC) for International Cooperation in the area of Earth, Atmospheric and Environmental Sciences constituted by DST for three years w.e.f Feb2, 2012.
		Member Sub-Committee of Advisory and Monitoring Committee on Seismic Microzonation study of NCT Delhi on 1:10000 scale constituted by Director General of Meteorology, IMD.
		Chairman, BIS Committee on Earthquake Engineering Sectional Committee - CED 39 reappointed for another term of three years 2014-2017.
		Member of re-constituted National Steering Committee (NSC) for National Earthquake Risk Mitigation Project (NERMP) constituted by NDMA datd July 21, 2014.
		Member of Expert Committee to discuss beyond design basis earthquake constituted by Atomic Energy Regulatory Board, Government of India.

4. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/SYMPOSIA/ WORKSHOP/GUEST LECTURES

Sl. No.	Name of Faculty	Details of Conf./ Semi. / Symp. / Workshop /Guest Lecture	Venue	Date
1.	M.L. Sharma	Dharamshala Workshop, Presented paper, chaired session invited talk		Nov 6-9, 2014
2.	M.L. Sharma	Natural Hazards in Himachal Pradesh, CUHP	Himachal Pradesh	Nov. 6-8, 2014
3.	M.L. Sharma	51st Convention of IGU, KUK Univ, Chaired session		Nov 19-21, 2014
4.	M. L. Sharma	MOES PAC meeting	Prithevi Bhawan, New Delhi	Nov. 26-28, 2014
5.	M. L. Sharma	Visited NCREE in Taiwan under sponsored research project funded by DST.	Taiwan	Jan 24-Feb 01, 2015
6.	Yogendra Singh	Tenth U.S. National Conference on Earthquake Engineering, Frontiers of Earthquake Engineering	Anchorage, Alaska	July 21-25, 2014
7.	B.K. Maheshwari	14th Int. Conf. of the International Association for Computer Methods & Advances in Geomechanics	Kyoto, Japan	Sept. 22-25, 2014
8.	B.K. Maheshwari	Visited Norwegian Geotechnical Institute (NGI) for Research Project	Oslo, Norway	Oct. 3-12, 2014
9.	Ravi Shankar Jakka	Indian Geotechnical Conference – 2014 (IGC)	Kakinada, Andhra Pradesh	18 to 20 Dec., 2014
10.	D.K. Paul	Brain storming for Civil Engineering at IIT Mandi, Mandi	IIT Mandi	April 19, 2014
11.	D.K. Paul	Int. Workshop on Emerging Trends in Earthquake Engg. and Structural Dynamics	IIT Delhi	Dec. 20, 2014
12.	D.K. Paul	Structural Engineering Convension, 2014	IIT Delhi	Dec. 22, 2014
13.	D.K. Paul	Int. Symp. on Reducing Earthquakae Losses	Institute of Seismological Research	Jan.5-7, 2015

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of the faculty	Name of the courses	Venue	Dates
1.	M.L. Sharma	Estimation of site specific seismic design parameters	Continuing Education Centre	Oct. 16-18, 2014
2.	M.L. Sharma	Geotechnical Earthquake Engineering	Continuing Education Centre	Nov.26-28, 2014
3.	M.L. Sharma	Earthquake Resistant Structural Design/Drawings	Continuing Education Centre	Dec 01-06, 2014
4.	B.K. Maheshwari	Geotechnical-Earthquake Engineering	QIP Centre	June 2-6, 2014
5.	Ravi Shankar Jakka	AICTE Sponsored STC on "Geotechnical Earthquake Engineering"	IIT Roorkee	June 2-6, 2014
6.	Ravi Shankar Jakka	NHPC Sponsored STC on "Geotechnical Earthquake Engg."	IIT Roorkee	Nov. 24-26, 2014

Sl. No.	Name of the faculty	Name of the courses	Venue	Dates
7.	Ravi Shankar Jakka	NHPC Sponsored STC on "Earthquake Resistant Structural Design /Drawings"	IIT Roorkee	Dec. 1-6, 2014.
8.	D.K. Paul	Indo-Norwegian Training Programme on Seismic Design of Multi-Storey Buildings: IS 1893 Vs. EUROCODE 8	IHC, New Delhi; BMTPC, NORSAR and IITR	May 26-27, 2014
9.	D.K. Paul	AICTE Sponsored STC on Geotechnical Earthquake Engineering	AICTE sponsored QIP course	June 2-6, 2014
10.	D.K. Paul	Earthquake Resistant Design and Construction training course	BIPART, Patna and BMTPC, New Delhi	Nov.11-12, 2014
11.	D.K. Paul	NHPC sponsored Short Term Course on Geotechnical Earthquake Engineering; For NHPC Engineers	CEC, IITR	Nov. 1-6, 2014
12.	D.K. Paul	NHPC sponsored Short Term Course on Geotechnical Earthquake Engineering; For NHPC Engineers	CEC, IITR	Nov. 24-26, 2014
13.	D.K. Paul	Indo-Norwegian Training Programme on Seismic Design of Multi-storey Buildings: IS 1893 vs. Eurocode 8	VNIT, Nagpur	Dec.7-8, 2014
14.	D.K. Paul	Indo-Norwegian Training Programme on Nonlinear Modelling and Seismic Response Evaluation of Structures	CED, IIT Roorkee	Dec.14-16, 2014

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL):

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
1.	Prof. William Powrie	Professor and University of Southampton UK		July 08, 2014
2.	Prof. John Preston	Professor and University of Southampton UK		July 08, 2014
3.	Prof. David Richards	Professor and University of Southampton UK		July 08, 2014
4.	Prof. Louis Le Ben	Professor and University of Southampton UK		July 08, 2014
5.	Dr. Mahendra P. Singh	Professor and USA		Jan 15, 2015

7. INTERSHIPS TO OTHER STUDENTS IN IIT ROORKEE

Sl. No.	Name of Student	Name of the Supervisor	Under Graduate	Post Graduate	Name of the Institute	Period
1.	Xavier Maurice	Yogendra Singh	U.G.		ESTP Paris	21-07-2014 to 05-09-2014

8. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Conf./ Seminar / Symp. /Workshop	Name of the Coordinator	Sponsored by	Dates
1.	15 Symposium on Earthquake Engineering	Dr. M.L. Sharma	Science and Engg. Research Board, NTPC Ltd, Atomic Energy Regulatory Board, and NHPC Ltd.,	11-13, Dec, 2014
2.	1 Day workshop on 'Challenges in Seismic Site Characterization and Solutions through Recent Developments'	Dr. Ravi Sankar Jakka & Dr. S. Mukerjee	QIP Centre, IITR	10th Dec., 2014

9. SHORT TERM/ SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Source of funding	Nos. of Participants	Dates
1.	M.L. Sharma	Estimation of site specific seismic design parameters	NHPC	15	Oct. 16-18, 2014
2.	M.L. Sharma	Geotechnical Earthquake Engineering	NHPC	15	Nov.26-28,2014
3.	M.L. Sharma	Earthquake Resistant Structural Design/Drawings	NHPC	20	Dec 01-06
4.	B.K. Maheshwari and D.K. Paul	Geotechnical Earthquake Engineering	QIP Centre, AICTE, Gol	18	June 2-6, 2014
5.	Yogendra Singh	Indo-Norwegian Training Programme on Seismic Design of Multi-storey Buildings: IS 1893 vs. Eurocode 8	BMTPC & NORSAR Norway	93	May 26 - 28, 2014
6.	Yogendra Singh	Indo-Norwegian Training Programme on Seismic Design of Multi-storey Buildings: IS 1893 vs. Eurocode 8	BMTPC & NORSAR Norway	100	Oct.13-15, 2014
7.	Yogendra Singh	Indo-Norwegian Training Programme on Nonlinear Modelling and Seismic Response Evaluation of Structures	BMTPC & NORSAR Norway	69	Dec.14-16, 2014

10. SPONSORED/CONSULTANCY PROJECTS

i. Completed Sponsored Research Projects

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	Ashwani Kumar	Seismological Network around THDC Region	THDC, India Ltd., Rishikesh	22.40
2.	Yogendra Singh	Earthquake Hazard and Risk Reduction on the Indian Subcontinent	NORSAR Norway	113
3.	D.K. Paul	Study of Seismic Base Isolation Techniques for Buildings and Development of Appropriate Seismic Base Isolation System	DST, New Delhi	23.1

ii. Continuing Sponsored Research Projects

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	Y. Singh, Co-PI: D.K. Paul, M.L. Sharma, B.K. Maheshwari	Seismic Risk and Loss Assessment in Hilly Areas	Royal Norwegian Embassy in India	Rs. 104 Lacs (total)

iii. New Sponsored Research Projects

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	B.K. Maheshwari	Dynamic Properties of Soils using Resonant Column Tests	Seismology Div. Min. of Earth Sciences, Gol	Rs. 16.6 Lacs (Oct. 1, 2014)

11. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (>RS. 10 LACS) (A BRIEF WRITE-UP UPTO 100 WORDS) (NEW PROJECTS DURING THE YEAR 2013-14)

S. No.	Title of Project	Funding Agency	Financial Outlay (lacs)	Year of start & total period	Name of P.I. and other Investigators	Status started or completed or in progress
1.	Seismic analysis of Bhakra dam stability analysis	Bhakra management Board	10.0	2008-09	D.K. Paul	Ongoing
2.	Rehabilitation & retrofitting of preindependence building of FRI, Dehradun	MoES	37.0	2008-09	D.K. Paul	Ongoing
3.	2D Stability Analysis of 215 m Roller Compacted Concrete Dam Sankosh HEP (2560 MW), Bhutan	THDC India Limited	13.236	2012	D.K. Paul	Started

- i. Development of Seismic Base Isolation: Seismic base isolation system is an seismic protection system against earthquake. Design and development of seismic isolation system for building has been developed and tested in collaboration with M/s Resistoflex Pvt. Ltd., Noida. The isolation system reduces the effects of an earthquake by essentially isolating the superstructure and its contents from potentially damaging ground motion. The most common isolation system used is Laminated Lead Rubber Bearings (LLRB). They combine the function of isolation and energy dissipation in a single compact unit, giving structural support, horizontal flexibility, damping, and a re-centering force in a single unit.
- ii. Retrofitting of Forest Research Institute: The FRI building is an architectural marvel and also a heritage building of historic importance. The building consists of several large halls, different kinds of arches, domed vaults and two huge towers. Seismic retrofitting of such a historical building is very demanding as all interventions are not allowed which may affect on the aesthetical appearance and heritage value. The FRI building has been sub-structured into five macro-elements whose independent behavior represents the global seismic behavior. Analyses of these macro-elements are used to locate the vulnerable locations in the building and accordingly suitable retrofitting strategy has been worked out.
- iii. Research Project entitled "Dynamic Properties of Soils using Resonant Column Tests", PI: Dr. B.K. Maheshwari, is awarded by Seismology Division, Ministry of Earth Sciences, Govt. of India. Outlay Rs. 16.6 Lacs, duration 3 years, Date of Start: October 1, 2014.
- iv. A sum of Rs.149.68 lakh has been allocated to IIT Roorkee, for Main phase of the MHRD sanctioned project entitled "Developing Suitable Pedagogical Methods for Various Classes, Intellectual Calibers and Research in e-learning", for developing 26 courses in Engineering Mathematics, Mathematics-I, Catalysis In Refining And Petrochemicals, Chemical Process Calculations, Chemical Engineering Plant Design And Economics, Engineering Geology, Risk And Reliability Analyses Of Civil Infrastructure Structure, Environment Impact Assessment and Auditing, Structural Analysis-I, Discrete Structures, Process Equipment Design, Equipment Design, Structural Analysis 2, Foundation Engineering, Principles of Surveying, Geographical Information System, Geomatics Engineering, Engineering Electromagnetics, Semiconductor Devices and Technology, Fluid Mechanics, Principles of Industrial Engineering, Analysis of Metallurgical Failures, Corrosion and Protection, Materials Science and Engineering, Electrical and Electronic Properties of Materials, and Work System Design.

12. SCIENTIFIC AND TECHNICAL REPORTS

(a) Scientific/technical reports prepared under Sponsored Research Projects

1. Kumar. A., A.D. Pandey, M.L. Sharma, J.P. Narayan and S.C. Gupta, EQ: 2015-01 (2014), "Seismological Network Around Tehri Region, (from July 2014 to Sep 2014), Department of Earthquake Engineering, IIT Roorkee
2. Kumar. A., A.D. Pandey, M.L. Sharma, J.P. Narayan and S.C. Gupta, EQ: 2014-38 (2014), "Seismological Network Around Tehri Region, (from April 2014 to June 2014), Department of Earthquake Engineering, IIT Roorkee

(b) Scientific/technical reports prepared under Consultancy Projects.

1. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and R.S. Jakka, EQ: 2015-06 (2015), Site Specific Design Earthquake Parameters for Kholongchu HE Project, Bhutan, Department of Earthquake Engineering, IIT Roorkee
2. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and R.S. Jakka, EQ: 2015-03 (2015), Site Specific Design Earthquake Parameters for Lakhwar HE Project, Uttarakhand, Department of Earthquake Engineering, IIT Roorkee
3. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and R.S. Jakka, EQ: 2015-02 (2015), Site Specific Design Earthquake Parameters for Ramagundam, T.P.P. Aandhra Pradesh, Department of Earthquake Engineering, IIT Roorkee
4. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and R.S. Jakka, EQ: 2014-46 (2014), Site Specific Design Earthquake Parameters for Jidu HE Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
5. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and R.S. Jakka, EQ: 2014-45 (2014), Site Specific Design Earthquake Parameters for Dardu HE Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
6. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and R.S. Jakka, EQ: 2014-44 (2014), Site Specific Design Earthquake Parameters for Turu HE Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
7. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and R.S. Jakka, EQ: 2014-43 (2014), Site Specific Design Earthquake Parameters for Par HE Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
8. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, Kirat Pal, J. Das and S.C. Gupta, EQ: 2014-40 (2014), Site Specific Design Earthquake Parameters for HEO HE Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
9. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, Kirat Pal, J. Das and S.C. Gupta, EQ: 2014-39 (2014), Site Specific Design Earthquake Parameters for Pauk HE Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
10. Sharma. M.L., Ashok Kumar, M. Shrikhande, B. K. Maheshwari and J. Das, EQ: 2014-35 (2014), Site Specific Design Earthquake Parameters for Umngot HE Project, Meghalaya, Department of Earthquake Engineering, IIT Roorkee
11. Sharma. M.L., Kirat Pal, M. Shrikhande, B. K. Maheshwari and J. Das, EQ: 2014-34 (2014), Site Specific Design Earthquake Parameters for Naying HE Project (updated), Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
12. Sharma. M.L., Kirat Pal, J. P. Narayan, M. Shrikhande, B. K. Maheshwari and J. Das, EQ: 2014-33 (2014), Site Specific Design Earthquake Parameters for Ganol HE Project, Meghalaya, Department of Earthquake Engineering, IIT Roorkee
13. Sharma. M.L., J. P. Narayan, M. Shrikhande, B. K. Maheshwari, R. N. Dubey and J. Das, EQ: 2014-32 (2014), Site Specific Design Earthquake Parameters for Bilhaur HE Project, Uttar Pradesh, Department of Earthquake Engineering, IIT Roorkee
14. Sharma. M.L., J. P. Narayan, M. Shrikhande, B. K. Maheshwari, Y. Singh and J. Das, EQ: 2014-31 (2014), Site Specific Design Earthquake Parameters for Swalkot HE Project, J & K, Department of Earthquake Engineering, IIT Roorkee
15. Sharma. M.L., Ashwani Kumar, J. P. Narayan, M. Shrikhande, B. K. Maheshwari and J. Das, EQ: 2014-30 (2014), Site Specific Design Earthquake Parameters for Luhri HE Project, Himachal Pradesh, Department of Earthquake Engineering, IIT Roorkee

16. Sharma. M.L., Amita Sinvhal, J. P. Narayan, M. Shrikhande, B. K. Maheshwari, J. Das and S. C. Gupta, EQ: 2014-29 (2014), Site Specific Design Earthquake Parameters for Renukaji Dam Project, Department of Earthquake Engineering, IIT Roorkee
17. Sharma. M.L., H. R. Wason, M. Shrikhande, J. P. Narayan, A. D. Pandey, Kirat Pal and J. Das, EQ: 2014-26 (2014), Site Specific Design Earthquake Parameters for Subansiri Middle (Kamla) HE Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
18. Sharma. M.L., Smt Amita Sinvhal, J. P. Narayan, M. Shrikhande, B.K Maheshwari, and J. Das, EQ: 2014-25 (2014), Site Specific Design Earthquake Parameters for Gandarbal HE Project, Jammu and Kashmir, Department of Earthquake Engineering, IIT Roorkee
19. Sharma. M.L., H.R. Wason, Ashwani Kumar, Smt Amita Sinvhal, M. Shrikhande, Pankaj Agarwal and J. Das, EQ: 2014-24 (2014), Site Specific Design Earthquake Parameters for Lower Kopili HE Project, Assam, Department of Earthquake Engineering, IIT Roorkee
20. Maheshwari, B.K., D.K. Paul and M.L. Sharma "Liquefaction Potential of NPP Site of Gorakhpur Haryana Anu Vidyut Pariyojana - 1 to 4, Fatehbad, Haryana".
21. Paul, D.K. Seismic Analysis of Concrete Gravity Dam of Luhri HEP 775 MW, Luhri HEP.
22. Paul, D.K. 2D Stability Analysis of 215 m Roller Compacted Concrete Dam at Sankosh HEP (2560 MW), Bhutan, Sankosh HEP (2560 MW), Bhutan
23. Paul, D.K. Seismic Stability Analysis of Concrete Gravity Dam of Demwe Lower HE Project, Demwe Lower HE Project
24. Singh Yogendra and D. K. Paul. Seismic Retrofit of Ward and Corridor Blocks of GTB Hospital, GTB Hospital, New Delhi.
25. Paul, D.K. and Yogendra Singh. Seismic Assessment and Retrofitting of Kendriya Vidyalaya, Gangtok, Kendriya Vidyalaya, Gangtok.
26. Paul, D.K. and Pankaj Agarwal. Seismic Vulnerability Assessment, Repair, Rehabilitation and Retrofitting of FRI Masonry Building, Dehraun, FRI Masonry Building, Dehraun.
27. Paul, D.K. and Y. Singh. Study of Seismic Base Isolation Techniques for Buildings and Development of Appropriate Base Isolation, Research Report, MoES.

4.8 DEPARTMENT OF EARTH SCIENCES

**Academic Staff : 25; Students Admitted : Int. M.Tech. U.G. – 58, PG -15, Ph.D.-28;
Publications: Books/Chapters: 01 Journals -19, Conferences –08,
Projects: Research: 106.03 Lacs Consultancy Project : 43.9 lacs**

1. SALIENT FEATURES

The Department of Earth Sciences (formerly the Department of Geology and Geophysics), was established in 1960. During the span of last five and half decades the department has become one of the leading centers of research, undergraduate and post graduate teaching and industrial consultancy in the field of Earth Sciences. The department has been recipient of financial aid under the prestigious Special Assistance and COSIST programmes of UGC (Ministry of Human Resources and Development, Govt. of India).

The geological studies in the university date back to the middle of the last century. During this period Colonel Sir Proby Cautley who was responsible for establishing the Thomason Engineering College was elected as a Fellow of the Royal Society, London, for his pioneering work on the vertebrate fossils of the Shivalik Ranges. Later Henry Benedict Medlicot, who was also nominated as the Fellow of the Royal Society in 1877, occupied the Chair in Geology and Experimental Sciences at Thomason College, Roorkee.

Presently, the Department runs three courses viz. M.Sc. in Applied Geology (admission through JAM) of two years duration, Integrated **M.Tech Geological Technology** and Integrated M.Tech. in Geophysical Technology (admission through JEE) of five years duration. Research work leading to Ph.D degree in several interdisciplinary areas and research and consultancy programmes constitute an integral part of the departmental activities. The faculty is engaged in a number of research projects sponsored by the Govt. of India agencies like Min. of Earth Sciences, CSIR, DST, ONGC, BRNS etc., and the consultancy projects sponsored by various Industries and government agencies. The Department has **Hamrock Society** consist of activities all faculty and students are members, which steers the Co-curricula promotes the educational aspects of Earth Sciences in the country.

2. LIST OF FACULTY MEMBERS

Professors

Saraf, Arun K., PhD (Dundee)

Digital Image Processing, Geographic Information System, Remote Sensing

Anbalagan, Rathinam, PhD (Kumaun)

Engineering Geology, Rock Mechanics

Bajpai, Sunil, PhD (Punjab)

Vertebrate Palaeontology,

Biostratigraphy

Chakrapani, Govind, J., PhD (JNU)

Environmental Geosciences,

Environmental Geology, Low

Temperature Geochemistry

Gupta, Pravin K., PhD (Roorkee)

Theoretical Geophysics

Gupta, Ravi P., PhD (Roorkee)

Remote Sensing, GIS

Israil, Mohd., PhD (Roorkee)

Goelectromagnetism, Forward &

Inverse Modelling

Mukhopadhyay, Dilip K., PhD

(IIT Kharagpur)

Structural Geology, Metamorphic Petrology

Mukhopadhyay, Sagarika (Ms), PhD

(Roorkee)

Exploration Geophysics, Seismology &

Seismotectonics

Sastry, Rambhatla G.S., PhD (Moscow)

Exploration Geophysics, Geophysical

Inversion

Singh, Sandeep, PhD (Roorkee)

Himalayan Tectonics, Igneous Petrology,

Geochronology

Srivastava, D.C., PhD (ISM)

Structural Geology

Sen, Amit K., PhD (ISM)

Mineral Exploration, Economic Geology,

Igneous Petrology Geochemistry

Joshi, Anand, PhD (Roorkee)

Seismology and Seismotectonics,

Seismic hazard

Krishnamurthy, R. PhD (IIT Bombay)

Economic Geology, Ore Geology

Associate Professors

Kamal, PhD (Canada)

Seismic prospecting, Seismology &

Seismotectonics, Gravity & Mag

Assistant Professors

Maurya, A.S., PhD (Allahabad)

Micropaleontology, Stable isotope,

geochemistry

Pati, Pitambar, PhD (IITRoorkee)

Sedimentology, Basin Analysis,

Geomorphology, Tectonics, Petroleum

Geology, Quaternary Geology

Bhattacharya, B. PhD (University of

Calcutta)

Sedimentology, Ichnology, Sequence

Stratigraphy

Saha, L. PhD, (IIT Khargpur)

Magnetism, Goelectromagnetism,

Inversion of Potential Field, Geohydrology,

Groundwater and Sedimentology

Chatopadhyay, Pallavi

Goswami, Ajanta

Emeritus Fellow

Singh, Vir N., Ph.D. (Roorkee)

Seismology, Exploration Geophysics

Visiting Fellow

Rai S. N.

3. HONOURS AND AWARDS TO FACULTY MEMBERS

Sl. No.	Name of Faculty	Award
1.	Prof. D.C. Srivastava	Member of Research Advisory Committee (RAC) of Wadia Institute of Himalayan Geology, Dehradun
		Member (2015-2017), Sectional Committee of Indian National Science Academy, New Delhi
		Expert member, Standing Committee for Emeritus Scientist and One Time Grant Research, CSIR, New Delhi
		Editor, Journal of Earth System Science
2.	Prof. A.K. Saraf	Member of the Geoscience Advisory Council, Ministry of Mines (Govt. of India), New Delhi
		Associate Editor, International Journal of Remote Sensing
3.	Dr. A S Maurya	Member, Board of Studies, C. C. S. University Meerut, Meerut

4. PARTICIPATION OF FACULTY IN CONFERENCE/ SEMINAR/ SYMPOSIUM/WORKSHOP/ GUEST LECTURES

Sl. No.	Name of Faculty	Details of Conf./Seminar/Symp./Workshop/Guest Lectures	Venue	Date
1.	Dr. D.C. Srivastava	Executive council meeting	North-Eastern Hill University, Shillong	June 17, 2014
		Screening committee meeting for eligible scientists to next higher grades.	Wadia Institute of Himalayan Geology, Dehradun	July 3, 2014
		Expert, The National Assessment and Accreditation Council, Bangalore for NAAC assessment of Goa University.	Goa University, Goa	July 7-10, 2014
		Selection Committee meeting of JRF	Wadia Institute of Himalayan Geology, Dehradun	Aug. 4, 2014
		Expert committee meeting of Bachelor's and Master's degree programmes in Geology	IGNOU, New Delhi	Sept. 01, 2014
		Expert member, Standing Committee for Emeritus Scientist and One Time Grant Research Committee meeting	CSIR, New Delhi	Oct. 10, 2014
		American Geophysical Union Meeting, December, 2014	San Francisco, USA	Dec. 15-19, 2014
		Assessment Promotion Committee meeting for eligible Scientists for promotion to next higher grades	Wadia Institute of Himalayan Geology, Dehradun	Jan. 16, 2015
		Selection Committee meeting for Scientist 'B'	Wadia Institute of Himalayan Geology, Dehradun	Jan. 24 & 25, 2015
2.	Dr. Arun K. Saraf	13th International Symposium on Geoinformation (ISG-2014)	Kuala Lumpur, Malaysia	Oct.14-15, 2014
		National Seminar on Geo-Environmental Hazards and Neo-Tectonic Activities in Himalaya	Department of Geology, HNB Garhwal University Campus, Badshahi Thaul, Tehri Garhwal	Oct. 28-30, 2014
		Seminar on Geospatial Technology in Natural Resource Management	Indian Society of Remote Sensing and Punjab Remote Sensing Centre, Ludhiana	March 17-18, 2015
3.	R.G.S. Sastry	Symposium on the application of Geophysics to engineering and environmental problems (AGEEP) 2014	Boston, USA	March 16-20, 2015

Sl. No.	Name of Faculty	Details of Conf./Seminar/ Symp./ Workshop/Guest Lectures	Venue	Date
4.	S. Mukhopadhyay	American Geophysical Union Fall Meeting	San Francisco	Dec. 15-19, 2014
5.	S. N. Rai Hon. Visit. Fellow	Invited talk	National Institute of Hydrology, Roorkee	Oct. 20, 2014
		Invited talk	Dept. of Hydrology, IIT Roorkee	Sept. 10, 2014
		Workshop (Invited talk)	Indian National Committee of IAH New Delhi	August 23, 2014
		51st convention of IGU	University of Kurukshetra	Nov. 19-21, 2014
6.	Prof. Anand Joshi	National Center for Earthquake Engineering, Taiwan	Research under Indo Taiwan project	Jul. 10-26, 2014
7.	Prof. R. Krishnamurthi	International Conference on Geoscience Education	University of Hyderabad, Hyderabad.	Sept. 5-9, 2014

5. PARTICIPATION OF FACULTY IN SHORT COURSES

Sl. No.	Name of Faculty	Name of Course	Venue	Date
1.	Prof. Arun K. Saraf	Workshop on Management of Water Resources, Glaciers and Climate Change with Special Reference to Uttarakhand	National Institute of Hydrology, Roorkee	Nov. 01-03, 2014

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/ INTERNATIONAL)

Sl. No.	Name	Designation and affiliation	Purpose	Dates
1.	Sri P.C. Parakh	IAS (Former Secretary, Ministry of Coal, Govt. of India)	Special Lecture	Aug. 21, 2014
2.	Mr. Alik Sundar Majumdar	Institut fur Mineralogie, WWU Munster, Germany	Special Lecture	Oct.10, 2014
3.	Dr. Chun-Hsiang Kuo and. Dr. Che Min Lin,	Researcher, National Center for Earthquake Engineering, Taiwan	Research under Indo Taiwan project	Dec. 09 - 17, 2014
4.	Dr. Vibhuti Rai	Prof. & Head, Deptt. of Geology, Lucknow University	Special Lecture	Oct. 02, 2015
5.	Dr. K.S. Krishna	Chief Scientist, NIO, Goa	Special Lecture	Feb. 02, 2015
6.	Prof. Laurent Godin	Professor, Dept. of Geological Sciences and Geological Engineering, Queen's University Ontario, Canada	Special Lecture	Feb. 23, 2015

7. SPONSORED/CONSULTANCY PROJECTS

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of Projects	Sponsoring Agency	Amount in Lacs
1.	Prof. A.K. Sen	Hydrothermal Alteration Pattern Based Exploration Model for Unconformity Type Uranium and Other Associated Metals in Southern Part of Sonari Basin, Lalitpur Distt., U.P.	BRNS, Deptt. of Atomic Energy, Govt. of India	15.57
2.	Prof. R. Krishnamurthi	Lode gold mineralization in the Southern Granulite Terrain, Kerala: geochemical and petrological constraints on their genesis.	DST New Delhi	40.30

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of Projects	Sponsoring Agency	Amount In Lacs
1.	Prof. S. Mukhopadhyay	Three Dimensional Seismic Structure and Seismicity in the Himalaya Region	DST-RFBR New Delhi	13.49
2.	Prof. Anand Joshi	Crustal attenuation studies of the Garhwal and Kumaon Himalaya for estimation of seismic hazard 2012-2015	DST New Delhi	51.66
		Simulation of great earthquake in the central seismic gap region of Himalaya and its related seismic hazard using modified semi empirical approach, 2013-2016	DST New Delhi	17.10
3.	Prof. D.C. Srivastava	New Methods for Strain Estimation from Deformed Markers in Rocks	DST New Delhi	14.72
		JC Bose Fellowship	Science and Engg. Research Board, New Delhi	68.00
4.	Prof. D.K. Mukhopadhyay	Structural and Petro- Mineralogical Controls of Uranium Mineralization in Hurra-Ki-Dhani-Jahaz area Sikar	DAE, BRNS	29.74
5.	Dr. B. Bhattacharya	Sediment-Organism Interaction Pattern in Basal Gondwana Sediments of Raniganj Basin, India and its bearing on late Paleozoic Paleoclimatic Changes	DST New Delhi	18.85
6.	Prof. M. Israil	Deciphering 3D Geoelectrical Structure from MT/MV Data Recorded in Garhwal Himalayan Region	DST New Delhi	19.58
		Magnetotelluric Studies for Delineation of 3-D Geoelectrical Structure of Garhwal Himalaya	MoES New Delhi	24.34
7.	Prof. Sandeep Singh	Text- Book Series for the Graduate studies in Earth Sciences	MoES New Delhi	88.17
8.	Prof. G.J.Chakrapani	Water and Sediment Characterization of Kallai River, Kerala: Geochemical and Sedimentological Approach	MoES New Delhi	29.36
9.	Dr. Vikram Vishal	INSPIRE Faculty Award	DST New Delhi	83.00

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of Projects	Sponsoring Agency	Amount In Lacs
1.	A. K. Sen	Study of Alkaline-Carbonatite Complexes as Potential Resource for REEs, Nb-Ta and U-Th	Ministry of Mines, Govt. of India	38.57
2.	Prof. Anand Joshi	Modelling of finite ruptures in three dimensionally attenuating medium for detail seismic hazard studies in the Kumaon Himalaya using strong motion data, 2014-2017	MoES New Delhi	23.50
3.	Prof. Sandeep Singh	Migmatization, melting Leucogranite generation, and exhumation of the Higher Himalayan Crystallines (HHC), Sikkim Himalaya	MoES New Delhi	23.96
4.	Dr. Lopamudra Saha	Collision of the Singhbhum Craton with the Eastern Ghats Mobile Belt: Testimony of Early Palaeozoic Accretionary Orogen in the Indian Subcontinent	SERB (Science and Engg. Research Board, New Delhi)	20.00

8. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (>Rs. 10 lacs.) (A brief Write-up upto 100 words) (New Projects during 2014-15)

Study of Alkaline-Carbonatite Complexes as Potential Resource for REEs, Nb-Ta and U-Th

The alkaline-carbonatite complexes are geologically rare igneous association and also their genesis is highly debated. But one of the major characteristics for recognition of carbonatite is trace element composition. These rocks are enriched in many incompatible elements (Nb, Ta, U, Th, etc.) and REEs. Such enrichment is possible when the source is enriched or some process like fractionation of magma, separation of hydrothermal fluid or even weathering, are active for enrichment. Undoubtedly, the chance of formation of ore deposit is more when both enrich source and efficient process act together. The first hand experience clearly indicates such possibilities in the proposed study areas: Sevathur, Samalpatti and Pakkanadu (Tamil Nadu), Amba Dongar (Gujrat) and Sung Valley (Meghalaya).

4.9 DEPARTMENT OF ELECTRICAL ENGINEERING

Academic Staff: 32, Student Admitted: UG/Int. M.Tech: 142, PG: 90, Ph.D.: 14

Publication in: Journals 14, Conferences: 22, Book/Books Chapters: 01

1. SALIENT FEATURES

The department has modified few laboratories and upgraded them. The department established a new laboratory named as “Standard and Calibration laboratory” where various calibrating equipments are installed. which can provide service to industry and will be used for in-house calibration of the equipments and also be used by the U.G., P.G. and Ph.D. scholars.

The department also procured RTDS capable of operating continuously in real-time to support research programmes as well as U.G. and P.G. students.

2. Academic Staff

Professors

Agarwal, Pramod, Ph.D (Roorkee)

Electric Drives and Power Electronics

Anand, R.S., PhD (Roorkee)

Instrumentation & Signal Processing

Das, B., PhD (IIT Kanpur)

Power System Engineering

Gupta, Satya P., PhD (Roorkee)

Electric Drives and Power Electronics

Kumar, Vinod, PhD (Roorkee)

Instrumentation and Signal Processing

Maheshwari, R.P., PhD (Roorkee)

Instrumentation & Signal Processing

Dewal, M.L., Ph.D (Roorkee)

Instrumentation & Signal Processing

Padhy, N.P., PhD (Anna Univ.)

Power System Engineering

Pillai, G.N., Ph.D (IIT Kanpur)

System and Control

Prasad, Rajendra, PhD (Roorkee)

System Engineering and Operation Research

Singh, Girish K., PhD, (BHU)

Electric Drives and Power Electronics

Singh, S.P., PhD (Roorkee)

Electric Drives and Power Electronics

Srivastava, Satya P., PhD (Roorkee)

Electric Drives and Power Electronics

Associate Professors

Tyagi, Barjeev, PhD (IIT Kanpur)

System and Control

Fernandez, Eugene, Ph.D (Roorkee)

Power System Engineering

Gupta, Indra (Ms.), PhD (Roorkee)

System and Control

Gupta, C.P, PhD (IIT Kanpur)

Power System Engineering

Pathak, M. K. PhD (IIT Delhi)

Electric Drives and Power Electronics

Assistant Professors

Bhattacharya Avik, Ph.D. IIT Kharagpur

Power Electronics, Power Quality, Facts

Choudhuri S.G, PhD (IIT Delhi)

Electric Drives and Power Electronic

Das, S. (Ms), PhD (IIT Kharagpur)

Electric Drives and Power Electronic

Hote, Yogesh Vijay PhD (Delhi)

System & Control

Jena, Premalata (MS) Ph.D,

Power System Engineering

Kumar, Vishal, PhD (IIT Roorkee)

System and Control

Kumbhar, Ganesh Babu, PhD (IIT Bombay)

Power System Engineering

Pant, Vinay, PhD (Roorkee)

Power System Engineering

Sharma, Ambalika (Ms), ME (Roorkee)

Instrumentation and Signal Processing

Sumathi, P. (Ms) PhD (IIT Madras)

Instrumentation and Signal Processing

Tripathi, Manoj PhD (Roorkee)

Instrumentation & Signal Processing

Guest Faculty

Vasantha, Mooteri K., M. Tech. (IIT Bombay)

System and Control

3. HONOURS AND AWARDS TO FACULTY MEMBERS

1.	Dr. S.P. Gupta	Attended an Award Function at Le Meridian Hotel, New Delhi hosted by the Competition Success Review. IIT Roorkee was given TOP INSTITUTE OF INDIA Award. The award was given by Shri S.K. Sachdeva, Chairman & Editor, Competition Success Review on April 19, 2015.
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4. PARTICIPATION OF FACULTY IN CONFERENCE/ SEMINAR/ SYMPOSI/WORKSHOP/ GUEST LECTURES

Sl. No.	Name of Faculty	Name of the Conference/ Seminar/ Symposia/ Workshop/Guest Lecture	Venue	Dates
1.	Dr. Manoj Tripathy	6 th IEEE Power India Instt.	New Delhi	July, 5-7, 2014

Sl. No.	Name of Faculty	Name of the Conference/ Seminar/ Symposia/ Workshop/Guest Lecture	Venue	Dates
2.	Dr. Vishal Kumar	IEEE, PES General Meeting	Washington D.C.	July 27-31, 2014
3.	Dr. N. P. Padhy	IEEE, PES General Meeting	Washington D.C.	July 27-31, 2014
4.	Dr. G. B. Kumbhar	IEEE, PES General Meeting	Washington D.C.	July 27-31, 2014
5.	Dr. Manoj Tripathy	8 th International Conference on Capacitors	New Delhi	Nov. 20-21, 2014
6.	Dr. Yogesh Vijay Hote	International Conf. on Mechanical Manufacturing and Control 9ICMMC 2014)	Singapore	Nov. 21-23, 2014
7.	Dr. M. K. Pathak	4 th International Conference on Power and Energy Systems.	Singapore	Nov. 21-23, 2014
8.	Dr. G. N. Pillai	IEEE Symposium Series of Computational Intelligence (IEEE, SSCI - 2014)	Florida U.S.A.	Dec. 6-13, 2014
9.	Dr. Rajendra Prasad	ETEEE-2015	New Delhi	Feb. 2-3, 2015
		Micro Electronics, Circuits & Systems	New Delhi	Feb. 2-3, 2015

5. i. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Bhaveshkumar R.Bhalja	Banes and Boons of Protection Issues of Microgrid/ Distrubuted Generators Interfaced Distribution System	SERB, New Delhi	24, 17, 880/-
2.	P. Sumathi	Experimental Investigation on Active Vibration Control of Single-Link Flexible Manipulator through Online Vibration Mode Estimation	DST	12.96

ii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. P. Sumathi Prof. Vinod Kumar	Field Deployable Signal Processing System for Measurement of Path Integrated Gas Concentration in Real Time	DRDO	18.975

4.10 DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Academic Staff: 24, Students Admitted: UG/INT. M.Tech/M.Sc 75, PG 110, Ph.D 2 Publications in: Journals. 66, Conferences 43, Book/Books Chapters.1 Projects: Research (Rs. in Lacs) 805.48

1. SALIENT FEATURES

The Department of Electronics & Communication Engineering is one of the major department of the Institute in terms of the number of students and number of programmes. It offers a wide spectrum of academic programmes at undergraduate and postgraduate level. Undergraduate programmes lead to B.Tech. in Electronics and Communication Engineering. Postgraduate programmes offered by the department are Communication Systems, RF and Microwave Engineering, System Modeling and Control, and Microelectronics & VLSI. In addition, the department offers two Integrated Dual Degree (IDD) programmes, leading to B.Tech. (Electronics & Communication) & M.Tech. (Wireless Communication). There are more than 32 full time research students working in various disciplines.

The department has always been on a high growth path and has experienced faculty with a strong commitment to teaching and sponsored research. A number of new sponsored research projects have been received in the current year in diverse areas like RF and Microwave Engineering and VLSI design. A new laboratory has been set up for research in Data Mining and Data Warehousing and capacity expansion of existing laboratories have been carried out. A new Computer Laboratory with about 90 computers has been built to cater to the needs of B.Tech Programmes. Five new faculty members have joined the department in the current year.

2. LIST OF FACULTY MEMBERS

Professors

Kartikayan, M.V., PhD (IT-BHU)

Millimeter/THz Wave Engineering, Microstrip Antennas, Soft Computing Techniques, HEAD

Nigam, Madhav J., PhD (Roorkee)

Digital Image Processing, Guidance and Control in Navigational Systems

Saxena, Ashok K., PhD (Sheffield, UK)

Semiconductor Materials & Devices

Singh, Dharmendra, PhD (IT-BHU)

Polarmetric & Interferometric Applications of Radar, Optical & Microwave Remote Sensing

Associate Professors

Ghosh, D., PhD (IISc Bangalore)

Communication Systems, Image and Video Processing, Computer Vision

Kumar, Vijay, PhD (Roorkee)

Fuzzy Control, Control Systems.

Pathak, Nagendra P. PhD (IIT Delhi)

Dielectric Waveguides, Microwave & mm-wave ICs, Adaptable RFICs

Dasgupta, Sudeb, Ph.D. (BHU), Varanasi)

Adiabatic Logic for Portable Applicatons, FINFET, PDSOI, FDSOI

Anand, B., PhD (IIT Bombay)

Device Circuit Co-design, Delay and Power Models for VLSI, Small Dimension Effect

Kaushik, B.K. Ph.D. (IIT Roorkee)

Carbon nanotube based transistors and Interconnects organic, Thin Film Transister Modeling.

Manhas, Sanjeev Ph.D (Leicester UK)

Nanoscale MOSFET modeling, MOS Device Reliability, Semiconductor Devices

Patnaik, Amalendu PhD (Berhampur University)

Antennas, Evolutionary methods for Antenna Design, Antenna Signal Processing

Assistant Professors

Chakravorty, Siddharth, M.E. (Roorkee)

Digital Communication, Wireless Communication

Tyagi, Anshul Ph.D. (IIT Delhi)

Wireless Communications, Error Control Coding, UWB Communications.

Pankajakshan, Vinod, Ph.D. (IIT Guwahati)

Signal Processing, Digital Water Marking, Image Forensics.

Panigrahi, Rajib K., Ph.D (IIT Guwahati)

Information extraction from radar images, Radar signal processing, target detection and estimation, Radar based remote sensing.

Datta, Arnab., Ph.D. (IIT Mumbai)

Electrical characterization and modeling semiconductor devices, Electrical characterization and modeling of semiconductor device, MEMS, semiconductor photonic device, semiconductor photonic device.

Rawat, Karun., Ph.D. (University of

Calgary) Doherty PA, pulse gate modulation, High Efficient PA modes, Transceiver Design, Chip Design:, CMOS and GaN MMIC based power amplifiers design, mixed signal design, Modelling:, RF Power Amplifier Design with Embedding Device Model, RF Circuits:, Multi-port Networks, Modulator, RF Analog Processing, mixers, LNA.

Kumar, Brijesh. (University of Minnesota, twin cities) Optoelectronics, Quantum Dot-Light Emitting Devices, High efficiency solar cells.

Pradhan, Pyari Mohan. Ph.D. (Indian Institute of Technology Bhubaneswar)

Wireless Communication, Cognitive Radio, Time-Frequency Representation, S-transform, Texture analysis, Wireless Sensor Network, Distributed Data Estimation
Das, Bishnu Prasad. Ph.D. (IISc, Bangalore)
 On-chip variability characterization, DFM-aware regular standard cell library design, Resilient circuit design, Hardware security, Low power circuit design.

Rawat, Meenakshi. Ph.D. (University of Calgary)
 Digital and RF predistortion for power amplifiers, Software defined radio solutions for multiband and MIMO transmission, RF/digital Signal processing, Digital signal processing for filterless transmitter and receivers.

Emeritus Fellows
 Prof. R. Mitra
 Prof. S.N. Sinha

3. HONOURS AND AWARDS TO FACULTY MEMBERS

Sl. No.	Name of Faculty	Award
1.	Dr. Dharmendra Singh	IFCAM Visiting Fellowship (Indo-French)
2.	Dr. Amalendu Patnaik	1. IEEE AP-S R10 Distinguished Speaker 2015-2016. 2. Editorial Board Member: International Journal of RF and Microwave Computer Aided Engineering (Wiley).
3.	Dr. Meenakshi Rawat	Best paper (oral presentation) award, (ARFTG-83), 83rd Microwave Measurement Conference, Microwave Measurements for Emerging Technologies, June 6th, 2014 - Tampa, Florida.
4.	Dr. Karun Rawat	Appointed Technical advisor for Avantel Ltd.

4. PARTICIPATION OF FACULTY CONFERENCES/ SEMINAR/SYMPOSIA/ WORKSHOP/GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
1.	Dr. Amalendu Patnaik	Conference: Progress In Electromagnetics Research Symposium (PIERS 2014). (Invited talk)	Guangzhou, China	25/08/2014-28/08/2014
2.	Dr. Sanjeev Manhas	Attended International Conference on Emerging Electronics(ICEE)	Indian Institute of Science	Dec. 4 – 6, 2014.
3.	Dr. Sanjeev Manhas	Attended International Conference on Solid State Devices and Materials (SSDM2014)	Tsukuba, Japan	Sept 9 – 13, 2014
4.	Dr. Sanjeev Manhas	IEEE ED MQ Guest lecture at one day National Seminar on Devices and Circuits (NCDC)	NIST, Behrampur, Orisa	Feb 20 – 21, 2015
5.	Dr. Bishnu Prasad Das	Invited talk on "Warning Flip-flop for Dynamic Voltage Scaling in ASICs" in that workshop.	ECE dept, IIT Roorkee	Oct 18 – 19, 2014
6.	Dr. Brajesh Kumar Kaushik	Presented paper in 64th IEEE Electronic Components and Technology Conference (ECTC 2014) on "Effect of polymer liners in CNT based through silicon vias".	Orlando, USA	May 27 – 30, 2014
7.	Dr. Brajesh Kumar Kaushik	Presented paper in 64th IEEE Electronic Components and Technology Conference (ECTC 2014) on "Modeling of crosstalk effects in coupled MLG NR interconnects based on FDTD Method."	Orlando, USA	May 27 – 30, 2014
8.	Dr. Brajesh Kumar Kaushik	Presented paper in IEEE Radio Frequency Integrated Circuits Symposium (RFIC 2014) on "Analysis of crosstalk delay and area for MWNT and bundled SWNT for global VLSI interconnects."	Tampa, USA	June 1 – 3, 2014

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
9.	Dr. Brajesh Kumar Kaushik	Delivered expert talks in “International Conference on Recent Advances in Computers, Communications, and Electronic Engineering” (COMMUNE-2015) and “UGC Sponsored National Seminar on Electronic Devices, Systems, and Information Security” (SEEDS-2015) on the following topics: Graphene based on-chip interconnects and TSVs – Prospects and challenges Spin transfer torque based magneto-resistive memories	University of Kashmir, Hazratbal, Srinagar, J & K, India	March 16 – 18, 2015
10.	Dr. Karun Rawat	Presented paper on “Design Strategy for Tri-Band Doherty Power Amplifier” 15th Annual IEEE Wireless and Microwave Technology Conference (WAMICON),	Tampa, Florida,	Jun. 6, 2014.
11.	Dr. Karun Rawat	Workshop organizer/Speaker for “Power Amplifiers and digital schemes for Efficient Multi-band/Multi-Standard Wireless Transmitters in context of Software Defined Radios” at IEEE International Microwave and RF conference (iMaRC) 2014.	Bangalore	Dec. 15 – 17, 2014.
12.	Dr. Karun Rawat	Power Amplifier Session Co-chair at IEEE International Microwave and RF conference iMaRC 2014.	Bangalore	Dec. 15 – 17, 2014.
13.	Dr. Dharmendra Singh	Invited Talk	INRIA, France	June 4, 2014. March 30, 2015.
14.	Dr. Dharmendra Singh	Invited Lecture: Trends in Signal Processing and Communication.	IEEE U.P Section.	April 12 – 14, 2014
15.	Dr. Dharmendra Singh	Invited Talk in FDP	Kurukeshtra University,	May 10, 2014.
16.	Dr. Dharmendra Singh	International Training Course Microwave Remote Sensing and Application	Indian Institute of Remote Sensing, Dehradun	May 13, 2014.
17.	Dr. Dharmendra Singh	Workshop on INSAT-3D,	Space Application Center, Ahmedabad,	July 29 – 30, 2014.
18.	Dr. Dharmendra Singh	Invited Talk	Faizabad University,	Oct 1, 2014.
19.	Dr. Dharmendra Singh	Invited Talk in National Symposium on Instrumentation	(NSI-39-Haridwar)	Oct 15 – 17, 2014.
20.	Dr. Dharmendra Singh	Converging Technologies Beyond 2020” (2CTB-2020)	Kurukeshtra University	Nov. 28 – 29, 2014.
21.	Dr. Dharmendra Singh	Invited Talk: International Conference on Industrial and Information System.	IIIT, Gwalior.	Dec. 15 – 17, 2014.
22.	Dr. Meenakshi Rawat	Presented paper titled, “Characterization and modeling scheme for harmonics at power amplifier output” at 83rd Automatic RF Techniques Group (ARFTG) conference 2014.	Tampa, USA	Jun. 6, 2014.
23.	Dr. Meenakshi Rawat	Delivered talk on " Digital techniques in PA design: Behavioral modelling and Digital predistortion for PA harmonic and intermodulation distortion mitigation" as a part of workshop at IEEE International Microwave and RF conference (iMaRC) 2014.	Bangalore	Dec. 15, 2014.
24.	Dr. Meenakshi Rawat	Presented paper titled “Digitally supported feed-forward harmonic cancellation for filter-less ultra-wideband transmitters” at IEEE International Microwave and RF conference (iMaRC) 2014.	Bangalore	Dec. 16, 2014.
25.	Dr. Meenakshi Rawat	Session Co-chair for session titled “MMwave and THz Designs “at IEEE International Microwave and RF conference iMaRC 2014.	Bangalore	Dec. 17, 2014.

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of Course	Venue	Date
1.	Dr. Brajesh Kumar Kaushik	Delivered Lectures in "Micro and Nano Electro-Mechanical Systems (MEMs and NEMs)"	QIP Center, IIT-Roorkee	June 23 - 27, 2014
2.	Dr. Karun Rawat	Cabinet Secretariat, Two lectures delivered on "RF Power Amplifiers and Application of Digital Techniques in RF" and "RF Techniques For Software Defined Radios".	I.I.T., Delhi	11-12, April 2014

6. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./seminar/symp./ workshop	Name of the Chairman	Sponsored by	Dates
1.	IEEE Mini Colloquium on Electro Devices and Application	Dr. Sanjeev Manhas	ECE dept IIT Roorkee	Sept. 19, 2014.
2.	Conference "RAECE-2015"	Dr. Dharmendra Singh	Key-sight Tech. Rohde & Schwarz	Feb. 13-15, 2015.
3.	NPTEL web course on "Advanced Antenna Theory"	Developed by Dr. A. Patnaik		

7. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Source of funding	Nos. of Participants	Dates
1.	Dr. Sanjeev Manhas	QIP lecture MEMS and NEMs,			
2.	Dr. Brajesh Kumar Kaushik	Coordinator of Course "Micro and Nano Electro-Mechanical Systems (MEMs and NEMs)" conducted by QIP Center, IIT-Roorkee			23/06/2014 – 27/06/ 2014.

8. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Sanjeev Manhas	Modeling for Design and Development of CNT based Chemical Gas Sensor, 2011-13,	DRDO	22
2.	Dr. Sanjeev Manhas	Silicon nanowire MOSFET process/device simulation and modeling for circuit simulation, 2009-12		4
3.	D. Singh	Study of Altimetric Measurements Over Land: A Special Application of Altimeter for Water flow/Water Logging Observation	SAC (ISRO), Ahmedabad	15.82
4.	D. Singh	SPACFIRE - Application of INSAT -3D Data for Sub-surface Fire Detection and Monitoring, Space Application Center	SAC (ISRO), Ahmedabad	10.00
5.	Dr. Amalendu Patnaik	Consultancy Project: Design and testing of Tx-Rx S-band antenna for INSAT Sponsor	Avantel Limited, Visakhapatnam, Andhra Pradesh	
6.	Dr. Karun Rawat	Experiments development for Software defined radio SDR-lab" by M/S Amitec Electronics Ltd., New Delhi	I.I.T. Delhi	5.86

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. A.K. Saxena Dr. S. Manhas	Investigation of Si nanowire FET reliability.	DST	42.4
2.	D. Singh	Optimal Inference in complex and turbulent data.	Indo-French Center	19.39
3.	D. Singh	Study of Development of Multi-Layer and FSS for Application of Radar Wave Application.	DRDO	84.036
4.	Dr. M.V. Kartikeyan	Analysis and Simulation of Beam-Wave Interaction and the Design of Specific Modules for the Design & Development of a 42 GHz, 200 kW, CW Gyrotron.	DST	84.6
5.	Dr. Karun Rawat	Broad-Band Gallium Nitride Based Doherty Power Amplifier for Efficient Amplification of High Crest Factor Signals	DST	59

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	D. Singh/ D. Ghosh/Sandeep K. Garg	Agriculture Information System for ICT	RailTel	72.00
2.	D. Singh	Optimal Inference of Data Fusion for Land Cover	DST-INRIA	27.00
3.	Dr. Sanjeev Manhas	Scheme of Financial Assistance for setting up of Electronics and ICT Academies	DEITY	10,000.00 (10 crore) (submitted)
4.	Dr. A. Bulusu, Dr. S. Dasgupta		DST	40
5.	Dr. S. Dasgupta	FinFET based SRAM Design	DEITY	30
6.	Dr. M. V. Kartikeyan	Studies on RF behaviour and Output System for Specific mm-wave Gyrotron	MTRDC/ DRDO	9.6

9. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (>Rs. 10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2014-15).

i. Project Title: **Agricultural Information System for ICT**, PI: Dr. Dharmendra Singh

Basically this project deals with two major objectives in which first objective is to use of satellite data for development of agriculture information system and second objective is to develop a system for real-time data capture via imaging of diseased plants in the field, on the field disease diagnosis and transmission of data for use by agricultural administrators to support operational decisions such as pesticide application. Accurate and timely information of agricultural field is very much required, as it can be used to evolve strategies for sustainable management of agricultural resources. Nowadays, satellite data, computer advances and communication technology may offer great scope for efficient planning and monitoring of agricultural resources in more efficient ways. Monitoring of agricultural system generally depends upon actual information of cultivated area, crop type, crop condition and region wise knowledge of agricultural system and effect on meteorological conditions. To provide this valuable information to various users like, satellite data may play a major role. Another important challenge is the definition of a cost effective solution, so end users like farmers can use these information with minimum cost. In this project we propose to develop methods for fusing the information of various satellite data in order to monitor crop area, crop type, crop health condition and soil moisture and this information can be timely send to end users by Information Communication Technology. The ICT system will consist of agricultural statistics for providing information about trends and changes in crops and meteorological conditions. A WEB/SMS information diffusion system will be experimented.

ii. Project Title: **Broad-Band Gallium Nitride Based Doherty Power Amplifier for Efficient Amplification of High Crest Factor Signals**

This project targets the design of broad-band Gallium nitride (GaN) based Doherty power amplifier (PA) for efficient amplification of signals with high crest factor. The signals which utilize spectrum efficient modulation schemes such as QAM, OFDM etc., have high crest factor corresponding to high peak to

average power ratio (PAPR). Thus, Doherty PA is one solution for efficient power amplification of such signals, which can operate with high DC to RF conversion efficiency even at average power level backed-off from its maximum output power at saturation. The Doherty PA is an inherently narrow-band structure and enhancing its bandwidth is the key objective of this research project. This will provide multi-band capability to the Doherty PA. Moreover, in order to achieve multi-standard capability, the project also targets for new architectural solutions of Doherty PA which can handle signals with different modulations schemes and hence different crest factors.

10. SCIENTIFIC AND TECHNICAL REPORTS

Sl. No.	Title of the Projects	Participants	Authors	Remarks
1.	Study of Altimetric Measurements Over Land: A Special Application of Altimeter for Water flow/Water Logging Observation	SAC (ISRO), Ahmedabad	D. Singh	-
2.	SPACFIRE - Application of INSAT - 3D Data for Sub-surface Fire Detection and Monitoring, Space Application Center	SAC (ISRO), Ahmedabad	D. singh	-
3.	Experiments development for Software defined radio SDR-lab	M/S Amitec Electronics Ltd., New Delhi	Dr. Karun Rawat	-

4.11 DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

Academic Staff: 14, Students Admitted: Ph.D:12 Publications in: Journals: 32, Conferences: 20, Book/Books Chapters:09 Projects: Research (Rs. in Lacs) 31.00

1. SALIENT FEATURES

The Department of Humanities & Social Sciences contributes significantly in teaching and research by teaching score of core and elective courses to students of all branches of B.Tech., B.Arch., MCA and MBA. It also offers a specialized course on Technical Communication to PG students besides running an evening course on German Language. The P.G. (Economics) course has been approved by the Senate and will be started from the session 2016-17. The Department has Ph.D. programs in the disciplines of Economics, English, Psychology, Sociology and Fine Art and encourages students to undertake interdisciplinary research. The Department has a State of the Art Language Lab with a seating capacity of 55 students and advanced language learning software to train students in LSRW; a Psychology Lab which contains tests and research material in the area of Organizational Behavior; as well as an Economic Data Base containing Data about various macro-economic indicators of the economy that help the researchers in various fields. The Department also has a Computer Laboratory and a customized Research Scholar Cubicle which help students in their research. To add to its vibrant academic inputs the department keeps on organizing short term courses and seminars/conferences and symposia from time to time.

2. LIST OF FACULTY MEMBERS

Professors

Singh, Sukh Pal (Ph.D. Meerut)

Head of Department

Economics (General), Rural Development, Agricultural Economics, Labour Economics, Irrigation & Water Resource Economics

Jha, Pashupati (Ph.D. IIT Delhi)

Modern British, American, Indian English Literature and Professional Communication

Nauriyal, Dinesh K. (Ph.D. Garhwal)

Economics (General), Demography, International Economics, Development Economics, Economic Appraisal of the Projects

Rastogi, Renu – (Ph.D. IIT Kanpur)

Organizational Behaviour, Counselling & Women's Studies

Gaur, Rashmi (D. Phil. Allahabad)

Professional Communication, Fiction, Gender/Culture Studies, Critical Theories

Kumar, Nagendra, Ph.D. (BHU)

Modern Literature, Technical Communication, Contemporary Fiction, Critical Theories, Literature of Indian Diaspora

Associate Professors

Jha, Smita, Ph.D. (Bihar), PGDTE (Hyderabad)

ELT, Linguistics, Technical Communication, Indian English & Modern Literatures

Assistant Professors

Mishra, Anindya Jayanta, Ph.D. (IIT Kanpur)

Social Gerontology, Sociology of Health, Sociology of Industry

Garg, Pooja, Ph.D. (IIT Roorkee)

Organisational Behaviour, Human Resource Management

Gulati, Rachita, Ph.D. (GNDU, Punjab)

Productivity & Efficiency

Sen, Subir, Ph.D. (ISEC, Bangalore)

Applied Econometrics, Economics of Risk and Uncertainty

Pattnaik, Falguni, Ph.D. (IIT Kharagpur)

Labour Market Dynamics, Labour Economics

Singh, Ram Manohar, Ph.D (IIT Bombay)

Psychology, Personality & individual differences, Organizational Behavior

Mishra, Indervir, Ph.D (IIT Kharagpur)

Cognitive Psychology

3. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/SYMPOSIUM/WORKSHOP/GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop /Guest Lecture	Venue	Date
1.	Prof. S.P. Singh	Attended 10th Annual Conference of Uttar Pradesh-Uttarakhand Economic Association (UPUEA) and delivered a key-note lecture on "Inclusive and Sustainable Growth in India"	National PG College Lucknow	Oct. 6-7, 2014
		Attended National Seminar on Agrarian Distress in India, organised by CSD, New Delhi	India International Centre New Delhi	Nov. 11-12, 2014
		Attended 18th Annual Conference of IPEA and participated in the panel discussion on "Development of Uttar Pradesh: Challenges and Possibilities"	GIDS, Lucknow	Nov.15-16, 2014
		Deliver a lecture on "Inclusive and Sustainable Development: Political Rhetoric or Real Concern?" in a Seminar on "Political Economy of India 1991-2014: Challenges, Opportunities & Alternative	Master School of Management, Meerut	Nov, 9, 2014
		56th Annual Conference of Indian Society of Labour Economics	BIT Mesra, Ranchi	Dec. 16-18, 2014
		Guest Lecture in the Inaugural Session of ICSSR Sponsored "Research Methodology Workshop"	GIDS, Lucknow	March 16, 2015
		Delivered guest lecture on "Emerging Trends in Women Entrepreneurship in India" in the National Workshop	SMP Govt. Girls PG College Meerut	March 13, 2015
		Key-note speaker in the inaugural function of the National Conference on "Make-in-India-A Vision, Strategy & Goal"	S D College of Engineering Technology, Muzaffarnagar &	March 28-29, 2015
2.	Prof. Pashupati Jha	Keynote Speaker at UGC National Seminar on Indian English Literature	JNC, Pasighat Arunachal Pradesh	Oct.9-10, 2014
		Plenary Speaker at 59th All India English Teachers Conference	Rajasthan Technical University, Kota	Dec.19-21, 2014
3.	Prof. D. K. Nauriyal	Delivered a A. S. Shergill Memorial Lecture on 'India in World R&D Atlas: How far Has New Patent Regime Helped?'	Guru Nanak Dev University, Amritsar	Dec. 19, 2014
		Delivered lectures on 'Research Processes', 'Tool of Data Collection: Primary & Secondary', and 'Results Interpretation and Report Writing' in an ICSSR sponsored workshop on 'Research Methodology in Social Scs.'	HNB Garhwal University, Srinagar	Feb. 07-08, 2015
		Attended 10th Annual Conference of Uttar Pradesh-Uttarakhand Economic Association (UPUEA) and delivered Presidential Address on the 'Current Status and Future Prospects of the Development of UP and Uttarakhand'	National PG College Lucknow	Oct. 6-7, 2014
		Chaired a session on 'General Management' in National Conference on 'Advances in Management for Business Excellence'	NIT, Kurukshetra	Feb 27-28, 2015

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop /Guest Lecture	Venue	Date
4.	Prof. Renu Rastogi	Paper presented at The Nepalese Academy of Management.	Kathmandu, Nepal	March, 27-29, 2015
5.	Prof. Nagendra Kumar	Plenary Speaker at International Seminar on Cultural Studies: Global and Local Perspectives.	Tezpur University, Assam	7 – 9 Feb., 2015.
		Chaired a Session at International Seminar on Cultural Studies: Global and Local Perspectives	Tezpur University, Assam	7 – 9 Feb., 2015.
		59th All India English Teachers' Conference.	Rajasthan Technical University, Kota	19 – 21 Dec., 2014
		International Conference on Cross-Cultural Nuances	KMV, Jalandhar	30 – 31 Oct., 2014
		Guest lecture on Teacher Motivation	NIH, Roorkee (Organized by DEO, Haridwar)	06 Dec., 2014
		Akhil Bharatiya Rajbhasha Sammelan org. by MHRD, New Delhi	GITAM Univ. Vizag.	22 – 23 May 2014.
6.	Dr. Smita Jha	Invited talk on 'Role of Ethics in Young Students 's Life'	Ramanujan College, New Delhi	15 – 16 Feb, 2015
		Presented paper on Journey of women in Indian Writing in English	Relocation the cultural linkage in South Asia: A Historical Perspectives	17 – 19 Oct., 2015
		Presented paper on Censorship: Thoughts on Orwell's Animal Farm	Melus, Chandigarh	20 – 22 Feb., 2015.
		Valedictory talk on History & Development of Indian Writing in English	Dept. of HSS IIT Roorkee	21-22 March, 2015
		Chaired the session on Multiculturalism and Diaspora	Dept. of HSS IIT Roorkee	21-22 March, 2015.
		Presented paper on American Metropolis & Indian women Writers in Two-day National Conference organized by HSS in association with Sahitya Akademi, New Delhi,	Dept. of HSS IIT Roorkee	21-22 March, 2015
7.	Dr. A. J. Mishra	International Conference on Engaging and Empowering the Elderly	Trivandrum, India	15 – 16 Sept., 2014
8.	Dr. Pooja Garg	Nepalese Academy of Management	Kathmandu, Nepal	27-29, March, 2015.
9.	Dr. Rachita Gulati	Chaired a session in 'Banking: Post-Financial meltdown' in the Global Conference on Managing in Recovering Markets (GCMRM)	Management Development Institute (MDI) Gurgaon	11-13 March, 2015
		Presented a paper in Global Conference on "Managing in Recovering Markets (GCMRM), 2014-17.	Management Development Institute (MDI) Gurgaon	11-13 March, 2015
		Presented a paper in the International Conference on Banking, Real Estate and Financial Crises: Hong Kong, China and the World	Hong Kong Shue Yan University, Hong Kong	16-17Jan., 2015
		Delivered lectures on 'Regression Analysis' in the Workshop on Data Analysis for Research & Publication	Department of Management Studies and Continuing Education Centre, Indian Institute of Technology Roorkee	20-21 Dec., 2014
		Presented a paper in the 4th India Finance Conference	IIM Bangalore, Bangalore	17-19 Dec., 2014

		Co-organized a Management Development Programme (MDP) on “Business Analytics for Managers” jointly by Indian Institute of Management Kashipur and ICICI Financial Learning, (Co-coordinators Prof. Mudit Kulshrestha and Prof. Barnali Nag, IIM Kashipur)	Hotel Connaught, New Delhi	7 – 9 May, 2014
10.	Dr. Subir Sen	Training Workshop on Econometric Method and its Application Role: Main Instructor	Institute for Integrated Development Studies (IIDS), Kathmandu, Nepal	1 – 10, Dec. 2014

4. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./seminar/symp./workshop	Name of the Chairman/Convener	Sponsored by	Dates
1.	National Conference on Multiculturalism, Identity Crisis & Belongingness	Dr Smita Jha	Sahitya Akademi , New Delhi	21-22 March, 2015.

5. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Source of funding	Nos. of Participants	Dates
1.	Smita Jha	Fundamentals on Sociolinguistics	QIP, IITR	40	9-13 June, 2014

6. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	S.P. Singh	SEC Group of Ganga River Basin Management Plan	MOEF	25.00

ii. EW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Rachita Gulati	Testing for Competition in Indian Banking Sector: An Econometric Analysis	Faculty Initiation Grant (FIG), IITR	6 lacs

7. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (Rs.10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2014-15).

Dr. Rachita Gulati

Testing for Competition in Indian Banking Sector: An Econometric Analysis: Brief Summary: The proposed study intends to provide a detailed and comprehensive analysis pertaining to the dynamics of competition in Indian banking sector using the state-of-the-art econometric tools like Panzar-Rosse H-statistic and the Boone indicator. In particular, the proposed study aims to provide a rigorous empirical investigation of the dynamic market structure and the competitive conditions in the Indian banking industry over the study period from 1996-97 to 2012-13. It is expected that the findings of the study would be of great significance for policymakers, regulators and bankers, and help them to gain in-depth understanding of how the regulatory changes may affect banks' efficiency, competition, financial stability and performance.

4.12 DEPARTMENT OF HYDROLOGY

**Academic Staff: 07, Students Admitted: UG/INT. M.Tech/M.Sc, PG -17, Ph.D -08
Publications in: Journals-26, Conferences-16, Projects: Research (Rs. in Lacs) 179.09 Lakh,**

1. SALIENT FEATURES

Like previous years, the 43rd International P.G. Diploma/M.Tech. Hydrology course commenced from July 2014 with 17 nos. of participants including 03 sponsored candidates from abroad. The M. Tech. final year programme also continued with 17 students. At present 19 students are pursuing their doctoral research in the Department.

2. LIST OF FACULTY MEMBERS

Professors

Goel, Narendra K., PhD (IIT Roorkee)

Stochastic Hydrology

Joshi, Himanshu, PhD (IIT Roorkee)

Environmental Hydrology

Perumal, M., PhD (IIT Roorkee)

Surface Water Hydrology

Associate Professors

Arya, D.S., PhD (Pondicherry)

Hydroinformatics, GIS and remote sensing application, Climate Change Impacts

Jain, Manoj K. PhD (IIT Roorkee) Watershed

Hydrology, Modeling of Hydrologic and

Hydraulic Systems

Assistant Professor

Yadav, Brijesh K., PhD (IIT Delhi)

Ground Water Hydrology

Sen, Sumit, PhD (Auburn University, Alabama, USA)

Watershed Monitoring, Modeling and Management

Emeritus Fellow

Singhal, Dinesh C., PhD (IIT Roorkee)

Groundwater Hydrology, Hydrogeology, Geophysics

3. HONORS AND AWARDS TO FACULTY MEMBERS

1.	Dr. Himanshu Joshi:	Regional Coordinator (Asia), Wetland Group, (International Water Association).
2.	Dr. M. Perumal	Visiting Professor, Department of Civil Engineering, University Technology MARA, Shah Alam, Selangor State, Malaysia.
3.	Dr. M.K. Jain	Editor, Hydrology Journal, IAH Associate Editor, J. Environmental Management, Springer

4. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/SYMPOSIA/WORKSHOP/GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Dates of visit
1.	M. Perumal	Dooge Nash International Symposium	Dublin, Ireland	24-25 April, 2014
2.	D S Arya	International Conference on Hydroinformatics 2014	The City College of New York, New York	17-21 August, 2014
3.	Brijesh K Yadav	The third International Conference on Water Energy and Environment (ICWEE)	Sharjah, UAE	24-27 March, 2015
		American Geophysical Union (AGU) Fall Meeting held in San Francisco	San Francisco, California	14-18 Dec., 2014
4.	Sumit Sen	21st Century Watershed Technology Conference and Workshop	Hamilton, New Zealand	03-07 Nov., 2014

5. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL /INTERNATIONAL)

Sl. No.	Name	Designation & Affiliation	Purpose	Dates
1.	Dr. Abinash Agrawal	Associate Professor, Environmental Geochemistry Lab, Department of Earth & Environmental Sciences Wright State University Dayton, OH 45435	Delivered a lecture in the workshop organized on Bioremediation of LNAPL Polluted Lands	November 10, 2014
2.	Dr. Shashi Mathur	Professor of Water Resources, Department of Civil Engineering, IIT Delhi, Hauz Khas, New Delhi-16	Delivered a lecture in the workshop organized on Bioremediation of LNAPL Polluted Lands	November 10, 2014

6.(a). INTERNSHIP BY IIT –ROORKEE STUDENT.

Sl. No.	Name of the Student	Name of Internship Programme	Under Graduate	Post Graduate	Name of Institute	Period
1	Srishti Vishwakarma	DAAD-IIT Sandwich Post-Graduate Fellowship Program	-	M.Tech	Stuttgard University, Germany	September, 2014 to March, 2015

6(b).INTERNSHIP TO OTHER STUDENTS IN IIT ROORKEE.

Sl. No.	Name of the Courses	Name of Supervisor	Under Graduate	Post Graduate	Name of Students	Period
1	Summer Internship	Brijesh K Yadav	UG	--	Aayushi Sharma	One month

7. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./ seminar/ symp./workshop	Name of the Chairman	Sponsored by	Dates
1.	Workshop on “Bioremediation of LNAPL Polluted Land under (Semi)-arid Coastal Environment Conditions”	Brijesh K Yadav	DST	10 Nov., 2014
2.	Workshop on “Sustainable Urban Management Practices “for Delegates from Water & Sewerage Authority, Trinidad and Tobago	Himanshu Joshi	WAPCOS	23 – 25 Jan, 2015

8. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Source of funding	Nos. of Participants	Dates
1.	N.K. Goel	Flood estimation and forecasting	Water Resources Department, Tamilnadu	19	22-27 Feb., 2015
		Hydrological analysis and planning for water resources projects	Water Resources Department, Tamilnadu	20	13-18 July, 2014
		Climate change issues and impacts on water resources management in coastal and seasonal wetlands	BWDB, Bangladesh	15	7-17 April, 2014

9. SPONSORED/CONSULTANCY PROJECTS

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of Projects	Sponsoring Agency	Amount in Lacs
1.	Himanshu Joshi	Design and Performance Evaluation of Solar Energy Driven RO And NF/RO Hybrid Water Treatment System	Ministry Of Water Supply & Sanitation, New Delhi	13.97 Lacs
2.	D.S. Arya	Inventorisation of Industries Using Web and GIS based Techniques for Hardwar and Udham Singh Nagar Districts, UCOST, Dehradun, India	UCOST, Dehradun	9.7 Lacs
		Studying meandering and shifting behaviour of the Ganges River in plains of Uttarakhand UCOST	UCOST, Dehradun	2.5 Lacs

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of Projects	Sponsoring Agency	Amount In Lacs
1.	Himanshu Joshi	Development of Innovative Spentwash Treatment and Resource Recovery Options for Distillery Application (with UNSW, Australia)	Department Of Science & Tech., New Delhi	67.98 Lacs
2.	Brijesh K Yadav	Multidimensional soil water flow and nonpoint source (NPS) pollutant movement through deep and heterogeneous variably saturated zones	FIG by MHRD	9.5 Lacs
		"Bioremediation of LNAPL Polluted Land under (Semi)-arid Coastal Environment Conditions"	DST	73 Lacs
3.	Sumit Sen	Understanding Hydrogeological Processes and Their Impacts on Water Security in the Tehri-Garhwal Region of Uttarakhand	IIT Roorkee	9.5 Lacs
		Understanding Relationship between Infiltration Tradeoff Hypothesis and Surface Runoff Generation Mechanisms	DST, New Delhi	19.11 Lacs

10. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS

(>Rs. 10 lacs.) (A brief Write-up upto 100 words) (New Projects during 2014-15)

Sumit Sen-Understanding Relationship between Infiltration Trade-off Hypothesis and Surface Runoff Generation Mechanisms, sponsored by DST, New Delhi, 19.11 Lakh, 2013-2016

The overarching goal of this proposed research is to acquire a better understanding of spatial and temporal structures of surface infiltration and runoff process through field and modeling investigations of the effects of driving fields such as rainfall and saturated hydraulic conductivity, on infiltration and runoff. Also, the study will also test the "infiltration tradeoff" hypothesis given by Bruijnzeel (1984). Based on hydrologic characteristics such as soils, geology, rainfall and land use patterns observed in the Aglar watershed of Tehri-Garhwal district, Uttarakhand, the following objectives are considered:

1. Identify runoff-generation mechanism through intensive plot-scale hillslope experiments.
2. Identify key hydrologic characteristics to delineate spatial and temporal distribution of runoff-Contributing areas through physically-based hydrologic response model.

4.13 DEPARTMENT OF MANAGEMENT STUDIES

**Academic Staff: 15 , Students Admitted : PG(MBA) -84 ,
Publications in: Journals - 39, Conferences-03, Projects: Research (Rs. in Lacs): 31 Lakh,**

1. SALIENT FEATURES

- i. DoMS, IIT Roorkee awarded with the **B-School Leadership Award by DNA & Stars of the Industry Group - Innovative B-School Awards 2014.**
- ii. DoMS, IIT Roorkee organized XVIII Annual international Conference of Society of Operations Management (SOM-2014) jointly with ABV-IIITM, Gwalior on 12-14 December, 2014. The theme of the conference was "Operations Management in Digital Economy".
- iii. As per available data highest package offered to students is 19.96 lacs, an increase of 59% from the previous year. The median stands at 8.25 lacs pa.

2. LIST OF FACULTY MEMBERS

Professors

Nangia, V.K., PhD

General Management, Finance & Knowledge Management

Singh, J.P., PhD

Mathematical Finance, Chaos & Fuzzy Mathematics

Associate Professor

Rangnekar, S., PhD

Human Resource, Organization Behaviour & Knowledge Management

Rahman, Z., PhD

International Business, MIS & Marketing

Sharma, A.K., PhD

Financial Management & Accounting

Sharma, Vinay PhD

Strategic Management, Marketing & Advertising Management

Barua, M.K., PhD

Operations Research, Operations Management, SCM, Project Management, Market research, Quality Management

Assistant Professor

Agarwal, Rajat, PhD

Operations Management, Supply Chain Management & Production Management, Operations Research

Lenka, Usha, PhD

HRM

Dhar R.L., PhD

Human Resource Management, Organisational Behaviour Organisational Development, Leadership Studies, Emotional Intelligence, Cultural Studies, Society and Organisations, Educational Management, Stress Management, Workplace spirituality, Worklife balance

Rao M.K., PhD

Competency management, Training Effectiveness and Design of Training Systems, Gender differences at work place, impact of developmental initiatives on employee learning and Organisational Learning. HR Analytics and Change management

Nayak J.K., PhD

Emerging issues in marketing management, Rural and Agricultural Marketing, New Product Development, Industrial Research, Research in Advertising and Promotion, Emerging Issues in Consumer Needs, Consumer Behaviour

A. Ramesh Ph.D

Operations Management, Supply Chain Management, Quality Management, Service Operations Management

Dixit Gaurav, Ph.D.

Visiting Faculty

Kallakurchi, J.V.R.

3 HONOURS AND AWARDS TO FACULTY MEMBERS

Dr. Rajat Agrawal and Dr. Vinay Sharma	Jointly awarded Noel Deerr Gold Medal for year 2013-14 for a paper presented in 72nd annual convention of Sugar Technologists
Prof. Vinay Kumar Nangia	Received Shiksha Rattan Puraskar at a seminar on Economic Growth and National Integration at New Delhi on 24th November 2014.
Prof. Vinay Kumar Nangia	Received Young Agricultural Scientist Award by Association of Agricultural Scientists of Indian Origin on 3rd November 2014 at California.
Dr. Z. Rahman	Special Invitee, Selection Committees, IIT Mandi.
Dr. Z Rahman	Member, Expert Committees for preparation of the Manual on Sewerage and Sewage Treatment- Part C: Management with JICA and MUD, Gol assistance.

4 PARTICIPATION OF FACULTY IN CONFERENCES/ SEMINAR/ WORKSHOP / SYMPOSIA/ GUEST LECTURES

Sl. No.	Name of Faculty	Details of conferences/ / Seminar/ workshop / symposia/ guest lectures	Venue	Date
1.	Dr. J.K. Nayak	16th International Society for Business Innovation and Technology Management Conference	Grand Mirage Resort , Bali, Indonesia	24-25 Jan., 2015
2.	Dr. A.K. Sharma	16th International Society for Business Innovation and Technology Management Conference	Grand Mirage Resort , Bali, Indonesia	24-25 Jan., 2015
3.	Dr. R.L.Dhar	16th International Society for Business Innovation and Technology Management Conference	Grand Mirage Resort , Bali, Indonesia	24-25 Jan., 2015
4.	Dr. M.K.Rao	16th International Society for Business Innovation and Technology Management Conference	Grand Mirage Resort , Bali, Indonesia	24-25 Jan., 2015
5.	Dr. Z Rahman	4th International Conference on "Human Values in Higher Education	GCBS, Gedu, Bhutan	27-29 March 2015
6.	Dr. Vinay Sharma	4th International Conference on "Human Values in Higher Education	GCBS, Gedu, Bhutan	27-29 March 2015
7.	Dr. Rajat Agrawal	4th International Conference on "Human Values in Higher Education	GCBS, Gedu, Bhutan	27-29 March 2015
8.	Dr. A.Ramesh	4th International Conference on "Human Values in Higher Education	GCBS, Gedu, Bhutan	27-29 March 2015
9.	Dr. Vinay Sharma	14th Global Conference on Flexible Systems Management, GLOGIFT 14 & 7th International Conference on Contemporary Business 2014	Curtin University, Singapore	15-17 Oct., 2014
10.	Dr. Rajat Agrawal	14th Global Conference on Flexible Systems Management, GLOGIFT 14 & 7th International Conference on Contemporary Business 2014	Curtin University, Singapore	15-17 Oct., 2014
11.	Dr. A.Ramesh	14th Global Conference on Flexible Systems Management, GLOGIFT 14 & 7th International Conference on Contemporary Business 2014	Curtin University, Singapore	15-17 Oct., 2014
12.	Dr. Z Rahman	14th Global Conference on Flexible Systems Management, GLOGIFT 14 & 7th International Conference on Contemporary Business 2014	Curtin University, Singapore	15-17 Oct., 2014
13.	Dr. Rajat Agrawal	International conference on Intellectual Property Management	Saigon, Vietnam	10-11 Sept., 2014
14.	Dr. M.K.Barua	Expert Lectures	Addis Ababa, Ethiopia	Dec. 2014

5 DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/ INTERNATIONAL)

Sl. No.	Name	Designation, Affiliation	Purpose	Date
1.	Prof. Ashoka Misra	Chairman, BoG, IIT Roorkee	To Participate in National Conference	13-14 March, 2015
2.	Prof. Janat Shah	Director, IIM Udaipur	To Participate in SOM, 14 Conference	12-14 Dec., 2014
3.	Prof. Gautam Sinha	Director, IIM Kashipur	To Participate in SOM, 14 Conference	12-14 Dec., 2014
4.	Padmshri Anil P. Joshi	Founder, HESCO	To Participate in National Conference	13-14 March, 2015
5.	Prof. Pren Vrat	Pro- Chancellor, Professor of Eminence, ITM, Gurgaon, Ex-Director, IIT Roorkee	To Participate in SOM, 14 Conference	12-14 Dec., 2014
6.	Prof. Sushil	Professor, DMS, IIT Delhi	To Participate in SOM, 14 Conference	12-14 Dec., 2014
7.	Prof. K.S.Momaya	Professor, IIT Bombay	To Participate in SOM, 14 Conference	12-14 Dec., 2014
8.	Dr. Gyan Prakash	Associate Professor, ABV-IIITM, Gwalior	To Participate in SOM, 14 Conference	12-14 Dec., 2014
9.	Prof. D.K.Banwat	Emeritus Professor, DMS, IIT Delhi	To Participate in SOM, 14 Conference	12-14 Dec., 2014
10.	Prof. Ravi Shankar	Professor, DMS, IIT Delhi	To Participate in SOM, 14 Conference	12-14 Dec., 2014
11.	Mr. Jaya Prakash	AVP, HSBC	To Participate in SOM, 14 Conference	12-14 Dec., 2014
12.	Mr Satish Agnihotri	TRSE, CMD , Rail Vikas Nigam Ltd.	To Participate in SOM, 14 Conference	12-14 Dec., 2014
13.	Prof. G. Srinivasan	President, SOM, Professor, DMS, IIT Madras	To Participate in SOM, 14 Conference	12-14 Dec., 2014
14.	Dr. Peeyush Mehta	Professor, IIM Calcutta	To Participate in SOM, 14 Conference	12-14 Dec., 2014
15.	Prof. J.K.Mitra	Professor, FMS, University of Delhi, Delhi	To Participate in 3rd International VFIM conference	28-30 Nov., 2014
16.	Prof. Sunita Singh Sengupta	Professor, FMS, University of Delhi, Delhi	To Participate in 3rd International VFIM conference	28-30 Nov., 2014
17.	Dr. J.L.Raina	Chairman, ISOL, Ex Vice Chancellor, UPES, Dehradun	To Participate in 3rd International VFIM conference	28-30 Nov., 2014
18.	Prof. Jayesh Bellare	Professor, Deptt. of Chemical Engineering, IIT Bombay	To Participate in National Conference	13-14 March, 2015
19.	Prof. Deepak Goel	Swami Ram Himalayan University, Dehradun	To Participate in National Conference	13-14 March, 2015
20.	Dr. Bharti	Astt. Director, Central Council for Research in Ayurvedic Science, New Delhi	To Participate in National Conference	13-14 March, 2015
21.	Dr. Bidyut K. Bhattacharyya	Fellow IEEE, Professor, Deptt. of Electrical Engineering, NIT Agartalla	To Participate in National Conference	13-14 March, 2015
22.	Prof. C. Amanath	Professor, Deptt. of Mechanical Engineering, PI SINE, IIT Bombay	To conduct a workshop	19-20 July, 2014
23.	Mr. Sushanto Mitra	Founder & CEO, Lead Angles, Former CEO, SINE, IIT Bombay	To conduct a workshop	19-20 July, 2014
24.	Mr. B.K. Sharma	AGM, ASERDC, HAL, Lucknow	To conduct a workshop	11 Oct., 2014
25.	Mr. J C Jain	CMD, Texplas Group of Companies, President PHD Chamber of Commerce & Industries, Uttarakhand	To Conduct a workshop	11 Oct., 2014
26.	Mr. Subrata Biswas	GM, Incharge CEPD & ARP, BHEL Corporate Office, New Delhi	To conduct a workshop	12 Oct., 2014
27.	Mr. Venkat Changavalli	First CEO of EMRI, Advisor - Home and Health GoUP , Director - SBH & Leadership Mentor Author	To deliver an expert lecture	23 March, 2015

Sl. No.	Name	Designation, Affiliation	Purpose	Date
28.	Gaurmandal Das	Akshaya Patra, Jaipur	To deliver an expert lecture	12 May, 2015
29.	Shri S. Raju	Additional Chief Secretary, Government of Uttarakhand	To deliver an expert lecture	29 Nov., 2014
30.	Swami Narasimhananda	Editor, Prabudha Bharat, Advaita Ashrama (A Publication Centre of Ramakrishna Mission & Math)	To deliver an expert lecture	29 Nov., 2014
31.	Dr. Anil Maheshwari	Associate Professor of MIS & Director of Center for Data Analytics, Maharishi University of Management, Fairfield, IOWA, USA	To deliver an expert lecture	29 Nov., 2014
32.	Prof. Shashi Tiwari	General Secretary WAVES, India	To deliver an expert lecture	29 Nov., 2014
33.	Dr. Laj Utreja	Director, Institute of Global Harmony, Gandhi Vidya Mandir, Sardarshahr, Rajasthan, India	To deliver an expert lecture	29 Nov., 2014
34.	Mr. Rakesh Kumar	G.M & C.V.O. Oriental Insurance Co. Ltd, Head Office, New Delhi	To deliver an expert lecture	29 Nov., 2014
35.	Prof. Bhuvnesh Sharma	Vice Chancellor, Maharishi Mahesh Yogi Vedic University, Madhya Pradesh	To deliver an expert lecture	30 Nov., 2014
36.	Prof. Bhudev Sharma	Former (Founder) President, World Assn. for Vedic Studies (WAVES, USA), Former President: Hindu Uni. of America, Orlando & Former Prof. of Math, Clark Atlanta University, Atlanta, GA, USA	To deliver an expert lecture	28 Nov., 2014
37.	Swami Chidananda	Founder FOWAI Forum Solan, Himachal Pradesh, India	To deliver an expert lecture	28 Nov., 2014
38.	Prof. Mahavir Agrawal	Vice Chancellor, Uttarakhand Sanskrit University, Haridwar	To deliver a key note address	28 Nov., 2014
39.	Mr. Virag Jain	Regional Head, reliance Capital assets Management Co. Ltd.	To deliver an expert lecture	21 Feb., 2015
40.	Mr. Baldeep Singh	GM, Operations, Walmart	To deliver an expert lecture	21 Feb., 2015
41.	Mr. Suben Rana	Former VP (Operations), Bajaj Motors Ltd.	To deliver an expert lecture	21 Feb., 2015
42.	Mr. Atul Tripathi	Sr. Manager, AbsolutData	To deliver an expert lecture	21 Feb., 2015
43.	Mr. Sanjay Srivastava	Director- Analytics, American Express	To deliver an expert lecture	21 Feb., 2015
44.	Mr. Mukesh Jain	VP, Head, Big Data Analytics, Reliance Jio Communication	To deliver an expert lecture	21 Feb., 2015
45.	Mr. Gagan Arora	Co-founder, Print Venue.com	To deliver an expert lecture	22 Feb., 2015
46.	Mr. Sridhar Bollam	VP- Analytics	To deliver an expert lecture	22 Feb., 2015
47.	Mr. Shivinder Singh	Seniot Product Manager, Dabur	To deliver an expert lecture	22 Feb., 2015

6. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Course	Name of the organizers	Sponsored by	Date
1.	XVIII Annual international Conference of Society of operations Management (SOM-2014)	Dr. A.Ramesh	DST + Participation Fee	12-14 Dec., 2014
2.	A workshop on Management education and Industry perspective, (Under MBA curriculum review process)	Dr. Gaurav Dixit	IIT Roorkee	06 June , 2015
3.	WORKSHOP on INNOVATION TO ENTREPRENEURIAL ECO-SYSTEM	Dr. Rajat Agrawal	MHRD-IPR Chair, DOMS, IIT Roorkee	19 – 20 July, 2014

4.	Workshop on Considering Industry Stake-holding in Lab research	Dr. Rajat Agrawal	MHRD-IPR Chair, DOMS, IIT Roorkee	11 – 12 Oct., 2014
5.	National Conference on Governance of Traditional Knowledge and Contemporary Innovations	Prof. P.K.Ghosh	MHRD-IPR Chair, DOMS, IIT Roorkee	13 – 14 March, 2015
6.	3rd International Conference on Vedic Foundation of Indian Management: New Insights on Co creation and Entrepreneurship	Dr. Rajat Agrawal	LIC of India, Quantum Global Campus	29 – 30 Nov., 2014
7.	Workshop on Creative Consciousness and Energy at Workplace: Insights from Adi Shankaracharya	Dr. Rajat Agrawal	LIC of India, Quantum Global Campus	28 Nov., 2014
8.	National level Symposium Confluencia 15 on theme “Prism of Possibilities”	Dr. S. Rangnekar	Engineers India Ltd.	21 – 22 Feb., 2015

7. SHORT TERM/ SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Course	Name of the Coordinator	Source of Funding	No. of Participants	Date
1.	HEI & Structured Innovation	Dr. Rajat Agrawal & Dr. Vinay Sharma	MHRD-IPR Chair	100	24 March, 2015
2.	Harnessing the Researcher to Promote sustainable Innovation	Dr. Rajat Agrawal	MHRD-IPR Chair	20	02 – 06 Sept., 2014
3.	Strategic HRM & Research Perspectives	DR. R. L.Dhar	Registration Fee	20	23 – 24 May, 2015
4.	Case Based Learning in Business and Management	DR. Rajat Agrawal, Dr. Vinay Sharma and Dr. Z.Rahman	QIP Centre, IIT Roorkee	37	15 – 19 June, 2015
5.	Data Analysis for Research and Publication	Dr. J.K.Nayak	Registration Fee		December 2014
6.	Advances in Management	Dr. Anil K.Sharma, Dr. M.K.Rao, Dr. J.K.Nayak	QIP Centre, IIT Roorkee		14 – 18 July, 2014
7.	Data Analysis for Research and Publication	Dr. J.K.Nayak	Registration Fee		20 – 21 June, 2015
8.	Six sigma Quality and its applications	Dr. A.Ramesh	QIP Centre, IIT Roorkee	100	12 Dec., 2014
9.	Sign Language for Teachers and Students of Anushruti	Dr. M.K. Barua & Dr. Usha Lenka	QIP Centre, IIT Roorkee		20 May, 2014

8. SPONSORED/ CONSULTANCY PROJECTS

(i) Completed Sponsored Research Projects

Sl. No.	Principal Investigator	Title of the Project	Sponsored by	Outlay (Rs in lacs)
1.	Dr. A.K. Sharma	Venture Capital: Life Support source for Development of Innovative Technologies, Products and Services - (A Study of trend and progress of venture capital in India)	Deptt. of Scientific & Industrial Research, (DSIR) MoST, GOI, New Delhi	Rs 6.00
2.	Dr. Usha Lenka	“Exploring dynamics of potential women entrepreneurs”	IIT Roorkee (FIG A)	
3.	Dr. Rajat Agrawal	NEED ASSESSMENT OF GANGA WATER FOR RELIGIOUS ACTIVITIES	MOTILAL BHIMRAJ CHARITY TRUST, DT. TEHRI UTTARAKHAND	Rs 60,000

(ii) Continuing Sponsored Research Projects

Sl. No.	Principal Investigator	Title of the Project	Sponsored by	Outlay (Rs in lacs)
1.	Dr. J.K. Nayak	Marketing Practices in Handicraft Sector in Uttarakhand	IIT Roorkee	5.00
2.	Dr. Rajib Dhar	Child labour in the restaurants and eateries: A study of selected cities from the State of Jharkhand, India	ICSSR	5.00
3.	Dr. Rajib Dhar	Stress at work: A study of the Private Banking professionals	IIT Roorkee (FIG A)	5.00

(iii) New Projects

Sl. No.	Principal Investigator	Title of the Project	Sponsored by	Outlay (Rs in lacs)
1.	Dr. Rajat Agrawal	A STUDY ON COST BENEFIT ANALYSIS OF INLAND WATERWAYS	MOTILAL BHIMRAJ CHARITY TRUST, DT. TEHRI UTTARAKHAND	2.50

4.14 DEPARTMENT OF MATHEMATICS

Academic Staff: - 31 Students Admitted: UG/INT. M.Tech/M.Sc...30 ; PG...26; Ph.D...22
Publications in: Journals: 133, Conferences: 18 , Book/Books Chapters: 02
Projects: Research (Rs. in Lacs) 51.00

1. SALIENT FEATURES

The Department of Mathematics has continued to establish a new computer lab for research students of the department from the grant received under FIST program of DST. The Department received two international and few Indian distinguished visitors for research collaboration. Three new faculty members joined the department. Faculty members from the department visited several research groups for different research collaboration under different grants/fellowship. Department organized an International conference, an Indo-Canadian workshop and four other short-term courses this year. Five new sponsored research projects started this year, four research projects have been completed.

2. LIST OF FACULTY MEMBERS

Professors

Agrawal, P.N., Ph.D., (IIT Kanpur)

Approximation Theory, Numerical Methods and Complex Analysis

Bhargava, Rama (Ms.), Ph.D. (University of Roorkee)

Fluid Dynamics & Numerical Analysis

Bhargava, R.R. (Ms.), Ph.D., (IIT Bombay)

Elasticity and Fracture Mechanics

Gakkhar, Sunita, Ph.D.(IIT Kanpur)

Bio-Mathematics, Fluid Dynamics, Mathematical Modelling of Environmental & Ecological Systems, Computer Applications, Industrial Mathematics and Programming Languages

Katiyar, V.K., Ph.D. (IIT Kanpur)

Fluid Dynamics, Industrial Mathematics and Bio-Mathematics

Lal Roshan, Ph.D.(University of Roorkee)

Elasticity Vibrations and Numerical Methods

Mittal, M.L., Ph.D. (University of Roorkee)

Fourier Analysis, Summability & Approximation Theory

Mittal R.C., Ph.D. (IIT Delhi)

Head of the Department

Numerical Analysis, Computer Software and Programming Languages

Sharma, S.P., Ph.D. (University of Roorkee)

Relativity, Reliability Theory, Cosmology, Graph Theory & Discrete Structures

Deep, Kusum, Ph.D. (University of Roorkee)

Optimization Techniques, Parallel Computing and Computer Software

Srivastava, Tanuja, Ph.D. (IIT Kanpur)

Statistics, Computerized Tomography, Statistical Models in Networking,

Sukavanam, N., Ph.D. (I.I.Sc. Bangalore)

Robotics Control Theory and Integral

Operators

Yadav, S.P., Ph.D. (BHU)

Operations Research, Optimal Control Theory and Numerical Analysis

Associate Professors

Swaminathan, A., Ph.D. (Madras University)

Computational Complex Analysis, Special Functions

Banerjee Sandip, Ph.D. (Calcutta Univ.)

Mathematical Biology

Bera, P., Ph.D. (IIT Kanpur)

Computational Fluid Dynamics

Jain, Madhu, Ph.D. (Agra University)

Computer Communications Networks, Performance Prediction of Wireless Systems, Networking, Operations Research, Stochastic Processes, Queuing Theory, Inventory Models, Software and Hardware reliability, Industrial Maths., Mathematical Modelling, Biomathematics

Gangopadhyay, Aditi, Ph.D.(IIT Kharagpur)

Statistics, Psychometry, Statistical Simulation, Ranking &

Selection, Statistical Inference

Pratibha, Ph.D. (Western Ontario Canada Univ.)

Symbolic Computation and Computational Fluid Dynamics

Gupta, Shiv Kumar, PhD (IIT Roorkee)

Operations Research

Assistant Professors

Kumar, Sanjeev, PhD (IIT Roorkee)

Computer Vision, Computational Geometry, Machine Learning

Maheshanand, Ph.D.(Jamia Millia Islamia)

Coding Theory, Cryptography

Nayak, Ameeya Kumar, Ph.D. (IIT

Kharagpur)

Computational Fluid Dynamics

Pandey, D.N., Ph.D. (IIT Kanpur)

Differential Equations, Control Theory

Singh, Uaday, Ph.D.(C.C.S. University

Meerut)

Fourier Approximation, Summability Theory

Pandey , Ram Krishan (IIT Delhi)

Number Theory (Additive & Combination)

Giri, Ankik Kumar, Ph.D. (Germany)

Co-agunation-Fragmentation Modules,

Stochastic Pidige & Inverse Problems

Jiwari, Ram, Ph.D. (I.I.T. Roorkee)

3. HONOURS AND AWARDS TO FACULTY MEMBERS

Dr. V. K. Katiyar	International conf. on Environmental sciences and Technology (Presented papers and chaired 3 sessions on Biomechanics)
Dr. Madhu Jain	Visiting Fellow
	Vice President of Operations Research Society of India
	Vice President of Vijnana Parisad of India

4. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/SYMPOSIA/WORKSHOP/GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./Workshop/Guest Lecture	Venue	Date
1.	P.N. Agrawal	102 nd Indian Science Congress	Mumbai University	3 – 7 Jan., 2015
2.	N. Sukavanam	Lecture Topic: Controllability of Semilinear Systems	Delhi University	04 Feb., 2015
		Lecture Topic: Kinematics and Dynamics of Robot Manipulators	University of Petroleum, Dehradun	17 Feb., 2015
		Study Group Meeting on Industrial Problems	M S University Vadodara	23 – 27, March 2015
3.	Kusum Deep Convener	4th International Conference on Soft Computing for Problem Solving, Proceedings by Springer.	NIT Silchar	27 – 29 Dec., 2014
4.	A. Swaminathan	Minicourse on “Linearity problem and convexity techniques in Geometric Function Theory”	School of Mathematical Sciences, Universiti Sains Malaysia, Penang, Malaysia	June – July 2014.
		Guest Lecture on “Turan type inequalities of Gaussian and Basic hypergeometric functions	School of Mathematical Sciences, Universiti Sains Malaysia, Penang, Malaysia	30 June, 2014
		Talk on “A generalized class of orthogonal polynomials related to Gaussian hypergeometric functions, CRM-ICMAT workshop on Exceptional Orthogonal Polynomials and exact solutions in Mathematical Physics	XOPCONF, ICMAT, Segovia, Spain	11.09.2014
		Invited Lecture on “Pick functions and ratios of hypergeometric type functions” ICSFA 2014	Thapar University, Patiala	17.10.2014
		Invited Lecture on “On the interlacing of zeros and related bounds for certain classes of orthogonal polynomials” in International Conference on Mathematics and its Applications	University College of Engineering, Anna University, Villupuram, TamilNadu	16.12.2014
		Invited Lecture on “Ratios of hypergeometric functions: Inequalities and Applications” International Conference on Geometric Function Theory and Applications	Department of Mathematics, I.I.T. Kharagpur, Kharagpur	19.12.2014
		5.	Sanjeev Kumar	National Workshop on "Advance Soft Computing Techniques in Hydrology and its Applications, November 2014
6.	S. K. Gupta	Industrial Engineering and Operations Management	Dubai (UAE)	March 3-5, 2015
7.	Dr Maheshanand	2 nd International Conference on Mathematics and Statistics (AUS-ICMS 15)	American University of Sharjah, Sharjah, UAE	April 02-05, 2015

8.	Uday Singh	Seventh Conference on Function Spaces at SIUE 2014	Edwardsville, USA	May 20-24, 2014
9.	Dr. A. K. Nayak	International conference on Mathematical Modelling and Simulation	IIT Madras	Dec. 8-10, 2014
10.	Dr. V. K. Katiyar	Nano Drug Delivery Systems (Industry – Academia Interaction)	Centre of Excellence: Nanotechnology, IIT-Roorkee	Jan. 10, 2015
		International conf. on Environmental sciences and Technology (Presented papers and chaired 3 sessions on Biomechanics)	Houston, Texas	June 9-13, 2014
11.	Dr. Madhu Jain	International Conference on “Optimization, Computing & Business Analysis” Delivered Invited talk on “Call admission and channel assignment schemes for congestion control in cellular Radio network”	Central University, Kishangarh, Raj	Feb. 20-22, 2015
		Refresher course in Mathematics Delivered 3 lectures on “Stochastic modeling of some queueing problems “	RGVP, Bhopal	Feb. 2-6, 2015
		1st International Conference of Indian Society of Information Theory and Applications (ISITA) Delivered invited talk on “Prediction of performance matrices for wireless communication network operating on cellular Technology“ on 18 Jan 2015. Chaired a session on 18 Jan. 2015	Sri Sai College of Engineering & Technology, Pathankot, Panjab	Jan. 16-19, 2015
		17th International Conference of International Academy of Physical Sciences (CONIAPS XVII) Delivered invited talk on “Performance modeling and channel assignment of cellular radio network with GPRS Services“ on 17 Feb. 2015. Chaired a Technical session	Rajasthan Univ. Jaipur, Raj	Feb. 16-18, 2015
		International Conference on “Operations Research: OR for Big data & Analytics” and 47 th Annual Convention of ORSI Delivered invited talk on “Performance modeling Wireless Communication Network”. Chaired a Technical session.	Sri Venkateswara University, Tirupati,	Dec. 1-3, 2014
		National Conference on FUTURE PERSPECTIVES OF SCIENCE & TECHNOLOGY IN SOCIETY AND GOVERNANCE (FPSTSG-2014), Delivered invited talk on “Software & Hardware Reliability“	SSV College, Hapur	29-30, Nov. 2014
		National Seminar on Recent Advances in Applied Mathematics and XVIII Prof. P.D. Verma Memorial Lecture-2014 (NSRAAM and PDVML-2014) Delivered Invited talk on “Reliability growth models for software systems with imperfect debugging process”	Rajasthan Univ. Jaipur, Raj	Sept 13-14, 2014
		National Seminar on “Application of Advanced Mathematics to Management and Financial Sectors and Emerging Areas of Research, Delivered talk (as Resource Person) on	PCM S.D. College, Jalandhar, Panjab	27 Sept 2014

		“Stochastic Modeling of Some Industrial Congestion Problems”		
		International Workshop on “Monte Carlo Inference for High Dimensional Statistical Models” Presented paper entitled “Performance Analysis of Machining System with Spares, Reneging and Two Mode Failures”	Isaac Newton Institute of Mathematical Sciences, Cambridge, UK	22-25April. 2014
12.	R C Mittal	Int. Conf. in Computational and Applied Mathematics(Invited Talk)	ITM Univrsity, Gurgaon	3 June,2014
		Workshop on Numerical and Computational Techniques in Engineering (Invited Talk)	DAV Institut of Engineering and Tech. Jalandhar	20 th May, 2014
		Instructional School on Numerical Analysis(Invited Talks)	Panjab University Chandigarh	9-11 June, 2014
		Int. Conf. on Recent Trends in Analysis and its Applications (Invited Talk)	IIT Roorkee, ROORKEE	21-23 Dec., 2014
		Guest Lecture	South Asian University, New Delhi	27 th Feb., 2014
13.	Sandip Banerjee	Talk titled Mathematical model to elucidate brain tumor abrogation by immunotherapy with T11 target structure at International Conference on Mathematical and Computational Biology.	IIT Kanpur, India	(February 28-March 3, 2015).
		Talk titled Rich Dynamics of hepatitis C viral infection with logistic proliferation at BIOMAT 2014.	Stefan Banach International Mathematical Centre, Institute of Mathematics, Polish Academy of Sciences, Bedlewo near Poznan, Poland	(November 2-8, 2014).
		Talk titled Mathematical Modeling of Malignant Brain Tumor with T11 Target Structure As a Potent Immune Stimulator at SIAM Conference on Life Sciences (LS14).	Charlotte, North Carolina, USA.	(August 4-7, 2014).
14.	Aditi Gangopadhyay	ICMSS	Dubai	Dec. 25-26, 2014

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of the Course	Venue	Date
1.	N. Sukavanam	NPDE Advanced Level Course on Computational Methods for Control Problems’	Ivanios College, Thiruvananthapuram	16-20, March 2015
2.	Sanjeev Kumar	Delivered lecture in QIP STC on Mathematical Modelling and Numerical Computation Using Matlab, February 2015	QIP Centre, IIT Roorkee, Roorkee-247667, INDIA	09-13 Feb., 2015
3.	S. K. Gupta	Recent Advances in Computational Methods with Applications	IIT Roorkee	June 6, 2014- July 4, 2014
		Optimization Techniques with Applications	IIT Delhi	16–19 Dec., 2014

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
1.	Prof. A. Sri Ranga	Professor, UNESP, Departamento de Matematica Aplicada, IBILCE UNESP 15054-000 Sao Jose do Rio Preto, SP Brazil	Research Collaboration	25.03.2014 – 10.04.2014
2.	Prof. Christian Berg	Professor, Department of Mathematics, University of Copenhagen, Denmark	Research Collaboration	22 – 26 Jan., 2015
3.	Prof. Gopalakrishna Srinivasan	Professor, Department of Mathematics, I.I.T. Bombay	Research Collaboration	22 – 26 Jan., 2015

7. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./ seminar/ symp./ workshop	Name of the Chairman	Sponsored by	Dates
1.	International Conference on Recent Trends in Mathematical Analysis and Applications, 2014	Prof. P. N. Agarwal Dr. Uaday Singh	DST, UCOST, ISAAC, IIT Roorkee	December 21-23, 2014

8. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Sources funding of	Nos. of Participants	Dates
1.	K. Nayak and S. K. Gupta	Recent Advances in Computational Methods with Applications		25	June 6, 2014- July 4, 2014
2.	Dr.V.K.Katiyar (Co-coordinator)	Nano Drug Delivery Systems (Industry – Academia Interaction)	Indian Society of Biomechanics; QIP Cell, IIT Roorkee		Jan. 10, 2015
3.	Dr. Aditi Gangopadhyay	Mathematical and Computational Finance with some Engineering Applications	AICTE	30	7 – 11 July, 2014
4.	Dr. V. K. Katiyar and Dr. Rama Bhargava	Mathematical Modelling and Numerical Computation Using Matlab	AICTE	32	09 – 13 Feb., 2015

9. SPONSORED/CONSULTANCY PROJECTS

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. R. Balasubramanian Dr. Sanjeev Kumar	3D Reconstruction and Software Development for City Model Generation from Satellite Images	ISRO, SAC Ahmedabad	7.73 lacs
2.	Sandip Banerjee	Mathematical Modeling of Malignant Brain Tumor with T11 Target Structure as a Potent Immune Stimulator	Department of Science and Technology.	21,39,360.00
3.	Sandip Banerjee & Alexei Tsygvintsev	Mathematical Modeling of Tumor-Immune Interaction considering the role of antibodies.	Indo French Center for Applied Mathematics (IFCAM)	Euro 5022
4.	Dr. Aditi Gangopadhyay	Cryptographically Significant Boolean Functions with Applications in Stream and Block Ciphers.	Department of Science and Technology India (DST) and Ministry of Higher Education, Science and Technology Slovenia and Slovenian Research Agency.	8.61

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Sanjeev Kumar	Study and Development of Multispectral Active Stereo Vision System for Video Surveillance	SERB, New Delhi (under fast-track young scientist scheme)	5.30 Lacs
2.	Dr. A. K. Nayak	Computational Investigation of Electrically excited flows in Nano channels for Mixing applications	IIT Roorkee	8.00 Lakhs
3.	Dr Ram Jiwari	Numerical Analysis and Computational Modeling of Hyperbolic Partial Differential Equations	IIT Roorkee (FIG)	6.5
4.	Ram Krishna Pandey	Fractional chromatic number of distance graphs and the density of integral sets with missing differences	SERB, DST New Delhi	11.64
5.	Prof. Rama Bhargava	Numeric-Symbolic Solutions of Rheological Transport Phenomena in Nano-Micro Fluid Medium	SERB	15.24

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	PI: Millie Pant Co-PI: Kusum Deep	Hybrid Nature Inspired Algorithms for Optimization Problems in Financial Mathematics	DST-RFBR	Rs. 18 lakhs
2.	Uday Singh	Fourier Approximation in Certain Function Spaces	SERB, DST	1545120
		Some Problems on Fourier Approximation in Banach Spaces	NBHM, DAE	299500
3.	P. Bera	Linear and weakly non-linear theories of instability mechanism of non isothermal convective flow in a vertical channel	DST	12.744
4.	Dr. A. K. Nayak	Computational Investigation of Heat and Mass Transfer in Mirco and Nano channel with surface heterogeneity	DST (starting date July 18, 2014)	12.00 Lakhs
5.	Sandip Banerjee and Alexei Tsygvintsev.	Mathematical Models in Biology: Dynamics Systems Approach.	Indo French Center for Applied Mathematics (IFCAM)	Euro 6222

10. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (>Rs. 10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2014-15).

(Uday Singh) Brief writ-up about the first project:

In this project, we consider the problem of approximating a typically unknown function f [i.e., f is not completely known to us, we have only some information about f for example continuity / differentiability / integrability / modulus of continuity/ integral modulus of continuity of the function etc. This information may be encoded by

the statements like $f \in W$ for some function class W belonging to Lipschitz, Hölder and Besov spaces by means of Fourier series associated with f . More precisely, we compute the error of approximation $E_n(f)$ given by

$$E_n(f) = \min_{T_n} \|f(x) - T_n(x)\|,$$

where the polynomial $T_n(x)$ is truncated Fourier series of the function f and $\|\cdot\|$ is the norm of the space to which f belongs.

(Ram Krishna Pandey) In this project, we study the well known fractional chromatic number for the distance graphs which is equivalent studying the well known density problem for integral sets posed by T.S. Motzkin in 70s. The equivalence was established by Griggs and Liu and independently by Chang, Liu and Zhu. This study is applicable in channel assignment problems or the T-coloring problems.

11. SCIENTIFIC AND TECHNICAL REPORTS

Sl. No.	Title of the Projects	Participants	Authors	Remarks
1.	Dual PTZ Stereo Rectification for Target Localization and Depth Map Computation	Jointly with University of Udine, Italy	Sanjeev Kumar and Christian Micheloni	Technical Report, 2014

4.15 DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING

Academic Staff: 44 Students Admitted: UG- 81, PG- 92 & Ph.D- 35
Publications in: Journals- 77, Conferences- 43,-Book/Books Chapters- 05
Projects: Research (Rs. in Lacs) 1769.90

1. SALIENT FEATURES

The Mechanical Engineering department came into existence in the year 1946 and the first batch of fifteen students received their Bachelor's degree in 1949. The department started its second undergraduate program of Industrial engineering in 1973. In the year 1982, the welding research lab was established under Indo-German collaboration program. Further, in the year 1990-1991 the department was recognized as the Center of Advanced Studies (CAS) by the U.G.C in two areas namely Computer Aided Engineering and Industrial Noise Pollution and its control. Presently, the Department of Mechanical and Industrial engineering offers two undergraduate and five post graduate courses.

The expertise by the faculty members of the department developed through research is being effectively utilized by providing solution to industrial problems in the form of design, analysis, testing and training through numerous industrial consultancies project from reputed private and government organizations. The department conducts National and International conferences to provide an insight of latest research trends in the field of Mechanical and Industrial engineering. The undergraduate students of the department are actively involved in student initiative activities like development of all-terrain vehicle, formula racing cars, wheel chair for disabled and elderly, robots etc. These developed products are showcased at various national and international forums.

2. Development

Gandhi, B.K.: Equipment Developed: Heavy duty slurry pot tester

Small scale bench test rig for evaluating erosion wear.

Pot diameter = 800 mm, Pot height = 533 mm

Unique features:

Separate arrangements for suspending the solid particles in the pot and rotating the wear specimens at different speeds.

Test speed range = 0 - 32 m/s

Solid concentration = 0-30% by weight

Solid particle size = 0 – 2 mm

Impingement angle (fix) = 0-90 degree

Applications

- To determine the accelerated wear characteristics of the different type of materials at different impact angles.
- Can be used to evaluate erosion due to any suspension.
- Very suitable for erosion characterization of materials used for hydro turbine blades and slurry transportation pumps.
- Currently used for evaluating the erosion wear of hydro-turbine blade materials developed by a well known turbine industry - Voith, Germany.
- The maximum erosion is generally observed on the hydro turbines installed in the Northern region, Himalaya. This equipment will be very useful to develop new wear resistant materials for turbine used for hydropower generation in this area.



Sharma, Apurbba Kumar: Laboratory Development

1. Microwave Materials Processing Laboratory

- i) **A Major Facility:** 1.45 kW, 2.45 GHz Microwave Applicator



ii) **Characterization Facilities:** (a) Vicker's Microhardness Tester and (b) Image Analysis System.



2. LIST OF FACULTY MEMBERS

Professors

Jain, P.K., PhD (Roorkee) **Head of the Department**

CAD/CAM/CIM/DFM, Operations Management

Arora, Navneet, PhD (Kurukshetra)

Welding Engineering, Reliability Engineering

Dwivedi, D.K., PhD (Jaipur)

Welding metallurgy, Surface modification, Fracture & fatigue properties, Weld-bonding & Friction stir welding, Structure-property-relationship

Gandhi, B.K., PhD (IIT Delhi)

Slurry erosion and cavitation wear. Flow measurement, Hydraulic Turbines & Pumps, Performance Testing of SHP stations

Gupta, Akhilesh, PhD (Roorkee)

Thermal Engineering, Heat Transfer, Solar Energy, Refrigeration & Air Conditioning

Kumar, Dinesh, PhD (Roorkee)

Supply chain management, Industrial Engineering, Maintenance Engineering, Process Planning & Optimization, Modeling and Simulation

Kumar, Pradeep, PhD (Roorkee) (on EOL)

Industrial Engineering, Supply Chain Management, Quality Engineering, Advanced Manufacturing Processes, Metal Casting

Kumar, Ravi, PhD (Roorkee)

Refrigeration & Air-Conditioning, Two-Phase Flow & Heat Transfer, Instrumentation & Measurement

Mishra, B.K., PhD (IT, BHU)

Composite materials, Fracture mechanics, Wave propagation

Sahoo, P. K., PhD (IIT Kharagpur)

Refrigeration & Air-conditioning, Thermodynamics, Building Energy Simulation, Liquid Desiccant Air Conditioning

Sharma, Satish C., PhD (Roorkee)

Machine Design, Tribology, Instrumentation & Measurement, Vibration and Controls.

Associate Professors

Dutta, Sushanta, PhD (IIT Kanpur)

Active and Passive control of flow field, Optical measurement techniques, Turbulence measurements and wake dynamics

Harsha, S.P., PhD (BITS Pilani)

Nonlinear Dynamics & Chaos, Unmanned Surface/Air Vehicles, Rotor Vibrations & Control

Jha, P.K., PhD (IIT Kharagpur)

Modeling of steelmaking processes, Continuous casting, Process modeling, Foundry Engineering

Kumar, Anil, PhD (Roorkee)

Thermal Engineering, Heat Transfer, Refrigeration & Air-Conditioning

Kumar, Ashok, PhD (Roorkee) – Retired in June 2014

Tribology, Machine Design

Mahapatra, M. M., PhD (IIT Kharagpur)

Welding distortion & residual stress control, Modeling, Line heating, laser cladding and joining, Improved Al alloys

Mishra, Manish, PhD (IIT Kharagpur)

Thermal and Fluids Engineering, Heat exchangers, Renewable Energy, Soft computing tool applied to Thermal Engineering

Murugesan, K., (IIT Madras)

Finite element modeling of systems with heat and mass transfer, Hydrogen energy, PEM Fuel cell

Pathak, P. M., PhD (IIT Kharagpur)

Robotics, Dynamics, Control, Bond Graph Modeling

Saran, V.H., PhD (Roorkee)

Machine design, Low frequency vibration comfort

Sharma, A.K., PhD (IIT Madras)

Advance Manufacturing, Microwave Material Processing, Surface Engineering

Singh, Inderdeep, (IIT Delhi)

Machining of Composites, Experimental and Simulation, Machining of Composites, Experimental and Modeling

Singh, Indra Vir, PhD (BITS Pilani)

FEM, X-FEM, Meshfree Methods, Fracture, Composites, FGM, Nano and Bio-Materials, Multiscale Simulations

Singh, K.M., PhD (IIT Kanpur)

DNS/LES of turbulent flows, Parallel algorithms, Modeling, simulation and CAD of energy systems

Tariq, Andallib, PhD (IIT Kanpur)

Heat Transfer, Thermal Contact Conductance, Flow Control, Turbulence, Proper Orthogonal Decomposition (POD), Micro-fluidics, Optical Techniques.

Upadhyay, Sanjay, PhD (Roorkee)

Non-linear Dynamics, Vibration, Smart material and structures

Assistant Professors

Bansal, Ankit, PhD (The Pennsylvania State University)

Radiative heat transfer, Hypersonic Flow, Flow radiation interaction, spectral modeling of gases.

Das, Arup Kumar, PhD (IIT Kharagpur)

Two phase flow, Microfluidics, Boiling and condensation, Augmentation of boiling heat transfer coefficient.

Dvivedi, Akshay, PhD (IIT Roorkee)

Metal Matrix Composites, Quality Function Deployment, Advanced Manufacturing Processes

Joglekar, M.M., PhD (IIT Bombay)

Mechanics of MicroElectroMechanical Systems (MEMS), Capacity fade modeling of lithium-ion batteries, Mathematical modeling and simulation

Karunakar, D.B., PhD (IIT Kharagpur)

Manufacturing Science, Metal Casting, FEM in Manufacturing, CAD/CAM

Kumar, Anil, PhD (University of Trento, ITALY)

Machine Design, Vibration, System Identification, Vibration Mitigation, Piping Systems

Mulik, R.S., PhD (IIT Delhi)

Non-conventional machining, abrasive based finishing processes, micro-machining, Rapid Prototyping

Pal, Kaushik, PhD (IIT Kharagpur)

Advanced Composites, Non-conventional machining, Welding of Polymers, Fracture and fatigue mechanism, Nanofillers, Coating, Wear and Abrasion, Bio polymers.

Pal, Siladitya, PhD (Michigan)

Finite Element Modeling, Multi-scale/ Multi-physics Modeling, Fracture Mechanics, Mechanics of Energy Storage and Soft Materials, Biomechanics.

Parashar, Avinash, PhD (University of Alberta)

Material Science, Nanotechnology, Composites, Nanocomposites, Atomistic

Modeling, Finite element modeling, Molecular dynamics

Saxena, Dhish K., PhD (IIT Kanpur)

Engineering Design, Evolutionary Multi-objective Optimization, Multi-Criteria Decision Making, Machine Learning, C.A.D.

Subudhi, Sudhakar, PhD (IISc Bangalore)

Heat transfer, Ventilation, Energy systems, Natural convection, Natural Ventilation, Non-conventional energy systems

Swain, Abinash, PhD (IISc Bangalore)

Product Design and Development, CAD/CAM, Computer Aided Prototyping, Virtual Product Development, Virtual reality, Product Lifecycle Management (PLM)

Emeritus Professor/ Fellow

Gupta, C.P.

Mehta, N.K.

Prakash, Rajendra

Gakkhar, R.P. (Visting)

3. HONOURS AND AWARDS TO FACULTY MEMBERS

Jain, P.K.

- Member of Editorial Board, [International Journal of Manufacturing Technology & Industrial Engineering](#), *International Sciences Press, ISSN: 0976-6251*
- Member of the Editorial Board, International Journal of Simulation Modelling (IJSIM) published by Danube Adria Association for Automation & Manufacturing (DAAAM International) Vienna, ISSN 1726-4529.
- Member, DAAAM International, TU Wien, IFT-IMS, Karlsplatz 13, 1040 Wien, Austria – Europe
- Member of the Editorial Board, Journal of Advances in Production Engineering and Management, ISSN 1854-6250, University of Maribor.
- Member of Working Group of World Scientific and Engineering Academy and Society (WSEAS) on COMPUTERS.
- Member of Editorial Board, [International Journal of Manufacturing Technology & Industrial Engineering](#), *ISSN: 0976-6251*.
- Senior Member, International Association of Computer Science and Information Technology (IACSIT), Singapore.
- Member, Board of Studies, Uttarakhand Open University, Haldwani, Vocational Studies Department.
- Member, Academic Council, Shri Mata Veshno Devi University, Jammu.
- Member Journal Advisory Committee, Journal of Engineering and Technology, ISSN 0976-8580.
- Member, National Advisory Committee, All Indian Manufacturing Technology Design and Research Conference, December 2012.
- Guest Editor, International Journal of Internet Manufacturing and Services (IAIMTDR-2012)
- Member, Academic Council GZS-PTU, Bhatinda, Punjab
- Member, Mentor Council for Production & Manufacturing Sector, Ministry of Labour & Employment, GOI
- UGC Nominee under SAP at Jadavpur University
- UGC Nominee under SAP at Anna University
- Conference Chair, 2013 International Conference on Manufacturing and Optimization (ICMO 2013), New Delhi, India. September 16-17, 2013
- Member, Uttarakhand Productivity Council, Uttarakhand

Mishra, Manish

- Associate Editor – International Journal of Advanced Thermo-fluids Research

Murugesan, K.

- Visited Geoenvironmental Research Centre, School of Engineering, Cardiff University, Cardiff, UK from Jan. 18 to Apr. 25, 2015 to carry out research on underground coal gasification.

Pathak, P.M.

- Member International Federation for the Promotion of Mechanism and Machine Science (IFToMM)- Technical committee for Multi Body Dynamics.

Saxena, Dhish

- Received as CI (Overseas), Indo-china project titled: "Decomposition Based Multi objective Evolutionary Computation" of total budget: 800,000 RMB. Sponsor: Nature Science Foundation of China. Duration: 3 years beginning from Jan. 2015.
- Received as PI, Indo-Dutch project titled: "A Systems Approach towards Data Mining and Prediction in Airlines operations" of total budget: 550,000 Euro. Sponsors: Deity-India & NWO-Netherlands+ GE Aviation, Bangalore. Duration: 4 years beginning from Jul. 2015.

Singh, K.M.

- Visited Japan from Jun. 2014 to Apr. 2015 to carry out research at, Hitachi Research Laboratory, Hitachi Limited.

4. PARTICIPATION OF FACULTY IN CONFERENCES/ SEMINAR/ SYMPOSIA/ WORKSHOP/GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
1.	Gandhi, B. K.	10th Intl. Conference on Hydraulic Efficiency Measurement	Itajuba-MG-Brazil	16 – 18 Sep., 2014
		National Conference on Recent Developments in Non Conventional Energy Systems	DIT Dehradun	22 – 23 Dec., 2014
		International conference on hydropower for sustainable development	Dehradun	5 – 7 Feb., 2015
2.	Harsha, S.P.	(i) Center for Surface Engineering and Tribology, Northwestern University, Evanston, IL, USA (ii) University of Akron, Ohio, USA	Collaborative research project funded by IUSSTF 30-JC-2012-Elasto hydrodynamic Lubrication Studies	08 – 22 June, 2014
3.	Mishra, Manish	International Conference on Renewable Energy Sources and Sustainability (RESUS2015)	Universite Des Mascareignes, Mauritius	3 – 5 Mar., 2015
4.	Parashar, Avinash	Molecular Simulation Technique - QIP Workshop	IIT Roorkee, Saharanpur Campus	21 Feb., 2015
5.	Pathak, P.M.	14th International Conference on Control, Automation and Systems	KINTEX, Seoul, KOREA	22 – 25 Oct., 2014
		International Conference on Production and Mechanical Engineering (ICPME'2014)	Arnoma Hotel-Bangkok	30 – 31 Dec., 2014
		Guest Lecture : Faculty Development Programme on Modeling and Simulation of Dynamical Systems and Optimization (MSMDO-2014)	Delhi Technical University	9 – 10 June, 2014
		Workshop: International Workshop on Autonomous Vehicles and Mobile Robotics	IIT Delhi	6 – 8 July, 2014
		Guest Lecture : Quadruped Robots: Design and Control in School of Electronics Engineering	Kyungpook National University, Daegu, South Korea.	21 Oct., 2014
		Guest Lecture: Faculty Development Programme on "Mechatronics & Robotics in Manufacturing Industries"	Mechanical Engineering Department, Zamia Milia Islamia	3 Mar., 2015
6.	Sahoo, P.K.	International Conference on Renewable Energy Sources and Sustainability (RESUS2015)	Universite Des Mascareignes, Mauritius	3 – 5 Mar., 2015
7.	Sharma, Apurbba Kumar	5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014	IIT Guwahati	13 Dec., 2014
		Expert Lecture	Graphic Era University, Dehradun	29 Nov., 2014
		Invited Lecture in Faculty Development Program	ITS Engg. College, Greater Noida	28 Feb., 2015
		Invited Lecture in Faculty Development Program	GNDEC, Ludhiana	31 July, 2014

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./Workshop/Guest Lecture	Venue	Date
8.	Sharma, Satish C.	(iii) Center for Surface Engineering and Tribology, Northwestern University, Evanston, IL, USA (iv) University of Akron, Ohio, USA	Collaborative research project funded by IUSSTF 30-JC-2012-Elasto hydro dynamic Lubrication Studies	08 – 22 June, 2014
9.	Upadhyay, S.H.	ASME 2014 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE 2014	University of Buffalo, New York, USA	17 – 20 Aug., 2014
		Workshop on Industrial Tribology & Application,	SVNIT Surat,	14 – 15 Nov., 2014
		Research Week	Gujarat Technological University	17 – 18 Mar., 2015

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of Course	Venue	Date
1.	Gandhi B.K.	Small Hydro Power Plant Development	IIT Roorkee	Nov. 17 – 21, 2014
		Performance Testing and Evaluation for SHP Stations	IIT Roorkee	19 – 23 Jan. 2015

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
1.	Prof. Gurvinder Singh Virk	Professor of Robotics, University of Gävle and KTH Royal Institute of Technology, Stockholm, SWEDEN	To deliver a talk on “International robotics: Past, present and future”	Mar. 16, 2015
2.	Prof. P.K. Das	Professor and Head, Department of Mechanical Engineering, IIT Kharagpur	To deliver a talk on “Understanding of dense granular theory: experimental and numerical viewpoints”	Feb. 16, 2015
3.	Prof. T. Sreevatsan	Professor, University of Acron	To attend PFAM-XXIII to deliver a talk and interact with the faculty and students	Nov. Dec. 2014
4.	Prof. Q Jane Wang	Professor, Robert F McCormic School of Engineering and Applied Sciences, Northwestern University, IL, USA	Collaborative Research Project Funded by Indo US Science and Technology Forum (IUSSTF)	Feb. 18, 2015

7. INTERNSHIP TO OTHER STUDENTS IN IIT ROORKEE.

Sl. No.	Name of the Courses	Name of Supervisor	Under Graduate	Post Graduate	Name of Institute	Period
1	Khalil Snoussi	P.M. Pathak	-	Post Graduate	Ecole Centrale de Lille- France	Jun. 01, 14 – Aug. 30, 14

8. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./seminar/symp./workshop	Name of the Organizing Chairman/ Secretary/Jt. Secy.	Organizing Convener/	Sponsored by	Dates
1.	23rd International Conference on Processing & Fabrication of Advanced Materials	P K Jain, Organizing Secretaries: Inderdeep Singh, P.K.Jha		ISRO, CSIR, QIP, IIT Roorkee	5 – 7 Dec., 2014

9. SPONSORED/CONSULTANCY PROJECTS

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Jain, P.K.	Establishing pre-heat time and development of nozzles for reducing pre-heat time while using Bharat Metal Cutting Gas (BMCG)	BPCL	14.04
		Experimental Investigation on Machining of Ti-6Al-4V Alloy	CSIR	20.66
		Quality Assessment of Steel Pipes	Jal Sansthan, Uttarakhand	5.18
		Studies on Mechanical Characteristics of Steel Sheet Layered False Ceiling	-	0.70
2.	Jha, P.K.	Physical modeling and numerical investigation of intermixing during LADLE change over in continuous casting process of steel.	CSIR, New Delhi	16.26
3.	Kumar, Ravi	Energy efficient impinging jet cooling of hot surfaces.	DST, New Delhi	4.21
4.	Mahapatra, M.M.	Prediction and optimization of distortion and residual stresses in austenitic stainless steel pipe welds.	BRNS, BARC Mumbai	24.31
5.	Pathak, P.M.	Modelling simulation and control of space robots.	ISRO, Bangalore	5.92
		Design and development of Miniatures robot for in - vivo surgery	DST, New Delhi	25.14
6.	Sharma, A.K.	Development of prediction study of ultrasonically assisted abrasive flow machining (UAAF) for precision finishing.	DST, New Delhi	20.40
7.	Singh, Indra Vir	Thermo-mechanical simulation of elastoplastic fracture mechanics problems using XFEM and meshless methods.	DST, New Delhi	4.57

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dutta, S.	Manipulation of flow field over a square prism for vertex load reduction using feedback control.	DST New Delhi	36.6
2.	Dvivedi, Akshay	Development and parametric evaluation of micro ultrasonic (μ - USM) machining for 3D micro moulds.	SERB, New Delhi	24.87
		Development and parametric study of grinding assisted electrochemical discharge machining.	SERB, New Delhi	35.00
3.	Dwivedi, D.K.	Development of diffusion bonding technology for development of fatigue and fracture resistance carbon steel and stainless steel joints with different inter - layers	Ministry of Steel, New Delhi	81.65
		Development of Nitrogen Ion implant coating on stainless steel substrate for improved mechanical and tribological performance.	DST, New Delhi	6.40
		Corrosion behavior of friction stir weld joints of AL alloys.	CSIR, New Delhi	17.92
		Investigation on plastic behavior of Aluminium alloys during friction stir welding and its effect on weldability	DST, New Delhi	6.45
4.	Gupta, Akhilesh	Development of fire test facility for defining the design fire environment relevant for NPPs.	BARC, Mumbai	400.00
5.	Jain, P.K.	Ultrasonic vibration assisted electro chemical machining with abrasive honing gear (UV-ECM-AG) of gears	DST, New Delhi	26.5
		FIST	DST, New Delhi	283.35
		Design of Critical Weld Joints of Coal Wagon BOXN25	RDSO	8.40

6.	Joglekar, Manish M.	Mathematical modeling and experimental characterization of the dynamic response of dielectric elastomer actuators.	SERB, N.DELHI	20.99
		Input Shaping Control of Beam-type Electrostatic Microactuators	MHRD (FIG)	8.00
7.	Karunakar, D.B.	Investigation and Enhancing the Porosity of Ceramics Shell in Investment Casting Process	SERB, N.Delhi	24.00
8.	Kumar, Pradeep and Divedi, Akshay	Parametric studies during machining of glass and metal matrix composite (AL – 7075) using electro chemical discharge machining (ECDM)	CSIR, N.Delhi	6.5
9.	Kumar, Ravi	Experimental investigation of the Rewetting of fuel cluster.	BARC, Mumbai	60.95
		Full length channel heat up experiments.	BARC, Mumbai	215.62
		Enhancement of heat transfer during condensation of ozone state refrigerants over single horizontal integral - fin tubes.	DST, New Delhi	19.5
		Assessment of radiation heat transfer of 19 pin PHWR fuel bundle under heat up condition.	DAE, BRNS, Mumbai	54.96
10.	Mishra, B.K.	Numerical and experimental investigation of Dynamic characteristics, shape changing and vibrations control of smart structures with piezomaterials.	DST. New Delhi	09.5
11.	Mishra, Manish	Investigation of the effect of temperature and flow non uniformities on the performance of three fluid compact heat exchanger.	SERB, NEW DELHI	22.42
12.	Mulik, R.S.	Investigation into improvement of material removal rate in traveling via electro - chemical spark machining (TV-ECSM) using magnetic field.	SERB, NEW DELHI	29.50
13.	Murugesan, K.	Numerical and experimental investigation of thermo – hydro-mechanical behavior of high performance concrete exposed to fire.	Forum, New Delhi Numerical & Exp	28.50
14.	Pal, Kaushik	Use of unmodified and modified nanofillers for sensors applications.	SERB, New Delhi	13.80
15.	Pathak, P.M.	Fault Tolerant control and reconfiguration of walking robots with flexible legs.	DST New Delhi	19.64
16.	Sahoo, P.K.	CFD stimulation of a deformed reactor channel under heat up condition.	DAE, BRNS, Mumbai	14.59
17.	Sharma, A.K.	Parametric studies during machining of micro channels on silicon wafer using micro ultrasonic machining.	CSIR, New Delhi	13.00
		Material joining and drilling with microwave	DAE, BARC Mumbai	30.86
18.	Sharma, Satish C.	Elasto hydro dynamic lubrication studies.	Indo-US Science & Tech Forum, New Delhi	28.54
19.	Sharma, Satish C.	A study of Hydrodynamic Journal Bearings of Steam Turbine to compute the Lube Oil and Jacking Oil flow/losses by considering the temperature variation in oil film.	BHEL – Haridwar	20.2248
		Development of Upgraded Draft gear for Freight Stock: Development of Testing Regimes.	RDSO, LUCKNOW	21.26
20.	Singh, I.V.	Prediction of graphite failure strength using RVE approach and XFEM.	BRNS, BARC, Mumbai	24.57
		Simulation of high temperature elasto –plastic fatigue crack growth using XFEM	DRDO, Vishakhapatnam	19.78
		Failure analysis of engineering components of Intricate Shape using extended Isogeometric analysis.	SERB, New Delhi	19.50
21.	Subudhi, Sudhakar	Indo-Us Base (Bhaskar Advanced Solar Energy) Fellowship Program.	Indo-US- SCI- & Tech DST, New Delhi	6.86

		Experimental investigation of convective heat transfer characteristics and pressure drop in forced convection using non fluids	SERB, NEW DELHI	22.70
22.	Tariq, Andalib	Detailed heat transfer investigation inside rectangular duct with matrix cooling using liquid crystal thermography.	Ministry of Defence , GATET Programme cell, GTRE, Bangalore	76.00
23.	Upadhyay, S.H.	Residual Life Prediction and Vibration Analysis of a high speed Rotor Bearing System	DRDO, N.Delhi	11.00

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dwivedi, D.K.	Corrosion behavior of friction stir weld joints of AL alloys.	CSIR, New Delhi	17.92
		Investigation on plastic behavior of Aluminium alloys during friction stir welding and its effect on weldability	DST, New Delhi	6.45
2.	Jogleker, Manish M.	Mathematical modeling and experimental characterization of the dynamic response of dielectric elastomer actuators.	SERB, New Delhi	20.99
3.	Karunakar, D.B.	Investigation and Enhancing the Porosity of Ceramics Shell in Investment Casting Process	SERB, New Delhi	24.00
4.	Mulik, R.S.	Investigation into improvement of material removal rate in traveling via electro-chemical spark machining (TV-ECSM) using magnetic field.	SERB, New Delhi	29.50
5.	Parashar, Avinash	Tailoring of Polymer Properties using Nanofiller	MHRD (FIG)	10.00
6.	Singh, Indra Vir	Simulation of high temperature elasto –plastic fatigue crack growth using XFEM	DRDO, Vishakha Patnam	19.78
		Prediction of graphite failure strength using RVE approach and XFEM.	BRNS, BAR C, Mumbai	24.57
		Failure analysis of engineering components of Intricate Shape using extended Isogeometric analysis.	SERB, New Delhi	19.50
7.	Subudhi, Sudhakar	Indo-US Base (Bhaskar Advanced Solar Energy) Fellowship Program.	Indo-US-Sci- & Tech, DST, New Delhi	6.86
8.	Upadhyay, S.H.	Residual Life Prediction and Vibration Analysis of a high speed Rotor Bearing System	DRDO, New Delhi	11.00
		Design & Development of a Proof-of-concept Model of an Adaptive Membrane	Indian Space Research Organizations (ISRO)	29.75

4.16 DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

**Academic Staff: - 23 Students Admitted: UG/INT. M.Tech/M.Sc...110; PG...36; Ph.D...08
Publications in: Journals: 48, Conferences: 33, Projects: Research (Rs. in Lacs) 83.44,
Consultancy (Rs. In Lacs) 4.5**

1. SALIENT FEATURES

The department is in the process of getting 300kV high resolution transmission electron microscope (JEOL) very soon. This state of the art equipment will help in in-depth analysis of variety of metallic and non-metallic samples. Department has recently procured spark plasma sintering (SPS) instrument from Japan. This instrument will help in sintering of ceramic materials and other difficult-to-sinter materials in a controlled atmosphere, at high pressure and temperature.

2. LIST OF FACULTY MEMBERS

Professors

Nath, Sumeer K, PhD (Roorkee)

Head

Materials Design & Development & Tribology

Ghosh, Prakriti K., PhD (Roorkee)

Joining of Materials

Agarwala, Vijaya (Mrs.), PhD (Roorkee)

Physical Metallurgy & Materials Engineering

Sil, Anjan, PhD (BHU Varanasi)

Electro-Ceramic Materials

Daniel, B.S.S., PhD (IIT Kanpur)

Composite and Metallurgical Thermodynamics

Jayaganthan, R. PhD (IISC Bangalore)

Nano Materials, Corrosion Engg.

Associate Professors

Prakash, Ujjwal, PhD (Sheffield, UK)

Physical Metallurgy

Chawdhary, G.P., PhD (Alabama, USA)

Physical Metallurgy

Singh, Devendra, PhD (IIT Kanpur)

Powder Metallurgy

Pancholi, Vivek, PhD (IIT Bombay)

Physical Metallurgy

Assistant Professors

Kumar, Sharvan, ME (Roorkee)

Physical & Industrial Metallurgy

Puri, Devendra, PhD (Roorkee)

Extractive Metallurgy & Waste Utilisation

Bhardwaj Mukesh, PhD (IIT Kanpur)

Extractive Metallurgy, Corrosion,

Electrocatalysis

Dhabade, Vikram, PhD (IIT Bombay)

Powder Metallurgy

Kumar, Manoj, PhD (IIT Kanpur)

Ceramics, Tribology

Sadan Ghosh, PhD (Karsruhe Institute of
Technology, Germany)

Physical Metallurgy

Sukrit Mula, PhD (IIT Kharagpur)

Nanomaterials, Powder Metallurgy

Depruba Lahiri, PhD (Florida International
University, USA)

*Biomaterials, Tribology, nanocomposites, Energy
Materials*

Indranil Lahiri, PhD (Florida Internationa
University, USA)

Nanomaterials

Dhawan Nikhil, PhD

Emeritus Professor/Fellow

Prakash, Satya, Ph.D. (Budapest)

Oxidation and Waste Utilization

Agarwal, Ranchor Das, Ph.D. (Roorkee)

Extractive & Chemical Metallurgy

Visiting Professor

Singh, Surendra

3. HONORS AND AWARDS TO FACULTY MEMBERS

1.	Dr. Debrupa Lahiri	Zwick Science Award 2013 for innovations in Materials Testing on 09.04.2014
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4. PARTICIPATION OF FACULTY MEMBERS IN CONFERENCES/ SEMINAR/ SYMPOSIA/ WORKSHOP/ GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./ Seminar /Symp./ Workshop/ Guest Lecture	Venue	Dates
1.	G.P. Chaudhari	Materials Science & Technology 2014	Pittsburgh, PA, USA	12-10-2014
2.	B. V. Manoj Kumar	Key Note Speaker in National Conference on "Futuristic Trends in Mechanical Engineering" (FTME 2015)	Jaipur Engineering College & Research Centre, Jaipur, India	March 14-15, 2015
3.	B. V. Manoj Kumar	Invited speaker in the course on "Recent Advancements in composites"	Coimbatore Institute of Technology, Coimbatore, India	November 03-07, 2014
4.	Vivek Pancholi	Guest lecture - UGC NRC-M Symposium and Discussion meeting on Severe Plastic Deformation and bulk nano-structured materials	IISc Bangalore	12-14 May 2014
5.	Vivek Pancholi	Guest lecture - NRB Research Dissemination Workshop on "Friction Stir Processing of Aluminium Alloys and Composites"	IIT Madras	March 5, 2015
6.	Debrupa Lahiri	Invited Talk in Zwick Forum on Mechanical testing of Lightweight Materials	Universidad Rey Juan Carlos, Madrid, Spain, Madrid, Spain	9 April 2014.
7.	Debrupa Lahiri	52 nd Annual Technical Meeting of Indian Institute of Metals.	Pune, India	12-15 Nov., 2014
8.	Debrupa Lahiri	International conference on Polymeric Biomaterials, Bioengineering and Biodiagnostics	IIT Delhi, India	27 – 30 Oct., 2014
9.	Debrupa Lahiri	Invited Talk in Molecular Signalling: Recent Trends in Biomedical and Translational Research - ICMS: RTBTR-2014.	IIT Roorkee, India	17-19 December, 2014.
10.	Debrupa Lahiri	Invited talk in Zwick Academia Day - India	German Centre, Gurgaon	19-20 January, 2015
11.	Debrupa Lahiri	Keynote Talk in International Conference on Emerging trends in Manufacturing, Engines and Modelling	NMIMS, Dhule, Maharashtra	27-28 February, 2015
12.	Indranil Lahiri	Invited Talk on "Nanostructured Carbon in Field Emission and Energy Storage"	BARC, Mumbai	23 December, 2014
13.	Indranil Lahiri	Invited Talk on "Nanotechnology and Its Applications"	Tripura Inst. Tech., Agartala	22 February, 2015
14.	S.K. Nath	Chaired a session in "International Science Conference"	Venice, Italy	14-15 August, 2014
15.	V.V. Dabhade	Indian Institute of Metals, NMD-ATM, Pune	College of Engineering Pune, PUNE	12-15 Nov 2014

5. PARTICIPATION OF FACULTY MEMBERS IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of Course	Venue	Date
1.	Vikram Dabhade	Advanced Aerospace Materials: Processing, Characterization and Applications	Continuing Education Programme, IIT Roorkee	June 1 – 5, 2015

6. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./ semi./ symp./ workshop	Name of the Chairman	Sponsored By	Dates
1.	Workshop: Innomania	Coordinator: Dr. B. V. Manoj Kumar Other coordinator: Dr. P. K. Ghosh, Dept. of MME	TOCIC, IIT Roorkee	February 14, 2015

7. SHORT TERM/ SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the coordinator	Name of the Course	Source of Funding	No. of participants	Dates
1.	Dr. B. V. Manoj Kumar	Short term course: "Materials Science Influence in Tribology of Engineering Ceramics"	AICTE sponsorship, QIP Centre, IIT Roorkee	30	June 30- July 04, 2014

8. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	R. Jayaganthan	Mechanical Behavior of Ultrafine grained Zr and Zr-Nb alloys Processed by Cryo-rolling (Experimental & Simulation Studies)	BRNS, Mumbai	48.00
2.	Vivek Pancholi	Physical simulation of hot deformation process in thermo-mechanical simulator and correlation with evolution of microstructure, texture, and micro-texture in Zr-Nb alloys	BRNS	51.94
3.	Suhrit Mula	Mechanical and thermoelectrical properties of copper-based nanocomposites developed by mechanical milling	CSIR-New Delhi	20.70
4.	S.K. Nath	Development of erosion resistant stainless steels for hydroturbines	DST	26.50
5.	Vikram Dabhade	Creep Resistant ODS steels by powder forging	BRNS	76.22

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	Mukesh Bhardwaj	Porous copper electrodeposits with large electrochemically active surface area as a substrate for electrocatalytic materials	Science and Engineering Research Board, DST, Govt of India	40.57
2.	Debrupa Lahiri	Polymer based Materials System for Orthopedic Application	IITR-FIG - MHRD	10.00
3.	Suhrit Mula	Nanostructured grains stabilization of Al-alloys for ultra light weight applications prepared by mechanical alloying.	SRIC, IIT Roorkee,	10.00
4.	Indranil Lahiri	Ultra-High Current-Density Field Emission System	IITR-FIG - MHRD	10.00

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	B. V. Manoj Kumar	Enhancement of Wear Resistance of SiC-WC Composites for Tribological Applications	CSIR, New Delhi	18.92 (excluding Institute overhead)
2.	Vivek Pancholi	Optimization of hot workability and control of microstructure in aerospace grade titanium alloys like Ti-3Al-2Sn (Half alloy), Ti-5Al-2.5Sn (alpha Ti), Ti-15-3-3-3 (Ti-15V-3Cr-3Sn-3Al, beta Ti)	ISRO	14.89
3.	Debrupa Lahiri	Developing Polymer Based Surface Modified Composite for Drug Eluting Orthopedic Implants	DST-SERB	24.67
4.	Indranil Lahiri	Carbon nanotube based 2D and 3D Field Emitters	NRB, New Delhi	24.96

9. A SUMMARY OF THE MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (> Rs. 10 lacs) (a brief write-up upto 100 words) (New projects during the year 2013-14)

A number of sponsored projects funded by DST, ISRO, CSIR, NRB agencies are presently being pursued in the department. The focus of the department is on the development of advanced materials. Process development for joining of dissimilar materials (HSLA-stainless steel) is being carried out. From materials development point of view, aluminium based metal matrix composites, cryo-rolled ultra-fine grain Zr-based alloys and creep-resistant steels are also being developed for structural applications. For hydro-turbine application, specially for Uttarakhand region, erosion resistant stainless steels are being developed. From energy materials point of view, work on metal foam, Li-ion battery etc. are also being performed. Research has also been initiated on the new frontiers of materials research including development of biomaterials for orthopaedic implants and electronic materials for field emission.

10. SCIENTIFIC AND TECHNICAL REPORTS

Sl. No.	Title of the Projects	Participants	Authors	Remarks
1.	DST project report entitled "Development of erosion resistant stainless steels for hydroturbines"	G.P. Chaudhari	S.K. Nath	Project completion report

4.17 DEPARTMENT OF PAPER TECHNOLOGY

**Academic Staff: 30; Students Admitted: UG- 26, PG- 16, Ph. D. - 20;
Publications: Books/ Chapters: 04, Journals: 48, Conferences:-16,
Projects: Research – Rs. 519.26 lacs,**

SALIENT FEATURES

The Saharanpur Campus has three departments viz. Department of Paper Technology, Department of Polymer & Process Engineering and Department of Applied Sciences & Engineering.

Department of Paper Technology

The Department of Paper Technology (DPT) is the oldest Department of the Saharanpur Campus which offers Two Year M.Tech. Paper Technology program in Pulp & Paper Technology. The Department has a well developed academic and research infrastructure. Its faculty is engaged in teaching, research and industrial consultancy. The courses aim to cater to the needs of Paper Industries across the country.

Department of Polymer and Process Engineering

Department of Polymer & Process Engineering (DPPE) is a new department in Saharanpur Campus. The Department offers academic courses leading to B. Tech in Polymer Science & Technology, and a Dual Degree Program of B. Tech in Process Engineering with MBA. The Department also performs fundamental and applied research in the areas of Polymer Science and Technology, Process Engineering and Management. The courses aim to cater to the needs of the vastly developing and much demanded **Polymer and Process** industries across the globe.

Department of Applied Sciences and Engineering

The Department of Applied Science and Engineering comprises multi-disciplinary faculty members mainly related to the disciplines like Physics, Chemistry, Mathematics, Humanities (English Literature), Electrical /Electronic Engineering to cater the academic requirements of multi-disciplinary students of the Campus. Our faculty members and scholars are actively engaged in the most promising doctoral and post-doctoral researches with an access to state of art educational/Research laboratories for both, Basic as well as Applied Science and Engineering.

Centre of Excellence in Packaging Technology

The Centre of Excellence in Packaging Technology was started in 2014 with the intake of 20 students per year in Two Year Master of Technology in Saharanpur Campus. The Centre is being supported by leading experts from outside institutions in academics and research such as Michigan University, Pepsico, USA and Packaging Institutions and Industries in India. The course is aimed to cater to the needs of highly demanding **Packaging Industries** across the globe.

GENERAL INFRASTRUCTURE

1. All the above Departments have procured state of the art research and laboratory equipment worth several crores including FIST project sponsored by DST, New Delhi. Most of the instruments have been installed and they are being extensively used for academic research purpose. The list includes: UV-vis., FTIR, Dynamic Light Scattering (DLS), Gel Permeation Chromatography, Zeta Size Analyser, AFM, Glove Box, Galvanostat, Hot Stage Polarizing Microscope, FE-SEM, Micro/Nano Grinder, Twin Screw Extruder, Micro Injection Molding, Rheometer, Injection Molding Machine, Hot Press, Rubber Injection Moulding Machine and other wide range of laboratory equipment for paper, polymer, process and materials science programs.
2. A state-of-the art Sports Complex is in the process of coming up. Synthetic Basketball and Lawn Tennis Courts with befitted flood lights have already been commissioned. Main Ground has also been encircled with fencing all around as per the plan of (E & W Department).
3. A Multi Story Faculty Residential Complex (TRIVENI APARTMENTS) has been allotted to the faculty members. Twenty one flats have been occupied by faculty members including one Assistant Registrar.
4. Air Conditioning of New Technology Block (7-Story Building) is in perfect order.
5. Old Library building has been made functional after minor repair and white wash barring the use of its first floor due to weak load bearing structural strength. New furniture has been made available through MGCL, IITR. Major structural modifications and AC fittings are yet to be initiated in the Auditorium and Guest Houses of Saharanpur Campus.
6. Necessary Physiotherapy Equipment for Dispensary has been purchased. One Physiotherapist on contract was appointed to help the students and residents of the SRE Campus.

7. Smart Class Room is under construction in 5th Floor of New Technology Block through NKN for managing classes in both the campuses.

2. LIST OF FACULTY MEMBERS

Professors

Dr. A.K. Singh

Ph.D (IIT Roorkee), *Corrosion Engineering, Material Science, Paper Properties*

Dr. Satish Kumar

Ph.D (IIT Roorkee), *Pulp Bleaching, Chloro-Organics Identification and Removal*

Dr. S.P. Singh

Ph.D (IIT Roorkee), *Printability, Paper Physics, Process Design and development*

Dr. Y.S. Negi

Ph.D (IIT Delhi) *Polymer Science and Engineering (synthesis, characterization and applications) Biodegradable Polymers, Cellulosic Nanomaterials for Drug Delivery System, Organic Liquid Crystalline Materials, Composites and Polymers for Micro/Optoelectronics, Recycling of Polymers & Polymer Fibres*

Dr. Dharm Dutt

Ph.D (IIT Roorkee), *Stock Preparations, Speciality Paper, Waste Minimization, Fiber Morphology and Biotechnology in Pulp and Paper*

Dr. S.C. Sharma

Ph.D (IIT Roorkee, *Communication, WL & Mobile Computing, Cloud Computing and Computer Control*

Associate Professors

Dr. Sanjay Palsule

Ph.D (Hanis-watt Univ. Edinburg-UK), *Polymer Science and Technology-Advance Polymer Blend and Polymer Composites*

Dr. U.K. Ghosh

Ph.D (BHU), *Chemical Engineering, Transport Process & Environmental Biotechnology*

Dr. (Mrs.) Chhaya Sharma

Ph.D (IIT Roorkee), *Environment, Bio Technology, Pulp & Paper and Industrial Chemistry*

Dr. Vivek Kumar

Ph.D (IIT Delhi), *Pulp and Paper Technology, Environment Management, Modeling and Simulation*

Dr. Ajay

Ph.D (G.B.Pant Univ.) *Condensed Matter Physics, Strongly Correlated Low Dimensional Systems, Theoretical Aspects of Iron & Cuprates high T_c Superconductors, Electronic Properties of multilayer Graphene & Josephson- quantum Dots Nanostructures*

Dr. (Ms.) Millie Pant

Ph.D (IIT Roorkee) *Soft Computing Numerical Optimization/Parallel Computing*

Dr. Sujay Chattopadhyay

Ph.D (IISc Bangalore), *Chemical Engineering, Polymeric Membranes*

Dr. N.C. Mishra

Ph.D (Max-Planck Institute of Colloids and Interface, Germany) *Chemical Engineering, Interface Science, Nano- biotechnology, Tissue Engineering,*

Dr. Rajan Arora

Ph.D (IIT Bombay), *Applied Mathematics (Fluid Mechanics)*

Dr. Sanjit Kr. Mishra

Ph.D (BHU, Varanasi), *Indian Writing in English*

Assistant Professors

Sh. Ram Kumar

ME (Roorkee), *Chemical Recovery, Environmental and Energy Management*

Dr.(Mrs.) Ashu Khanna

Ph.D (Gurukul Kangri, Hardwar), *MBA Finance*

Dr. Jaydev

Ph.D (IIT Kanpur), *Partial Differential Equation*

Dr. Yogesh Kr. Sharma

Ph.D (National Univ. of Singapore), *Materials Science, Polymeric Lithium Batteries, Nanomaterials*

Dr. Paritosh Mohanty

Ph.D (IIT Kharagpur), *Materials Chemistry, Synthesis and Characterization, Hybrid Materials*

Dr. Gaurav Manik

Ph.D (IIT Bombay), *Chemical Engineering, Polymer Adhesives, Modeling and Simulation*

Dr. A. Bandyopadhyay

Ph.D (IACS Calcutta), *Polymer Chemistry, Polymers for Smart Materials, Organic-Metallic Hybrid Polymer*

Dr. Tripti Mahara

Ph.D (IIT Kanpur), *ERP, Supply Chain Management, E-Commerce*

Dr. Abhijit Maiti

Ph.D (IIT Kharagpur) *Chemical Technology, Membrane Technology*

Dr. Pradip Kumar Maji

Ph.D (IIT Kharagpur) *Polymer Technology*
Dr. Sham Sunder Ravindernath
Ph.D (Akron, USA) *Polymer Technology*

Emeritus Fellow

Ray. A.K.

Polymer and Process Engineering.

Visiting Fellow

Kadam, Asish Polymer and Process Engineering.

Singh Vikram, Department of Paper Technology

3. HONOURS AND AWARDS TO FACULTY MEMBERS

Dr. Y.S. Negi	Conference Session Chairman: 2014 TAPPI Int. Conf. on NANOTECHNOLOGY for RENEWABLE MATERIALS (TAPPI-2014), Firemont Hotel Vancouver, British Columbia, Canada, June 23-26, 2014.
	Board Member: Search Cum Selection Committee for the selection of DIRECTOR-CPPRI,

	Saharanpur under Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (Paper Section), 7 th Nov., 2014, Meeting Venue-Udyog Bhawan, New Delhi.
	Board Member: Selection Committee for Assistant Professors-Chemistry, Govt. Degree College Higher Education Utrakhand Public Service Commission Gurukul Kangri, Haridwar
	Member: Governing Council of Kumarappa National Handmade Paper Institute, Sangner, Jaipur (KNPHI), 10 th June, 2014.
	Member: Selection Committee of RA/SRF, HRD Group of CSIR, New Delhi, 14-15 Jan, 2015.
	Member: Selection Committee of Scientific Staff/Faculty at Centre of Innovative and Applied Bio-processing (CIAB), Mohali, 10 th October, 2014.
	Member: Evaluation Process of Major Research Projects in 2013, UGC, Bahadur Shah Zafar Marg, New Delhi, 22 nd Sept., 2014.
	Adarsh Shikshak Samaan from Rotary Club Saharnpur Continental for the year 2014, 5 th September, 2014.
	Member: National Advisory Committee, Asian Polymer Association (APA).
	Member: National Advisory Committee Member, Society of Polymer Science.
	Member: Editorial Board USA- Int. J. Physics and Chemistry.
	Member: Short listing of Staff/Scientist Faculty Positions, CIAB, Mohali, 11 th Sept., 2014.
	Member: RAC Meeting at CPPRI for Evaluation of Ph.D students, 20 th April, 2015.
	Ph.D Thesis Evaluation and Viva-voce Examination: HNB Garhwal Univ., Utkal Univ., KIIT Bhubaneswar, NIT Raipur, VNIT Nagpur and FRI, Dehradun.
Dr. Dharm Dutt.	Honorary Board of Director of East and West Products Ltd., Khatema (UK)
	Technical Members of TOEC, IGNOU New Delhi,
	Peer, Core committee and special task force Central Pollution Control Board,
	Reviewer Award by Industrial Crops and Products (Elsevier) Amsterdam, The Netherland.

4. PARTICIPATION OF FACULTY IN CONFERENCES/ SEMINAR/ SYMPOSIA/ WORKSHOP/ GUEST LECTURES.

Sl. No.	Name of Faculty	Name of Conf./Seminar/Symposia/ Workshop Attended	Place	Dates
1.	Dr. G. Manik,	Speaker at SETCOR International Conference on Smart Materials and Surfaces (SMS-14), SETCOR,	Bangkok, Thailand	26 – 28 Aug. 2014.
		Invited Speaker in Second Symposium on Advances in Sustainable Polymers (ASP),	IIT Guwahati	21 – 22 Jan., 2015
		Speaker at Q.I.P Sponsored One Day Workshop on “Molecular simulation techniques”, Organized by Department of Polymer and Process engineering in association	Q.I.P. CENTRE, IITR	21 Feb., 2015
2.	Dr. Y.K. Sharma	Invited speaker and chaired a session International conference of Nanoscience and nanotechnology,	Kottayam India	Dec., 2014
3.	Dr. M. Pant	Invited Lecture: One day workshop on soft computing in cryptography	DRDO, New Delhi	23 Sept., 2014
		Invited Lecture: One Day Workshop on Advanced Optimization Techniques on	JAYPEE, NOIDA	23 Sept., 2014
		Invited Lecture: One Day Workshop on Engineering Applications of Soft Computing Techniques.	ITS, NOIDA	Nov. 2014
		Invited Lecture: three days International Workshop on ADVANCES IN ENGINEERING OPTIMIZATION	DECR, Pune	29 – 31 Jan. 2015
		Invited lecture: TEQIP-Phase II Sponsored one week Short Term Training Program (STTP) on “Optimization Techniques in Engineering R&D”	SLIET, Longowal, Punjab	9 – 13 March, 2015.
4.	Dr. A. Maiti	Invited Talk: Organic matter in pulp & paper mill wastewater and produced water of oil extraction: Challenges and opportunities	Central Pulp & paper Research Institute, Saharanpur, UP	12 Feb., 2015

Sl. No.	Name of Faculty	Name of Conf./Seminar/Symposia/ Workshop Attended	Place	Dates
5.	Prof. Y.S. Negi	Invited Talk/ Chairing Session: 2014 TAPPI Int. Conf. on NANOTECHNOLOGY for RENEWABLE MATERIALS (TAPPI-2014),	Firemont Hotel Vancouver, British Columbia, Canada,	23 – 26, June, 2014.
6.	Prof. Y.S. Negi	Invited Talk: One day Training Program in Collaboration with Ministry of Small and Micro Enterprises, Govt. of India for Entrepreneur/Personels from PACKAGING INDUSTRY	Kurukhetra University Campus, Haryana.	29 Nov., 2014
7.	Dr. S. Palsule	Invited Lecture: “Natural Fiber / Polymer Composites by Palsule Process” in “Conference on Microscopy in Materials Science & Biomemetic Technology”	DMSRDE Kanpur	26 – 28 Feb. 2015

5. DISTINGUIHED VISITORS TO THE DEPARTMENT (NATIONAL/ INTERNATIONAL)

Sl. No.	Name	Designation and Affiliation	Purpose	Date
1.	Prof. G. Corro	Professor Investigator Titular “C” Instituto de Química, Benemérita Universidad Autónoma de Puebla, 18 Sury Av. San Claudio, Edif. 103H, C.U., Puebla-72570, Mexico	In part of the Indo-Mexican project	March 04 - 10, 2015
2.	Mr. A. Kumar	Scientist E TBRL, DRDO, Min of Defence, GOI, Chandigarh	Invited Talk	2015
3.	Mr. D. Lekhi	Scientist D RCMA, DRDO, Min of Defence, GOI, Chandigarh	Invited Talk	2015
4.	Dr. S. Venkatraman	Chair , MSE, NTU, Singapore	Invited Talk	28-Feb, 2015

6. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Source of funding	Nos. of Participants	Dates
1.	Dr. Manik, G.	One Day Workshop on “Molecular simulation techniques”	QIP, IITR	50	21 Feb., 2015

7. SPONSORED RESEARCH PROJECTS

(i) CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigator	Title of the Project	Sponsoring Agency	Outlay Amt. (Rs. In Lacs)
1.	Dr. Sharma, Y.K.	Nanostructured Mn-based Silicate: Cathode Material for High Energy/Power Denisty Li-ion Batteries	CSIR	21.00
2.	Dr. Pant, M.	Hybrid nature inspired optimization algorithms for optimization problems in financial engineering.	DST-RFBR (Indo-Russian)	19.00
3.	Dr Mohanty, P.	Inorganic-Organic Hybrid Nanoporous Materials for Carbon Dioxide Capture	DST	75.26
4.	Dr. Mohanty, P.	Low-dimensional hybrid hierarchical nanoporous materials for environmental applications	DST-CONACYT (Indo-Mexican)	9.00
5.	HOD-SRE Campus	Instrumentation Facilities for High End Research	DST-FIST	375

(ii). NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Pant, M.	Solution of Dynamic Optimization Problems through Metaheuristics	DST-DAAD (Indo-German),	Rs. 10.00
2.	Dr. Chattopadhyay,S.	Phase Change Material Development	Pluss Polymer	Rs. 10.00 lacs

4.18 DEPARTMENT OF PHYSICS

**Academic Staff: 34; Students Admitted: UG- Int. MSc: 15, PG: (M.Tech) 16, (M.Sc.) 21, Ph.D.:16;
Publications: Journals: 79, Conferences: 52; New Projects: Research- Rs. 51.12 Lacs**

1. SALIENT FEATURES

- i) The structure for the recently proposed four-year B.Tech. program in Engineering Physics (EP) has been prepared by the faculty members of the Department of Physics. The undergraduate program in EP, to be introduced in Autumn Semester 2015-16 and administered by the Department of Physics, has been designed for the ever changing technologies and opportunities of the 21st century. This program will develop sufficient depth in both engineering and physics skills to produce engineers who can relate fundamental physics to practical engineering problems, and will possess the versatility to address new problems in our rapidly changing technological base. The structure of the EP program is on the [B.Tech. \(Engineering Physics\)](#) link. The students have options to choose technological areas from- Applied optics, nuclear engineering, space technology, nano engineering, superconductivity and modern particle physics along with B.Tech. (Honours) in Engineering Physics.
- ii) A new laboratory, named as "Radiation Detectors and Spectroscopy (RDS)", has been developed to perform small scale experiments in laboratory to familiarize the students the handling of high-end nuclear physics experiments. The idea is to generate a bridge between the theory and experiments in advanced Nuclear Physics for Masters' students and research scholars. All the purchased instruments have been installed successfully.

2. LIST OF FACULTY MEMBERS

Professors

Srivastava, Rajesh, PhD (BHU, Varanasi)
Head (w.e.f. 01-05-2014)

Atomic and Molecular Collision Physics:
Theory of Scattering of Spin Polarized
Electrons with Spin Polarized Atomic
Systems. Atomic Structure Calculations with
Relativistic Effects, Autoionizing States &
their Decay Plasma Diagnostics.

**Indu, Byas Dev, DPhil (HNB Univ.,
Garhwal)**
Condensed Matter Physics: Theoretical
Study of Impurity & anharmonicity Effects on
the Acoustical, Optical & Electronic
Properties of High Temperature Low
Dimensional Super Conductors,
Semiconductors & Insulators and effects of
lower dimensions.

Jain, Ashok Kumar, PhD (BHU, Varanasi)
Nuclear Physics: High-Spin States, Super-
Deformed Nuclei; Semi-Classical Physics:
Order & Chaos in Nuclei, Periodic Orbit
Theory.

**Kaur, Davinder, PhD (Delhi University,
Delhi)**
Experimental Condensed Matter Physics:
Thin films & Devices of Solid State
Functional Materials Especially High
Temperature Superconductors and CMR
Materials

Nath, Ravindra, PhD (IIT Delhi)

Condensed Matter Physics: Peizo-Pyro &
Ferroelectric Properties of Polymers &
Device Applications.

Nautiyal, Tashi, PhD (Roorkee)
Condensed Matter Physics: Theoretical
Study of Electronic, Magnetic & Optical
Properties of Compounds.

Singh, Gauri Shankar, PhD (Roorkee)
Condensed Matter Physics: Electronic
States in Nanosystems; Band Structures of
Photonic Crystals; Transport in Ellipsoidal
Fluids (Isotropic & Liquid Crystal Phases)

Singh, Vir, PhD (BHU, Varanasi)
Atmospheric Physics: Atmospheric & Space
Science, Auroral & Airglow Studies,
Planetary Atmospheres

Varma, Ghanshyam Das, PhD (BHU)
Experimental Condensed Matter Physics:
High Temperature Super Conductor, Nano
Carbon Tubes.

Yadav, Kanhaiya Lal, PhD (IIT Kharagpur)
*Experimental Condensed Matter Physics,
Smart Electro-Ceramics & Biomaterials*

Associate Professors

Arumugam P., PhD (MS Univ., Thirunelveli)
Nuclear Structure theory, Nuclear
Astrophysics, Hot and rotating nuclei,
Relativistic mean field theory

Chatterjee, Rajdeep., PhD (SINP, Calcutta)
Theoretical Nuclear Physics, Nuclear
Astrophysics, Low and medium energy

nuclear reactions, Unified models of nuclear structure and reactions, exotic radioactivity, physics of dripline nuclei

Maitra, Tulika, PhD (IIT Kharagpur)

Condensed Matter Theory, Correlated Electronic Systems, frustrated magnetic systems, Organic electronic systems.

Misra, Aalok, PhD (Rochester Univ. USA)

High Energy Physics: String Theory, Gauge Field Theories, Meson-Baryon Low Energy Effective Field Theories

Patra, Binoy Krishna, PhD (BHU, Varanasi)

High Energy Nuclear Physics, Quark – Gluon Plasma in ultra-relativistic nucleus-nucleus Collisions and in the early Universe, Low-energy effective field theory, Spectral Representation in finite-temperature field theory.

Rastogi, Vipul, PhD (IIT Delhi)

Laser Physics: Fiber Optics, Integrated Optics, Photonics

Wasan, Ajay, PhD (IIT Kanpur)

Atomic spectroscopy, Quantum Optics, Bose-Einstein condensation, Quantum computing

Assistant Professors

Deo. Ajay Y, PhD (Mumbai Univ.)

Experimental Nuclear Physics, Nuclear structure at high-spin, beta-decay studies, heavy-ion induced

Gourishetty, Anil Kumar PhD (IIT Kharagpur)

Nuclear Physics, Monte Carlo simulation of response of radiation detectors, Radiation induced effects in thin films, Characterization of radiation detectors for different applications

Jain, Puneet Ph.D. (SOKENDAI, Japan)

Beam dynamics and High-order-modes studies for charged particle accelerators

Mitra, Anirban, PhD (IIT Kanpur)

Laser, opto electronics, Optical properties of semiconductors

Maiti, Moumita PhD (SINP, Kolkata)

Nuclear Physics and its applications, Production of neutron deficient radio nuclides

M. V. Sunil Krishna, PhD (IIT Roorkee)

Atmospheric Physics, Atmospheric & Space Science, Auroral & Airglow Studies, Planetary Atmospheres, Space Weather

Nataraj S. Hulyar PhD (IIAP, Bengaluru)

Atomic and Molecular Physics, Symmetry violations in atoms and molecules, Atomic and molecular cloaks, Matter-antimatter symmetry

Sanyal, P PhD (IISc Bengaluru)

Theoretical Solid State Physics

Sharma, Lalita PhD (IIT Roorkee)

Atomic and Molecular Collision Physics: Theory of Scattering of Spin Polarized Electrons with Spin Polarized Atomic Systems. Atomic Structure Calculations with Relativistic Effects, Autoionizing States & their Decay.

Srivastava, P.C. Ph.D. (Allahabad Univ.)

Theoretical Nuclear Structure Physics, Exotic nuclei, Nuclear Models, Large-scale shell model, Double and Neutrinoless double beta decay.

Sarkhel, Sumanta PhD (PRL, Ahmedabad)

Upper Atmospheric Physics, Sodium Airglow, Mesospheric Chemistry and Dynamics, Atmospheric Gravity Waves, Optical Instruments, Active and Passive Remote sensing, Airglow Imager

Satapathi, Soumitra PhD (University of Massachusetts Lowell, USA)

Experimental Condensed Matter Physics, organic photovoltaics, optical sensors ,organic electronics, nanotechnology, Biomedical Optics and nonlinear imaging, Biophysics, Nanobiotechnology

Vivek K. Malik PhD (University of Fribourg, Switzerland) Experimental Condensed Matter Physics, Thin Films and Multilayers of Complex Oxide Materials, Magnetism, Superconductivity

Emeritus Professor/Fellow

Singh, Ishwar, PhD (Roorkee)

Condensed Matter Physics: Theoretical Studies of Strongly Correlated Electronics Systems including Heavy Fermions and High – Temperature Super Conductors. Conceptual Foundations of Quantum Mechanics.

Visiting Faculty

Biswas, Prasanta Kumar PhD (Calcutta University) *Materials Science and*

Technology, 1.Sol-gel films-optics & photonics 2.Expt condensed matter-QDs,TCOs 3.Soft lithography 4.Plasmonics

Sharma, Sangeeta

Rai, Jagdish

3. HONORS AND AWARDS TO FACULTY MEMBERS

1.	Prof. Rajesh Srivastava	Member, Fourth Program Advisory Committee, Department of Science and Technology, Lasers, Optics, Atomic and Molecular Physics Attended Selection Committee Meeting for the appointment of faculty at SMVD University, Jammu on June 26, 2014 Attended Selection Committee Meeting for the appointment of Professor at Physical Research Laboratory, Ahmedabad on June 24, 2014
2.	Prof. A. K. Jain	Outstanding Service Award 2013, by Indian Nuclear Society (Department of Atomic Energy) Convener, Nuclear Physics, DST-DAE Vision Meeting on High Energy, Nuclear and Accelerator Physics, held at Homi Bhabha Centre for Science Education, Mumbai, Aug. 24-25 2014
3.	Prof. D. Kaur	Selected by Indian National Science Academy (INSA) for nomination under International Scientific Collaborative and Exchange Program
4.	Dr. S. Satapathi	Nominated for Associate of the Indian Academy of Science

4. Participation of Faculty in Conference/ Seminar/ Symposia/ Workshop/Guest Lecture etc.

Sl. No.	Name	Name of Conference/ Seminar/ Symposium/ Workshop/ Guest Lecture	Place	Dates
1.	Prof. Rajesh Srivastava	Guest lecturer in SERB School on High intensity Laser plasma interaction: Theory and simulation	IIT Delhi	May 5-23, 2014
		IEEE International Conference on Plasma Science and International Conference on High-Power Particle Beams (ICOPS/BEAMS-2014)	Marriott Wardman Park, Washington DC, USA	May 25-29, 2014
		16 th International Workshop on Matter (RPHDM-2014)	Vienna, Austria	Sept. 29 - Oct. 03, 2014
		20 th National Conference on Atomic and Molecular Physics	Indian Institute of Space Science and Technology, Thiruvananthapuram	Dec. 8-12, 2014
		APS March Meeting	San Antonio, USA	March 2-6, 2014
2.	Prof. A. K. Jain	Key Note Address, National Conference on Emerging Challenges in Nuclear and Many Body Physics	Jammu University	Nov. 10-11, 2014
		Invited talk at the AASPP Workshop on Nuclear Reaction Database Development	B.A.R.C., Mumbai	Sept. 22-24, 2014
		Invited talk at the 33 rd International Workshop on Nuclear Physics	Bulgarian Academy of Sciences, Sofia, Bulgaria	June 22-28, 2014
		Invited talk at the 75 th year of Nuclear Fission	B.A.R.C., Mumbai	May 8-10, 2014
		Lectures at the School on Nuclear Fission	V.E.C.C., Kolkata	May 13-15, 2014
3.	Prof. K. L. Yadav	Harnessing the Researcher to Promote Sustainable Innovation	CEC, IIT Roorkee	Sept. 02-6, 2014
4.	Prof. G. D. Varma	Workshop on Advanced Functional Materials	MNIT Jaipur	Sept. 05-6, 2014

	International Conference cum workshop on “Nano Science and Life”	Department of Physics, B.H.U., Varanasi	Feb. 28 – March 02, 2015
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Sl. No.	Name	Name of Conference/ Seminar/ Symposium/ Workshop/ Guest Lecture	Place	Dates
5.	Prof. D. Kaur	Invited Talk in International Conference on Electron Microscopy (EMSI)	University of Delhi	July 09-11, 2014
		Invited Talk in 9th Indo Japan Bilateral Conference BICON 2014	Jaipur, India	Oct. 12-17, 2014
		Nominated to attend course on policy for Science	National Institute of Advanced Studies, Bengaluru	Dec. 15-19, 2014
		Nanostructured Shape Memory and Piezoelectric thin Films for MEMS based Sensors (Invited Lecture)	SSPL, DRDO, New Delhi	March 20, 2015
6.	Dr. Aalok Misra	International Conference on New Trends in Field Theories	BHU, Varanasi	Nov. 1-5, 2014
7.	Dr. Soumitra Satapathi	MACRO 2015	IACS, Kolkata	Jan. 23-26, 2015
		DST Inspire Summer Camp	Garhwal University	Jan. 16-20, 2015
		Invited Lecture	NCL, Pune	May 28, 2015
8.	Dr. Rajdeep Chatterjee	33 rd International Workshop on Nuclear Theory	Rila Mountains, Bulgaria	June 22-28, 2014
		Direct Reactions with exotic beams-2014	Darmstadt, Germany	June 30 - July 04, 2014
		Emerging Challenges in Nuclear and Many-body Physics	Dept. of Physics, Jammu University	Nov. 10-11, 2014
		Visitors' Program - 2015	Dept. of Physics, Delhi University	March 09-10, 2015
		Four lectures at Winter School on Nuclear Astrophysics, Centre for Nuclear Theory, VECC	VECC, Kolkata	Jan. 19-22, 2015
9.	Dr. Vipul Rastogi	XXII International Workshop on Optical Waveguide Theory and Numerical Modelling - OWTNM 2014	Nice, France	June 27-28, 2014
		International Workshop on Optical Waveguide Theory and Numerical Modelling, OWTNM 2015	London, UK	April 17 -18, 2015
10.	Dr. Moumita Maiti	12 th DAE BRNS Symposium on Nuclear and Radiochemistry (NUCAR-2015)	BARC, Mumbai	Feb. 19-23, 2015
		ISOLDE Workshop and User meeting 2014 "50 th Anniversary Edition"	CERN, Switzerland	Dec. 15-17, 2014
		Curie Memorial Lecture	IGCAR, Kalpakkam	Dec. 02, 2014
		Chemistry Colloquium	IGCAR, Kalpakkam	Dec. 01, 2014
		2 nd Workshop on Science with Rare Ion Beams (SCRIBE-2014)	VECC, Kolkata	Nov. 25-28, 2014
		The 3 rd International Conference on Application of Radiotracers and Energetic Beams in Sciences (ARCEBS-14), Kolkata	Ffort Raichak, Kolkata	Jan. 12-18, 2014

11.	Dr. Tulika Maitra	Current Trends in Condensed Matter Physics-2015	NISER, Bhubaneswar	Feb. 19-22, 2015
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Sl. No.	Name	Name of Conference/ Seminar/ Symposium/ Workshop/ Guest Lecture	Place	Dates
12.	Dr. Ajay Y. Deo	56 th AUC User Workshop	IUAC, New Delhi	July 6-7, 2014
13.	Dr. Lalita Sharma	45 th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics	Madison, Wisconsin, USA	June 2-6, 2014
		Exploring Fundamental Physics using Atomic Systems (EFPAS 2015)	Physical Research Laboratory, Ahmedabad	May 6-8, 2015
14.	Dr. Moumita Maiti	12 th DAE BRNS Symposium on Nuclear and Radiochemistry (NUCAR-2015)	BARC, Mumbai	Feb.19-23, 2015
		ISOLDE Workshop and User meeting 2014 "50 th Anniversary Edition"	CERN, Switzerland	Dec. 15-17, 2014
		2 nd Workshop on Science with Rare Ion Beams (SCRIBE-2014)	VECC, Kolkata	Nov. 25-28, 2014
		The 3 rd International Conference on Application of Radiotracers and Energetic Beams in Sciences (ARCEBS-14), Kolkata	Ffort Raichak, Kolkata	Jan.12-18, 2014
15.	Dr. P.C. Srivastava	DST-SERC School 2014 : series of lectures on large-scale shell model	TIFR, Mumbai	Nov., 2014
		DST-SERC School 2015 : lectures on shell model effective interactions	IIT Roorkee	March, 2015
		Excitation across Z=28 gap for heavy As isotopes (Invited talk)	ECNMP-2014 at Jammu University	Nov. 10-11, 2014
		Nuclear Structure of neutron-rich nuclei towards N=50 (Invited talk)	SCRIBE-2014 VECC Kolkata	Nov. 24-28, 2014
16.	Dr. Puneet Jain	DAE-DST Vision Meeting of Nuclear, Particle, High Energy Physics and Accelerators (Invited)	Homi Bhabha Centre for Science Education, Mumbai	August 24-25, 2014
		Indo-Japan School on Advanced Accelerators for ions and electrons (Invited)	IUAC, New Delhi	Feb. 16-18, 2015
17.	Dr. Vivek K. Maik	Conference on Neutron Scattering	Homi Bhabha Centre for Science Education, Mumbai	Feb. 02-04, 2015

5. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the Conf./ Seminar/ Symp./ Workshop	Name of the Chairman	Sponsored by	Dates
1.	SERB-DST School on Modern Theories of Nuclear Structure	Dr. P. Arumugam Dr. P. C. Srivastava	D.S.T., Govt. of India	Feb. 23 – March 05, 2015

6. SHORT TERM/ SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of the Course	Source of funding	Number of participation	Dates
1.	Dr. Soumitra Satapathi	Recent Advances in Nano biophotonics (From Lab to		35	July 13-17, 2015

		Clinic)			
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7. SPONSERED/CONSULTANCY PROJECTS

i. COMPLETE SPONSERED PROJECTS

Sl. No.	Principal Investigators	Title of Projects	Sponsoring Agency	Outlay Amount (Rs. In lacs)
1.	Dr. Vipul Rastogi	Indo-French Networking project on Specialty optical fibers and fiber-based components for optical communication	DST	6.4
		UKIERI Major grant on Application specific micro structured optical fibers	British Council	9.7
		Development of silica-based segmented cladding fiber	DST	9.6
		Innovative light extraction technology for white OLED	DST	62.75

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of Projects	Sponsoring Agency	Outlay Amount (Rs. In lacs)
1.	Prof. Rajesh Srivastava	Plasma based fully relativistic DW calculations of cross sections	IAEA, Vienna	Approx. 4
2.	Prof. G.D. Varma	Growth and Investigation of Fe-chalcogenide and alkali doped Fe-Selenide superconductors	CSIR	Approx. 14.92
		Investigation of Fe-Chalcogenide superconductors	SERB (DST)	Approx. 42.42
3.	Dr. R.K. Dutta	Ion beam assisted synthesis and characterization of novel optically active Glass /Polymer	IUC-DAEF, Kolkata Centre	No separate fund allocated
4.	Prof. P.K. Ghosh	Optimization of ultrasonic dual mixing for homogeneous distribution of inorganic nanoparticles in epoxy based adhesive affecting its thermal and mechanical properties	SERB, Technology Bhawan, New Delhi, India	Approx. 40
5.	Prof. K.L. Yadav	Investigation of dynamical magnetodielectric and magnetoferroelectric properties of multiferroic nanoparticles reinforced polymer nanocomposites and multiferroic oxides for device applications	CSIR, New Delhi, India	20.7
6.	Prof. D. Kaur	Fabrication of Nanostructured Multiferroic Thin Films and Multilayers for room temperature Electronic	DRDO	47.99
7.	Dr. B.K. Patra	Study of some aspects of strongly interacting QGP via String/ M-theory	CSIR	12.42
8.	Dr. Rajdeep Chatterjee	Reaction dynamics of nuclei far from the valley of stability	DST-SERB	25.08
9.	Dr. Tulika Maitra	Competing and coexisting long range orders in certain correlated systems	CSIR	14.32
10.	Dr. Ajay Y. Deo	Gamma Spectroscopy using incomplete-fusion reaction	SRIC	9
11.	Dr. Anil K	Studies with new scintillation detectors	DST	24

	Gourishetty	Studies on coincidence summing effects in scintillation detectors	SRIC-FIG (A)	4.9
12.	Prof. Rajesh Srivastava	Electron induced collision processes and plasma modeling	DAE-BRNS	29.41
13.	Dr. M.V. Sunil Krishna	Modeling of Sodium and OH airglow emissions	SRIC-FIG (A)	3.85
14.	Dr. Moumita Maiti	Heavy ion induced production of carrier free ^{97}Ru : An interdisciplinary Research”	SRIC, IIT Roorkee	9.5
15.	Dr. Moumita Maiti (Co-PI)	Studies on different accelerator based production routes of ^{163}Ho and its separation from target matrix	INSA-HAS Joint Research Project, India	---
16.	Dr. Prabuddha Sanyal	Study of magnetic properties of transition metal oxides using density functional theory(DFT) and model Hamiltonian methods	SRIC-FIG (A)	9

iii. **NEW SPONSORED RESEARCH PROJECTS**

Sl. No.	Principal Investigators	Title of Projects	Sponsoring Agency	Outlay Amount (Rs. In lacs)
1.	Dr. Soumitra Satapathi	Morphology Optimization in Excitonic Solar Cells	IIT Roorkee (FIG)	10
2.	Dr. Moumita Maiti	Quantification and isolation of radionuclides produced by light ion induced reactions in lead bismuth eutectic target	SERB, DST	21.2
3.	Dr. Vivek Malik	Strain Induced Ordered Electronic and Magnetic States in Complex Oxide Thin Films Using Patterned Substrates	SRIC-FIG	10
4.	Dr. Sumanta Sarkhel	Upper Atmospheric Investigation using Optical Techniques	SRIC-FIG	10

8. **SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (> Rs. 10 lacs) A brief write-up upto 100 words) (New Projects during the year 2014-15)**

A relativistic distorted wave (RDW) theory is proposed to be applied to obtain reliable excitation cross sections of several fine-structure levels involved in electron-atom (-ions) collisions. Further, to describe a plasma, suitable CR model will be developed which will use our calculated RDW cross sections to predict various plasma parameters, e.g., plasma temperature, population densities of excited species and line intensities etc. The proposed studies are not only of fundamental interest but also have practical applications to manufacture many products that we depend on, directly or indirectly, every day, such as plastic bags, automobile bumpers, airplane turbine blades, artificial joints, and, most importantly, semiconductor circuits.

4.19 DEPARTMENT OF WATER RESOURCES DEVELOPMENT & MANAGEMENT

Academic Staff: 11 Students Admitted: PG : 30 ; Ph.D : 12
Publications in: Journals: 45 , Book/Books Chapters: 03, Conferences: Nil,
Sponsored Research project: Rs. 185.92 Lacs. Consultancy Projects: Rs. 352.45 Lacs

1. SALIENT FEATURES

- The Department of WRD&M is a balanced blend of academicians and field engineers.
- The faculty is experienced in planning, design, construction, operation, and maintenance of water resources development projects (viz., hydropower, Irrigation management, and flood control management). It helps in implementation of application oriented academic programs.
- Since its creation in 1955, the Department has trained over 2606 serving engineers from 50 countries. The Department is offering post graduate training (P.G. Dip. / M.Tech.) in Water Resources Development and Irrigation Water Management.

2. LIST OF FACULTY MEMBERS

Professors

Khare, Deepak, PhD (Roorkee)

Head

Ground Water, Hydraulic Structures,
Watershed Management, Climate Change

Tripathi, S.K., PhD (Allahabad)

*Agronomy, Irrigation Water Management and
Agricultural Planning*

Sharma, Nayan, PhD (Roorkee)

River Engg., Hydraulic Structures &
Irrigation Engg

Kansal, M.L., PhD (Delhi Univ.)

*Water Resources Systems, Hydropower
Operation Management and Drinking Water*

Mishra, S.K. PhD (Roorkee)

Irrigation Water Management, Hydrology

Associate Professors

Pandey, Ashish, Ph.D (IIT Kharagpur)

Irrigation Water Management, Hydrological
Modeling of Watershed, Remote Sensing
and GIS Applications

Assistant Professors

Chelliah Thanga Raj, Ph.D (IIT Roorkee)

*Power Electronic in Large Pumped Storage
Plants*

Emeritus Fellow

Das, Devadutta, ME (Roorkee)

*Hydro-Electric System Engineering, Energy
Systems Planning & Economics*

Chaube, U.C., PhD (IIT Delhi)

*Water Resources, Hydrology, Irrigation and
Environmental Management of Rivers*

Chauhan Gopal, Prof. (On Contract)

ME (Roorkee)

Hydro Mechanical & Construction equipment

3. HONOURS AND AWARDS TO FACULTY MEMBERS

1.	Dr. Nayan Sharma	Dr. Nayan Sharma was appointed as Member of International Advisory Committee of the 5th International Conference on Water and Flood Management (ICWFM-2015), organized by Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET) held during 6-8 March, 2015 in Dhaka, Bangladesh. Member of Committee to Suggest Remedial Measures on Flood Problem of Guwahati, Constituted by Govt. of Assam, 31 st July, 2014. Appointed Distinguished Fellow of Centre for Development and Peace Studies, India.
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4. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/SYMPOSIA/ WORKSHOP/GUEST LECTURES.

Sl. No.	Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
1.	Dr. Deepak Khare	2 nd IWA Malaysia Young Water Professionals Conference 2015 (Kuala Lumpur, Malaysia)	Kuala Lumpur, Malaysia	March 17-20, 2015
2.	Dr. S.K. Tripathi	2014 International Annual Meeting "Grand Challenges Great Solutions" ASA, CSSA, SSSA (Long Beach, California, USA)	Long Beach, California, USA	Nov. 02-05, 2014
3.	Prof. Nayan Sharma	Delivered Invited talk on "Novel Unified Technology for Hazard Mitigation with Water Management for Mountain Streams"	INAE-Engineers Conclave-2014 at Indian Institute of Science, Bangalore	October 30 – Nov. 1, 2014.
4.	Prof. Nayan Sharma	Delivered Invited talk on "Harnessing The Brahmaputra: Key To Northeast India's Economic Regeneration"	Tezpur Central University, Assam	March 16-17, 2015.
5.	Dr. Nayan Sharma	HKH assessment meeting ICIMOD headquarter (Kathmandu, Nepal)	Kathmandu, Nepal	Oct. 14-16, 2014
6.	Dr. M.L. Kansal	E-flows Joint Research Team meeting and field trip (Dhaka, Bangladesh)	Dhaka, Bangladesh	May 05-08, 2014
		Environmental and Water Resources Congress 2014 (Cincinnati, Ohio, U.S.A.)	Cincinnati, Ohio, U.S.A.	June 01-05, 2014
		Visit of IOWA State University for exploring the long term Technical Association	IOWA State University	June 06-09, 2014
		Peer Review Meeting: Environmental Flow Assessment for the Sundarbans Ecosystems. (Bangkok, Thailand)	Bangkok, Thailand	Nov. 06-09, 2014
		Multi Stakeholder Workshop (Dhaka, Bangladesh)	Dhaka, Bangladesh	Nov. 16-18, 2014
7.	Dr. Ashish Pandey	International Conference on Chemical, Biological and Environment Science – 2014 ICCBES'2014 (Pattaya, Thailand)	Pattaya, Thailand	Dec.15-16, 2014
		Site visit of Consultancy Project No. WRC-6014/14-15 at Lekki Free Trade Zone (FTZ) Lagos, Nigeria	Lekki Free Trade Zone (FTZ) Lagos, Nigeria	March 24, 2015 to April 01, 2015
8.	Dr. Devadutta Das	18 th International Conference on Hydro Power Plants at University of Technology (Vienna, Austria)	Vienna, Austria	Nov. 22-30, 2014
9.	Dr. U.C. Chaube	Site visit of Consultancy Project No. WRC-6014/14-15 at Lekki Free Trade Zone (FTZ) Lagos, Nigeria	Lekki Free Trade Zone (FTZ) Lagos, Nigeria	March 24, 2015 to April 01, 2015

5. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
1.	Dr. Ali Azam Khosravi,	Research Counsellor of Science, Research & Techno-logy, Embassy of Iran,	To have discussions	March 20, 2015
2.	Dr. Razazade,	Pro Vice-Chancellor, Urmiah University,		
3.	Dr. Nikrouz	Director, International Relation, Urmiah University		

6(a). INTERNSHIPS BY IIT – ROORKEE STUDENTS

Sl. No.	Name of student	Name of the Internship Programme	Under Graduate	Post Graduate	Name of Institute	Period
1.	Subash Prasad Rai	South Asia Water Initiative (SAWI) New Delhi		Ph.D.	World Bank, New Delhi	January 06, April 06, 2015

(b). INTERNSHIPS TO OTHER STUDENTS IN IIT – ROORKEE

Sl. No.	Name of student	Name of Supervisor	Under Graduate	Post Graduate	Name of Institute	Period
1.	Ms. Vaishali Kandpal	Dr. Deepak Khare	U.G.	-	G.B. Pant University of Agriculture and Tech., Pantnagar	June 2014
2.	Mr. Ayush Dabas	Dr. Thanga Raj Chelliah	UG	-	GBPU, Pantnagar	June 2014

7. SPONSORED/CONSULTANCY PROJECTS:**i. COMPLETED SPONSORED RESEARCH PROJECTS**

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Radha Thangaraj	Evolutionary Computing And Performance Guarantee (EVOCOM) NO. SER-641 WRCDT. 14.7.12	Science & Engg Research Board, NEW DELHI	17.46
2.	Dr. Thanga Raj Chelliah	Control of Variable Speed Pumped Storage Hydropower Plants & Energy Balancing	MHRD, India	3.25
3.	Prof M. L. Kansal	Impact of climate and land use change on hydrological response (surface & sub surface) of Beas basin (up to Pandoh Dam)	DST, New Delhi	32.73

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Prof S.K Tripathi	Experimental Agromet Advisory Service (Gramin Krishi Mausam Seva) 2012-13	NCMRWF	3.6
2.	Prof S.K Tripathi	Forecasting Agricultural Output Using Space, Agrometeorology and Land Based Observations (FASAL)	MoES	18.5
3.	Prof. Nayan Sharma	Experimental Study of Jack Jetty and Porcupine Systems for River Training	Indian National Committee on Hydraulics, Ministry of Water Resources, Govt. of India	29.35
4.	Dr. S. K. Mishra and Dr. Ashish Pandey	Experimental Verification of SCS Runoff Curve Numbers For Selected Soils And Land Uses No. MOW-627 WRD DT. 9.5.12	MOWR, INDIA	44.15
5.	Dr. Ashish Pandey & Dr. S. K. Mishra	Hydrological Response of a River Basin In Changing Climate NO. MOW-628 WRD DT. 9.5.12	MOWR, INDIA	30.66
6.	Dr. S. K. Mishra and Dr. Ashish Pandey	Assessment of sediment yield from the catchment of Tehri reservoir. THDC India Limited Bypass Road, Rishikesh. Co-PI	THDC India Limited Rishikesh. Co-PI	15.00
7.	Dr. Thanga Raj Chelliah	Pumped Hydro Energy Storage Robust Computing & Control Technologies For Enhanced Energy Efficiency, Power Quality & Reliability	Science & Engg Research Board, INDIA	20.1

iii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Dr. Thanga Raj Chelliah & Prof. Deepak Khare.	Analysis of dynamic performance of variable speed hydroelectric plants under grid disturbances	Tehri Hydropower Development Corp. (I) Ltd	24.56

8. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (>Rs. 10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2014-15).

The Major Consultancy Projects of about Rs.3,52,45,738.00 and major sponsored research project of about Rs. 1,85,92,000.00 are under progress.

4.20 ALTERNATE HYDRO ENERGY CENTRE

Academic Staff: **07**, Students Admitted: UG/INT. M.Tech/M.Sc. **Nil** ; PG: **47**; Ph.D.: 31
Publications in: Journals: 59, Conferences 27, Book/Books Chapters: **02** (special publication)
Projects: Research (Rs. in Lacs): **115.00**, Consultancy (Rs. in Lacs): **316**

1. SALIENT FEATURES

1. Various activities related to education, research and technical expertise are undertaken by AHEC during the year in the area of small hydro power and other renewable energy development as well as environmental management of water bodies.
2. The planning, design, and vetting of SHP projects in various states of the country has been undertaken. AHEC has conducted several national and international short term training programmes which were attended by large number of professionals.
3. Technical assistance & support was provided to Govt. of Arunachal Pradesh for development of SHP projects and also in the border areas of Arunachal Pradesh on behalf of Government of India, techno appraisal for several pollution abatement schemes of rivers and lakes proposed by state of Uttarakhand, UP, Bihar, Delhi, Maharashtra and Rajasthan were carried out.
4. A number of consultancy & research projects are received and completed. AHEC provided the technical support to the public utilities of the state of Uttarakhand, Bihar, HP and Arunachal Pradesh for development of small hydropower projects.
5. During the year, National Workshop on Developing an Strategy for Education and Vocational Training for the Renewable Energy Sector in India in association with Ministry of New and Renewable Energy was organized at New Delhi on Aug 22, 2014 and thereafter an International Conference on "Hydropower for Sustainable Development" in association with Government of Uttarakhand was organized during Feb 05-07, 2015 at Dehradun.
6. The setting up of Small hydro power Hydraulic Turbine R&D Laboratory with the support of Ministry of New and Renewable energy, Government of India is in advanced stage of commissioning.

LIST OF FACULTY MEMBERS

Chief Scientific Officer

Kumar, Arun, Ph.D. (Roorkee)
Planning, Investigations, Designs of Small Hydropower Energy Economics and Policy, Project Management, Environmental Management of Water Bodies..

Associate Professor

Saini, Rajeshwar P, Ph.D. (Roorkee)
Hydro mechanical Equipment, Solar Energy, Wind Energy, Modelling of IRES, EIA Environment Auditing and Energy Conservation.

Sharma, Mahendra P, Ph.D. (Roorkee)
Bio Energy, Solar Energy, Wind Energy, Modelling of IRES, EIA, Energy Auditing, Energy Conservation of industries & Hydropower plants, water quality assessment and conservation of rivers & lakes.

Development of Software.

Assistant Professor

Khatod, Dheeraj, Ph.D. (Roorkee)
Distributed generations-Renewable Energy Systems

Principal Scientific Officer

Singal, Sunil K., Ph.D. (Roorkee)
Planning, Design of Civil Works for SHP projects, Financing and Economics of SHP projects

Senior Scientific Officer

Singh, Shyam N., Ph.D. (Roorkee)
Electrical Machines, Control & protection, Rural Transmission and Distribution lines of SHP stations, E&M works for small Hydropower stations, wind energy conversion and energy conservation

Singhal, Mukesh K., ME (Roorkee)
Planning, Design and Analysis of Civil Works,

3. PARTICIPATION OF FACULTY IN CONFERENCES/ SEMINAR/ SYMPOSIA/ WORKSHOP/ GUEST LECTURES

Sl. No.	Name of Faculty	Details of Conf./Semi./ Symp./ Workshop/ Guest Lecture	Venue	Date
1.	Dr Arun Kumar	Invited and delivered lectures as resource person for small hydropower under UN-CECAR postgraduate course on Renewable Energy being organized by United Nations University Institute of Sustainability and Peace (UNU-ISP), Tokyo	UN University Tokyo, Japan	08 – 09, April, 2014
		Hydro vision seminar on 'Clean and Smart Power Systems in India: Norwegian	New Delhi Norway Embassy	06 May, 2014

Sl. No.	Name of Faculty	Details of Conf./Semi./ Symp./ Workshop/ Guest Lecture	Venue	Date
		Technologies'		
		Invited and participated in the hydroenergia 2014, international conference organized by European Small Hydropower Association (ESHA) as member of scientific committee, Chaired the session on New turbine technology and presented the paper.	Istanbul, Turkey	21 – 24, May, 2014
		Invited and participated in annual conference of University Network for climate and Ecosystems change and Adaptation Research (UN-CECAR) held on May 30, 2014 and Planning Workshop	Kuala Lumpur, Malaysia.	May 31– June 01, 2014
		Panel Member in one day conference “Ganga Manthan” organized by National Mission for Clean Ganga under NGRBA.	New Delhi Vigyan Bhawan	07 July, 2014
		Workshop on “Developing Strategy for Education and Vocational Training for the Renewable Energy Sector in India”	New Delhi	22 Aug., 2014.
		Invited and participated as the member of conference organizing committee and to paper in 10th International Conference for Hydraulic Efficiency Measurement	University of Itajuba–MG–Brazil	16 – 18, Sept, 2014
		International Center on Small Hydropower (ICSHP) as a member of the Editorial Board at Hangzhou, China. Also visited Hydraulic turbine testing laboratory of China Institute of Water Resources and Hydropower Research (IWHR) in China.	ICSHP Hangzhou and Beijing, China	Nov 26 – Dec 03, 2014
		Workshop on ‘Study on Assessing and Strengthening Monitoring and Institutional Mechanisms for Appropriate Environmental Flow for Himachal Pradesh’ organized by WAPCOS Ltd.	New Delhi	22 Jan, 2015
		International Conference on “Sustainable Hydropower Development”.	Dehradun,	05 – 07, Feb., 2015
		Renewable Energy Global Investors Meet & Expo (RE – INVEST) being organized by MNRE	New Delhi	16 Feb., 2015
		Workshop on “Sustainable, Affordable and Efficient Rural Electrification System” organized by GB Pant University of Agri. and Technology, Pantnagar	G.B. Pant Univ. of Agriculture Pantnagar	27, Feb., 2015
2.	Dr. R.P. Saini	Workshop on “Developing Strategy for Education and Vocational Training for the Renewable Energy Sector in India”	IIC, New Delhi	22 Aug., 2014
		International Conference on Hydropower for Sustainable Development	Dehradun	05 – 07, Feb., 2015
		DST-SERI Workshop on Advanced Solar Thermal Energy Technologies: Next-Generation CSP, Polygeneration & Storage	IISc, Bangalore	16 – 17, Feb., 2015
		National Workshop on “Sustainable, Affordable, and Efficient Rural Electrification System”	G.B. Pant University of Agri. & Technology, Pantnagar	27 th Feb.- 1 st March, 2015
		National Seminar on “Sustainable Renewable Energy Generation – Current Scenario”	ERC, Punjab University, Chandigarh	21 March, 2015
3.	Dr. S.K. Singal	International Conference on “Sustainable Hydropower Development”.	Dehradun,	05 – 07, Feb., 2015
		International Conference on “Urban Environmental Pollution 2014, Climate Change and Urban Environment”,	Sheraton Centre, Toronto, Canada	12 – 15, June, 2014
		TechConnect World, National Innovation Summit and National Conference, Clean Energy,	National Harbor, Mary land, USA.	16 – 18, June, 2014

Sl. No.	Name of Faculty	Details of Conf./Semi./ Symp./ Workshop/ Guest Lecture	Venue	Date
		Workshop on Developing Strategy for Education and Vocational Training for the Renewable Energy Sector in India".	New Delhi	22 Aug., 2014

4. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Sl. No.	Name of Faculty	Name of Course	Venue	Date
1.	Dr. Arun Kumar Dr. R.P. Saini Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal Dr. D.K. Khatod	Short Term Course on RTDS for Fresh SHP Plant Engineers	AHEC, IIT Roorkee	12 – 17 Jan., 2015, 08-13 Sep, 2014, 10-15 Nov, 2014, 09-14 March, 2015, 01-06 Dec, 2014
2.	Dr. Arun Kumar Dr. R.P. Saini Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal Dr. D.K. Khatod	Short Term Course on RTDS for In Service SHP Plant Engineers	AHEC, IIT Roorkee	13-18 Oct, 2014, Oct 27-01 Nov, 2014, 24-29 Nov, 2014, 23-28 Feb, 2015, 23-28 Mar, 2015
3.	Dr. Arun Kumar Dr. R.P. Saini Dr. M.P. Sharma Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal Dr. D.K. Khatod	Small Hydropower Development	AHEC, IIT Roorkee	Nov 17-21, 2014
4.	Dr. R.P. Saini Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal	Selection & Design of Electro-Mechanical Equipment for SHP	AHEC, IIT Roorkee	Dec 01-05, 2014
5.	Dr. Arun Kumar Dr. R.P. Saini Dr. M.P. Sharma Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal Dr. D.K. Khatod	DPR Preparation and Evaluation for SHP projects	AHEC, IIT Roorkee	Dec. 15-18, 2014
6.	Dr. Arun Kumar Dr. R.P. Saini Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal Dr. D.K. Khatod	Performance Testing and Evaluation for SHP stations	AHEC, IIT Roorkee	Jan 19-23, 2015
7.	Dr. Arun Kumar Dr. R.P. Saini Dr. S.N. Singh Dr. S.K. Singal Dr. D.K. Khatod	Operation & Maintenance of SHP stations	AHEC, IIT Roorkee	18-21 Feb., 2015
8.	Dr. Arun Kumar Dr. R.P. Saini Dr. M.P. Sharma Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal Dr. D.K. Khatod	Small Hydropower Development	AHEC, IIT Roorkee	16-20 March, 2015
9.	Dr. Arun Kumar Dr. S.K. Singal	Small Hydropower Development	AHEC, IIT Roorkee	27 – 28 Sept, 2014
10.	Dr. Arun Kumar	Training Workshop on Ultrasonic Transit Time Flow Meter For Discharge Measurement	AHEC, IIT Roorkee	18-19 Oct., 2014

11.	Dr. Arun Kumar Dr. R.P. Saini Dr. M.P. Sharma Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal Dr. D.K. Khatod	International Training Course on Small Hydro Power Development	AHEC, Roorkee	IIT	15-26 Sept., 2014
12.	Dr. Arun Kumar Dr. R.P. Saini Dr. S.N. Singh Dr. S.K. Singal Sh. M.K. Singhal Dr. D.K. Khatod	AHEC – IRENA Joint Technical International Training Programme on “small-scale hydropower project development”	AHEC, Roorkee	IIT	14 – 25 Oct., 2014
13.	Dr. Arun Kumar Dr. R.P. Saini Dr. S.K. Singal Dr. D.K. Khatod	Developing an Strategy for Education and Vocational Training for the Renewable Energy Sector in India	IIC, New Delhi		Aug 22, 2014
14.	Dr. D.K. Khatod	TEQIP-II sponsored short term training programme on “Recent Trends in Power Systems”	Dept. of Electrical Engineering, SVNIT Surat (Gujrat)		Jan 07, 2015

5. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
1.	Er. Nihal Rupasinghe Mr. P. Amaratunga, and Mr. A Hewage	Central Engineering Consultancy Bureau, Ministry of Water Resources, Colombo, Sri Lanka	To visit AHEC	14 May 2014
2.	Dr. J.R.Samriya Dr. D.B.Patel	College of Renewable Energy & Environmental Engineering, S.D. Agricultural University Sardarkrushinagar	Visit to AHEC along with their students	16 June 2014
3.	Dr Saurabh Kwatra,	TRIZ Expert Level 4 (IID, Russia) Guest Faculty, Instrument Design & Development Centre Indian Institute of Technology (IIT) Delhi	To deliver a talk on “Ideality in Energy Generation, Transmission & Consumption (with special emphasis on Hydro-Power) via Russian TRIZ Design”	Aug.12, 2014
4.	Mr Partha P Chaudhuri	Director, VERDE 3C, Camac Street, Camac Tower, 4th Floor, Kolkata 700016, India	Discussed Swiss Technology based Micro Hydro Power generation	03 Sept. 2014
5.	Dr. Thomas Hies	Managing Director (CEO) Hydrovision Asia Pvt. Ltd., 1 Cleantech Loop, #03-05 CleanTech One, Singapore	To visit AHEC Facility	Feb.08, 2015
6.	Mr. Ram Warriar	General Manager- India Region Hydrovision GmbH, 602 Crystal CHS, Jimmy Tower-III Koper Khairane New Mumbai-400709-India	To visit AHEC Facility	Feb.08, 2015
7.	Mr Atle Harby	Director, Centre for Environmental Design of Renewable Energy, SINTEF Energy Research, P.O. Box 4761, Sluppen, 7465 Trondheim, Norway	To visit AHEC Facility	Feb.08, 2015
8.	Dr. Eng Fujimoto Tokihiko	Associate Professor, Shizuoka University Agri-424 836, Oya, Suruga-ku, Shizuoka 422-8529, Japan	To visit AHEC Facility	Feb 09, 2015

Sl. No.	Name	Designation and Affiliation	Purpose	Dates
9.	Mr. Yoshinobu Watanabe	Manager, Product Development Section, Nakayama Iron Works, Ltd., Asahimachi, Takeo City, Saga Pref 843-0001, Japan	To visit AHEC Facility	Feb 09, 2015
10.	Participants (27) from different countries through TERI New Delhi	The Energy and Resources Institute (TERI) Darbari Seth Block, I H C Complex Lodhi Road, New Delhi	To see AHEC facilities & solar PV solar thermal installations at IIT Roorkee	Feb 27, 2015

6.(a). INTERNSHIPS BY IIT – ROORKEE STUDENTS

Sl. No.	Name of student	Name of the Internship Programme	Under Graduate	Post Graduate	Name of Institute	Period
1.	Shri Manoj Rajgopalji Sarda Shri Abhishek Agarwal Shri Nikhil Guria	Nil	B.Tech III Yr Production and Ind. Engg.	-	IIT Roorkee	July – Sept 2014

6 (b). INTERNSHIPS TO OTHER STUDENTS IN IIT - ROORKEE

Sl. No.	Name of student	Name of Supervisor	Under Graduate	Post Graduate	Name of Institute	Period
1	Shri Nivesh Goel	Dr SK Singal	IDD (B.Tech-M.Tech) IV year	-	IIT Kanpur	June 01-30, 2014

7. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of the conf./seminar/ symp./workshop	Name of the Chairman	Sponsored by	Dates
1.	Workshop on “Developing Strategy for Education and Vocational Training for the Renewable Energy Sector in India” at New Delhi	Dr Arun Kumar	Ministry of New and Renewable Energy	22 Aug., 2014
2.	International Conference on “Sustainable Hydropower Development” at Dehradun	Dr Arun Kumar	UREDA & Uttarakhand Govt.	05 – 07 Feb., 2015

8. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Sl. No.	Name of Coordinator	Name of Course	Source of funding	Nos. of Participants	Dates
1.	Sh. M.K. Singhal	Short Term Course on RTDS for Fresh SHP Plant Engineers	MNRE, GOI, New Delhi	09	Sep 08-13, 2014
2.	Dr. D.K. Khatod	Short Term Course on RTDS for In Service SHP Plant Engineers	MNRE, GOI, New Delhi	08	Oct 13-18, 2014
3.	Dr. D.K. Khatod	Short Term Course on RTDS for In Service SHP Plant Engineers	MNRE, GOI, New Delhi	10	Oct 27-01 Nov, 2014
4.	Sh. M.K. Singhal	Short Term Course on RTDS for Fresh SHP Plant Engineers	MNRE, GOI, New Delhi	08	Nov 10-15, 2014
5.	Dr. Arun Kumar	Small Hydropower Development	MNRE, GOI, New Delhi	17	Nov 17-21, 2014
6.	Dr. D.K. Khatod	Short Term Course on RTDS for In Service SHP Plant Engineers	MNRE, GOI, New Delhi	09	Nov 24-29, 2014
7.	Dr. S.N. Singh	Selection & Design of Electro-Mechanical Equipment for SHP	MNRE, GOI, New Delhi	13	Dec 01-05, 2014
8.	Sh. M.K. Singhal	Short Term Course on RTDS for Fresh SHP Plant Engineers	MNRE, GOI, New Delhi	09	Dec 01-06, 2014
9.	Dr. S.K. Singal	DPR Preparation and Evaluation for SHP projects	MNRE, GOI, New Delhi	12	Dec. 15-18, 2014
10.	Sh. M.K. Singhal	Short Term Course on RTDS for Fresh SHP Plant Engineers	MNRE, GOI, New Delhi	07	Jan. 12-17, 2015
11.	Dr. R.P. Saini	Performance Testing and Evaluation for SHP stations	MNRE, GOI, New Delhi	10	Jan 19-23, 2015
12.	Dr. S.N. Singh	Operation & Maintenance of SHP stations	MNRE, GOI, New Delhi	12	Feb. 18-21, 2015
13.	Dr. D.K. Khatod	Short Term Course on RTDS for In Service SHP Plant Engineers	MNRE, GOI, New Delhi	07	Feb 23-28, 2015
14.	Sh. M.K. Singhal	Short Term Course on RTDS for Fresh SHP Plant Engineers	MNRE, GOI, New Delhi	08	March 09-14, 2015
15.	Dr. S.K. Singal	Small Hydropower Development	MNRE, GOI, New Delhi	19	March 16-20, 2015
16.	Dr. D.K. Khatod	Short Term Course on RTDS for In Service SHP Plant Engineers	MNRE, GOI, New Delhi	08	Mar 23-28, 2015
17.	Dr Arun Kumar	Small Hydropower Development	IREDA , New Delhi	10	Sept 27 – 28, 2014
18.	Dr. Arun Kumar	Training Workshop on Ultrasonic Transit Time Flow Meter For Discharge Measurement	MNRE, GOI, New Delhi	47	October 18-19, 2014
19.	Dr. M.P. Sharma	International Training Course on Small Hydro Power Development	MNRE, GOI, New Delhi	30	Sept. 15-26, 2014
20.	Dr. Arun Kumar	AHEC – IRENA Joint Technical training programme on “small-scale hydropower project development”	IRENA, Abu Dhabi	14	Oct 14 – 25, 2014
21.	Dr Arun Kumar	Developing an Strategy for Education and Vocational Training for the Renewable Energy Sector in India	MNRE, GOI, New Delhi	47	Aug 22, 2014

9. SPONSORED/CONSULTANCY PROJECTS:

i. CONTINUING SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
1.	Head	FIST support to AHEC to strengthen the research and teaching on Hydropower Generation-DST New Delhi	MNRE, New Delhi	92.00
2.	Dr Arun Kumar	Setting of Small Hydro Hydraulic Turbine R&D laboratory at AHEC, IIT Roorkee	MNRE, New Delhi	2282.31

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
		Capital Subsidy to IIT Roorkee for installation of Solar Water Heating Systems at Various Locations in the Campus during 2012-13 under JNNSM.	MNRE, New Delhi	303.36
		Installation of the Solar Steam Cooking Systems at the Premises of IIT Roorkee.	MNRE, New Delhi	176.00
		Installation of SPV Power Plants with Aggregate Capacity of 1812.6 kWp on Roof Top of 27 No. of Buildings at IIT Roorkee.	MNRE, New Delhi	3444.00
3.	Dr. RP Saini Dr. S. K. Singal	Development of Efficient Cross Flow Turbine for Hilly Region	MNRE, New Delhi	38.24
4.	Dr. RP Saini	Rural Technology Action Group (RUTAG) IIT Roorkee for the State of Uttarakhand	DST New Delhi	89.52

ii. NEW SPONSORED RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
	Consultancy Project			
1.	Dr. Arun Kumar	Development of Laboratory for Sediment Monitoring and Impact Analysis Studies in Hydro Power Plant	MNRE, New Delhi	305.15

iii. NEW CONSULTANCY RESEARCH PROJECTS

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
	Consultancy Project			
1.	Dr. Arun Kumar	Performance testing of Poozhithode (3x1.6 MW) SHP in Kozhikkode District of Kerala	Kerala State Electricity Board Ltd., Idukki Dist., Kerala	6.74
		Preparing Benchmark Cost for SHP and Comparison with Large Hydropower	MNRE, Govt. of India, New Delhi	8.40
		Appraisal of DPR for "Rejuvenation of Nag River and its tributaries" in Nagpur under NRCP	NRCD, Ministry of Environment & Forests, New Delhi	2.24
		Prefeasibility report for small hydropower on cooling water return channel at Trombay Thermal plant	M/s Tata Power Company Limited, Mumbai	3.82
		Technical Appraisal of Yammeng Hydro Electric Project (12 MW) in the upper Siang District, Arunachal Pradesh	Yammeng Green Energy (P) Ltd., Dadar (E), Mumbai	8.98
		Performance testing of 1.5 MW Hemavathy SHP Project at Hassan District of Karnataka	M/s Flax Hydro Energy Pvt. Ltd., Hyderabad	4.49
		Performance testing of Tulang (3 MW) SHP in Dist. Chamba, Himachal Pradesh	M/s Himachal Hydel Projects Private Ltd., Panchkula, Haryana	6.74
		Performance Testing of Jatashankari SHP (2x3.5 MW) on River Jatashankari in District Korba, Chhattisgarh	M/s Shalivahana Green Energy Ltd., Secunderabad	11.23
		Efficiency Testing of Pathri Power House District Haridwar, Uttarakhand	M/s Andritz Hydro Private Limited, Palwal, Haryana	11.23
		Monitoring of Ultra Low Head system at Hydraulic Research Station, IRI Bahadrad, Uttarakhand	UNIDO, Vienna, Austria	4.73
		Appraisal of DPR for Municipal Waste Water of Srinagar and Joshimath Towns and DPR for	NMCG, MOWR, RD & GR, New Delhi	6.17

Sl. No.	Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
		restoration of work in Devprayag, Uttarkashi and Gangotri Town in Uttarakhand		
		Appraisal of DPR for Package K1 – Rehabilitation of Trunk Sewer No. 2, Narwana, Anand Vihar, Hargovind Enclav and Vikas Minar, Package K2 – Rehabilitation of Trunk Sewer no. 5 and Jhilmil colony Sewer, Package R1a – Rehabilitation of Sewer in Ashok Vihar and Jahangir Puri Area	NMCG, MOWR, RD & GR, New Delhi	6.17
		Technical guidance for ultra head small hydropower projects in Uttarakhand	UNIDO, A-1400 Vienna, Austria	6.74
		Conservation, Protection and Development of Wullar Lake in Baramula (J&K)	NRCD, MoEF, GOI, New Delhi	2.33
		Performance Testing of Gangani SHP (8 MW) in Uttarakhand	M/s Regency Gangani Energy Pvt. Ltd., Paonta Sahib	11.23
		Appraisal of DPRs for RFD at (1) Sultan Ganj, Bihar and (2) Chandi Ghat, Uttarakhand –	NMCG, MOWR, RD & GR, New Delhi	3.37
		Appraisal of DPRs for Rehabilitation and Up-gradation of Okhla Phase II, III & IV WWTPs	NMCG, MOWR, RD & GR, New Delhi	2.80
		Appraisal of DPRs for (i) Additional 40 MLD STP at Jagjeetpur Haridwar (ii) Extension of rising main of Triveni Ghat and construction of 06 MLD STP in Rishikesh in Uttarakhand	NMCG, MOWR, RD & GR, New Delhi	3.93
		Study for optimization of Hydro resources in the state of Karnataka	Karnataka Power Corporation Ltd., Bangalore	178.31
		Techno-economic Appraisal for DPR of Pemashelpu Hydro Electric Project (81 MW) in West Siang District of Arunachal Pradesh	Mechuka Hydro Power Pvt. Ltd., Hyderabad	16.85
		Appraisal of DPR for Sewer Network in District E of Allahabad-Part 2 in Uttar Pradesh	NMCG, MOWR, RD & GR, New Delhi	2.24
		Performance testing of Patgaon HEP (2.5 MW) at Patgaon, Kolhapur in Maharashtra –	Shree Tatyasahed Kore Warana Sahakri Navshakti Nirman Sanstha Ltd., Maharashtra	6.74
	Dr. R. P. Saini	Performance testing of Gosang MHS (2x250 kW) in Arunachal Pradesh	Pangin EM Division DHPD, Pangin, Distt. East Siang, Arunachal Pradesh	4.49
		Performance testing of Suman Sarwari SHP (2x2.5 MW) in Kullu, H.P	Director, Usaka Hydro Power Pvt. Ltd., New Delhi	6.74

		Performance Testing of Hamal SHP (2x1 MW) in Chopal, Distt. Shimla (H.P)	Managing Director, Hamal Hydel Ltd., Paonta Sahib, Distt. Sirmour (H.P)	4.49
		Performance testing of Jogini (2x8 MW) SHP in Distt. Shimla, Himachal Pradesh	M/s Gangdari Hydro Power pvt. Ltd., Hyderabad, Telangana	11.23
		Performance testing of Ranni – Perundau SHEP (2x2 MW), in Kerala	M/s Kerala State Electricity Board Ltd., Moolamattom, Idukki, Kerala	6.74
		Performance testing of Aleo-II (4.80 MW) SHP in Manali, Himachal Pradesh	M/s Aleo Manali Hydropower Pvt. Ltd., Noida–U.P.	6.74
		Performance testing of Gautami-Godavari Small Hydro Electric Project (1x1200 KW) at Beze Tal-Trimbak, Distt. Nashik, Maharashtra	Samvat Systems Pvt. Ltd., Erandwane, Pune	4.49
	Dr. S.K. Singal	Techno-economic Review of Pachuk-I Hydropower Project in Arunachal Pradesh	M/s Energy Development Company Ltd., Faridabad/ DHPD Itanagar, Arunachal Pradesh.	15.00
	Shri M.K. Singhal	Checking/ Vetting of design and Drawings of Hydro mechanical equipment for Bathnaha HEP (4x2) MW	M/s BSHPC, PATNA	2.80
		Preparation of estimate and tender document for escape arrangement of Valmikinagar SHP Project(3x5 MW) in district West Champaran Bihar	M/s BSHPC, Patna	4.49
		Inspection of Civil, E&M and T&D works of Gaundar (100 kW) in district Rudraprayag and Gangi MHP (200 kW) in District Tehri, Uttarakhand	Uttarakhand Renewable Energy Development Agency, Dehradun	6.74
		Techno- Economic Appraisal of Detailed Project Reports of Palin SHP (10 MW) in kurung kumey District of Arunachal Pradesh	M/s TT Power and Project Developer Pvt. Ltd., Arunachal Pradesh	8.98
		Consultancy services for Detailed Engineering Design and Drawings of bridge over spillway of Satnala Dam Hydroelectric Project (1x1.75 MW)	Subernrekha Multipurpose Project, Jamshedpur	2.80
		Updating of DPR of Baram (2x500 kW), Hemkund (2 x 250 kW), & Nada (2x25 kW), Uttarakhand	Uttarakhand Renewable Energy Development Agency, Dehradun	5.05
		Consultancy for modification works for Bye Pass Gates & Hoisting Structures of Eight Mini Hydel Power Plants, Chandigarh	M/s Punjab Genco Limited	13.48

10. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (Rs. 10 Lacs) (A brief Write-up upto 100 words) (New Projects during the year 2014-15).

- (i) Development of Efficient Cross Flow Turbine for Hilly Region – MNRE, New Delhi (38.24 Lacs) To develop standard designs of improved cross flow turbine. In order to improve the efficiency of the turbine, guide mechanism to guide the flow inside the runner is proposed to be provided. The proposed improvement shall be analysed with CFD analysis and based on CFD analysis the turbine parameters shall be determined for different operating conditions. CFD results shall be validated with the model tests results in the laboratory. Finally optimal parameters shall be worked out for a prototype and a prototype is proposed to be fabricated and installed at a suitable site for its field performance monitoring.

- (ii) Alternate Hydro Energy Centre (AHEC) was identified as the test agency for performance evaluation of SHP plants. Accordingly performance testing of the SHP power stations of several projects in HP, Uttarakhand, Karnataka, Kerala, Tamilnadu have been assigned.
- (iii) Development of Laboratory for Sediment Monitoring and Impact Analysis Studies in Hydro Power Plant has been sanctioned by MNRE, New Delhi to study the impact of sediment laden water on different components of hydropower plant in laboratory as well as field conditions. A depository of the sediment data of hydropower plant shall also be made.
- (iv) National Mission for Clean Ganga, NGRBA, Govt. of India, New Delhi requested Techno appraisal of DPRs for Rejuvenation of Nag River and its tributaries in Nagpur, Municipal Waste Water of Srinagar and Joshimath Towns and DPR for restoration of work in Devprayag, Uttarkashi and Gangotri Town in Uttarakhand, Rehabilitation of Trunk Sewer No. 2, Narwana, Anand Vihar, Hargovind Enclav and Vikas Minar, Rehabilitation of Trunk Sewer no. 5 and Jhilmil colony Sewer, Rehabilitation of Sewer in Ashok Vihar and Jahangir Puri Area, River front Development at Sultan Ganj, Bihar and Chandi Ghat, Uttarakhand, Rehabilitation and Up-gradation of Okhla Phase II,III & IV WWTPs, Additional 40 MLD STP at Jagjeetpur Haridwar, Extension of rising main of Triveni Ghat and STP in Rishikesh in Uttarakhand, Appraisal of DPR for Sewer Network in District E of Allahabad-Part 2 in Uttar Pradesh.
- (v) Study for optimization of Hydro resources in the state of Karnataka has been sponsored by Karnataka Power Corporation Ltd, Bangalore to suggest the operation policy for hydro stations considering the addition of capacity planned from thermal, solar and wind generation, ways to achieve regulatory requirements with respect to operational parameters considering the present condition of the equipment and R, M & U studies at Kali Nadi (Nagjhari, Supa dam, Kodalalli Dam, Kadra Dam) and Sharavathy valley (Sharavathy, Linganamakki dam, MGHE, Gerusoppa).
- (vi) The assignment comprises of Consultancy Services for Renovation and Modernizations of Bypass gates and modification of hoisting structure for eight mini hydel projects located on Abohar and Bathinda Branch Canals in Punjab.

11. SCIENTIFIC AND TECHNICAL REPORTS

Sl. No.	Title of the Projects	Participants	Authors	Remarks
1.	Performance Testing of Brandavan Tailrace SHP (2x2 MW) in Distt. Mandya, Karnataka	Atria Brindavan Projects Ltd., Bangalore	Dr. R.P. Saini, Dr. Arun Kumar, Dr. H.K. Verma, and others	May 2014
2.	Performance testing of Brindavan (2 x 6 MW) SHP Station, Near Mysore, Karnataka	Atria Brindavan Power Ltd., Bangalore	Dr. R.P. Saini, Dr. Arun Kumar, Dr. H.K. Verma, and others	May 2014
3.	Performance Testing of Binwa-IV SHP (2x2 MW) in Distt. Kangra (HP)	Bhavani Renewable Energy Pvt. Ltd., New Delhi	Dr. R.P. Saini, Dr. Arun Kumar and others	June 2014
4.	Performance Testing of Ghanvi-II (2x5 MW + 10% COL) in District Shimla, Himachal Pradesh	Andritz Hydro Pvt. Ltd., Vill: Prithla, Distt: Palwal	Dr. R.P. Saini, Dr. Arun Kumar and others	July 2014
5.	Performance Testing of Ghanvi-I (2x11.25 MW), Distt. Shimla, H.P.	M/s Andritz Hydro Pvt. Ltd, village Prithla, District Palwal	Dr. R.P. Saini, Dr. Arun Kumar, Dr. Vinod Kumar, Dr. B.K. Gandhi and others	July 2014
6.	Feasibility Report of SHP on cooling water channel	Tata Power Mundra	Dr. Arun Kumar Dr. S.K. Singal	May 2014
7.	Performance Testing of Suman Sarwari SHP (2x2.5 MW) in Kullu, HP	Usaka Hydro Power Private Limited, Patparganj, Delhi	Dr. R.P. Saini, Dr. Arun Kumar, and others	Aug 2014
8.	Performance Testing of Dikleri Hydro Power Project (2x1 MW) in Distt. Chamba (HP)	The Manimahesh Hydel Power Project, Chamba- (HP)	Dr. R.P. Saini, Dr. Arun Kumar, and others	Aug. 2014
9.	Performance Testing of Tangling Hydro Electric Project (2x2.5 MW) in Distt. Kinnour (HP)	Sai Engineering Foundation, Sai Bhawan, New Shimla	Dr. R.P. Saini, Dr. Arun Kumar and others	Oct. 2014
10.	Performance Testing of	DM Corporation Pvt. Ltd.,	Dr. R.P. Saini,	Nov. 2014

Sl. No.	Title of the Projects	Participants	Authors	Remarks
	Phatakwadi SHP (2x4 MW) in Distt. Kolhapur, Maharashtra	Tarabai Park, Kolhapur	Dr. Arun Kumar, Dr. B.K. Gandhi and others	
11.	Performance Testing of Ranjha-Ala-Dunadi HEP (15 MW) in Distt. Kishtwar, J&K	M/s Choudhary Power Projects Pvt. Ltd., Jammu	Dr. R.P. Saini, Dr. Arun Kumar, Dr. Manoj Tripathy and others	Nov. 2014
12.	Performance Testing of Athwatoo SHP Project (2x5 MW) in J&K	Magpie Hydel Construction Operation Industries Pvt. Ltd., Srinagar	Dr. R.P. Saini, Dr. Arun Kumar and others	Nov.2014
13.	Performance Testing of Somavathi Mini Hydel Scheme (2x3 MW) SHP Chikmangalore Distt., Karanataka	Shri Rajgopal Gilada SRM Power Private Ltd., Bangalore	Dr. R.P. Saini, Dr. Arun Kumar, Dr. B.K. Gandhi and others	Nov.2014
14.	Performance testing of Poozhithode (3x1.6 MW) SHP in Kozhikkode District, Kerala.	Kerela State Electricity Board Ltd.,Moolamattom P.O., Idukki Dist. , Kerala	Dr. R.P. Saini, Dr. Arun Kumar, Dr. B.K. Gandhi and others	Jan. 2015
15.	Performance Testing of Rayabasavanna Canal MHP (1.4 MW) at Tungabhadra Dam, Distt. Bellary, (Karnataka)	Khandaleru Power Company Ltd., Hyderabad	Dr. R.P. Saini, Dr. Arun Kumar, Dr. B.K. Gandhi and others	Jan.2015
16.	Performance Testing of Gonal SHP –III (2x2.5 MW), Yadgir District (Karnataka)	South West Hydro Power Pvt. Ltd., Bangalore	Dr. R.P. Saini, Dr. Arun Kumar, Dr. B.K. Gandhi and others	Jan.2015
17.	Performance Testing of Periyar Vaigai-III (2x2 MW) SHP, Distt. Theni, Tamilnadu	M/s Kirloskar Brothers Ltd., Baner, Pune	Dr. R.P. Saini, Dr. Arun Kumar, Dr. B.K. Gandhi and others	Jan. 2015
18.	Turbine flow measurement for PG test of Periyar Vaigai-I (2x2 MW) SHP in Theni Distt., Tamilnadu	Kirloskar Brothers Ltd., Baner, Pune- 411045	Dr. R.P. Saini, Dr. Arun Kumar, Dr. B.K. Gandhi and others	Jan. 2015
19.	Performance Testing of Agraharhar SHP (708 kW) Scheme-I, Distt. Raichur (Karnataka)	Sarovara Energy Pvt. Ltd., Bangalore	Dr. R.P. Saini, Dr. Arun Kumar, Dr. B.K. Gandhi and others	Feb. 2015
20.	Performance Testing of Agraharhar SHP (550 kW) Scheme-II, Distt. Raichur (Karnataka)	Sarovara Energy Pvt. Ltd., Bangalore	Dr. R.P. Saini, Dr. Arun Kumar, Dr. B.K. Gandhi and others	Feb. 2015
21.	Performance testing of Jogini (2x8 MW) SHP in Distt. Shimla, Himachal Pradesh	Gangdari Hydro Power Pvt. Limited, Hyderabad	Dr. R.P. Saini, Dr. Arun Kumar and others	March 2015
22.	Dalla (1000 kW) SHP Station, Punjab, 2013 – 2014	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	Sept 2014
23.	Narangwal (1500 kW) SHP Station, Punjab, 2013 – 2014	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	Aug 2014
24.	Tuggal (1500 kW) SHP Station, Punjab, 2013 – 2014	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	Sept 2014
25.	Chupki (1500 kW) SHP Station, Punjab, 2013 – 2014	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	Sept 2014
26.	Bowani (1000 kW) SHP Station, Punjab, 2013 – 2014	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	Aug 2014
27.	Khatra (1000 kW) SHP	Punjab Genco Ltd.,	Dr. S.K. Singal	Sept 2014

Sl. No.	Title of the Projects	Participants	Authors	Remarks
	Station, Punjab, 2013 – 2014	Chandigarh		
28.	Jagera (1000 kW) SHP Station, Punjab, 2013 – 2014	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	Sept 2014
29.	Kangawal (1300 kW) SHP Station, Punjab, 2013 – 2014	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	Sept 2014
30.	Anonpani (22 MW) in Arunachal Pradesh -2014	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	June 2014
31.	Jaswantgarh Stage-I (4.20 MW) in Arunachal Pradesh, 2012-2015	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	March 2015
32.	Rima (8 MW) in Arunachal Pradesh, 2011-2015	Punjab Genco Ltd., Chandigarh	Dr. S.K. Singal	March 2015
33.	Techno-economic review report of Anonpani (22 MW) SHP project in Arunachal Pradesh	M/s Jindal Power Ltd., Gurgaon, Haryana	Dr. S.K. Singal	June 2014
34.	Phanchung SHP (45 MW) in Arunachal Pradesh	M/s Pachi Hydro Power Project Ltd., Kolkata	Shri M K Singhal	June 2014
35.	Appraisal of proposal for restoration of work in Devprayag, Uttarkashi and Gangotri Town, Municipal Waste Water of Srinagar Town, Additional 40 MLD STP at Jagjeetpur, Haridwar, Uttarakhand	NMCG, Ministry of Water Resources, RD & GR, New Delhi	Dr. Arun Kumar	Oct. 2014
36.	Appraisal of DPR of Saidpur STP of Patna(Package 2) and Saidpur Sewer Network (Package 6) of Patna	NMCG, Ministry of Water Resources, RD & GR, New Delhi	Dr. Arun Kumar	Dec. 2014
37.	Appraisal of DPR for Rehabilitation and Upgradation of Rithala Phase – I (182 MLD) WWTP, Kondli Phase – I (45 MLD), Phase – II (144 MLD) and Phase – III (45 MLD) WWTP under YAP.	NMCG, Ministry of Water Resources, RD & GR, New Delhi	Dr. Arun Kumar	May 2014
38.	Appraisal of DPR for Conservation and Rejuvenation of Kushal Lake, Gangapur city, Madhopur, Rajasthan under NLCP Scheme	Rajasthan Urban Infrastructure Finance & Development Co. Ltd., Jaipur	Dr. Arun Kumar	Oct. 2014

5. Centres of Excellence

5.1	Centre of Transportation Systems	5.3	Centre of Disaster Mitigation and Management
5.2	Centre of Nano Technology	5.4	Urban Design & Development

5.1 CENTRE FOR TRANSPORTATION SYSTEMS (CTRANS)

Academic Staff: 36 (Associated faculty). Students Admitted: M.Tech: 18; Ph.D.: 02
Publications in: Journals: 02, Conferences: 02, Book/Books Chapters: 01.
Projects: Research (Rs. in Lacs): 18.6 Lacs,

1. SALIENT FEATURES

CTRANS is a Centre of Excellence of IIT Roorkee in the area of Transportation Systems. The Centre aims to evolve a holistic approach for study of transport systems. CTRANS is primarily a multi-disciplinary initiative with collective participation of Engineers, Scientists and Researchers from Science & Technology, Humanities and Social Sciences, Architecture & Planning and Management background. The aim of CTRANS is also to promote multidisciplinary research and education for manpower development in transportation systems encompassing all modes of transport such as Road Transport, Rail Transport, Inland Water Transport, Air Transportation, Pipeline Transport, etc. Thus, the primary aims and objectives of the centre include the following:

- To promote multidisciplinary research on transportation systems.
- To provide technological support to national projects related to the growth of Transportation System in the country.
- Establishment of International Linkage for collaborative research in the frontier areas.
- Creation of a Resource Centre for rapid dissemination of information and knowledge.

CTRANS runs M.Tech. (Infrastructure Systems) and PhD programme

2. LIST OF ASSOCIATED FACULTY MEMBERS

There are no regular faculty members in CTRANS. About 36 faculty members in total belonging to various departments are associated with the centre.

3. HONORS AND AWARDS TO ASSOCIATED FACULTY MEMBER

- Dr. Nayan Sharma (Emeritus Fellow, WRDM) has been appointed as a Member of Committee to Suggest Remedial Measures on Flood Problem of Guwahati, Constituted by Govt. of Assam, 31st July, 2014.
- Dr. Nayan Sharma (Emeritus Fellow, WRDM) has been honored as a Distinguished Fellow of Centre for Development and Peace Studies, India.

4. PARTICIPATION OF ASSOCIATED FACULTY IN CONFERENCES / SEMINAR / SYMPOSIA / WORKSHOP / GUEST LECTURES.

Name of Faculty	Details of Conf./Semi./Symp./ Workshop /Guest Lecture	Venue	Date
Prof. Nayan Sharma	Delivered Invited talk on "Novel Unified Technology for Hazard Mitigation with Water Management for Mountain Streams"	INAE-Engineers Conclave-2014 at Indian Institute of Science, Bangalore	October 30 – Nov. 1, 2014.
Prof. Nayan Sharma	Delivered Invited talk on "Harnessing The Brahmaputra: Key To Northeast India's Economic Regeneration"	Tezpur Central University, Assam	March 16-17, 2015.

5. SPONSORED RESEARCH PROJECTS:

iii. NEW SPONSORED RESEARCH PROJECTS

Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
Dr. Shalini Biswas (Postdoctoral Researcher supported by DST under Women Scientist Scheme - A)	Production of Butanol from Agro-Waste via Microbial Route	Department of Science & Technology (DST), New Delhi	18.60
Total			18.60

6. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (Rs.10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2014-15).

Under Women Scientist Scheme-A (WOS-A), Department of Science & Technology (DST), New Delhi, has awarded a sponsored research project (Rs. 18,60,000/-) titled : "Production of Butanol from Agro-Waste via Microbial Route" to postdoctoral researcher Dr. Shalini Biswas for the period of three years 3 Years (i.e. from October, 2014 to October, 2017).

7. SCIENTIFIC AND TECHNICAL REPORTS

Title of the Projects	Participants	Authors	Remarks
Action based Tourism Development Plan for Chitrakoot, MP	MURP students (first year)	Planning Studio Team under Prof. R. Shankar and U. K. Roy	

5.2 CENTRE FOR NANOTECHNOLOGY

Students Admitted: M Tech:14, PhD:08; Books:02, Book Chapters: 02, Journals:09, Conferences: 11; Sponsored/ Consultancy/ New Projects: Research Rs. Lacs:826.54

1. SALIENT FEATURES

Centre for Nanotechnology was established in December 2005 as one of the Centres of Excellence. The faculty members associated with the centre are involved in developing state-of-the-art facilities at the institute and vigorously pursuing interdisciplinary research on various current aspects of Nanoscience and Nanotechnology.

A wide range of sophisticated equipment related to nanotechnology has been made operational at IIC as well as at centre involving the multidisciplinary faculty of the centre. In view of the major impact of 'Nanoscience' in vast disciplines of Science and Technology, M.Tech programme on 'Nanotechnology' was started in 2008. This course is aimed at providing the basic knowledge to B.Tech/M.Sc students about various concepts of nanoscale materials, their synthesis, characterization, novel properties, applications and future perspectives. These being a multidisciplinary area, a number of electives have been designed to impart knowledge on modeling and simulation, physics, chemistry, biological and technological aspects of nanomaterials. Besides, it is providing students a practical training on advanced methods for the synthesis, characterization and elucidation of different nanostructures. This expertise could be utilized to fabricate new materials and nanodevices.

2. LIST OF ASSOCIATED FACULTY MEMBERS

Professors

Agarwala, Vijaya, Metallurgical & Materials Engg. (Head)
Chandra, R., Institute Instrumentation Centre
Chaudhary, A.K., Institute Instrumentation Centre
Daniel, B.S.S., Metallurgical and Materials Engg.
Goyal, R.N., Chemistry
Indu, B.D., Physics
Jayaganthan, R., Metallurgical and Materials Engg.
Katiyar, V.K., Mathematics
Kaur, Davinder, Physics
Kumar, Anil, Chemistry
Kumar, Ravi, Mechanical and Industrial Engg.
Nath, Ravindra, Physics
Nath, S.K., Met. & Materials Engg.
Nautiyal, Tashi, Physics
Partha Roy, Biotech
Sil, A., Metallurgical and Materials Engg.
Singh, Dharmendra, Electronics & Computer Engg.
Singh, R. P., Biotechnology
Varma, G.D., Physics
Yadav, K.L., Physics
Chandra Kamlesh (Visiting Faculty)

Associate Professor

Chowdhary, G.P., Metallurgical and Material Engg.
Dutta, R.K., Chemistry
Jeevanandam, P., Chemistry
Justin Thomas, K.R., Chemistry
Kumar, P., Biotechnology
Navani, Naveen K., Biotechnology
Pathak, N.P., Electronic and Computer Engg.
Pathania, Ranjana, Biotechnology
Sharma, A.K., Biotechnology
Tomar, Shaily, Biotechnology

Assistant Professors

Anand, B., Electronic and Computer Engg.
Debrupa Lahiri, Metallurgical and Material Engg.
Gopinath, P., Biotechnology
Indranil Lahiri, Metallurgical and Material Engg.
Kiran Ambatipudi., Biotechnology
Mandal, T., Chemistry
Pal, K., Mechanical and Industrial Engg.
Pranita, Sarangi, Biotechnology
Rajib Chowdhury, Civil Engg.
Sankar, M., Chemistry
Sarkar, S., Civil Engg.
Manhas, S., Electronic and Computer Engg.

3. PARTICIPATION OF FACULTY IN CONFERENCES/SEMINAR/ SYMPOSIA/ WORKSHOP/GUEST LECTURES.

Name of Faculty	Details of Conf./Semi./Symp./Workshop/Guest Lecture	Venue	Date
Dr.P.Gopinath	Delivered an invited lecture at the "International Conference on Nanotoxicology" (ICNanotox- 2015)	SASTRA University	February 13, 2015.
Dr.P.Gopinath	Oral presentation at the "Indo-Australian conference BiTERM 2015"	Anna University, Chennai, India	February 5-7, 2015.
Dr.P.Gopinath	Presented three posters at the "TechConnect World 2014 Innovation Conference".	Washington, DC, United States of America.	June 16-18, 2014.
Prof.Vijaya Agarwala	9th Uttarakhand State Science and Technology Congress 2014-15,	UCOST, Dehradun, Uttarakhand	February 25-27, 2015.

4. SHORT TERM/SPONSORED COURSES ORGANIZED BY THE DEPARTMENT

Name of Coordinator	Name of Course	Source of funding	Nos. of Participants	Dates
Dr.P.Gopinath Prof.V.K.Katiyar Prof.K.Chandra	One day workshop on "Nano Drug Delivery Systems (Industry-Academia Interaction)"	Indian Society of Biomechanics; QIP Cell, IIT Roorkee; Fine Trap India Pvt. Ltd; Anton Paar India Pvt. Ltd; Galaxy Trading Corp.	200 participants	10th January, 2015

5. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
Dr. P. Gopinath	Chitosan as nanocarrier for gene delivery	MHRD	5,00,000.00
		Total	5,00,000.00

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
Dr. P. Gopinath (P.I) Dr.P.Roy (Co-P.I)	Cancer Nanotheranostics: Development of Multifunctional Nanocomposite for Tumor Targeted Delivery of Suicide Gene and Imaging Probe.	DBT (RGYI -2011-12), India	29,30,000.00
Dr. P. Gopinath	Tumor targeted multifunctional chitosan nanocomposite for cancer theranostic applications.	SERB (Fast track scheme for young scientists)	21,90,000.00
Dr. P. Gopinath Dr.P.Roy (Co-P.I)	Overexpression of Superoxide Dismutase in Mesenchymal Stem Cells for Therapeutic Applications of Chronic Obstructive Pulmonary Disease.	ICMR, India	28,87,500.00
Prof.V.Agarwala (P.I) Dr. P. Gopinath (Co-PI)	Low Cost Technology for Purification of Arsenic and Microbes Contaminated Water using Nanotechnology	DST-Water Technology Initiative, India	46,63,875.00
Prof.Vijaya Agarwala	A Novel Approach for Processing Hazardous Electronic Waste	AISRF-DST,NEW DELHI	21,86,000.00
		Total	1,48,57,375.00

5.3 CENTRE FOR DISASTER MITIGATION AND MANAGEMENT

*Academic Staff: Nil Students Admitted: M.Tech: 25 ; Ph.D: 11
Publications in: Journals-24, Conferences- 11, Projects: Research (Rs. in Lacs): 445.51 lacs,
Consultancy (Rs. in Lacs): 16.00 lacs*

1. SALIENT FEATURES

A Centre of Excellence in Disaster Mitigation and Management was established at IIT Roorkee in March 2006 for national capacity building in Disaster Mitigation and Management. The Centre has many objectives.

National capacity building in Disaster Mitigation through Human Resource Development

Dissemination of technical know-how by conducting short term courses in Disaster Mitigation & Management

Dissemination of technical know-how to meet the challenges arising of disasters through consultancy services

Minimize the impact of natural disasters through R & D and extension activities by providing engineering solutions in the area of Disaster Mitigation

Evolving strategies for mitigation and management of disasters and establishment of national technical data base for rapid dissemination of information and knowledge

Conduct research in related areas leading to Ph.D. degree in Disaster Mitigation and Management

Targets Achieved:

3rd batch of M. Tech. Program in Disaster Mitigation & Management is pursuing their course work.

Four Ph.D. awarded and one has been submitted for evaluation.

The Centre of Excellence in Disaster Mitigation and Management is very young Centre. This draws strength of faculty members of other Departments to solve important problems.

2. LIST OF ASSOCIATED FACULTY MEMBERS

Dr. B.K. Maheshwari – Head

Prof. D.K. Paul, Emeritus Fellow

Professors

Prof. B.K. Maheshwari, **Head**

Prof. N.K. Goel, Hydrology Deptt.

Prof. P.K. Garg, Civil Engg. Deptt.

Prof. R. Anbalagan, Earth Science Deptt.

Prof. A.K. Saraf, Earth Science Deptt.

Prof. M.L. Sharma, Earthquake Engg. Deptt.

Prof. Ashok Kumar, Earthquake Engg. Deptt.

Prof. Amita Sinval, Earthquake Engg. Deptt.

Prof. M. Perumal, Hydrology Deptt

Prof. Yogendra Singh, Earthquake Engg. Deptt.

Prof. Ajay Gairola, Deptt. of Civil Engineering

Prof. B.R. Gurjar, Civil Engg. Deptt.

Prof. Kamal Jain, Deptt. of Civil Engineering

Prof. Shishir Sinha, Deptt. of Chemical Engg.

Prof. Anand Joshi, Deptt. of Earth Sciences

Associate Professors

Dr. D.S. Arya, Hydrology Deptt.

Dr. Kamal, Earth Science Deptt.

Dr. Mahua Mukherjee, Arch. & Plng.

Dr. R.D. Garg, Civil Engineering Department

Dr. Inderdeep Singh, Deptt. of Mechanical & Industrial Engg.

Dr. N.K. Nawani, Deptt of Biotechnology

Dr. Ranjana Pathania, Deptt of Biotechnology

Dr. Amit Dhiman, Deptt. of Chemical Engg.

Dr. J. D. Das, Deptt. of Earthquake Engineering

Assistant Professors

Dr. Rajat Agarwal, Deptt. of Management Studies

Dr. R.S. Jakka, Deptt. of Earthquake Engineering

Dr. M.K. Rao, Department of Management Studies

Dr. (Mrs.) H.S. Lakra, Deptt of Arch & Planning

Dr. Sudip Roy, Computer Science & Engg. Deptt.

3. HONOURS AND AWARDS TO FACULTY MEMBERS

1. **Prof. B.K. Maheshwari** was presented **IACMAG** Award of "**Excellent Regional Contributions**" during 14th Int. Conference of the International Association for Computer Methods & Advances in Geomechanics, Kyoto, Japan, Sept. 2014
2. **Prof. B.K. Maheshwari** was invited to deliver a talk entitled "Recent Advances in Seismic Soil-Structure Interaction" in a **Preliminary Session** during Indian Geotechnical Conference, Kakinada, Andhra Pradesh, December 18, 2014.
3. **Dr. Ravi Sankar Jakka**, Asst. Professor, Deptt. of Earthquake Engg. has been conferred upon 'Young Geotechnical Engineer Best Paper Award' on 18th December, 2014 from Indian Geotechnical Society.
4. **Dr. Amit Dhiman**, Assoc. Professor of Chemical Engg. is Editorial board member, Journal of Nonlinear Dynamics, Hindawi Publishing Cooperation (since 2013)
5. **Dr. Amit Dhiman**, Assoc. Professor of Chemical Engg. has chaired a Session in Computational Fluid Dynamics Session C, 5th International and 41st National Conference on Fluid Mechanics and Fluid Power (FMFP 2014), IIT Kanpur, Dec. 13, 2014.

4. PARTICIPATION OF FACULTY IN CONFERENCES / SEMINAR / SYMPOSIA/ WORKSHOP/ GUEST LECTURES.

Name of Faculty	Details of Conf./Semi./Symp./ Workshop /Guest Lecture	Venue	Date
Dr. B.K. Maheshwari	14 th Int. Conf. of the International Association for Computer Methods & Advances in Geomechanics	Kyoto, Japan	Sept. 22-25, 2014
Dr. B.K. Maheshwari	Visited Norwegian Geotechnical Institute (NGI) for Research Project	Oslo, Norway	Oct. 3-12, 2014
Dr. B.K. Maheshwari	Indian Geotechnical Conference (IGC)	Kakinada, Andhra P.	Dec. 18-20, 2014
Dr. Ravi Sankar Jakka	Indian Geotechnical Conference – 2014 (IGC)	Kakinada, Andhra Pradesh	18 to 20 December, 2014
Dr. Ravi Sankar Jakka	Invited talk at UK-India Workshop(UKIERI)	IIT Guwahati, Guwahati	7-9th January 2015
Dr. Amit Dhiman	International Conference on Advances in Engineering and Technology (ICAET2014)	Roorkee Institute of Technology (RIT), Roorkee	May 24-25, 2014
Dr. Amit Dhiman	13 th Indo-European Winter Academy	IIT Kanpur	Dec. 3-9, 2014
Dr. Amit Dhiman	5 th International and 41 st National Conference on Fluid Mechanics and Fluid Power	Mechanical Engineering Department, IIT Kanpur	Dec. 12-14, 2014
Dr. Amit Dhiman	67 th Annual Session of Indian Institute of Chemical Engineers, CHEMCON 2014	Chandigarh Regional Centre IChE, Chandigarh	Dec. 26-28, 2014
Prof. Ajay Gairola	7th National Conference on Wind Engineering	Thapar University Patiala	21-22 Nov 2014

5. PARTICIPATION OF FACULTY IN SHORT TERM COURSES

Name of Faculty	Name of Course	Venue	Date
Dr. B.K. Maheshwari	Geotechnical-Earthquake Engineering	QIP Centre	June 2-6, 2014
Dr. Ravi Sankar Jakka	AICTE Sponsored STC on "Geotechnical Earthquake Engineering"	IIT Roorkee	June 2-6, 2014
Dr. Ravi Sankar Jakka	NHPC Sponsored STC on "Geotechnical Earthquake Engg."	IIT Roorkee	November 24-26, 2014
Dr. Ravi Sankar Jakka	NHPC Sponsored STC on "Earthquake Resistant Structural Design /Drawings"	IIT Roorkee	December 1-6, 2014.

6. ACADEMIC ACTIVITIES ORGANIZED BY THE CENTRE

Name of the conf./seminar/s ymp./ workshop	Name of the Chairman	Sponsored by	Dates
One Day workshop on 'Challenges in Seismic Site Characterization and Solutions through Recent Developments'	Dr. Ravi Sankar Jakka & Dr. S. Mukerjee	QIP Centre, IITR	10th December, 2014

7. SPONSORED/CONSULTANCY PROJECTS: CONTINUING SPONSORED RESEARCH PROJECTS

Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
Dr. Ranjana Pathania	Hazard Characterization and Isolation of Pesticide degrading Bacteria for Mitigating the Contaminated Environment	Uttarakhand State Science & Technology Council, Dehradun	5.91 lacs
Dr. Yogendra Singh	Study on Seismic Strengthening Technologies and Comparative Assessment of Various Retrofit Techniques for Unreinforced Masonry (URM) School Buildings in India	Nanyang Technological University Singapore	39.10 lacs
Dr. Ranjana Pathania	Development of Bacterial Pesticide Degrading System for Bioremediation of Pesticides Accumulated in the Local Environment	Uttarakhand State Science & Technology Council, Dehradun	2.50 lacs
Dr. Ashok Kumar	Development of Earthquake Early Warning System in Northern India	MoES, Govt. of India	375.00 lacs

8. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (>Rs. 10 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2013-14).

Summary against a Research Project Entitled: Development of Earthquake Early Warning System in Northern India

- Possibility of large size earthquake in seismic gap of Himalayas
- Can effect several cities (including Delhi) & industrial hubs
- Large population density at 100 to 300 Km from this region
- Lead time of 25 to 80 seconds may be available at these places
- Thus EEW is very useful for Northern India
- 23 instruments streaming data from NIC pops.
- 35 instruments streaming data through BSNL towers.
- 28 stations more will be installed at BSNL towers shortly.
- Algorithm for real time processing of the data for earthquake early warning is being tested and we hope that we will get out of present experimental mode of functioning soon and freeze various parameters of the software.

SALIENT FEATURES

The centre was inaugurated by Shri. N Ravi Shankar, Chief Secretary, Government of Uttarakhand on 25th January 2015. In addition to academic excellence, the centre aims at creating a platform where experts from academia, administration, profession and entrepreneur can come together to discuss traditional and emerging issues on urbanization, enhance knowledge and identify related framework towards its solution. In order to realise its aim the centre has fulfilled following activities during the past nine months.

Workshops

The centre has organised workshops to enhance and exchange knowledge between various groups in academia and society. The workshops also facilitate dissemination of knowledge among participants and students, who can consider these subject fields for more extensive work and research in future.

“URBAN DIALOGUES - The Global City & the Local Village” - A week long workshop was conducted during 8th December to 15th December 2014, as a prelude to the establishment of the centre. The workshop attempted in solving real life problem with observation, survey, and communication with local urbanites in Gurgaon. Envisioned as a summer school approach the workshop conducted in presence of Mr. Henrik Valeur, a Danish architect and urban development expert. The objectives of the workshop involved study and analysis of an urban village located in Gurgaon.

“DHAROHAR - A National Workshop on Craft and Skill Development for Sustainable Design” was successfully conducted under the aegis of Centre for Urban Design and Development (CUDD) during 16th August 2015 to 18th August 2015. Ms. Amita Sharma, former secretary to Government of India was the chief guest of the occasion workshop. Eminent speakers from the field of arts, craft, culture and heritage discussed about themes like heritage awareness and cultural industries, craft and skill development for sustainable development, and future road maps.

Projects & Collaborations

The centre is already initiating projects with government and private organisation. One of the major project is the collaboration of Dehradun Municipal Corporation and IIT Roorkee to conduct a digital survey of land and properties belonging to the corporation. The collaboration is the first step towards e-governance and making Dehradun a smart city.

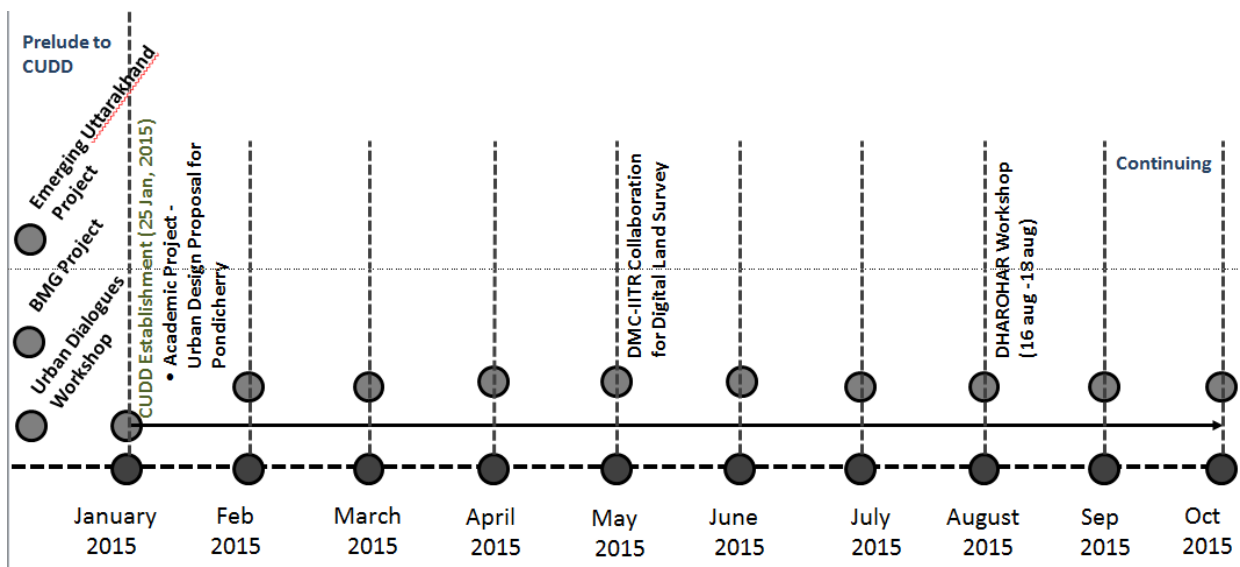
Research Projects

Emerging Uttarakhand project involves roadmap development for a sustainable and livable Uttarakhand. The objectives include technology for rural development, action plan for societal development, facilitation of rural entrepreneurs, and strategies of capacity building.

BMG foundation project involves development of blueprint for decentralised waste treatment by the use of Innovative Toilet System with Black Soldier Fly.

Timeline of the Progress

The centre which just started the journey this year, have initiated significant activity under its domain. The activities are highlighted in a time series map in the following figure.



6. Service Centres

- 6.1 Continuing Education Centre
6.2 Institute Computer Centre

- 6.3 Institute Instrumentation Centre
6.4 Quality Improvement Programme Centre

6.1 CONTINUING EDUCATION CENTRE

Academic Staff: 01, Short Term Courses-93,

1. SALIENT FEATURES

It is a pioneering Centre in the area of continuing education. It has completed more than 55 years of service and has played a very important role in the promotion of knowledge up gradation activity in our country by organizing refresher/specialist courses and workshops for in-service technocrats and professionals. This centre acts as a single window to disseminate information and technology on latest developments. The activities organized by this centre are innovative, refreshing and stimulating and address to the current needs of the participants. Apart from the technical expertise available in the departments and centres of the Institute, experts from industries and R&D organizations are also invited to deliver talks/ lectures wherever necessary.

Around 70 to 80 short term training programmes are being conducted every year in various disciplines of management, engineering, science and technology for participants from all parts of the country as well as from the neighboring countries. This year the Centre has conducted 78 courses including 02 International Courses in which about 1509 participants have been trained.

2. LIST OF ASSOCIATED FACULTY MEMBER

- Dr. B.K. Gandhi
Coordinator
Continuing Education Centre
IIT Roorkee

3. SHORT TERM / SPONSORED COURSES ORGANISED BY THE CENTRE

Co-ordinator(s)	Name of the Courses	No. of Participants	Dates
Dr. S. Rangnekar	Management Skills for Technical Personnel	15	April 5, 2014
Dr. N.K. Goel & Dr. D.S. Arya	Int. Course on Climate Change Issues and Its Impact on Water Resources Management in the Coastal and Seasonal Wetlands	15	April 7-17, 2014
Dr. S. Rangnekar	Managerial Excellence held at BHEL	33	April 11-12, 2014
Dr. S. Rangnekar	Managerial Excellence held at BHEL	19	April 18-19, 2014
Dr. S. Rangnekar	Managerial Excellence held at BHEL	27	April 25-26, 2014
Dr. S. Rangnekar	Training of Trainers for BHEL Personnel	21	May 5-6, 2014
Dr. S. Rangnekar	Team Work	38	May 12-13, 2014
Dr. S. Rangnekar	People Capability	42	May 16-17, 2014
Dr. A. Ramesh	Big Data Analysis for Improving Business Performance	24	May 17-18, 2014
Dr. M.K. Barua & Dr. Usha Lenka	Fundamentals and Applications of Structural Equations Modeling	10	May 24-25, 2014
Dr. S. Rangnekar	Creativity & Innovation	15	May 27-28, 2014

Co-ordinator(s)	Name of the Courses	No. of Participants	Dates
Dr. J.K. Nayak	Data Analysis for Research and Publication	34	May 31-June 1, 2014
Dr. R.L. Dhar	Strategic Human Resource Management for Effective Performance	17	June 14-15, 2014
Dr. N.K. Goel & Dr. D.S. Arya	Hydrological Analysis and Planning for Water Resources Projects	20	July 13-18, 2014
Dr. Praveen Kumar	Earthquake Resistant Structures	15	July 24-26, 2014
Dr. S. Rangnekar	GET/DET Induction Programme	27	Aug. 25-28, 2014
Dr. P.K. Ghosh	Harnessing the Researcher to Promote Sustainable Innovation	22	Sept. 2-6, 2014
Dr. M.K. Singhal	Real Time Digital Simulator for SHP Stations	9	Sept. 8-13, 2014
Dr. Praveen Kumar	Earthquake Resistant Structures	12	Sept. 11-13, 2014
Dr. M.P. Sharma	Int. Course on Small Hydropower Development	30	Sept. 15-26, 2014
Dr. Arun Kumar	Small Hydropower Development	10	Sept. 27-28, 2014
Dr. Vishwas Sawant	Introduction to Finite Elements	20	Oct. 7-9, 2014
Dr. Ashish Pandey	Application of Remote Sensing in respect of Geological and Geotechnical Aspects in Hydroelectric Projects	14	Oct. 10-14, 2014
Dr. Arun Kumar	Int. Course on Small Hydropower Development	14	Oct. 14-25, 2014
DR. D.K. Khatod	Real Time Digital Simulation for SHP Stations	8	Oct. 13-18, 2014
Dr. Praveen Kumar	Earthquake Resistant Structures	13	Oct. 16-18, 2014
Dr. M.L. Sharma	Estimation of Site Specific Seismic Design Parameters	18	Oct. 16-18, 2014
Dr. D.K. Khatod	Real Time Digital Simulation for SHP Stations	10	Oct. 27-Nov. 1, 2014
Dr. M.L. Kansal	Introduction to Hydrological Method for Assessment of Environmental Flow in River	16	Oct. 27-31, 2014
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	38	Nov. 7-9, 2014
Dr. Dinesh Kumar	Energy Resources	11	Nov. 8-12, 2014
Dr. M.K. Singh	Real Time Digital Simulator for SHP Stations	8	Nov. 10-15, 2014
Dr. R.D. Garg	Post Go Live on GIS Applications	12	Nov. 12-14, 2014
Dr. Arun Kumar	Small Hydropower Development	17	Nov. 17-21, 2014
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	41	Nov. 20-22, 2014
Dr. D.K. Khatod	Real Time Digital Simulator for SHP Stations	9	Nov. 24-29, 2014
Dr. M.L. Sharma	Geotechnical Earthquake Engineering	17	Nov. 24-26, 2014
Dr. Deepak Khare	Project Management for River Valley Projects	18	Nov. 27-29, 2014
Dr. V.C. Srivastava	Environmental Health and Safety Management in Process Industries	16	Nov. 27-29, 2014

Co-ordinator(s)	Name of the Courses	No. of Participants	Dates
Dr. M.K. Singhal	Real Time Digital Simulator for SHP Stations	9	Dec. 1-6,2014
Dr. S.N. Singh	Selection & Design of Electro Mechanical Equipment for SHP	13	Dec. 1-5,2014
Dr. M.L. Sharma	Earthquake Resistant Structural Design/Drawings	18	Dec. 1-6,2014
Dr. Vinod Kumar	Metering Technology & AMR Application	15	Dec. 10-12, 2014
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	19	Dec. 13-15, 2014
Dr. Y. Singh	Non Linear Modelling and Seismic Response Evaluation of Structures	69	Dec. 14-16, 2014
Dr. S.K. Singal	DPR Preparation and Evaluation for SHP Stations	12	Dec. 15-18, 2014
Dr. R.D. Garg	Post Go Live on GIS Applications	19	Dec. 16-18, 2014
Dr. J.K. Nayak	Data Analysis for Research and Publication	19	Dec. 20-21, 2014
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	74	Dec. 22-24, 2014
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	35	Dec. 25-27, 2014
Dr. S.K. Mishra	Dam Break Analysis	20	Dec. 26-30, 2014
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	10	Dec. 28-30, 2014
Dr. Vinod Kumar	Metering Technology & AMR Application	18	Jan. 7-9,2015
Sh. M.K. Singhal	Real Time Digital Simulator for SHP Stations	7	Jan. 12-17, 2015
Dr. R.D. Garg	GIS Applications	19	Jan. 13-15, 2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	23	Jan. 16-18, 2015
Dr. Mahendra Singh	Rock Engineering for Hydroelectric Projects	18	Jan. 19-21, 2015
Dr. R.P. Saini	Performance Testing and Evaluation for SHP Stations	10	Jan. 19-23, 2015
Dr. Z. Ahmad	Analysis and Design of Hydraulic Structures	19	Jan. 19-30, 2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	7	Jan. 20-22, 2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	27	Jan. 27-29, 2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	31	Feb. 7-9,2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	24	Feb. 16-18, 2015
Dr. Z. Ahmad	Analysis and Design of Hydraulic Structures	18	Feb. 16-27, 2015
Dr. S.N. Singh	Operation and Maintenance of SHP Stations	12	Feb. 18-21, 2015
Dr. R.D. Garg	Post Go Live on GIS Applications	19	Feb. 19-21, 2015
Dr. N.K. Goel & Dr. D.S. Arya	Flood Estimation and Forecasting	20	Feb. 22-27, 2015
Dr. D.K. Khatod	RTDS for In Service SHP Plant Engineers	7	Feb. 23-28, 2015

Co-ordinator(s)	Name of the Courses	No. of Participants	Dates
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	24	Feb. 23 - 25, 2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	14	March 2-4, 2015
Dr. Vinod Kumar	Metering Technology & AMR Application	21	March 7-9, 2015
Dr. M.K. Singhal	Real Time Digital Simulator for SHP Stations	8	March 9-14, 2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	4	March 10-12, 2015
Dr. R.D. Garg	Post Go Live on GIS Applications	16	March 13-15, 2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	14	March 14-16, 2015
Dr. S.K. Singal	Small Hydropower Development	17	March 16-20, 2015
Dr. Dinesh Kumar	Post Go Live on Revenue Management and Loss Reduction	17	March 21-23 , 2015
Dr. D.K. Khatod	Real Time Digital Simulator for SHP Stations	8	March 23-28, 2015
	Total Participants	1509	

6.2 INSTITUTE COMPUTER CENTRE

Academic Staff: 07, Short Term Courses-3,
Publication-Books/Chapter: 01 Journal:03,Conference-05

Merger of ICC and ISC

Institute Computer Centre (ICC) and Information Superhighway Centre (ISC) have been merged into one entity vide notification no. Estt.(A)/1828/E-2281, dated 25th April, 2014. It is now known as the Institute Computer Centre.

1. SALIENT FEATURES

The Institute Computer Centre (ICC) is an academic service centre providing the following computing and networking resources:

- (i) High-Performance Computing
- (ii) Central bulk licensing of Engineering/Scientific software
- (iii) Special needs for hardware/software of Research Scholars
- (iv) Facilities for B.Tech/M.Tech/MCA computer related laboratory classes
- (v) Central data storage facility
- (vi) Campus Wide Network
- (vii) E-mail, Internet and Intranet facility

Computing resources:

The Centre maintains a comfortable environment, conducive for research & training for both students and faculty. It has eight job-specific labs with about 250 workstations/desktops of latest configuration in 100/1000 mbps CAT 6 based structured network having Gigabit Managed Switches with Internet connectivity at every system. The range of servers covers from Intel based servers to high-end Blade Servers with SAN (Storage Area Network), RISC servers from SUN with NAS and SAN. Centre is also equipped with network laser printers and scanners. PARAM, Linux based HPC Cluster, and all the other servers (including software licensing servers) can be accessed within the campus including DPT Saharanpur Campus.

ICC has state-of-the-art hardware and software for applications such as: CAD/MCAD, Computational Fluid Dynamics (CFD), FEM & FEA Image Processing / Scientific Visualization, 3DAnimation/ Visual Simulation/ Geospatial imaging and analysis. Centre has mid-range to high-end configured graphics workstations. ICC is playing the major role of a central facilitator to students and faculty members who are intensely engaged in research activities.



Strengthening of High Performance Computing (HPC) Facility at ICC

In order to boost the computational facility at ICC, it has been augmented by deployment, integration and implementation of High Performance Computing (HPC) Cluster on the existing hardware for 16 nodes (15 compute nodes (148 cores) + 1 head node) and automatic backup system with the following:

- Red Hat Enterprise Linux (RHEL HPC server/compute nodes OS)
- Cluster Management Software - HP Insight CMU
- Job Scheduler - Altair PBS Professional
- Intel® Cluster Studio XE: Intel® C/C++ Compiler, Intel® Fortran Compiler, Intel® MPI library, Intel® Threading Building Blocks, Intel® Math Kernel Library, Intel® Integrated Performance Primitives, Intel® Trace Analyzer and Collector, Intel® VTune™ Amplifier XE, Intel® Inspector XE
- For automatic back up – Back up server, Tape SMSL 2024 Tape Library and hp Data protector Software

ICC's software licensing facilities provide the following major engineering and scientific software available throughout the campus over LAN:

- **ANSYS Academic Research v 15.0**
- **ArcGIS 10.2.2**
- **Autodesk Revit Architecture Suite 2009 & Educational Solution Set 2009**
- **Abaqus 6.8.1**
- **Bentley Academic Select Program Agreement** - with a set of 50+ software for Civil Engineering, Architecture, Plant Engineering, Geospatial, Geotechnical, Hydraulic Engineering, and Structural Analysis.
- **ChemOffice Ultra 10.0**
- **ERDAS Imagine 2015** with LPS and Imagine Developers Toolkit
- **Felix for NMR**
- **Hytran 3.7.3-7**
- **Intel Visual Fortran 9.0**
- **NI LabVIEW Fall 2014**
- **MATLAB R2014b** with various tool boxes & Distributed Computing Engine
- **Mathematica 5.0**
- **Mechanical Autodesk Inventor Series 11**
- **MagNet 64 bit v 6.22.1**
- **NAG Libraries** and Compilers
- **Oracle 9i & 10g**
- **Creo 2.0**
- **SARscape 4.2** with ENVI 4.7
- **SAP2000 Ult V-17; ETABS Ult V - 2013 and SAFE P/T V-2014**
- **SPSS 16.0**
- **Solid Edge 18.0**
- **Adobe Acrobat 9.0 Prof.** (Academic Version)
- **Microsoft** software products under School and Campus Agreement.

Academic activities held at ICC:

1. **Computer Systems & Programming** practical classes with C++ (Autumn semester) for B.Tech 1st year students of EED, Esc., Biotech and for B.Arch 1st year in Spring semester.
2. **CE-201** (Computer Graphics) practical class – Spring semesters based on Bentley Microstation software served through Bentley Academic Select Server deployed at ICC with network floating licenses for CS, EC and Electrical B.Tech 2nd year
3. **CS-103** practical class (Autumn semester) with JAVA and C++ programming environment B.Tech 1st year students of ECE and CSE.
4. **CA-714** practical classes for MCA II using Cluster for MPI-Programming (Parallel Computing).
5. **CA-604** practical classes of MCA (Computer Networks) with facility for Linux and JAVA
6. **Rajbhasha classes-** Regular practical classes conducted at ICC by Hindi Cell, IIT R for Hindi Typing for from IIT R candidates registered under Vibhag, GoI
7. **Dedicated systems** with specialized software required by students of M.Tech, and Ph.D scholars during their dissertation/thesis period in the Research Scholars Lab at ICC. These are high- end workstations with multi-core with high processing speed and high capacity memory and graphics

adaptors in network with remote access facility on 365x24x7 basis. Scientific and engineering software licenses being served through servers at ICC.

8. **Online placement/ internship examination conducted at the center:**

In'tl/ National Companies	For Placement	For Internship
International	07	02
Students participated	900	200
National	82	12
Students participated	14210	1520

Institute Computer Centre is spread over two floors having two Data Centers for (i) Computing Servers (ii) Campus Wide Network. For strengthening of these the following hardware/software have been added in the reporting period:

Software strengthening:

ICC is following one-point installation of Engineering/Scientific software for creating a central hub of software usage. The following new software/upgradation has been done at ICC and made them available throughout the campus over the LAN.

- (i) **MATLAB with various tool boxes upgraded to v R2014b (50 users)** - All academic departments/centres use this software for technical computing.
- (ii) **NI LabVIEW upgraded to v Fall 2014 (Academic Site license)** – This software is in use for B.Tech Projects, M.Tech Dissertation and research in the following centres/departments - AHEC, E&CE, EED, EQD, MIED and IIC.
- (iii) **SAP2000 Ult V-17; ETABS Ult V-2013 and SAFE P/T Ult V-2014:** Software suite for structural engineering research and to be used for various courses in CED and EQD.
- (iv) **Microsoft Campus Agreement** under academic pricing for major and latest Microsoft software products ranging from latest versions of OSs (32/64 bit - Standard and Enterprise) for Server/Workstation/ Desktop along with and Office Applications suites, and Visio Prof. have been licensed for the period April 2014 – March 2015 for whole Institute under that agreement.

These software are available throughout the campus over the network.

Centre runs in two shifts from Monday to Friday from 8:00 AM to 11:00 PM and on Saturday and Sunday 8:45 AM to 11:00 PM. It is rendering services all 7 days/week. Computing, software license serving and Networking facilities are available on 24x7 basis within the campus including DPT Saharanpur (SRE).

Networking Resources:

Networking resources at ICC acts as the nodal centre for outside/inside connectivity to the campus and serves as an Information Technology Center for promoting the effective use of IT, resource management and facilities for modernization/automation of the IP Infrastructure of the Campus.

The Institute has a star topology Gigabit Ethernet Switch based, state-of-the-art Enterprise class network with data, voice and video communication capabilities. All department and Centres are connected to the Network Data Centre at ICC through Optical Fiber. The network covers 365 acres of area through 35 Km of OFC and 70 km of CAT6A/CAT6/ CAT 5 UTP, connecting all Departments/Centres, Hostels and Saharanpur Campus. The Centre has Approximately 15,000 nodes network spread within all the Departments/ Centres/ Hostels including SRE Campus for providing internet/intranet and e-mail facility to all faculty, students, staff, library and laboratories.

(i) Network Structure and Facilities

- State-of-the-Art Data/Audio/Video capable campus wide network with Enterprise Class Core, and Access switches, firewall etc.
- 10G and 1G Ethernet optical fiber (SMF/MMF) based backbone for campus wide connectivity to all departments, centres and hostels in star topology.
- Network Access security at gateway and time based management of internet access at the hostels.
- Wired line CAT 6A Internet / Intranet connectivity in each room of all research scholar hostels, all boys and girls hostels.
- Wireless Internet/ Intranet connectivity in hostels through 802.11n Wi-Fi network.
- ADSL based broad band internet connectivity at faculty residences.

- RAS (Remote Access Server) dial up internet connectivity at staff residences.

(ii) Internet Bandwidth

- 2.0 Gbps internet leased line link of National Knowledge Network (NKN) from NIC under MHRD Govt of India initiative.
- 200 Mbps internet Leased Line Link from TATA Communication, New Delhi,
- 300 Mbps internet Leased Line Link from BSNL Haridwar
- 2 Mbps Leased Line Link from ERNET India, New Delhi.
- 34 Mbps dedicated Leased Line Link (RailTel) in a close group to Saharanpur Campus.
- 100Mbps internet Leased Line Link of National Knowledge Network (NKN) from NIC under MHRD Govt of India initiative to Saharanpur Campus.

(iii) Application Server

- High Performance Internet/ Intranet Applications servers for E-mail, Institute Internet/Intranet Website, DNS, DHCP, Radius etc.
- Antivirus Solution for E-mail Gateway and Desktops for the whole campus.

(iv) Mail Messaging System

Oracle Sun Java Mail messaging system to provide spam free mail services to the Institute users. Institute has 8000 user license. Mail messaging system is installed in active-active mode with full redundancy with separate storage. So that users can have more mail space with the facility of calendaring and instant messaging also.

(v) Other Facilities

- E-notice Board, Portal for Online Placement for Campus interview, Online Undergraduate Registration, Alumni portal.
- Publish online interactive JEE, JMET, JAM, GATE examination brochures and results.
- Channel-I and Institute portal.

Important Activities

(i) Implementation of LAN for all Boys Hostels at IITR as well as Saharanpur Campus with redundancy at Core Level with Centralized Network Admission Control. Following are the major works carried out under this project:

- Enhancement of the capability of the Data Centre at ICC like redundancy at core level, VPN (Virtual Private Network), Authentication, Centralized Network Admission Control etc.
- LAN for all the rooms in the boys hostels at IIT Roorkee Campus.
- LAN in Multi Activity Centre and Technology Block of SRE Campus.

(ii) Antivirus at E-mail Gateway and Desktops of Campus

- Upgraded Trend Micro (InterScan messaging security virtual Appliance) with SPS (Spam Prevention Solution)
- Trend Office Scan Corporate Edition with its upgraded versions.
- Subscribed Norton Symantec End Point Protection for desktops.

(iii) Multipoint Video Conferencing and Virtual Class Room facilities

For conducting interviews, meetings and interactive lectures. Centre also is having two Virtual Class Rooms under NKN-VCR project for conducting lectures through VCs for SRE campus as well as for other Institutes.

(iv) Multicast Video Streaming

Centre is doing multicast video streaming for Convocation over campus LAN and at Intranet for last several convocations

Hardware Strengthening for Network resources

- A. The following hardware strengthening has been done to better equip the DMZ in the network. It will also serve for DNS and redundant servers for various portals such as Alumni, Academic and Websevers, secured network services and monitoring.
- Blade Chassis (01 no.)– Dell PowerEdge M1000e with dual management controller, 3+3 redundant PSU for populating up to 16 half-height blade servers.
 - 1 Gb Blade chassis switches (2 nos.) – Dell Power connect M6220 Gigabit managed ethernet switch
 - Blade servers (10 nos)- Half height Dell PowerEdge M630 blade servers with 2x Intel Xeon E5-2630 v3, 2.4 Ghz/20 MB cache/32 GB RDIMM/2x300 GB hot plug SAS HDD/4x 1Gbps Ethernet ports

B. Additional desktops for IMG at ICC for better facilitation for upgradation of Internet/ Intranet related tasks.

Desktops (4 Nos.) – Acer Veritron M200-11-81, Intel Core i5 4Gen/6 MB L3 cache/4GB DDR3 RAM/500 GB/18.5” TFT

List of Associated Faculty Member

Head (up to 04.02.15)

Singh, Dharmendra, Professor ECE

Polarimetric, Interferometric application of Radar, Electromagnetic wave interaction with various media, Microwave techniques for buried object detection, Microwave and optical remote sensing.

Head (w.e.f. 05.02.15)

Balasubramanian, R, Associate Professor, CSE

Computer Vision- Optical Flow Problems, Fractional Transform Theory, Wavelet Analysis, Image and Video Processing, Multimedia Security: Digital Image Watermarking and Encryption, Biometrics, Content Based Image and Video Retrieval, Hyperspectral and Microwave Imaging, Visualization, Volume Graphics

Assistant Professor

Lal, Mohan, PhD (Roorkee)

RDBMS / Networking

System Programmer

Gupta, Navneet K., PhD (HNB Garhwal)

High Performance Computing/ Web Technologies/Digital Image Processing and GIS

System Programmer

Kumar, Mukesh, M.Sc., PGDCA

Enterprise LAN/WAN designin, integration, management and troubleshooting, Internet/Intranet Application Server hosting and management.

Programmer

Sachdeva, Rajesh, PG Dip.(Kurukshetra) *Internet/Intranet*

Jr. Programmer

Chauhan, Ravi , MCA (GEC, Jabalpur)

RDBMS/Intranet/System Analysis and Design

Scientific Officer Grade-II

Shukla, Sanjeev, M.Tech (CSE) (Roorkee)

LAN-WAN designing and implementation/System Admin (Linux & Win 9x)

Participation in Conference:

Name of Faculty	Details of Conference	Venue	Dates
Navneet Kr. Gupta	HP-CAST 2014 A High Performance Computing (HPC) Users Group meet by HP, India for Advanced Scientific and Technical computing	Pune	21st - 23rd August, 2014

Short Term /Sponsored Courses Organized by the Centre:

Coordinator(s)	Name of the Courses	No. of Participants	Dates
Navneet Kr. Gupta	Training on ERDAS Imagine 2014	26	28th - 29th August, 2014
	Training on ArcGIS 10.1	25	13th - 14th Sep., 2014
Dharmendra Singh	Training on LabVIEW	25	13th Nov., 2014

6.3 INSTITUTE INSTRUMENTATION CENTRE

Academic Staff: 04 Students Admitted: M.Tech; 2, Ph.D. 3
Publications in: Journals: 18, Conferences: 9, Book/Books Chapters: Nil
Projects: Research (Rs. in Lacs) 163.01, Consultancy (Rs. in Lacs)...2.50

1. SALIENT FEATURES

IIC runs & maintains Twenty Analytical Laboratories with modern Equipment for research and teaching of UG, PG and Ph. D students, which includes AAS, DTA-TGA, EPMA, FE-SEM, FLS, ICP-MS, Laser Ablation Micro-Analyzer, MCU, Powder X-RD, Single Crystal X-RD, Small Angle X-RD, SEM, SPM, SQUID, TEM, TIMS, UTM, VSM and Liquid Nitrogen Plant. Besides these, Electronics Repair Laboratory takes care of in-house repair and maintenance of equipment at IIC and other departments. As support facilities, a Mechanical Workshop and a Refrigeration/Air Conditioning Workshop are also maintained.

2. LIST OF ASSOCIATED FACULTY MEMBER

Professor & Head

Chandra, Ramesh, PhD (IIT Delhi)

Experimental Condensed Material Physics, Nanotechnology

Scientific Officer

Singh, Jagdish, M. Phil (Roorkee)

Gotyan, K. S., B. E. Ec & T (Aurangabad)

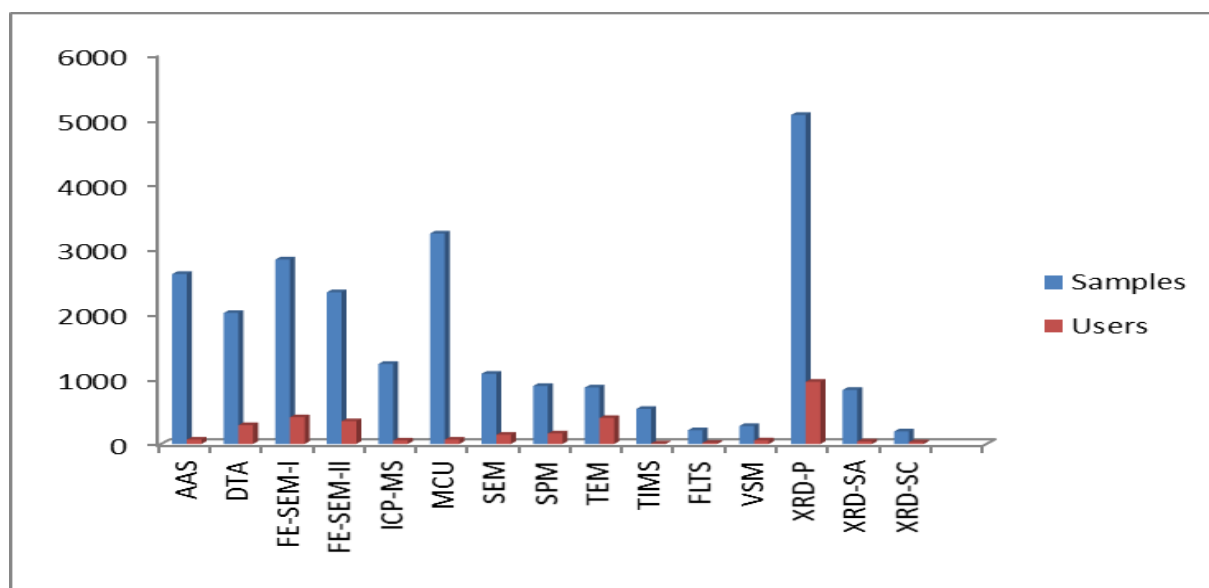
Dr.Bupender Singh, PhD (IIT Roorkee)

List of Technical Staff

Ravindra Saini, M. Tech (H.B.N.I Mumbai)

D. Prasad, M.Tech (IIT Delhi)

S.D. Sharma, M.Tech (University of Roorkee)



Highly utilized laboratories of IIC

3. OVERALL PERFORMANCE OF THE CENTRE DURING 01-04-2014 TO 31-03-2015:

S.N	Laboratory	No. of Samples	No. of Users
1	Atomic Absorption Spectrophotometer (AAS) Spectro photometer AAS	2229	93
2	DTA/TGA	1943	370
3	EPMA	0	0
4	FE-SEM-1	2167	371

5	FE-SEM-2	3090	390
6	Fluorescence Life Time System (FLTS)	314	67
7	Laser Ablation ICP-MS	1064	51
8	Macromolecular Crystallographic Unit (MCU)	60	18
9	Scanning Electron Microscope (SEM)	290	114
10	SPM	288	64
11	SQUID	0	0
12	Transmission Electron Microscope (TEM)	798	183
13	TIMS	871	14
14	UTM	0	0
15	VSM	679	83
16	WD-XRF	30	1
17	X-Ray Diffractometer (Powder)	3601	619
18	X-Ray Diffractometer (Single Crystal)	226	39
19	X-Ray Diffractometer (Small Angle)	578	45
20	Liquid Nitrogen Plant	13158 liters	475
21	Instrumentation Lab.		
22	Repair Lab	Sophisticated	11
		Analytical	49
		General	12
		Total	72
23	PA System	Convocation Hall	37 days
Total No. of users: 2522; Total No. of Samples: 18228			

4. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Name	Designation and Affiliation	Purpose	Dates
Prof. T.P Singh	AIIMS, New Delhi		10-04-2014
David Richards Louis Lepen John Preston	university of Southampton, U.K		09-07-2014
Dr. M.P Kaushik	Director DRDE Gwalior		09-10-14

5. LIST OF CANDIDATES AWARDED Ph.D. DEGREE

Name of Students	Nationality	Male/ Female	Category	Title of the Thesis
Mukesh Kumar	Indian	Male	SC	Synthesis and characterization of SiC thin films for spintronic applications"

6. SPONSORED/CONSULTANCY PROJECTS:

i. COMPLETED SPONSORED RESEARCH PROJECTS

Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
Dr. Ramesh Chandra	Golden Color Coatings on Plane Glass	Asahi India Glass Ltd Roorkee	2.50
Dr. Ramesh Chandra	Development of Silt Erosion Resistant Coating for Turbine Components	CPRI Bangalore	163.1
Dr. Ramesh Chandra	Synthesis and Characterization of Metal oxide Nanoparticles.....	DRDO	12.46

ii. CONTINUING SPONSORED RESEARCH PROJECTS

Principal Investigators	Title of the Projects	Sponsoring Agency	Outlay Amt. (Rs. in Lacs)
Dr. Ramesh Chandra	Absorption studies of laser light in nanoparticles for laser initiation of high explosive (Sanctioned)	DRDO	32.20
Dr. Ramesh Chandra	Development of SiC thin films for electronic applications	DRDO	20.70

Research Publication during the year under report (2014-15):

Papers in Refereed Journals:

1. The significant effect of film thickness on the properties of chalcopyrite thin absorbing films deposited by RF magnetron sputtering Pradeep Mishra, V.Dave, **R.Chandra**, J.N Prasad, A.K Choudhary **Mats Sci. Semicond. Processing** **34** (2015) 350
2. Synthesis of sputter deposited CuO nanoparticles & their use for decontamination of 2-chloroethyl ethyl sulfide (CEES) Monu Verma, Vinod Kumar Gupta, V. Dave, **Ramesh Chandra**, G.K. Prasad **J. Colloids Interface Sci.** **438** (2015) 102-09; **(3.55)**.
3. Ferromagnetism in Ni-ZnS thin films: Effects of Ni concentration & swift heavy ion irradiation Shiv P. Patel, J.C. Pivin, **R. Chandra**, D. Kanjilal, Lokendra Kumar **Vacuum** **111** (2015) 150-156
4. A study of crossover from 3D ferrimagnetic Bulk NiCr₂O₄ compound into 2D spin-glass like nanophase. H. Singh, T. Chakraborty, A. Venimadhav, **R.Chandra**, C. Mitra and U. Kumar* **Physica B** **448** (2014) 77–79
5. A study on consequence of swift heavy ion irradiation of Zn – Silica nanocomposite thin film: Electronic sputtering Compesh Pannu, D. C. Agarwal, **R. Chandra**, H. Amekura, D. Kabiraj, D. K. Avasthi **Beilstein J. Nanotechnol.** **5** (2014):1691–1698. (Impact Factor: 2.37)
6. Wettability and Optical Studies of Films Prepared from Power Variation of Co-sputtered Cr and Zr Targets by Sputtering Sushant K Rawal and Ramesh Chandra **Procedia Technology** **14** (2014) 304–311
7. Conduction mechanism and bandgap engineering in pulsed laser deposited Cd₁₂xPbxS films Sanjeev Kumar, Ashvani Kumar, Naresh Kumar, Amarjyoti Goswami, and **Ramesh Chandra J. Appl. Phys.****116** (2014) 073504-6
8. Effect of Annealing Temperature on the Physical Properties of Zn-ferrite Nanoparticles Sushant Singh, Naresh Kumar, Richa Bhargava, Amit Chawla, **R. Chandra**, Sanjeev Kumar, **J. Superconductivity & Novel Magnetism.** 27(3). (2014) 821-826
9. Study of thermal stability and mechanical properties of fcc phase Zr₂₂W₁₉N₅₈ thin films deposited by reactive magnetron sputtering P.Dubey, V.Arya, S.K.Srivastava, D.Singh, **R.Chandra Surface & Coatings Technology** **245** (2014) 34-39
10. Thickness dependent exchange bias in co-sputter deposited Ni-Mn-Al Heusler alloy hard nanostructured thin films **A. Mishra, S.K. Srivastava, Arvind Kumar, P. Dubey, Samta Chauhan, D. Kaur, R. Chandra Thin Solid Films** (2014), 142-146 [doi:10.1016/j.tsf.2014.08.014](https://doi.org/10.1016/j.tsf.2014.08.014)
11. Effect of processing parameter on structural, optical and electrical properties of photovoltaic chalcogenide nanostructured RF magnetron sputtered thin absorbing films Pradeep Mishra, V Dave, **R Chandra**, J N Prasad, A K Choudhary **Materials Science in Semiconductor Processing** **25** (2014) 307.
12. Phenothiazine-Capped Gold Nanoparticles: Photochemically Assisted Synthesis & Application in Electrosensing of Phosphate Ions Sandeep Gupta, Akhilesh K. Singh, Ravish K. Jain, **Ramesh Chandra**, and Rajeev Prakash **Chem Electro Chem**, **1** (2014) 1–7
13. Study of structural and optical properties of Zn_{1-x}Al_xO nanoparticles' Atikur Rahman, R. Jayaganthan, **Ramesh Chandra Materials Science in Semiconductor Processing** **18** (2014)15–21 **(1.338)**
14. 'The influence of various sputtering parameters on structural, wettability and optical properties of Zr₂ON₂ thin films'Sushant K Rawal, R Jayaganthan, **Ramesh Chandra Mats. Sci. &Engg. B**, **181**(2014) 16-23 **(1.846)**
15. 'Characterization and In vitro Biocompatibility study of Ti-Si-N nanocomposite Coatings developed by using Physical Vapour deposition' P. Trivedi, P. Gupta, Swati Srivastava, R. Jayaganthan, **R. Chandra, P. Roy, Applied Surface Science** **293** (2014) 143-150 **(2.112)**

16. 'Nanostructured Hydrophobic DC sputtered Inorganic Oxide coating for Outdoor Glass Insulators'V. Dave, H.O. Gupta, **R. Chandra** **Applied Surface Science** **295** (2014) 231-239 (2.112)
17. 'SHI induced enhancement in green emission from ncCdS thin films for photonic applications'Pragati Kumar, NupurSaxena, Avinash Agarwal, Fouran Singh, D. Kanjilal, **Ramesh Chandra**, **Journal of Luminescence****147** (2014) 184–189 (**2.144**)
18. 'Study of thermal stability and mechanical properties of fcc phase Zr₂₂W₁₉N₅₈ thin films deposited by sputtering'P. Dubey, V. Arya, S.K. Srivastava, D. Singh, **R. Chandra** **Surface & Coatings Technology****245** (2014) 34-39(**1.941**)

6.4 QUALITY IMPROVEMENT PROGRAMME CENTRE

Academic Staff : 01; Short Term Courses-12

1. SALIENT FEATURES

The Government of India launched the Quality Improvement Programme (QIP) in the year 1971 to upgrade the expertise and capabilities of the faculty members of the degree level engineering colleges/institutes in the country. This programme is now being implemented and monitored by the All India Council for Technical Education.

At present, there are three principal activities under QIP scheme being carried out by the QIP Centre, IIT Roorkee.

- (i) Providing opportunities for faculty members of AICTE – recognized degree level engineering Colleges/institutes to improve their qualifications, i.e., Masters and Ph.D. degree programmes.
- (ii) Organizing Short Term Courses for faculty working in engineering institutes/colleges.
- (iii) C.D. cell activities which include curriculum development (CD) as well as its revision, preparation of monographs and text books, laboratory manuals, examination reforms, undertaking of inter-institutional programmes, holding of seminars, **one day workshops** and panel discussions, developing educational technology, preparation of resource materials and undertaking of any other activity which helps to improve classroom teaching.

This year the QIP Center at IIT Roorkee has offered admission to 33 engineering college teachers for Ph.D programme and 18 teachers for M.Tech programme.

2. ASSOCIATED FACULTY MEMBER

Dr. Bhupendra K. Gandhi
Prof. & Coordinator
QIP Centre
IIT Roorkee

3. VISIT OF FACULTY MEMBERS TO OTHER INSTITUTIONS

Name of Faculty	Institute/ Organization Visited	Purpose of Visit	Dates
Bhargava, Rama	IIT Kanpur	To attend NQCC meeting	02.05.2014 – 03.05.2014
	AICTE, New Delhi	For meeting with Advisor (RIFD)	06.08.2014 – 06.08.2014
	AICTE, New Delhi	For meeting with Vice Chairman, AICTE New Delhi	02.09.2014 – 02.09.2014
	AICTE, New Delhi	For meeting with Chairman, AICTE New Delhi	30.10.2014 – 30.10.2014

(Note: Please Exclude visited Related to Examination/Consultancy/ Conference/Seminar/ Symposia)

5. CONFERENCE/ SEMINAR/ SYMPOSIA/ WORKSHOP ORGANISED BY THE DEPARTMENT

Org. Secretary	Deptt.	Name of Conference/Seminar/ Symposia/ Workshop	Dates
Dr. M.K. Barua Dr. Usha Lenka	Management Studies	Sign Language for Teacher and Students of Anushruti (RSD)	May 20, 2014
Dr. A.K. Sharma	Mechanical & Industrial Engineering	Two day Workshop on – “Microwaves in Material Processing”	June 20, 2014
Dr. Pravindra Kumar	Biotechnology	INDO-US Conference on “Recent Advances on Structure Biology and Drug Discovery”	Oct. 9-11, 2014
Dr. Inderdeep Singh Dr. P.K. Jha	Mechanical & Industrial Engineering	23 rd International Conference on “Processing & Fabrication of Advanced Materials (PFAM-XXIII)	Dec. 5-7, 2014

Dr. Ravi S. Jakka Dr. S. Mukerjee	Earthquake Engineering	Challenges in Seismic Site Characterization and Solutions through Recent Developments	Dec. 10, 2014
Dr. A. Ramesh	Management Studies	Six Sigma Quality and its Applications	Dec. 12, 2014
Prof. Partha Roy Dr. Debabrata Sircar	Biotechnology	International Conference on "Molecular Signaling: Recent Trends in Biomedical and Translational Research"	Dec. 17-19, 2014
Prof. P.N. Agarwal	Mathematics	International Conference on "Recent Trends in Mathematical Analysis and its Application"	Dec. 21-23, 2014
Dr. Dhaval Patel Dr. V. Raychoudhary	Computer Science & Engineering	Tools and Tech`nique for Social Network Analysis	Jan. 09, 2015
Dr. P. Gopinath	Centre of Nanotechnology	Nano Drug Delivery Systems (Industry-Academia Interaction)	Jan.10, 2015
Prof. P.K. Jain Dr. D.K. Dwivedi	Mechanical & Industrial Engineering	Advances in Manufacturing Systems	Feb. 14, 2015
Dr. Gaurav Manik	Polymers & Process Engg. Deptt. (Saharanpur Campus)	Molecular Simulation Techniques	Feb. 21, 2015
Dr. Indra Vir Singh	Mech. & Ind. Engineering	"Failure analysis and life assessment"	March 14, 2015

MAHATMA GANDHI CENTRAL LIBRARY

Academic Staff : 05, Journals:05, Conference: 21

Rapid advances in Information and Communication Technologies are changing the library and information services drastically. Besides this, expectations of the users have also risen manifold. Libraries are not mere spaces anymore; they are much more than that. It has become a challenge for library management to keep pace with changing information packaging and delivery methods on one hand and meet the user expectations on the other. Mahatma Gandhi Central Library (MGCL) has been trying to do the same over the years and as per feedback from its patrons has been quite successful in this venture. MGCL not only proactively work on its collection building and infrastructural augmentation, also put lot of emphasis on facilities for users.

Like previous years, this year also focus was on the strengthening of collection and implementation of latest information and communication technologies in its services. Now, MGCL has started SMS Alert Service and WebMail Alert Service for its users for sending SMS and confirmation mail for every transaction. MGCL has adopted newer WEB-Centric version of library management software Libsys with improved features.

1. FINANCES -

MGCL has been allocated Rs.1245.44 lacs under Plan and Rs.37.50 lacs under Non-Plan grant for expenditure during the year under report. Out of the allocated Plan fund Rs.58.20 lacs has been utilized for purchase of printed books, Rs.45.72 lacs for ebooks, Rs.1126.81 lacs for subscription to journals, Rs.5.25 lacs for digitization of these, dissertations and archival books and Rs.9.46 lacs for purchase of equipment and computer peripherals etc.

Table 1: Details of allocation and expenditure of Grant for FY: 2012-13, 2013-14 and 2014-15.

Sl. No.	Budget Head	2012-13 (Utilization in lacs)	2013-14 (Utilization in lacs)	2014-15 (Utilization in lacs)
1.	MHRD Non Plan Grant	28.21	31.86	37.50
2.	MHRD Plan Grant	1187.10	1080.33	1245.44
	TOTAL	1215.31	1112.19	1282.94

2. PERIODICAL SECTION-

During the FY 2014-15, total expenditure incurred on periodical subscription was Rs.1126.81 lacs. MGCL added 145 new journals titles to its subscription list and renewed the subscription for 811 serials subscribed in previous years. Thus total 956 print and online journals were subscribed to by MGCL. Access for back-files of *American Chemical Society (ACS)* journals have also been renewed for this year. The major addition is the subscription of complete package (49 e-journals) of *Royal Society of Chemistry (RSC)* to strengthen the chemistry e-journals collection, *SIAM* full package (16 e-journals), World Scientific Publication's *Natural Science* package (36 e-journals). MGCL also purchased 1000 articles through the **Wiley's Article Select token Service** on user's demand. The other major e-resources, discontinued from *INDEST-AICTE Consortium*, have also been made accessible to users w.e.f. 1st Jan 2013, namely entire collection (1200+ titles) collection, of *Taylor & Francis e-journals*, *SciFinder Scholar*, *Scopus* and *Nature journals*, beside renewal of full package (60 titles) of Sage journals comprising *Humanities*, *Social Science and Management* journals collection.

Table 2: Number of Journals subscribed and Expenditure Incurred

Year	Recommended Titles	Subscribed Titles	Amount (Rs. in lacs)
2012-2013	1092	903	844.83
2013-2014	941	827	986.69
2014-2015	1167	956	1126.81

* Remaining titles were not subscribed due to their online availability or some other technical reasons.

2.1 e-Journals Access through INDEST-AICTE Consortium-

Access to e-Journals through *INDEST-AICTE Consortium* remained available through this year also for unlimited users. The total number of full text e-Journals reached to over 14500⁺ The details of the resources available through INDEST are given below-

2.1.1 Full Text Journal/Full-Text Publications-

Table 3: List of Resources - Full-Text Access for UNLIMITED USERS

Sl. No.	Title	No. of Titles
1.	ACM Digital Library	42+ Journals, 9 Magazine, 270 Conf. Proc.
2.	ASCE Journals	34
3.	ASME Journals (+ A M R)	26
4.	Elsevier's Science Direct	2524
5.	Emerald Management Extra	300
6.	IEEE / IEE Electronic Library Online (IEL)	150+
7.	Optical Society of America (OSA)	29
8.	Springer Link	2700

2.1.2 Bibliographic / Factual Databases-

MGCL has full access to a number of bibliographical/factual databases for unlimited users. Details are given below.

Table 4: List of Bibliographic Databases

Sl. No	Title	Area of Interest	Resources/ Titles Covered
1.	Capitaline	Information about companies listed on Indian Stock Exchanges	24000 listed & unlisted companies
2.	Euromonitor (GMID)	Covers 350 markets from 207 countries	Global Marketing Information Database.
3.	INSPEC on EI Village	Abstracting/Full text	7000+

2.2 e-Journal Access through IITR Arrangements-

MGCL is also subscribing to several full-text online journals as well as secondary Online/CD-ROM databases for unlimited users, apart from the resources available from INDEST. The details are given below-

2.2.1 Full Text Journal Access-

Table 5: List of Resources: Full-Text Access FOR UNLIMITED USERS

Sl. No.	Publisher	Nos. of Titles
1.	American Chemical Society (ACS) (all titles with archives)	47
2.	American Economic Association	7
3.	American Institute of Physics (AIP)	9
4.	American Physical Society (APS)	11
5.	American Soc. for Microbiology	11
6.	Cambridge University Press	9
7.	Electrochemical Society	7
8.	Elsevier Science	84
9.	ICE Publishing	29
10.	InderScience	04
11.	Indiansjournal.com	85
12.	Institute of Mechanical Engineers (I Mech E)	16
13.	Institute of Physics Publishing (IOP)	30
14.	Maney	06
15.	Nature Publishing Group	7
16.	Oxford University Press	12
17.	Portland Customer Service	08
18.	Royal Society	8
19.	Royal Society of Chemistry (RSC)	49
20.	Sage Publishers	104
21.	Society of Industrial and Applied Mathematics (SIAM)	16
22.	Springer	37
23.	Taylor & Francis Journals	33 (1200+)
24.	Trans. Tech. Pub.	14
25.	University of Chicago	5
26.	Walter De Gruyter	5
27.	Wiley InterScience	66
28.	World Scientific	36
29.	Others	88

2.2.2 Bibliographic / Factual Databases-

Table 6: List of Bibliographic Databases

SN	Title	Area of Interest	Resources/ Titles Covered
1	ASTM Digital Library	International Standards	7 Journals and 12000+ standards
2	British Standards	International Standards	20,000+Standards
3	EBSCO Databases	Management and allied fields	375 Databases, 12000 Journals
4	JSTOR	Humanities and Social sciences	1000+
5	MathSciNet	Mathematics	2,00,000 reviews
6	SciFinder Scholar	World foremost chemistry database	10,000+
7	Scopus	The largest abstracting and citation database of peer-reviewed literatures	21900+ 30,000+ Ebooks 5.5 million+ conference papers

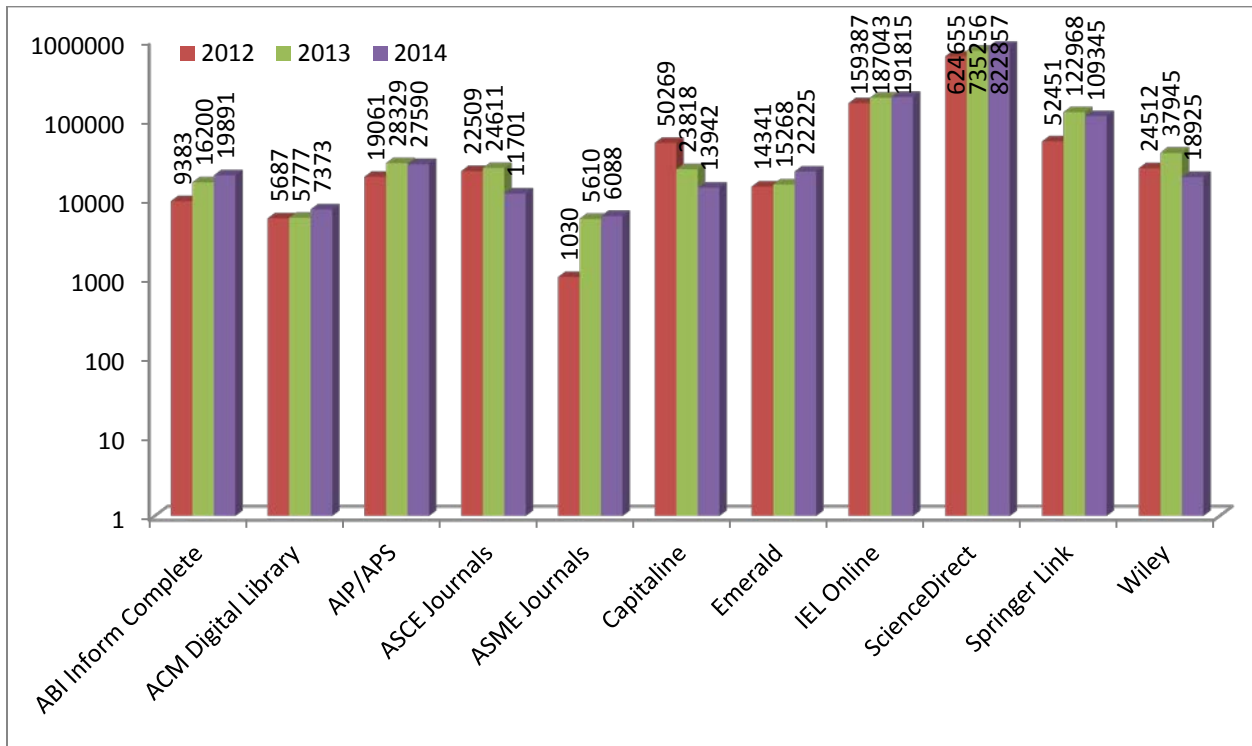
2.3 Usage Statistics of Electronic Resources-

2.3.1 Full Text Resources-

Usage statistics of full text databases have shown a mixed trend while ABI Inform , ACM Digital, ASME journals, Emerald, IEL Online, ScienceDirect and ACS journals have shown substantial increase in

usage. Others like AIP/APS, ASCE journals, Capitaline, SpringerLink and Wiley journals have shown marginal decrease over 2013. The usage details are presented in Figure on logarithmic scale.

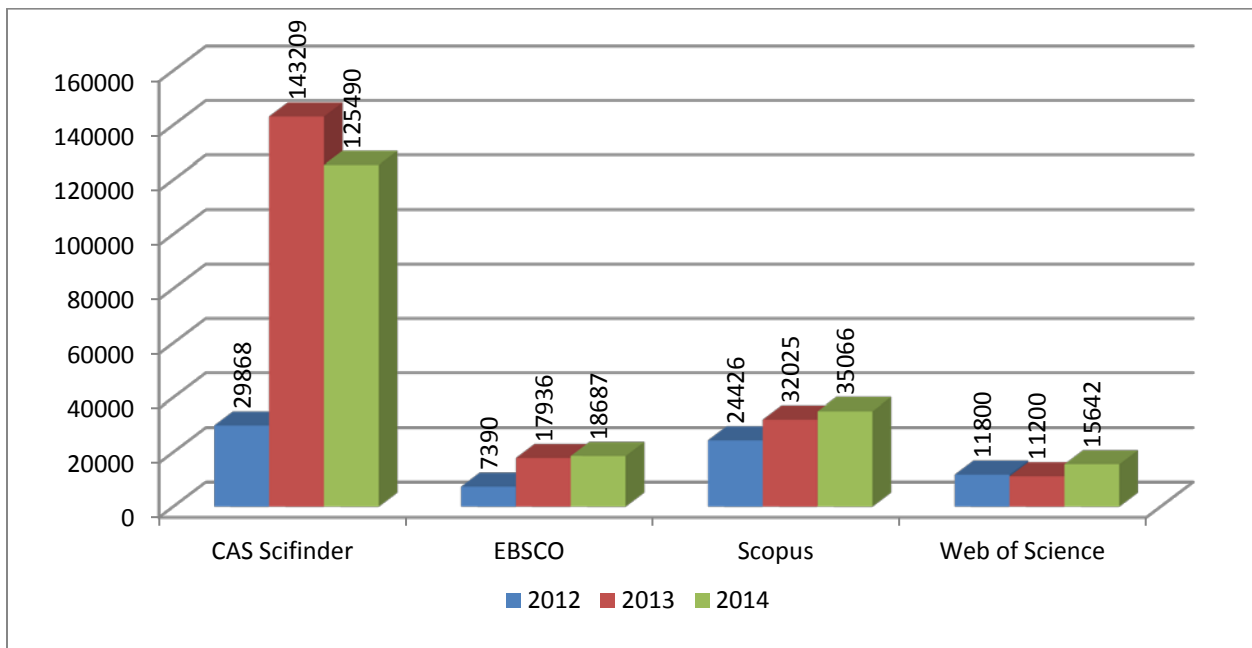
Figure: Usage Statistics for Major Full-text Databases



2.3.2 Secondary Resources-

The usage statistics of all secondary online resources have shown the significant increase as shown in figure below. Inspec and MathScinet were not subscribed to during 2014.

Figure: Usage Statistics for Secondary Online Resources



3. ACQUISITION SECTION-

3.1 Print Document Collection-

During the year under report 2483 new books, 704 e-Books and 1562 bound volumes of journals were added to the collection. In addition to this, library has also acquired 493 Hindi books and 649 books on gratis from the Government, R&D Organizations, students and voluntary agencies. Besides this, 1228 theses and dissertations were also added to library collection received from Ph.D. and PG students. MGCL also received 260 CDs as nonbook material during the year. The total number of documents in the collection has reached a significant figure of 400515 volumes.

Table 7: Annual Collection Development: Comparative figures

Year	e-Books	Books*	Bound Journals	Annual Intake	Total Bound Volumes	Total Collection
2012-13	1663	2787	800	5250	57531	387017
2013-14	1713	5028	2008	8749	59539	395766
2014-15	704	2483	1562	4749	61101	400515

* includes books received on gratis, theses and dissertations also.

3.2 Online eBooks Collection-

3.2.1 Access on Subscription Basis-

MGCL has subscribed the World e-Book Library containing more than 30 lacs classical and rare books in its collection from the varied fields of science, technology, management, education, research, humanities etc. from all the major global universities and publishers. Collection contains the digitized version of original works of renowned scientists like, Einstein, Newton, Faraday and many more.

3.2.2 Access on Perpetual Basis-

To make users more satisfied and fulfill their immediate needs for research and academic activities, MGCL have enriched its collection of e-books with the purchase of 704 new eBooks this year. Now we have 33264 e-books available in its collection for full access and download on perpetual access basis.

Table 8: Details of eBooks Collection at MGCL

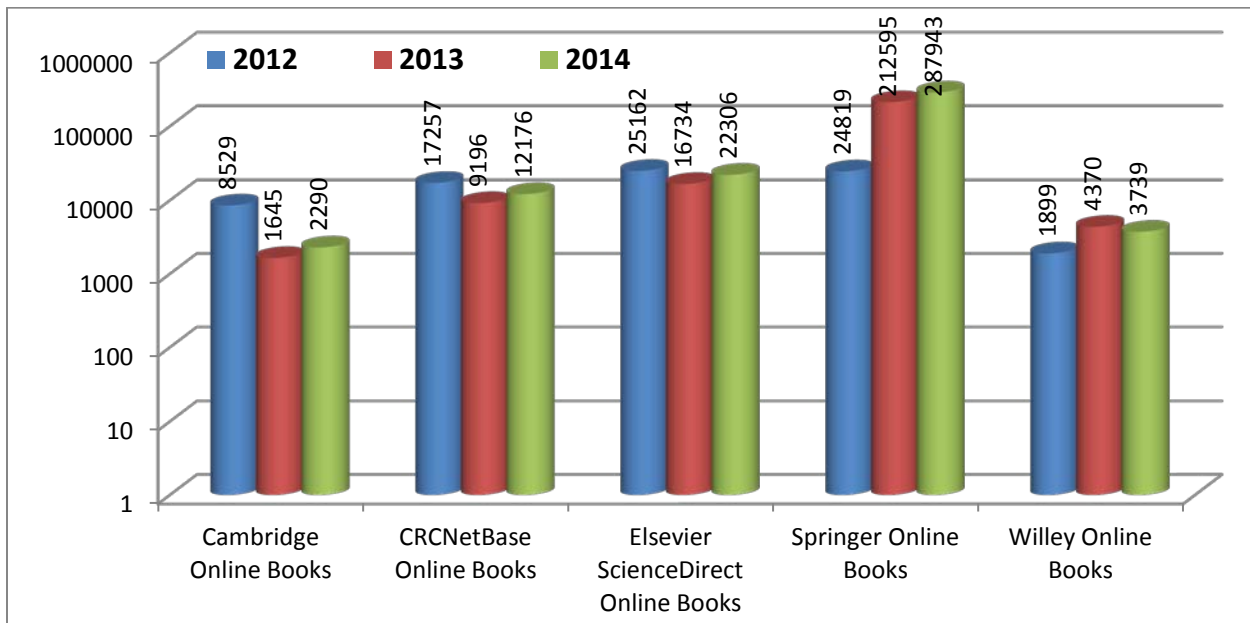
Sl. No.	COLLECTION	PERIOD	Current Additions	Total accessible eBooks from Publishers
1.	Cambridge University Press	2005 - 12	--	1513
2.	CRCNetBase (T&F)	2007 - 15	704	10,994
3.	Elsevier ScienceDirect	2007 - 13	--	2270
4.	John Wiley (<i>Selected titles</i>)	2007 - 08	--	1969
5.	John Wiley (<i>Complete</i>)	2011 - 12	--	
6.	John Wiley (<i>Complete</i>)	2013 - 14	--	
7.	Oxford University Press	2007 - 13	--	858
8.	Pearson Online	Up to 2012	--	665
9.	Springer Verlag	1999 - 11	--	16097
10.	Tata McGraw Hill	Up to 2013	--	898
		Total	704	35264*

* Actual accessible books are more than the total number shown.

3.3 Usage Statistics of eBooks-

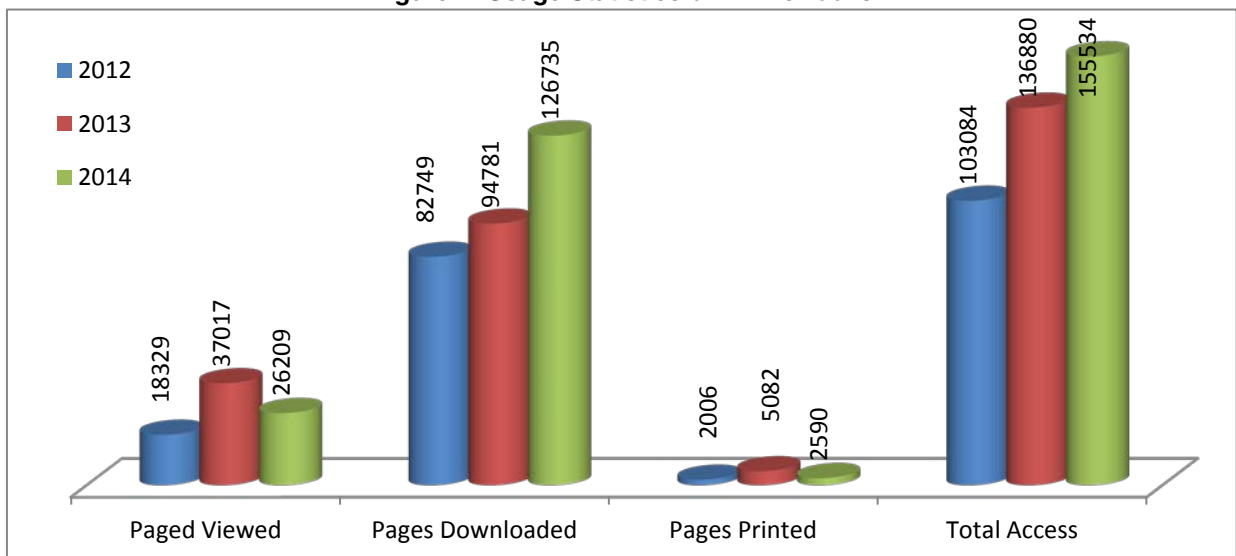
Use statistics of the online books accessible from various major publishers is given below. Table shows the total number of downloaded chapters of books.

Table 9: Usage Statistics of eBooks Resources (on logarithmic scale)



A) MGCL has purchased 898 McGraw Hill Online Textbooks. Use statistics of TMH online books is given below. Table shows the total number of accessed pages.

Figure 4: Usage Statistics of TMH eBooks



B) MGCL has also purchased 665 Pearson Education Online Textbooks. Usage statistics is given below. Table shows the total number of accessed pages during the period.

Table 10: Usage of TMH Online Books

Paged Viewed	Pages Downloaded	Pages Printed	Total Access
94693	214317	7344	316354

3.4 Collection Development of Departmental Libraries-

During the FY 2014-15, 2483 new printed books were procured for enriching the collections of different departmental libraries and Central Library. Department-wise breakup is given below -

Table 9: Collection of Departmental Libraries

SN	Departments	Additions in 2014-15	Total Collection
1.	Architecture and Planning	192	3995
2.	Biotechnology	87	4768
3.	Chemical Engineering	12	3256
4.	Chemistry	36	2496
5.	Civil Engineering	116	19481
6.	Earth Sciences	38	3638
7.	Earthquake Engineering	6	5492
8.	Electrical Engineering	5	4780
9.	Electronics and Communication Engineering/ Computer Science and Engineering	53	8704
10.	Humanities and Social Sciences	197	6238
11.	Hydrology	5	1701
12.	Management Studies	19	6702
13.	Mathematics	32	6481
14.	Mechanical and Industrial Engineering	-	10876
15.	Metallurgical and Materials Engineering	18	4153
16.	Paper Technology	69	20844
17.	Physics	53	4296
18.	Water Resources Development and Management	21	239
Centres-			
19.	Alternate Hydro Energy Centre	8	5337
20.	Centre of Nanotechnology	14	36
21.	Centre for Transportation Systems (CTRANS)	18	84
22.	Centre of Excellence in Disaster Mitigation & Management (CoEDMM)	6	68
23.	ICC+ISC+IIC	7	445
24.	Intellectual Property Rights Books for IPR Chair	35	335
25.	MGCL collection (TBLS + General Books)	570	

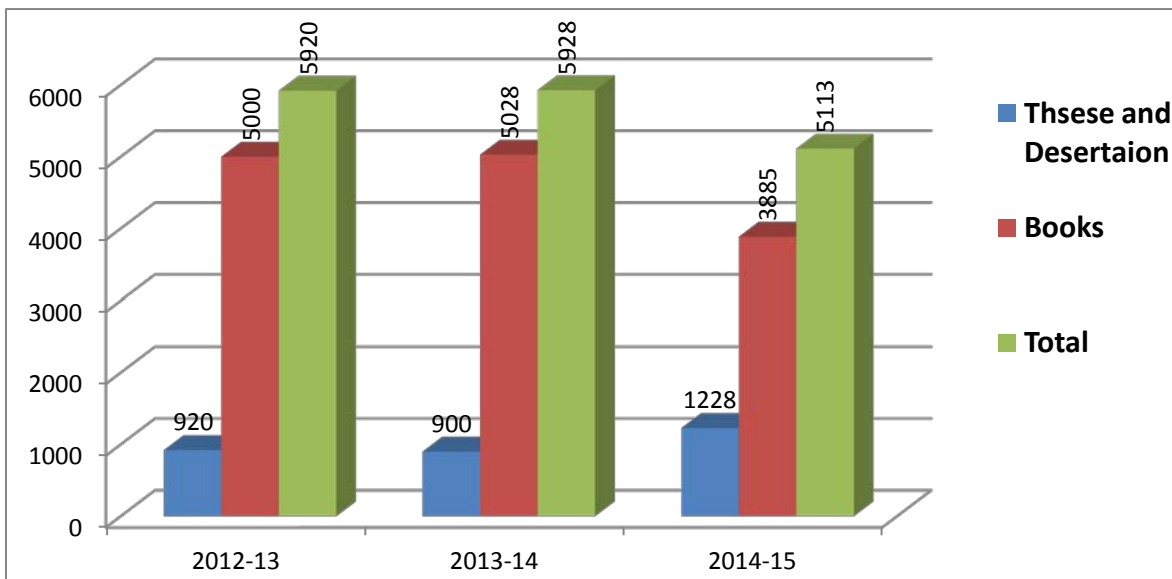
3.5 Special Purchase of IPR Books-

Besides the regular purchases, MGCL ordered 50 books on Intellectual Property Rights with an expenditure of around Rs. 2.25 lacs from MHRD-IPR Chair Grant for newly established IPR Chair at IIT Roorkee. Besides, approx. Rs.2.75 has also been spent from this grant for renewal subscription of IPR related four Journals.

4. TECHNICAL PROCESSING SECTION-

Classification, Cataloguing, Indexing and data entry of more than 5113 new books, including theses and dissertations, which were received during this period, have been successfully completed through Library Management Software Libsys for creating online catalogues for users' access.

Figure : Number of documents processed during last three financial years



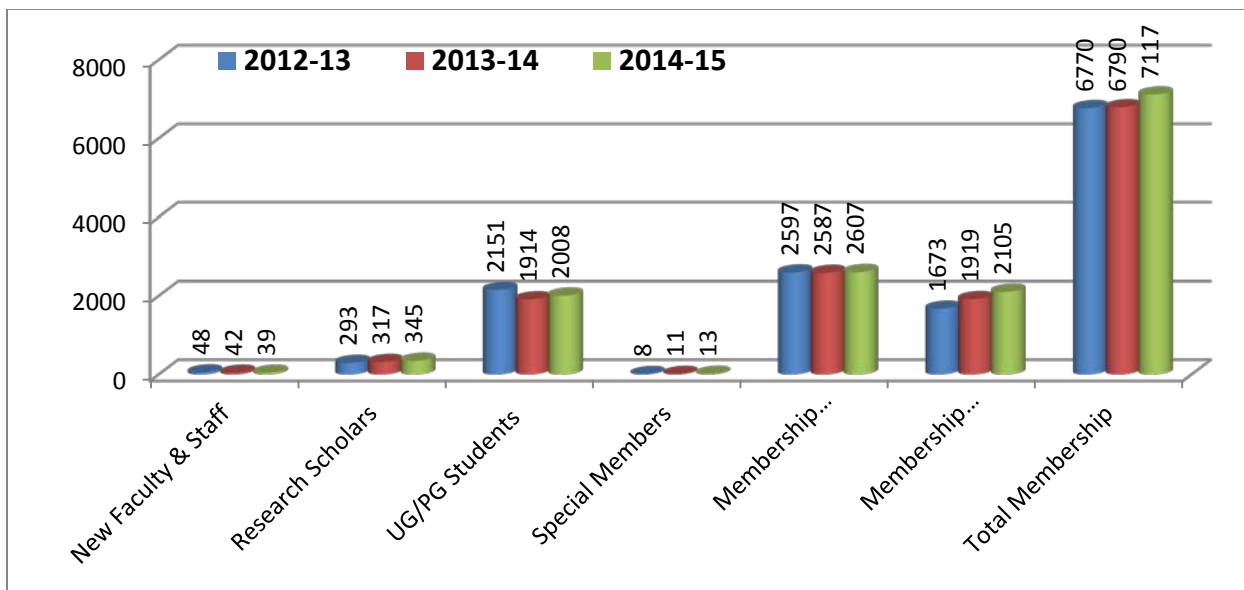
5. CIRCULATION SERVICES-

MGCL has strong base of users who visited and heavily utilized the services of library during the period under report. For authenticity and safety of users' account MGCL has adopted dual confirmation method by **SMS Alert Service** and **WebMail Alert Service**. To make the users' services cashless MGCL has also installed the bank's POS machine inside the library.

5.1 Membership-

During this year, 2405 new members including undergraduates and postgraduate students, faculty & staff members, research scholars and special members were enrolled as library users. Besides, memberships of existing 2607 members were also renewed. Among all these members around 4500 members from UG and PG categories were also enrolled for Text book Loan Scheme. Total 2105 membership were cancelled and no dues certificates issued.

Figure : Comparative Data of Library Membership



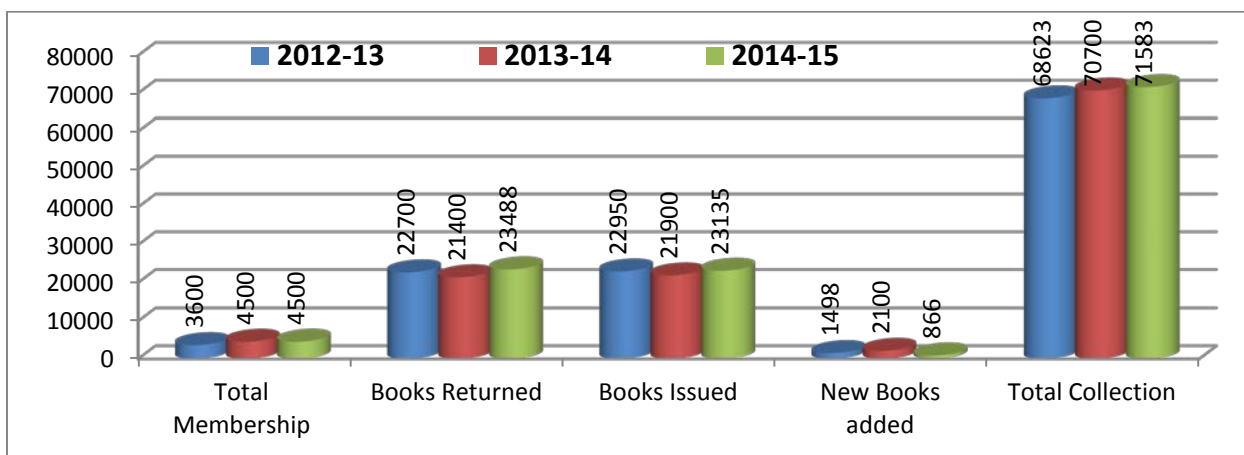
5.2 General and Reserved Books Section-

This section remained open from 10 A.M. till 07 P.M. on all working days and from 9.45 A.M. till 06.30 P.M. on all weekends and restricted holidays. A total number of 18092 general books and 100 reserved reference books from this section were issued and 18233 books were returned during the period under report. This year around 1000 outside visitors visited the library and on an average 200 books and periodicals were issued per day for home study in 250 transaction days (excluding weekends and holidays). A sum of Rs.1,73,633.00 was collected as overdue charges from the users and deposited in the Institute Treasury during the FY 2014-15.

5.3 Textbook Loan Scheme (Book Bank Facility)-

This year around 4500 students from UG and PG categories were benefited from this scheme in both the semesters and 23,135 books were issued and 23,488 books returned at time to time and at semesters end. After getting the recommendations from HOD and faculty members, 866 copies of new textbooks were added to the collection. The total number of books in this collection has gone up to 71,583 volumes this year.

Figure: Membership details of TBLS Users



6. AUTOMATION AND NETWORKING SECTION-

6.1 Procurement of Hardware-

A total number of 24 All-in-one PCs were added to the computing infrastructure of the MGCL.

6.2 Digitization of Archival Books for Repository-

A total number of 91580 pages of 210 Archival books have been digitized and added in Bhagirathi Repository.

7. BINDING OF BOOKS AND JOURNALS-

During this FY 770 books and 1562 journals volumes were got bounded and an amount of Rs.3,51,165/- was spent on binding work

8. ALL INDIAN SURVEY FOR HIGHER EDUCATION-

Institute Authority has identified MGCL as Nodal Center and Librarian as Nodal Officer for All India Survey for Higher Education project initiated by MHRD. Factual data regarding department wise total number of teaching and nonteaching staff, courses, discipline and category wise total number of students, resources and budget details, status and strength of facilities viz. hostels, class rooms, labs., Internet bandwidth etc. is collected from different departments and uploaded periodically to the server of project office.

9. USERS' SERVICES-

9.1 Document Delivery Service-

The Library being the level one member of INDEST–AICTE Consortium is well aware of its responsibilities towards the institutions those do not have access to many information resources. The Library receives continuous requests from other IITs, NITs and other institutions for technical literatures. During this period, a total 128 articles request was received and 55 articles were delivered to them.

9.2 Educational Tour of outside students to MGCL-

More than 125 students/ visitors from the other intuitions including foreign students and faculty, officers inducted at Institute for QIP courses, B. Lib and M. Lib. students from nearby Universities/ Institutions visited the Library. The information about the collection, infrastructure, services and specific features of MGCL has been provided to them beside the tour of entire library building.

9.3 Xerox/ Printing Service-

During the FY 2014-15 through reprographic service, 1,04,223 computer prints and xerox pages has been provided to its users and a sum of Rs. 85,086.00 was collected for these services from the users and deposited in the Institute Treasury.

10. SPECIAL ACHIEVEMENTS-

10.1 Institutional Repository of Theses & Dissertations-

MGCL has launched a digital repository of these and dissertations for quick and easy browsing. Around 13,100 digital records of Ph.D. theses and dissertations have been uploaded and made accessible to users.

10.2. Plagiarism Checking of theses and dissertations-

MGCL is working as central hub for plagiarism checking of the new Ph.D. theses and dissertations through Anti-Plagiarism software- *Turnitin*. Through this service 200+ theses and 900+ dissertations have been checked during this period and originality certificates have been provided to research scholars and PG students.

11. AWARDS AND HONOURS-

1. Shri Yogendra Singh, Librarian was presented "**ILA-KAULA Best Librarian Award**" on 8th April. 2015 by Indian Library Association during 60th ILA International Conference held at Panjab University, Chandigarh.
2. IIT Roorkee was awarded "**Best User for EBSCO Information Services among all IITs**" for the year 2014.
3. IIT Roorkee was awarded "**Best User for ScienceDirect e-books at National Level**" for the year 2014.

12. OTHER IMPORTANT DATA ABOUT THE LIBRARY-

Total Working days	: 355
Total Nos. of Holidays	: 10
Total number of staff	: 28
a. Library Academic Staff	: 04
b. Professionals	: 16
c. Non Professionals	: 06
d. Secretarial staff (contract)	: 01
e. Others (on contract)	: 01

13. Seminars/Workshops/ Short Term /Sponsored Courses organized by MGCL -

Sl. No	Name of the Programme	Date
1.	National Workshop on Open Source Software- KOHA, DSPACE and JOOMLA	2-6 Feb 2015
2.	'User Education Programme on Web of Science for Research'	27 th February 2015
3.	'User Education Programme on SCOPUS, Reaxys and Mendeley'	10 th March 2015
4.	'User Education Programme on SciFinder'	18 th March 2015

14. IMPORTANT EVENTS and EXHIBITIONS-

MGCL organized the following events and exhibitions-

Sl. No.	Exhibition	Duration
1.	Exhibition of Scientific and Technical Books	26-28 Aug, 2014
2.	Exhibition of Hindi Books during Hindi Pakhwada	14-21 Sep, 2014
3.	Observed and celebrated birthday of nations father Mahatma Gandhi on 2 nd Oct 2014 and organized a week long "Exhibition of Gandhian Literature".	01-07 Oct., 2014
4.	Observed and celebrated birth anniversary of Sardar Vallabhbhai Patel and organized an Exhibition of books on and by Sardar Patel	31 Oct – 13 Nov 2014
5.	Observed and celebrated birthday of Pt. Jawaharlal Nehru as BAL DIWAS and organized an "Exhibition of books on and by Pt. Jawaharlal Nehru".	14-20 Nov, 2014

15. Trainings and Human Resource Development and visits of Library Academic Staff to Conferences/Seminars/ Other Institutions-

Name	Place	Purpose	Date
Shri Yogendra Singh, Librarian	New Castle Upon Tyne, UK	To attend the 6 th International Integrity and Plagiarism Conference.	14-16 th June 2014
	Kurukshetra University, Kurukshetra	Sri Yogendra Singh, Librarian acted as a member of Selection Committee for the selection of Deputy University Librarian.	21 Aug. 2014.
	NIT Srinagar	Acted as a member of Selection Committee	14th Oct. 2014
	University of Petroleum Engg. Studies, Dehradun	Chief Guest at the valedictory function of the Workshop on Open Library Management Software	8 th Nov, 2014
	Graphic Era Univ., Dehradun	Delivered a lecture on a Seminar on Plagiarism detection and Prevention	6th Dec. 2014
	Central University of Himachal Pradesh, Daramshala	Delivered a key paper on "An Academic Librarian's Perception of LIS in India" during 20th LALIS Conference.	27th Nov. 2014
	IIT Delhi	Participated in Purchase Finalization Committee of INDSET- AICTE Consortium	1-2, Dec. 2014
	Rajagiri University, Kochi on	Delivered a keynote address at Kerala Library Association Conference	17th Dec. 2014
	Manipal University Jaipur	Delivered a keynote address at International Conference on Knowledge Organisation in	2nd Jan. 2015.

		Academic Libraries (I-KOAL 2015)	
	JP Institute, Noida.	Acted as Chairperson in technical session at <i>ETTLIS-2015</i> Conference	6 th Jan, 2015
	AISECT University, Raisen Madhya Pradesh	Participated as an Expert in the Joint Expert Committee of UGC to ascertain the fulfillment of criteria by AISECT University, Raisen Madhya Pradesh	10-11 th Feb, 2015
	Pragati Maidan, New Delhi.	Visited World Book Fair-2015 for selection of books for Library	15 th Feb. 2015
	ABV-IIITM, Gwalior	Attended one day Workshop on " <i>To Develop a Roadmap of Library</i> "	13 th Mar, 2015

16. DISTINGUISHED VISITORS TO THE LIBRARY-

Date	Visitor's Name and Address	Remark
14.9.2014	चित्रा मुदगल, B-105, वर्धमान अपार्टमेंट, मयूर विहार, फेज -१, नई दिल्ली	तकनीकी अध्ययन संस्थान से यह मुलाकात - इतिहास से साक्षात् भेंट है। हिंदी साहित्य के वैविध्य को समेटे यह ऐतिहासिक वाचनालाए अपने वास्तु और ज्ञान उपलब्धियों से यह चेताता है- पुस्तकों की मनुष्य के जीवन में क्या उपयोगिता है और वे कहीं न कहीं मनुष्यत्व को व्याख्यायित करती हुई उसके विकास और संवेदनाओ को संरक्षित ही नहीं करती - रोपती भी है व्यक्ति में। अद्भुत है पूरा वातावरण अविस्मारियें है यहाँ आना। आभारी हूँ सभी के प्रति।
14.9.2014	प्रो. महावीर अग्रवाल, कुलपति, उत्तराखंड संस्कृत विश्वविद्यालय, हरिद्वार	आज हिंदी दिवस के सुखद- पावन एवं ऐतिहासिक दिवस पर भारतीय प्रौद्योगिकी संस्थान के वृहद् पुस्तकालय प्राच्य-अर्वाच्य साहित्य का अवलोकन कर अनिर्वचनीय आनंद अनुभव कर रहा हूँ। सुन्दर सुव्यवस्थित रूप से संचालित यह ज्ञान का मंदिर दर्शनीय एवं वन्दनीय है यदि प्राचीन संस्कृत साहित्य का और अधिक संग्रह यहाँ किया जाये तो अत्यधिक लाभ होगा। मैं संस्थान के समस्त अधिकारियों को शुभकामनाएँ अर्पित करता हूँ।
13.11.2014	Anil Kokodkar (EX-Chairman AEC)	Great to be here and see the fantastic work. Keep it up.
13.11.2014	SC Dutta Roy Ex-Prof IIT Delhi and Member IIT Review Committee	I always enjoy coming to your beautiful library.
13.11.2014	Prof Larry William Kostiuk University of Alberta Canada	A beautiful place enjoyed it very much.
13.11.2014	T. Sridhar- Academic Vice President, Monash University and Member IIT Review Committee	An excellent library- one of the best that I have seen especially impressed with the documents that have been archived.
22.11.2014	Vasant Waikar, Retd. Prof. of Statistics, Miami University, Oxford, Ohio, USA	I am very impressed with the library itself as well as the furniture. One of the best even when compared with the university libraries in the USA.
5.12.2014	Dr. Arun Ektare, Retd. Prof., Computer Science, Colorado Mesa University, Colorado, USA	I visited IIT after 32 year. The campus has become quite impressive the library (specially) is now a far better place than I remember. Truly a remarkable architectural achievement.
5.12.2014	Kishan Kumar, Former Head, Dept. of Library & Information Sc., University of Delhi (Settled in USA)	The IIT Roorkee Central Library is a world class library. We should be proud of it. The credit goes to Dr. Yogendra Singh and his team. Dr. Singh should keep up his efforts and publicize the good work being done by him and his team.
13.12.2014	Jannat Shah, Director, IIM, Kashipur	IIT Roorkee Library is of global standard. Really impressed with the way library is managed. Very well designed and maintained. Institute is students and faculty centric.

17. APPENDIX-

List of Library Academic Staff (as on 31.3.2015)-

Librarian : Sri Yogendra Singh, M.Sc., (Zoology), M.L.I. Sc. (Delhi), FSIS
Deputy Librarian : Smt.Sushma Gupta, M.Sc. (Chemistry), M.L.I.Sc. (Annamalai) upto 30.11.2014
Asstt. Librarians 1. : Sri Som Pal Singh, M.A., (Eng. Lit.) , M.L.I.Sc.(Kurukshetra)
2. : Sri Amarendra Sharma, B.Sc.,M.L.I.Sc.(BHU), PGDCA (Kurukshetra)
Scientific Officer : Smt. Nisha, M.C.A. (GKU, Haridwar), B.L.I.S. (IGNOU)

8. Institute Accounts

- | | |
|---|--|
| 8.1 Summary of Balance Sheet | 8.5.3 Institute Development Fund |
| 8.2 Summary of Total Income and Expenditure | 8.5.4 Grant/Assistance received from AICTE |
| 8.3 Details of MHRD Plan Receipts and Expenditure | 8.5.5 Grant/Assistance received from UGC |
| 8.4 Details of MHRD Non Plan Receipts and Expenditure | 8.5.6 Grant/Assistance received from CSIR |
| 8.5 Details of Other Accounts | 8.5.7 Receipts from Seminar and conference |
| 8.5.1 Sponsored Research Projects | 8.6 Donations Received |
| 8.5.2 Consultancy and Testing Projects | |

8.1 SUMMARY OF BALANCE SHEET AS AT 31ST MARCH 2014

PARTICULARS	SCH. NO.	CURRENT YEAR		PREVIOUS YEAR	
		AMOUNT (Rs.)	AMOUNT (Rs.)	AMOUNT (Rs.)	AMOUNT (Rs.)
CORPUS FUND					
GENERAL FUNDS:	1	3,657,602,506.66		4,120,562,987.37	
Institute Development Fund	1A	2,121,444,400.43		1,846,423,415.97	
JEE Fund	1B	146,950,589.78		131,430,650.78	
JAM Fund	1C	13,396,081.35		11,490,893.35	
GATE Fund	1D	<u>258,223,346.56</u>	6,197,616,924.78	<u>210,285,829.26</u>	6,320,193,776.73
CAPITAL FUNDS					
Univ. Grant Commission Fund		17,204,473.38		197,428.38	
Govt. of India Fund	2A 2B	<u>51,595,037.16</u>	68,799,510.54	<u>52,457,172.16</u>	52,654,600.54
ENDOWMENT FUNDS					
Trusts Fund	3		230,889,200.83		197,125,664.29
CURRENT LIABILITIES & PROVISIONS					
SRIC Fund	3A		2,652,779,532.36		2,381,824,532.32
Expenses Payable/Other Payables	3B	133,210,434.00		127,784,863.00	
Provision for Employee's Benefits		7,915,459,698.00		7,195,683,645.00	
Security Deposits	3C-3E	<u>134,227,576.35</u>	8,182,897,708.35	<u>99,269,561.35</u>	7,422,738,069.35
TOTAL [RS.]			17,332,982,876.86		16,374,536,643.23
APPLICATION OF FUNDS					
FIXED ASSETS					
Tangible Assets	4A-4C		10,242,290,229.16		9,563,308,773.01
INVESTMENTS	5		83,600,000.00		83,600,000.00
CURRENT ASSETS, LOANS & ADVANCES					
A. Current Assets:					
a. Closing Stock of Medicines		659,923.05		756,772.63	
b. Non Plan Grant Receivable from MHRD		512,700,000.00		-	
c. Plan Grant Receivable form MHRD		81,176,000.00			
d. Cash & Bank Balances	6A-6C	5,227,728,868.76		5,056,201,467.82	
e. Interest Accrued on Investments		<u>137,688,574.89</u>	5,959,953,366.70	<u>155,708,831.77</u>	5,212,667,072.22
Advances Recoverable in Cash or in Kind:					
a. Advance against Foreign Letters of Credit issued by banks (pending adjustment)	7-7A	990,230,434.00		1,452,056,973.00	
b. Sundry Advances	8-8B	48,572,246.00		54,567,224.00	
c. Securities	9	8,336,601.00	1,047,139,281.00	<u>8,336,601.00</u>	1,514,960,798.00
TOTAL [RS.]			17,332,982,876.86		16,374,536,643.23

8.2 SUMMARY OF TOTAL INCOME & EXPENDITURE 2013-2014

(Rs. in lacs)

Head of Accounts	Opening Balance	Receipts	Other Receipts	Total	Payments
I. MHRD					
(a) Plan Grant	0.00	10311.76	41.00	10352.76	10352.76
(b) Non Plan Grant	3845.00	21220.00	4158.84	29223.84	26563.05*
II. UGC	1.85	660.91	5.92	668.68	296.77
III. CSIR	154.72	256.92	6.74	418.38	189.48
IV. Institute Receipts					
(a) Fee	2013.77	5756.71	611.41	8381.89	6827.68
(b) Bhawan Receipt Payment Fund	496.46	0.00	23.00	519.46	104.93
V. Sponsored Research Projects	3698.37	2828.06	-	6526.43	3715.24
VI. Consultancy & Testing Projects	4383.75	4318.00	-	8701.75	4086.83
TOTAL	14593.92	45352.36	4846.91	64793.19	52136.74

*The expenditure of Non-Plan includes (Rs. 22404.21 lacs actual expenditure + Rs. 4158.84 lacs saving transfer to IDF)

8.3 DETAILS OF MHRD PLAN EXPENDITURE

(Rs. in lacs)

Sl. No.	Head of Accounts	Expenditure 2013-14
1.	Equipment	
(i)	Replacement of obsolete equipment & modernization of laboratories	1182.58
(ii)	Equipment of new department/placement cell education Tech. Cell/NPTEL	100.65
(iii)	New Programme	
	(a) Equipment	0
	(b) NMR	04.16
(iv)	Office equipment/Automation	
	(a) A few new offices	0
	(b) Computerization of Adms. Functions	18.83
2.	Audio Visual	0
3.	Up gradation of Computing facilities	440.71
4.	Up gradation of Networking & Multimedia Facilities	661.84
5.	Strengthening of library	1260.59
6.	Staff / Student Amenities (other than buildings)	
	(a) DOSW (Clubs & Sports)	144.18
	(b) Security	24.28
	(c) Hospital	05.41
	(d) Dairy	0.00
	(e) Sports	47.33
	(f) Transportation	10.02
	(g) New Guest House	1.52
	(h) KIH	0
7.	Renovation/Extension of Buildings (including support services)	
(i)	New 11 KV DG Set	147.43
(ii)	HT and LT Cables	38.75
(iii)	Tube Well/Pipe Line in Roorkee Campus	99.39
(iv)	Renovation Department lab	182.82
(v)	Conversion of line	19.68
(vi)	Boys hostel 800 seats	0.75
(vii)	Transit Accommodation	1001.87
(viii)	Lecture hall	0.75
(ix)	Ext./Renovation of Acad & Admn Bldg Hostels etc	205.45
(x)	Residential Buildings	172.18

(xi)	Student Hostels & Amenities	183.52
(xii)	Rewiring of Department/Residences in IITR	146.46
(xiii)	Greater NOIDA	761.27
(xiv)	Sports- Activities	14.59
(xv)	Furniture-for Hostels and Departments	31.71
(xvi)	Multi-Activity Centre	298.64
(xvii)	Road etc.	93.64
(xviii)	Students Activities centre	0.75
(xix)	AC Plant For Biotech Deptt	71.02
(xx)	Condition assessment bldg	1.49
(xxi)	AC for Faculties in Roorkee and Saharanpur Campus	40.70
(xxii)	Sub-station for AHEC & up-gradation of existing sub stations	90.54
(xxiii)	Various construction works / Disaster Mitigation	120.04
(xxiv)	Dynamic test lab earthquake engg. Deptt.	184.50
(xxv)	Refund	(-) 274.35
8.	Assistantship/ Fellowship	2817.07
	Total	10352.76

8.4 DETAILS OF MHRD NON PLAN EXPENDITURE

(Rs. in lacs)

Sl. No.	Head of Accounts	Expenditure 2013-14
1.	Establishment Expenses	
(i)	Pay & Allowance	10373.04
(ii)	OTA and Honorarium	3.56
(iii)	Traveling Allowance & LTC	298.14
(iv)	Children Education Allowance	113.44
(v)	Fund Contribution	0
(vi)	Pension and Gratuity	5840.31
(vii)	Advances	0
(viii)	Security and other agencies	322.75
(ix)	Mess Subsidy	0
(x)	Medical Expenses	386.25
(xi)	Staff development and HRD	12.41
(xii)	Professor Development Allowance (PDA)	314.01
(xiii)	Transfer to DPT SRE	1164.95
	TOTAL	18828.86
2.	Academic and Educational Expenses	
(i)	Departmental Operating Costs	450.87
(ii)	Preparatory Course	0
(iii)	Assistantship/Fellowship/Merit-cum-Means	506.31
(iv)	Library	34.70
(v)	Other Educational Expenses	407.81
	TOTAL	1399.69
3.	Computerization & Comp. Support Services	11.30
	TOTAL	11.30
4.	Maintenance Expenses	
(i)	Estate Maintenance	969.95
(ii)	Water Power & Fuel/Electricity	784.54
(iii)	Property Tax	0
(iv)	Repair & Maintenance of Equipment	18.85
	TOTAL	1773.34
5.	Other Expenses	
	TOTAL	391.02
	GRAND TOTAL	22404.21

8.5 DETAILS OF OTHER ACCOUNT

8.5.1 Sponsored Research Projects

(Rs. in lacs)

Description	Amount
Opening Balance (Including FDR)	4383.25
Receipts	5890.05
Expenditure	5208.81
Closing Balance (Including FDR)	5064.49

8.5.2 Consultancy and Testing Projects

(Rs. in lacs)

Description	Amount
Opening Balance (Including FDR)	5443.71
Receipts	3982.55
Expenditure	4513.34
Closing Balance (Including FDR)	4912.92

8.5.3 Institute Development Fund

(Rs. in lacs)

Description	Amount
Opening Balance (Including FDR)	18464.23
Receipts	3750.21
Expenditure	1000.00
Closing Balance (Including FDR)	21214.44

8.5.4 Grant/Assistance received from AICTE

(Rs. in lacs)

Scheme/Programmes	Amount received
QIP	78.70
AHEC	0
Others	0
TOTAL	78.70

8.5.5 Grant/Assistance Received from UGC

(Rs. in lacs)

Scheme/Programmes	Amount received
JRF/SRF/Fellow	660.91
Others	0.00
TOTAL	660.91

8.5.6 Grant/Assistance received from CSIR

(Rs. in lacs)

Scheme/Programmes	Amount received
JRF/SRF/Fellow	256.92
Others	0.00
TOTAL	256.92

8.5.7 Receipts for Seminar and Conference

(Rs. in lacs)

Scheme/Programmes	Amount received
Conference Receipt	266.61
DST	0
CSIR	0
TOTAL	266.61

8.6 Donation Received

(Rs. in lacs)

Donor (s)	Date	Amount Received
1. Dr. Arun Kumar	05.05.2014	31,000/-
2. Mr. Monawarul Huda	14.08.2014	5,792/-
3. Mr. Rajendra Agrawal	17.09.2014	30,000/-
4. Dr. Ila Gupta	01.10.2014	35,000/-
5. M/s Shakumbhri Auto mobiles pvt ltd	10.11.2014	51,0000/-
	02.12.2014	5,000/-
6. Sri Vidya Sagar Arora	13.01.2015	1,00,000/-
7. Sri Jagdish Sardhana	10.02.2015	50,000/-
8. Sri. S P Gupta	10.02.2015	10,000/-
9. Sri. Rakesh Kumar	18.02.2015	1,04,693/-
10. Dr. Gyan C Agarwal	24.02.2015	5,000/-
11. Sri Raj Dev Singh	24.02.2015	16,000/-
12. Sri Narendra Kumar	25.02.2015	45,000/-
13. Society of Indian Automobile Manufacture New Delhi	02.03.2015	10,000/-
14. Sri Abhay Krishna Agarwal	09.03.2015	20,000/-
15. Sri Amit Garg	09.03.2015	15,000/-
16. Sri Rahul Goel	10.03.2015	50,000/-
17. Sri S P Gupta	27.03.2015	61,987/-
18. Prof. M P Singh	31.03.2015	30,000/-
19. Air Marshal P V Athawale	31.03.2015	1,50,000/-
20. Sri Mahesh Verma		
TOTAL		8,25,472/-

- 9.1 Sponsored Research and Industrial Consultancy activities
- 9.2 Conference / Symposia / Seminars
- 9.3 Sponsored Research Projects
- 9.4 Research Publications

- 9.5 Industrial Consultancy/ Testing
- 9.6 Faculty Initiation Grant
- 9.7 Intellectual Property Rights (IPR) Cell
- 9.8 Intellectual Property Rights (IPR) Chair

9.1 SPONSORED RESEARCH AND INDUSTRIAL CONSULTANCY ACTIVITIES

During the year 2014-2015, 68 new sponsored research projects by Department of Science and Technology (DST), CPRI Bangalore, Council of Scientific and Industrial Research, DRDO, Department of Atomic Energy, Ministry of Human Resource and Development, MNRE, ISRO, MIT, MoES, Ministry of Rural Development, Ministry of Water Resources and other agencies with an outlay of Rs. 1967.91 lacs' were taken up and 656 new consultancy projects were taken up across the various departments with an outlay of Rs.3805.36 lacs'.

9.2 CONFERENCES / SYMPOSIA / SEMINARS

A large number of National and International conferences, symposia and seminars were organized by various departments and centres of the Institute. The details regarding titles, dates and other relevant information

about these activities are given in the information provided by the concerned departments. The financial support for these events amounting to Rs. 266.61 lacs were obtained from DST, CSIR and other funding agencies.

9.3 SPONSORED RESEARCH PROJECTS

Almost all the departments of the Institute participated in these projects. 68 projects with a total outlay of Rs.3243.68 lacs were completed while 149 projects with an outlay of Rs. 11419.76 lacs continued for study and investigation during the year. The department-wise and agency-wise breakup of these sponsored projects are given in tables. Tables 9.3.1 A and B give the details of completed projects. Tables 9.3.2 A and B list the ongoing projects whereas Tables 9.3.3 A and B contain newly started projects.

Table 9.3.1 A. Sponsored Research Projects Completed (Deptt.-wise)

Department	No. of Project	Outlay in Lacs of Rs.
Biotechnology	7	205.46
Civil Engineering	11	545.24
Chemical Engg.	2	51.58
Chemistry	5	260.08
Department of Paper Technology	1	4.38
Centre of Nanotechnology	2	30.83
Electronics & Computer Engineering	4	103.29
Electrical Engineering	2	1025.00
Earthquake Engineering	3	202.69
Earth Sciences	6	130.37
Humanities & Social Sciences	1	5.22
Hydrology	2	16.52
Institute Instrumentation Centre	1	12.46
Mathematics	4	47.53
Met. & Mat. Engineering	5	200.97
Mech. & Ind. Engineering	7	181.93
Physics	3	52.40
WRD&M	2	167.73
Total	68	3243.68

Table 9.3.1 B. Sponsored Research Projects Completed (Agency-wise)

Organisations/ Agencies	No. of Project	Outlay in Lacs of Rs.
BRNS, BARC, Mumbai	3	114.72
Building Materials & Technology Promotion Council, New Delhi	1	9.96
Central Power Research Institute, Bangalore	1	25.00
CSIR, New Delhi	4	72
DBT, New Delhi	2	57.84
DAE, Mumbai	5	208.44
DRDO, New Delhi	3	73.45
DRDO, Tezpur (Assam)	1	9.48
DST, New Delhi	22	511.65
DST-FIST, New Delhi	4	674
European Commission	1	48.67
Indian Council of Medical Research (ICMR), New Delhi	1	21.73
Indian Council of Social Sciences Research (ICSSR), New Delhi	1	5.22
ISRO, Bangalore	2	21.85
ISRO, Ahmedabad	1	15.82
MHRD New Delhi	1	1000.00
Ministry of Earth Sciences, New Delhi	2	188.27
Ministry of Rural Development, New Delhi	1	13.97
Ministry of Shipping, Roads Transport & Highways, New Delhi	1	24.43
MOEF, New Delhi	1	25.00
Rajendra Memorial Research Institute of Medical Sciences, ICMR, Ministry of Health & Family Welfare, Govt. of	1	11.98

India, Patna		
SERB, New Delhi	2	57.08
UKIERI	1	30.56
Uttarakhand State Biotechnology Department (USBD), Govt. of Uttarakhand, Dehradun	2	11.40
Uttarakhand State Council for Science and Technology, Dehradun	4	11.16
Total	68	3243.68

Table 9.3.2 A. Sponsored Research Projects Continuing (Deptt.-wise)

Department	No. of Project	Outlay in Lacs of Rs.
AHEC	8	5819.32
Arch. & Planning	2	9.67
Biotechnology	10	304.93
Civil Engineering	16	942.98
Chemical Engineering	6	276.90
Chemistry	11	289.99
Centre of Nanotechnology	5	151.86
Department of Paper Technology	8	565.21
Centre for Transportation Systems	4	422.06
Electronics & Computer Engineering	12	269.69
Electrical Engineering	3	142.96
Earthquake Engineering	3	424.16
Earth Sciences	10	408.58
Educational Technology Cell	1	58.00
IPR Cell	2	14.19
Hydrology	3	234.98
Institute Instrumentation Centre	2	24.91
Mathematics	4	42.74
Met. & Mat. Engineering	5	114.88
Mech. & Ind. Engineering	12	387.79
Management Studies	2	14.21
Physics	12	326.51
WRD&M	8	173.24
Total	149	11419.76

Table 9.3.2 B. Sponsored Research Projects Continuing (Agency-wise)

Organisations/ Agencies	No. of Project	Outlay in Lacs of Rs.
AICTE, New Delhi	1	40.00
Building Materials & Technology Promotion Council, New Delhi	2	17.75
CSIR, New Delhi	12	273.98
DBT, New Delhi	6	196.50
DAE, Mumbai	8	266.78
DSIR, New Delhi	1	12.00
DRDO, Dehradun	1	8.98
DRDO, New Delhi	4	187.89
DST, New Delhi	21	1286.32
DST-FIST, New Delhi	5	422.50
European Commission	1	2.19
Govt. of Uttarakhand	1	6.00
IAEA, Vienna International Centre, Vienna, Austria	1	2.03
International Business Machine Corporation (IBM)	4	46.30
ICMR, New Delhi	2	55.82
ICSSR, New Delhi	1	5.00
Indian Institute of Chemical Engineers, Kolkata	1	1.00
INSA, New Delhi	1	15.00
INDO-US Science & Technology Forum, New Delhi	1	28.54
ISRO, Bangalore	2	35.38
Max Planck Society, Germany	1	33.13
MHRD, New Delhi	4	428.00
Ministry of Defence, GATET Programme Cell, GTRE Bangalore	1	76.00
Ministry of Drinking Water and Sanitation, New Delhi	1	8.51

Ministry of Earth Science, New Delhi	6	720.02
Ministry of Shipping, Roads Transport & Highways, New Delhi	1	20.28
Ministry of Steel, New Delhi	1	81.65
Ministry of Water Resources, New Delhi	2	74.81
MNRE, New Delhi	5	5631.80
Nanyang Technical University, Singapore	1	39.10
National Buildings Construction Corporation Limited, New Delhi	1	24.00
National Centre for Medium Range Weather Forecasting	1	4.69
NORSAR, Norway	1	120.46
Nuclear Power Corporation of India Limited (NPCIL), Mumbai	1	111.89
NVIDIA Corporation, Pune	1	1.55
SAARC Disaster Management Centre, New Delhi	1	5.50
SERB, New Delhi	37	951.91
THDC India Limited, Rishikesh	3	119.16
UKIERI, Edinburgh Research and Innovation Ltd., The University of Edinburgh, Scotland	1	33.36
United Nations University, International Organizations Center, Yokohama, Japan	1	18.60
Uttarakhand State Biotechnology Department, Govt. of Uttarakhand, Dehradun	2	5.38
Total	149	11419.76

Table 9.3.3 A. New Sponsored Research Projects (Deptt.-wise)

Department	No. of Project	Outlay in Lacs of Rs.
Arch. & Planning	1	22.25
Biotechnology	7	336.66
Civil Engineering	5	219.78
Chemical	2	61.02
Chemistry	8	244.05
Computer Science and Engg.	2	26.90
Centre for Transportation Systems	1	18.60
Department of Paper Technology	3	44.45
Electronics & Computer Engineering	6	157.99
Electrical Engg.	2	280.18
Earthquake Engg.	1	16.60
Earth Sciences	3	67.46
Hydrology	1	19.11
Institute Instrumentation Centre	2	52.90
Mech. & Ind. Engineering	10	180.58
Met. & Mat. Engineering	5	92.51
Management Studies Department	1	10.00
Mathematics	6	71.19
Physics	1	21.12
WRD&M	1	24.56
Total	68	1967.91

Table 9.3.3 B. New Sponsored Research Projects (Agency-wise)

Organisations/ Agencies	No. of Project	Outlay in Lacs of Rs.
Biotechnology Industry Research Assistance Council, New Delhi	1	51.20
BRNS, Mumbai	2	74.56
CSIR, New Delhi	7	124.89
CSIR-CBRI, Roorkee	1	5.00
DAE, Mumbai	1	2.99
DBT, New Delhi	5	288.96
DRDO, Bangalore	1	9.80
DRDO, Visakhapatnam	1	19.78
DRDO, Kanpur	1	20.70
DRDO, New Delhi	4	102.11
DST, New Delhi	12	522.08

HSMI/HUDCO, New Delhi	1	22.25
ICSSR, New Delhi	2	14.00
IIT Madras, Chennai	1	20.00
ISRO, Bangalore	1	14.89
MHRD, New Delhi	2	140.68
Ministry of Earth Sciences, New Delhi	3	64.06

RailTel Corporation of India Ltd., Gurgaon	3	70.86
SERB, New Delhi	18	374.54
THDC India Limited	1	24.56
Total	68	1967.91

9.4 RESEARCH PUBLICATIONS

Department-wise details of research publications under the following four categories are given in Table 9.4.

- A- Books/ Chapters in books/monograph
- B- Papers in Journals
- C- Papers in Conferences / Symposia / Seminar/ Workshop
- D- Scientific & Technical Reports

Table - 9.4 Research Publications

Department	A	B	C	D	Total
Arch. and Planning	0	24	06	00	30
AHEC	02	59	27	00	88
Biotechnology	06	57	36	00	99
Chemical Engg.	00	66	31	00	97
Chemistry	01	166	41	00	208
Civil Engg.	01	106	49	00	156
CSE	02	24	46	00	72
Earthquake Engg.	00	38	54	00	92
Earth Sciences	01	19	07	00	27
Electrical Engg.	01	14	22	00	37
Elec.& Comp. Engg.	05	66	57	00	128
Hum.& Soc. Sc.	09	33	22	00	64

Hydrology	00	22	19	00	41
Management	00	39	15	00	54
Mathematics	02	133	18	00	153
Mech.& Ind. Engg.	05	77	43	00	125
Met. & Mat. Engg.	00	48	33	00	81
Paper Technology	04	48	16	00	68
Physics	02	79	52	00	133
WRD&M	03	45	16	00	64
CTRANS	01	02	02	00	5
Nanotechnology	02	06	07	00	15
Disaster Mitigation & Management	02	18	28	00	48
ICC	00	00	00	00	0
IIC	00	20	0	00	20
Total	49	1209	647	00	1905

9.5 INDUSTRIAL CONSULTANCY / TESTING

During the year 2014 -2015, 656 new consultancy projects were taken up by different departments; major contributors are as: Table 9.5 gives the details about number and outlay of consultancy projects incl. without lab facilities, with lab facilities and testing works.

Departments	No. of Projects	Total Outlay (Rs. in Lakhs)
Alternate Hydro Energy Centre	43	403.92
Civil Engineering	494	2447.12
Chemical Engineering	3	12.06
Computer Science & Engineering	1	4.37
E & C Engineering	2	9.34
Electrical Engineering	9	24.90
Earthquake Engineering	36	262.35
Earth Sciences	9	41.27
Hum. & Social Sciences	1	1.78
Hydrology	3	52.40
Institute Instrumentation Centre	4	5.93
Mech. & Industrial Engineering	18	85.23
Met. & Mat. Engineering	5	16.06
Management Studies	3	5.32
WRD&M	25	433.31
Total Rs.	656	3805.36

**9.6 FACULTY INITIATION GRANT
(2014-2015)**

From the resource generated through SRIC activities the research initiation grants are awarded to the new faculty members joining the institute. The details of research areas and the faculty who received the grant is given in Table below:

SCHEME (OUT OF SRIC FUNDS) DURING 2014-15

					(Rs. in Lacs)
Sl. No.	Name of Faculty Members	Departments	Project Title	Duration (Period)	Amount sanctioned (Rs. in Lacs)
1.	Dr. Srinivas Kiran Ambatipudi Assistant Professor	Biotechnology Department	Quantitative Proteomics of Bovine Milk in Mastitis	3 years	10.00
2.	Dr. Pooja Garg Assistant Professor	Hum. & Social Sc. Department	Crafting Jobs to Facilitate High Performance Work Practices and Positive Organizational Scholarship : A Kaizen Approach	3 years	7.50
3.	Dr. Saurav Datta Asstt. Professor	Biotechnology Department	Engineering Efficient Enzymatic Systems for Sustainable Products and Processes	3 years	10.00
4.	Dr. Pranita P. Sarangi Asstt. Professor	Biotechnology Department	Role of extra cellular matrix protein Fibulin 7 in T Cell activation and function	3 years	10.00
5.	Dr. Saugata Hazra Asstt. Professor	Biotechnology Department	Identification and Characterization of novel inhibitors against medicinally important beta-lactamases	3 years	10.00
6.	Dr. Shri Ram Yadav Asstt. Professor	Biotechnology Department	Functional genomics of root system architecture (RSA) in rice : Crown root development	3 years	10.00
7.	Dr. Ankit Bansal Asstt. Professor	Mech. & Ind. Engg. Department	Development of an Open Source Coupled DSMC/PMC model for Radiative Heat Transfer in Rarefied Gas Dynamics	3 years	10.00
8.	Dr. Avlokita Agrawal Asstt. Professor	Arch. & Planning Department	Roadmap for Sustainability Audit of IIT Roorkee	3 years	10.00
9.	Dr. Prabuddha Sanyal Asstt. Professor	Physics Department	Study of Magnetic Properties of Transition Metal Oxides using Density Functional Theory (DFT) and Model Hamiltonian Methods	3 years	9.00
10.	Dr. Rachita Gulati Asstt. Professor	Hum. & Social Sciences Deptt.	Testing for Competition in Indian Banking Industry : An Econometric Analysis	3 years	6.00
11.	Dr. Abhijit Maiti Asstt. Professor	Deptt. of Polymer & Process Engineering	Synthesis of Porous Polymeric Coated Granular Inorganic Nano-particle from Natural clay and Application in Environmental Pollution Control	3 years	9.00
12.	Dr. Arup Kumar Das Asstt. Professor	Mech. & Ind. Engg. Deptt.	Mixing of Stratified Layers : Experimental and Numerical Investigations	3 years	10.00
13.	Dr. Sumana Ghosh Asstt. Professor	Chemical Engg. Deptt.	Hydrodynamic Cavitation Assisted Biodiesel Production	3 years	10.00
14.	Dr. Sulakshana P. Mukherjee Asstt. Professor	Biotechnology Department	Biochemical and biophysical characterization of NF-KB: Mediator interaction	3 years	10.00
15.	Dr. Prateek Kumar Jha Asstt. Professor	Chemical Engg. Department	Molecular Simulations, Polymer Physics, Drug Delivery	3 years	10.00
16.	Dr. Harsh Asstt. Professor	Biotechnology Department	Development of rapid and genotype independent genetic transformation and tissue culture systems for crop plants	3 years	10.00
17.	Dr. Kalyan Kumar Sadhu Asstt. Professor	Chemistry Department	Metal ion assisted artificial base pairing : an alternative approach for the nucleic acid template chemistry	3 years	10.00

18.	Dr. Avinash Parashar Asstt. Professor	Mech. & Ind. Engg. Department	Tailoring of Polymer Properties using Nanofillers	3 years	10.00
19.	Dr. Avik Bhattacharya Asstt. Professor	Electrical Engg. Department	Permanent Magnet Synchronous Generator Based Novel Bi-Directional Converter for Wind Applications	3 years	10.00
20.	Dr. Ramjiwari Asstt. Professor	Mathematics Department	Numerical Analysis and Computational Modeling of Hyperbolic Partial Differential Equations	3 years	6.50
21.	Dr. Soumitra Satapathi Asstt. Professor	Physics Department	Morphology Optimization in Excitonic Solar Cells	3 years	10.00
22.	Dr. Vivek Kumar Malik Asstt. Professor	Physics Department	Ordered electronic and magnetic states in complex oxide thin films induced by patterned substrates	3 years	10.00
23.	Dr. Arindam Biswas Asstt. Professor	Arch. & Planning Department	Measuring Inclusiveness of Indian Metropolitan Cities and Establish Inclusive Growth Index for Indian Cities within the Diversified Governance Framework	3 years	10.00
24.	Dr. Abinash Kumar Swain Asstt. Professor	Mech. & Ind. Engg. Department	Development of haptic based virtual assembly simulation platform for aircraft assembly	3 years	10.00
25.	Dr. Jagdish Prasad Sahoo Asstt. Professor	Department of Civil Engg.	Pullout Resistance of Eccentrically and/or Obliquely Loaded Plate Anchors in Sand: Experimental and Numerical Investigation	3 years	10.00
26.	Dr. Sanjay Chikermane Asstt. Professor	Department of Civil Engg.	Computational investigations of geometric non-linearities associated with fabric structures	3 years	10.00
27.	Dr. Saptarshi Kolay Asstt. Professor	Arch. & Planning Department	Connecting Third Age and Childhood through Indian Cultural Roots and Contemporary Technology	3 years	10.00
28.	Dr. Ashutosh Chamoli Asstt. Professor	Department of Earth Sciences	Development of time series analysis tools for geophysical applications	3 years	10.00
29.	Dr. Sumanta Sarkhel Asstt. Professor	Department of Physics	Upper Atmospheric Investigation using Optical Techniques	3 years	10.00
30.	Dr. N.Siva Mohan Reddy Asstt. Professor	Department of Chemical Engg.	Adsorption/desorption of organics/inorganics in Supercritical Carbon Dioxide	3 years	10.00
31.	Dr. Taraknath Das Asstt. Professor	Department of Chemical Engg.	Dry reforming of hydrocarbons (methane/ethanol) over supported metal catalysts for the production of hydrogen : An ex-situ FTIR study	3 years	10.00
32.	Dr. Ankik Kumar Giri Asstt. Professor	Department of Mathematics	Coagulation-fragmentation models: Well-posedness, Numerical approximations and Asymptotic analysis	3 years	10.00
33.	Dr. Raja Chowdhury Asstt. Professor	Department of Civil Engg.	Algal strain isolation from water bodies and their potential to produce valuable products, Life cycle analysis of the produced valuable products	3 years	10.00
34.	Dr. Meenakshi Rawat Asstt. Professor	Department of E & C Engg.	System Characterization and Digital Pre-compensation techniques for dual-band transmitters	3 years	10.00
35.	Dr. Soma Rohatgi Asstt. Professor	Department of Biotechnology	Generation and Characterization of Monoclonal Antibodies against fungal pathogen, Candida albicans	3 years	10.00
36.	Dr. Deepak Sharma Asstt. Professor	Department of Biotechnology	Rational design and development of effective drugs/vaccines against infectious diseases	3 years	10.00
37.	Dr. Partha Pratim Roy, Asstt. Professor	Deptt. of Computer	Tracking Multiple People in Video Surveillance	3 years	10.00

		Science & Engg.			
38.	Dr. Pyari Mohan Pradhan Asstt. Professor	Department of E & C Engg.	Development of Integrated Framework for Estimation and Storage of Spectrum Occupancy Information, and Wideband Sensing in Cognitive Radio	3 years	10.00
				Total Rs.	368.00

9.7 INTELLECTUAL PROPERTY RIGHTS (IPR) CELL

During this period significant effort has been made to promote the IPR activities. All the aspects are briefly reported below

PATENT FILING

During the period 1st April, 2014 to 31st March, 2015, the IPR Cell received 4 new disclosures for patent filing. In this duration, 3 cases have been granted patent.

ERICSSON Innovation Award – 2015

An Inter-IIT competition was conducted at IIT Delhi this year on the thematic areas proposed by ERICSSON. Eight (8) disclosures were received from our students for this award. After being screened by the experts here, 5 of them were forwarded to FITT, IIT Delhi. Mr. Vijay Jain B. Tech. E&CE 4th year and his team got cleared in the first round and received an incentive of Rs. 25000- for further development of a prototype on their work.

9.8 INTELLECTUAL PROPERTY RIGHTS (IPR) CHAIR

About IPR Chair

Under the scheme of Intellectual Property Education, Research and Public Outreach (IPERPO) the Ministry of Human Resource Development initiated action for establishment of IPR Chairs for development and growth of IPR education, research and training in the country.

Vision: Creation of superior quality Intellectual Capital for Indian Leadership in a globalized knowledge society.

Mission:

Long Term: Capacity creation in IP practice, education, training, research and awareness through a multidisciplinary approach.

Short Term (Five Years):

- Development of suitable academic programs in IP education, research and training.
- Providing a framework for analyzing the impact of Intellectual Property in development initiatives in the country.
- Dissemination of knowledge and information through outreach programmes

Theme for year 2014-15

Activities at IPR Chair Roorkee are planned and executed based on a relevant theme and the theme for year 2014-15 was Structured Innovation and Higher Educational Institutes. Institutes of higher education play a key role in national innovation systems. Beyond their mission to educate, they account for substantial shares of total R&D done in a country. Most of the basic research is carried out by university and other HEIs. According to world intellectual property report

2011 published by WIPO most of the PCT patent application in developed countries come from universities however, such filings have also grown rapidly in certain middle income countries like China which leads in terms of university applications, followed by Brazil, India and South Africa. Recognizing the importance of HEI in innovation capacity building MHRD-IPR CHAIR at IIT Roorkee organized various activities with this central theme.

Activities at a glance for the year 2014-15

Sl. No	Date	Programme
1	19-20 July 2014	Workshop on “ <i>Innovation to Entrepreneurial Eco-System</i> ” Scale of activity: Institute
2	2-6 September, 2014	Training of Trainers (TOT) Programme on “ <i>Harnessing the Researcher to Promote Sustainable Innovation.</i> ” Scale of activity: National
3	23 August, 2014	Workshop with research Scholars “ <i>Considering industry stake holding in Lab research</i> ” Scale of activity: National
4	13-14 March, 2015	National Conference on “ <i>Governance of traditional knowledge for contemporary innovation</i> ” Scale of activity: National
5	24 March, 2015	Outreach Programme on “ <i>HEIs and Structured Innovation</i> ” Scale of activity: Regional

Brief of Activities organized in 2014-15 under different heads

Activities under Workshops/Conferences

1. Workshop on “Innovation to Entrepreneurial Eco-System”

A two day Workshop on Innovation to Entrepreneurial Eco-system held on 19-20 July, 2014 organized by MHRD-IPR Chair at Department of Management Studies, Indian Institute of Technology, Roorkee (U.K.). The workshop focused on importance of T2M3 (Teams, Technology, Markets Money and Mentors) and funding avenues both for entrepreneurs as well as the incubators in higher educational institutes. The goal of the event is to inspire students' interests in innovation, foster the entrepreneurial campus culture, and promote the I&E ecosystem at IIT Roorkee. More than 80 students of various backgrounds, research scholars and faculty members from various departments of IIT Roorkee had attended the workshop.



Invited Speakers

1. Prof. C. Amarnath, Former Head of Mechanical Engineering and PI, Society of Innovation and Entrepreneurship (SINE), IIT Bombay.
2. Mr. Sushanto Mitra, Founder & CEO of Lead Angels and Former CEO of SINE, IIT Bombay

This event invited students and faculty with entrepreneurial mindset to talk about their vision and understanding of innovation, creativity, and entrepreneurship. Making events like this available to students will gradually generate a momentum that pushes the campus culture more toward innovation and entrepreneurship. Moreover entrepreneurship is the essence of economic development, but it cannot exist without technological innovation. Science Parks, Innovation Centres and Technology Business Incubators are similar initiatives in creating an environment for innovation and entrepreneurship. These initiatives foster interactions between academia and industry for sharing ideas and experiences and for developing new technology in order to transfer it to the end-users through SMEs. Merely creating such facilities, planning programmes and delivering training is not sufficient; equally important is the vision and strategy that educate students, young entrepreneurs and empower them for change. Clearly, there is a need for faculty and educators to generate entrepreneurs and start-ups for the twenty-first century that are agile and professional.

2. Workshop with research Scholars on “Considering industry stake holding in Lab research”

A two day Workshop on CONSIDERING INDUSTRY STAKE-HOLDING IN LAB RESEARCH was organized by MHRD-IPR Chair, IIT Roorkee from October 11 – 12, 2014 at Continuing Education Centre, IIT Roorkee.



A two day Workshop on “Considering Industry Stake-Holding in Lab Research” was organized by MHRD-IPR Chair, IIT Roorkee from October 11 – 12, 2014 at Continuing Education Centre, IIT Roorkee.

The main objectives of conducting this workshop were:

- To trigger entrepreneurial orientation among research scholars.
- To find out the degree of industry stake holding in contemporary academic lab researches.
- To find out the reasons for low or no involvement of industry stake holding in some lab researches, if any.

- To discuss on the ways of incorporating industrial stake-holding and the relevant benefits in contemporary Lab researches.
- Discussion on the avenues or channels for commercialization of research work.

Following distinguished speakers from various organizations have given their views on different topics related to the theme of the workshop:

- Mr. B K Sharma, Addl. General Manager, Aerospace System & Equipment Research and Design Centre (ASERDC), Hindustan Aeronautics Limited, Lucknow
- Mr. J.C. Jain, CMD, Texplas Group of Industries, President, PHD Chamber of Commerce and Industry, Uttarakhand
- Dr. P.K.Ghosh, MHRD-IPR Chair Professor, IIT Roorkee
- Mr. Subrata Biswas, General Manager In-Charge (CEPD & ARP) BHEL, Corporate Office, New Delhi

This program helped researchers in identifying the importance, challenges and implications of industry stake holding in research work through expert lectures, opinions and suggestions of distinguished panel members. Participants come to know about the present technological needs of different industrial sectors. Research scholars had this opportunity to interact with invited Key speakers at senior level from different industrial circle and clarify any doubts and queries within the limits of workshop theme.

3. National Conference on “Governance of traditional knowledge for contemporary innovation”

The MHRD IPR Chair, DOMS, IIT Roorkee organized two day National conference on “Governance of Traditional Knowledge and Contemporary Innovations” on March 13-14, 2015 in the Department of Management Studies, to provide a special forum to present and discuss about latest research in the field of traditional knowledge management and contemporary innovations.



Invited Speakers

1. Prof. Jayesh Bellare, Department of Chemical Engineering, IIT Bombay

Topic of talk: “Nanotechnology of modern, traditional and alternative medicines”

In his presentation Prof. Bellare told about various studies in the materials science of traditional and alternative medicinal systems, which have brought out their nanostructure and unconventional chemistry, could help our understanding of various alternative and traditional medicines and pave the way for new leads for modern medicinal chemistry.

2. Prof. Anil P Joshi, HESCO

Topic of talk: “Resource Rights: Community Domain”

Prof. Joshi emphasized on the balance use of natural resources. He said that traditionally, the villages used to live in harmony with these resources, but in course of time the relation was broken due to enforcement of new laws. The destruction of natural resources not only entails a threat to ecology but to their survival also. The transposition of the rights on resources back to the community would add to its conservation.

3. Prof. R.Shankar, Department of Architecture and Planning, Indian Institute of Technology Roorkee

Topic of talk: “Traditional Architectural Practices of South India“

The talk was focused on the traditional architectural practices followed in row housing in two climatically different locations, one in Tamil Nadu and another in Kerala. Prof Shankar told audience that Indian rural settlements are repositories of traditional knowledge and offer invaluable insight into sustainable practices of resource conservation, and harmonious living among people and with nature.

4. Prof. Partha Roy, Molecular Endocrinology Laboratory, Department of Biotechnology, Indian Institute of Technology Roorkee

Topic of talk: “From traditional Ayurvedic medicine to modern medicine: polyphenolic compounds for suppression of bone related disease and cancer”

Prof Roy in his talk told about the reverse pharmacology approach which is inspired by traditional medicine and Ayurveda. It can offer a smart strategy for new drug candidates to facilitate discovery process and also for the development of rational synergistic botanical formulations.

5. Prof. Deepak Goel, Swami Ram Himalayan University, Dehradun

Topic of talk: “Traditional Indian Medicine: Governance and Innovations”

In his presentation Prof Goel told that traditional Indian Medicine was suppressed in many years of foreign invasion. It was a life science practiced for human service not for trade. Later on Europeans took lead in about 80% of new innovations and trade becomes important target of knowledge. He also highlighted the issues of protection of intellectual property in case of traditional Indian medicine (TIM).

Participants from various background, research scholars and faculty members from various educational institutions and industries across the nation had attended the conference. Speakers emphasized on making use of the existing IP System to protect and promote traditional knowledge and draw attention towards the need of extensive documentation for Traditional Knowledge.

Activities under Extension Work

1. Outreach Programme on “HEIs and Structured Innovation”



An outreach programme was conducted by MHRD-IPR Chair of IIT, Roorkee in collaboration with CoLS, UPES to make the students understand the importance of Structured Innovation at Higher Education Institution. There were three key speakers in the workshop, Dr. Rajat Agarwal and Dr. Vinay Sharma from IIT Roorkee and Dr. Tabrez Ahmad, Director of College of Legal Studies, UPES, Dehradun. The talk delivered by each speaker was very intensive, enriching and engrossing for all the participants. Speakers laid emphasis on the need and importance of innovation in both private and public HEIs. The programme was very interactive as well and the participants queries during the session to the key speakers which were well addressed. The participants were faculties and students across the programmes from the three

college of UPES i.e. Law, Engineering & Management and also from external community.

Activities under Training

1. Training of Trainers (ToT) Programme on “Harnessing the Researcher to Promote Sustainable Innovation”

A five days training of trainers’ programme on HARNESING THE RESEARCHER TO PROMOTE SUSTAINABLE INNOVATION was organized by MHRD-IPR Chair, IIT Roorkee from September 02 – 06, 2014 at Continuing Education Centre, IIT Roorkee. The main objective of this ToT programme were to help creating an environment that encourages and expedites the dissemination of discoveries, creations and new knowledge generated by researchers for the

greatest public benefit, to develop awareness of the IP systems in the Country, to develop a system which ensure that both intellectual property and other products of research are made available to the public through an efficient and timely process of technology transfer and to understand the relationship between culture and innovative behavior.



Reputed personalities like Prof. Pradipta Banerji, Director IIT Roorkee, Prof. S.K. Bhattacharya, Director CBRI, Roorkee, Prof. S. Ray, IIT Mandi have presented their views and shared their experiences with the participants of the programme. In his talk Prof. Banerji said that higher education Institutes must convert challenges into enablers in order to become true innovation universities. He address the themes and questions like What roles can private industries and governments agencies play in accelerating the needed changes for sustaining innovation? How can it be made safe for courageous students to take educational paths different from traditional tracks, and work upon disruptive technologies?

On the occasion Prof Bhattacharya Director CBRI, Roorkee, said that conducting a research work in any field of science is a systematic process and the final output of the research depends upon the procedure and methodology followed by the researcher while conducting the research. The value of research work is decided by its utility which should not confine to publications only.

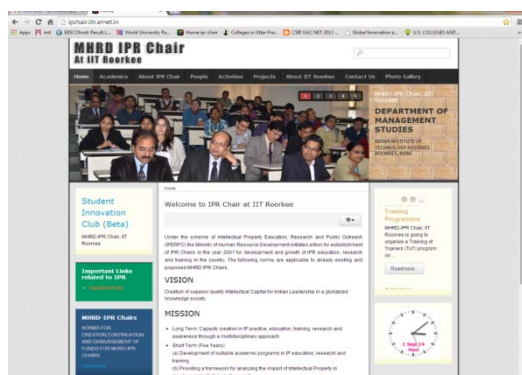
The program helped faculty members to understand the concept and practices of innovation. Participants come to know how to harness the researcher’s capabilities to obtain tangible output which can be useful for the industries sector and can be used in nation building. Participants had this opportunity to interact with experts from research institutes like CBRI.

Academic Courses introduced by the IPR- Chair

A course titled “Innovation, Business Models and Entrepreneurship” at undergraduate level was started which runs for both Autumn and Spring Semesters in the Department of Management Studies, IIT Roorkee. Objective of this course was to acquaint students with fundamentals of innovation, entrepreneurship and new business models. 151 students have opted this course in Autumn 2014 semester and 81 students have opted this course in Spring 2014 semester. In Spring semester 2014-15, 63 students have elected this course.

Infrastructure Development

Website for IP administration and awareness



MHRD IPR Chair, IIT Roorkee’s website was officially launched and can be accessed at <http://ipchair.iitr.ernet.in>. With the launch of this site we feel more confident that our primary audiences are going to be able to find the information they needed quickly and easily. This site will provide all the Information on the past and latest happenings of IPR Chair IIT Roorkee. We are planning to extend the radius of this site and continuously working to make it more interactive and rich in term of IP related matters. In this very short span of time the website hit counter have already reached up to 30 thousand with visits from all around the nation.

Research initiatives

The chair is continuously working on the research aspect of innovation and intellectual property. The chair has published two research papers viz: “Enablers to propel innovation in the Higher Educational Institutes” and “Analyzing the progress of geographical indication in India”. In-house research is carried out on different sectors and fields like traditional knowledge with orientation of innovation and intellectual property rights.

- 10.1 General
- 10.2 Students' Welfare and Facilities
- 10.3 National Cadet Corps (NCC)
- 10.4 Sports Association
- 10.5 National Service Scheme
- 10.6 Institute Students' Club
- 10.7 Hobbies Club

- 10.8 Cultural Society
- 10.9 Educational Cinema Club
- 10.10 Himalayan Explorers Club
- 10.11 Students Affairs Council (SAC)
- 10.12 Foreign Students' Activities
- 10.13 Training & Placement Office

10.1 GENERAL

During the year 2014-2015, the students performed extremely well in academics, displaying high sense of responsibility and discipline. They also excelled in organizing extracurricular activities and also in the management of hostels and mess facilities. Students' activities were multifarious and predominantly included participation in the Hobbies Club, Students' Club, National Cadet Corps (NCC), Sports Association, Cultural Society, NSS/NSO, Cinema Club and Himalayan Explorers' Club.

The Sports Association continued organizing its activities with usual vigor during the year 2014-15 and our students participated in Inter-IIT annual sports meet at IIT Bombay. Our students won the Gold Medals in Basketball (M), Hockey, Football and Squash and girls won the Gold Medal in 4x400m relay. IIT Roorkee team stood 2nd in overall championship (Men). The Annual Festivals;

Thomso was organized during 31st October – 2nd November and Cognizance was organized during 27th March – 29th March. The various events attracted about 2000 participants from various reputed Technical Institution across India. Annual Sports Fest "Sangram" was organized during 20th – 22nd March 2015 in which about 1000 students participated.

Under the aegis of NSS, our students did commendable social work. Blood donation camps were organized. The other notable activities included helping handicapped people, holding classes for poor children, and visiting nearby villages to improve awareness regarding general and personal hygiene.

Khosla International House Mess was modernized and opened for the entire IITR community.

10.2 STUDENTS' WELFARE AND FACILITIES

Student's Affairs Council (SAC) constitution was brought in line with other IITs and approved by Competent Authority. The Elections of SAC for 2014-2015 were held on 24th Aug at Bhawans and 30th Aug. on Executive basis. The Student's Senate was elected and other bodies of SAC were constituted. Mr. Madala Vamshi Chowdhary was elected as General Secretary of the SAC for 2014-2015. The student's Affairs Council was constituted under the Chairmanship of the Deputy Director. The Coordinating Committee of the Bhawans (CCB) was also constituted.

'Students Aid Fund' scheme was further operationalized to enable meritorious but financially weaker students to pursue their education. For the past few years, a cash

grant-in-aid, instead of a loan, is being provided to needy students. During the year 2014-2015, 32 students were provided financial assistance under this scheme and a sum of Rs. 4,80,000.00 was distributed to needy and deserving students. Cold storages have been introduced in four of IITR messes. Four additional automatic chapatti making machines have been provided in the messes. Heavy duty desert coolers were installed in two messes. Cast iron benches for seating comfort of the students were provided in the bhawans. Biometric attendance has already been started in Messes.

Yoga activities and community services have been started as alternative to punishment for in disciplinary action on the part of students. NCC

camp will be organized on the occasion of International Yoga Day during 18th June – 27th June.

Insurance policy has been taken for students from United India Insurance Company Ltd. And

National Insurance Company Ltd. Which provides for reimbursement of medical expenses of students.

10.3 NATIONAL CADET CORPS (NCC)

GENERAL

The Training year of NCC Cadets under 3 UK Composite Technical Regiment, Roorkee, started with enrolment of Cadets at IIT, Roorkee, on 26 Jul 2014, same was completed by 30 Jul 2014. The training year finished on 31 Mar 2015. NCC 'B' and 'C' Certificate Exam were conducted on 15 & 16 Feb 2015 and 22 & 23 Feb 2015 respectively. The Officers, the Associate NCC Officers of the IIT, Permanent Instructors of Army and Civil Staff of NCC took keen interest in imparting training to the cadets.

ENROLMENT

For academic year 2014-15 enrollment in NCC was as under:-

	I Year	II Year	III Year	Total
(a) Engr Coy	127	13	-	140
(b) EME Coy	132	10	-	142
(c) Sig Coy	126	12	-	138
Total	385	35	-	420

Note. NCC training is of three years implying 'C' Certificate will be given after three years training.

TRAINING

Physical fitness is of the utmost importance for everyone, young and old. Participation in games and sports invariably ensures good health, fitness and, generally, freedom from ailments of various types.

Sports also offer an enjoyable, exciting environment in which students learn how to handle both failure and success. Everyone wins and losses on some occasions in both sports and other endeavors. Winning feels great and empowering but can also cause a young person to feel pressure and anxiety for the next attempt to win. Losing usually produces feelings of sadness, depression, and disappointment. Learning how to cope with these different feelings fosters good mental health. Good sportsmanship provides guidelines that can be generalized to classroom and lifelong

Regular training classes were conducted and training imparted in Drill, Weapon Handling, Map Reading, Battle Craft, Field Craft, Leadership, Social Service, Health & Hygiene.

SOCIAL SERVICE

Anti Drug rally

Anti Drug rally was carry out at IIT Roorkee to Solanipuram, Adrash Nagar and back on 25-11-2014.

Swachh Bharat Abhiyaan

Swachh Bharat Abhiyaan was carry out by Cadets of IIT Roorkee on 27 Nov. 2014 at Khanjarpur village and at Sunehra village on 24 Jan 2015.

CERTIFICATE EXAMINATION – 2013-14

NCC certificate examination details are as under:-

Exam	Appeared	Passed	% of Passing
(a) Certificate 'B'	07	-	Result awaited
(b) Certificate 'C'	-	-	-

IMPORTANT EVENTS

A two week special cadre was conducted to train cadets for a Guard of Honors to Honorable Director, Chief Guest IIT, Roorkee, on Independence Day 2014 and Republic Day 2015

10.4 INSTITUTE SPORTS COUNCIL

achievement. Participation in challenging sports contests teaches students to love classroom challenge. It also teaches students to function in a competitive society.

Sports Council Staff:

Sports Officer	-Shri K.Sukumar
Asstt. Sports Officers	-Shri Hemant Sharma -Dr. Alok Kumar Pandey
Physical Training Instructor	-Smt. Hema Pant
Coach (Badminton)	-Shri S.N Goel
Office In-charge	-Shri Muzahir Hussain
General Secretary	-Ms. Soumita Talukdar
Deputy General Secretary Sports	-Mr. Arjun Malik

A. INTERNAL (Intramural) TOURNAMENTS:
“Intramural” means literally “within the walls” and refers to activities that take place entirely within an Institution.

In order to encourage 100% students participation in the Sports activities various tournaments were organized within the IIT Roorkee (Intramural) Institutes Trophy Tournament, Inter Year tournaments & Institute Open tournaments for Racquet games were also organized. This year we have included institute trophy instead of Inter Bhawan. To encourage the more number of students & also getting more participants & more space for beginners Institute trophy is more successful. It has been noticed that a lots of students have participated in the Institute Trophy Tournament as the teams were distributed on the basis of skills of the students. Due to this the matches were found interesting and many talented players have been identified.

(I) Result of Institute Trophy 2014-15 (Men)

Activity	Winners	Runners-Up
Athletics	Blue Hawks	Red bulls
Badminton	Blue Hawks	Red bulls
Basketball	Green Mantis	Black Mambas
Cricket	Black Mambas	Staff
Football	Black Mambas	Blue Hawks
Hockey	Blue Hawks	Green Mantis
Squash	Red bulls	Blue Hawks
Table Tennis	Blue Hawks	Black Mambas
Volleyball	Blue Hawks	Green Mantis
Tennis	Red bulls	Black Mambas

Result of Institute Trophy 2014-15 (Women)

Activity	Winners	Runners-Up
Athletics	Blue Hawks	Red bulls
Badminton	White Sharks	Blue Hawks
Basketball	Black Mambas	Red Bulls
Table Tennis	Black Mambas	White Sharks
Volleyball	Red Bulls	Green Mantis
Tennis	White Sharks	Red Bulls

(II) Result of Inter- Year Tournaments 2014-15

ACTIVITY	WINNERS	RUNNERS-UP
BASKETBALL (M)	3 rd Yr	2 nd Yr
BASKETBALL (W)	4 th Yr	3 rd Yr
CRICKET	2 nd Yr	3 rd yr
FOOTBALL	IIT Saharanpur campus	4 th yr

HOCKEY	3 rd Yr	4 th Yr
VOLLEYBALL (M)	4 th Yr	3 rd Yr
VOLLEY BALL (w)	2 nd Yr	PG+PHD

(III) Weight Lifting Competition 2014-2015

Weight Category under 56 Kg		Position
1.	Mr. Sukhvir Gahlot, BTech 4 th yr, Meta	FIRST
2.	Mr. Rohit Sharma, BTech 4 th yr, Civil	SECOND
3.	Mr. Akshay Sheokand, B.Tech. 1 st Yr.	THIRD
Weight Category 56- 62 Kg		
1.	Mr. Nilesh Talwar, IMT 1 st Yr GT	FIRST
2.	Mr. Om Prakash Meena, IDD 4 th Yr PEM	SECOND
3.	Mr.Nitin Verma, B.Tech. 4 th Yr. Civil	THIRD
Weight Category 62- 69 Kg		
1.	Mr. Devendra Singh Meena, B.Tech. 4 th Yr. Meta	FIRST
2.	Mr. Manish Kumar, B.Tech. 2 nd Yr. P&I	SECOND
3.	Mr. Shankey Jain, B.Tech. 4 th Yr. Chem.	THIRD
Weight Category 69- 77 Kg		
1.	Mr. Gagandeep Singh, Int. Msc. 4 th Yr. Chem.	FIRST
2.	Mr. Pushkar Yadav, B.Tech. 2 nd Yr. Civil	SECOND
3.	Mr. Apurv Maheshwari, B.Tech. 2 nd Yr. P&I	THIRD
Above 77kg		
1.	Mr. Kartikeya Verma, IDD 3 rd Yr. Civil	FIRST
2.	Mr. Manik Verma, IMT 2 nd Yr GPT	SECOND
3.	Mr. Ketan Bains, B.Tech. 2 nd Yr. Bio	THIRD

(IV) POWER LIFTING COMPETITION 2014-2015

Weight Category under 56 Kg		Position
1.	Mr. Sukhbir Gahlot, B.Tech. 4 th Yr. Meta	FIRST
2.	Mr. Pradeep Singh Gautam, B.Tech. 4 th Yr Meta	Second
3.	Mr.Kuldeep Kumar, Int. Msc. 2 nd Yr Physics	Third
Weight Category 57-62 Kg		
1.	Mr. Vikrant Yadav, B.Tech. 3 rd Yr. Mech.	FIRST
2.	Mr. Nilesh Talwar, IMT 1 st Yr. GT	SECOND
3.	Mr. Somvir, B.Tech. 3 rd Yr. Meta	THIRD
Weight Category 62- 69 Kg		
1.	Mr. Manish Kumar, B.Tech. 2 nd Yr. P&I	FIRST
2.	Mr. Shankey Jain, B.Tech. 4 th Yr Chem	SECOND
3.	Mr. Sirish Kumbhar, B. Tech. 4 th Yr. Mech.	THIRD
Weight Category 69- 77 Kg		
1.	Mr. Shubham Chaudhary, B.Tech. 4 th Yr Chem	FIRST
2.	Mr. Alok Rawat, M.Tech. 1 st Yr. Geomatics	SECOND
3.	Mr. Vikram, B.Tech. 4 th Yr., Chem.	THIRD
Above 77kg		
1.	Mr. Harvender Singh, B.Tech. 4 th Yr CSC	FIRST
2.	Mr. Vikrant Yadav, B.Tech., 4 th Yr, Chem	SECOND
3.	Mr. Karthik Kumar, M.Tech., 2 nd Yr. AHEC	THIRD

(V) BODY BUILDING COMPETITION 2014-2015

Light Weight		Position
1.	Mr.Rohit Sharma, B.Tech. 4 th Yr. Civil	FIRST
2.	Mr.Varun Mahajan, PhD.	Second
3.	Mr. Rohit Patel, B.Tech. 4 th Yr Chem	Third
Medium Weight		
1.	Mr.Sirish Kumbhar, B.Tech. 2 nd Yr P&I	FIRST
2.	Mr. Manish Kumar, B.Tech. 2 nd Yr, P&I	SECOND
3.	Mr.Rishi Singh, M.Tech. 1 st Yr	THIRD
Heavy Weight		
1.	Mr. Kartikeya Verma, IDD, 3 rd Yr, Civil	FIRST
2.	Mr. Abhishek Tomer, B.Tech. 3 rd Yr. Civil	SECOND
3.	Mr. Manas Aggarwal, B.Tech. 2 nd Yr. Chem	THIRD

(Vi) SQUASH COMPETITION 2013-14

Open Championship		Position
1.	Mr. Karn Vashisht, B.Tech. V Yr.	Winner
2.	Lt Col Anshuman Chowdhary, MTEch II Yr	Runner-up

(VII) TENNIS INSTITUTE OPEN COMPETITION 2014-15

SINGLES		Position
1.	Mr. Rahul Adhikari, B.Tech. 4 th Yr. Civil	Winner
2.	Mr.Irfan Khan, MTech II nd Yr. MMED	Runner-up
DOUBLES		
1.	Mr.Irfan Khan, MTech II nd Yr. MMED Mr. Ravi Verma, B.Tech. 5 th Yr. EE	Winner
2.	Mr. Mr. Rahul Adhikari, B Arch 4 th Yr. Civil Mr. Karan Vashisht, B.Tech. 5 th Yr.	Runner-up
Women		Position
1.	Ms.Pooja Arya, B.Tech 4 th Yr., PST	Winner
2.	Ms. Kinnera Priya, B.Tech. 1 st Yr. ECE	Runner-up

(VIII) BADMINTON INSTITUTE OPEN COMPETITION 2014-15

SINGLES		Position
1.	Mr. Saurabh Saini B.Tech. 5 th Yr. CHH	Winner
2.	Mr.Kasu Naveen Raju B.Tech. 5 th Yr. Civil	Runner-up
DOUBLES		Position
1.	Mr. Kasu Naveen Raju B. Tech. 5 th Yr. Civil Mr. Vemula Himasagar B.Tech. 3 rd Yr. ECE	Winner
2.	Mr. Saurabh Saini B.Tech. 5 th Yr. CHH Mr. Mayank Sharma B.Tech. 3 rd Yr. CE	Runner-up

SINGLES (Girls)		Position
1.	Ms. Tanvi, B.Tech. 1 st Yr. GPT	Winner
2.	Ms. Sarita Nandwani, B.Tech. 5 th Yr. GT	Runner-up

(IX) TABLE TENNIS INSTITUTE OPEN COMPETITION 2014-15

SINGLES (Men)		Position
1.	Mr. Saquib Ali, B.Tech 3 rd Yr GPT	Winner
2.	Mr Akhil Mehta, BTech 4 th Yr., CH,	Runner-up

(X) ANNUAL ATHLETIC MEET 2014-2015

Annual Athletic Meet for the session 2014-15 was held on March 14th & 15th, 2015. Following are the medal & Trophy winners: Following are the winners of trophies/ cup in Annual Athletic Meet for the session 2014-2015:

Sl.	Cup/Trophies	Name & Class
1.	Lion Trophy	Mr. Laxman Singh, B.Tech II Yr
2.	Stampe Cup	Ms. Priyanka Sharma, Phd E & C
3.	Bernett Cup	Mr. Devender Yadav, B.Tech II Yr ECE
4.	Krishna Hudda Cup	Ms. Nidhi Kumari, B.Tech III yr Chem IDD

(X) INDIVIDUAL YOGA COMPETITION

The Individual Yoga competition was held on Feb 28, 2015 at Yoga Hall. The Results of the competition are as follow

(MEN)

Rank	NAME	Year/Branch
1.	Mr.N. LakshmanChakravarthy	B.Tech, 2 nd Yr Meta
2.	Mr.Kh Bijenkumar Meitei	B.Tech, 4 th Yr Mech
3.	Mr.Veer Singh	IDD, 5 th Yr GT
4.	Mr.Vikash Kumar	B.Tech, 3 rd Yr EE
5.	Mr.Suman Kumar Sahoo	B.Tech, 3 rd Yr Mech
6.	Mr.Ankit Kumar Yadav	B.Tech, 4 th Yr Civil
7.	Mr.Brajesh Kumar	B.Tech, 2 nd Yr Meta
8.	Mr.Vijay Patidar	IDD, 4 th Yr CSI
9.	Mr.ShashankBhatra	M.Tech, 1 st Yr Civil
10.	Mr. Pankaj Kumar	B.Tech, 2 nd Yr EE
11.	Mr. Tinku Biswas	Ph.D, 1 st Yr EQ
12.	Mr.Naman Jain	B.Tech, 4 th Yr Mech

(WOMEN)

RANK	Name	Year/ Branch
1	Ms. Anita Kumari	Ph.D, 4 th Yr.
2	Ms. Savita	PhD, 3 rd Yr. DOMS
3	Ms. Deepmala Wadhvani	B.Tech, 3 rd Yr. CH
4	Ms. Srishti Tembhare	M.Tech, 1 st Yr. ECE
5	Ms. Ruchi Lamba	Ph.D, 2 nd Yr. CTRANS
6	Ms. Namburu Ravali	B.Tech, 3 rd Yr CH
7	Ms. Neha Gupta	Ph.D, 3 rd Yr., Chemistry
8	Ms. Alankrita Gautam	B.Tech, 4 th Yr ECE
8	Ms. Sarita Meena	B.Tech, 3 rd Yr Civil
9	Ms. Shivani Soni	B.Tech, 3 rd Yr EE
10	Ms. Smriti Vashisth	B.Tech, 3 rd Yr CSE

(B) EXTERNAL TOURNAMENT & PARTICIPATION

All India Inter University Yoga Championship 2015

All India Inter University yoga Championship held at University of Kurukshetra from 17th Feb to 21th March 2015. Participating in Yoga for the Second time at All India Inter University Level. IITR's men and women team were placed at a commendable 23rd and 34th spot, out of a total of 112 participating Colleges and Universities. IITR's 6 boys and 6 girls battled out against more than 1500 students at this extravaganza.

External Tournament organized by IIT Roorkee:

- Volleyball Team, Hockey Team and Football Teams of IIT Roorkee played matches with BEG & Centre, Roorkee, with ICFRE, FRI Dehradun and with few local Teams.
- Friendly cricket matches were played with AIS Glass factory team and with Roorkee Town Club Cricket Team.
- Friendly Basketball & Volleyball Matches were played with College of Engineering, Roorkee (COER), BEG & Centre, Roorkee, Haridwar.
- Water polo matches were played with BEG & Centre Teams.
- Badminton & Table Tennis & Squash matches were played with BEG & Centre, Roorkee & with local team.

Organization of "Sangram Sports Fest" (20 to 22 March, 2015)

This year Sangram Sports Fest was organized from 20th to 22nd March, 2015 by IIT Roorkee. Various indoor games like T.T, Badminton, Squash and outdoor games like Football, Hockey, Cricket, and Basketball & Volleyball will be conducted during this sports fest.

Approximately 1000 students (800 Boys & 200 Girls) of 22 Technical Educational Institutions from Kurukshetra, Bits Pilani, Jhansi, Kota, Kanpur, Dehradun, Haridwar, Jalender and Patna were taking part in this Sport Fest. The opening Ceremony will be graced by Prof. Vinod Kumar, Dy. Director IIT

Roorkee as the Chief Guest, and Prof. Pradipta Banerjee, Director, IIT Roorkee invited as the chief guest in the closing ceremony on 22nd March 2015.

Boys & girls from various Institutes took part with a lot of enthusiasm. Their efforts and their presence made the festival a grand Success, and for 3 days the IIT Roorkee playfields wore a festive look. IIT Roorkee Team won gold medals in Volleyball, Basketball & also won silver medals in racquet games.

(3) NSO (National Sports Organization)

NSO (National Sports Organization) scheme was launched to spread awareness of physical fitness and importance of Sports among students. About 200 students from 1st Year were selected and fitness/Coaching classes were conducted four days in a week. It was found that there was a marked improvement in their physical fitness level. A number of the NSO students have represented Institute's team (IIT Roorkee), participated & performed well in various games & Athletic events in the 50th Inter IIT Sports Meet -2014.

(4) Coaching Camps conducted for IIT Roorkee students and others

- a. Basic coaching camps were conducted for all Indoor & outdoor games.
- b. Advanced coaching camps were conducted for the selected players of IIT Roorkee contingent to enable them to participate in the 50th Inter IIT Sports Meet 2014, Bombay.
- c. Basic & Advance coaching camps were conducted in swimming events.
- d. Summer Coaching Camp for school going children of the campus were organized in Badminton, Tennis Swimming & Aerobics.
- e. Winter Coaching camp was also organized this year in the month of December in Tennis & Badminton.
- f. Coaching Camps were also conducted in yoga, swimming for the faculty, Staff & their wards of IITR and other sister organization established in IITR campus.

(5) PARTICIPATION IN THE 50th INTER IIT SPORTS MEET 2014 AT IIT BOMBAY

(i) Performance of IIT Roorkee in the Inter IIT Aquatic Meet

IIT Roorkee's contingent consisting of 11 boys and 05 girls took part in the swimming events and Water Polo (Boys) game in the 50th Inter IIT Aquatic Meet -2014 held at IIT Bombay. Aquatic meet was held from October 01 to 04, 2014. Details of the medals winners in the Inter IIT Aquatic Meet in given below:

Sl.	Name	Event	Position
1.	Ms. Nivedita Sharma	50m Freestyle	Gold
2.	Ms. Nivedita Sharma	100m Free style	Gold
3.	Ms. Nivedita Sharma	50m Back stroke	Gold
4.	Ms. Nivedita Sharma	50m Breast Stroke	Gold
5.	Ms. Nivedita Sharma	50m Butterfly	Gold
6.	Ms. Nivedita Sharma	4x50m Relay	Fourth
	Ms. Srishti Gupta		
	Ms. Anisha Grover		
	Ms. Radhika Munsri		

7.	Mr. Maharnab Mitra	1500 m Freestyle (M)	Gold
	Mr. Maharnab Mitra	100 m Butterfly (M)	Fourth

- (a) The Woman's Swimming Championship Trophy was won by IIT Roorkee.
- (b) Ms. Nivedita Sharma was declared the "Best Swimmer" of the 50th Inter IIT Aquatics Meet -2014
- (c) IIT Roorkee Women team got Aquatic Championship.
- (d) Men Water Polo team stood in fourth place.
- (e) IIT Roorkee Men team got Overall Fourth Place.

(ii) 50th Inter IIT Sports Meet 2014

The IIT Bombay has organized the 50th Inter IIT Sports Meet -2014 from December 12 to 19, 2014. Totally 146 Students consisting 112 boys and 34 girls participated in the 50th Inter IIT Sports Meet -2014. In the March Past at the Opening Ceremony, our Contingent has performed well and scored 6.5 points. The IIT Roorkee Teams took part in all the Indoor & Outdoor games. The following members of the Athletic team won medals in various athletic events.

Athletic Men

Sl.	Events	Position	Name
1.	100 M	Fourth position	Harsh Vijay
2.	400 M	Bronze medal	Harsh Vijay
3.	110 m Hurdles	Bronze medal	Mr. Harsh Vijay
4.	800 m	Fourth position	Mr. Devender Yadav
5.	1500m	Fourth position	Mr. Devender Yadav
6.	Discus Throw	Bronze medal	Mr. Kuber Dutt Sharma
7.	Shotput	Silver medal	Mr. Kuber Dutt Sharma
8.	Shotput	Bronze medal	Mr. Harvinder Singh
9.	Javelin Throw	Silver medal	Mohd. Irfan Khan
10.	Long Jump	Bronze medal	Mohd. Irfan Khan
11.	Triple Jump	Fourth Position	Mohd. Irfan Khan

Athletic Women

Sl.	Events	Position	Name
1.	800 M	Bronze medal	Ms. Juhi Sharma
2.	Long Jump	Silver Medal	Ms. Nidhi Kumari
3.	4 x100m relay	Bronze medal	Ms. Nidhi Kumari Ms. Nisha Kaswan Ms. Somya aravind Ms. Samruddha Bangar
4.	4 x400 m relay	Gold Medal	Ms. Juhi Sharma Ms. Nidhi Kumari Ms. Nisha Kaswan Ms. Somya aravind

Weight Lifting

Sl.	Events	Position	Name
1.	Under 62 Kg	Silver Medal	Mr. Devendra Singh Meena

2.	Under 77 Kg	Gold Medal	Mr. Gagandeep Singh
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IIT Roorkee Wt. Lifting team got III Place in the Meet.

Results of Team Events

Sl.	Events	Position
1.	Athletic (M)	IV Place
2.	Athletic (W)	Bronze/ III Place
3.	Basketball (M)	Gold/ Ist Place
4.	Basketball (W)	Bronze/ III Place
5.	Hockey	Gold/ Ist Place
6.	Football	Gold/ Ist Place
7.	Squash	Gold/ Ist Place
8.	Table Tennis (M)	IV Place
9.	Tennis (M)	Silver/II Place
10.	Tennis (W)	IV Place
11.	Volleyball (M)	Bronze/III Place
12.	Volleyball (W)	IV Place
13.	Wt Lifting	Bronze/III Place

Overall General Championship (Men)

Position	IIT	Points
IV	Bombay	56.5
III	Kharagpur	58.5
II	Roorkee	68.5
I	Kanpur	69

Overall General Championship (Women)

Position	IIT	Points
IV	Roorkee	28.5
III	Madras	30
II	Kanpur	31
I	Bombay	40.5

This year IIT Roorkee contingent showed commendable performance by bagging Second place in the 50th Inter IIT Sports meet. Only with .5 marks in March Past, we lost General Championship. Due to hard work, our team games (Basketball, Football, Hockey & Squash) got gold. Institute Sports Council always try our best to get more laurels for our Institutes.

(6) SPORTS AWARD WINNERS FOR THE YEAR 2014-15

In order to encourage the Sportsmen/ women (students of IITR) participating in various activities, the Institute Sports Council has selected a few outstanding sportspersons who performed extremely well in their activity during the year 2014-15 and honored them with a few special sports awards. The following sports men/women were the recipient of the Institute Sports Awards for the year 2014-15.

Sl	Award	Name	Branch & Year
1	Institute Colour Award	Mr Arjun Malik	B.Arch 4 th Yr, Civil
		Ms. Vivek Kumar Shaikiya	B.Tech 4 th yr, MMED
		Ms. Rahul Adhikari	B.Tech 4 th yr Civil
		Mr. Kamlesh Kaji	B.Tech 2 nd yr, GT

2	Best Sports Man Award 2014-15	Mr. Anshuman Chowdhary	M.Tech 2 nd yr CE
3	Best Sports woman Award 2014-15	Ms. Nidhi Kumari	B.Tech III yr Chem IDD
4	Rohit Guruwara Award	Mr. Maharnab Mitra	B.Tech I yr CE
5.	Special Prize Award	Ms. Nivedita Sharma Mr. Karan Vashisht	IMT 5 th Yr PST B.Arch 5 th Yr
6.	Institute Blue	Ms. Nivedita Sharma Mr.Rahul Adhikari	IMT 5 th yr PST B Arch 4 th yr

(7) UP GRADATION OF SPORTS FACILITIES FOR THE YEAR 2014-15

Sports facilities work completed

1. Up gradation of weight Lifting hall
2. Purchase of latest gym equipments.

Sports Facilities maintenance work to be undertaken:

1. Construction of sand volleyball court
2. Relaying of Synthetic surface in the existing Basketball Courts
3. Filling & leveling with soil of Football & Hockey Ground
4. Proposal for construction of three Cement Concrete Tennis Courts near govind Bhawan
5. Renovation of Gymnasium (Men & Women)
6. Purchase of branded Gym equipments

10.5 National Service Scheme

1. CENTRAL EVENTS

Cloth Distribution Drive

On 25th January, 2015, NSS organized a cloth distribution drive in a village, Chandighat near Roorkee with the motivation that every little bit helps. Used clothes provide requisite warmth for the needy. Clothes were distributed to people in slum areas and collectively to various government-financed leprosy institutions including Rog Nidan Kendra.

The Event Management Cell managed this drive. It's not about changing the lives of the people but doing something even more basic than that, enabling them to fight their battle of survival against nature.

NSS had also organized a cloth sorting drive on 18th January in which clothes were sorted for women, girls and men. There were about 30-35 bags of clothes. One mini bus was almost full. Kind behavior and enthusiasm of volunteers had brought smile on the face of the native people of Chandighat. They were really touched by this gesture of NSS.

When you help such people, they will really thank you and bless you from their hearts, which gives incentive to NSS.

Clean India Movement

A combine effort was put in by Pragati and Environment cell of NSS IIT Roorkee to clean a village near Roorkee named Teliwala. It was an initiative towards the 'Swachh Bharat Abhiyan'. The primary motto was to create awareness among

villagers to keep their village clean and tidy and to change behavior of people regarding healthy sanitation practices. The students of two cells collectively formed a group in morning. A sad view of village could be seen as all entered the scene. It was an untidy place with poor drainage system. There was no proper water supply with unhygienic condition of living. Seeing this condition, some students were unwilling to proceed further but they had to.

While some students got involve in picking packets of biscuits and chips, others took a broom and began cleaning the roads. It was good to see seniors helping and encouraging juniors. The sad part was that the villagers turned a blind eye to the ongoing events. Rather they were involved in their own gossips about students. Students were disheartened by their response but they didn't leave their hope. They began doing their work with more enthusiasm. They picked every small packet without hesitating and properly threw them in dustbin. Soon villagers began interacting with the students and the happiest part was when one of them joined us to clean their village. Also a small kid after seeing our activity threw his packet of biscuits in dustbin. This brought a smile on everyone's face.

An emotional outburst was seen when an old woman said that they are just showing off. "We have no connection with your village but still we are doing this not for our benefit but for you and for our country. We want to make our county clean" responded one of the students. The response was quite attractive and it was great to see when other villagers supported us and then the old woman realize her mistake for which she apologized. All

villagers promised to keep their village clean and will throw everything in a proper dumping place. They apologized for the current condition of their village and assured as that their village will be cleaner next time whenever we visit it. Everyone after cleaning returned back happily as they had a successful campaign in a small village and they were able to create awareness in villagers about clean India.

Model village Nurtures Young Talent

The children of today are the nation's future. In order to encourage the spirit of learning among children, Model Village cell of NSS IITR organized a talent search exam in the schools of Bhangeri village, which is almost three kilometers from the campus of IITR. At around 10:30 am, the volunteers of Model Village cell assembled near Rajiv Bhawan and soon, they left for the village on their cycles.

In about twenty minutes, they reached their destination and entered the Smt. Saraswati School in the village. The students, after settling down in their respective classrooms, were given the question paper as per their class from first to eighth grade. The difficulty of the questions was different for students of different classes. The members of the cell with the help of the teachers supervised the students while they wrote the paper of 45 minutes time limit. The questions were from mathematics and science subjects. There were also some questions related to general knowledge about the India. A total of around eighty students took the test. Later, they conducted the same exam in M.A.P.S. Bhangeri School. There were about another fifty students who attempted the exam in that school.

After the exam was concluded, the members of cell checked each one of the papers. The top three students from each class were to be given prizes on the occasion of Republic Day. And thus, the Model Village cell has encouraged the budding talent in the village.

Movie Screening for the Students in a Village School

A special screening of the movie 'Delhi Safari' was conducted for the students of a school in a village, Teliwala which is in the vicinity of Roorkee by the NSS Pragati cell representatives. This motion picture was viewed by about 100 students from various classes ranging from 4th to 8th standard. The excitement of watching a film was clearly noticeable on their faces. The duration of the film was about 2 hours. The movie was about a group of animals who lose their livelihood due to various human activities which threaten their existence and how they fight for their survival. Students learnt how paramount it is to save the various components of an ecosystem and maintain

biodiversity. At the same time they understood how humans sometimes for their own interests harm other animals and don't care even a bit for them. All in all, It was an event which the children enjoyed a lot but at the same time took some important morals home and were enlightened with some valuable preaching's.

Swachh Bharat Abhiyan

Proposed by Gandhi, implemented as a campaign by the following generations, the Swachh Bharat Abhiyan is one of those movements that aim at a substratum level reconstruction of the face of the Indian subcontinent. The campaign is recognized as an often part of the Indian culture and hopes to rebuild the tranquil nature of the multilingual peninsula. Although often criticized as a political instrument, the crusade still dictates its relevance and utility in the contemporary world. The activity is expected to become a part of the routine of the Indian citizen, and is currently being carried out by NGOs throughout India.

As a part of this highly applauded campaign, the Pragati cell of IIT, Roorkee visited a small village, Paddli Gurjar Tailiwala, in the outskirts of the city. The corresponding event was organized on the 31st of January, 2015. The cell members themselves initiated the event in which the members themselves took the responsibility of cleaning the roads of the village. The organizers as well as the volunteers who took part in the event gathered in front of the New Sophia Public School in the same village by 10am. Every cell member was offered plastic gloves and brooms after which they began the seemingly simple, but laborious task of cleaning the roads of the under-developed village. Every pair of hands that volunteered for the effort could be observed to be working selflessly to immaculate the disheveled public roadway in an effort to provide conditions of improved hygiene to the occupants of the village. The efforts and wholeheartedness of the group demands more than applause by words.

Although the event was managed and conducted with the intended endeavor, the public opinion in this matter seemed to be a little disheartening. The occupants of the village still remain to be under the assumption that the event was conducted as an act of publicity in the institution and remarks that the job was not executed properly. However, the fact remains that the event was conducted not as an "act of publicity" but as an act of persuasion. Upon enquiring about the public remarks, the cell members still appear to be optimistic on their idea reaching the population eventually.

Drug Money Supports Terrorism

New Delhi: Exhorting India's youth to shun drugs, Mr. Narendra Modi, our honorable Prime Minister, has said narcotics not only destroy lives and

families but the money paid to buy them could be funding terrorists in their nefarious activities.

In his third 'Mann Ki Baat' program on radio, he said the menace is a "national pain" but instead of the youth being mired in the problem, drugs should be shunned.

This is further accentuated by these words by former FBI and whistleblower, Sibel Edmonds.

"You get to a point where it gets very complex, where you have money laundering activities, drug related activities, and terrorist support activities converging at certain points and becoming one"

Indeed drug trafficking has provided funding for insurgency and those who use terrorist violence in various regions throughout the world, including in transit regions. In some cases, drugs have even been the currency used in the commission of terrorist attacks, as was the case in the Madrid bombings.

On January 17th 2015 (Saturday), NSS volunteers conducted a rally cum presentation in Teliwalla village, near Roorkee. The overseer, Pragati cell managed to generate an overenthusiastic response from the intended audience. Main aim of this rally was to make people aware that "DRUG MONEY SUPPORTS TERRORISM". In past NSS has organized 'NashaMukti Kendra' in nearby village and found that, on an average every one out of two houses had people smoking cigarettes/beedhi.

The rally was preceded by a presentation given by members of pragati cell at New Sophia Public School and Lions public school.

Students and other attendees were shown the link between drug money and terrorism through a PowerPoint presentation, were taught about the harms and consequences of such activities and how they prey on our society.

Rally, the main event, covered whole village on foot and seemed to get through the intended result. Rally included boys of standard 6th, 7th and 8th from New Sophia Public School. The rally was a great success and sure would have left a positive impact, at-least, on the minds of young children who participated in it.

The slogans were: "Maanaandhera Ghana Hai, lekin Diyajalana kahanmanahai", meaning "Though there is deep darkness, there is no restriction to light the lamp of brightness", and many more.

Additionally this might help stave off the mango people's drug (narcotics) habit by showcasing the consequences of their miniscule, yet not so negligible actions.

Terrorism has no religion so let's rupture that rapture and grow up.

Science Exhibition by RT Education

National Service Scheme is a non-government organization, yet it takes up the mantle of such social change again and again for the betterment of society as a whole.

RT Education Cell Exhibition Enlightens at Srishti

NSS IIT Roorkee's RT-Education cell exhibited the basic fundamentals of physics at Srishti'15 conducted on 14-15-mar-2015. RT education cell has adopted Khanzarpur village and are constantly involved in helping them develop through different events. The cell gives free coaching to the children of same and nearby villages and has always tried to bring some interest towards science in them. So, like last year team RT education helped the kids in making few brilliant science models. Total 7 models were exhibited which were highly appreciated by the visitors, professors and students from various other colleges. The feedback says it all.

RTE-Sports Event

"3 COLORS NOT JUST TO LOOK BEAUTIFUL, 3 COLORS TO GIVE US A MESSAGE THAT WE SHOULD LOVE EACH OTHER, LIVE IN PEACE AND UNITY."

While the country was celebrating its 66th Republic day, we at NSS, IIT Roorkee did the same by celebrating the National festival with great pomp and pride.

On this auspicious occasion, National Service Scheme (NSS, IIT Roorkee Chapter) organized sports event, and the day witnessed to have one hundred and ten participants, to make the event a success. Nagmani Kumar, the ex-secretary of RTE, Vaibhav Gupta, Saket Kumar and Rahul Jain inaugurated the Sports event, which was held in Chedi Raam School (Subhash Chandra Bose Kridasthal), Khanjarpur. The event comprised of three rounds, in which first round was of twenty meters race, second round was of marble spoon and lastly third round was divided according to the class in which the students were, one group was of class one to three named junior, second group was of class four to six named middle, third group was of class seven to nine named higher. For juniors, frog race was held in third round, for middle ones, two laps forty meters race and for higher, one leg balance race.

They showed enthusiasm and zeal in such an active competition. Over-whelming response was received for the prizes. Prizes included lunch box as first prize for juniors, cricket bat for middle ones, and badminton set for higher ones. The rest second and third prize was medals for all juniors, middle and higher students.

The RT Education Cell of NSS (National Service Scheme) IIT Roorkee organized a science exhibition at Chediram School of Khanjarpur

village. The motive of the event was to build interest towards science in the children of Khanjarpur and nearby villages. The RTE members had demonstrated a total of 6 projects. The total number of visitors was around 50 and all of them learnt a lot and appreciated the science and working of the models. The event ended with a short quiz and children actively took part in it.

Blood Donation Camp

"Your droplets of blood may create Ocean of Happiness. It is red gold in times of saving a life." One of the organizers of the camp said "We are happy to conduct such an event in our college and we are quite overwhelmed by the response of the students. We wish to conduct many such events in the college and also would make sure to conduct this camp every year in our college."

As following the noble tradition of 'Not for me, but for the Nation', National Service Scheme (NSS, IIT Roorkee Chapter) organized its tour de force, the Blood Donation Camp, on Sunday 12th April, 2015 but the day witnessed something extraordinary and satisfactory to the souls who continuously strived to make the event a success. With overall 471 blood donors, the event reflected a real sense of mankind and humanity. Prof. (Dr.) S.P. Gupta, the honorable Deputy Director and Prof. (Dr.) P. Jiwandan, the Associate Dean of Student Welfare, inaugurated the Blood Donation Camp, IIT Roorkee. IMA Blood bank Dehradun, Shri Mahant Indires Hospital Dehradun and Himalayan Institute Hospital Dehradun were the three participating blood banks. Throughout the morning, a steady stream of donors was witnessed with smiles and laughter all around - a true embodiment of what we believe in - selfless service with a smile. The donors had to undergo three levels of screening before donating blood to ascertain their eligibility for donating blood. The primary screening consisted of weight and blood pressure checkup and secondary dealt with hemoglobin test and the tertiary issued the blood bags with questions concerning the donor history. As appreciation, various refreshments like water, fruits, biscuits, juice along with goodies and a certificate were provided to the proud donors. Some of the donors who could not meet the criteria had to go empty-handed.

Awareness Cell Supports Organ Donation

8th February, 2015, Sunday: On the final day of Sankalp 2015, the annual social convention of IIT Roorkee a street play was organized called 'Halla Bol'. NSS Awareness Cell gave a performance of their Nukkad Natak before the event. Through the play, Awareness Cell tried to create consciousness about Organ Donation.

Nagmani Kumar former secretary RTE also attended the exhibition. The event was planned by RTE NSS IIT R under the guidance of Dr. A K Gaurishetty (Department of physics, IIT Roorkee) and the cell secretaries Vaibhav Gupta, Saket Kumar and Rahul Jain. The event was a great success and it provided a platform for the students of the villages to learn and explore a lot.

A great amount of awareness was created regarding the camp through door to door campaign, posters and flexes around the campus. Arrangements were also setup as to provide a help desk that did a remarkable job of handling people's doubts and queries. At first, some donors were quite doubtful of the experience but seemed contented after the donation. The exquisitely fabricated BDC cutouts provided a refreshing ambience and were highly appreciated by the photo-enthusiasts.

Volunteers were motivated by the zeal and the enthusiasm of donors who waited for hours to participate in this noble cause and encouraged students from all streams to take part in this wonderful project. All the donors felt a wave of satisfaction and pride to contribute for donating the gift of life.

Anurag Aggarwal, a second time donor and the first donor of the camp, showed no sign of fear and even inspired others to donate the blood. The chief guest admitted his desire to accompany and observe and to be involved in all the activities of NSS. NSS Coordinator Dr. Smita Jha, the flag bearer of this camp pretty much summed it up that, "Life is precious, try to save it whether yours or others". The CMO was quite elated on seeing an energetic participation by not only the academic fraternity but also the localities of Roorkee." One of the volunteers said that he will surely cherish the indelible memories of this BDC in the near future. Also, the doctors were quite overwhelmed by the cleanliness and sanitation of the hospital and appreciated our efforts in realizing the Swachh Bharat Abhiyaan in practice.

In the end, the three blood banks congratulated Mr. Mohit Tanwar, General Secretary, NSS IIT Roorkee, and appreciated the hard work put by him and his team. The whole NSS team conveyed gratitude towards the donors and expects the next camp to be even greater, both in terms of magnitude and outreach

The team of volunteers of Awareness Cell consisting of about 15-20 students made their way to the UG Floor in the morning at around 10 am. All of them wore White Kurtas and Jeans as their uniform. The bystanders were excited to see what the Nukkad Natak will be about. Soon, the play started and shouts were made calling bystanders to come and see the Natak. Formations of students changed properly and in a well-rehearsed manner.

The play consisted of a story of a child who is visually-disabled since birth and his father who narrates the beauty of the outer world to his son. Also, great impact was put by another story of a man who dies due to kidney failure. Then, they proceeded to give information about organ donation in third person through some more characters. The play concluded with a scene

showing that the dead man made provisions to donate his eyes and the child gets those eyes.

The play was quite moving, especially when seen performed with such intensity and perfection. The students made sure that the message reached its audience clearly. The awareness cell got the respect of not only their peers but also from students of other colleges.

10.6 Institute Students' Club

The Students Club Council for the year 2014-15 is hereby constituted and it as follows:

1.	Dr. S. K. Ghosh, Professor (Civil Engg. Deptt.), Chief Club Advisor, Students Club	Chairman
2.	Dr. K.M. Singh, Associate Professor, (MIED), Dy. Chief Club Advisor, Student's Club	Member
3.	Dr. R.D. Garg, Associate Prof., (Civil Engg. Deptt.), Club Advisor, Jawahar Club	Member
4.	Dr. Akshay Dvivedi, Asstt. Professor, (MIED), Club Advisor, Alaknanda Club	Member
5.	Mr. Aditya Goel, Int. M. Tech. (GPT), IV yr., FG-10, Jawahar Bhawan, General Secretary	Member
6.	Mr. Abhishek Gupta, Int. M. Tech.(GPT), IV yr., FG-7, Jawahar Bhawan, Joint Secretary	Member
7.	Mr. Akash Agarwal, B.Tech. (MMED), I Yr., AS-55, Rajendra Bhawan	Member
8.	Mr. Sakeel Ahmad Waseem, Ph.D. (Civil), F-87, Azad Bhawan	Member
9.	Mr. Priyanshu Taparia, B.Tech. (MMED), IV Yr., S-131, Govind Bhawan	Member
10.	Mr. Pallav Angrulla, M.B.A., I Yr., T-115, Ganga Bhawan	Member
11.	Mr. Jitesh Arora, B.Tech. (Civil), II Yr., 790, Radhakrishanan Bhawan	Member
12.	Mr. Gaurang Mahawar, B.Tech. (Chemical), II Yr., B-649, Rajiv Bhawan	Member
13.	Ms. Pinki Yadav, M.Sc.(Mathematics), I Yr, S-67, Sarojini Bhawan	Member
14.	Mr. Anurag Shukla, R/s (Mathematics), S-27, G.P. Hostel	Member
15.	Ms. Kritika Kaushik, M.Tech. (AHEC), II Yr., C-220, Kasturba Bhawan	Member
16.	Mr. Himadri Pramanik, M.C.A., II Yr., A.G. – 72, Cautley Bhawan	Member
17.	Mr. T. Bency Joseph, IDD (Elect.) IV Yr., G-142, Ravindra Bhawan	Member
18.	Mr. Shubham Rana, B.Tech. (Civil), III Yr., FT-23, Jawahar Bhawan	Member
19.	Mr. Pratik Asai, B.Tech. (Elect.), II Yr., BI-28, Rajiv Bhawan, Indoor Games Secretary	Member
20.	Mr. Siddharth Khandelwal, DF-4, Govind Bhawan, Billiards/Snooker Secretary	Member
21.	Mr. Vivek Kumar, Int. M.Tech. (GPT), IV Yr., FG-14, Jawahar Bhawan, Chess Secretary	Member
22.	Mr. Gargiy Sharma, Int. M.Tech. (GPT), IV Yr., FG-08, Jawahar Bhawan, Music/Magazines Secretary	Member
23.	Ms. Payal Agarwal, A4-39, Kasturba Bhawan, Nominated Member	Member

During the year 2014-15 the following activities were organized by the different club units:-

Billiards:

1. Students Club Open Singles - 15.02.2015 to 14.03.2015
2. Students Club Open Doubles - 15.02.2015 to 14.03.2015

Snooker:

1. Students Club Open Singles - 15.02.2015 to 14.03.2015
2. Students Club Open Doubles - 15.02.2015 to 14.03.2015
3. Inter Bhawan Billiards - 01.11.2014 to 07.11.2014
4. Inter Year Billiards - 22.01.2015 to 29.01.2015

Pool (8 ball and 9 ball) :

1. Students Club Open Singles - 15.02.2015 to 14.03.2015

2. Students Club Open Doubles - 15.02.2015 to 14.03.2015

Indoor Games:

1. Carom, Students' Club Open - 15.02.2015 to 14.03.2015
 2. Chess, Students' Club Open - 15.02.2015 to 14.03.2015
 3. Foosball, Students Club Open - 15.02.2015 to 14.03.2015

Students' Club is the hub of various activities related to students on the campus. A large number of students' daily visit and participate in different Indoor and Cue sports activities housed in the Club. Students' Club is central to large number of other students' activities as well viz. COGNIZANCE, SRISHTI and THOMSO.

This year significant changes to the club premises have been done such as, re-laying of floors in Billiards and carom board rooms. Friction based tiles have been put in place of mosaiced floor in TT room. Also a high speed Wi-Fi modem has been installed for the use of Students, and the air hockey was also made operational. Further, the electrical wiring in the whole of club premises was replaced, to ensure safety.

The extended portion of Jawahar Club was made operational with enhanced playing facilities such new pool and billiards table etc.

10.7 HOBBIES CLUB

Hobbies Club is one of the few destinations in IIT Roorkee where students come to fulfil their hobbies in different areas. The club provides opportunities in the area of Fine Arts, Models and Robotics, Electronics, Software Development, Philately and Numismatics, Star Gazing, Photography and Gardening. The activities of the club started with putting the Hobbies Club council in place. This time a student was selected for the post of General Secretary (Council Secretary) through wide circulation of notice and based on an interview. It was a deviation from previous years wherein General Secretary was nominated / selected from the secretaries of different sections. The selected candidate was given the responsibility of Srishti 2015 also, as convenor. The council for 2014 – 2015 is given in Table 1 below.

Table 1: Hobbies Club Council 2014 - 2015

Sl. No.	Section	Staff Advisor	Secretary
1.	Hobbies Club	Rajat Rastogi	Ravi Kishore
2.	Electronics	Kamal Singh Gotyan	Nikhil Jain
3.	Fine Arts	Harshit Lakra	Vinitendra
4.	Gardening	G.P. Choudhary	Sahithi Sarjana
5.	Star Gazing	Rajdeep Chaterjee	Pranay Sumbley
6.	Philately and Numismatics	Rajat Rastogi	Hemant Charaya
7.	Software Development	Sateesh K. Peddoju	Shashank Mehta
8.	Photography	Anindya J Mishra	Kaustubh Kulkarni
9.	Model and Robotics	Mukesh K Barua	Ankur Dua

This year Robotics came back to Hobbies club from Mechanical Engineering Department.

First meeting of the council was held on 28th August 2015. Advisors and secretaries of each section were pre-intimated to prepare and present the event calendar and roadmap of activities of their individual sections. The event calendar was finalized subsequently and is given in Table 2.

Table 2 : Event Calendar of Hobbies club, 2014 – 2015

Hobbies Club Calendar Autumn 2014

Date of Event	Section – Event Details
Sept. 6, 2014	Star Gazing – International observe the Moon night
Sept. 13 – 14, 2014	SDS – Lecture series on HTML, CSS, Javascript. Robotics – Lecture on Microcontrollers Model – Workshop on Microcontrollers Fine Arts – Charcoal Sketching – 1 Gardening – Bonsai Workshop

Sept. 26 – 28, 2014	Photography – Convocation photoshoot Star Gazing – Cosmic Voyage (3 day festival)
Oct 11 – 18, 2014	Model – Lecture Series on Line Follower and Arduino – Oct. 11 SDS – Online Programming Contest Pi-rates – Oct. 11 Philately – Workshop on Collection and Preservation – Oct. 13 Electronics – Applications of Arduino workshop (Part 1) – Oct. 14 Model – Workshop on Programming with Arduino – Oct. 15 Star Gazing – Telescope Handling Workshop and Hands-on-Oct 13-16 Fine Arts – Charcoal Sketching – 2 Workshop – Oct. 18 Photography – Workshop on Photography Basics – Oct. 18
Nov. 1 – 8, 2014	Photography – Online Pic competition on “Happiness” starts – Nov 1 Photography – Workshop on Photographic Techniques - Nov 4 Electronics – Applications of Arduino workshop (Part 2) – Nov 5 Model – Chain Reaction Contest – Nov. 6 SDS – Online competition Stalemate based on application built by student – Nov. 7 Star Gazing – Rosetta Comet Landing (Exact dates to be decided later) Fine Arts – Doodling Workshop – Nov 8 Philately – Stamp and Coin designing competition for Schools – Nov. 8
Nov. 29, 2014	Photography – Results of online Pic competition on ‘happiness’ Fine Arts – Arts Competition for children

Hobbies Club Calendar Spring 2015.

Jan 17 – 18, 2015	SDS – Lecture series on PHP, MySQL Model – Smart city design Gardening – Workshop on taking care of pots and plants
Jan 30 - 31, 2015	Philately – Open competition for students, employees of IITR Model – Model competition for students, children on theme ‘Technology for Rural Development’ Photography – Pic Hunt contest, Republic Day photoshoot Fine Arts – Oil Painting Workshop SDS – Lecture Series on Design, Photoshop
Feb. 7 – 8, 2015	SDS – Lecture series on Illustrator, Corel Draw Model – Robotics Quiz Photography – Digital Post Processing workshop. Star Gazing – Quiz competition for students and children on ‘Space/Univers’
Feb. 14 – 15, 2015	Photography – Open contest on ‘Colours of Spring’ Fine Arts – Aipan Workshop Electronics Section – Lecture cum Workshop on Electronic circuits Gardening – Binomial nomenclature Workshop Model – Workshop on ‘Robotics’
Mar 7 – 8, 2015	Philately – Trip to Simpex, Shimla Philatelic Exhibition Photography – Photo coverage for Cognizance, Sangram
Mar 14 – 15, 2014	SRISHTI ANNUAL FUNCTION

The students in hobbies club not only pursue their hobby but also earn (academic) credits for the efforts they made in the club. The number of proficiency holder is increasing in the hobbies club from year to year. This is presented in Figure 1. For the academic year 2014 -15 it stood at 1629.

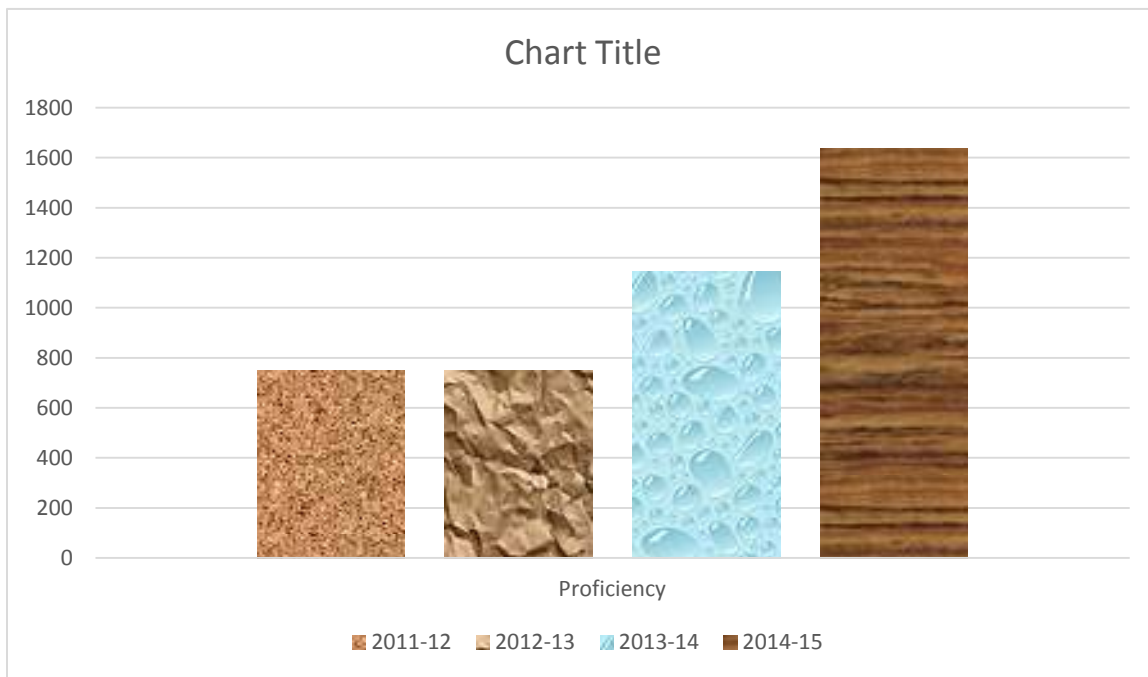


Figure 1: Proficiency Holders in Hobbies Club 2011 – 2014

Apart from the conduct of activities in different sections. Focus was also shifted to infrastructure requirements, operational requirements of the sections, and aesthetics of the club so that a suitable working environment can be created for the students. Proper lighting arrangements were made in and around the hobbies club to improve visibility and security of the students. Closed Circuit Television (CCTV) camera were installed in different sections and at entry and at exit of the club. White boards were made available to each of the section for conduct of lectures. A full HD projector with Wi-Fi was purchased to replace the out of order projector with a view to complement Star Gazing section. The power back-up for software development section was enhanced by replacing aging batteries. Computational facilities in the form of Laptops were added to different sections. Unmaintained statues inside Hobbies Club area have been redecorated and iconic statues have been strategically reoriented at various places in the lawn along with placement of excellent lighting. The Hobbies club rock garden had been revived from its barren state with well-maintained plants and watering, which has further become an active leisure spot for students and other residents of the campus. The requirements of different sections were compiled and orders were placed to start work within time.

Hobbies Club further adjusted the operating timings for a better reach to the student community by remaining open 6 days a week. This, along with newly placed lighting facilities together have made Hobbies club an active spot for students to spend a major productive time of theirs. Further throughout the year, Hobbies Club regularly publicized all its activities like lectures, workshops, events and website launches through various publicity flexes, posters, emails and pamphlets for widespread publicity among students as well as the faculty. The website pages of each individual section and Hobbies Club have been kept up-to-date in the Institute website.

Brief Information of Events

Speaking of the events conducted by Hobbies Club in the academic year of 2014-15, a total of 48 events were held throughout the year other than the ones conducted during Srishti, the annual Techno-Hobby Exhibition of the Hobbies Club.

The events were broadly classified as

1. Student held lectures

2. Guest Lectures by eminent people in each field
3. Workshops
4. Sky Observing Sessions
5. Application Development Sessions

International Observe the Moon Night (InOMN) was organized by Star Gazing section on September 6th, 2015. Good number of students and faculty and their wards participated in it. A Bonsai workshop was organized by Gardening section on September 13th, 2015, wherein a bonsai expert provided the inputs to the participants.

A large number of events were organized in two weeks in autumn semester, one in October (11th – 19th) and other in November (3rd – 9th). The highlights of these were origami workshop by Fine Arts on October 18th, workshop on Basics of Photography on October 18th, Stamp and Coin Design contest for school students on November 8th by Philately and Numismatics section and Puppet making workshop on November 8th – 9th by Fine Arts section. Experts were invited from outside IIT to provide inputs to the students and other participants (staff, faculty and their wards). Students created a Planetarium with their own efforts and conducted shows periodically.

The event statistics for the year 2014-15 are given in Table 3.

Table 3: Event statistics for year 2014-2015

Lectures conducted by students	35
Workshops conducted by students	30
Events, Competitions and Exhibits conducted by students	70
Software Section Projects	110
Electronics Section Projects	60
Software Applications running 24 x 365 in intranet	27
Robotics Section Projects	10
Featured Photography Events	10
Featured Photographs	1000+
Maintained Flowers and Pots	100
Featured Coins and Stamps	400

Lectures were held by students and invitee experts on various topics in different sections. There were lectures on HTML, CSS, JavaScript, Arduino, sensors, use of camera, coin and stamp preservation, serial communication protocol, wireless communication protocol, OP-AMPS and their application, basic electronics, transistors, FETS, JFETS, BJT and their application, etc. by students. Invitee lectures were on Robotics by Prof. Gianee De Caro, Senior Researcher, IDSIA, Lugano, Switzerland, who visited IIT Roorkee on February 3 – 4, 2015; on Cosmic Voyage by Dr. Bradley M Peterson, Chair Astronomy and Astrophysics Committee, NASA and by Dr. Micheal Kramer, Director, Max Planck Institute for Radio Astronomy (both through Webinar), on preservation of coins by Mrs. Illona Prakash are few to be mentioned in specific.

During the year, students in each section were given project works in groups. They were expected to submit the work done towards the end of the spring semester, wherein they would be evaluated for proficiency as well as for exhibit during Srishti-2015.

Section-wise Activities and Initiatives

Software Development

1. The section started an intranet portal for IITR students with services like DC++ file sharing, live streaming of sports and institute events, online music player, self-updating software repository, a local book repository, and intranet study material repository and a plethora of other services for students that run 24x7.
2. Lectures were conducted throughout the year on the following topics:-
 - a. HTML/CSS
 - b. PHP
 - c. Javascript

- d. Android development
 - e. Photoshop
 - f. Corel Draw
 - g. Video editing
 - h. Node JS
 - i. Linux
 - j. Automation
 - k. Networking and Security
3. Online programming and security contests CodeBlitz, BackdoorCTF, Insomnia, NoobCTF, ReconCTF, Project Gauss, EndGame and Stalemate were few of the contests held on platforms built by students themselves. Each of the online competition was widespread publicized and witnessed a maximum of 850 participants in one of the competition.
 4. A Linux user group was formed to discuss and solve issues faced by various linux users on campus. The group conducted operating system installation events for first time users on campus.
 5. Two new groups namely, Game Development and Computer Security group have been formed based upon the interests of students.
 6. An online website intended for alumnus to share their campus experiences was created and launched.
 7. An online portal called study portal was launched for students to share their own study material for academic and non-academic courses.
 8. An intranet portal called Erdos was created for students to share practice mathematical problems which could be solved using basic programming skills.
 9. Quadcopters were programmed to follow humans wearing a particular color of clothes.
 10. Motion sensor devices have been utilized to create an immersive virtual reality gaming arena in the Software Section of Hobbies Club.
 11. Various applications over Android platform have been built and launched over Google Appstore allowing students to learn state of the art new programming languages.

Achievements:

The following are the achievements of the section during the academic year:-

- **Intel Embedded Challenge, winners 2014:-** A 2 member team representing the software development section secured the National Winners position in this Competition held at Bangalore in December
- **Deloitte Collegiate Cyber Security competition Winners- 2014:-** A team of 3 members won the third edition of the Deloitte Collegiate Cyber Security competition and were awarded a cash prize of Rs. 1,20,000/- conducted at Hyderabad.
- **ACM ICPC world finalists, 2015:-** Team from SDSLabs (representing IIT Roorkee) qualified for ACM ICPC world finals 2014-15 and will attend the Finals at Morocco, Africa.
- **Google Summer of Code, 2015:-** 3 Students were selected for the Google Summer of code (GSOC) program from the software development section. Each of the students will receive a stipend of 6000/- US dollars on completion of the programme.
- **Backdoor CTF, 2015:-** Hosted BackdoorCTF a Jeopardy style cyber security competition online. Participants from 68 countries and a total of 769 teams participated in this worldwide competition held during 1st April to 3rd April.
- **Ambassadors, 2014-25:-** Students of Software Development Section were selected as the Student Ambassadors for prestigious companies including Facebook, Google and Microsoft.
- **Open Lectures:-** Conducted 23 open lectures in various Programming languages and Algorithms with attendance of 100 - 150 each.
- **Online Groups:-** The section has an online facebook and google group with a total following of 12,000+ members. All news related to the events of the section were shared using these groups and all key events were publicized throughout campus by flexes, posters, pamphlets and emails.

Following were the Best projects of this section:

1. **Experiences**, internet app for sharing student's experiences during their stay in IITR
2. **SMSKitty**, intranet app for sending SMS notification to students
3. **Backdoor**, internet app to conduct international security and penetration competitions.
4. **BruteDC**, intranet app that allows users to download media through an interactive portal
5. **Suadeo**, a custom developed
6. **Cross application** recommendation engine.

Electronics

1. The Electronics Section's main motto for the academic year was to teach and help people understand seemingly incomprehensible gadgets and assist people in building their own electronic projects and devices.
2. The section organized numerous open lectures and workshops throughout the year and tried to deliver functional and operational knowledge of electronics hardware and its software. Lectures and Workshops covered wide areas including :
 - i. Microcontroller Applications
 - ii. Arduino Applications
 - iii. Digital design and synthesis
 - iv. Basic Digital and Analog Electronics
 - v. Soldering Techniques and PCB Optimization.
 - vi. Printed Circuit Board (PCB) design and fabrication.
3. Approximately 200 students have worked on over 50 projects that were displayed during Shristi Exhibition. Projects' domains included embedded system, Automation, Signal processing, Zig bee and GSM communication, GPS, Robotics etc.
4. A Maze solver bot was built, that could solve a maze path by detecting paths using Digital Image Processing
5. Various Home Automation techniques were proposed and implemented by students to control home appliances cheaply from remote locations
6. 3D laser scanner, Low cost Coffee Machine, FPGA based audio processing were some of the major student projects developed by the Electronics section during the academic year.

Following were the Best projects of this section:

1. **Touchscreen Laptop**
2. **Sixth Sense**
3. **Smart Energy Meter**
4. **Motion Sensor**
5. **Watch controlled Energy system**

Models and Robotics

1. The Models and Robotics section's main motto for the year was to impart knowledge of Robotics to students and help them build low cost robots as solutions for different problem cases.
2. As a part of this, the section took up a set of lectures and workshops, few involving experts in the field.
3. Topics of workshop and student projects include:
 - i. Basic robotics
 - ii. Mechanical robots and drives
 - iii. Microcontrollers
 - iv. Sensors
 - v. Arduino and AVR
 - vi. Maze solving by robots
 - vii. Advanced robots
4. Further, the section actively developed ten major robotics projects including:
 - i. Smart Shower
 - ii. Follower Bot
 - iii. Writing Robot

- iv. Surveillance Robot
 - v. Parking Automation Robot
 - vi. Quadcopter
 - vii. Biped
5. Active participation by at least 100 students have been witnessed in each of the major workshops held by section.

Following were the Best projects of this section:

1. **Writing Bot**
2. **Smart Shower**
3. **Self-Balancing Bot**
4. **Automated Parking System**
5. **Man-Following Bot**
6. **Maze Solving Bot**
7. **Wireless Surveying Bot**

Gardening

1. The Gardening Section has been instrumental in promoting the gardening activities in the IIT campus and outside. The Section has been proactive with its activities, infusing and promoting the recreational spirit of nature and gardening amongst the students.
2. The approach of the Section has been holistic in this pursuit, with the following major activities being organized during the year:
 - i. Plantation Drive
 - ii. Bonsai Plantation workshop by Ms. Nivedita Budhalakoti
 - iii. Pots and Plant Maintenance Lecture
 - iv. Pot painting and Garden modelling workshops
 - v. Binomial Nomenclature workshops
3. Further during Srishti 2015, the section actively hosted many events and competitions such as Flower Bouquet making, identification of flowers and plants.
4. Major highlight for Srishti 2015 by the gardening section was the event Plant-A-Bottle where students utilized recycled bottles and soil to create beautiful hanging designs.
5. The Gardening section has been highly active in promoting gardening as a hobby on the campus. The sessions were attended and appreciated by students spanning all years and branches, along with various faculty members and outsiders as well.

Philately and Numismatics

1. The Philately and Numismatics section's main motto for the year was to enhance the pleasure and friendliness of stamp and coin collections among students. Further, the focus has been to assist its members in acquiring and disposing of various collectibles.
2. During the session of 2014-15 this section has initiated and coordinated numerous new programs in the direction to fulfil its goals. Few of them are :
 - a. Lectures
 - i. The Art of stamp collection by Mrs. Illona Prakash – This lecture was conducted to help the beginners, who want to build their own stamp collection.
 - ii. The Philately of New-Zealand: Innovation born of necessity by Mrs. Illona Prakash - Lecture was about how innovative methods, which were born to recover and reuse materials in New-Zealand inadvertently added to the richness of philatelic material of the country.
 - b. Workshops
 - i. A History of India in thirty-six postage stamps by Mr. Manoj
 - c. Events
 - i. Stamp and Coin Design Competitions in various schools in Roorkee
 - ii. Essay competition on importance of Philately and Numismatics

- iii. Valutare - a stamp evaluation competition.
3. Further the section conducted various events as a part of Srishti 2015 namely :
 - a. CurrenC
 - b. Ameleta
 - c. Naksha
 - d. Search Squad
4. The participation in the events of the section was much higher during this year compared to previous years.

Fine Arts

1. The fine arts section has always been known to harbour numerous student artists and experts in fields like sketching, painting, digital art, origami, material designing.
2. The section actively conducted numerous workshops and lectures that attracted hundreds of students and teaching staff. Few of them are :
 - i. Charcoal Workshop
 - ii. Sketching Workshop
 - iii. Painting Workshop
 - iv. Digital Art Workshop
 - v. Origami Workshop
 - vi. Puppet Making Workshop
3. Further, the section served as an active spot for lots of students on campus working on collaborative art pieces.
4. Hundreds of student made arts, designs and models have been placed as exhibits and displayed during the Hobbies Club Exhibition.
5. Further, students conducted competitions such as Face Painting, Calligraphy and Wall painting.

Following were the note-worthy works done in Fine Arts section:

1. **Shipwreck**
2. **Pirate's Arsenal**
3. **Ship In A Bottle**
4. **Bioscope**
5. **Main Wall**

Star Gazing

1. The Stargazing Section has been instrumental in pioneering amateur astronomy activities in the IIT campus and outside. The Section has been proactive with its activities, infusing and promoting the exciting spirit of science in general and astronomy in particular.
2. The section kick started its events for the year with an International Observe the Moon Night using its state of art telescopes during the month of September
3. Further, a 3 day Astronomy festival was conducted during September during which multiple guest lectures and workshops were conducted including :
 - i. Talk by Dr Bradley Peterson, Chairman, NASA
 - ii. Talk by Dr. Michael Kramer, Max Planck Institute
4. A 15 foot planetarium was erected by students of the section to showcase the jewels of the night sky to students.
5. Workshops on Telescope Handling was conducted.
6. Rosetta Comet Landing was attempted to be observed by telescope.
7. Workshops on various types of astronomy, sundial making, and observations were held which witnessed participation of around 200 students.

Photography

1. The photography section is quite actively involved in various photoshoots of the campus.

2. With over 1000 featured photos and 10 main photography events, the section helps students learn photography, its technical aspects and post processing
3. The section held lectures and workshops about different Photography techniques, hands on workshop on handling special cameras.
4. As an exercise, numerous photos were capture of the Main Building, Cultural events and technical festival of the institute.
5. With over 400 displayed entries in Srishti, photography section exhibits were an absolute eye candy for visitors.
6. The main attraction for the exhibition by Photography section was Photobooth.

Following were some of the main themes in which entries were invited:

1. **Shutter**
2. **Lights And Reflection**
3. **Symmetry And Distortion**
4. **Flora And Fauna**
5. **Moods**
6. **Travel**
7. **Abstract**
8. **Humans And Habits**

SRISHTI 2015

1. The 56th Annual Techno Hobby exhibition, Srishti was conducted on 14th - 15th of March 2015.
2. The working team and committees for organizing Srishti was formulated as early as December 2014 and a roadmap for preparations had been established by early January.
3. Extending the scale of Srishti from previous years, this year it had been made open for entries and participation from Colleges and Schools outside IITR.
4. The inaguration Ceremony (14th March) was held inside Hobbies Club premises and the Chief guest for the exhibition was Prof. Vinod Kumar, Deputy Director of the Institute.
5. The official website of Srishti had been developed and maintained by the Software Development Section students and hosted at srishtiiitr.in
6. The event witnessed footfall in thousands and the number of events, competitions and exhibitions held were more than 65
7. The two day exhibition was a grand success and had been applauded by 4 newspaper articles featuring student activities and projects
8. Each of the 8 sections had judged the best projects the students have made and gave away prizes in each category
9. Badminton Playing Robot, Motion Sensor gaming, 3D image processing, Information Security projects, Cardboard Ship art, Ship in a bottle exhibit, Rare stamps from pre independence time, 24 hours Photographs of Main Building fusion were few of the most enthralling aspects of Srishti 2015.

Winners – Parma Jyoti Foundation Awards

Parma-Jyoti Foundation has instituted awards worth Rs 5,000.00 each for the BEST judged entry in each section by IIT Roorkee student during Srishti. Following were the winners for the award:

1. **Section Electronics:** Entry MAZE Solver; Students Deepanshu Garg, Shivam Kumar, Rishabh Jain (2nd yr EC)
2. **Section Models and Robotics:** Entry Writing Bot; Students Jashan Preet Singh (14111016, Biotech 1st yr), Gautham Sriram (14410007, GPT, 1st yr)
3. **Section Star Gazing:** Entry Model of Solar System based on Space Time Curvature; Students Pushtivardhan Mishra, Vatsal Barthwal, Prakhar Khandelwal, Gulshan Dhanani, Hshubham Raj and Himanshu Gupta (all 3rd yr, Cicil Engg)
4. **Section Fine Arts:** Entry Ship in a Bottle; Student Prakhar Sharma (MT IV yr)

5. **Section SDS Labs:** Entry Backdoor; Students Vishrut Kumar (13115139, EE 2nd year) and Dhaval Kapil (13114015, CSE 2nd Year)

Section Trophy Winner

Following are adjudged the sectional trophy winners for 2014 – 2015:

1. **Star Gazing** – Himanshu Khanchandani (12311014)
2. **Electronic Section** – Roopak Srivastava (12116048)
3. **Photography Section** – Saket Sarupria (11110046)
4. **Software Development Section** - Agniva Si (13118005)
5. **Fine Arts** – Avichal Agarwal (12410004)

Links:

1. Photography section: photog.iitr@gmail.com ; <https://www.facebook.com/photog.iitr>
2. Electronics section: section.electronics@gmail.com ; <https://www.facebook.com/groups/electronics.section/>
3. Fine Arts section: <https://www.facebook.com/FineArtsIITR>
4. Gardening section: gardeningsession2013@gmail.com ; <http://www.facebook.com/groups/408773655848213/>
5. Models and Robotics section: roboticssection.iitr@gmail.com ; <http://teamroboconiitr.in/>;
6. Software Development section: contact@sdsdslabs.co.in ; <https://sdsdslabs.co.in/>; <http://facebook.com/SDSLabs>

10.8 CULTURAL SOCIETY

Dhun

The Music Section organized Annual Musical Events “Dhun” on 04th April, 2014.

Passing out Play

The Passing out Play (CURIOUS SAVAGE) was performed by Dramatics Section on 09th & 10th April 2014 in O.P.Jain Auditorium.

Dr. B.R. Ambedkar Jayanti

The students of Music section performed Kulgeet & National Anthem for the Birth Day celebration of ‘**Dr. B.R. Ambedkar Jayanti**’ on 14th April, 2014. in the Senate Hall.

The Valedictory Function

The valedictory function of Cultural Council was organized on 17th April 2014, Certificates and mementoes were given to the sectional Secretaries and members of passing out batch (2013-14). A new student executive body for the session (2014-15) was installed.

Orientation Program

The students of Cultural Council performed a Cultural Program on 20th July, 2014 at Convocation Hall as a part of Orientation Program for New B.Tech. entrants.

Intro-talk & Auditions

Intro-talk Function was held on 1st August, 2014. The students of new batch (2013 - 14) were introduced to various activities of the Cultural Council on August, 1st August 2014. Consequent to this, audition of new entrants was organized for different sections as per the choice and talent of new students.

Independence Day

The students of Music section performed Kulgeet & National Anthem on August 15th, 2014 as a part of Institute activity.

Teacher’s Day

Student of Music Section performed Kulgeet on the Occasion of 'Teacher's Day' on 05th September, 2014 at O.P. Jain Auditorium, Civil Engineering Department.

Shaam-e- Mausiqi

Students of Music Section performed a Classical Music show on "Shaam-e- Mausiqi" on 11th September, 2014.

Annual Institute Convocation

The students of Music section performed Kulgeet & National Anthem on 20th September, 2014 in "Convocation -2014" at Convocation Hall.

"Mantrimandal"

Dramatics Section performed a stage play "Mantrimandal" on 14th October, 2014 at O.P.Jain Auditorium.

"Ye Kaisa Swabhiman"

Dramatics Section performed a street play "Ye Kaisa Swabhiman" on 15th October, 2014 at U.G.Club Flore

Pehla Nasha

The Music Section organized "Pehala Nasha" on 16th October, 2014, in which only the new students of the session 2014 -15 performed.

Gandhi Jayanti

Students of Music section performed Bhajan on October, 2nd 2014 as a part of Institute activity.

Republic Day

Students of Music section performed Kulgeet & National Anthem on January 26th, 2015 as a part of Institute activity.

Cultural Week (09th -13th Feb, 2015)

Cultural council conducted the annual Cultural Week from 9th-13th February, 2015. This program encompasses various events which are organized annually; Music Section presented "Dhun" on 09th February, 2015. The Dramatics Section Staged a play "The Mouse Trap" on 11th & 12th February, 2015. The Choreo/Dance Section presented a dance show "JASHN" on 09th February 2015.

Literary Section

Literary Section of Cultural Council IIT Roorkee organized number of Debates and Quiz programs.

Kshitiz Magazine

Kshitij Magazine Section Published Two Volumes of Kshitiz Magazine.

Watch Out News Agency Magazine

Watch Out News Agency Magazine Section Published Two Volumes of Watch Out News Agency Magazine.

IIT Heart Beat Magazine

IIT Heart Beat Magazine Published One Volume of IIT Heart Beat Magazine.

10.9 CINEMA CLUB

Movie Screening in Convocation Hall

City lights – 3 show
Singham Returns – 2 show
Haider – 2 show
Mary Kom – 2 show
PK – 2 show
Baby – 2 show

Movie Screening in O.P. Jain Auditorium

Whiplash – 1 show

Movie Screening in Multi Activity Centre

Interstellar – 1 show
The Imitation Game – 1 show

10.10 HIMALAYAN EXPLORERS CLUB

The brief summary of the activities of Himalayan Explorers' Club held during the autumn semester of academic year 2013-14 are listed below:

AUTUMN SEMESTER

- **Udghosh 2013:** A contingent of 15 members represented IIT Roorkee in Taekwondo Championship at annual sports festival of IIT Kanpur, Udghosh 2013 held from 26th to 29th September 2013. The team brought glory to the institute by winning 30 medals including **8 gold, 10 silver and 12 bronze medals.**
- **Taekwondo camp:** A Taekwondo camp extending for 10 days was organized. Basic self-defense techniques were demonstrated and taught in the camp. Camp was fruitful and witnessed participation of 100 students.
- **Short Treks:** Short treks have always been a crucial and attractive activity of HEC. On 3rd September 2013, notice was issued for short treks to be organized in the month of September and October. Nine short treks were planned for both boys and girls from 28th September 2013 to 29th September 2013 and 12th October 2013 to 13th October 2013 from IIT Roorkee main campus as well as from Saharanpur Campus. The trekking spots were **Triund-Lahesh Cave, McLoyd Ganj –Triund, Pangot, Bhadraj, Nagtibba, Chakrata, and Himani-Chamunda.** Registrations for the same were done on 5th September 2013. Over 400 students registered themselves for the treks. Out of the 400 students registered, 280 students were shortlisted on the basis of Conditioning and Training camp organized from 16th September 2013 to 20th September 2013. All the nine treks got completed safely and as per the plan.
- **Green Yatra:** On 20th October 2013, a cohead regional development trip -Green Yatra to Danaulti was organized. 14 girls and 24 boys along with a professor participated in this trip. It also included visit to Eco Park and a short trek of 3 km to Surkanda Devi temple. Saplings were collected for the Plantation Programme. Overall it was a delightful one-day trip.
- **Skating Camp:** A 5-day skating camp was organized from 16th September 2013 to 20th September 2013 on the UG floor, Students Club in the evening after classes. Skates were provided by HEC to all the students who attended the camp. The UG floor bustled with students who came to the camp. Nearly 100 students were allowed everyday on "FIRST COME, FIRST SERVE" basis as per their slot timings
- **Guest lecture:** On 9th October 2013, a motivational and mettlesome guest lecture, "**Triumph of Willpower, atop Everest**" was held at O.P.Jain Auditorium where Ms. Arunima Sinha, the first female amputee to climb Mt. Everest. Ms Arunima Sinha enlightened everyone with the most threatening adventurous experiences of her life and shared her breathtaking story of expedition to Mt. Everest. Nearly 200 students attended this inspirational lecture. Programme also witnessed officials from Roorkee Cantonment and IIT Roorkee.
- **Plantation Programme:** On 27th October 2013, a Plantation Programme was organized at General Williams' Conifer Land, a garden near main building, in which different kinds of saplings were planted. Saplings were brought from the places of trekking and Green Yatra. Planted saplings are regularly taken care by HEC.
- **Long Treks:** Long Treks are accomplished during the Semester break as they require minimum 4-6 days. Again this year, we received an overwhelming response of the students participating in 2 hard treks and 3 moderate treks.
 - Sunderdhunga Trek
 - HarKi-doon Trek
 - KhanolChikka Trek
 - Malana Trek
 - Deo-Tibba TrekEach destination has its own importance and natural beauty. Trek members had to carry their own tents, food items, sleeping bags, gas cylinders, ruck-sacks and mattresses during

the whole length of the trek varying from 35kms-50kms.

SPRING SEMESTER

- **National Taekwondo Championship:** The spring semester began with the participation of our Taekwondo Team in National taekwondo championship held at Chennai. Seven students participated in this championship. Performance was very well and this was the first opportunity for students to participate in such a national level competition.
- **Annual Cycle Race:** On 8th of February, the biggest and most awaited event of the campus, the **ANNUAL CYCLE RACE** was organized in which 200 boys and 35 girls participated. The race was flagged off by Sub-Divisional Magistrate, Roorkee
- **Corbett Trip:** Like previous year, this year also we organized a venturesome trip to JIM Corbett National Park. It included various adventure activities, jungle safari and museum visit. The trip had a participation of 51 students including 21 girls.
- **Confidence Assault Training Course:** A 5-day Confidence Assault training Course was held at Bengal Sappers. Around 100 participants were trained about the tactics actually used by the commandoes for physical training.
- **Annual Plantation Day:** On 9th March 2014, a guest lecture by Dr. Prafulla Soni, President, Society for Application of Forest Ecological Research was organized to pay tribute to the founder of HEC Late Prof. Mahendra Pant on the occasion of Annual Plantation Day. Dr. D. K. Nauriyal gave a brief insight of Pant sir's life. The function took us to the 80s, where we got to know the true purpose, that why HEC was formed. After the lecture, samplings were planted at William Conifers Land followed by a visit to the nearby Nursery of IIT Roorkee.

- **Marathon:** On 18th March 2014, a 4 km long Marathon was organized by HEC in association with National Service Scheme, IIT Roorkee for the cause "Save the Girl Child" on the occasion of –"International Women's Day". A large number of students, over 170, participated enthusiastically; not in a competitive spirit, but with a feeling of sisterhood and brotherhood, to join hands for supporting the cause.
- **Paragliding and Skiing Trip:** After waiting for many years, this year during the HOLI break, we organized a Paragliding and Skiing trip to Manali. 75 students of Roorkee and Saharanpur campus participated in this trip and learnt the basics of the above sports.
- **Rock-Climbing:** From 15th to 17th March 2014, a Rock Climbing trip was also organized at "Nanital" to conquer heights and leaving all fears behind. It was a wonderful trip. About 40 students participated in the trip.
- **Rafting:** White water Rafting is one of the most exciting and thrilling events. About 123 students (50 boys and 73 girls) enjoyed the Rapids of the river Ganga at Rishikesh. This 2 day trip consisted of camping, beach volleyball, body surfing, jungle hiking, rappelling, and the most thrilling 36 km white water rafting starting near Marine drive to Laxman Jhula.
- **Photographic Competition** An online photography competition was organized in April 1st week on the theme - "Iridescence".
- **Annual Club Day:** This was the final event of the session. The programme started with the release of Annual Club Magazine followed by a self-defense demonstration and video of annual activities. Finally, the prizes were distributed for various round the year activities.

10.11 FOREIGN STUDENTS' ACTIVITIES

This year, 65 students from various countries were registered in various undergraduate, postgraduate and Ph.D. programmes. The Institute is proud of imparting education and training to the students from various countries including Asia and Africa in

different disciplines of Science and Engineering. The international students stay in hostels along with other students and take part in the extra-curricular activities of the Institute.

10.12 TRAINING AND PLACEMENT OFFICE

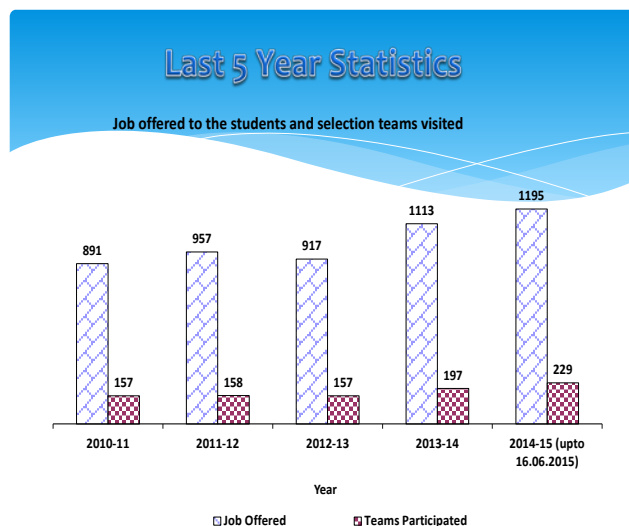
The placement and training activities continue to grow under the guidance of Professor-in-Charge, Training and Placement. A student core placement team and the Placement Advisory Council consisting of student representatives from the final year academic programmes and the faculty in-charge from each academic department work round the year to look after smooth execution of the activities.

The progress in placement over the years, as can be seen from the bar chart given below has been made possible due to following initiatives:

- More than 2200 companies were invited for campus placement
- We have managed to achieve 1195 job offers
- Proactive approach in inviting companies
- Multiple sessions of campus recruitment on each day
- Complete computerization of the placement process
- Active co-operation and participation by the students in assisting the companies during their stay in campus
- Soft skills workshops were conducted
- New companies hired interns from the campus – Fuzzy Logix, PayU Payments Pvt. Ltd., Shapoorji Pallonji and Company Pvt. Ltd., Finisar Malaysia Sdn Bhd etc.
- Major MNC's like LinkedIn India, Visa, Huawei Telecommunication (India) Co. Pvt. Ltd., Pyramid E&C, Shimizu Corporation India Pvt. Ltd., Jubilant Life Sciences Ltd. and etc. visited the campus for the first time.
- 84 new companies have visited first time in campus this year.
- We managed 20 companies in a day in campus.
- Personal visits to companies and establishing relationships and contacts at the highest level
- Special mails were sent to all our alumni to reconnect and contribute towards placements

Since the start of 'on-campus recruitment' for the session 2014-2015, from 1st December 2014, 229 companies visited the campus.

Year wise job offers and teams participated in campus recruitment

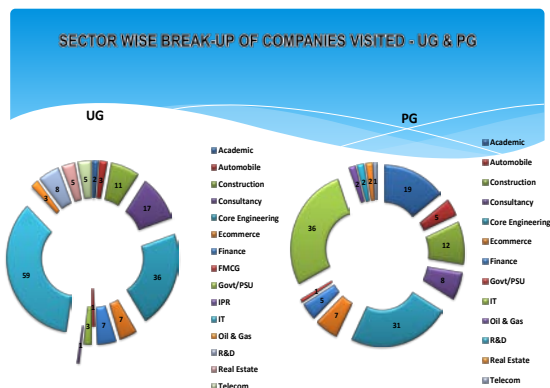


Many big names visited the institute for the first time. Companies like LinkedIn India, Vias Inc, Fuzzy Logix, Pyramid E&C, Swiss Re, Housing.com, Leaf Technologies, Tata Communications, Huawei Telecommunication (India) Co. Pvt. Ltd., Practo, V-Mart Retail Ltd., Vodafone India Ltd., Idea Cellular Ltd., Libsys Limited, Kolte Patil Developers Ltd., Times Business Solutions, Shimizu Corporation India Pvt. Ltd., Jubilant Life Sciences Ltd., Havells India Ltd. and many others recruited for the first time from IIT Roorkee. Some other key companies that visited the campus were Microsoft (Redmond), Samsung Research India, Schlumberger, Google Inc, Shell, Reliance Industries Ltd., ITC Ltd., Qualcomm India Private Ltd.. They were indeed impressed by the technical knowledge and the quality of students and did recruit a significant number of students. This year's placement session also had a healthy and uniform participation from various sectors like Finance, Core engineering, FMCG (Fast Moving Consumer Goods), Construction, IT, R&D, Oil/Energy etc.

Besides IT, core engineering was also as popular among the students. Regular recruiters like Qualcomm, Tata Steel, SRF Ltd., Tata Motors, Eaton, Cisco etc. followed the same trends as the past few years and hired students for their operations pertaining to core engineering. The sector wise break-up (UG & PG) of the companies visiting the campus this year is given the following figure.

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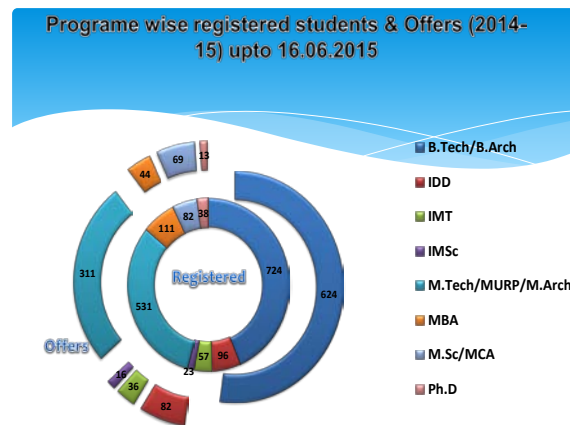


The Institute also witnessed a huge increase in terms of the number of offers received from companies for overseas recruitment. Some of the firms which have hired students for their overseas operations are Facebook Inc, Google Inc, Microsoft Redmond, Oracle, Vias Inc, Pyramid E&C, Works Applications Co. Ltd., Finisar Malaysia Sdn Bhd. A total of 16 offers were made by these companies. The company wise break-up of offers is given in Appendix 1.

A glance at overall placement statistics in the following table and the figure clearly reflects that the campus placement for the year 2014-15 has been quite satisfying across all the academic programmes.

Academic Programme	Number of students registered for Placement	Number of offers made
B.Tech/B.Arch	724	624
IDD	96	82
IMT	57	36
IMSc	23	16
M.Tech/MURP/M.Arch	531	311
M.Sc/MCA	111	44
MBA	82	69
Ph.D	38	13
Total	1662	1195

* Excluding a few students who opted out of placement to pursue other career opportunities or higher studies.



The branch/discipline wise placement statistics of undergraduate and postgraduate students is given in Appendix 2.

The Training and Placement office was also able to secure significant number of offers for the mandatory summer internships of the pre-final year students from companies such as ITC Ltd., Face Book, Works Applications Co. Ltd., Schlumberger Asia Services Ltd., Microsoft, Reliance Industries, Goldman Sachs, Amazon, Qualcomm India Private Ltd, Wipro, BPCL, Cairn, Adobe Systems India Pvt. Ltd., Deloitte Consulting, Mahindra & Mahindra, Samsung Engineering Labs, Shell, Robert Bosch Engineering and Business Solution Ltd., Shree Cement Ltd. etc. among others. A total of 284 internships were arranged by the office.

Overall, the placement session 2014-15 heading to on a successful note.

Appendix 1

Company wise break-up of number of offers

Sl. No.	Name of Company/ Organization /Institute	Offers
1	3DPLM Software Solutions Ltd.	1
2	Accolite Software India Pvt. Ltd.	1
3	Adobe Research India	7
4	Affine Analytics	4
5	Alfa College of Engineering & Technology	10
6	Alstom India Limited	1
7	Amazon Development Centre	5
8	Anand Automotive Ltd	2
9	Applied Materials	1
10	Arup India Pvt. Ltd.	2
11	ASC Infratech Pvt. Ltd.	2
12	Avanti Learning Centres Pvt. Ltd.	1

13	Axtria India Pvt. Ltd.	25
14	B&S Engineering Consultants Pvt. Ltd.	1
15	Balaji Action Buildwell	6
16	Beehyv Software Solutions Pvt. Ltd.	5
17	Bharti Airtel Ltd.	2
18	Boston Analytics	5
19	BrowserStack	1
20	Cairn India Ltd.	2
21	Capgemini India Pvt. Ltd.	13
22	Capital One Services(India) Pvt. Ltd.	2
23	Caterpillar India Pvt. Ltd.	2
24	CBRE South Asia (P) Ltd.	3
25	Centre for Development of Telematics	1
26	Cisco Systems (India) Pvt. LTd.	6
27	Citicorp Services India Ltd.	12
28	Citrix R&D India Pvt. Ltd.	3
29	Clavileno Capital	5
30	Click Labs Pvt. Ltd.	1
31	Coal India Ltd.	13
32	Codenation	0
33	Cognilytics Software & Consulting	2
34	Cognizant Technology Solutions	18
35	Continental India Ltd.	1
36	Crayon Data	4
37	CRISIL Ltd.	3
38	CSC India Pvt. Ltd.	1
39	Cubastion Consulting Pvt. Ltd.	11
40	D.E. Shaw India Software Pvt. Ltd.	2
41	Daimler India Commercial Vehicles	2
42	Dar Al-Handasah Consultants (Shair & Partners) India Pvt. Ltd.	42
43	Deloitte US India	11
44	Denfab Engineers Pvt. Ltd.	3
45	Directi	4
46	DIT University	18
47	DocSuggest	6
48	DPS Yamunanagar	2

49	DRDO	3
50	Drishti-Soft Solutions Pvt. Ltd.	2
51	Dunnhumby - MBA	3
52	Eaton	5
53	ebay Inc.	1
54	Edge Verve Systems Ltd. (Infosys)	0
55	EduExcellence	3
56	e-GMAT	2
57	Elegant Marine Services	10
58	Era Infra Engineering Limited	4
59	ERCON COMPOSITE	1
60	Evalueserve	5
61	EXL Service (I) Pvt. Ltd.	5
62	Expicient software Pvt. Ltd.	3
63	Facebook	2
64	Feedback Business Consulting Services Pvt. Ltd.	2
65	Finisar Malaysia Sdn Bhd	4
66	First Choice Retailing Pvt. Ltd.	1
67	Flipkart Internet Pvt. Ltd. - Software - BA	19
68	Freescale Semiconductor India Pvt. Ltd.	3
69	Futures First Info Services PL	5
70	Fuzzy Logix	2
71	General Motors Technical Centre India Pvt. Ltd.	1
72	Girnar Software Pvt. Ltd.	30
73	Global Analytics	2
74	Goldman Sachs Services Pvt. Ltd. (Strategies Group)	10
75	Goldman Sachs Services Pvt. Ltd. (Technology Division)	2
76	Google International	2
77	Grail Research, a division of Integreon	7
78	Gram Power	0
79	Greaves Cotton Ltd.	4
80	Havells India Limited	1
81	Haygot Education Pvt. Ltd.	1
82	HCL Technologies	1
83	HDFC Asset Management Co. Ltd.	4
84	HDFC Bank Ltd.	7

85	Holachef Hospitalities Pvt. Ltd.	2
86	HouseJive Technologies	2
87	Housing.com	11
88	HPA Spaces Pvt. Ltd.	8
89	Huawei Telecommunication (India) Co. Pvt. Ltd.	3
90	i3 Consulting	7
91	ICF International	1
92	ICICI Bank - MBA	6
93	ICICI Lombard GIC Ltd.	12
94	Idea Cellular Ltd.	3
95	IFTM University Moradabad	9
96	Incture Technologies	2
97	IndiaMART	2
98	Indus Insights	3
99	Informatica Business Solutions	1
100	InMobi	3
101	Inteva Products India Automotive Pvt. Ltd.	4
102	iRunway India Pvt. Ltd.	2
103	Isgec Hitachi Zosen Ltd.	1
104	ITC Ltd.	6
105	Jindal Stainless Limited	3
106	Jindal Steel & Power Limited	6
107	JK Paper Ltd.	2
108	Jubilant Life Sciences Ltd.	5
109	Kellogg Brown & Root Engineering & Construction India Pvt. Ltd.	3
110	KIE Engineering Pvt. Ltd.	1
111	KIIT University	16
112	Kolte Patil Developers Limited	4
113	Krishna Anti-Oxidant Pvt. Ltd.	6
114	L&T Construction	17
115	Larsen & Toubro Limited	2
116	Leaf Technologies - Business Analyst	4
117	Lenskart.com	2
118	LexInnova	1
119	Libsys Limited	1
120	LimeRoad.com	2
121	LinkedIn India	2

122	Lovely Professional University	25
123	Mahindra & Mahindra Ltd.	1
124	Mangalayatan University	2
125	Marvel Realtor	6
126	Maxheap Technologies Pvt. Ltd. (Commonfloor.com)	3
127	McGAN's Ooty School of Architecture	6
128	MediaTek India Technology Pvt. Ltd.	1
129	Meritnation.com	5
130	Microsoft IDC - US	12
131	Mind Shaper Technologies Pvt. Ltd. (Classteacher Learning Systems)	2
132	Mu Sigma Business Solutions	18
133	MYDALA.COM	4
134	Nagarro Software (P) Ltd.	5
135	National Engineering Industries Limited	4
136	NEPA	4
137	Newgen Software Technologies Ltd.	1
138	Nikola Tech Pvt. Ltd.	2
139	Numerify India Software Private Limited	2
140	Nvidia	3
141	Oceaneering International Services Limited	2
142	One97 Communications Ltd (Paytm) - Software - BA	4
143	Oracle India - OFSS - US	25
144	Pandit Deendayal Petroleum University	1
145	Parcelled	2
146	Parul Group of Institutes	8
147	PolicyBazaar.com (ETechAces Marketing Pvt. Ltd.)	6
148	Practo	3
149	PropTiger Realty Pvt. Ltd.	4
150	Pyramid E&C	4
151	Qualcomm India Private Ltd.	10
152	Quetzal Online Private Limited	2
153	R Systems International Ltd.	5
154	Raheja Developers Ltd.	5
155	Ramboll India Private Limited	6
156	Rate Gain	1

157	Rays Power Infra Pvt. Ltd., Jaipur	2
158	Relaince Industries Ltd.	21
159	Reppify	5
160	Risk Management Solutions	1
161	RK University	2
162	RMSI	9
163	Saint Gobain	1
164	Samsung R&D Institute India - Delhi	5
165	Samsung R&D Institute India, Bangalore	1
166	Samsung R&D Institute India, Noida	3
167	SCA Technologies India Pvt. Ltd.	5
168	Schlumberger India	6
169	ServiceNow Software Development India Pvt. Ltd.	2
170	Shapoorji Pallonji & Co. Ltd.	5
171	Shell Technology Centre, Bangalore	7
172	Shimizu Corporation India Pvt. Ltd.	3
173	Shri Ramswaroop Memorial University	6
174	Siegwerk India Pvt. Limited	2
175	Siksha 'O' Anusandhan	5
176	Silver Oak College of Engineering & Technology	9
177	SMEC India Pvt. Ltd.	3
178	Snapdeal - Analyst - Software	14
179	Sokrati Technologies	3
180	Spectrum Techno Consultants Pvt. Ltd.	2
181	Spire Global Singapore Pte Ltd	0
182	SRF Ltd.	5
183	SumTotal Systems	3
184	Suresh Gyan Vihar University, Jaipur	6
185	SVKM's NMIMS, Mukesh Patel School of Tech.Mgmt. & Engg.	1
186	Swiss Re	2
187	Synopsys India Pvt. Ltd.	2
188	Tagbin Services Pvt. Ltd.	3
189	Tango Media	4
190	Target Corporation India	4
191	Tata Communications	7
192	Tata Consultancy Services Ltd. - DESS	36
193	Tata Consulting Engineers Limited	16
194	Tata Motors Ltd.	17
195	TATA Steel Ltd.	1

196	Tavant Technologies	12
197	Tech Mahindra Ltd.	0
198	Teerthanker Mahaveer University	10
199	Texas Instruments India Pvt. Ltd.	1
200	Thapar University	1
201	THDC	1
202	Thermax Limited	1
203	Thermo Fisher Scientific	1
204	Times Business Solutions – (Magicbricks)	4
205	TinyOwl Technology Private Ltd.	1
206	Total Environment Building Systems	5
207	Transbit Technologies Software Pvt. Ltd.	4
208	TransWeb Educational Services Pvt. Ltd.	13
209	Unbxid	1
210	Unicommerce eSolutions Pvt. Ltd.	3
211	United Health Group	11
212	Vconnect Global Services Pvt. Ltd.	4
213	Vignan's Foundation for Science, Technology and Research University	13
214	Virtusa Consulting Services Pvt. Ltd.	4
215	Visa - US	19
216	V-Mart Retail Ltd.	1
217	Vodafone India Ltd.	4
218	Voith Paper Fabrics India Pvt. Ltd.	1
219	Walmart Labs	4
220	Wipro Limited	21
221	Witty brains Software Technologies Pvt. Ltd.	2
222	Works Applications Co. Ltd.	2
223	WS Atkins	4
224	Yash Papers Ltd.	2
225	ZeMoSo Technologies Pvt. Ltd.	7
226	Zigsaw Consultacny Services	1
227	Zillious Solution Pvt. Ltd.	4
228	Zopper	3
229	ZS Associates India Private Limited	10

Appendix -2

Table Showing Placement of Undergraduate and Postgraduate students Branch-wise (as on 16.06.2015)

S. No.	Degree	Effective Placement	Total Offers	
1	Architecture and Planning	43	50	
2	Biotechnology	20	22	
3	Chemical Engg.	37	39	
4	Civil Engg.	76	79	
5	Computer Science Engg.	46	55	
6	Electrical Engg.	89	95	
7	Electronics & Communication Engg.	45	48	
8	Production & Industrial Engg.	30	31	
9	Mechanical Engg.	61	74	
10	Metallurgical & Materials Engg.	65	76	
11	Pulp & Paper Technology	49	55	
Total B.Arch/B.Tech		561	624	
IDD				
1	B.Tech (Chemical Engineering) and M.Tech (Hydrocarbon Engineering)		17	17
2	B.Tech (Computer Science & Engineering) and M.Tech (Information Technology)		21	24
3	B.Tech. (Electrical Engineering) and M.Tech. (Power Electronics)		13	16
4	B.Tech (Electronics & Communication Engineering) and M.Tech (Wireless Communication)		12	12
5	B.Tech. (Process Engineering) and M.B.A.		12	13
Total IDD			75	82
IMT				
1	Integrated M. Tech Polymer Science and Technology		6	7
2	Int. M.Tech Geological Technology		11	13
3	Int. M.Tech Geophysical Technology		14	16
Total IDD			31	36
IMSc				
1	Int. M.Sc. (Applied Mathematics)		11	12
2	Int.M.Sc. (Physics)		3	3
3	Int. M.Sc. (Chemistry)		1	1

Total IMSc		15	16
M.Arch/MURP/M.Tech			
1	AHEC	13	14
2	Hydrology Engg.	3	3
3	Earthquake Engg.	33	40
4	WRDM	0	0
5	Architecture and Planning	23	27
6	Chemical Engg.	12	13
7	Civil Engg.	57	67
8	Computer Science Engg.	33	37
9	Electrical Engg.	23	25
10	Electronics & Communication Engg.	15	15
11	Mechanical & Industrial Engg.	25	25
12	Metallurgical & Materials Engg.	16	17
13	Pulp & Paper Technology	4	4
14	SSEM Engg. (Physics)	2	3
15	Geophysical Technology	3	3
16	Geological Technology	2	2
17	Advance Chemical Analysis	1	1
18	Disaster Mitigation and Management	4	4
19	Infrastructure Systems	11	11
Total M.Arch/MURP/M.Tech		280	311
M.Sc/MCA			
1	MCA	27	27
2	M. Sc. Appl. Geology	0	0
3	M. Sc. Physics	4	4
4	M. Sc. Chemistry	5	5
5	M. Sc. Maths	6	6
6	M. Sc. Biotechnology	2	2
Total M.Sc/MCA		44	44
MBA			
1	Management Studies	68	69
Ph.D			
1	Electrical Engg.	4	4
2	Electronics & Communication Engg.	2	2
3	Mechanical & Industrial Engg.	4	5
4	Metallurgical & Materials Engg.	1	1
5	Earthquake Engg.	1	1
Total Ph.D		12	13

A = Job Offered

Grand Total of A = 1195

B = Effective Placement

Grand Total of B = 1086

11. Central Facilities

- 11.1 Estate and Works
- 11.2 Institute Hospital
- 11.3 Institute Dairy

- 11.4 Hindi Cell
- 11.5 Central Purchase Office

11.1 ESTATE AND WORKS

The following major works carried out by the Estate & Works during 2014-15 are as follows.

Sl. No.	Name of Works	Physical Progress
1.	Construction of Laboratory of the Centre of Excellence in Disaster Mitigation and Management.	Work Completed
2.	Sewerage System and STP Roorkee and Saharanpur Campus	Work Completed except STP
3.	Construction of Multi Activity Centre in IIT Roorkee Campus	Work Completed
4.	Widening & relaying of road in Roorkee/ Saharanpur Campus	Work Completed
5.	New 11 KV DG sets 2x1500 KVA at IIT Roorkee Campus	Work Completed
6.	A.C. Plant and strengthening for Bio-Tech. Department	Work Completed
7.	Site Development at Greater Noida Extension Centre	Work Completed
8.	Development of Pseudo-Dynamic Testing Facility at the Department of Earthquake Engineering	Work in Progress

11.2 INSTITUTE HOSPITAL

Special Events

1. Blood Donation Camps

Blood Donation Camp in Coordination with NSS, IIT Roorkee was organized at the Institute Hospital. Donors from IIT community consisting of Students, Employees and Faculty donated the Blood during the camp. The donated Blood was collected by the Blood Bank of Himalayan Institute Hospital Trust, Dehradun and Blood Bank of Indian Medical Association, Dehradun.

2. Pulse Polio Camp

Pulse Polio Camp under National Pulse Polio Programme are organized regularly as per schedule. The Staff of the institute hospital is continuously providing their services into this programme of national interest.

OPD Patients	
Total Number of visits made by the Patients	128497

Emergency Patients	
Total Number of Visits made by the Patients	7439
Physiotherapy Unit	
Total Number of Patients	12668
Traction (Lumber/Cervical)	2000
Heat (SWD/IPR/PWB/HD)	3555
Stimulation (IFT/TENS/MS)	3655
Ray's (US/Laser)	2000
Other's (Exerciser/ Massager/ Cold Pack)	1600
Pathology Reports	
Blood Sugar	6649
Blood Sugar (with Accucheck Glucometr)	438
Urea	1514
Creatinine	1572
Uric Acid	757
Serum Billirubin	1172
SGOT	1048
SGPT	1142
Serum Amylase	39
Lipid Profile	1490

Serum Cholesterol	112
Montoux Test	20
Sodium/Potassium	380
Complete Blood Count (CBC) MS9	4809
Hb (Hemoglobin) Widal	156
AEC (Absolute Eosinophill Count)	89
GBP	63
Blood Grouping & Rh typing	279
MP (Malaria Parasite)	658
WIDAL	461
ESR	881
Dengue (IgG, IgM) HbAc1	52
RA Factor	109
CRP (C-Reactive Protein)	117
HbA ₁ C	392
HBsAg	154
VDRL	98
Urine Gravindex Test (UPT)	139
Urine Examination (RE/ME)	1278

STOOL Examination (RE/ME & Occult Blood)	52
T ₃ & T ₄	1109
TSH	1162
PRL (Prolactin)	16
HIV	159
HCV	80
Platelet Count	53
Indoor Patients	
New Admissions	687
Referred	65
Discharged after Treatment	609
Death	02
Total No. of birth (Live child)	01
Total No. of delivery conducted	01
Gynecology	
Minor Operation (D&C etc.)	05
Copper T inserted	01

11.3 INSTITUTE DAIRY

- During the financial year 2014-15, the Community Dairy has maintained its regular supply of high quality milk to various student messes and residents of the institute campus as per their requirements.
- Weekly milk analysis report is being uploaded regularly on the Institute website (Channel I–more links–dairy report). The Dairy has made its sincere effort to maintain high quality of the milk and to supply it at reasonable price.
- The total transaction during the financial year 2014-15 was Rs.2,01,85,049 (~202 lakh) and

the total milk distribution was 5,20,271.500 liters (~520 KL) and butter distribution was 259.250 kg.

- Dairy building has been repaired.
- Dr. Shri Chand, Professor, Department of Chemical Engineering, Dr. P. Mondal, Associate Professor, Department of Chemical Engineering and Dr. Naseem Ahmed, Associate Professor, Department of Chemistry have served as Chairman, Dy. Chairman(Admin.) and Dy. Chairman (Accounts) respectively.

11.4 HINDI CELL

Officers: 02, Publications: 02 & Annual Hindi Magazine 'MANTHAN'

1. Background

Since the very beginning of University Of Roorkee (Now IIT Roorkee) Dr.Chandrika Prasad, Head Mathematics Department, Dr.R.S.Mittal, Head Earth Sciences Department, Dr. K.K.Singh, Professor, Earth Sciences Department, and Dr. R.K.Goel, Reader, Earth Sciences Department have been associated with the Creation of scientific & technical Hindi vocabulary.

Besides this the faculty has also made a great contribution towards the progress of Official Language, by working as members of Official Language committees, Hindi Scientific Literature Council and by contributing Hindi papers on Scientific and Technological topics. They have also been active in making computers more suitable for Hindi work and have published many scientific reports on Hindi topics etc.

In 1965 a seminar was organized in Roorkee university on the topic 'Vaigyanik kaaryo me Hindi ka prayog' only 04 papers were presented in this seminar.

After two years again a Hindi seminar was organized in which the number of Hindi papers increased to 06.

A huge exhibition in the senate hall of University of Roorkee was organised on the topic 'Hindi ka badhata hua prayog' which went on for 5 days and attracted several thousand people.

With the success of this exhibition again one Hindi seminar was organized in University of Roorkee which was inaugurated by the then Vice-chancellor shri Mulk Raj Chopra and a total of 12 papers were presented in this seminar.

In 1978 again an all India Hindi seminar was organized in university of Roorkee in which 44 papers were presented by the participants from different parts of India. Total 250 delegates attended this seminar including Vice-Chancellors of five Universities, Directors of 2 national laboratories and many famous scientists. The quality of the papers presented in this seminar was so high that a special issue of the journal of the Institution of Engineers was published to include these papers. The seminar was inaugurated by Dr. Atma Ram the Chairman of National Committee for Science and Technology

On 22 August 1979 another Hindi seminar was organized in the Q.I.P. Centre of University of

Roorkee on the topic 'Hindi Madhyam me Takneekee Shiksha, ek kaalbaddh yojana'. 11 senior professors presented paper in Hindi in this seminar.

From July 5 to 7, 1984 University of Roorkee organized one more All India Seminar under chairmanship of the then Vice-chancellor Professor Bharat Singh. The topic of this All India Hindi Seminar was 'Urja Sansadhan- Vikas evam Pariyojanaayen'. Total 35 experts presented their papers in the seminar.

From September 23 to 24, 2009 IIT Roorkee organized an All India Workshop on 'Computer and Hindi' with participation of a total of 123 delegates from all parts of India.

Since 1980 the Institute is organizing Hindi Day every year on 14 September. The list of eminent Hindi Scholars who visited as Chief guests of this function is as follows:-

Sl. No..	Year	Name of the Chief Guest
1.	1980	Acharya Kishori Das Vajpayee
2.	1982	Pandit Shreenarayan Chaturvedi
3.	1983	Dr. Kshem Chandra Suman
4.	1984	Dr. Vidya Nivas Mishra
5.	1985	Shri Viyogi Hari
6.	1986	Dr. Ram Kumar Verma
7.	1987	Shri Amrit Lal Naagar
8.	1988	Shriyut Shreelal Shukla
9.	1989	Pandit Seetaram Chaturvedi
10.	1990	Dr. Vijayendra Satak
11.	1991	Dr. Kshem Chandra Suman
12.	1992	Shri Akshay Kumar Jain
13.	1993	His Excellency Gyanee Zail Singh
14.	1994	Dr. Ved Pratap Vaidik
15.	1995	Dr. Amba Prasad Suman
16.	1996	Shri Rajendra Avasthi
17.	1997	His Excellency Prof. Siddheshwar Prasad
18.	1998	Dr. Naamvar Singh
19.	1999	Shri Vishnu Prabhakar
20.	2000	Dr. Shyam Singh Shashi
21.	2001	Dr. Gopal Das Neeraj
22.	2002	His Excellency Shri B. Satyanarayan Reddy
23.	2003	Dr. Ratnakar Pandey and Special Guest Prof. Bansh Bahadur Tripathi

24.	2004	Achrya Rammurty Tripathi
25.	2005	Shri Prabhash Joshi
26.	2006	Dr. Laxmimal Singhvi
27.	2007	Dr. Kanahiya Lal Nandan
28.	2008	Dr. Som Thakur
29.	2009	Dr. Narendra Kohali
30.	2010	Dr Yogendra Nath Sharma 'Arun'
31.	2011	Shri Kuber Datt and special guest Shri Shyam Sushil
32.	2012	Dr. Vishnu Datt 'Rakesh'
33.	2013	Sh. Giriraj Kishore and Special Guest Dr-. kunwar Bechain
34.	2014	Smt. Chitra Mudgal and Special Guest Prof. Mahaveer Agrawal

Implementation of Official Language

After conversion of the University of Roorkee into an IIT, in 2002 an 'Institute Official Language Implementation Committee' was constituted under the chairmanship of the Director IIT Roorkee for the purpose of successful implementation of the provisions of the Constitution relating to the Official Language. The progress of Official Language is being monitored regularly by the committee by holding meetings after every three months. At present following are the members of 'Institute Official Language Implementation Committee':-

1	Professor Pradipta Banerji	Director	Chairman (ex-officio)
2	Professor Vinod Kumar	Dy. Director	Member (ex-officio)
3	Professor Nagendra Kumar	Chairman Hindi Cell	Member (ex-officio)
4	Professor D.K. Nauriyal	Dean Students' Welfare	Member (ex-officio)
5	Professor U.P. Singh	Dean Administration	Member (ex-officio)
6	Professor Deepak Kashyap	Dean Faculty	Permanent Special Invited (ex-

Awards and Honors

For doing maximum official work in Hindi, every year some Institute Employees are encouraged & awarded under many schemes approved by BOG.

On 26th January 2015 following employees were awarded for their commendable

			officio)
7	Professor Pramod Agrawal	Dean Academic	Permanent Special Invitee (ex-officio)
8	Professor P.K. Ghose	Dean Finance and Planning	Permanent Special Invitee (ex-officio)
9	Professor Sandeep Singh	Dean Alumni & International Relations	Permanent Special Invitee (ex-officio)
10	Professor Manoranjan Parida	Dean SRIC	Permanent Special Invitee (ex-
11	Professor Yuvraj Singh Nagi	In-charge Saharanpur Campus	Member (ex-officio)
12	Dr.G.D. Ransinchung R.N.	Assistant Professor Department Of Civil Engineering	Member (Non Hindi Speaking)
13	Professor R. Balasubramanyam	Head Computer Centre	Member (ex-officio)
14	Shri Yogendra Singh	Librarian, Mahatma Gandhi Central Library	Member (ex-officio)
15	Shri Prashant Garg	Dy. Registrar Administration	Member (ex-officio)
16	Ms. Bibi Morium	Assistant Registrar, Materials Management	Member (ex-officio)
17	Joint Director (O.L.)	MHRD	MHRD Representative
18	Shri Parag Chaturvedi	Official Language Officer	Member/ Secretary (ex-officio)

contribution in the development and use of Hindi for official purposes:-

"Scheme to encourage original Hindi noting/ drafting in official work"

1	Shri Raman lal	Dy. Registrar , Lision Cell	1 st Prize
2	Shri Praveen Kumar	Senior Assistant Estt. 'B' Section	1 st Prize
3	Shri Pradeep Kumar Sharma	Assistant Registrar, Services	2 nd Prize
4	Shri Gopal Sharma	Jr. Suptd., Estt. 'A' Section	2 nd Prize
5	Shri Baburam Panwar	Senior Attendent, Industrial and Mech. Engg.	2 nd Prize
6	Shri Vinod Gupta	Suptd., Constructionand Works	3 rd Prize
7	Shri Tejindra Jeet Singh	Junior Assistant Estt. 'B' Section	3 rd Prize
8	Shri Jogendra Kumar	Senior Assistant, Pension Cell	3 rd Prize
9	Shri Gopal Upadhyay	Senior Assistant, Estt. 'A' Section	3 rd Prize
10	Shri Ram Kumar	Suptd., Civil Engg.	3 rd Prize

Hindi Essay Writing

1	Shri D. P. Singh	Suptd., E & C E Deptt.	1 st Prize
2	Shri Ramveer Singh	Suptd., Metall.& Material Engg. Deptt.	2 nd Prize
3	Shri Pravesh Ku.Sharma	Senior Assistant, A.H.E.C.Deptt	3 rd Prize

"Incentive on Passing Hindi 'Prabodh' exam"

1	Dr. R.S. Jakka	Assiatant Prof. (Earthquake Engg.)
2	Dr. P.Gopinath	Assiatant Prof. (Nanotechnology)
3	Dr. A. Ramesh	Assiatant Prof. (Management Studies)
4	Dr. M. Shanker	Assiatant Prof. (Chemistry)

"Incentive on Passing Hindi 'Typing' exam"

1	Sh. Mukesh	Junior Attendent (Dy. Registrar Office)
2	Sh. Ram Vijay Diwedi	Attendent (Physic Deptt.)
3	Sh. Sanjeev Kumar	Attendent (General Section)

Awarding Certificates to the Articles published in the 12th issue of Institutes Annual Hindi Magazine "MANTHAN"

1	Khel Janit Paryavran Pradusan	Dr. Alok Kumar Pandey, Assistant Sports Officer	1 st Prize
2	Paryavaran Sanrakshan mein Naaree ka Yogdaan	Dr.Uma Jain, Reader Sanskrit Deptt., Munnalal and Jainarayan Kemka Girls College,Sharanpur	2 nd Prize
3	Petrol-Disel Vaahano se Badta Pradusan tatha urja ke khapat: samasya evam samadhan	Shri A.A.Ansari and Shri Rakesh Kumar,C.B.R.I. Roorkee	3 rd Prize

Participation in Conferences/Symposiums/Workshops/Meetings etc.

Name	Name of Conference/ Symposium/ Workshop/ Meeting attended	Place	Date
Prof. Nagendra Kumar Chairman Rajbhasha Cell & Sh. Parag Chaturvedi Officer (O.L)	18th Half Yearly meeting of Haridwar Town Official Language Implementation Committee (TOLIC)	Hotel Jahnvi Del Bypass Road Haridwar	08-08-2014
Prof. S.P. Gupta, Dy Director, Prof.,Nagendra Kumar Chairman Rajbhasha Cell And Shri Parag Chturvedi, Officer (O.L)	19th Half Yearly meeting of (TOLIC) Haridwar	C.B.R.I. Roorkee	30-01-2015

Prof.,Nagendra Kumar Chairman Rajbhasha Cell And Shri Parag Chturvedi, Officer (O.L)	Hindi Coordinators meet Of TOLIC Haridwar Members	Hotel Jahnvi Del Bypass Road Haridwar	19-01-2015
Shri Parag Chturvedi, Officer (O.L)	Regional Official Language Prize Distrebution Function of The North Region, Ministry Of Home Affairs, Deptt. of Official Language, Government of India	Sh. V.K.S. Vardan Auditorium, Aliganj, Lucknow	19.11.2014

Events Organised

Sl. No.	Event	Chief Guest	Date
1.	Bharat Ratn Pt. Govind Ballabh Pant Jayanti	Dy Director, Prof. S.P. Gupta	10.09.2014
2.	Hindi Pustak Pradersani	Smt. Chitra Mudgal, A Famous Hindi writer	14.09.2014
3.	Hindi Divas Samaroh	Smt. Chitra Mudgal, A Famous Hindi writer	14.09.2014
4.	Gandhi Jyanti	Director, Prof. Pradipta Banerji	02.10.2014
5.	Rajbhasha Prize Distribution	Director, Prof. Pradipta Banerji	26.01.2015

Hindi Classes held for non Hindi speaking employees of the Institute

Name of the Course	Date of the Class	Total number of the classes
PRABODH	01.11.2014, 08.11.2014, 15.11.2014, 22.11.2014, 29.11.2014, 06.12.2014, 20.12.2014, 27.12.2014, 03.01.2015, 10.01.2015, 17.01.2015, 24.01.2015, 31.01.2015, 07.02.2015, 14.02.2015, 27.02.2015, 12.03.2015	17
PRAVEEN	31.10.2014, 07.11.2014, 14.11.2014, 21.11.2014, 28.11.2014, 05.12.2014, 12.12.2014, 19.12.2014, 26.12.2014, 02.01.2015, 09.01.2015, 23.01.2015, 30.01.2015, 06.02.2015, 13.02.2015, 20.02.2015, 26.02.2015, 13.03.2015	18

(OFFICIAL LANGUAGE) Workshop organised

Workshop Organised	Date	Total number of workshops
Hindi word processing	02-04-2014, 09-04-2014, 16-04-2014, 23-04-2014, 30-04-2014, 21-05-2014, 28-05-2014, 11-06-2014, 18-06-2014, 25-06-2014, 02-07-2014, 09-07-2014, 23-07-2014, 06-08-2014	14

Achievements

1. In the year 2014-15, TOLIC Haridwar awarded Rajbhasha Shield to Indian Institute of Technology Roorkee, for excellent Implementation of Official language in the Institute.

2. In the first week of June 2014, we successfully conducted online Hindi language (Prabodh) exam in the Institute Computer Centre. Sh. Vikram Singh, from Central Hindi Training Institute was the observer. Following faculty members of the Institute appeared in the exam-
 1. Dr. R.S. Jakka, Assistant Prof. (Earthquake Engg.)
 2. Dr. P.Gopinath, Assistant Prof. (Nano Technology)
 3. Dr. A.Ramesh, Assistant Prof. (Mangement Studies)
 4. Dr. M. Shanker, Assistant Prof. (Chemistry)
3. (A) From first week of April, 2014 till August, 2014 every week, 14 Workshops of Hindi Typing training had been organized in Computer Centre for 10 registered trainees of Institute in Hindi Typing Correspondence Course and 10 other employees.

(B) On 11th and 14th July, 2014 A Hindi typing exam was conducted in the Institute Computer Centre for the following 10 registered trainees of the Hindi Typing Correspondence Course. Prof. Nagendra Kumar, Chairman Hindi Cell was appointed convener by the Central Hindi Training Institute, New Delhi for this Exam-

 1. Sh.Mukesh Kumar-1, Junior Attendent (Dy. Registrar Office)
 2. Sh.Ram Vijay Dwivedi, Attendent (Physics Deptt.)
 3. Sh.Sanjeev Kumar, Junior Attendent (General Section)
 4. Sh. Vineet Sharma, Junior Attendent (Estt 'B' Section)
 5. Sh. Rakesh Kumar, Junior Assistant (E & CE)
 6. Sh. Amar Singh, Senior Attendent (Physics Deptt.)
 7. Sh. Kali Prasad, Attendent (Physics Deptt.)
 8. Sh. Sudhir Kumar, Senior Attendent (Physics Deptt.)
 9. Sh. Vinod Kumar Yadav, Junior Attendent (Dy. Registrar Office)
 10. Sh. Ajay Yadav, Junior Attendent (Dean of faculty Office)

Other Activities

Indian Institute of Technology, Roorkee Edited The 2nd Issue of the Annual Magagine of TOLIC Haridwar "Gyan Prakash". The magazine was released by the Executive Director and Chairman TOLIC BHEL Haridwar on 8th August, 2014 in the halfyearly meeting of TOLIC organized at Hotel Jhaanvi dale.

11.5 MATERIAL MANAGEMENT SECTION

During the year 2014-15, the Institute had a Central Purchase Office, functioning under the control of the Central Purchase Officer (C.P.O.) Dr. Suman Kumar, Dy. Registrar (Internal & Audit) till 8th December, 2014. On 9th December, 2014 it was notified that the Central Purchase Office would be known as Material Management Section, the responsibility of which was given to the newly appointed Assistant Registrars-Sh. Dileep Kumar Toppo

and Ms. Bibi Moriom Barbhuiya and Dr. Suman Kumar, Dy. Registrar (Internal & Audit) as the Guide and Advisor to the Officers appointed for the smooth functioning of the section.

There were following purchase committees for considering the purchase cases received from various Departments/Offices/Centres of the Institute. The Central Purchase Officer is the Member Secretary of all these committees.

Sl. No.	IPC/PPC	Name of Chairman
1.	IPC	Prof. Ritu Barthwal, Biotechnology Deptt.
2.	PPC	Dr Pradeep Bhargava, Dean (SRIC) Prof. M. Parida, Dean (SRIC) (from 01.02.2015)

Month wise details of purchase orders pre-audited during the year 2014-2015 by the C.P.O. for an amount of Rs. 5.00 lac or above are as below:

Month	Number of Purchase Orders	Approx. amount of P.O. (In Rupees)
April	3	5154076.00
May	4	4708129.43
June	8	7202851.50
July	2	2969730.00
Aug.	10	15474277.32
Sept.	6	13106506.50
Oct.	7	10288991.47
Nov.	10	10538471.73
Dec.	27	32013326.80
Jan.	10	10791924.00
Feb.	13	28316346.70
March	15	20730138.62
TOTAL	115	16,12,94,770.10

(Sixteen Crore, twelve lacs, ninety four thousand seven hundred seventy and paisa ten only)
Besides above purchase cases, the following Rate Contracts has also finalized in the interest of Institute work.

1. Rate contract of Clearing Agent
2. Rate contract of Furniture items (Category -A & Category-B)

12. *Other Activities on Campus*

12.1	Technology Incubation and Entrepreneurship Development Activity (TIEDA) Centre	12.3	Asmita
12.2	Alumni Affairs	12.4	Adarsh Bal Niketan Sr. Sec. School
		12.5	Anushruti

12.1 TECHNOLOGY INCUBATION AND ENTREPRENEURSHIP DEVELOPMENT ACTIVITY (TIEDA) CENTRE

The Entrepreneurship Development Cell (EDC) of TIEDA Centre organized the following events in the academic year 2014-15:

1. Organized a talking for Wi-Fi and LAN facilities during July 2014 in the EDC Office.
2. **Open Meeting, 2nd Monday Every Month:** Regular open meetings were held where in camlokpus entrepreneurs were invited to share their experience with the students and answer their queries regarding opening up new ventures.
3. Organized a workshop for the new entrants the Institute during the month of August 2014.
4. Continuation discussion and inter view of new IIT students during September 2014.
5. **TEDx IIT Roorkee Live:** A live telecast of Global TED Conference 2014 was held during October 2014 for which selected student from IIT Roorkee were chosen to attend. This event saw interactive activities for IIT Roorkee audience and featured speakers like Bill Gates and Edward Snowden.

12.2 ALUMNI AFFAIRS & INTERNATIONAL RELATIONS

The office of Dean Alumni Affairs organised various activities in the Institute for strengthening and forging the bonds between the alumni and Institute fraternity. The year 2014-2015 saw some important visits and get together of our alumni.

Following are the important events that have taken place during the period April 1, 2014 to March 31, 2015.

1. DISTINGUISHED ALUMNI AWARDS 2014

The Distinguished Alumni Awards were presented to Four Alumni who have made major contribution in their respective fields on Alumni Day i.e. Nov. 25, 2014. The recipients of the Distinguished Alumnus Awards for the year 2014 were:

- (i) **Dr. Satyandra Kumar Gupta**, Director, Maryland Robotics Centre received the Distinguished Alumnus Award under the category Academic Research.
- (ii) **Shri Rajendra Kumar Bahugauna**, CMD, Raitel Corporation of India Ltd. received the Distinguished Alumnus Award under the category Corporate Development.
- (iii) **Shri Subodh Kumar Jain**, Retd. Member Engineering, Indian Railways received the Distinguished Alumnus Award under the category Engineering Services.
- (iv) **Shri Shankar Aggarwal**, Secretary, Ministry of Urban Development, GOI received the Distinguished Alumnus Award under the category Administration.
- (v) **Dr. Sharad Chandra Sharma**, Director, Materials and Metallurgy Group, ISRO received the Distinguished Alumnus Award under the category Engineering Services.

2. RECENTLY INSTITUTED AWARDS/SCHOLARSHIPS

Following new scholarships have been initiated by our alumni for the benefit of the students:

- (i.) **Encore Scholar (Eighty Nine Class of Roorkee Endowment)** The undergraduate batch of Engineering who graduated in 1989 and architects who graduated in 1990 of IIT Roorkee donated an initial amount of Rs. 42,18,000/- (Rupees forty two lacs and eighteen thousand only) to IIT Roorkee with the object and

purpose to help deserving and meritorious student of the Institute by instituting scholarships and grants. ENCORE awards will consist of 2 ENCORE scholarship of Rs. 50,000/- each to a boy and girl for sustained overall excellence from the Fourth Year UG program and three 'means and merit' ENCORE grants of Rs. 30,000/- each for First year boys from UG Program and three 'means and merit' ENCORE grants of Rs. 30,000/- each for First year girls from UG Program. The total value of the scholarship would be Rs. 2,80,000/- p.a..

(ii.) **CELEBRATING LIFE AWARDS** Prama Jyoti Foundation is deeply connected with IITR for the last 5 years and have instituted 39 annual awards and special travel grant for the students of IITR. On Alumni day November 25, 2014 Shri Ravi Sharma founder of Prama Jyoti Foundation and alumnus IIT Roorkee 1984 batch, announced and started a new category of annual awards named as **"Celebrated Life Awards"**. The first is the Harsh Singhal Celebrating Life award for "All rounder of the year" and the second, the Narendra Jain Celebrating life award for "Social Activist of the year". The prizes comprise a cash award of Rs. 21,000/- and a trophy. The awards were instituted in remembrance of Shri Harsh Singhal & Shri Narendra Jain of 1984 batch. The first winners of these awards were-

- i. Mr. Rahul Adhikari B.Tech. Civil Engg. 4th Yr. – HARSH SINGHAL MEMORIAL AWARD for "All Rounder of the year – 2014"
- ii. Ms. Rupal Saraswat B.Tech. Electrical Engg. 4th Yr. – NARENDRA JAIN MEMORIAL AWARD for "Social Activist of the year -2014"

(iii) **MANOJ JAIN AWARD FOR EXCELLENCE IN HUMAN VALUES** The Legacy Force of UOR-81 Trust instituted an award titled 'Manoj Jain Award for Excellence in Human Values' as a memorial and tribute to their dear friend Late Er. Manoj Jain, mechanical 1981 batch. The awardees were short listed based on 10 values –honesty, courage, compassion, integrity, forgiveness, love, knowledge, discipline, faith, principles and leadership.

The award carries a sum of Rs. 25,000/- each to a boy and a girl along with a shield and certificate. For this award all final year students of B.Tech., B.Arch (4th year) and 4th year integrated degree (B.Tech. + M.Tech) will be eligible

After an exhaustive selection procedure the following student were selected as winners of the first 'Manoj Jain Award for Excellence in Human Values':

- i. Ms. Roshni Samala, B.Tech. (Process Engineering)
- ii. Mr. Harshit Sihare, B.Tech. (Electronics & Communications Engg.)

3. MEMORANDUM OF UNDERSTANDING

- i) Memorandum of understanding was signed between IIT Roorkee and Asian Institute of Technology, Thailand; Colorado State University, United States of America; University of Stuttgart, Germany and Universiti Teknologi Mara, Malaysia on 24th December 2014 for promotion of friendship, co-operation and mutual understanding of academic scientific thought and personnel Exchange, to share their expertise and enhance their academic links and co-endeavour to strengthen, promote and develop international and research co-operation between them on the basis of equality and mutual benefit.
- ii) Memorandum of understanding was renewed between IIT Roorkee and The Ecole Speciale des Travaux Publics, du Batiment et de l'Industrie (ESTP), France on 26th December 2014 with the aim to promote exchange of people, experience and activities in the domains of higher education and research, to promote student exchanges and work towards establishing a process of academic recognition.
- iii) Memorandum of understanding was signed between IIT Roorkee Arba Minch University and Wollega University of Ethiopia for exchange of scientific, academic and technical information and identifying opportunities for exchanges and cooperation in disciplines of mutual interest and commercialization of technology.

4. INTERNATIONAL STUDENTS DAY

The International Student's Day was celebrated on 20th March 2015 at Multi Activity Centre. The main objective of the celebration was to celebrate the success and talent of the international student and to introduce the diversity of their cultures to our own national students.

The event was well attended by all the international students who put up cultural events showcasing their talents.

Also the event was attended by H.E. Mr. Ernest Rwamucyo, The High Commissioner of Rwanda and Mr. Mucyo Rutishisha, the Second Counsellor. There was representation from the Embassies of France and Iran as well.

5. TRAVEL GRANT AWARD

Under this scheme a token grant of Rs. 10,000/- per student has been given to 48 UG/PG/Ph.D. student for presenting their research papers in Conferences held in India during the period (1 April 2014 to 31 March 2015) from funds donated by Alumni for this purpose, as per details given below:

UG/PG/Ph.D.	National conferences within India
No. of UG Students	-
No. of PG Students	23
Ph.D.	25
Total	48

6. STUDENT'S CAREER DEVELOPMENT FUND

Under this scheme a maximum amount of Rs. 50,000/- per student has been given to 59 UG/PG/Ph.D. students for presenting their research papers in Conferences held outside India during the period (1 April 2014 to 31 March 2015), as per details given below:

UG/PG/Ph.D.	Conference Abroad
No. of UG Students	5
No. of PG Students	5
Ph.D.	49
Total	59

7. IITR ALUMNI ASSOCIATION

The Association as on 31 March, 2015 has 28340 registered alumni as life members. The Association has a substantial presence in a large number of cities in India as well as abroad, and has 12 local chapters. During the year 2014-15, Prof. Prem Krishna (1959), Former Professor, Civil Engineering Department, IIT Roorkee and Dr. Pradeep Kumar (1986), Senior Principal Scientist, CSIR-CBRI, Roorkee have been the President and Honorary Secretary of the IITR Alumni Association. For the year 2015-2016, Prof. Prem Krishna (1959) and Dr. Achal Mittal (1986), Principal Scientist, SCIR-CBRI, Roorkee have been nominated as the President and Honorary secretary respectively.

Jubilee Alumni Meets 2014 were celebrated with great enthusiasm. Silver Jubilee function for the 1989 pass out batch on November 04-05, 2014 and Golden (1964 batch) & Diamond (1954 batch) Jubilee functions were celebrated on 24-25 Nov. 2014. Seven-Diamond Jubilee Alumni, 83- Golden Jubilee Alumni and 127 – Silver Jubilee Alumni (1989 batch and B.Arch 1990 batch) participated in the meet along with their families. This year two New Jubilees-Ruby Jubilee (40 years) for 1974 batch on November 17-18, 2014 and Coral Jubilee (35 years) for 1979 batch on January 24-25, 2015 were also celebrated. Some of the alumni visited the campus for the first time after graduating from the erstwhile University of Roorkee.

The Jubilee Alumni along with their families in many cases enjoyed the re-union on the campus, recalling with nostalgia, their days here. They were felicitated and presented with mementos in the O.P. Jain Auditorium of Civil Engineering Department.

On November 25, 2014 the IIT Roorkee celebrated "The Alumni Day" near the Institute Flag which commemorated the foundation Day of Thomason College and Charter Day of University of Roorkee. Five Distinguished Alumni Awards were presented. The Diamond and Golden Jubilee alumni also graced this function.

On November 05, 2014, the 65th Annual General Body Meeting of the Association was also held in O.P. Jain Auditorium and was attended by over 200 members. The president of the Association in the presence of Dean Alumni Affairs, IIT Roorkee, and Dr. Pradeep Kumar, Honorary Secretary welcomed the members and Jubilee Alumni who had graced the function.

12.3 A SKILL MANAGEMENT IMPROVEMENT AND TRAINING ACADEMY (ASMITA)

ASMITA was engaged in following activities for the period of 1-4-2014 to 31-3-2015.

Regular Activities: We have following five sections working on regular basis:

Academic Section:

1. 14 girls/women passed their Diploma exam held in June 2014.
2. Currently 17 new girls/women are pursuing their Diploma course, which will be completing in June this year.
3. 46 women have done or doing Choice Based Course during this year.
4. We introduced a new advance level Dress designing course in May 2014, in which 11 girls have enrolled and are making all kinds of designer dresses.

Gift Section: In this section good quality stitched items like home linen, bags, kitchen linen are made by the trained ladies for their income generation. These gift items are put together by various trainees and workers to raise funds for the academy at different activities at the campus like Alumni meet, exhibitions etc and for other visitors on regular basis.

Masala Section: In this section 100% pure quality masalas and flours are being prepared and packed in the centre. Two ladies from the weaker section are working on regular basis and few others are working on call basis for this section under supervision of our volunteer members. In this section, 4 kinds of new masalas were introduced during the last year

E- Learning Section: in this section ladies and girls are to be trained for basic computer skills.

Free basic computer knowledge was imparted to the ASMITA girls during this year.

Adult Education: in this section ladies from nearby areas are being provided with basic education, basic knowledge about health, hygiene, and other household and lifestyle tips etc on a friendly level. Some ladies are now shifted to a next level where they will learn basic Maths, Basic English and Basic Personality development classes. All the ladies in ALS are provided basic stationary, books, copies and Bags from ASMITA.

Special Activities: Apart from the above regular activities we conduct free workshops and other events at our academy from time to time. For encouraging our students and workers we held some of these in the last year also.

These included free embroidery classes in the evening and Crochet class for 8 weeks. In November 2014, we organized a Convocation Day (Alankrita) for all graduating ASMITA women, where 14 girls were given their stitching Diploma, 10 housewives and 11 School teachers were given their basic computer training certificates and 11 graduating ladies were given their report cards in the Adult Literacy section.

We also celebrated various events like Teachers Day, New Year's Day and Women's day etc. with the students, members and the whole staff of ASMITA.

Other Highlights:- We have supplied 400 gift packs of assorted Masalas and multipurpose kit to the Alumni association of IITR in the month of Oct. – Nov. 2014.

We have bought 5 new sewing machines in the Academic section.

Financial Report 2014-2015:

Total Fundraising in the year 2014-15: Rs. 4, 90,089.00/-

(Major fundraising came from the fees from the students, Members subscription, donations from individuals and various institutions.)

Total expenditure in the year 2014-2015: Rs. 4, 11,721.00/-

Major expenses involved salaries for the staff, labor payments purchase of new equipments and day to day running and maintenance of the Academy. The detailed balance sheet is given below:

Income Amount in Rs./-		Expenditure Amount in Rs./-	
Bank Interest	64,304.00	Salaries	1,57,772.00
Fees	1,00,175.00	Maintenance	3,400.00
Membership fees	8,700.00	Electricity charges	11,687.00
Donations	2,15,640.00	Printing and stationary	8,510.00
Alumni Order	1,00,000.00	Gift Making training section	34,818.00
Others	1,270.00	Masala Making training section	64,736.00
		New machinery	16,000.00
		Special events	9,639.00
		Alumni Order	1,00,000.00
		Others	5,159.00
Total	4,90,089.00	Total	4,11,721.00

Note: We have reinvested the bank interest in fixed deposits and with the surplus money that we have, we are going to use it for our future projects.

ASMITA's accounts are audited every year by a recognized Chartered Accountant of the city.

12.4 ADARSH BAL NIKETAN, SENIOR SECONDARY SCHOOL

Progress report for the session 2014-15:-

Adarsh Bal Niketan conducts classes from Nursery to XII with Science and Commerce streams at plus two level. The school provides facilities to arrange indoor and outdoor games. It also avails the facilities in games and lectures on different topics, provided by IIT Roorkee.

During each academic session the school organizes extracurricular activities like art & craft, music and Dance, Mehandi, Rakhi, Salad, Drawing, Quizes related to science and G.K. to develop the different skills and values among the students. A very rich library with about 6000 books related to G.K., comics, history, encyclopedias and other different subjects adds to its better academic environment. Well equipped A.C computer Centre

with 60 PC, physics, chemistry and biology labs are the attraction of the students. The academic result has been very impressive for last many years. This year it was 97.3% in X class and 98% in XII class. The school provides a complete education of mind, body and spirit.

Every year house matches are played in the games like basketball, volleyball, badminton, T.T. etc. This year school basketball team won the youth district basketball championship in August 2014. The school football team participated in various interschool football tournaments and did well in all of them. Every year many players of the school participate in state and national basketball championships.

12.5 ANUSHRUTI

ACADEMIC HIGHLIGHTS

Anushruti's annual result was 85.07% for the year 2014 – 15. The highest percentage of Marks 91.00% was secured by Riya Jain. The above result was announced on Annual Prize Distribution Function held on 31.03.2015. Prof. S. P. Gupta, former Dy. Director, IIT Roorkee and well wisher of the school graced the occasion as Chief Guest. Awards were felicitated for academic recognition to the children for meritorious performance in various fields and winners of annual Extracurricular Activities organized during the whole academic session. Air Marshal Pramod Athawale, advisor to Director, IITR alongwith Dr. Gaurav Raheja (Manager, SMC) distributed the prizes to the students on a Annual Prize Distribution function held on 31.03.2015.

5 students of Anushruti cleared Secondary Certificate Examination (October- November-2014) from National Institute of Open Schooling Board, Noida. The number of students appearing for NIOS examination (April May - 2014) this year was as under:

- Secondary Certificate Course 07
- Sr. Secondary Certificate Course 04

Awards & Achievements

- Mrs. Neelima Agarwal, Anushruti faculty received the Guru Vandana Award from Bharat Vikas Parishad Samarpan Roorkee for overall excellence.
- Mrs. Renu Sood received National Builders Award during the year, from Rotary Club of Roorkee Midtown – Roorkee.
- Anushruti student Ms. Vineeta Negi of Class I also received Best Student Award form Bharat Vikas Parishad Roorkee for her outstanding academic performance.
- Mrs. Parvati Pandey, Principal- Anushruti was honoured by Alpana Krishnanchal Sports and Educational Trust, Roorkee for dedicated services to the Children with Hearing Impairment.
- National Union of Journalists, Uttarakhand honoured 5 Anushruti students, Devesh Kumar, Rajat Gupta, Vishu Aneja, Vijay Tyagi, Adnan Ahmad for the best academic performance in their respective classes.

VOCATIONAL TRAINING

Following workshops were organized at Anushruti, providing a wide exposure to Anushruti students:

Sl. No.	Date	Title	Organized by
1.	20.05.2014	Workshop on Sign Language and Educational Methodologies for HI Children	Department of Management Studies and QIP Centre , IIT Roorkee Conducted by : Prof. S. C. Handa , Prof. (Mrs.) Renu Rastogi and Mrs. Kiran Handa
2.	26.09.2014	Canvas Painting Workshop	Mrs. Kulina Shah , Fine Artist and Member , SMC- Anushruti
3.	27.09.2014	Workshop on Paper Craft and Screen Printing	Mrs. Alka Sharma, Asstt. Professor , Department of Art , SSDPC (PG) College , Roorkee
4.	09.10.2014 and 10.10.2014	Puppet Making Workshop	Mr. Ram Lal Bhatt, Artist, Dehradun
5.	08.11.2014	Workshop on Foot Art	Mr. Shaam Pahapalkar, Free Lancer Artist from Ahmedabad

Series of Development and Various Activities organized at Anushruti during 01.04.2014 to 31.03.2015

April -2014		
	11.04.2014	4 Children with Hearing Impairment were offered admission to Anushruti.
	23.04.2014	A Hindi and English essay writing competition was organized for Classes II to VIII in order to enhance creativity and competitive spirit in children.
May -2014		
	19.05.2014	A team of auditors from THDC India Ltd. visited Anushruti and the space audit was done by them. Dr. Arun Kumar, Treasurer, SMC – Anushruti briefed about the various activities and professional development of Anushruti. The visitors were impressed to see the set up of Anushruti.
	20.05.2014	Anushruti, the social initiative of IIT Roorkee in association with the 'Department of Management Studies, IIT Roorkee' & QIP Centre, IITR organized One Day Workshop on Indian Sign Language for Teachers of Anushruti. The speakers spoke on a range of topic varying from the learning and teaching trends for the HI Students and discussed different methods to cope up with deafness- for children, parents and teachers for future roadmap for the professional development of the Children with Hearing Impairment.
June -2014		
	26.06.2014	7 students registered for NIOS Second Public Examinations for October – November -2014
July - 2014		
	08.07.2014	Dr. John Pester, Ms. Luis Pen. Mr. William Pownei, Dr. David Rechar from University of Southamton, UK visited the school alongwith Dr. Gaurav Raheja , Manager , SMC – Anushruti . The visit was co-ordinated by Mrs.

		Usha Banerjee. They were highly impressed by the Art and Craft work of Anushruti students.
	10.07.2014	As per Academic Calendar, Anushruti had organized an inter class CALLIGRAPHY contest in Hindi and English from the class I to V on 10 th July, 2014. 43 students altogether took part in the competition and winners were awarded for the best performances.
	31.07.2014	On the occasion of Teej Festival, Mehndi Competition was held in the supervision of Mrs. Neelam Madhok at Anushruti. Students showed their creativity by using different materials. The beautifully decorated Mehndi was judged by Mrs. Kamlesh and Mrs. Ritu Khandelwal, well wisher. They declared as winners of category - Nisha -I , Avi – II , Rashmi –III
August -2014		
	1.08.2014	The visit of Karuna Club, Roorkee Chapter was organized by Dr. Karuna Jain from College of Engineering; Roorkee. Further Karuna Club is associated with Karuna International Chennai. Mrs. Anasuya Banerji, President – Anushruti told the visitors about the school set up and it's professional development and needs of the school.
	02.08.2014	Mrs. Sushmita Mukherjee, from Washington D.C., USA visited the school and shared her international pedagogical experiences & delivered lecture for our school faculty on "Teaching Strategies used for Children with Multiple Disabilities".
	04.08.2014	Dr. Rakesh and Sangeeta Thapar from Wexford, USA visited the school and were impressed with the dedication of faculty and the social initiative of IIT Roorkee. They contributed a sum of Rs. 50,000=00 towards the Corpus Fund.
	05.08.2014	On the occasion of Raksha Bhandhan, a rakhi making competition was held in the supervision of Mrs. Renu Sood at Anushruti. The Winners were : Senior Section : Afnan – I, Manu – II , Shivani–III Junior Section : Vishu –I , Ajay –II , Karthik –III Primary Section : Shivam –I , Vineeta –II , Naman –III To motivate the students, winner were awarded by prizes on the next day in Assembly.
	05.08.2014	Dr. Maarit Salolainen, Aalto University, Finland visited the Anushruti alongwith Dr. Raheja. Dr. Raheja, Manager, SMC – Anushruti, showed the infrastructure and discussed the future R&D plans of Anushruti. She was impressed by the professional growth of school. She suggested to contact with similar level institution in European Countries so that school can benefited by peer expertise for its professional R& D activity. The visit was planned and co-ordinated by Ms. Smriti Saraswat, Assistant Professor, Department of Architecture and Planning, IIT Roorkee.
	13.08.2014	A meeting had been organized on 13th Aug 2014 at Anushruti School to finalize the mode of operation of the proposed research project on "A RANDOMIZED CONTROLLED TRIAL OF YOGA AND PHYSICAL EXERCISE FOR HEARING IMPAIRED CHILDREN" and its implementation. Dr. Vinod Kumar , Dean (Faculty Affairs) , IIT Roorkee and Mrs. Anasuya Banerji discussed the research proposal with Prof Pravat Mandal and his colleague Ms Sarah, a Clinical Psychologist, of NBRC, New Delhi , Physical Instructor from Patanjali Yogpeeth , Haridwar.
	16.08.2014 & 17.08.2014	Anushruti in association with SKENT Centre, New Delhi organized a screening camp for Hearing Aid Trial, Assessment, Fitting, Troubleshooting and Cochlear Implants on 16 -17 August, 2014 at free of cost for the children of Anushruti. The camp was successfully organized at Anushruti on 16th and 17th Aug, 2014. Dr. Sunil Kathuria, glad to inform that he was equally enthusiastic for the same. According to Mr. Anirban Chaudhary and Ms. Varsha Srivastava they would like to give all the professional support for establishing a cochlear

		implant wing at Anushruti. As cochlear implants have been a proven treatment for profound hearing impairment, they feel Anushruti should be equipped to handle cochlear implant recipients. Mr. Rajendra Yadav and Mrs. Renu Sood coordinated the camp's activities. The outcome of the camp was: The students screened for Ear Mould: 34, Hearing Aid Trial: 65 and Cochler Implant: 05.
September -2014		
	05.09.2014	The school children celebrated the "Teachers Day" and presented a colourful cultural programme for the teachers of the school and the parents of Anushruti students
	20.09.2014	Sh. R. S. T. Sai, Chairman & Managing Director, THDC India Ltd Rishikesh alongwith Prof. Ashok Mishra, Chairman, BOG, IIT Roorkee & Chairman, Intellectual Ventures India Consulting Private Limited, Bangalore inaugurated the East block (SEWA THDC Wing) of Anushruti in the graceful presence of Prof. Pradipta Banerji , Director , IIT Roorke.
	30.09.2014	It was again that time of the year when Anushruti celebrate International Week of the Deaf in association of BHOR, Department of Management Studies, IIT Roorkee. They organized lots of fun learning activities, dance, drama and mime for our students.
October -2014		
	04.10.2014	The medical team of Dr. Ajay Bhargava, Dr. Madhulika Chaudhary organized a physical health check –up camp.
	16.10.2014	Dr. Shiv Prasad Kosta, Ex-Director ISRO visited the campus of Anushruti for an interaction with the students and teachers on 16 th October, 2014. Dr. Kosta was the leader for Indian Satellite Launch Teams for our first satellite Aryabhata and Bhaskar.
	20.10.2014	On October 20, 2014, Anushruti family celebrated Deepawali Festival with great joy. Mr. M. P. Jha, an Anushruti wellwisher joined the celebration with Anushruti fraternity.
	30.10.2014	Major General Viswambhar Singh visited Anushruti on Oct 30, 2014. He deeply appreciated and motivated the Anushruti fraternity through his word of wisdom.
November -2014		
	03.11.2014 to 05.11.2014	The 4 th National Abilympics -2014 was held at National Institute of Technical Teachers' Training & Research (NITTTR), Chandigarh from November 3 – 5, 2014. Four Anushruti students Chetan Saini, Tanveer Ahmad, Devesh Kumar and Ms. Abha Kalura winner of Regional Abilympics -2013 participated.
	06.11.2014	Silver Jubilee Alumni Meet of IIT Roorkee was organized on 06.11.2014 Around 125 Jubilee Alumnus of IITR visited Anushruti. Contributions amounting to Rs. 24,700=00 towards professional development of Anushruti were received from Jubilee Alumnus of IITR
	08.11.2014	ANUSHRUTI celebrated its Silver Jubilee year in 2014-15, culminating in a mega event at GNEC, IIT Roorkee Campus, NOIDA on 8 th November, 2014. Managing Director & CEO of Lemon Tree Hotels Group Mr. <i>Patu Keswani</i> graced the function as Chief Guest. Prof. Pradipta Banerji, Director, IIT Roorkee, Mrs. Anasuya Banerji President, Anushruti, IIT Roorkee and Mr. Anil Sharma, Founder Architect, A Sharma Associates, New Delhi, Mr. Ravi Sharma, Ex-CEO -Adani Power and Chairman, Prama Jyoti Foundation presided over the function. Prof. P. K. Ghosh, Dean (Finance & Planning), Prof. U. P. Singh, Dean (Administration), IIT Roorkee, All members of School Management Committee and Teachers of Anushruti attended the function. After being accorded a formal welcome by Dr. Gaurav Raheja, Manager, Anushruti. Mr. <i>Patu Keswani</i> , inaugurated the event as well as Art Exhibition that comprised displays by Anushruti students. A documentary film is also being made screen to express the vision, ideas and views that have guided ANUSHRUTI at each step.

		<p>In an inaugural session the eminent representatives from the hospitality industry very enthusiastically discussed the key challenges, issues and experiences gained through the employment of HI and other individuals with disabilities. The key outcomes that emerged from this intense panel discussion were:</p> <ol style="list-style-type: none"> 1. Sharing of training experiences of Hospitality industry with Anushruti students through vocational internships, visits and employment opportunities. 2. Development of professional modules related to the training of HI children beyond the traditional roles of hospitality to the front end management. 3. Travel and mobility strategies for the specially abled as introduced by Lemon Tree hotels can be used for the students of Anushruti. <p>Session 1 Employment and Employability in Hospitality Industry</p> <p>The eminent representatives from the hospitality industry very enthusiastically discussed the key challenges, issues and experiences gained through the employment of HI and other individuals with disabilities. The key outcomes that emerged from this intense panel discussion were:</p> <ol style="list-style-type: none"> 1. Sharing of training experiences of Hospitality industry with Anushruti students through vocational internships, visits and employment opportunities. 2. Development of professional modules related to the training of HI children beyond the traditional roles of hospitality to the front end management. 3. Travel and mobility strategies for the specially abled as introduced by Lemon Tree hotels can be used for the students of Anushruti. <p>Session 2 Creative Openings</p> <p>This session had eminent panelists and moderators with diverse forms of human focused experiences and also in relation to children with hearing impairments.</p> <ol style="list-style-type: none"> 1. Experiencing tremendous potential among students with disabilities including HI. 2. Role of sign language 3. Technology support to enhance creative powers of children with Hearing impairments <p>Session 3 Alumni Support and Care</p> <p>This session primarily focused upon the IITR alumni support and its role in taking Anushruti to its advancing roles in the lives of children with hearing impairments.</p> <ol style="list-style-type: none"> 1. Impactful Networking through social media like Facebook/Twitter must be done to connect Anushruti to a global connect/platform. 2. Collaboration possibilities with other institutes for higher studies, like collaboration with CDAC be explored for professional skill development of students at Anushruti. <p>DMRC , REC , Graves Cotton Ltd, Mumbai , Rail Vikas Nigam , Bank of Baroda , Canara Bank, M/s Shakumbari Automobiles- Roorkee, Mr. V. S. Verma , former Secretary , CERC Govt. India , New Delhi , Sh. Hemant Arora , Chartered Accountant – Roorkee , Ar. Mujeeb Malik Technoconsult , group of architecture and engineers Roorkee and Dr. R. Bhaskara Rao , Visakhapatnam were the sponsors of this mega event. Mr. <i>Mangu Singh</i>, the Managing Director of Delhi Metro Rail Corporation Limited (DMRC), Prof. S. C. Handa, Director General, Quantum Global Campus, Roorkee and the eminent representatives from the hospitality industry , moderator,</p>
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		panelist and teachers and staff of Anushruti were felicitated by Prof. Pradipta Banerji, Director, IIT Roorkee, and Mrs. Anasuya Banerji President, Anushruti, IIT Roorkee.
	15.11.2014	The delegation of York University, Toronto (Canada) visited the campus and impressed to see the set up of Anushruti.
	18.11.2014	Ruby Alumni Meet of IIT Roorkee was organized on 18.11.2014 Around 75 Jubilee Alumnus of IITR visited Anushruti. Contributions amounting to Rs. 4,700=00 towards professional development of Anushruti were received from Jubilee Alumnus of IITR and Rs. 25,000 received towards for making Corpus Fund.
	25.11.2014	Celebrated as Foundation day of IITR. Around 80 Golden and Diamond Jubilee Alumnus of IITR visited the school. The National Anthem presentation by the students of Anushruti at the Alumni felicitation at main building (<i>James Thomason Building</i>) IIT Roorkee appreciated by alumnus. An amounting of Rs. 48,255=00 for the welfare of hearing impaired students were received from Jubilee Alumnus of IITR.
December -2014		
	03.12.2014	International Day for Persons with Disabilities was commemorated at Anushruti with an active participation from Anushruti students and faculty.
	10.12.2014	Our students visited BEG & Centre in a "Chrysanthemum Flower Show - 2014.
	12.12.2014	6 students of Anushruti appeared in Secondary Certificate Examination (September - October -2014) from National Institute of Open Schooling Board, Noida. The students cleared their examination with good marks. One student Bhavyadeep, appeared in Senior Secondary Certificate Examination (October -2014) and passed with good marks.
	14.12.2014	Mrs. Parvati Pandey was honoured by Alpna Krishnanchal Sports and Educational Trust, Roorkee for her dedicated services to the Children with Hearing Impairment.
	16.12.2014	Mr. Hemant Parekh, founder of M/s Hemant Parikh And Associates Pvt Ltd Mumbai, visited Anushruti and he appreciated all the staff for outstanding work in a neglected area
January -2015		
	09.01.2015	Mrs. Sadhna Agarwal W/o Dr. Gyan C. Agarwal visited the Anushruti and contributed US\$ 1700 for the Welfare of Children of Anushruti.
	25.01.2015	Indian Institute of Technology- Roorkee celebrated Coral Jubilee Alumni meet and in a scheduled programme, there was a visit at Anushruti on 25.01.2015. Around 60 Jubilee Alumnus of IITR visited the school. A contributions amounting to Rs. 5000=00 for the welfare of hearing impaired students were received from Jubilee Alumnus of IITR.
	26.01.2015	Flag hosting was done by Mrs. Anasuya Banerji, President – Anushruti on the occasion of Republic Day on 26 th January, 2015. After small introduction on Republic Day by Mrs. Banerji, our students performed a patriotic dramatic Skit on "Sarva Dharma Sambhaav" in the main building ground (<i>James Thomason Building</i>) IIT Roorkee.
	30.01.2015	Rotary Club of Roorkee and Bharat Vikas Parishad organized a Painting Competition on "Wastage of Water" and "Rural Sanitation – Sawaksh Bharat Abhiyan". In a gala function at Auditorium of Institution of Engineers, IIT Roorkee the winners of the competition Ms. Shazia Mirza received first prize. Further, Ms. Shivani and Master Kartik Saini were also honoured during the programme.
February -2015		
	27.02.2015	"Smt. Kamala Devi and Shri Madan Gopal Gupta Award of Excellence" was given to Ms. Vineeta Negi in a social event organized at Anushruti with the gracious presence of Dr. S. P. Gupta, former Dy. Director, IIT Roorkee and his family along with Mrs. Anasuya Banerji. The award was instituted in the memory of his parents.

March -2015		
	26.03.2015	Anushruti students have been participating and performing a cultural evening at HI-Aim Conference and Exposition during 26th March, 2015 at Leela Ambience Gurgaon, with an intention to promote Anushruti's involvement in the graceful presence of the hotel brands, delegates, exhibitors.
	29.03.2015	The first meeting of members of Advisory Council of Anushruti, a Social Initiative of IIT Roorkee, was held on March 29, 2015 under the Chairmanship of Mr. Sunil Pahilajani, Managing Director & CEO, Greaves Cotton Limited, Mumbai.
	29.03.2015	Greaves Cotton Limited, Mumbai, recruited our four students, (Sagar Singhal, Amar Tyagi , Sazid Hassan and Rishab Maheshwari) for the placement in MIDC Chikalthana , Aurangabad .

FINANCIAL REPORT

Statement of Donations Received During Financial Year: 2014 -2015

Sl. No.	Type of Donations	Amount (in Rs.)
1.	General Donations (One Time, Monthly, Quarterly, Half Yearly, Yearly)	23,25,939.00
2.	General Donations received from Alumni Function	82,655.00
3.	Collection through Greeting Cards / Other Products	93,730.00
4.	Corpus Fund Donations	9,13,693.00
	TOTAL	34,16,017.00

Appendices

A1 Details of ITR Results (2014-2015)
 A2 Details of Awards
 A3 Hostel Accommodation on the Campus

A4 On Campus Recruitment
 A5 Scholarships and Financial Aid to Students

A1 - DETAILS OF ITR RESULTS (2014-15)

S.No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
B.Tech. / B.Arch. (First Year)				
1.	Architecture	34	34	–
2.	Biotechnology	39	37	2 student not earned required credits
3.	Chemical	106	99	7 student not earned required credits
4.	Civil	136	122	14 student not earned required credits
5.	CSE	75	71	4 student not earned required credits
6.	E&C	76	66	10 student not earned required credits
7.	Electrical	138	126	12 student not earned required credits
8.	Industrial (P&I)	60	58	2 student not earned required credits
9.	Mechanical	81	78	3 student not earned required credits
10.	Metallurgical	107	100	7 student not earned required credits
11.	Pulp & Paper	-	-	–
12.	Polymer Science	26	25	1 student not earned required credits
TOTAL		878	816	62 student not earned required credits
B.Tech. / B.Arch. (Second Year)				
1.	Architecture	30	30	–
2.	Biotechnology	43	43	–
3.	Chemical	110	110	–
4.	Civil	135	134	1 student not earned required credits
5.	CSE	76	74	2 student not earned required credits
6.	E&C	77	75	2 student not earned required credits
7.	Electrical	142	142	–
8.	Industrial	61	61	–
9.	Mechanical	81	81	–
10.	Metallurgical	112	112	–
11.	Pulp & Paper	13	13	–
12.	Polymer Science	19	19	–
TOTAL		899	894	5 student not earned required credits
B.Tech. / B.Arch. (Third Year)				
1.	Architecture	36	36	–
2.	Biotechnology	42	42	–
3.	Chemical	80	80	–
4.	Civil	119	119	–
5.	CSE	79	79	–
6.	E&C	56	56	–
7.	Electrical	128	128	–
8.	Industrial	61	61	–
9.	Mechanical	84	84	–
10.	Metallurgical	81	81	–
11.	Pulp & Paper	27	27	–
12.	Polymer Science	34	34	--
TOTAL		827	827	--

S.No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
B.Tech. Final Year / B.Arch. (Fourth Year) 2014-15				
1.	Biotechnology	50	46	04 student not earned required credits
2.	Chemical	57	56	01 student not earned required credits
3.	Civil	128	112	16 student not earned required credits
4.	CSE	60	47	13 student not earned required credits
5.	E&C	58	46	12 student not earned required credits
6.	Electrical	131	116	15 student not earned required credits
7.	Industrial	52	47	5 student not earned required credits
8.	Mechanical	89	76	13 student not earned required credits
9.	Metallurgical	98	95	03 student not earned required credits
10.	Pulp & Paper	58	51	07 student not earned required credits
11.	B.Arch. (Forth year)	49	49	
TOTAL		830	741	89 student not earned required credits
B.Arch. (Final Year) 2014-15				
1.	B. Arch.	49	48	01 student not earned required credits
Integrated Dual Degree (First Year) 2014-15				
1.	CH/HC	NA	NA	–
2.	E&C/WC	NA	NA	–
3.	CSE/IT	NA	NA	–
4.	PEM	20	19	01 student not earned required credits
Integrated.M.Tech. (First Year) 2014-15				
1.	GPT	25	22	03 student not earned required credits
2.	GT	25	22	03 student not earned required credits
TOTAL		50	44	06 student not earned required credits
Integrated.M.Sc. (First Year) 2014-15				
1.	MSM	29	27	02 student not earned required credits
2.	MSP	15	13	02 student not earned required credits
TOTAL		44	40	04 student not earned required credits
Integrated Dual Degree (Second Year) 2014-15				
1.	CH/HC	--	--	–
2.	E&C/WC	--	--	–
3.	CSE/IT	--	--	–
4.	PEM	20	20	–
5.	CES	--	--	–
6.	MMT	--	--	–
7.	EPE	--	--	–
TOTAL		20	20	
Integrated.M.Tech. (Second Year) 2014-15				
1.	GPT	29	28	01 student not earned required credits
2.	GT	23	23	–
TOTAL		52	51	01 student not earned required credits
Integrated.M.Sc. (Second Year) 2014-15				
1.	MSC	--	--	–
2.	MSM	28	28	–
3.	MSP	15	15	–
TOTAL		43	43	--
Integrated Dual Degree (Third Year) 2014-15				
1.	CH/HC	32	32	–
2.	E&C/WC	21	21	–
3.	ES	15	15	–
4.	MMT	19	19	–
5.	CSE/IT	--	--	–

6.	PEM	29	29	–
7.	EPE	14	14	–
	TOTAL	130	130	
S.No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
Integrated.M.Tech. (Third Year) 2014-15				
1.	GPT	29	29	–
2.	GT	31	31	–
3.	PST	--	--	–
	TOTAL	60	60	
Integrated.M.Sc. (Third Year) 2014-15				
1.	MSC	11	11	–
2.	MSM	29	29	–
3.	MSP	23	23	–
	TOTAL	63	63	
Integrated Dual Degree (Fourth Year) 2014-15				
1.	CH/HC	22	22	–
2.	E&C/WC	19	19	–
3.	CSE/IT	27	27	–
4.	PEM	26	26	–
5.	EPE	60	60	–
	TOTAL	154	154	
Integrated.M.Tech. (Fourth Year) 2014-15				
1.	GPT	27	27	–
2.	GT	27	27	–
3.	PST	24	24	–
	TOTAL	78	78	
Integrated.M.Sc. (Fourth Year) 2014-15				
1.	MSC	19	19	–
2.	MSM	27	27	–
3.	MSP	17	17	–
	TOTAL	63	63	–
Integrated Dual Degree (Final Year) 2014-15				
1.	CH/HC	20	20	--
2.	E&C/WC	18	15	03 student not earned required credits
3.	CSE/IT	23	23	–
4.	PEM	23	22	01 student not earned required credits
5.	EPE	16	15	01 student not earned required credits
	TOTAL	100	95	05 student not earned required credits
Integrated.M.Tech. (Final Year) 2014-15				
1.	GPT	24	23	01 student not earned required credits
2.	GT	23	20	03 student not earned required credits
3.	PST	16	15	01 student not earned required credits –
	TOTAL	63	58	05 student not earned required credits
Integrated.M.Sc. (Final Year) 2014-15				
1.	MSC	5	4	01 student not earned required credits
2.	MSM	16	14	02 student not earned required credits
3.	MSP	16	15	01 student not earned required credits
	TOTAL	37	33	04 student not earned required credits

M.Sc. First Year 2014-15

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	Indl. Math. & Informatics	11	11	-
2.	Applied Mathematics	13	13	-
3.	Biotechnology	26	26	-
4.	Chemistry	22	22	-
5.	Applied Geology	15	15	-
6.	Physics	21	21	-
TOTAL		108	108	-

M.Sc. Final Year (2014-15)

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	Indl. Math. & Informatics	12	12	-
2.	Applied Mathematics	15	15	-
3.	Biotechnology	23	23	-
4.	Chemistry	19	19	--
5.	Applied Geology	13	13	-
6.	Physics	15	15	-
TOTAL		97	97	--

M.Tech. (Earth Sciences) First Year 2014-15

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	Geophysical Technology	5	5	--
2.	Geological Technology	12	12	-
TOTAL		17	17	-

M.Tech. (Earth Sciences) Final Year 2014-15

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	M.Tech. Geological Tech.	12	12	-
2.	M.Tech. Geophysical Tech.	9	9	-
TOTAL		21	21	

M.B.A.

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	M.B.A. First Year	85	84	1 Students not earned required credits
2.	M.B.A. Final Year	87	87	-
TOTAL		172	171	1 Students not earned required credits

M.C.A.

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	M.C.A. Second Year (2014-15)	42	42	-
2.	M.C.A. Final Year (2013-14)	47	47	-
TOTAL		89	89	

Master of Architecture/Master of Urban & Rural Planning (First Year) 2014-15

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	M. Arch.	18	18	–
2.	MURP	18	18	–
TOTAL		36	36	–

Master of Technology (First Year) 2014-15

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
Chemical Engineering				
1.	Indl. Pollution Abatement	24	24	–
2.	Com. Aided Process Plant Design	25	25	–
TOTAL		49	49	–
Civil Engineering				
1.	Environmental Engineering	14	14	–
2.	Geotechnical Engineering	17	17	–
3.	Hydraulic Engineering	17	17	–
4.	Geomatic Engineering	16	16	–
5.	Structural Engineering	32	32	–
6.	Transportation Engineering	25	25	–
TOTAL		121	121	–
Earthquake Engineering				
1.	Soil Dynamics	17	17	–
2.	Structural Dynamics	27	27	–
3.	Seismic Vulnerability & Risk Assessment	10	10	–
TOTAL		54	54	–
Electrical Engineering				
1.	Electric Drives & Power Electronics	23	23	–
2.	Power System Engineering	20	20	–
3.	Instrumentation & Singnal Processing	18	18	–
4.	System Control Engineering	20	20	–
TOTAL		81	81	–
Metallurgical & Materials Engineering				
1.	Industrial Metallurgy	16	16	–
2.	Material Engineering	14	14	–
TOTAL		30	30	–
Electronics & Computer Engineering				
1.	Communication Systems	15	15	–
2.	R.F. & Microwave Engg.	16	16	–
3.	Micro Electronics & VLSI	13	13	–
TOTAL		44	44	–
Computer Science & Engineering				
1	Computer Science & Engg	44	44	–

Paper Technology Saharanpur				
1.	Pulp & Paper	16	16	–
2.	Packaging Technology	12	12	–
		28	28	
Mechanical & Industrial Engineering				
1.	Machine Design	14	14	–
2.	Production & Ind. Systems	20	20	–
3.	Welding	15	15	–
4.	Thermal	14	14	–
5.	CAD CAM & Robotics	14	14	-
	TOTAL	77	77	–

Transportation Systems

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	M. Tech. Infrastructure Systems First Year (2014-15)	18	18	-
2.	M. Tech. Infrastructure Systems Final Year (2013-14)	-	-	-
	TOTAL	18	18	-

Solid State Electronic Materials

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	M. Tech. (S.S.E.M.) First Yr. (2014-15)	14	14	–
2.	M. Tech. (S.S.E.M.) Final Yr. (2013-14)	16	16	–
	TOTAL	30	30	–

Chemistry

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	Advanced Chemical Analysis First year (2014-15)	9	9	–
2.	Advanced Chemical Analysis Final (2013-14)	11	11	–
	TOTAL	20	20	–

Alternate Hydro Energy Centre

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	A.H.E.S. I year (2014-15)	41	41	–
2.	EMR&L I year (2014-15)	12	12	–
	TOTAL	53	53	

P.G Diploma /M. Tech. I Yr. (Hydrology)(2014-15)

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	Hydrology	15	15	

P.G Diploma /M. Tech. I Yr. (Water Resources Development) (2014-15)

1.	WRD&M	20	20	-
2.	I.W.M.	7	7	-
	TOTAL	27	27	-

Nanotechnology

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	M. Tech. N.T. First Year (2014-15)	8	8	-
2.	M. Tech. N.T. Final Year (2013-14)	13	13	-
TOTAL		21	21	-

M. Tech. (Disaster Mitigation & Management)

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	Disaster Mitigation & Management (First Year) (2014-15)	11	11	
2.	Disaster Mitigation & Management (Final Year) (2013-14)	12	12	

Master of Architecture & Rural Planning (Final Year) 2014-15

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
1.	M. Arch.	19	19	-
2.	MURP	18	18	-
TOTAL		37	37	-

Master of Technology Courses Final Year 2014-15

S. No.	Name of Class	Main Exam.		Remarks
		Appeared	Passed	
Chemical Engineering				
1.	Indl. Pollution Abatement	20	19	1 student not earned required credits
2.	Com. Aided Process Plant Design	23	23	-
3.	Industrial Safety & Hazards Management	12	11	1 student not earned required credits
TOTAL		55	53	2 student not earned required credits
Civil Engineering				
1.	Building Science & Tech.	12	12	-
2.	Environmental Engineering	10	10	-
3.	Geo-technical Engineering	20	20	-
4.	Hydraulic Engineering	13	13	-
5.	Geomatics Engineering	18	18	-
6.	Structural Engineering	16	16	-
7.	Transportation Engineering	24	24	-
TOTAL		113	113	-
Earthquake Engineering				
1.	Soil Dynamics	14	14	-
2.	Structural Dynamics	27	27	-
3.	Seismic Vulnerability and Risk	11	11	
TOTAL		52	52	

Electrical Engineering				
1.	Electric Drives and Power Electronics	14	14	-
2.	Power System Engineering	16	14	2 Students not earned required credits
3.	Instrumentation & Signal Processing	21	21	-
4.	System & Control	17	17	-
TOTAL		68	68	2 Students not earned required credits
Metallurgical & Materials Engineering				
1.	Industrial Metallurgy	16	16	-
2.	Corrosion Engineering	13	13	-
3.	Physical Metallurgy	12	12	-
TOTAL		38	38	-
Electronics Engineering				
1.	Communication System	17	17	-
2.	Systems Modeling & Control (Control Guidance)	11	11	-
3.	RF & Microwave	10	10	-
4.	Micro Electronics & VLSI	15	15	-
TOTAL		53	53	-
Computer Science Engineering				
	Computer Science Engineering	44	44	-
Mechanical & Industrial Engineering				
1.	Machine Design	18	18	-
2.	Production and Ind. Systems	18	18	-
3.	Welding	11	11	-
4.	Thermal	12	12	-
5.	CAD,CAM & Robotics	13	13	-
TOTAL		72	72	-
Alternate Hydro Energy Centre (Final Year)				
1.	A.H.E.S.	26	25	1 student not earned required credits
2.	Environmental & Management of Rivers & Lakes	12	12	-
TOTAL		38	37	1 student not earned required credits
M. Tech. (Hydrology) (Final Year)				
1.	Hydrology	22	22	-
M. Tech. (Final Year) (Water Resources Development)				
1.	WRD	23	23	-
2.	I.W.M.	7	7	-
TOTAL		30	30	-
Pulp & Paper				
1.	Pulp and Paper	14	14	-

A2 - DETAILS OF AWARDS

CONVOCATION – 2014

President's Gold Medal**1. Archit Singhal, B.Tech. (Electrical Engineering)**

For obtaining highest C.G.P.A. amongst the B.Tech./B.Arch./IDD/Int. M.Sc./Int. M.Tech. Passing out students entered through JEE having good character.

Director's Gold Medal**2. Nihar Rajvanshi, B. Tech. (Production & Industrial Engg.)**

For the best all-rounder other than sports amongst the B.Tech./B.Arch./IDD/Int. M.Sc./Int. M.Tech. Passing out students entered through JEE having good character and having CGPA ≥ 9.0 .

The President of India, Dr. Shankar Dayal Sharma Gold Medal**3. Payal Bajaj, B. Tech. (Computer Sciences & Engg.)**

For excellent performance in academics, extra-curricular activities including social service and having good character amongst all passing out UG and PG students.

4. Dr. Jai Krishna Gold Medal**Jacob Mathew, B.Tech.(Civil Engineering)**

For the best student in B.Tech./B.Arch. Courses for outstanding performance in Academics and in Sports who does not get any other Gold Medal.

5. Institute Silver Medals

For obtaining the highest C.G.P.A. amongst the students undergraduating/IDD/int. M.Sc./Int. M.Tech. Programme in their respective disciplines as follows:

Name of Student	Programmes
I Shivam Gupta	B. Architecture
II Rasham Garg	B. Tech. (Biotechnology)
III Agrawal Anshul Sankarlal	B. Tech. (Chemical Engg.)
IV Anupriya	B. Tech. (Civil Engg.)
V Payal Bajaj	B. Tech. (Computer Sciences & Engg.)
VI Suryaansh Makked	B.Tech. (Mechanical Engg.)
VII Shubham Garg	B. Tech (Electronics & Communication Engg.)
VIII Swati Goel	B. Tech. (Met. & Mat. Engg.)
IX Nihar Rajvanshi	B. Tech. (Prod. & Ind. Engg.)
X Pooja Agrawal	B. Tech. (Pulp & Paper Engg.)
XI Bhaskar Mahato	IDD (B. Tech (Chem. Engg.) & M.Tech. (HE))
XII Abhinav Aggarwal	IDD (B. Tech. (Comp. Sci.& Engg.) & M.Tech. (IT))
XIII Mohd. Faizan Malik	IDD (B. Tech. (Elect. Engg.) & M.Tech. (PE))
XIV Gannavarapu Gopala Krishna Murthy	IDD (B. Tech. (E & CE) & M.Tech. (WC))
XV Kartikey Sharma	IDD (B. Tech. Process Engg.) & MBA
XVI Pallavi Bhambri	Int. M. Tech. (Polymer Science & Tech.)
XVII Akhil Prabhakar	Int. M. Tech. (Geophysical Tech.)
XVIII Puneet Seth	Int. M. Tech. (Geological Tech.)
XIX Chiranjiv Paritosh	Int. M.Sc. (Applied Mathematics)
XX Arpit Dua	Int. M.Sc. (Physics)
XXI Ankit S Agrawal	Int. M.Sc. (Chemistry)

6. Bachelor of Technology/Bachelor of Architecture

Institute Medal

For Best Project in Engineering & Architecture amongst the undergraduate students in their respective disciplines as follows:

Name of Student	Programmes
(i) Siddharth Inani	B. Architecture
(ii) Samarth Mathur	B. Tech. (Biotechnology)
(iii) Govind Gullbadhar	B. Tech. (Chem. Engg.)
(iv) Ashirwad Barnwal	B. Tech. (Civil Engg.)
(v) Mansukhani Ashish Kishan	B. Tech. (Computer Sciences & Engg.)
(vi) Pritam Choudhury	B. Tech. (Electrical Engg.)
(vii) Priyanshi Goyal	B. Tech (Electronics & Communication Engg.)
(viii) Ali Yawar	B. Tech. (Mechanical Engg.)
(ix) Akshat Rajput	B. Tech. (Met. & Mat. Engg.)
(x) Archit Garg	B. Tech. (Production & Industrial Engg.)
(xi) Pooja Agrawal	B. Tech. (Pulp & Paper Technology)

7. **Agrawal Anshul Shankarlal, B.Tech. (Chemical Engineering)**

Prem Prakash Gupta Medal for the student obtaining highest C.G.P.A. in Tech. (Chemical) final year.

8. **Anupriya, B.Tech. (Civil Engineering)**

Madhusudan Dayal Mithal Medal for obtaining highest C.G.P.A. in B.Tech.(Civil)

9. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**

Dr. G. Pande Medal for the girl student for standing first amongst the girl student in all B.Tech./B.Arch. courses.

10. **Anupriya, B.Tech. (Civil Engineering)**

Rai Bahadur Sohan Lal Bhatia Medal for obtaining highest C.G.P.A. in B.Tech.(Civil)

11. **Archit Singhal, B.Tech. (Electrical Engineering)**

Dr. A.N. Khosla Medal for the student obtaining highest C.G.P.A. in all B.Tech. Courses.

12. **Archit Singhal, B.Tech. (Electrical Engineering)**

Smt. Shashi Krishna Medal for the student obtaining highest C.G.P.A. all B.Tech./B.Arch. courses.

13. **Pooja Agrawal, B.Tech. (Pulp and Paper Technology)**

Federation of Paper Traders Association of India Medal for obtaining highest C.G.P.A. in B.Tech.(Pulp & Paper).

14. **Anupriya, B.Tech. (Civil Engineering)**

Smt. Kaushalaya Arya Cash Prize of Rs. 4000/- for the next best girl student in B.Tech/B.Arch. IV year.

15. **Mansukhani Ashish Kishan, B.Tech. (Computer Sciences and Engineering)**

Dr. A.S. Arya Cash Prize of Rs. 4000/- for the second best student (boy) in B.Tech./B.Arch. Final year.

16. **Ashirwad Barnwal, B. Tech. (Civil Engg.)**

Brig. Harish Chandra Cash Prize of Rs. 1000/- for the B. Tech., Civil Engg. Final year student on the basis of the best Design (Project).

17. **Chilukuri Ajit Krishna, B.Tech. (Civil Engineering)**

Sri M.A. Rao Cash Prize of Rs. 1000/- for the student standing second in order of merit in B.Tech. (Civil Engg.) Final Year.

18. **Anupriya, B.Tech. (Civil Engineering)**

Sri M.A. Rao Cash Prize of Rs.1000/- for the best girl student obtaining highest C.G.P.A. amongst girl student in B.Tech Civil.

19. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**

Sri M.A. Rao Cash Prize of Rs. 1000/- for having all round best performance in studies and sports in B.Tech.Courses

20. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**

Laxmi Devi and Shri Banadri Das Cash prize of Rs. 5000/- for the best and outstanding girl student with excellence in academics amongst all girls in B.Tech. /B.Arch. courses.

21. **Ashirwad Barnwal, B. Tech. (Civil Engg.)**

Tara Chand Kanti Devi Cash Prizes of Rs. 2500/- to the best student doing best design project in B. Tech. (Civil)

22. **Archit Singhal, B.Tech. (Electrical Engineering)**

- Late Smt.Kailash Devi Goyal W/o Sri Kanhaiyalal Goyal of Firozabad Memorial Cash Prize of Rs.5000/-for the student obtaining highest CGPA in B.Tech.(Elect.) final year.
23. **Anupriya, B.Tech. (Civil Engineering)**
 “Prabhakar Swarup Civil Engineering Award” of Rs. 10000/- to a student of B.Tech Civil IV year who obtained highest CGPA in B.Tech Civil IV year.
24. **Agrawal Anshul Shankarlal, B.Tech. (Chemical Engineering)**
 Prem Prakash Gupta Cash Prize of Rs. 5000/- for the student obtaining highest C.G.P.A. in B.Tech.(Chemical) final year.
25. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**
 Durga Award of Rs. 5000/- to a girl student for outstanding proficiency including character, conduct and excellence in academics performance, extra-curricular activities and social services.
26. **Swati Goel, B.Tech. (Metallurgical & Materials Engineering)**
 Mrs. Leila Saxena Memorial Cash Award of Rs. 5000/- For the student who obtains highest CGPA in B.Tech. Metallurgical & Materials Final Year.
27. **Shivam Gupta, B. Architecture**
 Everest Award of Excellence of Rs. 10,000/- for the student who obtains highest CGPA in B. Arch. Final Year.
28. **Swati Goel, B.Tech. (Metallurgical & Materials Engineering)**
 G.P. Bagchi Metallurgical & Materials Engineering Cash Prize of Rs. 5000/- for highest CGPA to Final Year student of Metallurgical & Materials.
29. **Anupriya, B.Tech. (Civil Engineering)**
 Prof. Ranvir Singh Shastry” Cash Prize of Rs. 6000/- to a girl student B.Tech. Final Year. Who obtains 2nd highest CGPA.
30. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**
 “Om Bala Thapar” Cash Prize of Rs. 12000/- for the best all round girl student in the B.Tech. Degree Programme.
31. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**
 “Col. Bajpai” Cash Prize of Rs.5000/- for the girl student obtaining highest CGPA. Amongst girls students in undergraduate Programme
32. **Anupriya, B.Tech. (Civil Engineering)**
 “Shri Shiv Nandan Swaroop and Avadh Narayan Bhatnagar” Cash Prize of Rs. 10000/- to a student of B.Tech. Civil Final Year Batch topper.
33. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**
 “Smt. Rama Devi Krishna Bhatnagar” Cash Prize of Rs. 10000/- for the girl student amongst girl students in all Branches undergraduate Programme.
34. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**
 “Kedar Nath Agarwala, I.S.E. Memorial” trophy and Cash Award of Rs. 5000/- for Academics Excellence and outstanding Community Service. services.
35. **Chilukuri Ajit Krishna, B.Tech. (Civil Engineering)**
 “Vinay Krishna Cash Prize of Rs. 5,000/-“ for a student of B.Tech., Civil Engg. final year who obtained second highest CGPA.
36. **Govind Gullbadhar, B. Tech. (Chemical Engg.)**
 “Astha Mukul Dixit Prize” of Rs. 5,100/- for the best Engineering Project in Final year of B.Tech. Chemical Engg
37. **Anupriya, B.Tech. (Civil Engineering)**
 “Prof. (Mrs.) Renu Bhargava Cash Award for Excellence in Environmental Engineering” of Rs. 11,000/- to a girl student obtaining highest Marks/Grade in compulsory Environmental Engineering subjects in B.Tech. (Civil Engineering and securing overall CGPA 8.0 or above after final year.
38. **Payal Bajaj, B.Tech. (Computer Science and Engineering)**
 Sarojini Naidu Cup for work and play
M.Tech./M.Arch./M.U.R.P.M.Phil./M.Tech (ES)/M.Sc.
1. **Mandeep Singh, M.Tech. (Civil Engineering)**
 Tara Chand Kanti Devi Cash Prizes of Rs. 3000/- to the best student of M.Tech. (Civil)
2. **Mandeep Singh, M.Tech. (Civil Engineering)**
 Tara Chand Kanti Devi Cash Prizes of Rs. 2000/- to the best student of M.Tech. (Geotech)
3. **Subhajit Sen, M.Tech. (Earthquake Engg.) (Structural Dynamics)**
 The Indian Service of Engineers Cash Prize of Rs. 2000/- for standing first in class in “Structural Dynamics”
4. **Sneha Singh, M.Tech. (Electrical) Instrumentation and Signal Processing**
 Late Smt. Uma Goyal, W/O Sri Uday Shankar Goyal Memorial Cash Prize of Rs. 2500/- for

- obtaining highest CGPA in M.Tech.(Electrical) Final Year.
5. **Aby K. George, M.Tech. (Electrical) Instrumentation and Signal Processing**
Late Smt. Uma Goyal, W/O Sri Uday Shankar Goyal Memorial Cash Prize of Rs. 2500/- for obtaining highest CGPA in M.Tech.(Electrical) Final Year.
 6. **Subhajt Sen, M.Tech. (Earthquake) Structural Dynamics**
Dr. Jai Krishna Medal for obtaining highest CGPA in all M.Tech. Courses.
 7. **Subhajt Sen, M.Tech. (Earthquake) Structural Dynamics**
Laxmi Devi and Shri Banadri Das Cash Prizes of Rs. 5000/-for the best and student with excellance in academic amongst all the student in M.Tech. Engg. /M.Arch. Courses.
 8. **Priyank Jain, M.Tech. (E & CE) System Modeling and Control**
Late Sri Kanahiya Lal Goyal F/O Sri Uday Shanker Goyal Cash Prize of Rs. 2500/- for obtaining highest CGPA in M.Tech. (E&C) final year
 9. **Tuhin Sharma, M.Tech. (Computer Science and Engineering)**
Goyal Cash Prize of Rs. 1500/- for obtaining highest CGPA in M.Tech. (CSE).
 10. **Melvin Boss Desmond Scott, M.Tech. (Hydrology-Surface Water)**
Puran Mal Gupta Medal for obtaining highest CGPA in courses M.Tech.(Hydrology)
 11. **Ranjit Kumar Jha, M.Tech. (WRD) Irrigation Water Management**
Dr. A.N. Khosla Medal for obtaining highest CGPA in M.Tech. WRD courses in various specializations in WRD
 12. **Subhasish Dash, M.Tech. (WRD)**
Dr. P.S. Nigam- Nirmala Cash Prize of Rs.1000/- for the best project in M.Tech. WRD
 13. **Arushi Thareja, M.Tech. (Civil Engineering)**
Kathpalia Award of Rs. 5000/- for the best dissertation in M.Tech. (Environment Engg.) (Civil) in the area of Environment Aspects.
 14. **Sandeep Kumar, M.Tech. (WRD)**
Kathpalia Award of Rs. 5000/- for the best dissertation in M.Tech. (Environment Engg.) (WRD) in the area of Environment Aspects.
 15. **Oppiliappa B G, M.Tech. (AHEC)**
Hydro Awards of Rs. 10000/- for a candidate obtaining highest C.G.P.A. in M.Tech. (AHEC) II year
 16. **Tarun Kumar Singh, M.Sc. (Physics)**
Dr. A. N. Khosla Medal for obtaining highest CGPA in M.Sc./M.Tech. (Science) Courses.
 17. **Deepika Malwal, M.Tech. (Nanotechnology)**
Smt. Sushilavati Khosla Medal for the girl student obtaining highest CGPA in M.Sc./M.Tech. (Science) courses.
 18. **Ashvarya Bhalla, M.Sc. (Applied Geology)**
G. Pande Medal for the girl student for obtaining highest CGPA in M.Sc. final year Examination
 19. **Souvick Biswas. M.Sc. (Chemistry)**
Dr. Hari G. Garg Cash Prize of Rs. 5000/- for obtaining highest CGPA in M.Sc. Chemistry final year.
 20. **Sujata Goswami, M.Tech. (Civil) Geomatics**
Amba Prasad – Kalawati Memorial Cash Prize of Rs.5000/-to a student for obtaining highest CGPA in M.Tech. (Geomatics) for obtaining highest CGPA.
 21. **Oppiliappa B G, M.Tech. (AHEC)**
“Electro Steel Award” of Rs. 10,000/- for M.Tech.(Alternate Hydro Energy Systems), II year for best dissertation.

A3 - HOSTEL ACCOMMODATION ON THE CAMPUS

Co-ordinating Committee of Bhawans (CCB) takes care of the overall management of all the hostels and messes under the Chairmanship of Dean of Students Welfare/Associate Dean of Students Welfare (Mess) respectively. There are 13 bachelor hostels for boys and girls, providing accommodation to under graduate, post graduate and Ph.D. students. Married hostels are also available for married students. All bachelor hostels have their own messes. Bhawan and Mess councils are constituted for each Bhawan under the Chairmanship of the Chief Warden with the Warden, Asstt. Warden and elected students

representatives as members to ensure smooth functioning of the Bhawans and messes. Previous year the kitchen of almost all Messes have been modernized to cater to the growing needs of the students. With this set up the students of the Institute are enjoying their meals in different messes which has improved the hygiene and cleanliness within the messes. Automatic chapatti making machines have also been installed in all the messes to meet the requirement of increased intake in different courses.

A4 - ON CAMPUS RECRUITMENT

Company wise break-up of number of offers

S. No.	Name of Company/ Organization/ Institute	Total
1	3DPLM Software Solutions Ltd.	1
2	Accolite Software India Pvt. Ltd.	1
3	Adobe Research India	7
4	Affine Analytics	4
5	Alfa College of Engineering & Technology	10
6	Alstom India Limited	1
7	Amazon Development Centre	5
8	Anand Automotive Ltd	2
9	Applied Materials	1
10	Arup India Pvt. Ltd.	2
11	ASC Infratech Pvt. Ltd.	2
12	Avanti Learning Centres Pvt. Ltd.	1
13	Axtria India Pvt. Ltd.	25
14	B&S Engineering Consultants Pvt. Ltd.	1
15	Balaji Action Buildwell	6
16	Beehyv Software Solutions Pvt. Ltd.	5
17	Bharti Airtel Ltd.	2
18	Boston Analytics	5
19	BrowserStack	1
20	Cairn India Ltd.	2
21	Capgemini India Pvt. Ltd.	13
22	Capital One Services(India) Pvt. Ltd.	2
23	Caterpillar India Pvt. Ltd.	2
24	CBRE South Asia (P) Ltd.	3
25	Centre for Development of Telematics	1
26	Cisco Systems (India) Pvt. Ltd.	6
27	Citicorp Services India Ltd.	12
28	Citrix R&D India Pvt. Ltd.	3
29	Clavileno Capital	5
30	Click Labs Pvt. Ltd.	1
31	Coal India Ltd.	13
32	Codenation	0
33	Cognilytics Software & Consulting	2
34	Cognizant Technology Solutions	18
35	Continental India Ltd.	1
36	Crayon Data	4
37	CRISIL Ltd.	3
38	CSC India Pvt. Ltd.	1
39	Cubastion Consulting Pvt. Ltd.	11
40	D.E. Shaw India Software Pvt. Ltd.	2
41	Daimler India Commercial Vehicles	2
42	Dar Al-Handasah Consultants	42

	(Shair & Partners) India Pvt. Ltd.	
43	Deloitte US India	11
44	Denfab Engineers Pvt. Ltd.	3
45	Directi	4
46	DIT University	18
47	DocSuggest	6
48	DPS Yamunanagar	2
49	DRDO	3
50	Drishti-Soft Solutions Pvt. Ltd.	2
51	Dunnhumby - MBA	3
52	Eaton	5
53	ebay Inc.	1
54	Edge Verve Systems Ltd. (Infosys)	0
55	EduExcellence	3
56	e-GMAT	2
57	Elegant Marine Services	10
58	Era Infra Engineering Limited	4
59	ERCON COMPOSITE	1
60	Evalueserve	5
61	EXL Service (I) Pvt. Ltd.	5
62	Expicient software Pvt. Ltd.	3
63	Facebook	2
64	Feedback Business Consulting Services Pvt. Ltd.	2
65	Finisar Malaysia Sdn Bhd	4
66	First Choice Retailing Pvt. Ltd.	1
67	Flipkart Internet Pvt. Ltd. - Software - BA	19
68	Freescale Semiconductor India Pvt. Ltd.	3
69	Futures First Info Services PL	5
70	Fuzzy Logix	2
71	General Motors Technical Centre India Pvt. Ltd.	1
72	Girnar Software Pvt. Ltd.	30
73	Global Analytics	2
74	Goldman Sachs Services Pvt. Ltd. (Strategies Group)	10
75	Goldman Sachs Services Pvt. Ltd. (Technology Division)	2
76	Google International	2
77	Grail Research, a division of Integreon	7
78	Gram Power	0
79	Greaves Cotton Ltd.	4
80	Havells India Limited	1
81	Haygot Education Pvt. Ltd.	1
82	HCL Technologies	1
83	HDFC Asset Management Co. Ltd.	4
84	HDFC Bank Ltd.	7
85	Holachef Hospitality Pvt. Ltd.	2
86	HouseJive Technologies	2

87	Housing.com	11
88	HPA Spaces Pvt. Ltd.	8
89	Huawei Telecommunication (India) Co. Pvt. Ltd.	3
90	i3 Consulting	7
91	ICF International	1
92	ICICI Bank - MBA	6
93	ICICI Lombard GIC Ltd.	12
94	Idea Cellular Ltd.	3
95	IFTM University Moradabad	9
96	Incture Technologies	2
97	IndiaMART	2
98	Indus Insights	3
99	Informatica Business Solutions	1
100	InMobi	3
101	Inteva Products India Automotive Pvt. Ltd.	4
102	iRunway India Pvt. Ltd.	2
103	Isgec Hitachi Zosen Ltd.	1
104	ITC Ltd.	6
105	Jindal Stainless Limited	3
106	Jindal Steel & Power Limited	6
107	JK Paper Ltd.	2
108	Jubilant Life Sciences Ltd.	5
109	Kellogg Brown & Root Engineering & Construction India Pvt. Ltd.	3
110	KIE Engineering Pvt. Ltd.	1
111	KIIT University	16
112	Kolte Patil Developers Limited	4
113	Krishna Anti-Oxidant Pvt. Ltd.	6
114	L&T Construction	17
115	Larsen & Toubro Limited	2
116	Leaf Technologies - Business Analyst	4
117	Lenskart.com	2
118	LexInnova	1
119	Libsys Limited	1
120	LimeRoad.com	2
121	LinkedIn India	2
122	Lovely Professional University	25
123	Mahindra & Mahindra Ltd.	1
124	Mangalayan University	2
125	Marvel Realtor	6
126	Maxheap Technologies Pvt. Ltd. (Commonfloor.com)	3
127	McGAN's Ooty School of Architecture	6
128	MediaTek India Technology Pvt. Ltd.	1
129	Meritnation.com	5
130	Microsoft IDC - US	12
131	Mind Shaper Technologies Pvt. Ltd. (Classteacher Learning Systems)	2
132	Mu Sigma Business Solutions	18
133	MYDALA.COM	4
134	Nagarro Software (P) Ltd.	5
135	National Engineering Industries Limited	4

136	NEPA	4
137	Newgen Software Technologies Ltd.	1
138	Nikola Tech Pvt. Ltd.	2
139	Numerify India Software Private Limited	2
140	Nvidia	3
141	Oceaneering International Services Limited	2
142	One97 Communications Ltd (Paytm) - Software - BA	4
143	Oracle India - OFSS - US	25
144	Pandit Deendayal Petroleum University	1
145	Parcelled	2
146	Parul Group of Institutes	8
147	PolicyBazaar.com (ETechAces Marketing Pvt. Ltd.)	6
148	Practo	3
149	PropTiger Realty Pvt. Ltd.	4
150	Pyramid E&C	4
151	Qualcomm India Private Ltd.	10
152	Quetzal Online Private Limited	2
153	R Systems International Ltd.	5
154	Raheja Developers Ltd.	5
155	Ramboll India Private Limited	6
156	Rate Gain	1
157	Rays Power Infra Pvt. Ltd., Jaipur	2
158	Relaince Industries Ltd.	21
159	Reppify	5
160	Risk Management Solutions	1
161	RK University	2
162	RMSI	9
163	Saint Gobain	1
164	Samsung R&D Institute India - Delhi	5
165	Samsung R&D Institute India, Bangalore	1
166	Samsung R&D Institute India, Noida	3
167	SCA Technologies India Pvt. Ltd.	5
168	Schlumberger India	6
169	ServiceNow Software Development India Pvt. Ltd.	2
170	Shapoorji Pallonji & Co. Ltd.	5
171	Shell Technology Centre, Bangalore	7
172	Shimizu Corporation India Pvt. Ltd.	3
173	Shri Ramswaroop Memorial University	6
174	Siegwerk India Pvt. Limited	2
175	Siksha 'O' Anusandhan	5
176	Silver Oak College of Engineering & Technology	9
177	SMEC India Pvt. Ltd.	3
178	Snapdeal - Analyst - Software	14
179	Sokrati Technologies	3
180	Spectrum Techno Consultants	2

	Pvt. Ltd.	
181	Spire Global Singapore Pte Ltd	0
182	SRF Ltd.	5
183	SumTotal Systems	3
184	Suresh Gyan Vihar University, Jaipur	6
185	SVKM's NMIMS, Mukesh Patel School of Tech.Mgmt. & Engg.	1
186	Swiss Re	2
187	Synopsys India Pvt. Ltd.	2
188	Tagbin Services Pvt. Ltd.	3
189	Tango Media	4
190	Target Corporation India	4
191	Tata Communications	7
192	Tata Consultancy Services Ltd. - DESS	36
193	Tata Consulting Engineers Limited	16
194	Tata Motors Ltd.	17
195	TATA Steel Ltd.	1
196	Tavant Technologies	12
197	Tech Mahindra Ltd.	0
198	Teerthanker Mahaveer University	10
199	Texas Instruments India Pvt. Ltd.	1
200	Thapar University	1
201	THDC	1
202	Thermax Limited	1
203	Thermo Fisher Scientific	1
204	Times Business Solutions – (Magicbricks)	4
205	TinyOwl Technology Private Ltd.	1
206	Total Environment Building Systems	5
207	Transbit Technologies Software Pvt. Ltd.	4
208	TransWeb Educational Services Pvt. Ltd.	13
209	Unbxid	1
210	Unicommerce eSolutions Pvt. Ltd.	3
211	United Health Group	11
212	Vconnect Global Services Pvt. Ltd.	4
213	Vignan's Foundation for Science, Technology and Research University	13
214	Virtusa Consulting Services Pvt. Ltd.	4
215	Visa - US	19
216	V-Mart Retail Ltd.	1
217	Vodafone India Ltd.	4
218	Voith Paper Fabrics India Pvt. Ltd.	1
219	Walmart Labs	4
220	Wipro Limited	21
221	Wittybrains Software Technologies Pvt. Ltd.	2
222	Works Applications Co. Ltd.	2
223	WS Atkins	4
224	Yash Papers Ltd.	2

225	ZeMoSo Technologies Pvt. Ltd.	7
226	Zigsaw Consultacny Services	1
227	Zillious Solution Pvt. Ltd.	4
228	Zopper	3
229	ZS Associates India Private Limited	10

Table Showing Placement of Undergraduate and Postgraduate students Branch-wise (as on 08-05-2014)

S. No.	Degree	Effective Placement	Total Offers
1	Architecture and Planning	43	50
2	Biotechnology	20	22
3	Chemical Engg.	37	39
4	Civil Engg.	76	79
5	Computer Science Engg.	46	55
6	Electrical Engg.	89	95
7	Electronics & Communication Engg.	45	48
8	Production & Industrial Engg.	30	31
9	Mechanical Engg.	61	74
10	Metallurgical & Materials Engg.	65	76
11	Pulp & Paper Technology	49	55
Total B.Arch/B.Tech		561	624
IDD			
1	B. Tech (Chemical Engineering) and M. Tech (Hydrocarbon Engineering)	17	17
2	B. Tech (Computer Science & Engineering) and M. Tech (Information Technology)	21	24
3	B. Tech. (Electrical Engineering) and M. Tech. (Power Electronics)	13	16
4	B. Tech (Electronics & Communication Engineering) and M. Tech (Wireless Communication)	12	12
5	B. Tech. (Process Engineering) and M.B.A.	12	13
Total IDD		75	82
IMT			
1	Integrated M. Tech Polymer Science and Technology	6	7
2	Integrated M.Tech Geological Technology	11	13
3	Integrated M.Tech Geophysical Technology	14	16
Total IDD		31	36

IMSc			
1	Integrated M.Sc. (Applied Mathematics)	11	12
2	Integrated M.Sc. (Physics)	3	3
3	Integrated M.Sc. (Chemistry)	1	1
Total IMS		15	16
M.Arch/MURP/M.Tech			
1	AHEC	13	14
2	Hydrology Engg.	3	3
3	Earthquake Engg.	33	40
4	WRDM	0	0
5	Architecture and Planning	23	27
6	Chemical Engg.	12	13
7	Civil Engg.	57	67
8	Computer Science Engg.	33	37
9	Electrical Engg.	23	25
10	Electronics & Communication Engg.	15	15
11	Mechanical & Industrial Engg.	25	25
12	Metallurgical & Materials Engg.	16	17
13	Pulp & Paper Technology	4	4
14	SSEM Engg. (Physics)	2	3
15	Geophysical Technology	3	3
16	Geological Technology	2	2
17	Advance Chemical Analysis	1	1

18	Disaster Mitigation and Management	4	4
19	Infrastructure Systems	11	11
Total M.Arch/MURP/M.Tech		280	311
M.Sc/MCA			
1	MCA	27	27
2	M. Sc. Appl. Geology	0	0
3	M. Sc. Physics	4	4
4	M. Sc. Chemistry	5	5
5	M. Sc. Maths	6	6
6	M. Sc. Biotechnology	2	2
Total M.Sc/MCA		44	44
MBA			
1	Management Studies	68	69
Ph.D			
1	Electrical Engg.	4	4
2	Mechanical & Industrial Engg. Engg.	2	2
3	Pulp & Paper Technology	4	5
4	Physics	1	1
5	Chemistry	1	1
Total Ph.D		12	13

A = Job Offered

Grand Total of A = 1195

B = Effective Placement

Grand Total of B = 1086

A5- INSTITUTE MERIT-CUM-MEANS SCHOLARSHIP

Institute Merit-Cum-Means Scholarship @ Rs 1000/- p.m in addition to tuition fee is given to 25% of the sanctioned strength in each of B.Tech./B.Arch. The mode of award is based upon the condition that CGPA must be a 6.0 or more, and earned credits should not be less than 22 times the number of semesters registered for, as well as SGPA in the previous semester must be 6.0 or more, subject to condition that parents/guardians' total annual income from all sources should be up to rupees 4.5 lacs. Details of such students are given below in the tables A5-1 to A5-19 for the Academic Session 2014-2015.

Table A5-1 B. Architecture				
I Year	II Year	III Year	IV Year	V Year
Khyati Jain	Mohit Yadav	Naman Sharma	Apoorva Mudgal	Divyaa Saxena
Tavishi Agrawal	Shresth Jaiswal	Akanksha Sharma	Murtaza Mohammadi	Daksh Sharma
Ayush Agarwal	Chandan Jain	Niketa	Dewesh Agrawal	Ammar Nawab
Madan Chawla	Navneet Kumar	Karan Khandelwal	Pimparwar Sheetal Pradeep	Mayur Karodia
Samoju Sriram Sarad	Priyal	Shubham Rathore	Priyanshu Mani	
Rahul Bamel	Suraj Kumar	Gaurav Chaudhary	Vishal Kesarwani	
Rishikesh Kumar	Rajat Sachan	Kuldeep Singh Kushwah	Gurusharan Singh	
Manish Soni	Akash Chaudhary	Tejveer Singh	Akhil Thomas	
Akshay Sheokand	Akshay Paliwal	Erugu Chandana	Himanshu Jain	
Sanjeet Kishore	Ashwini Kumar Soni		T Dheeraj Kumar Reddy	
Anurag Mathur	Mukul Anand		Siddharth Agrawal	
			Nupur Jain	

Table A5-11 B.Tech (Biotechnology)			
I Year	II Year	III Year	IV Year
Kisan Kumar	Abhinav Singh	Prem Prakash	Gurpreet Singh
Deepak Rai	Anshika Maheshwari	Yatin Garg	Mehul Kumar
Somesh Chaturvedi	Akhil Bhutada	Mukul Suryawanshi	Pritam Singh
Raju Bishnoi	Kanade Kiran Raosaheb	N Saikiran	Shubham Rathore
Vishal Khandelwal	Shilpa Garg	Challa Manoj	Munish Kumar
Praveen Kumar	Aditi Yadav	Abhijeet Kumar	Saurabh Kushwaha
Prashant Choudhary	Deepak Sharma	Shubham Kumar Nayak	Ravi Yadav
Mukesh Kumar Mehta	Harsh Kumar	Sunil Dhakad	Prashasti Godara
Paruvada Shanmukha Harish Kumar	Chandan Kumar	Krishan Kumar	Jitendra Kumar
Hukma Ram	Akash Kumar		Raghav Nuwal
	Ashok Kumar Thori		Diddi Anil Kumar
	Sunil Kumar		Avvaru Akshay Kumar
			Charan Sevakula

Table A5-2 B.Tech (Civil)			
I Year	II Year	III Year	IV Year
Abhishek Kumar	Lucky Kumar	Abhiraj Sharma	Akash Agarwal
Sidharth Rawat	Arpit Kumar Agrawal	Vedullapalli Sri Vihari	Gaurav Kumar Gupta
Mohini Singhal	Gyaneshwar Kumar	Kushagra Agarwal	Harsh Goel
Ashok Singh	Deepraj	Krishna Khandelwal	Ishita
Pankaj Bansal	Nishtha Mahajan	Prithu Raj	Maitresh Agarwal
Ajay Singhal	Mayank Kumar	Aman Agarwal	Ravi Verma
Pramudit Somvanshi	Unagar Ajaykumar	Vikas	Himanshu Chawla
Sourav Belani	Ankit Gupta	Nawneet Kumar	Dhruv Garg
Chinturaj Singh Hada	Vineet Arora	Vaibhav Gupta	Nikhil Gupta

Parag Jain	Aishu Agarwal	Hemant Kumar	Chirag Ashok Kavdia
Rahul Gupta	Anant Pratap Singh	Chandra Shekhar Singh	Hemant Raj Sharma
Nagmani	Shikhar Jain	Akshay Soni	Ravinder
Prempal Singh	Aryan Raj	Ram Chandra	Harshvardhan
Shashank Garg	Shubham Mantri	Sunil Kumar Sharma	Rishab Garg
Yash Lakhani	Vindhyawasini Prasad	Vijay Kumar Sahu	Punit Mittal
Varun Jain	Lovish Sachdeva	Rohit Kumar	Pallav Ranjan
Love Goyal	Gaurav Pahuja	Raj Kumar Kumawat	Gitin Arora
Parag Jain	Rajat Verma	Anurup Kedia	Tarun Mittal
Devanshu Mishra	Mahendra Kumar	Shivendu Raj	Prashant Chaturvedi
Solanki Abhishek Bharatbhai	Hitesh Chawla	Jai Parkash	Ankit Kr Yadav
Shubham Kumar	Ayush Jain	Mohit Singhal	Pratyush Kumar
Navin Soni	Abhishek	Nikhil Vaishnav	Manish Kumar Jangid
Prakash Patel	Robin Verma	Gopal Dhaked	Parmeshwar Suthar
Ashish Kumar	Manish Goyal	Ankit Mittal	Devkishan Kumhar
Uditya Raj	Keshav Lakhera	Parveen	Yesvender Singh
Nishant Sachan	Lavish Kumar Gupta	Prateek Sachan	Shashank Jha
Shashikant Kumar	Satyam Seth	Akhil Gupta	Anubhav Singh
Dushyant	Ankit Kumar	Nikunj Aeron	Abhishek Singla
Roshan Kumar	Pradeep Beniwal	Shubham Mangal	Mukul Kaushik
Shubham Kumar	Abhinav Chaturvedi	Keshav Mehta	Akshay Goyal
Sudhanshu Suman	Umang Parikh	Akash Garg	Kshitij Soni
Anil kumar Kushwaha	Vidhyam Harish	Rakesh Kumar Yadav	Pushkar Kumar
Gaurav Singh	Praveen Pawar	Sumit Kumar	Rajat Singla
Lalit Mohan Pandey	Divyadeep Singh	Harishankar Roy	
	Daleep Singh Chouhan	Ashok Togra	
	Manav Patidar		
	Pawan Singh Rajput		

Table A5-3 B.Tech (Production & Industrial) (Mech.)			
I Year	II Year	III Year	IV Year
Pulkit Khandelwal	Tara Chand Aswani	Ashutosh Kumar	Saurabh Ranjan
Gaurav Kumar Jindal	Abhishek	Abhishek Agrawal	Arohan Kumar
Gaurav Kumar Tripathi	Sarabjeet Singh	Divya Tawra	Ankit Agarwal
Swapnil Chauhan	Vivek Verma	Badhe Sanket Manohar	Suraj Kumar
Sahil Jindal	Akshay Sanjay Karangale	Vikash Goyal	Mohit Soni
Shubham Pandey	Deepak	Ankur Kumar Bhartiya	Nitesh Kumar
Joshi Rohit Vinayak	Masoom	Novel Jindal	Akshay Goyal
Thaker Devarsh Shailesh	Umesh Malhotra	Ajay Kumar Dhewa	Mukesh Singh
Jaydeep V Patel	Mohammed Anas	Yatin Gupta	Jyoti Prakash
Renju K Kokkattu	Prashant Kumar Chourasiya	Botla Srinivasa Rao	Koravi Gnana Chakravarthy
Prince Kumar		Pappu Lal Dhaker	
Gompa Lohitha		Shivam Bhatt	
Ankiv Kumar Maurya		Avinash Kumar Soni	
Shubham Kumar		Saurabh Kumar Singh	
Bhavar Rishabh Vijay		Neeraj Kumar Verma	
Manish Kumar Jangir			
Vijendra Singh Nitharwal			

Table A5-4 B.Tech (Mechanical)			
I Year	II Year	III Year	IV Year
Raghav Mohta	Maroof Ahmad	Nitesh Tolani	Shubham Gupta
Mohit Kumar Siddha	Aman Mansuri	Prakhar Agrawal	Amit Kumar Gupta
Vishal Chaudhary	Raghav Aggiwal	Tamoghna Hiraklal Biswas	Rajat Gupta
Rishabh Gupta	Shetty Prabhat Umanath	Nitish Garg	Aman Mittal
Deepanshu	Yadhu Nandan Mittal	Nilesh Kumar Singh	Aditya Pokra
Anand Kumar	Dhruv Pachauri	Amba Dan Singh Charan	Bipin Kumar
Rajvardhan Singh	Indraj Saini	Manav Bansal	Divyam Aggarwal
Dipanshu Mittal	Ishu	Ravi Ranjan	Rohit Mittal
Dheeraj Kumar	Momin Aquib Irfan	Sachin Raman	Deepanshu Saini
Rohit Arawal	Vaibhav Goel	Nilesh Raj	Harshit Gupta
Adarsh Kumar	Ayush Katiyar	Shashank Kumar Maurya	Abhishek Chaurasia
Arpit Aggarwal	Gaurav Patil	Varnit Jain	Nihar Agarwal
Amit Kumar	Raju Maurya	Suman Kumar Sahoo	Sharad Gangwar
Bagla Karan Santosh	Aayush Sable	Ayush Kumar Tiwari	Rahul Kumar Raghava Reddi
Prashant Kumar	Umesh Jangir	Vikrant Yadav	Shivraj Nagar
Hardeep Singh	Ankit Kumar	Gagandeep Singh	Gyan Prakash Verma
Ishwar Singh Shekhawat	Prince Jindal	M Karthik	Sachin Kumar
Kuldeep Singh	Uppala Manikumar	Naveen Kumar	Saurabh Dudani
Ramanjeet Singh	Kurella Sai Venkata Naresh	Sangeeta	Atul Miglani
Nagwanshi Sarang	Nipul Seervi	Shakti Rana	
Sunny Kumar	Arun Yadav	Manglani Dharmesh Sunilkumar	
Aman	Aniket Gupta	Divy Bansal	
Sandip Kumar	Manoj Kumar Sahu	Shubham Kumawat	
Gunda Pavan Kumar	Jitender Singh	Pranjal	
Jai Vishnu Naman	Piyush Kumar Tiwari		
Sumit Kumar	Dhirendra Choudhary		
Mohit Kumar			
Shyam Choudhary			
Himanshu Kinha			
Roop Kishor Singh			

Table A5-5 B.Tech (Electrical)			
I Year	II Year	III Year	IV Year
Manu Agarwal	Avishek De	Lilly Kumari	Nikhil Agrawal
Sanyam Gupta	Aman Malhotra	Vibhor Goel	Vishal Rathi
Dudipala Anusha	Nagabhushan S. Baddi	Murtuza Raja	Harshavardhan Gupta
Vimal Mishra	Aditya Sharma	Ashok Tak	Saurabh Gupta
Naman Tambi	Sumit	Shah Viraj Jayminkumar	Palak Jajoo
Shubham Gupta	Abhishek Kumar	Gandluru Veerabharathchandrareddy	Gautam Kumar
Aishwarya Mittal	Ashish Kumar Yadav	Sachin Goyal	Ashu Agrawal
Gurmandeep Singh Bedi	Raj Hans Gupta	Polubothu Santhosh Kumar	Nikhil Jain
Pranjul Singh Chauhan	Manish Kumar Sharma	Vinay Kumar	Amol Jadhav
Ankit Dulani	Nainee Kumari	Kashyap Tibrewal	Piyush Agrawal
Maddipatla N V Sai Krishna	Prasant Shekhar Singh	Pande Padmanabh Shrinivas	Anjani Kumar Yadav
Shivam Srivastava	Priya Garg	Shivani Soni	M V Surya Prakash

Abhay Agarwal	Krishna	Mahim Agarwal	Richa Jain
Saurabh Kumar Mishra	Neeraj Kushwaha	Krishna Gopal Patidar	Shivam Gupta
Chauhan Hardik Hansrajbhai	Bandi Akhil Reddy	Asafak Husain	Rahul Ranjan
Male Gnanendar Reddy	Prashant Goyal	Anshu Kumar	Sanapureddy Revanth Reddy
Krishan Kumar Kumawat	Deepanshu Mittal	Priyank Kumar Singh	Dashrath Kumar Saini
Vivek Khatana	Sai Krishna Chaitanya Chirukuri	Rahul Karwasra	Puneet Kumar
Shaury Anand	Subhash Kumar	Veluri Bandhav	Surender Saharan
Chutra Ram Kuriya	Md Imran	Ponduru Prakash Naidu	Adarsh Fogawat
Pyla Alekhya	Bagam Sahithi	Anuj Arora	Samdeesh Singh
Vishal Kumar	Akhil Ahuja	Akshay Jain	Shubho Das
Malipeddi Bharath	Mohit Khadaria	Pavuluri Bhargav	Ritesh Kumar
Gohad Mohit Narendra	Saini Bhavesh Jhabarmal	Anuj Pandey	Ganesh Yadav
Manish Kumar Yadav	Prem Prakash Dudi	Manjul Manivesh	Abhishek Nayak
Ghananand	Shantanu Aggarwal	Nitin Kumar Dhakad	Aman Prince
Rakesh Godara	Himanshu Sachan	Rohit Chauhan	Amit Kumar Singh
Shubham Kumar	Keetha Indraneel Varma	Rajveer Jat	Akash Gaurav
Sanjay Singh	Vinit Chacharia	Ashish Choudhary	Prashant
Md Sibghatullah	Chowgani Satish Chandra	Vipul Tak	
Yuvraj Rana	Koneti Sarat Kumar	Param Vijay	
Rahul Gupta	Himanshu Shashank	Robin Kumar	
Khushboo Kumari	Chitty Nikhil Lokesh	Amit Kumar	
Abhishek Paharia		Sunil Kumar	
		Lavkush Kumar Patidar	
		Vaibhav Agrawal	

Table A5-6 B.Tech (ECE)			
I Year	II Year	III Year	IV Year
Patel Rashminkumar Rakeshbhai	Nallagatla Manikanta	Sandeep Pathry	Deep Jain
Vivek Gupta	Shivam Kumar	Akshit Budhreja	Rachamadugu Shiva Tejesh
Abhishek Sachdeva	Mohit Gupta	Sashidhar Jakkamsetti	Gutala Sriramachandra Murthy
Raghav Chawla	Mayank Deora	Mikul K Patel	Harshit Sihare
Aashay Medatwal	Peyush Jain	Muthineni Apoorva	Vineet Singla
Malladi Phaniswar	Gaurav Wadhvani	Kawaljeet Singh	Avijit Singh Yadav
Kundurthi Adithya Siddharth	Shubham Jain	Adabala Sri Lakshmi	Saurabh Suman
Rekula Raviteja Reddy	Shubham Goyal	Ankit Goel	Adury Surya Kiran
Piyush Garg	Avish Prakash Jain	Parul Yadav	Vijay Jain
Akash Gupta	Jain Nishank Nirmalkumar	Brijesh Khandelwal	Rishav Soni
Goli Akhil	Dara Janardhana Hemanth	Madala Vamshi Chowdary	Akshay Kumar Sanghai
Praveen Gupta	Abhishek Pratap Singh	J H M Apoorva	Amit Jangra
Vikash	Disha Maheshwari	Prateek Shrivastava	Pinka Yadav
Shreshth Kumar Jaiswal	Ashish Joshi	Rahul Jain	Aditya Kumar
Divyanshu	Jain Sarjan Ravikumar	K Saiteja	Sajal Anand
Saurabh Yadav	Arpit Agarwal	Aman Anand	Santosh Kumar Singh
Aman Shivhare	Sangepu Nitish Narayan	Sachin Kumar	Punit Kumar Gujrathi
Manish Kumar	Devender Yadav		
Raskar Hrishikesh Dhananjay			
Akshit Choudhary			

Gorle Rajesh Bharadwaj			
Rohit Raushan			
Anuma Rathore			

Table A5-7 B.Tech (CSE)			
I Year	II Year	III Year	IV Year
Reganti Naveen Reddy	Vivek Kumar	Pankaj Gudlani	Sanket Vaibhav Mehta
Yogesh N. Biyani	Shubham Kumar Pandey	Anil Kumar Saini	Archit Agrawal
Tarun Jindal	Saurabh Verma	Aman Kumar Kedia	Ranjith Kumar Reddy G
Hanumant Mittal	Tauqueer Ahmad	Ashok Vishnoi	Rahul Raj
Nikhil Sheoran	Vikas Yadav	Yashpal Choudhary	Jitin Singla
Shiva Soni	Rakholiya Jenish	Diksha Saxena	Surendra Kumar Gadwal
Voddapally Amarnath	Purushottam Kumar	Mohite Kishor Namdeo	Anshul Singhal
Ashutosh Yadav	Saurabh Kumar Jaiswal	Ramanpreet Singh	Rahul Kumar Sahu
Anil Kumar	Manisha Patel	Sagar Kumar	Abhay Sharma
Vikash Kumar	Nihal Nanecha	Shubhi Jain	Anu Yadav
Gurwinder Singh	Chandel Manu Virender Singh	Anindya Chakravarti	Ashish Kumar Singh
Shivam Yadav	Harsh Kumar Sahu	Amit	
Sunil Kumar Yadav	Amar Yadav	Aman Sharma	
	Vikash Kumar	Ganpat Lal	
	Shubham Virmani	Babu Lal Yadav	
	Ankit Khandelwal	Anshul Singhal	
		Om Prakash	
		Anchal Chandra Gupta	
		Sunil Kumar Yadav	
		Bharat Gaiind	
		Raj Sahu	
		Kaushal Kishore	

Table A5-8 B.Tech (Chemical)			
I Year	II Year	III Year	IV Year
Katha Sowmya Reddy	Shivam Dimri	Ayush Goyal	Gaurav Kumar
Ayush Kumar	Vaibhav Mittal	Abhishek Joshi	Surya Pratap Singh Solanki
Mohit Garg	Aviral Jain	Himanshu Tyagi	Prachi Sahu
Ghanendra Shrivastava	Binesh Garg	Abhishek Modi	Pooja Kumari
Gupta Rahul Kamlesh	Shivam Kumar	Vibhor Agarwal	Sonal Maheshwari
Aayush Agarwal	Shallabh Tiwari	Ishtyaque Ahmed Ansari	Shubham Taunk
Rohit Agrawal	Kartik Hajela	Faisal Saifi	Siddharth Saraswat
Vaibhav Agrawal	Himanshu Bansal	Sakshi Verma	Virender Pratap Singh
Sagar Arora	Nikhil Sinha	Ansh Arora	Anshul Singh
Anurag Dhingra	Dhruvi Jain	Priyanka	Nishish Agrawal
Divyanshu Garg	Shivangee Gupta	Irfan Ahmad	Jasvinder Singh
Hitesh Sewani	Sonu Kumar	Prashant Saini	Nishant Bansal
Vivek Kumar Agarwal	Ashutosh Kushwaha	Karan Kumar Khetan	Pawan Kumar Yadav
Harsh Singhal	Vinay Kumar	Vijender	Shubha Pathak
Anurag Aggarwal	Karan Ramchandani	Kawaljeet Singh Maras	Kadali Jaya Krishna
Sahil Jindal	Nikhil Kumar Soni	Amarjeet Kumar Gupta	Dharpal Yadav
Sumit Kumar	Shubham Kumar Jain	Neetu Shyoran	
Yogesh Poonia	Bhavishy Kumar Gupta	Ajay	
Ashish Kumar	Sumukh Kumar Verma	Krishnakant Agarwal	

Bunty Rathore	Shahbaj Khan	Trilok Chand	
Kathole Shrishti Nitin	Sargam Chandiwala	Mohit Goyal	
Keshwani Sandesh	Navneet Kumar	Anjali Ahuja	
Monu Kumar	Harminder Kaur	Abhishek Anupam	
Saragadam Bharath Kumar	Jagdeep Singh Smagh		
Saurav Kumar Goyal	Rajat Verma		
Alok Kumar	Shobhit Gupta		
Dev Raj	Vijendra Kumar		
	Deeksha Adlakha		
	Ashwath Reddy		
	Abhinav Soni		
	Ashwani Tyagi		

Table A5-9 B.Tech (Metallurgical & Materials)			
I Year	II Year	III Year	IV Year
Ruchil Kothari	Nallanchakravarthula Lakshman Chakrav	Manish Shekhar	Shubham Jain
Siddharth Chhajed	Deepu Ashok	Akshat	Akshay V Singhal
Shivam Gupta	Rishabh Parihar	Mahak Agarwal	Mayank Patwa
Sonali Mittal	Ujjwal Kumar Gupta	Akshay Choudhary	Natu Divakar Anant
Somesh Mohapatra	Vartha Kota Sai Dinesh	Prakhar Varshney	Pooja Preeti
Rahul Agrawal	Amrutkar Rohan Rajendra	Md Rasheed Alam	Gupta Shubham Rajesh
Tarandeep Singh	Satyendra Kumar Tiwari	Rohan Kalia	Shashi Chaudhary
Sanket Agrawal	Vishal Kumar Rana	Mankeshwar Kumar	Pawan Kumar
Nabarun Pal	Abhinav Agrawal	Mahendra Singh Gurjar	Bhanu Pratap Singh
Akshay Kumar	Manvendra Singh Lodha	Aman Kumar Singh	Guja Akhil
Abhishek Kapoor	Shubham Jain	Amit Kumar	Agnihotri Ojas Chaitanya
Luktuke Amey Avinash	Arpit Agrawal	Ravi Ranjan	Deepak Swarnkar
Mayank Gupta	Nitin Patel	Yatharth Bhatia	Shashank Shekhar
Saurabh Anand	Saurabh Singh Ujjain	Gurucharan Mohapatra	Siddharth Jain
Rohit Kumar	Ankit Kumar	Abhilash Ranjan	Amitesh Kumar
Navneet Kumar Soni	Hemlata Borana	Ketan Vaidya	Ayush Mittal
Shivam Singh	Vijay Kumar Verma	Narendra Choudhary	Pratik Khandelwal
Shubham Vishvakarma	Nitin Kant	Sourabh Singh	Rajeev Sharma
Nishant Raj	Tejasva Vashistha	Rahul Jangid	Puneet Sharma
Sachin Nehru	Anugu Shashank		Nishit Misra
Mohit Patel	Srijan Sen		Kashinath Parshetty
Gudelli Vamshi	Harshal Kavishwar		Paliseti Yeswanth Kumar
Wazid Hussain	Pratyush Kumar		Govind Dan Charan
Rahul Priyadarshi	Ravi Shankar Yadav		
Rajat Patel	Rishabh Thakur		
Yeola Shrutika Subhash	Manoj Patidar		
Abhishek Mahto	Ravi Kumar		
	Vivek Singh		
	Brajesh Kumar		
	Tarun Borana		
	Mahaveer Kumawat		

Table A5-10 B.Tech (Pulp & Paper)			
I Year	II Year	III Year	IV Year
	Amresh Kumar	Dheeraj Karwa	Mayank Gupta

	Ritesh Kumar	Divyanshu Jaiswal	Vaibhav Gautam
	Harshvardhana Kumar	Akash Chugh	Arun Kumar Agarwal
		Amit Khedar	Sachin Kumar
		Abhishek Dutt	Abhishek Dash
		Tarun Soni	Sasanka Bhagabati
			Tanuj Choudhary
			Abhay Prakash
			Aditya Sharma
			Rahul Rajesh Mishra
			Vishweshwar Vivek
			Naveen Kumar Goyal
			Ankit Kumar Jha
			Akash Kumar Patro
			Shamsher Singh
			Aashish Jindal
			Mandeep
			Jonnalagadda Avanendra Prasad
			A Rajender Reddy
			Kumar Chitresh
			Kapil Aggarwal
			Raj Guru Dixit

Table A5-12 Integrated Dual Degree (E&C)

I Year	II Year	III Year	IV Year
	Shubham Gupta V Shreyas Ajay Jangir Jai Datt Poonia Rambabu Kumar	Yatin Tyagi Nagmani Kumar Daksh Verma Boddula Srikanth	Pradyumna Paliwal Pralhad Kumar M. Shashivardhan Naidu Chandra Prakash Mishra

Table A5-13 Integrated Dual Degree (CSI)

I Year	II Year	III Year	IV Year
		Tarun Bansal Shadab Naseem Peeyush Jain Somnath Asati Sumit Kumar Sudarshna Sumit	Rishabh Jain Jitesh Khandelwal Deepak Kumar

Table A5-14 Integrated Dual Degree (Chemical)

I Year	II Year	III Year	IV Year
	Rishi Dixit Ahmed Yasir Ankita Soni Hari Om Choudhary Rohit Kumar Patel Gajendra Singh Saransh Singhal	Arvind G Pramanshu Rajput Rahul Gurjar Shailendra Kumar Sharma Banvari Ankush Jindal	Suraj Anthwal Keval Pareta Naveen Kumar Mishra Kunal Arora Arvind Suthar

Table A5-15 Integrated M.Tech. Polymer Science & Technology				
I Year	II Year	III Year	IV Year	V Year
	Shivam Sharma	Vaishnavi Shukla	Vivek Pandey	
	Prathmesh Garg	Mukesh Kumar Yadav	Joginder Bansal	
	Aryaman Jaiswal	Ashwani Kumar Jaiswal	Parth Gupta	
	Shubham Mireja	Nehal Ramesh Nupnar	Rajan V Harkare	
	Ravi Kumar	Navaneet Madhoor	Garrepally Sandeep Kumar	
	Punna Spandana	Hemant Saini	Niraj Verma	
	Gaware Aniket Nana	P Nihal		
	Abhishek Kumar			

Table A5-16 M.Tech. Geological Technology				
I Year	II Year	III Year	IV Year	V Year
Supriya Dube	Sushant Shekhar	Kartik Bhatnagar	Kislay Kumud	Rohan Dhar
Bhavuk Setia	Bingi Adithya	Mohit Kumar Phophliya	Yash Gupta	Amit Kumar Agrawal
Shubham	Anisha Godha	Shubham Patel	Roopak Malik	
Gautam Yadwani	Shruti Mehta	Umareddy Derreddy	Ekta Yadav	
Saurabh Kumar	Siddharth Tiwari	Pragyanand	Akash Rishishwar	
Jeeshan Ahmad		Sushant Katiyar	Nikhlesh Kumar Singh	
			Abhishek Vishal	

Table A5-17 M.Tech. Geophysical Technology				
I Year	II Year	III Year	IV Year	V Year
Ashish Chopra	Nikhil Singh	Aakash Chuchra	Rohit Raj	
Amrinder Singh	Shubham Madheysia	Dev Ashish Hans	Mayank Khirwal	
Mayank Verma	Ayan Prabhakar Baruah	Aayushi Garg	Utkarsh Sharma	
	Manish Kumar	Romit	Harpreet Singh Sethi	
	Pallavi Sahu	Jitendra Yadav	Kshitiz Gupta	
	Anmol Chilana	Adarsh Goyal		
	Naveen Gupta	Siddharth Verma		
	Shivankee Sahu	Abhimanyu Sharma		

Table A5-18 Process Engg. with MBA				
I Year	II Year	III Year	IV Year	V Year
Sanjay Kumar Deo	Chakraborty Kunal Kisholoy	Upneet Singh	Sunit Arora	Rajesh Ranjan
Lalak Harnathka	Nivedita	Nikhil Pareek	Ankur Porwal	Mutyapu Sushanth
Chetan Singh	Chetan	Saurav Jain	Kanishk Jain	Sahil
D.Roshan	Kishore Kumar	Shubham Malviya	Piyush Dixit	Adam Muhammad
Shahzma Alif	Shubham Mangal	Marutesh Agarwal	Om Prakash Singh	Vamshedhar Reddy C
Manne Karthik	Abhishek Kumar	Parag Bandil	Rahul Upadhyay	Shah Chintankumar Chetankumar
Prashant Solanki	Dinesh Chandra Kumawat	Shubham Tikkiwal		
	Lokesh Mahala	Durgesh Kumar Kumawat		
		Ashish Sharma		
		Nukala Akhil		
		Monica Saini		
		Shiv Raj Singh Gurjar		

Table A5-19 Integrated Dual Degree (Eloect.)			
I Year	II Year	III Year	IV Year
	Gaurav Singh Mahal Pranav Kumar Jha Vats	Subhash Sahni Ishitva Maitray Deepak Kumawat Shrikrishna Pati Tripathi	Ravi Bhushan Vipul Kumar Akarshan Singh Jain Chanakya Manoj

Table A5-20 B.Tech. Polymer Science & Technology			
I Year	II Year	III Year	IV Year
Ashish Nasa			
Saurabh Singh			
Sandeep			
Raghav Mangal			
Dharmjeet Madhav			
Amit Patel			
Bure Durga Venkatesh			
Alok Kumar Yadav			
Arun Kumar			
Saurav			
Nar Singh Ram			
Maddala Sri Harsha			
Ayush Bhardwaj			
Salil Kolhe			

Table A5-21 Integrated Dual Degree (Civil)			
I Year	II Year	III Year	IV Year
		Sparsh Magotra	
		Vishal Kumawat	
		Inder Singh	

Table A5-22 Integrated Dual Degree (CHH)			
I Year	II Year	III Year	IV Year
		Rishi Dixit	Arvind G
		Ankita Soni	Pramanshu Rajput
		Ahmed Yasir	Manish Kumar
		Rohit Kumar Patel	Ankush Jindal
		Hari Om Choudhary	Rahul Gurjar
		Gajendra Singh	Banvari
		Saransh Singhal	
		Anurag Gupta	
		Sachin Kumar Mahato	

Table A5-23 IMS (MATHS) (APPLIED MATHEMATICS)			
I Year	II Year	III Year	IV Year
Nitish Kumar	Mithilesh Kumar		
Mohammad Junaid Abbasi	Nishant Kumar		
	Abhishek Prajapati		

Table A5-24 IMS (PHYSICS)				
I Year	II Year	III Year	IV Year	
Manish Gupta	Chirag Sanghi			
	Bhrigumoni Deka			
	Vijay Singh			

Table A5-25 Integrated Dual Degree (EPE)				
I Year	II Year	III Year	IV Year	V Year
		Gaurav Singh Mahal	Subhash Sahni	Sushank Kumar
			Ishitva Maitray	
			Harshit	
			Deepak Kumawat	

Table A5-26 Integrated Dual Degree (CSI)				
I Year	II Year	III Year	IV Year	V Year
		Gaurav Singh Mahal	Subhash Sahni	Sushank Kumar
			Ishitva Maitray	
			Harshit	
			Deepak Kumawat	

Table A5-27 Integrated Dual Degree (ECW)				
I Year	II Year	III Year	IV Year	V Year
		Shubham Gupta	Yatin Tyagi	
		V Shreyas	Nagmani Kumar	
		Ajay Jangir	Boddula Srikanth	
		Jai Datt Poonia		
		Rambabu Kumar		

Table A5-28 Integrated Dual Degree (CSI)				
I Year	II Year	III Year	IV Year	V Year
			Tarun Bansal	
			Shadab Naseem	
			Peeyush Jain	
			Sumit Kumar	
			Somnath Asati	
			Sumit	
			Sudarshna	
			Smit Parsania	
			Vijay Patidar	

Table A5-29 Integrated Dual Degree (METULLURGYCAL Engg.)				
I Year	II Year	III Year	IV Year	V Year
		Gourav Ranjan Sinha		
		Sanjay Singh Dangi		
		Shubham Agrawal		
		Gadde Mani Kanta		
		Nikhil Singla		

4. ACADEMIC DEPARTMENTS & CENTRE

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12. Mukherjee, M.; Singh, D. and Shankar, R., Rural Infrastructure Development through Community based Social Organization: Case Study-Awang Sekmai village in Manipur, **Journal of North East India Studies**, Volume 4, No. 1 , (2014)
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4.5 CIVIL ENGINEERING

Books/Book Chapter/Proceeding/Monograph

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4.10 ELECTRONICS & COMPUTER ENGG.

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Books/Book Chapter/Proceeding/Monograph

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