



॥ त्वं ज्ञानमयो विज्ञानमयोऽसि ॥

# **Annual Report**

**2013-14**

**Indian Institute of Technology Jodhpur**  
Old Residency Road, Ratanada  
Jodhpur 342011



## Contents

Preface	
Organization	
Board of Governors	1
Finance Committee	2
Building and Works Committee	3
Key Functionaries	4
Centers & Focus Groups – Associated Faculty Members	6
Staff Members	16
Academics	
Academic Programs	17
Research	
International Relations	19
R & D Projects	21
Faculty Publications	25
Undergraduate Research & Innovation Program (UGRI)	34
Outreach	35
Institute Events	
Visit of Union Minister for HRD	37
First Convocation	38
IIT Jodhpur's New Director	39
National Festivals	41
Initiatives in Establishment and Administration	43
Facilities	
Present Campus	45
Permanent Campus	46
Computer Center	49
Library	51
Laboratories	54
Health Center	70
Sports Facilities	70
SC/ST Cell	70
Student Activities	
Students Gymkhana	71
Student Fests	78
Parivartan	83
Student Accolades	84
Counselling Service	85
Student Placement Cell	87
Alumni Relations	89
List of Registered Students	90
Financial Position	115



## Preface

IIT Jodhpur is nearing completion of six years. The year 2013-14 has been an year of introspection and consolidation. Significant effort was put in ensuring smooth transition from oral traditions to formal documented traditions, leading to the establishment of systems and processes. In particular, major overhaul was undertaken on two fronts, namely the Academic Degree programs, and Student and Sponsored Research Programs. This yearlong effort, though arduous, was steered enthusiastically by Faculty and Staff Members. Also, extra attention was paid to review and recruitment of Faculty and Staff Members.

People first... is a clear strategy at the Institute. Actionable items are being taken up to make the Institute (a) *student-centric* for educational programs, and (b) *India-centric* for technology development programs. This stakeholder approach of building careers of Faculty and Staff Members is the watchword for the IIT Jodhpur community. It is hoped that the Institute will establish more systems and processes to implement the “stakeholder approach” of building the Institute.



## ORGANIZATION

### BOARD OF GOVERNORS

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#### Chairman

- **Professor Goverdhan Mehta** (FNA, FRS)  
Department of Organic Chemistry  
University of Hyderabad  
Central University PO  
Hyderabad 500046
- **Director (Ex-officio)**  
**Professor C. V. R. Murty**  
Director  
IIT Jodhpur  
Old Residency Road, Ratanada,  
Jodhpur 342011

#### Member-Nominees of the IIT Council

- **Professor Pankaj Chandra**  
Former Director  
Indian Institute of Management  
Bangalore 560076
- **Dr. K. Vijay Raghavan**  
Secretary,  
Department of Biotechnology  
Government of India  
Bangalore 560076
- **Mr. Kiran Karnik**  
Former President, NASSCOM  
S-315 Panchsheel Park  
New Delhi 110017
- **Mr. D. R. Mehta**  
Founder & Chief Patron  
Bhagwan Mahaveer Viklang Sahayata Samiti  
13A-Gurunanak Path  
Main Malviya Nagar  
Jaipur 302017

#### State Government Nominee

- **Principal Secretary**  
Higher & Technical Education  
Main Building Secretariat  
Government of Rajasthan  
Jaipur 302005

**Chairman**

- **Professor Goverdhan Mehta** (FNA, FRS)  
Department of Organic Chemistry  
University of Hyderabad  
Central University PO  
Hyderabad 500046

**Members**

- **Professor C. V. R. Murty**  
Director  
IIT Jodhpur  
Old Residency Road, Ratanada  
Jodhpur 342011
- **Additional Secretary (Technical Education)**  
Department of Higher Education  
Ministry of Human Resources and Development  
Government of India  
Shastri Bhawan  
New Delhi 110001
- **Financial Advisor**  
Department of Higher Education  
Ministry of Human Resources and Development  
Government of India  
Shastri Bhawan  
New Delhi 110001
- **Mr. G. S. Sood**  
CMD National Scheduled Tribes Finance and Development Corporation  
NBCC Tower  
Plot No. 15  
Bhikaji Cama Place  
New Delhi 110066
- **CA S. S. Bhandari**  
Director, Non-Executive Director on the Board  
Bank of Baroda  
P-7, Tilak Marg, C-Scheme  
Jaipur 302005
- **Gaurav Harit**  
Assistant Professor  
Indian Institute of Technology Jodhpur  
Jodhpur 342011



**Chairman**

- **Professor C. V. R. Murty**  
Director  
IIT Jodhpur  
Old Residency Road, Ratanada,  
Jodhpur 342011

**Members**

- **Ms. Usha Kasana**  
Chief Architect  
Public Works Department  
Government of Rajasthan  
Jacob Road, Civil Lines  
Jaipur 302006
- **Mr. R. K. Govil**  
Additional Director General Civil (Retd.), CPWD  
26, Ankur Apartments  
7, I.P. Extension  
Delhi 110092
- **Mr. V. K. Bansal**  
Chief Engineer Electrical (Retd.), CPWD  
721 Sky Lark Apartment,  
Sector-6, Plot No.35, Dwarka  
New Delhi 110075
- **B. Ravindra**  
Associate Professor  
Indian Institute of Technology Jodhpur  
Jodhpur 342011

## KEY FUNCTIONARIES

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### Director

C. V. R. Murty

### Coordinators

B. Ravindra	Faculty
Ambesh Dixit	Research & Development
Gaurav Harit	Academics (Undergraduate Programs)
Atul Kumar	Academics (Post Graduate Programs)
Hari Narayanan V.	Students
Rakesh Kumar Sharma	Laboratories
Rakesh Kumar Sharma	Automation
Mainak Mazumdar	Library
Sushmita Jha	Centre for Biologically Inspired System Science
B. Ravindra	Centre for Energy
Anil Kumar Tiwari	Centre for Information & Communication Technologies
Kirankumar R. Hiremath	Centre for System Science

### Convener

Venkata Ramana Badarla	Computer Science & Engineering
Deepak Fulwani	Electrical Engineering
Anand Krishnan Plapally	Mechanical Engineering
Sushmita Jha	Biology
Rakesh Kumar Sharma	Chemistry
Puneet Sharma	Mathematics
Ashutosh Kumar Alok	Physics
Vidya Sarveswaran	Humanities & Social Sciences

### Chairman

Shree Prakash Tiwari	Council of Wardens
P. Manikandan	Student Placement Committee
Anil Kumar Tiwari	Medical Services Committee
V. V. M. Sarma Chandramouli	Logistics Committee
V. V. M. Sarma Chandramouli	Scholarships and Prizes Committee
Anand Krishnan Plappally	Alumni Relations Committee
Laltu Chandra	Peer Review Committee
Monika Sinha	Counselling Services Committee

### **Officer**

Gaurav Harit	Chief Vigilance Officer
Rahul Chhibber	Transparency Officer
Puneet Sharma	Hindi Officer
Kirankumar R. Hiremath	Green Initiative Officer
Monika Sinha	Women Cell Officer
Amardeep Sharma	Public Relations Officer

### **Senate**

C. V. R. Murty	Chairman
Pratap Bhanu Mehta	Member (Nominee of Board of Governors)
H. P. Khincha	Member (Nominee of Board of Governors)
Sanjeev Misra	Member (Nominee of Board of Governors)
B. Ravindra	Members
Atul Kumar	
Gaurav Harit	
Mainak Mazumdar	
Rakesh Kumar Sharma	
Shree Prakash Tiwari	
Vidya Sarveswaran	

### **Academic Committee**

Coordinator (PG Programs)	Chairman
Coordinator (UG Programs)	Co-Chairman
Coordinator, Center for Biologically Inspired System Science	Members
Coordinator, Center for Energy	
Coordinator, Center for Information & Communication Technology	
Coordinator, Center for System Science	
Barun Pratiher	

## Centers & Focus Groups – Associated Faculty Members

IIT Jodhpur's academic and research activities are organized from its Centers and Focus Groups.

We are committed to developing State-of-the-Art, research-led and multidisciplinary centers where scholars from different disciplines carry out productive research on emerging and technological, scientific, and social issues that characterize the challenges faced by the contemporary world. In order to promote the interdisciplinary culture in each and every academic activity, IIT Jodhpur does not adopt the structure of establishing the academic departments based on the individual disciplines. Only undergraduate programs are offered in the individual disciplines.

Presently, IIT Jodhpur has four Centers in the following areas:

1. Energy
2. Information and Communication Technology
3. Systems Science, and
4. Biologically-inspired Systems Science

The Focus Groups are organized in the following disciplines:

1. Computer Science & Engineering
2. Electrical Engineering
3. Mechanical Engineering
4. Biology
5. Chemistry
6. Mathematics
7. Physics
8. Humanities & Social Sciences

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## CENTER FOR BIOLOGICALLY INSPIRED SYSTEM SCIENCE (BISS)

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### **Vision**

*Biologically Inspired System Science* (BISS) is a Center initiated with the broad objective to design novel, adaptive and sustainable technological solutions inspired by biological systems and processes. IIT Jodhpur launched the Center with the conviction that the time for reforms has come to move from a test-oriented singular education towards a creativity-oriented quality multidisciplinary education, which will eliminate existing boundaries between biology and engineering.

The unique B.Tech. in BISS provides the students with the option of choosing core competencies in one of the three engineering streams of electrical engineering, mechanical engineering or computer science engineering with added state of the art competency in biological sciences. They will be trained in courses ranging from basic biology to advanced neuroscience, psychology, cognitive science, computational biology and environmental science. This blend of knowledge of core engineering and pioneering fields in biology provides the added advantage of choosing careers in fields of conventional engineering as well as in biologically inspired engineering.

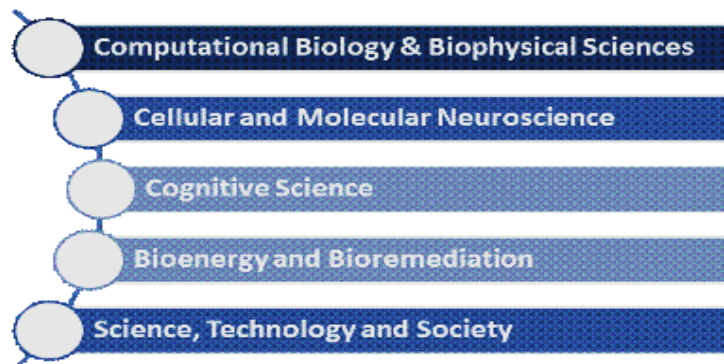
The 4-Year B. Tech. program in Biologically Inspired System Science is divided into 8 semesters. The key features of this program are as follows:

1. Empower the students with fundamentals with core courses;
2. Develop research orientation;
3. Motivate towards higher education (M.Tech./M.S./Ph.D.).
4. Specialized or advanced Elective courses;
5. Project based hands-on-experience;
6. Prepare the students to meet the requirements of core industries

The Ph.D. (Biologically Inspired System Science) Program emphasizes hands on training and integration of techniques from biological sciences, physical sciences and engineering to innovate and translate which enables students to undertake multidisciplinary and integrated problems.

### **Research Axes**

The faculty performs basic and applied research in the following areas:



### **Computational Biology and Biophysical Sciences**

The focus of this group is to understand the underlying physical and chemical processes that constitute complex biological systems. Group members work on theoretical and computational approaches such as molecular docking, virtual screening, molecular dynamics along with computational modeling based on graph theory, complex network analysis that provide relevant information of such complex systems at the molecular level. The group also implements diverse biophysical techniques e.g., magnetic resonance, microscopy, calorimetry, spectroscopy etc. to understand and analyze the structure, function and intermolecular interactions of biologically relevant small and macromolecules besides verifying the computational predictions.

### **Cellular and Molecular Neuroscience**

The objective is to unravel the cellular and molecular mechanisms underlying the functions of the healthy as well as diseased brain. The first approach is to understand the molecular mechanism of highly versatile and ordered protein assemblies at the cellular level in neurons. The second approach aims at understanding the intricate cellular and molecular mechanisms that underlie interactions of glial cells with one another and with neurons.

### **Cognitive Science**

Cognitive science, the study of mind and its functioning, is pursued from philosophical, psychological, computational, and neuroscience perspectives. Current research is focused on embodied cognition, mindfulness, mind-wandering, attention, perception, memory, perception-action interface, creativity, cognitive biases in behaviours such as self-harm and defensiveness; and cognitive and neuro-feedback training for excellence.

### **Bioenergy and Bioremediation**

Energy harnessing systems that have an inherent capacity to remove pollutants are the systems of interests for their sustainability and wide applicability. This axis focuses on Microbial fuel cells which are efficient waste treatment devices but low energy producers. The research is focused on improving energy efficiency by understanding the microbial /electrochemical processes in cell's compartments. Our lab is also exploring yeast based biodiesel and the improvement of yield thereof.

### **Science, Technology and Society**

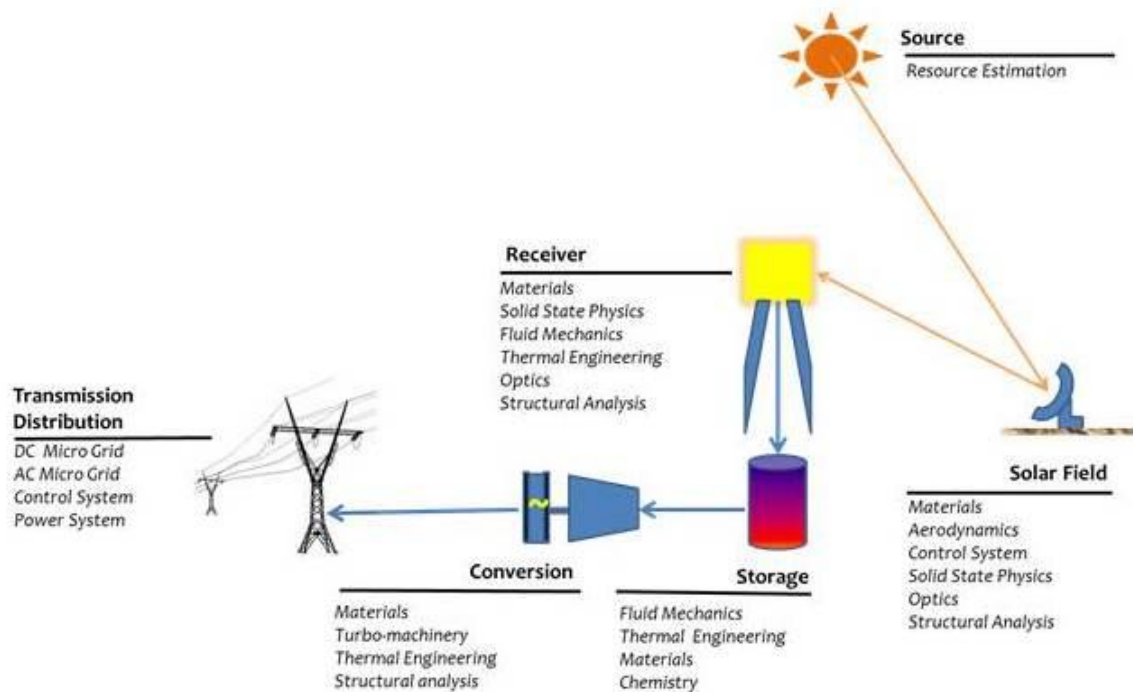
The pedagogical and academic loci of this axis consist of the niche of science, technology, and society. This axis gives emphasis to philosophical, cultural, normative, and historical understanding of the above niche. Major themes of enquiry involve History and Philosophy of Science, Normativity of Science and Technology, Sustainability, Technological Discourses, Aesthetics and Design, Visual Arts Studies, and Literature. The axis provides a platform for understanding ways in which human societies transform themselves through technological innovation and for assessing the social, cultural, and ethical issues associated with the change.

**Purpose**

The Center for Energy at Indian Institute of Technology Jodhpur is dedicated to educating, developing new and improved energy conversion technologies and sustainable energy solutions, including new materials for energy storage, technology indigenization, harvesting solar energy, and energy conversion.

The Center is envisioned to be a catalyst for the growth and development of the arid west of India by initiating, educating, and coordinating regional, national as well as international activities on energy. It provides a common ground for government, academia, industry and the society to foster partnerships and engagement in energy-related issues and technology development.

The Center for Energy has faculty members working in energy research from the focus groups of Chemistry, Electrical Engineering, Mechanical Engineering, and Physics, for the purpose of leveraging their work and expertise.



The associated faculty members are engaged in basic and applied research in the following areas:

1. Solar Energy
2. Materials
3. Chemistry
4. Physics
5. Energy Conversion and Distribution
6. Storage
7. Computational Fluid Dynamics
8. Structural Analysis and Design
9. Environment and Society

## **CENTER FOR INFORMATION & COMMUNICATION TECHNOLOGY (ICT)**

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### **Vision**

The aim of the Center for Information and Communication Technology (ICT) is to make it a premier destination to develop innovative and sustainable ICT based solutions for addressing the socio-economic and environmental problems.

### **Mission**

At Center for ICT, multidisciplinary research is conducted and academic programs are offered with the below mentioned objectives:

1. To harness the potential of technological advances to solve the existing socio-economic and environmental problems.
2. To turn the digital divide into a digital opportunity for all through functionality driven cost hardware design.
3. To develop a breeding ground for learners, developers, contributors, entrepreneurs and decision-makers.
4. To work in the direction of building an inclusive society with the participation of Government, Private Sector and International Organizations.

### **Research Axes**

**Communication and Networking:** This group's activities are primarily focused on developing solutions for wireless and wired communication, sensor and computer networks. The research involves development of computationally efficient schemes for multiple-input multiple-output (MIMO) systems, interference management, resource allocation, cross-layer algorithmic design, physical layer security, surveillance, wireless power transfer and cognitive radio technologies. Other focus areas include satellite based navigation systems, radar systems and mobile cloud computing.

**Device Technology:** This group's activities are mainly focused in the area of microelectronics and VLSI. Current research activities are aiming to developing low dimensional semiconductor devices, group III-Nitride materials for LEDs, HEMTs, sensors and solar cells applications, low cost organic field-effect transistors, oxide and nitride compound semiconductors in multilayer geometries for memory and photovoltaic applications, magnetic materials for spintronics applications, plasmonic and metamaterial structures, piezoelectric thin films for MEMS devices.

**Multimedia and Software Systems:** Currently the group is focusing on computationally efficient algorithms for real-time processing of degraded video, noise minimization, super resolution, watermarking, image and video compression. A main focus is on video analysis, document image analysis, multi-camera surveillance, video indexing. A particular emphasis is on addressing the machine learning issues in making these applications. For software systems, the focus is on designing energy efficient task scheduling algorithms for multi-core systems, solving scientific problems requiring high performance computing capability using distributed systems, and computational complexity theory. This group also looks into the systems related aspects of big-data analytics.



### **Vision**

The Center for System Science IIT Jodhpur from its very inception in 2011 has aimed to promote and implement interdisciplinary education and research by adopting a holistic systems thinking approach. The Center upholds its vision of transforming students into young trained graduates who are imbued with the spirit of systems thinking in diverse domains of engineered systems, natural systems, and financial systems. The Center works on the research axes that include quantitative finance, quantum information, nonlinear dynamics and chaos, complex networks and systems, chemical reaction dynamics, graph algorithms, and image processing. Details of these research areas are:

### **Quantitative Finance**

The focus areas of the Quantitative Finance group include Financial Risk Measurement and Modelling: credit risk, market risk and operational risk for banking sector; Time Series and Machine Learning Techniques: development of models for long term and short term forecasting of financial time series; and Insurance Models: analysis of existing models and development of new models.

### **Quantum Information**

Quantum information area deals in a wide range of topics covering fundamental aspects of quantum entanglement to the potential applications offered by quantum information and computation such as quantum cryptography, teleportation, secret sharing, quantum algorithms and dense coding. In this research axis, the group also works on the interface of quantum information with areas of research such as quantum optics, condensed matter physics and particle physics.

### **Non Linear Dynamics and Chaos**

The area deals in engineering and mathematical aspects of nonlinear dynamics, the long term behaviour and stability, dynamical properties like transitivity, sensitivity, periodicity, entropy, and various notions of chaos. Insights obtained from these mathematical studies are applied in fields like nonlinear optics, plasmonics, light-matter interactions, etc. The group also focuses on Renormalization technique to study geometric rigidity of the attractors in low dimensional systems, and how to extend this theory to higher dimensional systems.

### **Complex Networks and Systems**

The focus areas of this research area include controllability, voting and consensus decision making; games on networks, formal-informal network and social capital, information diffusion in networks, modelling and analysis of real networks. Members in this group are also contributing towards the National Mission on Electric Mobility Program 2020 (NMEMP 2020) through holistic systems approach for electric mobility research starting from materials to engineering.

## FOCUS GROUPS

The inception of Focus Groups in individual disciplinary subject areas in the year 2013-14, has facilitated Faculty Members to engage in directed discussions for improving quality of education at IIT Jodhpur. Presently there are eight Focus Groups in the following areas with associated faculty members and their areas of specialization:

### Computer Science & Engineering

Venkata Ramana Badarla Transport, Network, MAC layers issues in Wireless ad-hoc, mesh, sensor networks. Also interested in the issues such as, Designing of an autonomous/self-organising wireless networking system, Techniques for implementing reconfigurable MAC-layer, Techniques for implementing a prototype cognitive radio network, Deployment aspects of IPv6, and Issues related to WiMAX

Abhishek Mishra Computer Science and Engineering: Algorithms & Complexity

Gaurav Harit Image and Video Analysis

### Electrical Engineering

Deepakkumar M. Control and state estimation of uncertain systems, Power system, Control issues in wind energy conversion system

Fulwani  
Abdul Gafoor Shaik Protection of various components of Power System, Protection of Distribution Network with DG penetration, Power Quality assessment and mitigation in Distribution Networks with Renewable Energy Source penetration

Anil Kumar Tiwari Electrical Engineering: Image Processing, Video Processing, and Signal Processing application in Bio-Medical

Arun Kumar Singh Communication Theory, Wireless and Mobile Communications, Satellite based Navigation Systems, Spread Spectrum Systems

Sandeep Kumar Yadav Signal Processing, Condition Monitoring, Image Processing, Data Compression, Blind Source Separation, Artificial Neural Network

Shree Prakash Tiwari Microelectronics & VLSI Technology, Microfabrication, Organic Electronics, Device Physics and Characterization, New Device Structures

Vivek Dixit Nanophotonic / Optoelectronic Devices, Semiconductor device physics, III-V semiconductors, Plasmonics

### Mechanical Engineering

Anand Krishnan Plappally Energy Water Nexus; Water/Waste Water Treatment, Hydrology, Mechanics of Materials, Probability, Methods in Engineering, Agriculture Water Management

B. Ravindra Mechanics, Mechatronics and Solar energy

Barun Pratiher Dynamic Model & Simulation, Nonlinear Dynamics, Stability Analysis, Perturbation Techniques, Flexible Robots, Fluid-Structures Interaction in Flexible Pipes or carbon nanotube, Modeling and Dynamics Response MEMS Devices

Laltu Chandra	Solar thermal system, Thermal hydraulics, Turbulence simulation (DNS/LES/HYBRID/RANS) & model development, Computational Fluid Dynamics, Heat Exchanger design
Prodyut Ranjan Chakraborty	Heat and mass transfer, Latent heat based thermal energy storage for high temperature applications, Active and passive solar cooling, Solidification and melting of alloys, Thermodynamics, Numerical heat transfer
Rahul Chibber	Welding and Joining, Advance Manufacturing Processes, Damage Mechanics, Biomaterials, Materials Processing
Tapano Kumar Hotta	Thermal Management of Electronic Devices, Solar Refrigeration and Air-Conditioning

### **Biology**

Sushmita Jha	Cellular and Molecular Neuroscience, Cell and Molecular Physiology
Amit Kumar Mishra	Cellular and Molecular Neuroscience, Cell Cycle Regulation and Cancer
Ganesh Bagler	Computational Biology and Bioinformatics, Complex Networks, Systems Biology, Complex Systems
Karunakar Kar	Protein Biophysics, Amyloids and Collagens, Rationally Engineered Biomaterials
Meenu Chhabra	Biological Science & Bio-Engineering: Renewable Bioenergy Bioremediation

### **Chemistry**

Rakesh Kumar Sharma	Water splitting catalysis, solar hydrogen production Macromolecule based molecular sensors, Heterogeneous catalysis for small molecule activation, Green Chemistry Catalysis for stereocontrol plastic electronics, Feedstock Chemistry, Catalysis for energy solutions, Coordination Chemistry based of d- and f- block element. Water chemistry
Ananya Debnath	Multi-scale Modeling, Protein-Membrane Biophysics, Dynamics and Thermodynamics of Interfacial Water, Polymer Dynamics of Activated Processes and Barrierless Reactions, Theory of Path Integrals
Atul Kumar	Quantum Information Processing
Manikandan Paranjothy	Theoretical and Computational Chemistry, Chemical Reaction Dynamics
S. Harinipriya	Lithium ion batteries, fuel cells, electro-deposition, Thermal storage systems, Monte Carlo simulations, Materials synthesis and characterization
Samanwita Pal	Solution and solid state NMR and NQR spectroscopy

## Mathematics

Puneet Sharma	Topological Dynamics, Low Dimensional Chaos
Bibhas Adhikari	Linear and Non-linear Algebraic Systems, Optimization Techniques, Network Systems
Dinabandhu Pradhan	Graph Theory and Graph Algorithms
Gaurav Bhatnagar	Wavelet Analysis, Fractional Transform Theory, Multimedia Security, Image Processing, Information Fusion
I. Venkata Appal Raju	Financial Mathematics, Insurance Models
Kirankumar R. Hiremath	Theoretical, mathematical and computational aspects of wave-matter interactions
Satyabrata Adhikari	Quantum Information
V. V. M. S. Chandramouli	Smooth Dynamical Systems, Renormalization of Unimodal maps and Henon-like maps
Vivek Vijay	Financial Risk Analysis, Categorical Data Analysis, Regression

## Physics

Ashutosh Kumar Alok	Particle Physics and Cosmology
Ambesh Dixit	Semiconductors, multifunctional ferroics & materials for energy-fabrication & characterization, Photovoltaic materials & devices ab initio DFT study and device simulations
Mahesh Kumar	Group III-V quantum structures by MBE, Growth of thin films and nanostructures, Group III-nitride alloys for LEDs, HEMTs and photovoltaic applications, Inorganic-Inorganic hybrid structures with special attention to band gap engineering, Si and wide band gap semiconductors for MEMS, Micro and Nano device fabrications
Monika Sinha	Astrophysics, Astroparticle physics
Satyajit Sahu	Information Processing in Biological Systems
Subhashish Banerjee	Open Quantum Systems; Quantum Information; Non-Equilibrium Statistical Mechanics; Quantum Optics
V. Narayanan	Optics and Solar Field Design, Plasmonics, Laser Produced Plasmas (LPP), Pulsed Laser Deposition (PLD), Plasma Diagnostics (Interferometry & Optical Emission Spectroscopy (OES)), Laser Matter Interaction and Laser Cluster Interaction

## Humanities & Social Sciences

Vidya Sarveswaran	English: Literature and Environment (Ecocriticism), Film and Literature, Literatures of the Global South, Regional Literatures in Translation, American Literature
Ankita Sharma	Psychology: Gerontology, Clinical and Positive Psychology

Ansu Louis	English:	American Literature, Literary and Critical Theory, Postmodern Fiction, and English Language and Communication
Debabrata Pal	Economics:	Social Choice Theory, Law and Economics, Socio-economic Networks, Economic Theory
Gourishankar S. Hiremath	Economics:	Financial Economics, Financial Markets, International Finance, Economics of Energy, Long Memory, Cooperatives
K. J. George	Philosophy:	Applied Ethics, Ethics of Technology, Bioethics
Mainak Mazumdar	Economics:	Intellectual Property Rights (IPR) and Pharmaceutical Industry, Productivity and Efficiency Analysis, Growth and Regional Development, Inequality Poverty and Social mobility
Rijo M. John	Economics:	Health Economics, Health Policy, Applied Econometrics, Development Studies
Snehlata Jaswal	Psychology:	Cognition, Psychometrics, Depression
Sreekumar Jayadevan	Philosophy:	Philosophy of Science, Aesthetics of Design, Formal Logic, Philosophy of Technology
V. Hari Narayanan	Philosophy:	Cognitive Studies, Evolutionary Theory, Analytic Philosophy and Mindfulness

## Staff Members

Kshema Prakash	Deputy Librarian
Sanjeeb Mukherjee	Executive Engineer
Amardeep Sharma	Assistant Registrar
Ashish Kachhawaha	Account Officer
Gaurav Nigam	Superintendent
Sandeep Chandel	Superintendent
Narendra Kumar Singh	Technical Superintendent
Rimpesh Katiyar	Technical Superintendent
Vijay Borana	Senior Technical Superintendent
Dheerendra Kumar Yadav	Junior Technical Superintendent
Poonam Chand Sankhla	Junior Technical Superintendent
Rinkesh Kumar Mangal	Junior Technical Superintendent
Bharat Pareek	Junior Technical Superintendent
Raju Peta	Junior Technical Superintendent
Shailendra Pratap Singh	Junior Technical Superintendent
Amit Kumar Soni	Senior Library & Information Assistant
Naresh Chouhan	Junior Account Officer
Sandeep Pareek	Junior Superintendent
Sharabh Pradhan	Junior Superintendent
Sudesh Kumar Agnihotri	Junior Superintendent
Vinay Kumar	Junior Engineer
Chandresh Pareek	Junior Engineer
Sharad Srivastava	Junior Accountant
Dhani Ram	Junior Assistant
Swati Kushwaha	Junior Assistant
Ganpat Chowdhary	Junior Technical Lab Assistant
Pankaj Singh	Junior Technical Lab Assistant
Praveen Suthar	Junior Technical Lab Assistant
Anurag Gupta	Junior Technical Lab Assistant
Vivek Verma	Junior Lab Assistant

## ACADEMIC PROGRAMS

In the year 2013-14, in a meticulous effort involving Faculty Members, Office of Academics, Students, the curriculum and coursework of the three degree programs (namely B.Tech., M.Tech. and Ph.D. programs) were critically reviewed and recast. This restructuring of over 300 courses has given an opportunity to raise the bar of quality academics at IIT Jodhpur.

Presently, IIT Jodhpur offers the following Undergraduate, Post Graduate and Ph.D. programs. The five Bachelor of Technology (B.Tech.) programs offered are, namely:

1. B.Tech. Computer Science and Engineering
2. B.Tech. Electrical Engineering
3. B.Tech. Mechanical Engineering
4. B.Tech. System Science
5. B.Tech. Biologically Inspired Systems Science

The duration of B. Tech programs is 4 years. The objectives of these undergraduate programs are to:

1. To provide fundamental concepts to students in technology and science,
2. To promote spirit of free and objective enquiry in the field of study, and
3. To contribute towards development of skilled technical manpower to address the technological needs of the nation.

The Master's Program is offered in three domains, namely

1. M.Tech. (Energy),
2. M.Tech. (Information and Communication Technologies), and
3. M.Tech. (System Science)

The M.Tech. programs now have organized streams of electives. Likewise, the coursework requirement of the new Ph.D. programs has been brought in-line with the practice at other institutes. In all the three programs (B.Tech., M.Tech. and Ph.D.), multi-disciplinary research is encouraged, with one supervisor to begin with.

IIT Jodhpur hosts Ph.D. program in all areas of technology, engineering, sciences, and humanities and social sciences. The aim of the Ph.D. Program is to develop graduates having good knowledge and research training in classical and emerging areas. The Ph.D. Program is based on three tenets of (1) *Semester System*, (2) *Credit System*, and (3) *Relative Grading*.

The year 2013-14 also saw successful passing of the proposal for an academic-industry partnered Blended B.Tech. Program. This unique program has been slated to be launched for the undergraduate students joining the Institute from July 2014. The salient features of this unique program include:

1. Inviting distinguished personnel from leading industry to contribute to the curriculum reforms and offering lectures in select domains;
2. Taking students through an immersive experience at the Industry for 8-weeks each summer for three successive summers as an integral part of technology education offered by the Institute;
3. First lectures of all courses by distinguished subject specialists from Industry and academia;
4. Early engagement of students with technology-related courses;
5. Comprehensive capstone multi-disciplinary innovation project spanning over two and a half years in association with the Industry.

As of now, seven top industries of the country have shown their willingness to enthusiastically participate in this one-of-the-kind program of the country.



# RESEARCH

## International Relations

### Memoranda of Understanding (MoU) between IIT Jodhpur and International and National Institutions, and Agencies

- 1. University of Western Ontario, Canada (09/08/2010)**  
To explore the possibilities for cooperation in education, training, and research and also to encourage direct contact and mutual cooperation between faculty members, departments, and research centers.
- 2. Universitat Rovira I Virgili, Tarragona, Spain (29/08/2010)**  
Development of mutually beneficial academic program and courses; coordination of academic staff travel for the purposes of teaching, research, and training; cooperation of student mobility program for study, research, and for joint academic activities such as research publications, conferences and symposia; exchange of documentation and research materials in the field of mutual interest provided that there are no legal barriers against exchange and collaboration in international master's and doctoral programs between both the institutions.
- 3. The Commissariat a l'Energie Atomique et aux Energies Alternatives France (22/11/10)**  
Cooperation in the areas of solar energy research, such as Concentrated Solar Power (CSP) and Concentrated Photovoltaic (CPV), water production by using solar energy, renewable energy storage and smart management, integration of solar energies and energy efficiency in buildings.
- 4. University of Waterloo, Canada (25/11/2010)**  
Collaborative measures to foster international experience and advancement of knowledge on the basis of reciprocity, mutual benefit, interaction and exchange of students in graduate programs.
- 5. University of Manitoba, Canada (09/12/2010)**  
Development of mutually beneficial programs for student internships and graduate study in order to provide students opportunities for advancement of knowledge and international experience.
- 6. Embassy of France in India (28/03/2011)**  
For exploring prospective domains for students and scholars to learn French language effectively.

**7. University of California, Merced (26/04/2011)**

Development of mutually beneficial relationships for promoting academic exchange, scholarly cooperation, and collaborations under mutually agreeable terms and conditions: the exchange of faculty members, scientists and students and scientific material, access to library resources, pursuit of joint meetings, symposia and/or conferences and access to laboratories as may be appropriate and feasible in the two institutes.

**8. Arid Forest Research Institute, Jodhpur, India (15-08-2011)**

Development of sheltering belt plantation as urban forestry model for at a selected site at IIT Jodhpur.

**9. Institute of Science and Technology, Nara, Japan (28/02/2012)**

To promote academic exchanges in fields where each party needs to enhance its educational and academic programs: the academic exchanges will include, implementation of collaborative research, joint symposia, lectures and education and exchange of scholars, researchers, and administrative staff; exchange of information in fields which are of interest to both parties and exchange of graduate students in fields of interest to both parties.

## R & D Projects

The national goal of improving research ambience at Institutes of Technology is being taken seriously by our Faculty Members. As detailed in the following list of ongoing sponsored research projects, now 20 of them have funding from national and international agencies for undertaking sponsored research. Currently on-going sponsored research projects in the Institute are:

- 1. Identification, assessment and characterization of E3 ubiquitin ligases implicated in the neurodegenerative diseases**  
*Department of Biotechnology (DBT), Government of India*  
PI: Amit Mishra  
Rs. 74.5 Lakhs
- 2. Understanding the molecular function of MGRN1 in Chaperone Mediated Autophagy**  
*Department of Biotechnology (DBT), Government of India*  
PI: Amit Mishra  
Rs. 41.19 Lakhs
- 3. Identification, assessment and characterization of E3 ubiquitin ligases and molecular chaperones implicated in the neurodegenerative diseases**  
*Department of Science & Technology (DST), Government of India*  
PI: Amit Mishra  
Rs. 5.56 Lakhs
- 4. How AMFR gene regulates cell division and cancer after stress exposure?**  
*Board of Research in Nuclear Sciences (BRNS), DAE, Government of India*  
PI: Amit Mishra  
Rs. 23.9 Lakhs
- 5. Language, Cognition & the Human Mind**  
*Ministry of Human Resource Development, Government of India*  
PI: Hari Narayanan V.  
Rs. 0.5 Lakhs
- 6. Bioremediation of low level wastes including denitrification using microbial fuel cells**  
*Board of Research in Nuclear Sciences (BRNS), DAE, Government of India*  
PI: Meenu Chhabra; Co-PI: Atul Kumar  
Rs. 23.73 Lakhs
- 7. Deposition of particulate matter in lungs**  
*Board of Research in Nuclear Sciences (BRNS), DAE, Government of India*  
PI: Sushmita Jha  
Rs. 24.79 Lakhs
- 8. Role of the inflammasome associated proteins in glioma**  
*Science and Engineering Research Board (SERB), DST, Government of India*  
PI: Sushmita Jha,  
Rs. 22.30 Lakhs
- 9. Development of III-Nitrides thin film(s) for high frequency saw device applications**  
*Department of Space, Government of India*  
PI: Ambesh Dixit  
Rs. 22.62 Lakhs

10. **Development of Ferroelectric and their composite with hexaferrites for microwave absorption applications**  
Defence Research & Development Organization, Jodhpur  
PI: Ambesh Dixit  
Rs. 9.55 Lakhs
11. **Investigation of Magnetoelectric coupling in  $\text{Cu}_{1-x}\text{TM}_x\text{O}$  multiferroic System**  
Board of Research in Nuclear Sciences (BRNS), DAE, Government of India  
PI: Ambesh Dixit  
Rs. 23.42 Lakhs
12. **Hunting of New Physics Through  $b \rightarrow S$  Transitions**  
Council of Scientific & Industrial Research (CSIR), Government of India  
PI: Ashutosh K. Alok  
Co-PI: Subhashish Banerjee  
Rs. 11.92 Lakhs
13. **Bifurcation and Stability Assessment of a Highly Lightweight Rotor-Bearing System with Moving Platform**  
Science and Engineering Research Board (SERB), DST, Government of India  
PI: Barun Pratiher  
Rs. 21.8 Lakhs
14. **Establishment of the Centre of Excellence in Solar Thermal Research and Education**  
Ministry of New & Renewable Energy, Government of India  
PI: Laltu Chandra  
Rs. 40 Crores
15. **IOC-BHEL-IITJ CSP Plant**  
Indian Oil Corporation Ltd.  
PI: Laltu Chandra  
Rs. 60 Lakhs
16. **Generation, Storage and Distribution of Solar Hydrogen**  
Department of Science & Technology (DST), Government of India  
PI: Rakesh Kumar Sharma  
Rs. 8.66 Lakhs
17. **Asymmetric Hydrogenation on Carbon Nanotube Surface**  
Department of Science & Technology (DST), Government of India  
PI: Rakesh Kumar Sharma  
Rs. 25.25 Lakhs
18. **Molecular Sensors: Synthesis and Anion Recognition Studies**  
Science and Engineering Research Board (SERB), DST, Government of India  
PI: Rakesh Kumar Sharma  
Rs. 27 Lakhs
19. **Dual scale simulations of surfactant, co-surfactant water system**  
Science and Engineering Research Board (SERB), DST, Government of India  
PI: Ananya Debnath  
Rs. 21.7 Lakhs

20. **Enabling Technologies for Intelligent Wireless Sensor Network for Health and Environment Monitoring**  
Department of Science & Technology (DST), Government of India  
PI: Anil Kumar Tiwari  
Rs. 75 Lakhs
21. **Development of Low Cost Mobile Robots - Robotics for Education**  
National Mission on Education through Information & Communication Technologies (NMEICT), Ministry of Human Resource Development, Government of India  
PI: Deepakkumar M. Fulwani  
Rs. 1.55 Crores
22. **Development of Programmable Emulator for Photovoltaic Plant to Facilitate Complex Testing Requirements**  
Science and Engineering Research Board (SERB), DST, Government of India  
PI: Deepakkumar M. Fulwani  
Rs. 9.48 Lakhs
23. **Development of Analysis and Indexing Tools for Harnessing Educational Videos**  
National Mission on Education through Information & Communication Technologies (NMEICT), Ministry of Human Resource Development, Government of India  
PI: Gaurav Harit  
Rs. 32.45 Lakhs
24. **Development of Metal Doped TiO<sub>2</sub> Low Dimension Structures by Sputtering for Gas Sensing Applications**  
Board of Research in Nuclear Sciences (BRNS), DAE, Government of India  
PI: Mahesh Kumar  
Rs. 17.46 Lakhs
25. **Chemical Dynamics Simulations of Complex Organic Reactions**  
Science and Engineering Research Board (SERB), DST, Government of India  
PI: Manikandan Paranjothy  
Rs. 18.7 Lakhs
26. **NI-Sensor & Networks Lab**  
NI Systems (I) Pvt. Ltd., Bangalore  
PI: Sandeep Kumar Yadav  
Rs. 5 Lakhs
27. **Reproductive Child Health**  
UNICEF, Jaipur Branch  
PI: Sandeep Kumar Yadav  
Rs. 38.52 Lakhs
28. **Synchrony Based Evolution of Various Biological and Artificial Systems to Understand Complex Computational Aspects**  
Department of Science & Technology (DST), Government of India  
PI: Satyajit Sahu  
Rs. 35 Lakhs
29. **Developing Dielectric Semiconductor Combinations and Processes for Flexible Organic Electronics**  
Science and Engineering Research Board (SERB), DST, Government of India  
PI: Shree Prakash Tiwari  
Rs. 12.84 Lakhs

30. **Theory and Numerical Algorithms for Interval Linear System and Interval Eigen-Value Problem**  
*Board of Research in Nuclear Sciences, DAE, Government of India*  
*PI: Bibhas Adhikari*  
*Co-PI: Vivek Vijay*  
*Rs. 21.87 Lakhs*
31. **Graph Theoretical Aspects in Quantum Information processing**  
**Council of Industrial & Scientific Research, Government of India**  
*PI: Bibhas Adhikari*  
*Co-PI: Subhashish Banerjee*  
*Rs. 9.92 Lakhs*
32. **SiC Coatings on Graphite**  
*Board of Research in Nuclear Sciences (BRNS), DAE, Government of India*  
*PI: S. Harinipriya*  
*Rs. 17.12 Lakhs*
33. **Ultrafast charging cathode and anode nanomaterials for aqueous flexible lithium ion batteries**  
*Science and Engineering Research Board (SERB), DST, Government of India*  
*PI: S. Harinipriya*  
*Rs. 18 Lakhs*

In particular, for their research achievements in respective areas, Amit Kumar Mishra has been decorated with INSA Young Scientist Medal at the INSA Annual Convention in December 2013, while Mahesh Kumar has been chosen to receive the same this year in December 2014. Nine of the faculty members were invited to present their research at national technical events.

The involvement of the Institute in Solar Energy Research has been strengthened by Union Ministry of New and Renewable Energies, Government of India, through its continued support to build a 100kW (peak capacity) Concentrated Solar Thermal System on the permanent campus of IIT Jodhpur.

In the year 2013-14, 56 journal papers, 18 conference presentations and conference proceedings publications, two book chapters, and two edited books have been contributed by our faculty members. Also, our Faculty Members are serving on the Editorial Boards of some International and National Journals.

Alongside, our Staff Members have participated as Members of selection and assessment committees at the Indian Council for Agricultural research (ICAR) and other IITs. In particular, Kshema Prakash, is involved in developing post-graduate course contents for the development of e-PG Pathshala spearheaded by INFLIBNET Consortium.

## Faculty Publications 2013-14

### JOURNAL PUBLICATIONS

1. **Adhikari, B.,** & Alam, R. (2014). Structured mapping problems for linearly structured matrices. *Linear Algebra and Its Applications*, Vol. 444, Pp.132–145. doi:10.1016/j.laa.2013.11.014
2. Sazim, S., **Adhikari, S., Banerjee, S.,** & Pramanik, T. (2013). Quantification of entanglement of teleportation in arbitrary dimensions. *Quantum Information Processing*, Vol. 13(4), Pp.863–80. doi:10.1007/s11128-013-0697-3
3. **Alok, A. K.,** & **Banerjee, S.** (2013). Decoherence free  $B_d$  and  $B_s$  meson systems. *Physical Review D*, 88(9), 094013(1–4). doi:10.1103/PhysRevD.88.094013
4. **Banerjee, S.,** Chandrashekar, C. M., & Pati, A. K. (2013). Enhancement of geometric phase by frustration of decoherence: A Parrondo-like effect. *Physical Review A*, 87(4), 042119. doi:10.1103/PhysRevA.87.042119
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7. Dhar, H. S., **Banerjee, S.,** Chatterjee, A., & Ghosh, R. (2013). Controllable quantum correlations of two-photon states generated using classically driven three-level atoms. *Annals of Physics*, 331, 97–109. doi:10.1016/j.aop.2012.12.008
8. **Chakraborty, P. R.,** & Dutta, P. (2013). Study of Freckles Formation During Directional Solidification Under the Influence of Single-Phase and Multiphase Convection. *Journal of Thermal Science and Engineering Applications*, Vol. 5(2), Pp.021004(1–13). doi:10.1115/1.4023601
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15. Khoo, E. H., Ahmed, I., Guo, Z., **Dixit, V.**, Ang, M. T. W., & Li, E. P. (2013). Investigation of the near field distribution in circular nanostructures using Stokes polarization states. *Applied Physics A*, Vol. 112(3), Pp.597–603. doi:10.1007/s00339-013-7756-6
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18. Mallik, A., Ghosh, H., Chaudhury, S., & **Harit, G.** (2013). MOWL: An Ontology Representation Language for Web-Based Multimedia Applications, *ACM Transactions on Multimedia Computing, Communications and Applications*, Vol. 10(1), Pp.1–21. doi:10.1145/2542205.2542210
19. Franchimon, E. F., **Hiremath, K. R.**, Stoffer, R., & Hammer, M. (2013). Interaction of whispering gallery modes in integrated optical microring or microdisk circuits: hybrid coupled mode theory model. *Journal of the Optical Society of America B*, Vol. 30(4), Pp.1048–1057. doi:10.1364/JOSAB.30.001048
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38. **Narayanan, V. H.** (2013). Embodied cognition and the Orwell's problem in cognitive science. *AI & SOCIETY*, Pp. 1–5. doi:10.1007/s00146-013-0496-5
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45. Ghosh, S., Dutta, M., **Sahu, S.**, Fujita, D., & Bandyopadhyay, A. (2014). Nano Molecular-Platform: A Protocol to Write Energy Transmission Program Inside a Molecule for Bio-Inspired Supramolecular Engineering. *Advanced Functional Materials*, Vol. 24(10), Pp.1364–71. doi:10.1002/adfm.201302111

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#### RESEARCH REPORTS

1. Burki, S. J., Pasha, A. G., Pasha, H. A., **John, R. M.**, Jha, P., Baloch, A. A., ... Chaloupka, F. J. (2013). *The Economics of Tobacco and Tobacco Taxation in Pakistan*. Paris: International Union Against Tuberculosis and Lung Disease. ISBN: 9791091287104.

#### CONFERENCE PRESENTATIONS & PUBLICATIONS IN CONFERENCE PROCEEDINGS

1. Rathore, H., **Badarla, V.**, **Jha, S.**, & Gupta, A. (2014). Novel approach for security in Wireless Sensor Network using bio-inspirations. In *Sixth International Conference on Communication Systems and Networks (COMSNETS)* (Pp.1–8). IEEE. doi:10.1109/COMSNETS.2014.6734875
2. **Bhatnagar, G.**, & Wu, Q. M. J. (2013). A novel framework for multi-focus image fusion. In Harit, G., (Ed.) & Das, S. (Ed.). 2013 Fourth National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), Jodhpur, Pp. 1–4. IEEE. doi:10.1109/NCVPRIPG.2013.6776177
3. Sharma P. K., Sarma R, **Chandra, L.**, Shekhar, R., Ghoshdastidar, P. S., *On the design and evaluation of open volumetric air receiver for process heat applications*. ISES Solar World Congress 2013, Cancun Mexico.
4. Yadav, N. K., Pala, D., & **Chandra, L.**, *On the understanding and analyses of dust deposition on heliostat*. ISES Solar World Congress 2013, Cancun, Mexico.
5. **Chandra, L.** (2013). *Solar thermal R & D at IITJ*. Workshop on Energy Efficiency and Clean Energy, 13 September 2013, India Expo Center, Greater Noida, India.

6. Verma, R. N., Jayakumar, P., **Chandra, L.**, Shekhar, R. (2013). *Development of a Technique for Measurement of High Heat Flux*. 37<sup>th</sup> National Systems Conference, 5-7 December 2013, IIT Jodhpur. Tanwar, U., Tripathi, S., Lahuwa, K., Mohan, A., & **Dixit, A.** (2013). Novel MICS band implantable antenna for WBAN application. In *Proceedings of the IEEE Indian Antenna Week*. Aurangabad.
7. Tanwar, U., Tripathi, S., Lahuwa, K., Mohan, A., & **Dixit, A.** (2013). Novel MICS band implantable antenna for WBAN application. In *Proceedings of the IEEE Indian Antenna Week*. Aurangabad.
8. Trivedi, A. R., Singh, A. K., Digumarti, S. T., **Fulwani, D.**, & Kumar, S. (2013). Design and Implementation of a Smart Wheelchair. *Proceedings of Conference on Advances In Robotics - AIR '13*, ACM, New York, NY, USA. (Pp. 1-6) doi:10.1145/2506095.2506140
9. Singh, S., & **Fulwani, D.** (2014). On design of a robust controller to mitigate CPL effect a DC-Micro-grid Application. In *IEEE International Conference on Industrial Technology (ICT) 2014*. (Pp. 448–454). Busan, Korea: IEEE.
10. **George, K. J.** (2013). Intergenerational and International Justice: Sustainability and the Dilemma of Developing Nations. In *Societas Ethica Annual Conference 2013: Climate Change, Sustainability and an Ethics of an Open Future*. Soesterberg, Netherlands: Societas Ethica.
11. **Jaswal, S.** (2014). Profiles on Facebook: What do they reveal. In *49th Indian and 18th International Conference of the Indian Academy of Applied Psychology*. Ahmedabad: Indian Academy of Applied Psychology.
12. **Jha, S.** (2013). Debris clearance in the brain: Implications for inflammation and repair. In *Young Investors Meeting (YIM)*. Jodhpur: Indiabioscience.org.
13. Ram, P., **Kumar, M.**, **Dixit, V.**, **Sharma, R. K.** (2013). Synthesis, physical and electrochemical characterization of Gd(III) doped LiMn<sub>2</sub>O<sub>4</sub> and cathode material for lithium ion rechargeable batteries. In *International Union of Materials Research Societies (IUMRS) 12<sup>th</sup> International Conference in Asia (ICA) 2013*, 15-20 December 2013, IISc, Bangalore.
14. Tripathi, B., **Ravindra, B.**, & Joshi, Y. M. (2013). Improving lubrication of EDM oil at higher shear rate & temperature with carbon nanotubes. In *International Conference and Exhibition of Powder, Granule and Bulk Solids, Innovations and Applications (PGBSIA)*. Patiala.
15. **Singh, A.**, Elia, P., & Jalden, J. (2013). Rate-reliability-complexity tradeoff for ML and lattice decoding of full-rate codes. In *IEEE International Symposium on Information Theory* (Pp. 1267–1271). IEEE. doi:10.1109/ISIT.2013.6620430
16. Sharma, P., **Sharma, R. K.** (2014). Metal Incarcerated CNT Nanoreactors for Asymmetric Catalysis. In *16<sup>th</sup> CRSI National Symposium in Chemistry, 7-9 February 2014, IIT Bombay, Bombay*.

17. Shejale, K. P., **Sharma, R. K.**, Roy, M. S., **Kumar, M.** (2013). Investigation of Synthesized Graphene Counter Electrode for Dye Sensitized Solar Cells. In *International Union of Materials Research Societies (IUMRS) 12<sup>th</sup> International Conference in Asia (ICA) 2013*, 15-20 December 2013, IISc, Bangalore.
18. Jaiswal , S.P., Au, O.C., Jakhetiya, V., Guo, Y., **Tiwari, A. K.** (2013). Efficient Adaptive Prediction Based Reversible Image Watermarking. In *IEEE International Conference on Image Processing (ICIP)* (Pp. 4540–44). Hong Kong: IEEE. doi:10.1109/ICIP.2013.6738935
19. Jaiswal, S. P., Au, O. C., Bhadviya, J., Jakhetiya, V., Yuan, Y., & **Tiwari, A. K.** (2013). An efficient two phase image interpolation algorithm based upon error feedback mechanism. In *IEEE Signal Processing Society (SiPS) 2013 Proceedings* (Pp. 251–55). IEEE. doi:10.1109/SiPS.2013.6674514
20. Singh, V. P., **Vijay, V., Ravindra, B.**, Basu, S. J., & Chaturvedi, D. K. (2014). Ground based measurement for solar power variability forecasting using generalized neural network. In V. Vijay, S. Yadav, B. Adhikari, H. Seshadri, & D. Fulwani (Eds.), *Systems Thinking Approach for Social Problems: Proceedings of 37th National Systems Conference, December 2013. Series: Lecture Notes in Electrical Engineering Vol. 327*. Jodhpur: Springer Verlag.
21. Hewson, D. J., Jaber, R., Chkeir, A., Hammoud, A., Gupta, D., Bassement, J., **Yadav, S.**, ... Duchene, J. (2013). *Development of a monitoring system for physical frailty in independent elderly*. In Lovell, N. (Ed.). *Proceedings of the 35<sup>th</sup> Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Osaka, Pp. 6215–18. doi:10.1109/EMBC.2013.6610973
22. Tripathi, S. Mohan, A. **Yadav, S. Vijay, V. Dixit, A.** (2013). Hexagonal Shaped Fractal UWB Antenna. In *IEEE APPLIED ELECTROMAGNETICS CONFERENCE 2013*. Bhubanashwar.
23. Tripathi, S., **Yadav, S., Vijay, V., & Dixit, A.** (2013). A Novel Multi band notched Octagonal Shaped Fractal UWB Antenna. In *35th International Conference on Software Engineering (ICSE 2013)* (pp. 167–169). San Francisco: ICSE 2013 doi:10.1109/ICSPCom.2013.6719776

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1. **Jaswal, S. (Ed.)**. (2013). *Inhibition in the Process of Feature Binding*. Switzerland: Frontiers Media SA. ISBN: 9782889191406. doi:doi:10.3389/978-2-88919-140-6
2. Slovic, S., Rangarajan, S., & **Sarveswaran, V.** (Eds.). (2014). *Ecoambiguitiy Community and Development: Toward a Politicized Ecocriticism* (1st ed., p. Pp.214). Maryland: Lexington Press.

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1. **Fulwani, D.,** & Bandyopadhyay, B. (2013). Design of Sliding Mode Controller with Actuator Saturation. In B. Bandyopadhyay, S. Janardhanan, & S. K. Spurgeon (Eds.), *Advances in Sliding Mode Control SE - 10* (Vol. 440, pp. 207–219). Springer Berlin Heidelberg. doi:10.1007/978-3-642-36986-5\_10
2. **Narayanan, V. H.** (2014). Reconceptualising the Separative Self. In S. Menon, A. Sinha, & B. V. Sreekantan (Eds.), *Interdisciplinary Perspectives on Consciousness and the Self* (Pp. 328). Springer Verlag.
3. **Sharma, A.,** Sharma, A. (2013). Role of emotional competence in motivation to work and extra role behaviors. In Pattanayak, B., Ray, K.S. & Niranjana, F. (Eds.), *Inclusive Growth: Need to Rethink the Business Model*. Bloomsbury Publishing.

## **Undergraduate Research Initiative (UGRI 2013)**

Indian Institute of Technology Jodhpur started the Undergraduate Research Initiative (UGRI) program in 2011 with the objective to promote research and innovation among a diverse group of undergraduate students. This program is being continued in every summer to help selected students improve their professional knowledge and skills. Students across the country are encouraged to utilize the UGRI program for their academic and professional developments. In 2013, the institute conducted this program from 6 May to 18 July, 2013. 16 students were selected for working on projects of their interest with the Faculty Members in the Institute on topics related to Energy, Health, Environment, and ICT (Information and Communication Technologies).

The selected students were provided accommodation in students' hostel at IIT Jodhpur. During this period, a remuneration of Rs. 8000 per month was offered as financial assistance to the participants. The students also received an additional sum of Rs. 1000 for preparing posters and interim reports.



## Outreach

The Institute saw the launch of a new initiative MoEA—IIT Jodhpur Distinguished Lecture Series, where current and former Ambassadors of India are invited to the Institute to share their experiences and understanding of India in the context of the world. As a part of this initiative, the first lecture was delivered by Ashok Sajjanhar, the Former Ambassador to Latvia, Sweden and Kazakhstan, who is presently the Secretary of National Foundation of Communal Harmony (NFCH).

The Distinguished Lecture (DIL) Series and Extra-Mural Lecture (EML) Series are two other initiatives of the Institute to bring in a meaningful exchange of ideas from outside to the Institute. The first Distinguished Lecture was delivered by Professor Bruce Alberts, noted American Biochemist and Former President of the National Academy of Sciences, USA, on 17 January 2014.

The first EML Lecture was delivered by Professor M. S. Ananth, Former Director, IIT Madras, and currently Visiting Professor, IISc Bangalore, on 22 November 2013, followed by Professor I. K. Bhat, Director, MNIT, Jaipur, on 28 November 2013, and by Professor V. S. Raju, Former Director, IIT Delhi, on 5 March 2014.

Faculty Members of the Institute organized six events to facilitate scholarship and networking among the research communities. They are:

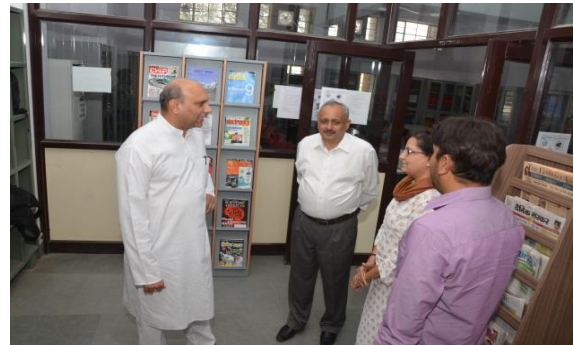
1. International Workshop on “Socio Economic Network System”, 25-27 October 2013;
2. 37<sup>th</sup> National “Systems Conference”, 5-7 December 2013
3. International Meet on “Quantum Correlations and Logic, Language and Set Theory”, 9-14 December 2013;
4. National Conference on “Computer Vision, Pattern Recognition, Image Processing and Graphics”, 18-21 December 2013;
5. International Workshop on “Design of Sub-Systems for Concentrated Solar Power Technologies”, 19-22 December 2013; and
6. Short Course on “Design of Concentrated Solar Thermal Systems”, 16-18 December 2013.



## INSTITUTE EVENTS

### Visit of Union Minister for HRD

The Union Minister for Human Resource Development Sh. M. Pallam Raju visited the Institute on 16 April 2013. He first visited the labs, lecture hall complex and other facilities of the Institute in its transit academic campus. Sh. Pallam Raju, then laid the foundation stone for IIT Jodhpur's permanent campus at Karwad Village on the same day.



## First Convocation of IIT Jodhpur

IIT Jodhpur's first convocation was held on 10 July 2013. Honourable President of India Shri Pranab Mukherjee graced the occasion as the Chief Guest of the ceremony. The ceremony was also attended by Smt. Margaret Alva, Governor of Rajasthan, and Sh. Ashok Gehlot, Chief Minister of Rajasthan. The first two batches of B.Tech. Undergraduate students and the first batch of M.Tech. students received their degrees on this occasion.



The President, on this occasion, also performed the ceremonious tree plantation ritual at the Institute's permanent campus on NH 21 at Karwad Village. The First Convocation ceremony of IIT Jodhpur was attended by many dignitaries from in and around Jodhpur.



## IIT Jodhpur's New Director

Professor C. V. R. Murty has assumed charge as Director of IIT Jodhpur on 11 September 2013. Professor Murty did his B.Tech. in Civil Engineering, M.Tech. in Structural Engineering from IIT Madras and Ph.D. in Civil Engineering from California Institute of Technology, USA. He started his career in 1992 at IIT Delhi. He worked in the Department of Civil Engineering, IIT Kanpur from 1993 to 2010 and also served as Head, Department of Civil Engineering. During 2008-2009, he was associated with IIT Madras as Visiting Professor to start and establish basic academic systems at IIT Hyderabad. He served as Professor at IIT Madras from 2010 till he joined IIT Jodhpur as the Institute's Director.



Professor Murty's primary research interests have been (a) seismic behaviour of steel and reinforced concrete (RC) structures, (b) modelling of nonlinear behaviour of structures and (c) development of seismic design codes. His work is mostly related to the practical aspects of earthquake engineering research and implementation of the same in the design guidelines and building codes of the country. He has supervised six Ph.D. and 28 Masters' theses; currently, he is supervising the Ph.D. Theses work of four Ph.D. students.

He has been associated with major revisions of the Indian seismic codes on seismic design provisions for buildings and bridges; as Member of Bureau of Indian Standards and Indian Roads Congress code committees. He has authored of seven books and one book-chapter on earthquake resistant design and construction; the book IITK-BMTPC *Earthquake Tips Series on Learning Earthquake Resistant Design and Construction* received the ICI Best Construction Technique Paper Award for the year 2004-2005. He was the *Editor-in-Chief*, World Housing Encyclopedia, Earthquake Engineering Research Institute, USA, during October 2005 – July 2008, and is currently its *Editor*.

He was a Principal Author, *National Disaster Management Policy and Guidelines – Earthquakes*; this policy document (approved in April 2007) by the *National Disaster Management Authority (NDMA), Government of India*, is the primary policy document identifying comprehensive action plan items to be undertaken in the march towards seismic safety in India. Also, he is *Member of other Technical Committees of NDMA to develop guidelines for safety against tsunamis, seismic retrofitting of buildings and hospitals, techno-financial policy for banks, and seismic macrozonation of India*. He served as *Honorary Advisor (Earthquake Mitigation)*, Government of National Capital Territory of Delhi, during June 2005 – July 2007. Since May 2013, he is *Member of the*

Tamil Nadu State Disaster Management Authority, Government of Tamil Nadu, Chennai.

He has been Member of Earthquake Reconnaissance Teams which conducted extensive post-earthquake survey after the 2011 Sikkim, 2005 Kashmir, 2004 Sumatra, 2002 Diglipur, 2001 Bhuj, 1999 Chamoli, 1997 Jabalpur and 1993 Killari earthquakes. Some of these studies were also a part of Earthquake Engineering Research Institute's (EERI, USA) *Learning from Earthquakes* project with National Science Foundation (USA). He was the Team Leader of NDMA Post-Earthquake Reconnaissance Team to study effects of the 2011 Sikkim and 2012 Doda Earthquakes. He conducted over 40 short courses in India, Nepal and Bhutan on *Seismic Design of New Buildings* (Reinforced Concrete, Steel and Masonry) of *Bridges*, and *Seismic Evaluation and Strengthening of Existing Structures* and which trained over 2,500 professional engineers and architects, with his colleagues.

He actively steered in Technical Collaborations in Earthquake Engineering Research with two organisations, namely

- (a) the *Central Building Research Institute (CBRI), Roorkee, India* in joint collaboration research projects during 1996-2002; supervised four Masters Theses of students; and
- (b) the *Institute of Engineering (IOE), Tribhuvan University, Katmandu, Nepal* from 1997 in establishing the M.Sc. Research Program in Structural Engineering (laboratory experiments, theses discussions, and External Examiner M.Sc. Theses).

Since 2010, he has been Member of the Technical Advisory Committee on Structural Safety of temples and associated structures under the control of Endowments Department, Government of Andhra Pradesh, 2010-present. Currently, he is Chairman, Study Group on the *Indian Engineering Heritage (Civil)*, of the *Indian National Academy of Engineering*, New Delhi, to develop a white paper on status and future of Civil Engineering Heritage in India, 2010-present.

He is a *Fellow*, Indian National Academy of Engineering; *Fellow*, Institution of Engineers (India); *Life Member*, Indian Society of Earthquake Technology; *Life Member*, Indian Roads Congress; *Associate Member*, Earthquake Engineering Research Institute (USA); *Life Member*, Indian Concrete Institute; *Life Member*, Institute for Steel Development and Growth; *Life Member*, Institution of Engineers (India); *Life Member*, Indian Society for Advancement of Materials and Processing Engineering; and *Life Member*, Indian Archaeological Society.

## National Festivals

### Independence Day Celebrations



The 67<sup>th</sup> Independence Day was celebrated in the Institute on 15 August 2013 with a great spirit of patriotism. The Director, faculty members, staff and students participated in it. The function started at 9.15 am on the morning of August 15 at the Academic campus with the Director, Professor Prem Kumar Kalra hoisting the national flag, followed by the national anthem and Director's address. The students organized various cultural programs like performance of IITJ musical band 'Sangam', recitation of patriotic poems, speeches, dance and street play performance by our students' dance and dramatics club, etc. Prizes were distributed to students who aced in academics and extra-curricular activities. The national festival was also celebrated in the two residential campuses of the Institute.

### Republic Day Celebrations

The 65<sup>th</sup> Republic Day was celebrated in academic and residential campuses of IIT Jodhpur on 26 January 2014. Professor C. V. R. Murty, Director of IIT Jodhpur hoisted the flag in the academic campus at 8.00 am and addressed the members of faculty, staff and students. On this occasion the contribution of faculty and staff members to the institute was recognized. Rakesh Kumar Sharma and Vivek Vijayvargiya were felicitated as 'Best Teachers', while Kshema Prakash and Sharad Srivastava received the award in staff category. Three of our helpers Kanwara Ram, Dungar Ram and Manohar Singh, and J. R. Chouhan, (Guard, MBM College, Jodhpur) were also honoured.



Prof. Mannell E. Zakharia, International Technical Expert in French Embassy in India, who is on a teaching and research assignment at IIT Jodhpur under the Indo-French collaboration arrangement, was also honoured for his contribution to the institute. His areas of expertise are underwater acoustics and sonar signal processing.

Republic Day was also celebrated at the two residential campuses. Flag hoisting ceremony was performed at the BSNL residential campus by the warden, residing faculty and students. Students presented their creative skills at GPRA residential campus.



Ranveer Singh delivered the Students' Body speech. Sharat Chinna and Reena Yadav shared their thoughts about the national festival. While Sangam music club entertained the audience with their musical performance, Avadhesh Kumar Sharma aroused our patriotic sentiments with his recital of patriotic poems in Hindi. Our students' *Nukkad Team* performed a thematic street play "*Bhed Chaal*" displaying the general nature of people to follow a person or a group blindly without giving a logical thought about it. The play had a subtle message for us to think, analyze and understand the consequences of our actions before moving forward in any direction.



## **Initiatives in Establishment & Administration**

### **Recruitments and Reviews**

Before embarking on new recruitments of Faculty and Staff Members, the Institute has developed norms for the processes to be adopted. This has assisted the Institute in its new recruitment cycles. 12 offers to Administrative Staff Members and three to Faculty Members were made this year. Also, the performance was reviewed of seven Administrative Staff Members, 11 Technical Staff Members, five Medical Staff Members and 16 Faculty Members.

### **Administrative Systems and Processes**

Administration is working to promote smooth Governance with emphasis on transparency, accountability, growth-orientation, and informed decision-making structures. Efforts are underway at developing a process-oriented organisation with defined norms and systems to undertake various activities of the Institute. Special attention is given to human aspects in the functioning of the Institute, including adherence to unified mission, vision and core values.



# FACILITIES

## Our Campus

### Present Academic & Residential Campuses



Presently, the Institute functions from a temporary campus at Ratanada, in Jodhpur, Rajasthan. The campus has three blocks, Administrative Block, Academic Block-I, and Academic Block-II. In addition to the major administrative offices of the Institute, a few laboratories are situated in the Administrative Block. In Academic Block-I, the laboratories, Computer Center, and the Library are housed. Academic Block-II has lecture halls, tutorial rooms, language laboratory, and cabins for Ph.D. students. The campus also has a mess facility for students.

The residential areas of IIT Jodhpur are situated on New Pali Road in the outskirts of Jodhpur city, and in Shastri Nagar, which is in city premises. Undergraduate residences are provided in the GPRA Colony on New Pali Road, where the area is divided into student hostels, residential apartments of the employees of the Institute, gymnasium, health center and Office of the Council of Wardens. In addition, the students enjoy facilities for both indoor and outdoor games at this area. A health center also functions in the BSNL Colony residential campus in Shastri Nagar where the postgraduate students are provided hostel facility. Some faculty members also reside here. Round the clock security services keep the residential areas safe and secure. All hostels are Wi-Fi enabled.

The GPRA residential area also has a computer center, television rooms, and student activities center to hosts several events. Moreover, the residential complex also houses several students-run clubs which nurture the creativity of students and initiate the celebration of several festivals. Students are provided with mess facility in these residential areas. The mess offers good quality food at affordable rates. These messes are regularly monitored by wardens to ensure hygiene and nutritional value.



The residential area has a branch of State Bank of India with an ATM counter. The institute has a bus service running between the Residential and Academic areas at regular intervals, exclusively for the students, faculty members, and staff of the Institute. Some shops catering to various needs of the students, two general stores, one medical store, stationery, and a mobile phone accessories store also operate in front of the residential area. The residential area in BSNL colony being in the city premises, has an access to shopping etc., facilities.

#### **Permanent Campus**

In the forthcoming years, the institute will be shifted to its own residential campus near Nagaur in Jodhpur. The government has acquired 872 acres of land for the institute and the construction of the boundary wall is being completed, and so is the 33 KV electric substation. An MoU has been signed with Arid Forest Research Institute for designing and developing an urban forestry model for the institute. The institute has successfully completed the selection of the campus master planner. It is envisioned that the new campus of IIT Jodhpur would stand as a symbol of academic excellence while creating a multi-cultural ethos with centers such as an Eco Village, an Arts and Culture Center and an International Inter-Cultural Activity Center, all of which would contribute to a holistic development of its community.

The Permanent Campus of IIT Jodhpur is envisioned to be a place where our value systems will help us create a real shift. The pursuit of opulence, maintained by ever-increasing resource consumption, will be replaced by the creation of abundance. Less shall do more. We will be symbiotic rather than, and aim for fulfillment rather than blind achievement. In this water starved area on the desert edge, we intend practicing organic and natural urban agriculture to provide seasonal, wholesome, nutritious, organic food. In the longer term, we shall be self-sufficient in water and energy. Plans are on to recycle wastes to produce energy and high value nutrients. Organic farming and chemical and oil free driven vehicles will be encouraged on campus. The use of natural, local building materials, that will enable to build in a fashion that naturally mitigates the heat, with courtyards, externally insulated walls, and buildings in contact with earth, is proposed.

It will be a place without dust, noise or bugs, with adequate health care, sports and education facilities, which will be made available to other communities. With minimum use of energy consuming, processed materials like steel, cement or bricks, and intelligent use of glass, we hope to create sustainable structures. Adopting indigenous wisdom and culture in building, agriculture, biodiversity management, horticulture, healing systems, water and energy management, generating local employment and upgrading skills, we look forward to a meaningful change that the world needs.

The Campus Master Plan of IIT Jodhpur conceptualizes the workings of all parts of the campus as an interlocking, integral network of complex dynamic systems, like the metabolism of a living organism. This meta-system is expected to be not only settlement but also a “Living Laboratory” that is studied and monitored online. This “Smart Intelligent Eco-campus” encompasses ideals of social, economic and environmental sustainability, and integrates aspects of landscape and biodiversity, food, water and waste, solid waste, mobility, energy and ICT to create an intricate life-like system of campus metabolism.



**Campus Master Plan of IIT Jodhpur's Permanent Campus on NH21 at Karwad Village, Nagaur**

## Key Features of the Permanent Campus of IIT Jodhpur

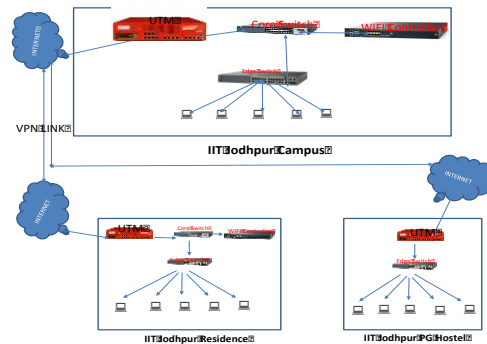
1. *Approach* : Arresting erosion and desertification, building up soil moisture over time
2. *Plants* : Native plant species, soil stabilization, protection from dusty wind
3. *Movement* : Pedestrian oriented and bicycle dominant
4. *Spaces* : Multi-media enabled learning spaces with flexible, shared public spaces
5. *Settlement* : Dense desert settlement morphology, low height *Construction:* Low embodied energy materials with improved local and traditional methods
6. *Buildings* : GRIHA 4/5 star compliant buildings and GRIHA LD benchmark campus
7. *Water* : Rain water harvesting, water reduction and sewage recycling, greening site over time
8. *Wastes* : Segregated wastes and customized recycling
9. *Energy* : Carbon neutral campus harnessing renewable energy
10. *Community* : Extensive planned outreach and community-technology interfaces
11. *Technology* : Learning facilitated anywhere, anytime, with an ICT backbone

## Computer Center

The Computer Center of the Institute connects the academic and residential campuses within the Institute and also with the external world by providing necessary networking and computing facilities. It runs on a gigabit LAN with 1Gbps Internet bandwidth.

### Networking Facilities - The Gigabit Network

1. Gigabit Core switch
2. Gigabit Network edge switch
3. Wireless controller
4. Wireless access points
5. Firewall and web security device
6. Internet access authentication server
7. WPA2 Enterprise security



### Computing Facilities

The Computer Center provides computing facilities for faculty and staff members, and for students to access internal resources, use application software and to access Internet. There are 65 computer terminals in the Computer Center that are running on Windows and GNU/Linux operating systems. The Computer Center provides access to software like Matlab, Mathematica, Cadence, Mentor-Graphic, Ansys, PSCAD, Solidworks, orCad licensed by IIT Jodhpur. A 802.11/b/g/n Wi-Fi is enabled in academic and residential campuses. The Computer Center also hosts a high performance computing cluster for scientific research.



### Servers and Software



The following are the servers and software available in the Computer Center

1. Centralized Servers E7-7540 Processor 2\*6 Core with 32 GB RAM (Dell R810 & 910)- 6 Nodes
2. Centralized application Server E7-8837 processor 4\*10 Core with 128 GB Ram (Fujitsu RX600 S6) – 4 Nodes
3. Workstation E5-2640 processor 2\*6 Core With 64 GB Ram (fujitsu Celsius R920) – 2 Nodes
4. High Performance computing system- 520 cores with 2 Tesala nodes.
5. Software like, Matlab, Mathematica, PSPICE, Mentor-Graphic, Cadence, Ansys, Pscad, CST studio, Solidwork, ProE, and Synopsys etc.

### **Online Application Services (Automation)**

The Office Automation wing of the Computer Center has successfully launched online applications for the Offices of Academics, R&D, Accounts, and Students. Some of them are:

1. Online portal for registration into M.Tech. and Ph.D. programs along with online fee submission facility.
2. Online portal for Academic Section used by faculty members and staff of the Office of Academics to upload grades, semester course registration, and for students to submit course feedback, and to view and print their transcripts.
3. Online portal for R&D Section used by faculty members and staff members of the Office of R&D for processing the online project staff recruitment.
4. Online application for Store & Purchase section to automate their processes.
5. Online portal for recruitment process of staff members along with online application fee submission facility.
6. Centralized authentication server (LDAP)

These features together lead us towards making a **near-zero emission campus**, planned to provide flexible and phased expansion of all the relevant services.



## Library

The Library supports all teaching and research activities of the institute by facilitating acquisition, organization and dissemination of knowledge resources, and also providing library & information services to IIT Jodhpur community at large. It is located on the ground floor in room nos. 1001 and 1011, Academic Block I of the academic campus of IIT Jodhpur. The Library works under the guidance of the Institute's Library Committee.



### Library Collection

1. **Books:** During the year 2013-14, 907 books have been added to the collection, making a total of 11,388 volumes. These include books of text, reference and research nature.
2. **Journals & Databases:** The Library subscribes to scholarly journals/databases from various sources. These resources are accessed by the faculty members and students in the academic and residential campuses of the Institute for their academic and research work. The Library also subscribes to some of the popular magazines and dailies. The following are some of the journal and database resources that were licensed by the Library in the year 2013-14.

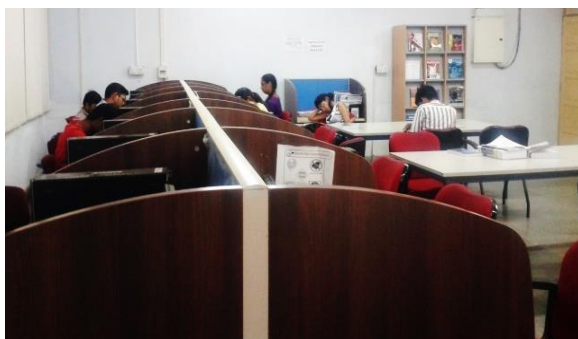
#### Journal resources & Databases

1. ACM Digital Library
2. American Chemical Society
3. American Institute of Physics
4. American Physical Society
5. ASME Digital Library
6. Elsevier's Science Direct
7. IEL Online
8. Royal Society of Chemistry
9. Proceedings of the National Academy of Sciences
10. Project MUSE
11. Science Online
12. Society for Industrial & Applied Mathematics
13. Springer Link
14. JStor



## Services and Facilities

1. **Member Services:** The library provides facilities and services to all registered students, faculties, staff members of IIT Jodhpur. Additionally, the library also provides services and facilities to visiting faculties to IIT Jodhpur. Assistance in locating reading material, orientation to new users is also provided by the Library staff.
2. **Circulation Services:** One of the major services that the library offers is circulation of books and other reading material among the users. All IIT Jodhpur faculty, staff and students are entitled to borrow reading material from library.
3. **Reference & Information Service:** The library houses a number of reference books and also has access to information resources in electronic form. Library staffs are always available for guidance and help with the reference material, and also for answering the related queries.
4. **Inter Library Loan & Document Delivery Service:** Library arranges for borrowing books and scholarly articles that are not available in the library, from other libraries in India.
5. **Course Reserves:** The recommended textbooks by the faculties for different courses are available in the Course Reserves section. These books are for consultation in the library premises against the Identity Card. However, these are issued overnight during the examination period at IIT Jodhpur.
6. **Current Awareness Service:** Information about new arrivals of books and journals is made available on the library- website, catalogue and by way of an email newsletter sent periodically.
7. **Online Catalogue:** The library operations are completely computerized. Online catalogue can be accessed in both academic and residential campuses.
8. **Library Website:** The library website provides information about the services and facilities that can be availed and also acts as a gateway to a range of electronic resources including subscribed and open access. Indent forms for recommending books and journals for library are hosted on the library website.
9. **Digital Library Facility:** The library extension in room no. 1011 serves as the digital library with a facility of 14 computer terminals providing access to various academic resources such as journals, databases.



**Library Networks:** IIT Jodhpur Library is a member of professional library networks like Indian National Digital Library for Engineering, Science & Technology (INDEST), INformation & LIBraries NETwork (INFLIBNET), and DEveloping Libraries NETwork (DELNET). As a member the library benefits in terms of subscriptions of journal resources and inter library loans and resource sharing.

**New Section in Library:** A small reading section for the library users has been developed that will allow them to bring in their own books and do their academic work. It has a modest seating capacity, yet has facilitated the students for their study purpose.



Alongside of providing regular library facilities and services, the library staff members are now engaged in rendering services in preparation of Institute's publications like the Annual Report, Newsletter; and also actively contribute in Institute's activities like Convocation.

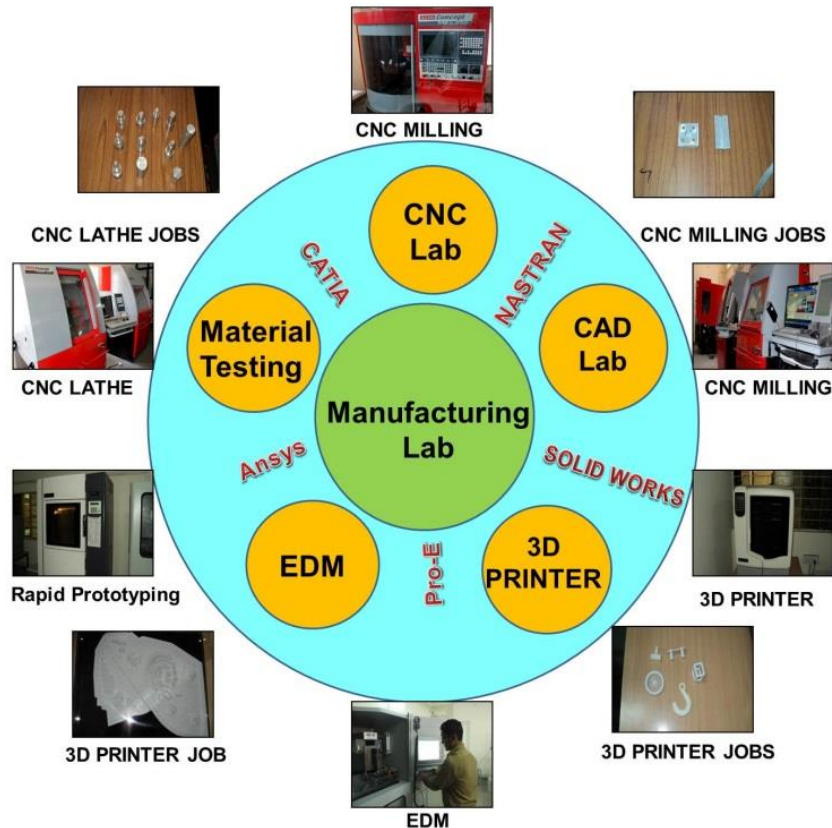
## Laboratories

IIT Jodhpur has established good number of laboratories and research centers that aid in elevating the students from minimalist academic concerns to the inquisitive world of scientific arena. These labs and research centers help the faculty members and students work for better future by supplementing and improving existing technologies and bodies of knowledge, using competence, creativity, and imagination. The following sections describe in detail about the laboratories and equipment in the Institute.

### Advance Manufacturing Laboratory

In the Advance Manufacturing Laboratory, CAD model of object is prepared using 3D modelling softwares like ProE, SolidWorks, Catia. FE analysis is carried out using Analysis software like Ansys, Nastran/Patran and precision manufacturing is carried out using CNC programming/CNC machines and Rapid Prototyping Machine/ 3D Printer. The manufactured components are characterised for mechanical behaviour using UTM, Hardness testers, Impact testers etc. The role of CNC machines in increasing flexibility and precision of the product to be manufactured and, increasing productivity are illustrated. The Advance Manufacturing Laboratory of institute is equipped with following facilities:

1. CAD Section
2. Precision Machining Section
3. Rapid Prototyping Section
4. Mechanical Behaviour Characterisation section



## Central Workshop



Central workshop is the central facility of Institute, consisting of various workshops such as Welding shop, Carpentry shop, Fitting shop, Sheet metal shop, Foundry and Heat treatment shop and Machine shop. Undergraduate Students get hands on experience in above sections by doing the job work and carrying out projects as part of their coursework and also students utilize the facilities for fabrication purpose of their academic projects. It also supports the R&D projects of the institute handled by various faculty members and Ph.D. and M.Tech. thesis work of research scholars by providing them assistance in fabrication of their research set-ups.

The following machines and equipment are available in the Central Workshop:

1. Welding fume extraction down draft table
2. Multi process welding equipment
3. Portable single phase MIG/MAG
4. AC/DC welding equipment
5. MIG/MAG welding equipment
6. Treadle operated shearing Machine
7. Hand operated Folding Machine
8. Kaizen Muffle Furnace
9. Hand operated Jeeny or Burying Machine
10. Motorized Circle cutting Machine
11. Hand operated Circle cutting Machine
12. Hydraulic shearing Machine
13. Portable Heating Plant
14. Portable hardening plant



15. Forging Heating Plant
16. Aluminium Melting Plant
17. Fitting Table
18. Mould Making Facility
19. Portable Tool Grinder



### **Electro Mechanical Energy Conversion Laboratory**

In order to familiarize students to Electrical Machines properties & characteristics, IIT Jodhpur has established “Electro Mechanical Energy Conversion Laboratory” and has continually been developing the potential of its lab facility. In this lab, state-of-the-art “Electrical Engineering” facilitates the students to empower their potential by familiarizing themselves with the fundamental of electro-mechanical energy conversion process, including several practical & industrial applications of machines in true applicable environment. This lab occupies conventional as well as modern equipment to fulfil the basic and modern technological requirements with continual developing efforts.

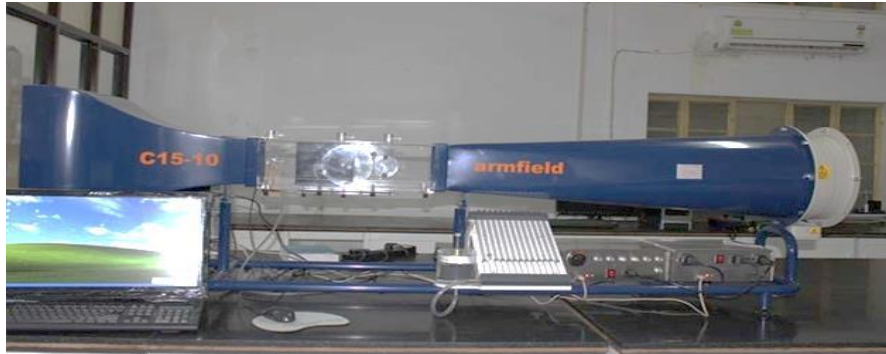


## Fluid Mechanics and Heat Transfer Laboratory

At Fluid Mechanics Laboratory students learn about the following:

1. Analyses and evaluation of experimental data
2. Comparison between theoretical models and experimental data
3. How to design a fluid mechanical and heat transfer system e.g. a piping system considering various technical aspects, heat exchanger, thermal energy storage, receiver, wind catcher, volumetric air receiver.

In addition to the above, this laboratory aims at generating innovative ideas in students by promoting the design of experiments and small scale projects. At present in the fluid mechanics laboratory are conducted experiments on losses in pipes (smooth/rough) and fittings (e.g. valves, bends), comparison between different flow meters, particle image velocimetry technique, Hot-wire anemometer, lab-scale sub-sonic wind tunnel for pressure distribution around a cylinder/air-foil, lift and drag balance, boundary layer development, weather monitoring. Furthermore the lab provides training on standard software, such as, CFAST for fire simulation.



Currently the Heat Transfer Laboratory is equipped with the demonstration of various thermometry techniques, heat exchange system, ventilation system, Natural and forced convection system, heat conduction unit for different materials, lab and industrial-scale solar water heater system, and thermal radiation unit. All these equipment are installed with respective software.

For testing, calibration and research purpose in these laboratories, various equipment such as Laser Doppler Velocimeter with Particle Analyzer, pressure and temperature calibration, blower with variable flow, pressure transducers, differential pressure transducers, turbine test rig, turbo-machine test rig, IC engine test rig etc., have been procured.

Moreover, multi-purpose test set up is being indigenously designed and the components / sub-systems involved are being fabricated locally. This system aims at investigation and evaluation of solar thermal sub-systems such as volumetric air receiver, thermal energy storage, air-water heat exchange systems and their simultaneous operation. Devices such as earth air heat exchange system, wind catcher, and air-cooled heat exchange systems are being fabricated and tested for certain applications.

## Control / DSP / Microprocessor Laboratory



The lab provides software and hardware infrastructure for carrying out experiments in the field of Control Systems, Microprocessor and DSP. Broadly, the lab includes the following experimental setup:

### a. Control Systems

1. Ball & Beam System from Quanser
2. Magnetic Levitation System from Quanser
3. Inverted Pendulum System from Quanser
4. Softwares include Scilab / Matlab

### b. DSP Lab Equipment

### c. Microprocessor Lab

## Electronic Circuit Laboratory



In this laboratory the students make and test their analog and digital circuits by using all kinds of circuit components like diode, transistor, op-amps, and clocks. The lab has following equipment:

1. Arbitrary Function Generator from Agilent
2. Digital Oscilloscope from Agilent
3. Programmable Power Supply from Scientific
4. 6 1/2 BIT DMM from Agilent



### Power Electronics Laboratory

The power electronics laboratory is used for undergraduate studies and research in the area of power electronics based power conversion systems, control systems and drives. The laboratory facilitates for faculty and students to conduct research in the areas power converters and AC/DC micro-grid. The laboratory is equipped with state-of-art test and measurement instruments, converters, power supplies and programming boards. Major equipment available in this lab are:

1. High Precision power Analyzer –YOKOGAWA WT3000.
2. DSO- Tektronix 200MHz (DPO 2024) and 1GHz (DPO 4104B).
3. Function Generator-Tektronix AFG 3021B.
4. Power Supply: 0-30V, 1A; 0-32V, 3A; 0-32, 10A.
5. Three phase inverter drive.
6. Three phase inverter stacks.
7. DC-DC converters.
8. Differential currents Probes.
9. Current clamps.
10. Isolation Transformers.
11. FPGA training kits and programming boards.



### Robotics Laboratory

IIT Jodhpur has an advanced robotics laboratory for PG/UG education and research. The infrastructure includes the following:

1. Vicon Motion Tracking System
2. Mobile Manipulator comprising of Barret WAM ARM mounted on a PowerBot Mobile robot platform
3. Pioneer P3-DX mobile robots - 10 units
4. Turtlebot
5. Wheel Chair
6. Force Plate
7. Infrastructure for Mobile Robotics - Navigation, Path-planning, SLAM
8. Dynamic and Kinematic Control problem, Redundancy Resolution, Inverse Kinematics of Manipulators and Mobile Manipulators, Visual Servoing
9. GAIT Analysis and Robot Assisted Rehabilitation



### Instrumentation and Communication Laboratory

The mission of Instrumentation and Communication Laboratory is to provide platform for UG and PG students on research and hands-on learning in Measurement and Automation Technology. The state-of-the-art facilities at this laboratory offer innovative research opportunities in the astronomical space of communication and real time measurement technology. The experienced Lab team nurtures students' talent in research and offers an opportunity for developing sophisticated measurement, test, control systems, data analysis system and next generation communication technologies.



Students also develop theoretical and practical competence in (i) building baseband communication circuits, (ii) the application of NI LabVIEW graphical programming software, (iii) the PXI based NI RF/Wireless measurement stand, (iv) evaluating NI WSNs and LabVIEW software, adjusting a software-defined radio system, measuring the parameters of studied antennas and (v) the operation of analog modulation schemes. NI-Lab contains software and hardware subsystems which enable rapid prototyping and development of embedded systems for various applications. Currently, this lab constitutes the following setups:

1. NI ELVIS based Communication Systems and Theory Teaching Stand
2. Large MIMO Stand for Spectral, Channel Efficiency Studies and New Standard Development
3. Protocols Stand for WLAN, WiMAX, GPS, RFID, Zigbee, GSM, CDMA, WCDMA, Bluetooth
4. FPGA-enabled Software Defined Radio Stand for Custom Communication Scheme Development and Research
5. Basic Analog and Digital Communication Techniques Teaching Stand
6. Wireless Sensor Networks Stand
7. Signal Intelligence and Wireless Spectral Monitoring Stand
8. Wireless Prototype Characterization and Testing Stand
9. FPGA based protocol development for base-band studies and signal processing
10. VNA based Antenna Characterization Stand
11. Fiber Optic Communication Stands
12. Network Based Manufacturing
13. USRP (Universal Software Radio Peripheral) based wireless communication system for physical layer design, record and playback, signal intelligence, algorithm validation and more.
14. Network Communication and Manufacturing Control Stand

After three years of its formation, this lab has contributed immensely to the learning and research activities at IIT Jodhpur. Communications and Networking Lab, Intelligent Instrumentation, System Analysis Techniques and Bio-Sensors courses are being offered through this lab for both graduate and undergraduate students. The lab has provided the right hardware and software tools for many industrial consultancy projects, including the development of DRM/DRM+ IP for digital radio standards, Link budget design for Marine environment, DRFM based Radar echo simulator and Blind Signal Demodulator. Other projects being done in the lab are development of affordable wireless video transmission systems, cognitive radio and Zigbee protocol development.

### **Networking Technologies Laboratory**

Networking Technologies Laboratory has been started functioning in the Academic Year 2011-2012. It aims at enabling undergraduate and graduate students, who pursue their interest in the area of computer networks, to understand the concepts of computer networks and work with contemporary networking equipment in a realistic setting. In addition, the lab aims at providing necessary infrastructure to carry out research activities on advanced topics, such as wireless mesh networks, sensor networks, communication on power lines, from computer networks. The activities that take place in this laboratory are:

1. Prototyping of networking hardware (Example, Ethernet switch, IPV4 router etc.) using NetFPGA.
2. Developing packet processors using “Click router” modular software framework.
3. Establishing infrastructure for the mini-Internet, single-hop wireless networks, multi-hop wireless mesh and sensor networks, power line communication networks, home phone line networks.
4. Studies related to the performance analysis of various protocols over on different network configurations.
5. Development of novel routing algorithms, transport layer mechanisms, and services for next generation networks.
6. Setting up planet-lab infrastructure (which will essentially become part of the global distributed computing platform created over the Internet by connecting over 500+ sites). This allows the students and researchers not only to understand the traffic patterns on the Internet but also to develop new technologies/applications on the Internet for distributed storage, networking mapping, peer-to-peer systems, content distribution service, and cloud computing.

### **Multimedia Laboratory**

The Media Laboratory provides facilities to carry out work related to E-learning, image processing, and computer vision. The thrust areas of research in this lab are: Semantic analysis of video/image content, video surveillance, human motion analysis, document image analysis, content based image retrieval etc. E-learning related activities include video recording, audio-video digitization, video editing, etc. In the academic year 2011-2012, a research on Indian sign language recognition using Kinect has been initiated.

#### **Equipment:**

1. Scanners: Book Drive Mini, UMAX Powerlook.
2. Cameras: Sony 177PD, Sony Camcorder, Cannon 500D VCR: Sony DSR 45AP
3. Tripods: Manfrotto, iMac.

## Renewable Energy Laboratory

To resolve most daunting challenge of this world—energy needs—and also our nation’s heavy reliance on fossil fuels, Renewable Energy Laboratory (REL) promotes rigorous and objective empirical research at IIT Jodhpur on issues related to energy and environment. REL focuses on designing, testing, and disseminating renewable and efficient energy system. The mission of REL is to help these technologies to



realize their full potential to contribute to environmentally sustainable development in industrial and developing countries. In the renewable energy field, expert faculty and students at this Laboratory are currently striving to create an innovative system to efficiently harness energy from sunlight and wind power. Recently, a work on solar and wind system for household development has been planned and our research effort at REL draws on ongoing work in variety of fields, including energy engineering, and environmental risk analysis. REL has computer interfaced systems and approximately 30 students can work at a time. Students are the greatest resource of REL and IIT Jodhpur has made substantial commitment to the area of renewable energy and been providing all required resources to execute a viable plan and innovative research at REL. One aspect of the evolution of REL is the development of collaborative partnership with other academic and industrial groups. In the near future, it will be a hub for training and public-private sector collaboration. Recently, the lab has started a consultancy project, with Panasonic R & D India Pvt. Ltd., on the prototyping of microbial fuel cells. In addition, the lab has started work on data collection, interpretation, and analysis of PV power plants less than 5 MW in Rajasthan and Gujarat.

The Renewable Energy Laboratory uses the following equipment:

1. Wind power of 2KW Charge controller ~12V, Synchronous generator with permanent magnets ~12V, Lamp board ~12V, Off grid inverter etc.
2. PEM Fuel cell Fuel cell with DC converter, Electronic load, Metal hydride storage cell, Electrolyser, 200W/20V/10A.
3. Advanced Photovoltaics Solar module simulation model 23V/2A, Solar module with solar altitude emulator, Solar charge controller 12/24V, 6A, Solar accumulator 12V, 7Ah, Off grid inverter 230V, 275VA etc.
4. Combined RF/DC Sputtering Unit for Coatings Applications

### **Solar Radiation Laboratory**

The Ministry of New and Renewable Energy (MNRE) has selected the IIT Jodhpur campus site as one of their solar radiation centers. Solar radiation measurement (Global and Direct), Humidity, Ambient temperature, Rain gauge and wind speed measurement are carried out at this center and the data is transmitted via a satellite link to the MNRE nodal center C-WET in Chennai. The instruments in this laboratory are powered by a couple of solar panels. The data collected from this center enables the solar resource assessment required for the setting up of solar thermal and solar photovoltaic power plants as outlined in the Jawaharlal Nehru National Solar Mission (JNNSM).



### **High Temperature Solar Thermal Laboratory**

Six laboratories are being set-up under the MNRE funded project entitled as “Establishment of Center of Excellence in Solar Thermal Research and Education at IIT Jodhpur”. High Temperature Solar Thermal Laboratory is one of these specialized laboratories. The aim of this laboratory is:

1. Fundamental aspects of fluid flow and heat transfer related problems, like, dust deposition
2. Design and analysis of sub-systems for concentrated solar thermal systems

Some of the sub-systems being designed and analyzed in this laboratory are:

- (a) Open Volumetric Air Receiver for process heat applications
- (b) Compact heat exchanger
- (c) Solar Convective Furnace

This laboratory includes test facility, such as, Solar Air Tower Simulator (SATS) facility, advanced research grade equipment like Laser Doppler Velocimetry. SATS facility includes, open volumetric air receiver, thermal energy storage, air-water heat exchanger and is being extended with solar convective furnace.



### **Microscopy Laboratory**

The Microscopy Laboratory at IIT Jodhpur is located in Academic block 1, Room Number 1107. This burgeoning laboratory is committed to procuring all specific Equipment and is about to gain the level of state-of-the-art laboratories at IIT Jodhpur. Experienced faculty nurtures students' enthusiasm about the morphological analysis of biological samples and also assists them to operate scientific instruments. Currently, this laboratory houses different microscopes and a number of common pieces of sample preparation equipment.



### **Biosciences and Neuroscience laboratory**



The Advanced Biosciences and Neuroscience laboratory is a part of the center of excellence in biologically inspired systems science (BISS). The goal of this laboratory is to provide cellular and molecular investigative tools for UG and PG teaching and research in neuroscience. We utilize cell culture studies along with molecular biology, biochemistry and microscopy approaches to elucidate the molecular mechanisms underlying

molecular and cellular interactions underlying inflammation and repair. Inflammation is a key component of many diseases including traumatic brain injury, cancer, multiple sclerosis, stroke, asthma, Parkinson's disease and Alzheimer's disease. Inflammation is characterized by accumulation and proliferation of innate immune cells. This is followed by clearance of dead cells and cellular debris along with enhanced expression of molecular mediators called cytokines and chemokines, which cause migration and proliferation of immune cells and may even lead to cell death. Understanding the mechanisms by which inflammation occurs, and the molecular mediators involved in this process, is necessary for identification of potential therapeutic targets.

### **Biomolecular Information Processing laboratory**

This laboratory is involved in the understanding of information processing by various kinds of biomolecules and related synthetic molecules. The process involves in using a single molecule first and then a group of molecule on a given interface. The interaction among the molecules in a given external stimuli will help us understanding the communication among them.



### **Chemical Biology Laboratory**

The Chemical Biology Laboratory deploys cellular and molecular biology approaches to explore the pathogenesis of cancer and other neurodegenerative diseases. Given the interest in neuronal death, it is no wonder that this lab team is interested in E3 ubiquitin ligases essential for quality control events in neuronal survival. Protein ubiquitylation is highly versatile, ordered, the multistep post translation modification enzymatic process that regulates numerous aspects of cell physiology. This lab team has been studying the role of such E3 ligases to find out the role of quality control E3 ubiquitin ligases in maintenance of proteostasis and hence playing a role in cellular survival and death. Such important biochemical findings may contribute to innovative therapeutic approaches for the diseases associated with misfolded proteins.

Organisms at the cellular level possess a well-established protein quality control mechanism which the lab team is trying to understand at present. The role of E3 ubiquitin ligases was reported in such mechanisms so far. Our laboratory is dedicated to a qualitative research in the field of protein quality control mechanisms. We have

recently found that a HECT domain containing E3 ubiquitin ligase E6-AP helps in Amyotrophic Lateral Sclerosis diseases suppression through its association with the misfolded protein aggregates formed by SOD1 mutants. Such findings support that an E3 ligase can have a capability to clear the misfolded protein aggregation. However, while appreciating the incredible efficiency of cellular systems, we must recognize the crucial role of chaperones which are supposed to work preferentially compared to E3 ubiquitin ligases in order to refold the misfolded proteins, and hence conserving the energy utilized during the translation of those proteins. Various examples made us think that we could explore the role of both the chaperones and E3 ubiquitin ligases in the clearance of misfolded proteins. Therefore, now we are working not only with E3 ubiquitin ligases but also with the chaperones and even in their functional association to confer an efficient quality control mechanism to the cell.

### **Chemistry Laboratory**

The core objective of the chemistry laboratory of IIT Jodhpur is to train students in scientific methods that would solve real problems at the frontier of our understanding of the matter. This is a multi-use laboratory and provides a number of resources to assist undergraduate, graduate and Ph.D. students in planning their professional careers after completing their academic program at IIT Jodhpur.



This laboratory maintains a broad spectrum of state-of-the-art instrumentation including basic laboratory set up (for organic, inorganic, organometallic and material synthesis), Nitrogen, Oxygen and LPG gas line, Inert atmosphere boxes, vacuum line work, fume hood pH, conductivity, BOD, COD, meters, Rotary evaporator, Vacuum pumps, centrifuges, High pressure reactor system, Chiller, microbalances, Orbital Shaker, GC, HPLC and Radleys ready reactor. In the academic year 2012-2013, the lab procured equipments such as Polarimeter, Melting point Instrument, Solar Simulator, Digital Titrator, Kugalrohr, Electrochemical work stations, and Battery analysers.

A 500 MHz NMR spectrometer with solid state probe is an essential resource, whose mission is to make a state-of-the-art high field NMR and methods available to researchers, providing a place for them to pursue their projects and develop new methodologies in NMR methods.





### Physics Laboratory

The mission of the Physics laboratory at IIT Jodhpur is to provide students with experiential knowledge in basic physics. This laboratory has state-of-the-art facilities including specific equipment and is currently offering different experiments in Mechanics, Waves, Electricity, Magnetism, and Optics. Now the lab has facilities for experimenting with Speed of Light, Zeeman Effect, and Michelson Interferometer.



### **Material Testing and Solid Mechanics Laboratory**

The material testing lab of the institute provides facilities to test samples of different types of materials to find out their mechanical properties like modulus of elasticity, tensile and compressive strength, stress strain curve, bending properties, hardness etc. The lab is equipped with following test equipment:

1. Universal testing Machine 5-50 kN
2. Rockwell Tester
3. Brinell Tester
4. Vickers Tester
5. Poldi Hardness Tester
6. Portable hardness tester
7. Material Testing and Solid Mechanics

### **Materials Analysis Laboratory**



The research focuses on the development of novel materials for different applications including materials for energy generation and storage. The current work includes the development of solution processable CIGS compound semiconductor materials for solar cell applications and transition metal oxide based materials for lithium ion batteries and supercapacitor applications. The laboratory is equipped with synthesis of bulk and thin films techniques such as sputtering, sol-gel process assembly etc., and numerous characterization techniques such as X-ray diffraction, Scanning electron microscope, Optical spectroscopic techniques, LCR meter, ferroic measurement system for bulk samples etc.

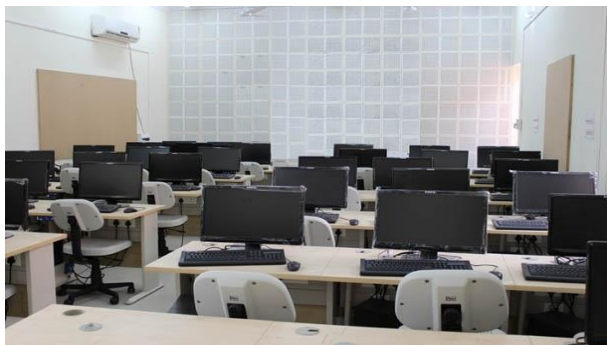
In addition, the group is also focusing on the development of multifunctional materials for different applications such as solar selective coatings, ferroic materials for high frequency absorbing system, and magnetic particles for different applications. The laboratory is equipped with state-of-the-art facilities to carry out thermal analysis, electrochemical analysis, surface morphology studies, separation techniques for chemicals, electrical conductivity measurement devices, glove box etc.

### **Magnetic Property Measurement System (MPMS/SQUID)**

IIT Jodhpur has created an excellent facility in the field of material characterization. Recently an additional dimension has been added to it by procuring magnetic property measurement system (MPMS). MPMS (SQUID) is getting installed in coming few months. This will provide a wide temperature 2 K – 1000 K range for both DC and AC magnetic measurements in conjunction with field dependent magnetic measurements. Such measurements will help to understand magnetic properties and associated spin dynamics in magnetic materials.

### **Digital Language Laboratory**

The Digital Language Laboratory provides resources, facility, and support for foreign language instruction and learning to the entire student community of IIT Jodhpur. The lab is the multilingual computing and assessment center of the Institute. The lab team explores and implements methods through which multimedia technology renders a more



authentic experience to learning a foreign language. Here, for language learning purposes one could seek recourse to technologies like the Internet and interactive video, audiovisual techniques, multi-modal iconic approach, and speech recognition. The exercises include listening and comprehension, grammar-based exercises, placement solutions, and mastery tests. The main features of this facility include Smart Class Symposium LL from Robotel and New Dynamic English Learning Program from Dyned International. All the facilities at the Digital Language Laboratory are proficiency-oriented, standard-based, and nurture the students' enthusiasm for gaining global exposure and proficiency in a foreign language.

## **Health Center**

IIT Jodhpur provides round the clock health care facilities to students, faculty and staff members of the Institute at its residential campuses. The Health Center has three doctors and four supporting staff members. The Institute also has tied-up with some hospitals in Jodhpur city to cater to the medical needs of its students and employees. The Health Center at the residential areas has all the necessary infrastructure, facilities, and equipment needed for basic health care. Essential medicines are stocked and provided to patients under treatment. An ECG machine has also been procured.

The Health Center coordinates and supervises the treatment of students, employees, and their dependents during hospitalization in other hospitals that are accredited to the institute, to provide in-patient care. The Health Center has an ambulance of its own for attending to any medical emergencies.

On request, the Health Center extends its health care services to Institute visitors during their stay in the residential campus. Under emergency circumstances medical services are also extended to the non-IIT Jodhpur community residents at the campus. Details like patient records, medicine procurement/disbursement, assets, equipment of Health Center are all computerized.

## **Sports Facilities**

Sports and games facilities to students are provided at four places, namely, the hostel premises, academic campus, playground of Vidhyashram International School, and in the new campus area of Jai Narayan Vyas University. Conveyance is taken care of by the Office of Logistics in the Institute. Students also enjoy a gymnasium facility at the residential campus.

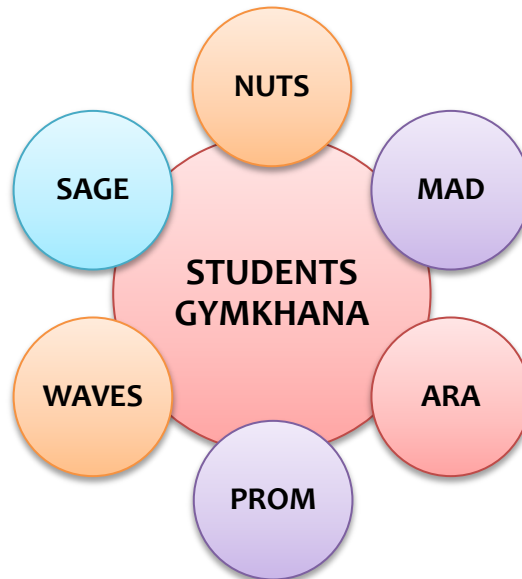
## **SC/ST Cell**

An SC/ST and OBC Cell for ensuring the proper utilization and adaptation of reservation policies and guidelines issued by the Government of India, is functional at IIT Jodhpur. The Cell deals with matters related to grievances received from SC/ST and OBC employees and students in the Institute. The Cell acts as a communicator between the Institute and the Ministry of Human Resource Development in matters related to SC/ST and OBC students and employees in the Institute. IIT Jodhpur has adopted the reservation policy while selecting the students for MCM scholarship. In addition, a substantial number of SC students whose total family income is limited to Rs. 4.50 lakhs per annum, are deriving the benefit of Central Sector Scholarship of Top Class Education available from the Ministry of Social Justice and Empowerment.

## STUDENT ACTIVITIES

### Students Gymkhana

The “Student Gymkhana” is divided into six wings called “Councils”. Each council is divided into several clubs. These wings fulfil the varied interests of the students and contribute to their holistic development.



#### 1. Academic and Research Affairs (ARA)

The Academic and Research Affairs Council (ARA) is the council under Student Gymkhana which will act as a platform for all activities regarding Research & Academics. The purpose of council is to encourage research & academic activities in Institute on students’ court, and to make sure of effective student recognition and involvement in the decisions regarding the same. The role of the council will further extend to promote and advance research within the Institute. This year, the Academic & Research Affairs Council plans to organize various lectures of eminent personalities and notable research scholars to aid in this process.

#### Mission

The mission of the Academic and Research Affairs council is:

1. To serve as a platform for students to undertake research projects under professors and to create an environment of cognizance in the student community pertaining to the real-life problems and help them to procure their research needs;
2. To strengthen Student-Faculty relationship and take them beyond only formal talks, to explore the intricacies in their research and come up with novel solutions;
3. To organize various technical meets and seminars to expose students to the recent discoveries and technological advancements and the innumerable opportunities that they can pursue.

## **Functions and Responsibilities**

The functions and responsibilities of the Academic and Research Affairs council are:

1. To effectively represent the views of the students' community on academic and research matters.
2. To help individual students tackle their specific academic problems and take up their problems to respective authorities.
3. To coordinate with the functioning of all centralized facilities of academic domain such as Computer Centre, Library and Reading Room amongst others.
4. To take views and opinions on the revision of academic curriculum, reform policies and initiate academic and research programs based on these suggestions.

### **2. Media, Arts, and Design (MAD)**

Creativity is more than just being different. Anybody can plan being weird; that's easy. What's hard is to be simple. Making the simple, awesomely simple, that's creativity. The council makes people develop their imagination, their talent; teaching them the advancement in technology to enhance their knowledge in their field of interest. The council has its independent activities, workshops and competitions under the following areas of interest:

#### **(a) Animatrons (The Animation Club)**

The club teaches students to bring the animator out of them via workshops by professionals and its own team. With the blend of Stop Motion Animation and Software Animation, the club moves towards paper animation, 2D and 3D graphics animation, pixilation, flash light animation.

#### **(b) Ateliers (The Fine Arts Club)**

To play with colours is the passion of this club. Training is imparted to students via workshops and competitions in fine or decorative arts. We organize a lot of activities of interest like painting, sketching, glass etching, face and T-shirt Painting, wax carving, graffiti workshops etc. This club gives shape to various festivals of IIT Jodhpur.

#### **(c) Designerds (The Designing Club)**

The club designs logos, posters, newsletters, T-shirts etc. The club has given some of the best designers who can train with software like Adobe Photoshop, Indesign and Illustrator. The club members excel in graphic designing which promotes thoughts and imagination. The club has also won competitions in Mood Indigo – IIT Bombay.

#### **(d) Frame-X (The Film Making and Video Editing Club)**

The club makes videos, record and edits them. The club, constantly and actively, takes part in various Inter College Fests presenting short films or documentaries which have gained popularity. The club members use the most sophisticated HandyCams, GoPro cameras dealing with software like Windows Movie Maker, Sony Vegas and Adobe After Effects.

**(e) Porta Talkies (The Movie Screening Club)**

The club is responsible for screening of movies, matches and on demand talks.

**(f) Shutterbugs (The Photography and Photo-Editing Club)**

The club consistently holds its workshops on Photoshop and provides hands on experience on technically sound semipro DSLR Cameras. The club holds responsibility of all media coverage of IITJ.



**3. Nurturing Understanding Technology and Science (NUTS)**

With the thought “Imagination is more important than knowledge”, the Science and Technology Council (NUTS) of IIT Jodhpur provides students an opportunity to think beyond the conventional boundaries of science, to realize their dreams and develop the technology for the next generation.

**(a) Aeromodelling Club**

The Aeromodelling Club is a group for aviation and Aeromodelling enthusiasts in the institute. The club provides students an opportunity to make rockets, gliders, planes, hovercrafts and fly them up in the air. The activities of the club include lectures and workshops on various Aeromodelling and aviation topics and working on small projects.

**(b) Automobile Club**

The club promotes students to design and make their own car. The club has developed an eco-friendly manual cum electric driven vehicle. The club is associated with an international body, Society of Automotive Engineers (SAE) and keeps on participating in their national level competition such as Baja and Effi Cycle.

**(c) Astronomy Club**

The club organizes regular lectures and discussions to help students develop a better understanding of those astronomy phenomenon in nature. The club made a record at the Inter IIT Tech Meet 2014 by detecting 72 objects in the overnight observatory competition “The Messier Marathon”.

**(d) Electronics Club**

The club makes students familiar with electronic circuits, and teaches them skills like working on mini computers such as beagle bone, Raspberry pie etc. The club also makes students familiar with analog as well as digital electronics through various lectures and competitions organized throughout the year.

**(e) Robotics Club**

The club conducts regular lectures and workshops to provide students a hand on experience on technologies such as DTMF, image processing, motion sensing etc. The club today is an active platform for students to display and develop their practical machine building skills and knowledge.

**(f) Programming and Web Designing Club**

With regular lectures, competitions and winter coding camp, the Club provides students a chance to learn from people around them and improve their coding skills. Students get a chance to sit with a group of like-minded people and prepare for various national and international level coding competitions.

**(g) Science Club**

The club provides students an opportunity to solve the Rubik's Cube, make their own angry bird station, and play with air gun, Rube Goldberg etc. The activities of this club tests students' imagination skills and help to improve it.

**4. Promotions, Relations, Occasions, Management (PROM)**

The council deals with all matters regarding public relations and management of the various activities of all the councils that take place in the institute. It helps in enhancing one's personality, management skills, public speaking, writing and coordination with colleagues, which leads to an overall development in him/her. The following are the cells under PROM:

**(a) Promotions Cell**

The Cell writes content as well as reports for various Intra and Inter collegiate fests, special events and seminars that are held throughout the year. It also coordinates for the content to be published in local media.

**(b) Public Speaking and Personality Development Cell**

Public speaking is one very important aspect which shows the personality of an individual. The cell organizes sessions to hone public speaking skills, increase confidence levels and makes students proficient in Public Speaking.

**(c) Entrepreneurship Cell**

The cell collaborates with the E-cells of other institutes and conducts various seminars and useful activities related to entrepreneurship.



**(d) Resource Management Cell**

The main work of this cell is to manage resources during various inter and intra-level activities efficiently.

**(e) Finance and Case-Studies Cell**

Many individuals are faced with investing and financing decisions in some point in their life. Having a firm grasp over finance aids them in making those decisions. The cell helps students undertake Case Studies which helps to see how the complexities of real life situations influence decision making.

**(f) Leadership Enhancement and All-round Development (LEAD)**

This is an initiative by P.R.O.M. which aims at enhancing the overall personality and soft skills of the students, and prepares them for the professional world. Workshops organized by professionals skilled in personality grooming, resume writing, personal interview etc. are conducted. Group discussions, mock interviews and public-speaking sessions are conducted to train students for interviews and help in their personality development. Students get a real-world exposure, while getting expert guidance not only from professionals, but also senior mentors.

**5. Sports, Adventures, Games and Explorations (SAGE)**

Sports are known for producing the most remarkable athletes, colourful characters, influential leaders and memorable heroes. IIT Jodhpur Sports and Games council reflects the same spirit of introducing sporting activities to the campus community. This council aims to promote sports and exercise in the true spirit of sportsmanship and motivate students to work with team spirit. The Council strives and endeavours to inculcate and introduce this essential activity as a part of the routine in every student's life. All efforts are made to bring out and encourage the sports person in each one under the guidance of professional coaches and with best sporting facility.

Individuals can be strong on their own but they are much stronger in a team. Victory achieved alone can be sweet but there is nothing sweeter than sharing that moment with fellow members. One of the rare times in life one learns to play with his friends and some of his enemies and yet respect each one of them for the innate respect of the sport. That is the essence of introducing sports in a student's life to instill the qualities of vigour, sacrifice and overall sportsman spirit. The council organizes the Institute team that participates in Inter IIT Sports Meet held annually at any one of the IITs. Inter-IIT Championship title is much coveted in the whole IITJ family. It is the place where every sports student is given the opportunity to showcase his/her talent in respective sports and to wear the jersey and run around the grounds representing the glorified history of respective IITs along with the responsibility to continue the legacy. Every Inter IIT player has this unique urge to win the game for the pride and the honour of the institute, for the blood, and the tears and the sweat to make a team and to earn the spot.

The institute has representation in the sports like Aquatics, Athletics, Badminton, Basketball, Cricket, Football, Lawn tennis Squash, Table tennis, Volleyball, Weightlifting at Inter IIT Sports Meet.

The Institute has many sporting events lined up throughout the year which act as a platform to showcase your talent and to keep the adrenaline levels racing. Every year the council organizes an Intra Institute Sports Festival called “KRIDANSH”. This sports fest is designed to attract mass participation. It sees the best sporting talents in the institute pitted against each other to fight for the glory of their respective branches. It has games like tug of wars, Kho-Kho and Kabaddi along with regulars.

In addition to sports, the council arranges several adventure tours and coordinates the carrom club, the chess club, the skating club and yoga club and the joggers club.



## 6. Writing, Awareness, Vocals, Entertainment, Social (WAVES)

WAVES is the fountainhead of all cultural activities in the institute. It provides students opportunities to pursue their passion for performing arts and in honing their aesthetic sensibilities. Under WAVES there are five clubs, which function throughout the year.

### (a) Dance Club

The Dance Club organises activities ranging from Intra Institute to Inter Collegiate events with a special emphasis on workshops on different dance forms. The team, with name '**dEFEATtHEbEAT**', has participated in different college festivals across country including Chaos (IIM-A) and Mood Indigo (IIT-B) and has also been selected in Indian Hip Hop Dance championship auditions.

### (b) Music Club

The Music Club is all about passion and the platform you need to showcase them. Spanning from the students' band performances for freshers, to the live stages of college festivals, Music Club brings opportunities for all the interested students. The major highlights include Unplugged Nights and the Musical Extravaganza. Apart from these, music learning sessions are conducted for the beginners.

**(c) Quiz Club**

The main aim of Club is to generate interest in quizzing as a fun activity that everyone can indulge in and at the same time gain some handful amount of knowledge. The club organizes interesting Quiz contests/sessions throughout the year to expose students to the artistic world of Quizzing and provide a platform to contest at several national and intra-collegiate quizzes.

**(d) Drama Club**

The dramatics club of IIT Jodhpur “DRAMEBAAZ” performs a variety of plays which are both didactic and simultaneously entertaining. *Nukkad* performance is the highlight of the Republic and Independence Day celebration in the institute and is quite applauded by the audience, leaving them awestruck every time. It also performs stage plays.

**(e) Literature Club**

The club works on the vision to explore a whole new world of books, *belles-letters* and the magic of words. The club is not all about writing, it also includes all fun events like Jam, Shout, Hurdles, Debates etc. and language is no bar, we have both Hindi and English Literature Clubs.

**(f) SPIC MACAY**

The **Society for the Promotion of Indian Classical Music And Culture Amongst Youth** (SPIC MACAY) is a society that helps protect and popularize our rich Indian heritage. SPIC MACAY IIT Jodhpur chapter was formalized in the year 2012.



## Student Fests

The students were successful in nurturing a culture filled with energy and initiative. They have organized events which served as a medium of communication and bonding amongst themselves. Major festivals like Ganesh Chaturthi, Diwali, Sankranti, Eid and Holi were celebrated with great enthusiasm. Sports activities were also regularly conducted to encourage sportsmanship which were supported by the faculty members. The following are some of the major student activities that had taken place in the campus in the year 2013-14.

### VARCHAS



Varchas is the sports fest of IIT Jodhpur. It celebrates the spirit of sportsmanship and serves as a platform to showcase countless hours of perspiration put in by college teams to achieve excellence in sports. Varchas was first conducted in the year 2011, with a vision of promoting sports among the colleges of India, particularly Rajasthan and providing the athletes in India a platform to showcase their talent.

Competitions are held in the fields of football, cricket, table tennis, lawn tennis, badminton, squash, volleyball, basketball and athletics in national level stadiums of Jodhpur. Varchas promotes healthy competition and is a great opportunity for the teams to prove their mettle in their respective sports.

Moreover, being the educated core of the country, the students of IIT Jodhpur try to fulfil their social obligation through "Soch -The Social Aspect of Varchas". Soch is a platform where we take up pertinent social issues and try to find possible solutions through discussions and debates; spread awareness and conduct drives to involve people spanning across varied backgrounds. We attempt to create a profound social impact for the amelioration of the society.

Driven by the spirit of "Vigour, Valour, Victory", Varchas 2014, took off on 13 February 2014 and with its ebullient competitions and dynamic face-offs, came to an end on Feb 16, 2014. The morning of Feb 13 witnessed a huge influx of participants from around the country. After a few matches that were planned in morning, the onset of dusk saw the opening ceremony of the festival. The occasion was graced by the presence of our chief guest Mr. Hemant Gera, Divisional Commissioner, Jodhpur and Prof. C. V. R. Murty, Director of the Institute, who showered their best wishes. Igniting of the torch symbolically marked the opening of the competitions. The next few days saw the upsurge of excitement, sportsman spirit and enthusiasm among the participants. In addition to the sports extravaganza, the Varchas team also conducted a panel discussion to sensitize the participants with a pertinent social issue. Soch - the social initiative under the banner of Varchas has raised various social issues in each edition of the festival, provoking us to 'think'. The event concluded with the prize distribution, graced by the faculty members of the institute. In 2014, Soch team put their best foot forward to spread awareness against begging in the society and help at least some of the beggars live with dignity. The mission was to develop a platform that makes the beggars realize the value of earning over begging. The major events organized as part of Soch were:

1. **Awaaz:** A panel discussion was conducted with a great contribution from some renowned speakers and students from all over the city.
2. **Intra and Intra School Competitions:** To understand the outlook of younger generation who are tomorrow's responsible citizens, a visit was undertaken to some schools of Jodhpur. Competitions like drawing, essay writing were conducted to get a reflection of their thoughts and ideas.

## IGNUS



IGNUS is IIT Jodhpur's Annual Techno-Social cum Cultural Festival. In these many years of its existence it has witnessed a footfall of colleges from all across the country making Ignus a much awaited spectacle every year. It comprises of an array of cultural events, activities and competitions which keep the fest full of life and zest. The cultural events mainly consist of pronites, performances and competitions, etc. Coming to the "techno" part of the event which promises to ignite your gray matter, has its motto of promoting innovation, technology and scientific thinking.

Realizing its social Responsibility, IGNUS has initiated a social campaign - “PRAKRITI” to ensure sustainable development of the society by conducting various campaigns, competitions and exhibitions in various schools and colleges. Also adding to the fun are the buzzing informals like city wide treasure hunt- Breakthrough which is one of the only event of its kind to take place in Jodhpur.

IGNUS, the annual inter-college socio-techno cultural festival of IIT Jodhpur which was held from 27 February to 2 March of 2014, saw the participation of numerous stalwarts in the various arenas. With the total footfall amounting to about five thousand, IGNUS on its very first day witnessed the absorbing performance of one of the world’s most famous hypnotist Andrew Newton followed by an enthralling classical dance performed by artists of the SPIC MACAY. Teams from various colleges participated in different cultural and technical activities. The second pronte witnessed one of the exquisite performances by the Pentagram Band featuring Vishal Dadlani. On the third day, Miss Diva India contest was organised which was judged by Shobhita Dhulipala- Miss India Earth2013. The fourth day saw around 4000 people dance to the tunes of the melodious Bollywood singer Shilpa Rao and Pentagram’s Vishal Dadlani. Events like Clash of Bands and Antarang (Fashion Show) were the other highlights of IGNUS’14. To add to the social initiative, the team of PRAKRITI initiated a plantation drive all around the city by planting around 500 trees and raised awareness about the degrading standard of the environment and the need to uplift the same in schools and colleges by organizing competitions. Thus IGNUS created an unmatched aura of science and technology spectacle at the campus of IITJ.

To add to the glare, workshops were organised by professionals from various companies to provide student a technical exposure to current topics including Cloud computing, Ethical hacking, of various eminent personalities were organized including Mr. Vivek Prakash, Founder of Hackerearth. What makes IGNUS different is that it coalesce all the three aspects required to be lucrative, thrilling and full of fun.

### **INTRA-INSTITUTE FESTIVALS**

Apart from the inter-institute festivals, IIT Jodhpur student gymkhana also hosts intra-institute festivals for its own community. They are Spandan, Nimble, Kalakriti and Kridansh.

#### ***(a) Spandan***

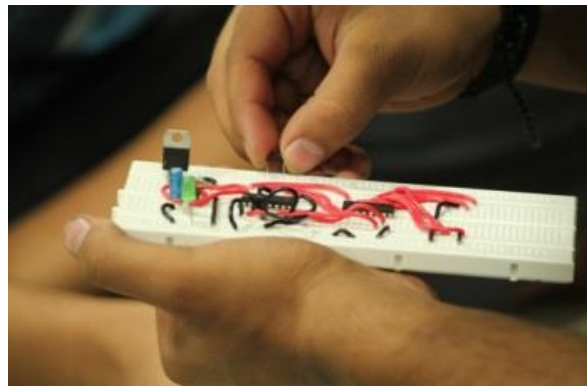
Spandan is the intra-institute cultural fest of IIT Jodhpur. Usually the first fest of the session, it is participated by an enthusiastic crowd, eager to portray their talents in the cultural arena. Versatility in the various categories is extensive, with competitions in fields like drama, dance, singing, literature, photography events, informals and fashion show among others. Three days of Spandan awaken the whole campus leaving them to prepare all night. Spandan is one of the first public occasions to take place in the year and hence it also brings together students from all years to interact with each other.

Participation with zeal and showing the hidden creativity tamed inside an individual is the motive of the fest.



### **(b) Nimble**

Nimble, the intra-college technical fest provides a platform to the techno buds of the college to show their hidden talent. Nimble comprises of four action packed days filled with a great variety of tech and science events ranging from intense mind boggling events such as robotics, Electronics, programming to fun filled events like angry bird, quizzes, crypto etc. Apart from the events, the talks by eminent personalities in the field of Science and Technology are organized to motivate students to work harder as there is no end to discoveries and inventions.



### **(c) Kalakriti**

‘Kalakriti’ is a mixed bag of fun-filled competitions, interesting workshops and back-to-back movie screenings. “Because everything you can imagine is real!” – These lines wake up the dormant talent amongst the student and the output is sudden burst of colors. With a multitude of events ranging from Fine Arts and Clay Modelling to Photography and Video Editing, ‘Kalakriti’ witnesses huge participation from designers and non-designers alike. Events like ‘Scribble Day’ bring together the entire final year batches to which all the other students bid adieu and leave a farewell message or graffiti on a common piece of cloth given to them. A great way to bring smile on everyone’s face, ‘Kalakriti’ succeeds in spreading joy, unity and togetherness in the small tight-knit community of ours.

**(d) Kridansh**

Kridansh is organized by Sports Council to give Sports enthusiasts a chance to pursue their passion for sports. Matches are organized both outdoor and indoor such as Gully Cricket, Street Football and Single Court Basketball, Chess, Carom, Badminton, Table Tennis, Swimming and many more. Full-fledged dedication from participants and organizers makes Kridansh one of the liveliest events of the year.





## Parivartan: A Social Initiative

“Parivartan” is a social initiative of IIT Jodhpur which aims to improve education levels and social awareness in the poor and deprived section of society, through teaching and youth counselling. The IIT Jodhpur Community, concerned by the ever growing problems in society, took up this social initiative to support the downtrodden. Parivartan is working in the direction of building an educated and well informed society around. Mission of Parivartan is “To Bridge the Inequality in Society through Education”.

In 2013-2014, Parivartan took different steps to accomplish its mission.

1. A health camp was organised at Sangariya, the adopted village of Parivartan, by providing free medical checkups, medicines and thus catering to health improvement of over 176 villagers.
2. Knowing the importance of blood, the greatest gift to mankind, a blood donation camp was organised at one of the residential areas (GPRA) which received a huge response from people all over Jodhpur.
3. With an aim of eradicating polio among the children of Sangariya village, polio drops were administered to them.
4. Career Counseling was given in a government school near GPRA to support the emotional health and well-being of these young people and help them build a healthy future.
5. A winter camp was organized in a nearby government school .Various competitions were organized to show them that learning can be fun and to imbibe in them, the importance of gender equality.
6. During winter, some old blankets and clothes were collected and distributed them among the shelter less and the poor in Jodhpur.



## Student Accolades

It is encouraging to see our students learning to organize their activities. Also, they have prepared the Constitution of their Students Gymkhana. In academics, four of our students have been recognized for their academic work:

1. Heena Rathore, a Ph.D. Student was selected for TCS Research Scholar Scheme under the TCS Research Fellowship Programme;
2. Deepak Chhangani, a Ph.D. Student was declared the "Scopus Champion of IIT Jodhpur" by Elsevier Science;
3. Kiran Prakash Shejale, a Ph.D. Student, received the Best Paper Award with Gold Medal in the Optics'14 International Conference on Light; and
4. Tanmay Sethi, a Fourth Year B.Tech. (Mechanical Engineering) student, was shortlisted among 750 from around the world for his idea submitted as a part of 360, a global ideas competition for students organized by M/S. Shell Corporation, USA.

### **Participation in International Conferences**

Two of our B.Tech. students, Arun Balajee Vasudevan and Srikanth Muralidharan attended the International Conference on Computer Vision at Sydney from 1-8 December 2013. They presented their research paper "Dynamic Scene Classification using Spatial and Temporal Cues". They were guided by our ex-faculty Shanmuganathan Raman for developing this paper.

### **Inter-IIT Sports Meet**

In sports, Kushagra Surana, a First Year B.Tech. (Computer Science and Engineering) student, bagged a Bronze Medal in freestyle aquatics competition in the Inter-IIT Sports Meet organized at IIT Guwahati this year.

### **Achievements in Moodi and Inter IIT Techfest**

Our students won prizes in the most popular "Mood Indigo (Moodi)" Annual Cultural Festival of IIT Bombay, which was held from 20-23 December 2013. Kirti Vardhan Rathore of B.Tech. II year, won first prize worth Rs.15,000 for designing logo, visiting cards and letter heads for Campus Diaries. Kshitij Minocha of B.Tech. I year bagged the first prize worth Rs.4,500 creatively representing given statistics in a graphical way, calling it "Apple for A".

Our students also held our banner high by winning positions in the Inter IIT Tech Meet, a pan-IIT competition on science and technology held at IIT Bombay from 2-5 January, 2014. The team of Pratik Kalshetti, Vaibhav Gupta and Aswanth Thani secured 2<sup>nd</sup> position in the event "Social Impact" by designing a prototype of 'Solar Water Desalination Plant', and the team of Shreyas Srivastava, Ayush Raina, Rohil Surana and Priyanka Arya secured 3<sup>rd</sup> position in the competition "Messier Marathon" an amateur astronomy event, which was held at Giant Metrewave Radio Telescope utility, Pune.

## Counselling Service

Studying at IIT brings about tremendous academic growth and overall development. However, it is also accompanied by significant challenges and considerable stress. Our counselling services team provides personalized guidance and necessary resources to help students under duress to achieve their goals. The counselling service is a voluntary organization formed by a group of dedicated students guided by faculty members. It helps students deal with various problems both personal and academic, and plays a significant role in enriching their experiences as students in the Institute.

IIT Jodhpur Counselling Service was formed in the year 2009 by the first batch of B.Tech. undergraduate students under the supervision of a faculty advisor. It has been an integral part of the Institute since its inception. Every year, it strives hard to ensure that every student gets to know IIT Jodhpur at its most intricate levels, and absorb all that the Institute has to offer. The Counselling Service team consists of a faculty advisor with 30 students committed to work for the welfare of students. “Student Guide” is the backbone of this team, with every guide taking 8-10 sophomores under his/her supervision and guidance. The prime objective of the team is to organize the Orientation Program for the newly admitted students. This program is specially tailored to propel the sophomores to match up to speed of life in the Institute, while maintaining a homely feel, and gently enabling the their transition into the undergraduate life in this Institute.

Counselling Service team also takes care of special language needs that some students might face during this time. The team spares no effort to work towards making this transition memorable throughout their lives.

The Student Guide makes sure that the sophomore student adjusts well in the hostel and in his academic life. As a part of this effort he/she maintains continuous touch with the student and his/her family. The team ensures that not only the student, but his/her parents also get an opportunity to interact with the Student Guide in order to maintain a healthy relationship. As part of this Counselling Service, it is the duty of the team to promote development of the student in all three aspects of the college tenure:

- (a) Academics
- (b) Extra-Curricular
- (c) Personal

For this purpose, voluntary, confidential and free counselling service is offered for a wide range of issues that include:

- (a) *Academic support*: Providing information about the different academic programs of the Institute, imparting efficient time management skills and study skills;
- (b) *Personal*: Overcoming homesickness, adjusting to the new environment and related difficulties;
- (c) *Counselling advocacy*: Psycho-education and referral services to students;
- (d) Interaction with the Institute and the existing body of students; and
- (e) Encouraging students to discover their extra-curricular interests/hobbies.

Counselling service also focuses on the concerns and difficulties of the students by providing personal guidance to deal with problems arising during their college life at the Institute. The following activities are undertaken by the Counseling Services team:

- (a) Maintaining the Institute as a ragging free campus;
- (b) Organizing “Orientation Program” every year, for the sophomore batch so as to make them acquainted with the culture of IIT Jodhpur;
- (c) Organizing workshops related to:
  - [1] Career counselling,
  - [2] Stress management,
  - [3] Time management,
  - [4] Health care and hygiene,
  - [5] Vocational training,
  - [6] Relationship problems,
  - [7] Coping with homesickness and
  - [8] Addiction and others;
- (d) Conducting motivational talks by eminent speakers;
- (e) Addressing the academic problems of the students by conducting:
  - [1] English language sessions for students from vernacular background, and
  - [2] Basic Information Technology (IT) skill building sessions etc.;
- (f) Organizing interaction building events amongst students of different batches, and with faculty members etc.; and
- (g) Individually attending to problems of students with poor academic performance.

In the forthcoming year IIT Jodhpur’s Counselling Service will be launching the Campus Mentorship Program, where Faculty and Staff Members assume roles as Mentors, to bring value to student-teacher relationships. B.Tech. Students and Faculty and Staff Members are expected to engage meaningfully in both professional and personal spaces. The good interpersonal skills, holding a balanced view of life, ability to understand, empathize, support, encourage, listen, and giving feedback to young students, is expected to help the smooth transition across the adolescent years spent in the Institute.

## Student Placement Cell

The Student Placement Cell (SPC) is run and managed by the students in sync with the official authorities, thereby taking care of the placement and internship procedures. The students coordinate the job of contacting various companies, their interaction with the students, arranging pre-placement talks, tests, and interviews.

In 2013-14, companies in core engineering, information and communication technology, and banking sector, government and public sector organizations have visited IIT Jodhpur for placements.

Total 62 of our students (59 UG and 3 PG) have been placed with different companies in the year 2013-14. Their details of 2013-14 are:

### B.Tech. Undergraduate Students

S. No.	Company	Name	Roll No.	Branch
1.	Aakash Institute	Niket Kumar Singh	UG201012024	ME
2.	Amadeus Software Labs	Pote Rohan Ramchandra	UG201011018	EE
3.		Hemlata Soni	UG201010008	CSE
4.	ARM Ltd.	Ravi Mahavar	UG201011025	EE
5.		Yogesh Kumar Gupta	UG201010043	CSE
6.		Rohit Gupta	UG201010029	CSE
7.	Cisco Systems India	Sukalkar Pavan Vijayrao	UG201010033	CSE
8.		Pankaj Khandelwal	UG201010025	CSE
9.		Mahesh Chand Gurjar	UG201010014	CSE
10.	Cognizant	S. Praveen Kumar	UG201010030	CSE
11.		Junaid Masood	UG201010009	CSE
12.		Reena Yadav	UG201010028	CSE
13.		Ankur Hasija	UG201012007	ME
14.		Vishwas Garg	UG201010042	CSE
15.		Hemant Verma	UG201011047	EE
16.		Vikas Yadav	UG201010040	CSE
17.	Defence Research & Development Organisation (DRDO)	Yatin Chaudhary	UG201012045	ME
18.		Srikanth M.	UG201011035	EE
19.		Gaurav Kumar	UG201012015	ME
20.		Himanshu Jaiswal	UG201011009	EE
21.		Saba Suhail	UG201011029	EE
22.		Dheeraj Tak	UG201010006	CSE
23.		Saurabh Singh	UG201010031	CSE
24.		Narendra Meena	UG201010021	CSE
25.	Futures First	Utkarsh Trivedi	UG201012040	ME
26.	Havells India Limited	Vasu Goenka	UG201012041	ME
27.		Snehlata Joshi	UG201012038	ME

28.		Sachin Gupta	UG201012032	ME
29.		Rajat Jain	UG201011023	EE
30.	L&T Ltd.	Aditya Budaraju	UG201012002	ME
31.		Gudla Sushanth	UG201012014	ME
32.	Morgan Stanley	Manu Agarwal	UG201010044	CSE
33.		Sourabh Maheshwari	UG201010032	CSE
34.		Manpreet Singh Bedi	UG201010017	CSE
35.		Godugu Ravi Kiran	UG201010007	CSE
36.	Nagarro Software	Mukul Bansal	UG201011013	EE
37.		Sandeep Kumar Singh	UG201011030	EE
38.		Pankaj Agrawal	UG201010023	CSE
39.		Mohd. Hamzah Khan	UG201010019	CSE
40.	National Instruments (R&D)	Ayush Verma	UG201011001	EE
41.		Aswin Suresh	UG201011046	EE
42.	Nucleus Software	Abhishek Anand	UG201010001	CSE
43.		Tapish Rathore	UG201010037	CSE
44.	Oracle Corporation	Pankaj Bhardwaj	UG201010024	CSE
45.		Mohd. Asad	UG201010018	CSE
46.		Manish Kumawat	UG201010016	CSE
47.	Oracle Financial Services Software Ltd.	Vinod Kumar Meena (Sigmoid)	UG201010041	CSE
48.		Arun Balajee V.	UG201011003	EE
49.	Resonance Eduventures Pvt. Ltd.	Akash Bansal	UG201012004	ME
50.		Amar Singh Saini	UG201010003	CSE
51.		Narendra Kumar Singh	UG201011014	EE
52.	Samsung R&D India Institute	Nischay Kala	UG201010022	CSE
53.		Vikas Goyal	UG201010039	CSE
54.		Trivikram Bollempalli Chowdary	UG201010005	CSE
	Sigmoid Analytics	Vinod Kumar Meena	UG201010041	CSE
55.	Tata Consultancy Services	Surya Pratap Singh Yadav	UG201011038	EE
56.	Tata Motors	Abhinav	UG201012001	ME
57.		Aman Doharey	UG201012006	ME
58.	Trident	Tanmay Sethi	UG201012039	ME
59.		Prince Gupta	UG201011019	EE

### M. Tech. Postgraduate Students

S. No.	Company	Name	Roll No.	Branch
1.	Cisco Systems India	Kulkarni Siddharth Sadanand	PG201272005	ICT
2.		Satyam Saxena	PG201272009	ICT
3.	Credit Rating Information Services of India (CRISIL)	Saloni Sardana	PG201273004	SS

## **Alumni Relations**

An Alumni Association was formed after the first batch of B.Tech. students completed their program in April 2012, in order to provide them with a platform where they can stay connected to the institute, their fellow alumni, and junior students.

Office of Alumni Relations is the primary co-ordinating center for all official communication, events and other activities on behalf of the Chairman, Alumni Relations. The Office along with the Students' Alumni Cell is responsible for organizing the Annual Alumni Meet, Distinguished Alumni Awards (during Convocation) and other alumni related events.

The office works hard to build strong alumni relations and develop a unique platform for an effective communication between the alumni, faculty, students and the institute. The Alumni Relations Office is managed by its Chairman, Dr. Anand Krishnan Plapally along with Coordinator (Students), one staff member and two student members.

## List of Registered Students in IIT Jodhpur

(as on 31 March 2014)

IIT Jodhpur has, as on 31 March 2014, a total of 749 students registered in various programs offered by the Institute. The table below gives the break-up of the registered students against the programs.

Program	Year of Registration	Number
Ph.D.	2013	27
	2012	19
	2011	20
	2010	4
<b>Total</b>		<b>70</b>
M.Tech.	2011	41
	2012	22
	2013	25
<b>Total</b>		<b>88</b>
B.Tech.	2010	128
	2011	148
	2012	146
	2013	169
<b>Total</b>		<b>591</b>
<b>Grand Total</b>		<b>749</b>

Following are lists of students registered in various programs offered by the Institute, detailed according to the Centers and Branches of the various programs.

### Ph.D. Students

Sl. No.	Roll No.	Name	Center
1.	PG201081501	Belal Usmani	Energy
2.	PG201081502	Dharmendra Singh Rajpurohit	Energy
3.	PG201081504	Suresh Kumar	Energy
4.	PG201082502	Deepak Kumar Chhangani	ICT
5.	PG201181001	Deepesh Patidar	Energy
6.	PG201181003	Pura Ram	Energy
7.	PG201181004	Vikas Pratap Singh	Energy
8.	PG201181005	Vikash Chandra Janu	Energy
9.	PG201181501	Lokesh Saini	Energy
10.	PG201181502	Surendra Singh Barala	Energy
11.	PG201182001	Abhay Samant	ICT



12.	PG201182003	Heena Rathore	ICT
13.	PG201182005	Puneet Kumar Jain	ICT
14.	PG201182006	Ram Niwash Mahia	ICT
15.	PG201182007	Ravi Raj Choudhary	ICT
16.	PG201182009	Sapana Ranwa	ICT
17.	PG201182010	Saurabh Maheshwari	ICT
18.	PG201182011	Sibani Bisoyi	ICT
19.	PG201182501	Amit Bhati	ICT
20.	PG201182502	Kapil Sharma	ICT
21.	PG201182506	Shrivishal Tripathi	ICT
22.	PG201183001	Rohan Sharma	SS
23.	PG201183501	Parmod Kumar	SS
24.	PG201183502	Preeti Yadav	SS
25.	PG201281001	Ajay Jain	Energy
26.	PG201281002	Dharmesh Kumar	Energy
27.	PG201281003	Poonam Sharma	Energy
28.	PG201281004	Shejale Kiran Prakash	Energy
29.	PG201282002	Deepak Bharti	ICT
30.	PG201282003	Giriraj Vyas	ICT
31.	PG201282006	Onkar Krishna	ICT
32.	PG201282007	Rakesh Kanji	ICT
33.	PG201282009	Suresh Dahiya	ICT
34.	PG201282010	Vaibhav Saini	ICT
35.	PG201282012	Vibha Sahlot	ICT
36.	PG201282501	Shilpa Pandey	ICT
37.	PG201283001	Anoopa Joshi	SS
38.	PG201283003	Manvendra Sharma	SS
39.	PG201283005	Parvinder Singh	SS
40.	PG201283006	Pradumn Kumar Pandey	SS
41.	PG201283007	Rakesh Kumar	SS
42.	PG201283008	Ranveer Singh	SS
43.	PG201283009	Vinay Pratap Singh	SS
44.	PG201381001	Aditya Raw Gautam	Energy
45.	PG201381002	Goutam Kumar Gupta	Energy
46.	PG201381003	Om Prakash Mahela	Energy
47.	PG201381004	Prakhar Nigam	Energy
48.	PG201382001	Monika Choudhary	ICT
49.	PG201382002	Prachi Budania	ICT
50.	PG201382003	Rajnish Kumar	ICT

51.	PG201382004	Vikas Kumar Sihag	ICT
52.	PG201382005	Vipin Joshi	ICT
53.	PG201383001	Anjali Singh	SS
54.	PG201382002	Anurag Sahu	SS
55.	PG201383002	Dipti Trivedi	SS
56.	PG201383005	Raj Kumar Satankar	SS
57.	PG201383006	Shraddha Choudhary	SS
58.	PG201384002	Ankisha Vijay	BISS
59.	PG201384003	Anuj Kumar Bharti	BISS
60.	PG201384004	Arun Kumar Upadhyay	BISS
61.	PG201384005	Ayeman Amanullah	BISS
62.	PG201384006	Bhubanesh Rathore	BISS
63.	PG201384007	Kriti Dubey	BISS
64.	PG201384008	Megha Singh	BISS
65.	PG201384009	Nidhi Sharma	BISS
66.	PG201384010	Rahul Badhwar	BISS
67.	PG201384011	Rakhi N. K.	BISS
68.	PG201384012	Ridhi Agarwalla	BISS
69.	PG201384013	Shalini Singh	BISS
70.	PG201384014	Vibhuti Joshi	BISS

**M.Tech. Students, Batch 2011**

Sl. No.	Roll No	Name	Center
1.	PG201171001	Akash Yadav	Energy
2.	PG201171003	Anurag	Energy
3.	PG201171004	Digpal Kumar	Energy
4.	PG201171005	Gaurav Hedau	Energy
5.	PG201171006	Nupur Rathore	Energy
6.	PG201171007	Pallavi Kar	Energy
7.	PG201171008	Parag Kamal Talukdar	Energy
8.	PG201171009	Priyanka Bhartiya	Energy
9.	PG201171010	Rakesh Kumar	Energy
10.	PG201171011	Rakesh Sarma	Energy
11.	PG201171012	Ram Niwas Verma	Energy
12.	PG201171013	Shubhi Srivastava	Energy
13.	PG201171014	Vinod Kumar Verma	Energy
14.	PG201171015	Ayyaz Siddique	Energy
15.	PG201172001	Amrik Singh	ICT
16.	PG201172002	Ankita Samariya	ICT
17.	PG201172003	Anop Singh	ICT
18.	PG201172004	Deepak Kumar Gupta	ICT
19.	PG201172005	Durgesh Kumar	ICT
20.	PG201172006	Garima Jain	ICT
21.	PG201172007	Gaurav Raj	ICT
22.	PG201172008	Govind Salvi	ICT
23.	PG201172009	Himanshu Singhvi	ICT
24.	PG201172010	Kapil Lahuwa	ICT
25.	PG201172011	Nagabhushan Eswara	ICT
26.	PG201172012	Nakul Shashikant Goud	ICT
27.	PG201172013	Naman Joshi	ICT
28.	PG201172014	Prasad Kulkarni	ICT
29.	PG201172015	Ramnarayan Yadav	ICT
30.	PG201172016	Ravi Bhandari	ICT
31.	PG201172017	Ravi Ranjan	ICT
32.	PG201172018	Satyanarayan Sahu	ICT
33.	PG201172019	Saurabh Heda	ICT
34.	PG201172020	Shahnawaz Abdullah	ICT
35.	PG201172021	Shailendra Soni	ICT

36.	PG201172022	Supratim Shit	ICT
37.	PG201172023	Umesh Tanwar	ICT
38.	PG201172024	Yatin Mehandiratta	ICT
39.	PG201172025	Zafar Ahmed Ansari	ICT
40.	PG201172026	Ety Mittal	ICT
41.	PG201172027	Shantanav Chakraborty	ICT

### M.Tech. Students, Batch 2012

Sl. No.	Roll No.	Name	Center
1.	PG201271001	Avadhesh Kumar Sharma	Energy
2.	PG201271002	Balram Choudhary	Energy
3.	PG201271003	Gurveer Singh	Energy
4.	PG201271005	Rattandeep Singh	Energy
5.	PG201271006	Veenu Kumari	Energy
6.	PG201271007	Vinay Vaishnav	Energy
7.	PG201271008	Zeeshan Ahmed	Energy
8.	PG201271009	Sandeep Gupta	Energy
9.	PG201272001	Ammar Adil	ICT
10.	PG201272002	Deepa	ICT
11.	PG201272003	Gagandeep Singh	ICT
12.	PG201272004	Hiteshi Jain	ICT
13.	PG201272005	Kulkarni Siddharth Sadanand	ICT
14.	PG201272006	Manjunath Bj	ICT
15.	PG201272007	Naresh Kumar Verma	ICT
16.	PG201272009	Satyam Saxena	ICT
17.	PG201272010	Shakti Gaurav	ICT
18.	PG201272011	Shinde Neha Naresh	ICT
19.	PG201272012	Shirish Mishra	ICT
20.	PG201273001	Adarsh Kumar Misra	SS
21.	PG201273002	Brajesh Kumar Shukla	SS
22.	PG201273004	Saloni Sardana	SS

**M.Tech. Students, Batch 2013**

Sl. No.	Roll No	Name	Center
1.	PG201372001	Abhay Arora	ICT
2.	PG201372003	Arka Ujjal Dey	ICT
3.	PG201372004	Astha Tyagi	ICT
4.	PG201372006	Divya Sharma	ICT
5.	PG201372012	Piyush Chakrawarty	ICT
6.	PG201372014	Rupali	ICT
7.	PG201372015	Shruti Srivastava	ICT
8.	PG201372016	Sumit Kumar Paliwal	ICT
9.	PG201372017	Tushar	ICT
10.	PG201372018	Akshay Jain	ICT
11.	PG201372019	Praveen Chopra	ICT
12.	PG201372020	Umesh Chaturvedi	ICT
13.	PG201372021	Vishnu Dutta	ICT
14.	PG201371002	Chandni Kumari	Energy
15.	PG201371003	Sheetanshu Tiwari	Energy
16.	PG201371004	Vinay Maheshwari	Energy
17.	PG201373001	Abhinav Sharma	SS
18.	PG201373002	Amanjot Kaur	SS
19.	PG201373003	Anupam Jain	SS
20.	PG201373004	Hargeet Kaur	SS
21.	PG201373005	Jyoti Faujdar	SS
22.	PG201373006	Mathew Alexander	SS
23.	PG201373007	Nishith V. Oze	SS
24.	PG201373008	Raveendra Bavor	SS
25.	PG201373010	Mahaveer Meel	SS

**B.Tech. Students, Batch 2010**

Sl. No.	Roll No.	Name	Branch
1.	UG201010001	Abhishek Anand	CSE
2.	UG201010002	Aman Deep	CSE
3.	UG201010003	Amar Singh Saini	CSE
4.	UG201010004	Anurag Saini	CSE
5.	UG201010005	Bollempalli Trivikram Chowdary	CSE
6.	UG201010006	Dheeraj Tak	CSE
7.	UG201010007	Godugu Ravi Kiran	CSE
8.	UG201010008	Hemlata Soni	CSE
9.	UG201010009	Junaid Masood	CSE
10.	UG201010010	Kanchan Kumari	CSE
11.	UG201010011	Khusheeram Meena	CSE
12.	UG201010012	Kishor Mehra	CSE
13.	UG201010013	Lalit Yadav	CSE
14.	UG201010014	Mahesh Chand Gurjar	CSE
15.	UG201010015	Mandeep Singh Yadav	CSE
16.	UG201010016	Manish Kumawat	CSE
17.	UG201010017	Manpreet Singh Bedi	CSE
18.	UG201010018	Mohd Asad	CSE
19.	UG201010019	Mohd Hamzah Khan	CSE
20.	UG201010020	Monu	CSE
21.	UG201010021	Narendra Meena	CSE
22.	UG201010022	Nishchay Kala	CSE
23.	UG201010023	Pankaj Agrawal	CSE
24.	UG201010024	Pankaj Bhardwaj	CSE
25.	UG201010025	Pankaj Khandelwal	CSE
26.	UG201010026	Pavan Meena	CSE
27.	UG201010027	Pawan Meena	CSE
28.	UG201010028	Reena Yadav	CSE
29.	UG201010029	Rohit Gupta	CSE
30.	UG201010030	S Praveenkumar	CSE
31.	UG201010031	Saurabh Singh	CSE
32.	UG201010032	Sourabh Maheshwari	CSE
33.	UG201010033	Sukalkar Pavan Vijayrao	CSE
34.	UG201010034	Sumit Jangid	CSE
35.	UG201010035	Sunita Pateer	CSE
36.	UG201010036	Surendra Singh Meena	CSE
37.	UG201010037	Tapish Rathore	CSE
38.	UG201010038	Vemana Vinith	CSE

39.	UG201010039	Vikas Goyal	CSE
40.	UG201010040	Vikas Yadav	CSE
41.	UG201010041	Vinod Kumar Meena	CSE
42.	UG201010042	Vishwas Garg	CSE
43.	UG201010043	Yogesh Kumar Gupta	CSE
44.	UG201010044	Manu Agarwal	CSE
45.	UG201011001	Aayush Verma	EE
46.	UG201011002	Amit Kumar Verma	EE
47.	UG201011003	Arun Balajee V	EE
48.	UG201011004	Bharat Kumar Tanwar	EE
49.	UG201011005	Chintapalli Siva Pratheek	EE
50.	UG201011006	Dilip Kumar Meena	EE
51.	UG201011008	Ghatge Mayur Sambhaji	EE
52.	UG201011009	Himanshu Jaiswal	EE
53.	UG201011010	Mahesh Chandra M.	EE
54.	UG201011011	Manish Kumar Meena	EE
55.	UG201011013	Mukul Bansal	EE
56.	UG201011014	Narendra Kumar Singh	EE
57.	UG201011016	Nimmarthi Vara Prasad	EE
58.	UG201011017	Pasunoori Prashanth	EE
59.	UG201011018	Pote Rohan Ramchandra	EE
60.	UG201011019	Prince Gupta	EE
61.	UG201011020	Priya Dhandev	EE
62.	UG201011021	Rahul Malav	EE
63.	UG201011022	Rahul Meena	EE
64.	UG201011023	Rajat Jain	EE
65.	UG201011024	Rajeev Kumar	EE
66.	UG201011025	Ravi Mahavar	EE
67.	UG201011026	Rinku Meena	EE
68.	UG201011027	Rishi Kumar	EE
69.	UG201011028	Rit Shekhawat	EE
70.	UG201011029	Saba Suhail	EE
71.	UG201011030	Sandeep Kumar Singh	EE
72.	UG201011031	Saurabh Santosh	EE
73.	UG201011032	Shashikant	EE
74.	UG201011033	Siddharth Singh Rao	EE
75.	UG201011034	Shiv Singh Meena	EE
76.	UG201011035	Srikanth M.	EE
77.	UG201011036	Sudesh Gora	EE
78.	UG201011037	Sudhir Kumar Singh	EE



79.	UG201011038	Surya Pratap Singh Yadav	EE
80.	UG201011039	Tarun Patel	EE
81.	UG201011040	Tirumani Vamshi Krishna	EE
82.	UG201011041	Veepee Singh Meena	EE
83.	UG201011042	Vikash Kumar	EE
84.	UG201011043	Vinod Meena	EE
85.	UG201011044	Vivek Dubey	EE
86.	UG201011045	Yogendra Kumar Goyal	EE
87.	UG201011046	Aswin Suresh	EE
88.	UG201011047	Hemant Verma	EE
89.	UG201012001	Abhinav	ME
90.	UG201012002	Aditya Budaraju	ME
91.	UG201012003	Aditya Ranjan	ME
92.	UG201012004	Akash Bansal	ME
93.	UG201012005	Akhilendra Singh	ME
94.	UG201012006	Aman Doharey	ME
95.	UG201012007	Ankur Hasija	ME
96.	UG201012008	Anshul Gupta	ME
97.	UG201012009	Anuj Kumar	ME
98.	UG201012010	Ashok Kumar Meena	ME
99.	UG201012012	Chetram Meena	ME
100.	UG201012014	Gudla Sushanth	ME
101.	UG201012015	Gaurav Kumar	ME
102.	UG201012018	Jagmohan Shree Rao	ME
103.	UG201012019	Jaideep	ME
104.	UG201012020	Jai Prakash Meena	ME
105.	UG201012021	Kuldeep Singh	ME
106.	UG201012022	Manraj Meena	ME
107.	UG201012023	Mohit Naneria	ME
108.	UG201012024	Niket Kumar Singh	ME
109.	UG201012025	Nishant Kumar	ME
110.	UG201012026	Nitesh Kumar	ME
111.	UG201012027	Nitin Katiyar	ME
112.	UG201012028	Pradeep Rai	ME
113.	UG201012029	Himanshu Chandrakant R.	ME
114.	UG201012030	Rooga Ram	ME
115.	UG201012032	Sachin Gupta	ME
116.	UG201012033	Sarvesh Dayal	ME
117.	UG201012034	Shaikh Abu Amsal	ME
118.	UG201012035	Shivendra Rai	ME

119.	UG201012036	Siddarth Jain	ME
120.	UG201012037	Sitaram Meena	ME
121.	UG201012038	Snehlata Joshi	ME
122.	UG201012039	Tanmay Sethi	ME
123.	UG201012040	Utkarsh Trivedi	ME
124.	UG201012041	Vasu Goenka	ME
125.	UG201012042	Vijay Singh Meena	ME
126.	UG201012043	Vipin Kumar	ME
127.	UG201012044	Vivek Ganj Gahlot	ME
128.	UG201012045	Yatin Chaudhary	ME
129.	UG201012046	Yogesh Kumar	ME

**B. Tech. Students, Batch 2011**

Sl. No.	Roll No.	Name	Branch
1.	UG201110001	Abhishek Saini	CSE
2.	UG201110002	Amit Raj	CSE
3.	UG201110003	Apurv Gupta	CSE
4.	UG201110004	Ashish Kumar	CSE
5.	UG201110005	Banoth Surya Prasad	CSE
6.	UG201110006	Debashish Ghatak	CSE
7.	UG201110007	Deven Bhooshan	CSE
8.	UG201110008	Gurupratap	CSE
9.	UG201110009	Hari Om Gaur	CSE
10.	UG201110011	Hemraj Kumawat	CSE
11.	UG201110012	Jitendra Kumar Chaudhary	CSE
12.	UG201110013	Jitendra Singh Garhwal	CSE
13.	UG201110014	Kalpna Rao	CSE
14.	UG201110015	Kankanti Nithin Veer Reddy	CSE
15.	UG201110017	Kuchana Maharshi Devaraj	CSE
16.	UG201110018	Mahesh	CSE
17.	UG201110019	Mayank Agrawal	CSE
18.	UG201110020	Mayank Mittal	CSE
19.	UG201110021	Palak Samaiya	CSE
20.	UG201110022	Pitta Divya Shree	CSE
21.	UG201110023	Praneeth A. S.	CSE
22.	UG201110024	Prashant Rastogi	CSE
23.	UG201110025	Ravi Kumar Meena	CSE
24.	UG201110026	Revti Raman Singh	CSE
25.	UG201110027	Rishi Mishra	CSE
26.	UG201110028	Sahil Kharb	CSE
27.	UG201110029	Sanjeev Kumar	CSE
28.	UG201110030	Santosh Kumar Siddharth	CSE
29.	UG201110031	Saurabh Kumar Gangwar	CSE
30.	UG201110032	Shah Jenil Dilip	CSE
31.	UG201110033	Shivam Verma	CSE
32.	UG201110034	Siddharth Kumar Singh	CSE
33.	UG201110035	Siddharth Maheshwari	CSE
34.	UG201110036	Sonu Mehta	CSE
35.	UG201110037	Syed Navaid Ahmad	CSE
36.	UG201110038	Yash Kumar Sonthalia	CSE
37.	UG201110039	Yeravothula Rohith	CSE
38.	UG201110040	Gatla Rajasekhar Reddy	CSE

39.	UG201110041	Abhishek Bassan	CSE
40.	UG201110042	Arvind Pandey	CSE
41.	UG201110043	Smriti Jain	CSE
42.	UG201110044	Wins Goyal	CSE
43.	UG201111002	Abhishek Pilania	EE
44.	UG201111003	Anshul Narayan Bhatt	EE
45.	UG201111004	Anshul Singh Parihar	EE
46.	UG201111005	Anurag Dharmawat	EE
47.	UG201111006	Atul Agarwal	EE
48.	UG201111007	Battula Sasi Kaushik	EE
49.	UG201111008	Brajesh Kumar	EE
50.	UG201111009	Bussa Pavan Kumar	EE
51.	UG201111010	Damacharla Sandeep	EE
52.	UG201111011	Devendra Kumar Jangid	EE
53.	UG201111012	Gajarla Ravi Teja	EE
54.	UG201111014	Guneet Singh Mehta	EE
55.	UG201111015	Hari Om Meena	EE
56.	UG201111016	Harshit Dixit	EE
57.	UG201111017	Hem Singh Meena	EE
58.	UG201111018	Hemant Kumar Biloniya	EE
59.	UG201111019	Kadoo Amruta Anil	EE
60.	UG201111020	Kotha Sudheer	EE
61.	UG201111021	Koyinni Deekshitha	EE
62.	UG201111022	Krishna Kumar Damolia	EE
63.	UG201111023	Kuldeep Singh Rathore	EE
64.	UG201111024	Kumar Saurav	EE
65.	UG201111025	Lalithkumar P.	EE
66.	UG201111026	Prashant Mittal	EE
67.	UG201111027	Rahul Rathore	EE
68.	UG201111028	Rangaraju Yashomani Srikar	EE
69.	UG201111029	Ravindra Kumar Sharma	EE
70.	UG201111030	Ravyansh Kumar	EE
71.	UG201111031	Sanchit Kumar Singh	EE
72.	UG201111032	Satyendra Kumar Gautam	EE
73.	UG201111033	Shivalika Agarwal	EE
74.	UG201111034	Shivam Punia	EE
75.	UG201111035	Sudhanshu Singh	EE
76.	UG201111036	Sunil Kumar	EE
77.	UG201111037	Vadakattu Sreeja	EE
78.	UG201111038	Vineet Kumar	EE

79.	UG201111039	Voruganti Surya Teja	EE
80.	UG201111041	Alvin Roy Aliath	EE
81.	UG201111042	Aniruddh Ramrakhyani	EE
82.	UG201111043	Ashutosh Mittal	EE
83.	UG201111044	Dhiraj Bhatt	EE
84.	UG201111045	Heena Masuriya	EE
85.	UG201112002	Ankit Aggarwal	ME
86.	UG201112004	Ashutosh Vishwakarma	ME
87.	UG201112005	Atishay Jain	ME
88.	UG201112006	C. Sri Harsha	ME
89.	UG201112007	Chetan Regar	ME
90.	UG201112008	Chilakamarri Satya Ranga Prasanth	ME
91.	UG201112009	Deep Kumar	ME
92.	UG201112010	Deshraj Meena	ME
93.	UG201112011	Devesh Singh	ME
94.	UG201112012	Dheeraj	ME
95.	UG201112013	Gajanand Saini	ME
96.	UG201112014	Gautam Kumar	ME
97.	UG201112015	Harsh Kumar Karmveer	ME
98.	UG201112016	Harshit Srivastava	ME
99.	UG201112017	Himanshu Sahu	ME
100.	UG201112018	Kishan Sharma	ME
101.	UG201112019	Kothapally Mounish	ME
102.	UG201112020	Kunal Vishnu Paraswani	ME
103.	UG201112021	Kundan Singh Meena	ME
104.	UG201112022	Maninder Singh	ME
105.	UG201112023	Manish Sachdeva	ME
106.	UG201112024	Mohit Dadhich	ME
107.	UG201112025	Mukul Kumar Gupta	ME
108.	UG201112026	Navneet Kumar Yadav	ME
109.	UG201112027	Neeraj Kumar	ME
110.	UG201112028	Rahul Sathya Babu	ME
111.	UG201112029	Sagar Anand Ramgare	ME
112.	UG201112030	Sandeep Shankarrao Hatte	ME
113.	UG201112031	Sanket Kinage	ME
114.	UG201112032	Shravan Mishra	ME
115.	UG201112033	Siddee Meena	ME
116.	UG201112036	Tagde Prateek Prakash	ME
117.	UG201112037	Vaidya Kedar Sanjay	ME
118.	UG201112038	Vikash	ME

119.	UG201113002	Abhishek Singh	SS
120.	UG201113003	Ajay Sunarathi	SS
121.	UG201113004	Akhil Arora	SS
122.	UG201113006	Ankit Singh	SS
123.	UG201113007	Arpit Agarwal	SS
124.	UG201113008	Atharv S. Ghaisas	SS
125.	UG201113010	Desidi Siva Prakash	SS
126.	UG201113012	Divya Grover	SS
127.	UG201113013	Gurjot Singh	SS
128.	UG201113014	Himanshu Shukla	SS
129.	UG201113015	Jaswant	SS
130.	UG201113016	Jitendra Kumar Meena	SS
131.	UG201113017	Kakkirala Anuroop	SS
132.	UG201113018	Kowlagi Sudhendra Narayan	SS
133.	UG201113019	Krati Saxena	SS
134.	UG201113020	Kusum Lata Meena	SS
135.	UG201113022	M Hari Haran	SS
136.	UG201113023	Manthani Tejaswi	SS
137.	UG201113024	Mohamed Rehan Mohamed Sagheer	SS
138.	UG201113025	Neelesh Dwivedi	SS
139.	UG201113026	Neha Singh Chauhan	SS
140.	UG201113027	P. Vivek	SS
141.	UG201113028	Pratik Kumar	SS
142.	UG201113029	Rahul Kumar	SS
143.	UG201113030	Raj Rohit Jalem	SS
144.	UG201113032	Rishabh Jain	SS
145.	UG201113033	Sankha Narayan Guria	SS
146.	UG201113036	Shinde Sahil Anil	SS
147.	UG201113037	Tavish Garg	SS
148.	UG201113039	Vinnakota Sai Rakshit	SS

**B. Tech. Students, Batch 2012**

Sl. No.	Roll No.	Name	Branch
1.	UG201210001	Abhishek Kumar	CSE
2.	UG201210002	Aditya Yadav	CSE
3.	UG201210003	Akash Mishra	CSE
4.	UG201210004	Akshit Jain	CSE
5.	UG201210005	Aseem Raj Baranwal	CSE
6.	UG201210006	Asheet Kumar	CSE
7.	UG201210007	Attanti Madhurya	CSE
8.	UG201210008	Bandela Prathyusha	CSE
9.	UG201210009	Basamgari Harika	CSE
10.	UG201210010	Bundele Manas Mahesh	CSE
11.	UG201210011	Dhake Akash Hiranman	CSE
12.	UG201210012	Dinesh Kumar Jangra	CSE
13.	UG201210013	Dinesh Kumar Saini	CSE
14.	UG201210014	Gaurav Shastri	CSE
15.	UG201210015	Gondi Dedeepya Sai	CSE
16.	UG201210016	Gorla Uhasree	CSE
17.	UG201210017	Jinank Jain	CSE
18.	UG201210018	Kalshetti Pratik Mallinath	CSE
19.	UG201210019	Kunal Dadheech	CSE
20.	UG201210020	Mala Muthyalappa	CSE
21.	UG201210021	Manish Jaiswal	CSE
22.	UG201210022	N. K. Kiran	CSE
23.	UG201210023	Pankaj Kumar	CSE
24.	UG201210024	Pawan Kumar Saini	CSE
25.	UG201210025	Rajesh Kumar Meena	CSE
26.	UG201210026	Rishabh Garg	CSE
27.	UG201210027	Rishikesh Meena	CSE
28.	UG201210028	Ritesh Kumar	CSE
29.	UG201210029	Rohan Khanna	CSE
30.	UG201210030	Sachin Grover	CSE
31.	UG201210031	Samarth Kumar Goel	CSE
32.	UG201210032	Shah Akshat Mukeshkumar	CSE
33.	UG201210033	Shivam Kumar Garg	CSE
34.	UG201210034	Siddharth Talesra	CSE
35.	UG201210035	Sonika Agrawal	CSE
36.	UG201210036	Sunil Kumar	CSE
37.	UG201210037	Vaibhav Singh Khokhar	CSE
38.	UG201210038	Vijendra Sukariya	CSE

39.	UG201210039	Vikas Meena	CSE
40.	UG201210040	Ankit Jain	
41.	UG201211001	Abhishek Thepra	EE
42.	UG201211002	Ajay Charan	EE
43.	UG201211003	Akarsh Rastogi	EE
44.	UG201211004	Akshay Arya	EE
45.	UG201211006	Anubhuti Mittal	EE
46.	UG201211007	Ashwani Kumar	EE
47.	UG201211008	Ashwani Nainawat	EE
48.	UG201211009	Deepak Verma	EE
49.	UG201211010	Devabattini Sriharsha	EE
50.	UG201211011	Dharm Raj Meena	EE
51.	UG201211012	Dheeraj P.	EE
52.	UG201211013	Dinesh Gurjar	EE
53.	UG201211014	Farazuddin Ansari	EE
54.	UG201211015	Ghanshyam	EE
55.	UG201211016	Hitesh Kumar Singhal	EE
56.	UG201211017	K. V. Vikas Reddy	EE
57.	UG201211018	Lalit Mirdha	EE
58.	UG201211019	Mamta Dhaka	EE
59.	UG201211020	Mukesh Kumar	EE
60.	UG201211021	Nisha Agrawal	EE
61.	UG201211022	Nishit Umesh Parekh	EE
62.	UG201211023	Pawan Kumar Verma	EE
63.	UG201211024	Piyush Dugar	EE
64.	UG201211025	Prakash Gehlot	EE
65.	UG201211027	Rajat	EE
66.	UG201211028	Rajat R Rahatgaonkar	EE
67.	UG201211029	Rajnesh Meena	EE
68.	UG201211030	Sanchit Gupta	EE
69.	UG201211031	Sanket Jain	EE
70.	UG201211032	Santosh Kumar Meena	EE
71.	UG201211033	Saurav Kumar	EE
72.	UG201211034	Sharath Kuntanhal	EE
73.	UG201211035	Shivam Upadhyaya	EE
74.	UG201211036	Shrish Lal Bhatnagar	EE
75.	UG201211037	Sriramadasu Ashok Kumar	EE
76.	UG201211038	Sunil Saran	EE
77.	UG201211039	Tarun Vatwani	EE
78.	UG201211040	Upendra Kumar Nagar	EE



79.	UG201211041	Vinay Shankar Saxena	EE
80.	UG201211042	Antos C. Varghese	EE
81.	UG201211043	Himanshu Takwani	EE
82.	UG201212001	Aditya Khandelwal	ME
83.	UG201212002	Ajay Kumar Jagetiya	ME
84.	UG201212003	Anjali Bansiwal	ME
85.	UG201212005	Ashish Kumar	ME
86.	UG201212006	Ashish Kumar	ME
87.	UG201212007	Atul Dubey	ME
88.	UG201212008	Ayush Bhadauria	ME
89.	UG201212009	B. V. Kishore	ME
90.	UG201212010	Balla Raghavendar Goud	ME
91.	UG201212011	Boddupalli Nibodh	ME
92.	UG201212012	Chamarthy Kameswara Shiva Dinesh	ME
93.	UG201212013	Chetan Gupta	ME
94.	UG201212014	Daman	ME
95.	UG201212015	Dilkhush Meena	ME
96.	UG201212017	Himanshu Yadav	ME
97.	UG201212018	Kamlesh Aseri	ME
98.	UG201212019	Kanak Shrivastava	ME
99.	UG201212020	Manish Soni	ME
100.	UG201212021	N. Vinaykumar Reddy	ME
101.	UG201212022	Navneet Mittal	ME
102.	UG201212023	Pavan Kumar Shakya	ME
103.	UG201212024	Sachin Yadav	ME
104.	UG201212025	Sandeep Kumar Meena	ME
105.	UG201212026	Saurabh Jain	ME
106.	UG201212027	Saurabh Pandey	ME
107.	UG201212028	Shah Jigar Deepak	ME
108.	UG201212030	Shreyas Srivastava	ME
109.	UG201212031	Shubham Gupta	ME
110.	UG201212032	Snigdhideep Moitra	ME
111.	UG201212033	Sonu Siba Bara	ME
112.	UG201212034	Surendra Pal Singh	ME
113.	UG201212035	Tapesh Kumar Mourya	ME
114.	UG201212036	Thani Aswanth	ME
115.	UG201212037	Vaibhav Gupta	ME
116.	UG201212038	Varun Suryan	ME
117.	UG201212039	Vikash Kumar Goenka	ME
118.	UG201212040	Vishal Kumar	ME

119.	UG201212041	Anshuman Singh	ME
120.	UG201212042	Kirti Vardhan Rathore	ME
121.	UG201213002	Anmol	SS
122.	UG201213005	Divya Nagar	SS
123.	UG201213006	Gaurav Choudhary	SS
124.	UG201213007	Gourab Kumar Patro	SS
125.	UG201213008	Hari Om Meena	SS
126.	UG201213013	Kota V Aakash	SS
127.	UG201213014	Kshitij Soni	SS
128.	UG201213016	Mahendra Kachhawa	SS
129.	UG201213018	Manish Malhotra	SS
130.	UG201213019	Narender Kumar	SS
131.	UG201213020	Paladugu Venkata Karteek	SS
132.	UG201213021	Palash Jain	SS
133.	UG201213022	Parag Rahangdale	SS
134.	UG201213023	Pise Indraneel Rajnish	SS
135.	UG201213024	Pragati Nagar	SS
136.	UG201213025	Prasoon	SS
137.	UG201213026	Priyanka Raju Masne	SS
138.	UG201213027	Purvi Tiwari	SS
139.	UG201213028	Raghunath Meena	SS
140.	UG201213029	Ravi Kumar	SS
141.	UG201213031	Rochika	SS
142.	UG201213033	Sharwan Songara	SS
143.	UG201213034	Shivam Choudhary	SS
144.	UG201213035	Shreshtha Garg	SS
145.	UG201213036	Sunil Suthar	SS
146.	UG201213037	Vibhav Sharma	SS

**B. Tech. Students, Batch 2013**

Sl. No.	Roll No	Name	Branch
1.	UG201310001	Aakash Asija	CSE
2.	UG201310002	Aayush Sharda	CSE
3.	UG201310003	Abhay Kumar Singh	CSE
4.	UG201310004	Aman	CSE
5.	UG201310005	Amit Jain	CSE
6.	UG201310006	Anjali Malav	CSE
7.	UG201310007	Archit Agrawal	CSE
8.	UG201310008	Arnav Chopra	CSE
9.	UG201310009	Arnav Jindal	CSE
10.	UG201310010	Avan Jayendra Rathod	CSE
11.	UG201310011	Bharti	CSE
12.	UG201310012	Bharti Arya	CSE
13.	UG201310013	Dishant Goyal	CSE
14.	UG201310014	Hemant Pratap Singh	CSE
15.	UG201310015	Kartik Singh	CSE
16.	UG201310016	Komanduri Sai Raghava	CSE
17.	UG201310017	Kushagra Surana	CSE
18.	UG201310018	Mahendra Kumar Jat	CSE
19.	UG201310019	Makarand Milind Gomashe	CSE
20.	UG201310020	Muttineni Navya	CSE
21.	UG201310021	Nikhil Jeevansingh Taji	CSE
22.	UG201310022	Nithin V.	CSE
23.	UG201310023	Piyush Yadav	CSE
24.	UG201310024	Priyank Arya	CSE
25.	UG201310025	Rajkumar Meena	CSE
26.	UG201310026	Ramkesh Meena	CSE
27.	UG201310027	Ravi Prakash Gupta	CSE
28.	UG201310028	Ravindra Kumar Saini	CSE
29.	UG201310029	Riteek Srivastav	CSE
30.	UG201310030	Shiv Bhagwan	CSE
31.	UG201310031	Shiv Kumar Sen	CSE
32.	UG201310032	Shiv Mohan	CSE
33.	UG201310033	Shubham Saxena	CSE
34.	UG201310035	Sourav Khoso	CSE
35.	UG201310036	Suresh Gehlot	CSE

36.	UG201310037	Tapan Bhatnagar	CSE
37.	UG201310038	Upendra Singh Chauhan	CSE
38.	UG201310039	Vaghela Rajan Arvindkumar	CSE
39.	UG201310040	Vaibhav Paliwal	CSE
40.	UG201310041	Vivek Lata	CSE
41.	UG201311001	Abhishek Agrawal	EE
42.	UG201311002	Abhishek Jaju	EE
43.	UG201311003	Abhishek Kumar Yadav	EE
44.	UG201311004	Amit Kumar	EE
45.	UG201311005	Anirudh Singh Shaktawat	EE
46.	UG201311006	Ankit Garg	EE
47.	UG201311007	Anshul Agarwal	EE
48.	UG201311008	Anshul Yadav	EE
49.	UG201311009	Ashok Kumar	EE
50.	UG201311010	Ashutosh Gupta	EE
51.	UG201311011	Ashutosh Vaishnav	EE
52.	UG201311012	Bhabhuta Ram	EE
53.	UG201311013	Dinesh Kumar Danwa	EE
54.	UG201311014	Dipender Singh Ridmalot	EE
55.	UG201311015	Ekant Kumar	EE
56.	UG201311016	Gurpinder Singh	EE
57.	UG201311017	Hede Tejan Rohit	EE
58.	UG201311018	Hemant Meena	EE
59.	UG201311019	Kanika Mahajan	EE
60.	UG201311020	Khushbu Saxena	EE
61.	UG201311021	Kshitij Sandeep Minocha	EE
62.	UG201311022	Mohit Gupta	EE
63.	UG201311023	Niranjan Sanodia	EE
64.	UG201311024	Paduru Kandarpa Sai	EE
65.	UG201311025	Prakhar Gupta	EE
66.	UG201311026	Rahul Jain	EE
67.	UG201311027	Rajendra Kumar Yadav	EE
68.	UG201311028	Ramdev Bhichar	EE
69.	UG201311029	Rishikesh Meena	EE
70.	UG201311030	Shraddha Garg	EE
71.	UG201311031	Siddhant Jain	EE
72.	UG201311032	Sisodiya Vrushali	EE

73.	UG201311033	Sneha Gupta	EE
74.	UG201311034	Sumit Pegwal	EE
75.	UG201311035	Sushant Gautam	EE
76.	UG201311036	Syed Afshan Ali	EE
77.	UG201311037	Talloju Jawahar	EE
78.	UG201311038	Tiloka Ram	EE
79.	UG201311039	V. Ashwin	EE
80.	UG201311040	Vaibhav Sharma	EE
81.	UG201312001	Aditya Saxena	ME
82.	UG201312002	Akhil Mehta	ME
83.	UG201312003	Amit Kumar	ME
84.	UG201312004	Ankit Raipuria	ME
85.	UG201312005	Arpit Kumar Gahlot	ME
86.	UG201312006	Ayush Raina	ME
87.	UG201312007	Balveer Danga	ME
88.	UG201312008	Bhaskarjyoti Barman	ME
89.	UG201312009	Dheeraj Kumar Sisodiya	ME
90.	UG201312010	Dron Airon	ME
91.	UG201312011	Hardik Jain	ME
92.	UG201312012	Harsh Vardhan Shrivastava	ME
93.	UG201312013	Himanshu Agrawal	ME
94.	UG201312014	Himanshu Kumar Singh	ME
95.	UG201312015	Himanshu Sharma	ME
96.	UG201312016	K. Lakshmi Phalguni	ME
97.	UG201312017	Kanuganti Vamshi	ME
98.	UG201312018	Lakshaya Bhatt	ME
99.	UG201312019	Lakshman Kumar	ME
100.	UG201312020	Lokesh Swami	ME
101.	UG201312021	Manish Rajendra Jadhav	ME
102.	UG201312022	Mayank Gupta	ME
103.	UG201312023	Mohammed Firoz	ME
104.	UG201312024	Mohit Agarwal	ME
105.	UG201312025	Patel Harsh Bhupendrabhai	ME
106.	UG201312026	Pradyuman Meena	ME
107.	UG201312027	Prakhar Srivastava	ME
108.	UG201312028	Pushpendra Dhurwe	ME
109.	UG201312029	Pushpendra Mishra	ME

110.	UG201312030	Rohan Kumar	ME
111.	UG201312031	Rohit Singh	ME
112.	UG201312032	Sachin	ME
113.	UG201312033	Shubham Shaurya	ME
114.	UG201312034	Subham Teji	ME
115.	UG201312035	Vaghela Nirav Jitendrakumar	ME
116.	UG201312036	Vaibhav Jain	ME
117.	UG201312037	Vikas Kumar	ME
118.	UG201312038	Vikrant Arora	ME
119.	UG201312039	Viraat Srivastava	ME
120.	UG201313002	Aman Ajmera	SS
121.	UG201313003	Anirudh Vyas	SS
122.	UG201313004	Arvind Saini	SS
123.	UG201313005	Ayush Bhaskar	SS
124.	UG201313006	Darapaneni Chandana	SS
125.	UG201313007	Deepika Jalli	SS
126.	UG201313008	Deepshi Garg	SS
127.	UG201313010	Gaikwad Sangram Dasharath	SS
128.	UG201313011	Gourav Singh	SS
129.	UG201313013	Jayant Carpenter	SS
130.	UG201313014	Jayant V. Khapre	SS
131.	UG201313015	Joshi Achyut Sanjay	SS
132.	UG201313016	Lingala Prasantha Kumar	SS
133.	UG201313017	Mandeep	SS
134.	UG201313018	Naresh Kumar Prajapati	SS
135.	UG201313019	P Manisha	SS
136.	UG201313020	Pankaj Panwar	SS
137.	UG201313021	Pankaj Yadav	SS
138.	UG201313023	Perla Suresh	SS
139.	UG201313024	Pinkesh Kumar	SS
140.	UG201313025	Prabhash Jain	SS
141.	UG201313026	Prakhar Mathur	SS
142.	UG201313027	Pramod Kumar	SS
143.	UG201313028	Prashant Kumar	SS
144.	UG201313029	Pulavarthy Anirudh	SS
145.	UG201313030	Rohil Surana	SS
146.	UG201313031	Rohit Kumar	SS

147.	UG201313032	Sangepu Ashrith	SS
148.	UG201313033	Saroj Prasad Chhatoi	SS
149.	UG201313034	Sheela Meena	SS
150.	UG201313035	Shipra Jain	SS
151.	UG201313036	Shubham Singh	SS
152.	UG201313037	Tarun Devireddy	SS
153.	UG201313038	Vishal Kumar	SS
154.	UG201314001	Abhishek Thombre	BISS
155.	UG201314002	Aditya Choudhary	BISS
156.	UG201314003	Ajay Kumar Kumawat	BISS
157.	UG201314004	Arnav Mishra	BISS
158.	UG201314005	Chandresh Kumar	BISS
159.	UG201314006	Dhanajit Brahma	BISS
160.	UG201314007	Himanshu Sikaria	BISS
161.	UG201314008	Jalaj Sharma	BISS
162.	UG201314010	Kaushtubh Kumar	BISS
163.	UG201314011	Kuldeep Meena	BISS
164.	UG201314012	Nisha Kumari	BISS
165.	UG201314013	Pranjal Singh	BISS
166.	UG201314014	Rakesh Yadav	BISS
167.	UG201314015	Sharath Challapalli	BISS
168.	UG201314017	Shrey Maheshwari	BISS
169.	UG201314018	Ujjwal Anand	BISS





## FINANCIAL POSITION

The MHRD has released a sum of Rs. 2601.85 Lakhs as Grant-in-Aid under Normal Plan Head and Rs. 3937.79 Lakh as opening balance as on 01-04-2013. The internal income of the Institute was Rs. 924.17 Lakh. The total Plan expenditure during the year was Rs. 5490.48 Lakh (Recurring Rs. 2238.02 Lakh and Non-Recurring Rs. 3252.45 Lakh).

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9



Annual Report  
2013-14