तृतीय दीक्षान्त समारोह

3rd Convocation

Saturday, 31st October, 2015

CHIEF GUEST

Prof. Narayanasami Sathyamurthy
Director, Indian Institute of Science Education & Research, Mohali

GUESTS OF HONOUR

Shri M. Natarajan
Chairman, Board of Governors
IIT Mandi

Prof. Timothy A. Gonsalves
Director
IIT Mandi

Indian Institute of Technology Mandi

Scaling the heights

Indian Institute of Technology Mandi

WELCOME TO IIT MANDI

Indian Institute of Technology (IIT) Mandi, the only IIT in the foothills of the splendid Himalayas, welcomes you to its third convocation ceremony on 31st October, 2015. As part of this convocation, 3 Ph.D. scholars, 7 M.S., and 105 B. Tech students would graduate from IIT Mandi.

IIT Mandi's main campus is developing fast as an eco-friendly and sustainable infrastructure campus. Construction of state-of-art facilities are under rapid progress. On 23rd September 2012, 108 B. Tech. 2nd year students, the Director, few research scholars, 20 faculty and staff with their families shifted to the main campus. Currently, all of the undergraduate students, the Director and 40% of the faculty members reside in the main campus. IIT Mandi is now home to a buzzing community of students, academicians and staff.

CONVOCATION PROGRAMME

31st October 2015, 3:30 PM to 5:30 PM

Arrival of Chief Guest in IIT Mandi Robe Room

Start of the Academic Procession

National Anthem

Felicitation to Dignitaries on Dias

Chairman, BoG Declares the Convocation "Open"

Welcome Speech and Report by the Director, IIT Mandi

Award of Degrees and Medals

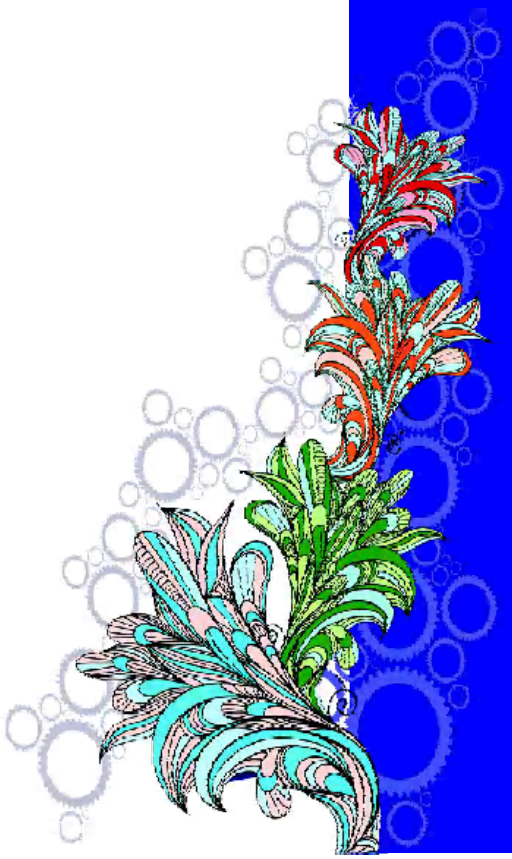
Oath Giving

Convocation Address by the Chief Guest

Closing of Convocation Ceremony

National Anthem

Return of Academic Procession



VISION & MISSION OF IIT MANDI

VISION

To be a leader in science and technology education, knowledge creation and innovation, in an India marching towards a just, inclusive and sustainable society.

MISSION

To create knowledge through team effort and individually for the benefit of society

To impart education to produce professionals capable of leading efforts towards innovative products and processes for the development of the Himalayan region in particular and our country and humanity in general.

To inculcate a spirit of entrepreneurship and to impart the ability to devise globally recognized solutions for the problems of society and industry, particularly in the fragile eco-system of the Himalayas.

To train teachers capable of inspiring the next generation of engineers, scientists and researchers.

To work intensely with industry in pursuit of the above goals of education and research, leading to the development of cutting edge and commercially-viable technologies.

To operate in an ambience marked by overriding respect for ability and merit.

SHRI M. NATARAJAN
CHAIRMAN, BOARD OF GOVERNORS
IIT MANDI

MESSAGE FROM THE CHAIRMAN BOARD OF GOVERNORS, IIT MANDI

Respected Chief Guest, **Prof. Sathyamurthy**, Director, IISER, Mohali, Members of Board of Governors, Members of Finance Committee, Members of Senate, **Prof. Timothy A. Gonsalves,** Director IIT Mandi and Directors of other IITs, members of the Faculty, distinguished invitees, research scholars, dear students, parents of degree recipients, members of IIT Mandi staff, ladies and gentlemen, a very good morning. As IIT Mandi's first Chairman, Board of Governors, it is my pleasure to welcome you all to the Institute's Third Convocation Ceremony.

Established in 2009, IIT Mandi remains, the torchbearer for the advancement of knowledge and education in science and technology in this beautiful Himalayan landscape. In a span of 6 years, the Institute has grown in strength, accommodating 752 students presently. Among these students, 487 students are in four different B. Tech. program, 41 students are in MS (by research) programs, 10 students in M. Tech. (Energy Materials) program, 30 students in M.Sc. (chemistry) program, 7 students in iPh.D. (Physics) program and 177 students in Ph.D. programs.

Indian Institute of Technology Mandi

Scaling the heights

You would be happy to hear that this year IIT Mandi shifted its B. Tech. program completely to its permanent campus at Kamand, where the campus is spread over 538 acres of forested land on the banks of river Uhl. However, the Institute continues to use its transit campus at Mandi to house a growing number of research scholars and research labs. I extend my thanks to the Government of Himachal Pradesh, for generously accommodating the Institute's transit campus on Vallabh College premises.

The construction activities of phase 1, comprising of new buildings for hostels, administrative block, mess, labs, and classrooms, are complete and these buildings are being occupied now by students, staff, and faculty; several of whom have already shifted to Kamand. While it may take another year's time for the campus to become fully residential, the academic and research activities are already proceeding smoothly on the Institute's new campus. Here, I convey my thanks to the Director, the faculty, staff and the enthusiastic students and researchers for pursuing their activities unmindful of inconveniences and hardships. I feel that it is the continued trust, encouragement and support of all that has kept IIT Mandi striving for and achieving betterment in all aspects.

Dear faculty, staff, and students, science and technology have been an integral part of Indian civilization and its culture and it has had unprecedented impact on the economic growth and social development of the country. In today's world, the science and technology education is becoming increasingly inter- and multi- disciplinary in nature. As you'd appreciate a number of real-world problems require engineers to work hand-in-hand with scientists and social scientists. We must further this inter-disciplinary research approach in our daily lives in order to find lasting solutions for the underprivileged of our society. In this regard, IIT Mandi has taken a number of initiatives. These include: broader schools compared to smaller departments, hands-on learning via inter-disciplinary practicums and projects, and flexible curriculums at the undergraduate and graduate levels. I am confident that the heterogeneous group of specialized faculty of IIT Mandi, with their innovative teaching and research, will help nurture inter-disciplinary skills among students of this Institute.

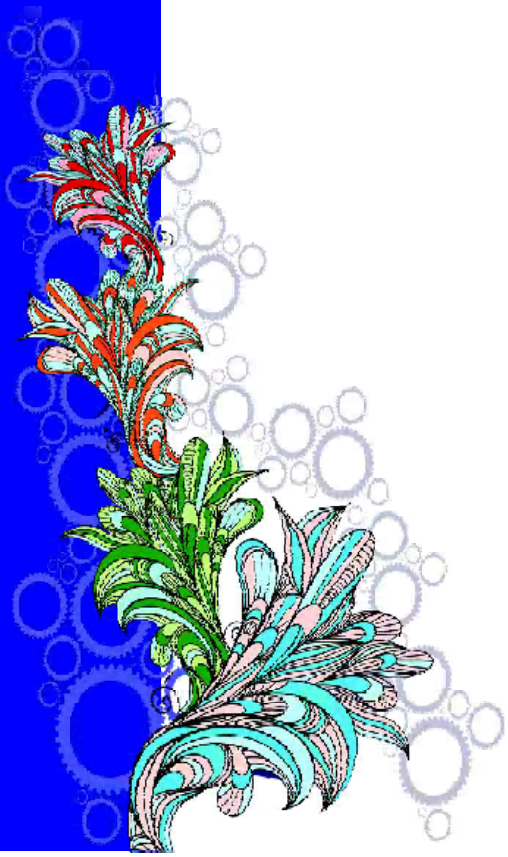
As a developing nation, India has several socio-economic challenges confronting its citizens. Some of these pressing challenges include, poverty and illiteracy, poor housing and living conditions; lack of proper food and nutrition; poor water and sanitation; and, insufficient healthcare, agriculture communication and transportation services. One option for us as Indians is to keep worrying about these challenges without attempting to solve them. However, another more promising option in front of us is to become agents of change and apply our gained knowledge related to engineering, science, and social science to find innovative and cost-effective solutions. I would encourage each of you graduating today to constantly look for problems around you and be the agents of change and innovation in the country.

In today's globalised world, knowledge and expertise have become the most precious commodities and will no longer be parted with, purely on economic considerations. Global business entities will have a definitive control over raw materials technologies, designs, test and evaluation equipment, specialised processes and equipment for manufacture. They would also control the investment patterns, market share, and logistics in collaborative efforts. Many of them, as the Indian manufacturers, have not invested adequately in Research & Development activities and the ability to absorb advanced technologies is constrained. They perceive our companies more as repeat production centers, with no worthwhile technological capabilities for global business!

Therefore, our industries need to invest in well qualified human resource, and in projects and technologies, which, besides promoting science, technology and Engineering development for manufacture, shall build the requisite skill sets, at the level of technologists, engineers and technicians for system integration, test and evaluation, and product support etc. Industry and technical institutions must jointly evolve innovative ways of using the students pursuing various B. Tech., M. Tech./M.S., and Ph.D. courses, in mutually beneficial ways. Progressively industries can consider exclusive Research and Development centers, to be setup jointly with Technical institutions, for sustained technological support, to remain a leader in their own business.

As you may have studied from History books, our civilization is an old one. Generations-after-generations, the Indian people have accumulated a rich heritage of traditional knowledge. I would encourage the graduating students to be proud of this socio-cultural heritage and use both modern and traditional knowledge to arrive at innovative solutions to some of our pressing societal challenges. Our country can only achieve development through the outstanding contributions of intelligent, well qualified and professionally committed work force like you, one which looks for opportunities in the face of challenges within a resource limited environment.

I take this opportunity to wish each one of you, graduating and post-graduating, the very best in the years ahead for professional accomplishments and for a happy, healthy, peaceful and purposeful life. May the Almighty bless each one of you and be with you in all your good deeds



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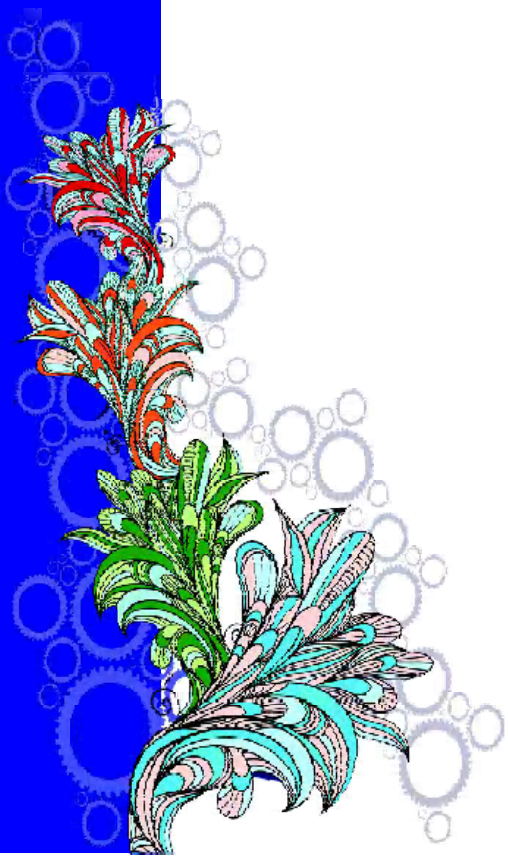


DIRECTOR'S REPORT

Prof. Timothy A. Gonsalves,
Director, IIT Mandi

Welcome

Prof. Sathyamurthy, Chief Guest of the Convocation; Mr. M. Natarajan, Chairman, Board of Governors; Members of the Board of Governors; Members of the Senate; distinguished guests; graduating students and their family members; my faculty and staff colleagues; dear students; media persons; and, ladies and gentlemen, it gives me great pleasure to extend a very warm welcome to you on the occasion of the 3rd Convocation of the Indian Institute of Technology Mandi.

It is a privilege to have among us Prof. Sathyamurthy, Director, IISER, Mohali. Prof. Sathyamurthy is an expert faculty in Chemistry, who served at IIT Kanpur for many years. Prof. Sathyamurthy's presence will inspire the graduating students in many different ways and make this day a memorable one, which the graduating batch will cherish for a lifetime.

It has been a challenging but rewarding journey of six years. IIT Mandi has grown steadily and surely towards its vision to become globally renowned while catering to the needs of society, both local and global. Thanks to yeoman efforts of our faculty, students, alumni and staff, IIT Mandi today is a full-fledged research University that is beginning to make its name in India and worldwide. Thanks are also due to the support of many well-wishers in India and abroad, and the Governments of India and Himachal Pradesh.

Academic Activities

Research

IIT Mandi places a great emphasis on the development of our research scholars. The first research scholars joined the Institute in October 2010, soon after the Institute started operating in Mandi. Despite the difficulties of doing globally competitive research in a nascent Institute, IIT Mandi has a total of 451 international publications up to this present academic year 2015. Our faculty published an average of 2.23 papers in refereed international journals in 2014. This is comparable to other IITs.

Today, a number of research scholars will be graduating with M.S. and Ph.D. degrees. These include:

1 Jai Prakash Tripathi

Thesis: Dynamical analysis of some Predator-Prey Models with the help and refuge.

Guides: Dr. Syed Abbas and Dr. Manoj Thakur

His thesis analyzed different types of predator-prey systems with different types of functional response and refuge. Numerical simulations were done using particular values of parameters to validate analytical findings

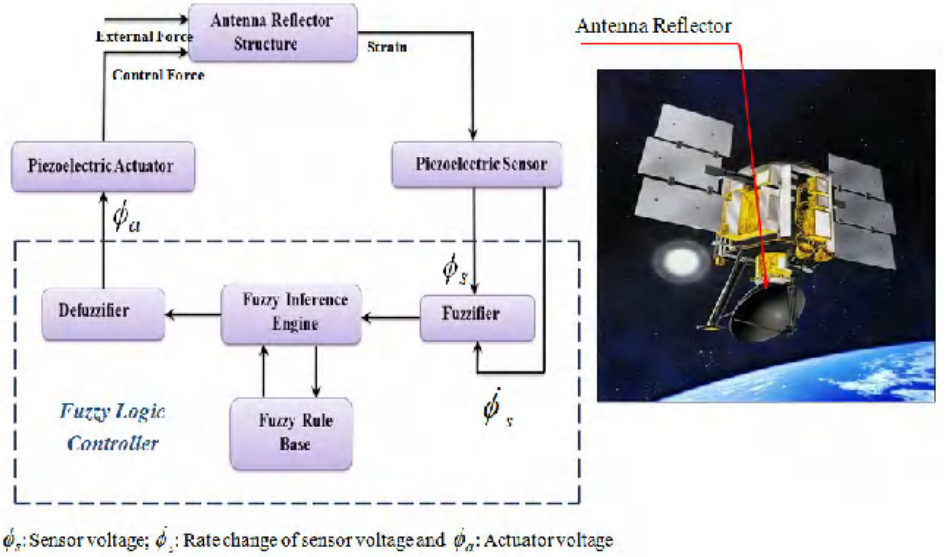
2. Mr. Anshul Sharma

   Thesis: Active Vibration Control of Smart Structure using Fuzzy Logic Controller and its Experimental Implementation.

   Guide: Dr. Rajeev Kumar

   He designed an effective active fuzzy logic controller for vibration suppression of antenna reflector used in satellite communication. Using FEM, he developed a non-conventional controller to control/suppress the vibration in real time.

Block Diagram of Smart Structure in close loop with fuzzy logic controller



ϕ_s: Sensor voltage; $\dot{\phi}_s$: Rate change of sensor voltage and ϕ_a: Actuator voltage

3. Mr. Sunil Dutt

   Thesis: Morphology controlled synthesis of polyaniline nanostructures and its nanocomposites using swollen liquid crystals as templates.

   Guide: Dr. Prem Filix Siril

   He worked on the development of swollen liquid crystals as 'soft' templates for the synthesis of nanostructures of polyaniline and its nanocomposites with metals, metal oxides, and graphene.

4. Mr. Ansul Kumar Mishra

   Thesis: Design and development of induction Machine Drive for performance Optimization.

   Guide: Dr. Bharat Singh Rajpurohit.

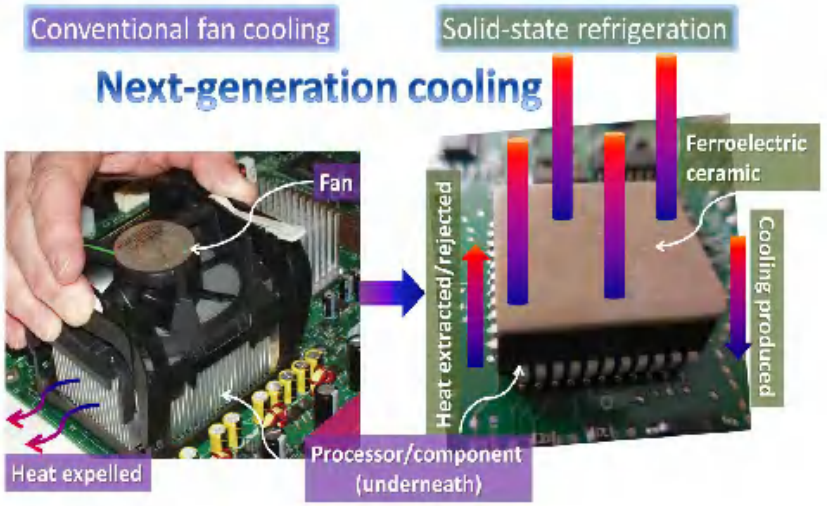
He worked on design and development of Induction Machine drive for performance optimization in terms of torque ripple minimization and power factor improvement.

5. Mr. Aditya Chauhan

   Thesis: Stress Mediated Tuning of Ferroelectric Properties in 0.68 Pb (Mn1/3 Nb2/3) O3-0.32PbTiO3 Single Crystals.

   Guide: Dr. Rahul Vaish

   His work mainly focused on development of suitable (ferroelectric) ceramics for energy applications with primary applications for next generation cooling/refrigeration.



Microprocessor Cooling via Ferroelectric ceramic

6. Mr. Ankit Sharma

   Thesis: Numerical Simulation of Radiation Losses in a Decaying Laser Spark Using LBL Method.

   Guide: Dr. Anil Kishan

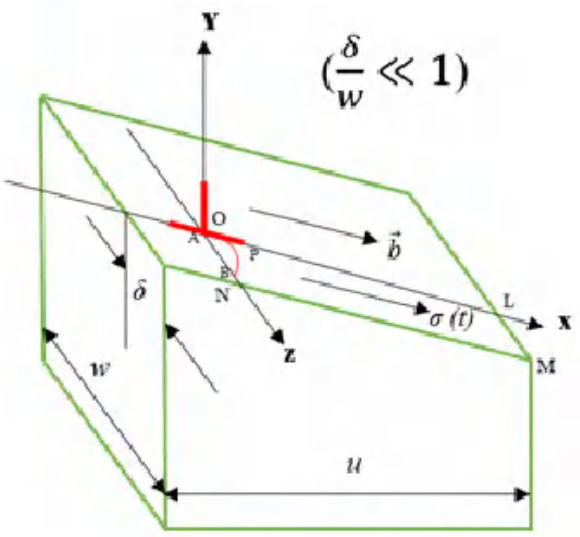
   His thesis focused on an investigation to numerically simulate the radiation losses which occur due to laser energy deposition.

7. Mr. Anmol Kothari

   Thesis: Effect of Strain Hardening Parameters on Deformation Induced Electromagnetic Radiation from Metals and Alloys.

   Guide: Dr. Vishal Singh Chauhan and Dr. Rajeev Kumar

   The thesis emphasized the effect of strain hardening parameters and the Peierls' stress on electromagnetic radiation. Idealized model representing a vibrating dislocation during plastic deformation.



Idealized model representing a vibrating dislocation during plastic deformation

8. Mr. Deepak Kumar Sharma

   Thesis: High-k TiOxNy based MFIS Structure for Next Generation Applications.

   Guide: Dr. Satinder Kumar Sharma

   He worked on next generation Ferroelectric Random Access Memory (FeRAM) because of its potential advantages such as fast read and write time and low voltage operations than other emerging non-volatile memories

9. Mr. Sujeet Kumar

   Thesis: Design and Implementation of Crossbar Switch in NS-2.

   Guide: Dr. Samar Agnihotri

   He worked on Packet switches, which include network switches, routers, bridges, etc. to improve and maintain the high performance of the Internet.

10. Mr. Tarun Kumar

    Thesis: Finite Element Modeling and Analysis of a Bistable Piezoelectric Energy Harvester.

    Guide: Dr. Rajeev Kumar

    Tarun worked on a Bistable Piezoelectric Energy Harvester for lightweight electronic devices without traditional batteries. The harvester has been modeled using Finite Element Method.

Achievement and Awards

Exceptional students flourish under exceptional faculty. Our faculty has received a number of awards and honors. Some of the notable achievements in the past 6 months:

1. Dr. Shubahjit Roy Chowdhury was nominated as Coordinator of Wearable Devices, Embedded Systems, and Computer Aided Diagnosis theme under Health Care Sector of the pan-IIT-IISc project IMPRINT, MHRD in 2015.
2. Dr. Ramna Thakur got a 6-month Research Fellowship under the ERASMUS MUNDUS program to the Oxford University, UK in 2015.
3. Dr. Devika Sethi delivered an invited lecture titled, "The Ban Formula: Non-Indian Authors and the Colonial State in the 1920s-30s", at the Indian Council of Historical Research (ICHR), New Delhi, in June, 2015.
4. Dr. Varun Dutt, Palvi Aggarwal, Antra Grover, Saumya Singh and Zahid Maqbool won the best paper award at the IEEE International Conference on Cyber Situational Awareness, Data Analytics and Assessment (CyberSA 2015), June 2015, London, UK, 2015.

5. Dr. Varun Dutt was nominated as the Review Editor of *Frontiers in Cognitive Science* journal in July, 2015.

B.Tech. Program

Despite the challenges of constructing and occupying our permanent campus, the academic activities of the Institute have flourished. Currently, we have 752 students including 487 students in four different B. Tech. Programmes.

Achievements of Graduating Batch

Pradeep Seervi tops GATE (EE), 2015

Pradeep Servi topped the GATE-2015 (EE) exam, in competition with 1.26 lacs candidates nationwide. A number of students have opted for higher studies, at IITs, universities abroad and management institutes. Shubham Ajmera of the graduating B. Tech. batch became the 1st student from IIT Mandi to get a direct job offer from abroad, landing a job with Google, California. Kshitiz Saraswat got selected as Air Force officer cadet becoming the first of our students to join the Defence Forces.

The third placement of IIT Mandi students took place in 2015. Despite its remote location many top companies visited IIT Mandi and hired our students.

These companies included Altair Engineering, Benchmark, CAD Studio, Amazon, Cisco, Cognizant, DRDO, Finisar, HPCL, Infosys, Microsoft, Nucleus Software, Samsung, Sigmoid Analytics, Tescra, eClerx, IP Infusion, Khosla Labs, Amber Group, L&T, TCS, Tata Motors and several others. In all, 90% of eligible students from were placed.

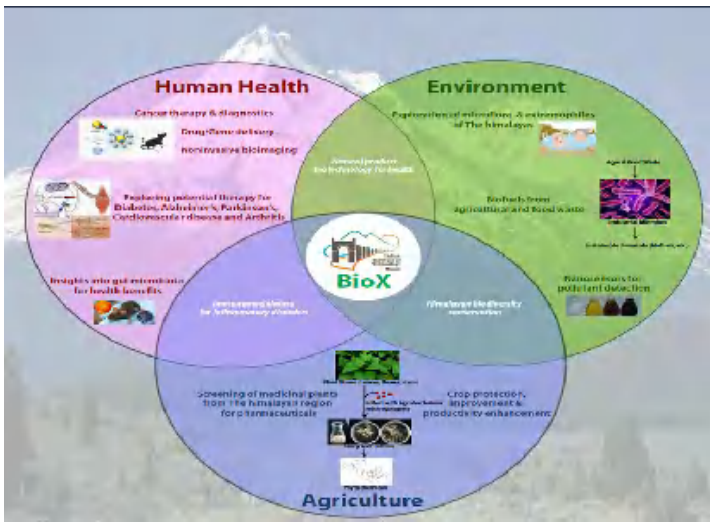
New PG Program

In 2014, IIT Mandi expanded the breadth of its academic programs by starting two Masters programmes: M. Tech. in Energy Materials and M.Sc. in Chemistry. This year, the Institute started an integrated M.Sc. - Ph.D. program in Physics (iPh.D. Physics). Currently, the proportion of PG students (including MS and PhD) in the Institute is about 35%, with UGs comprising about 65%.

Civil Engineering

In addition, IIT Mandi started research in Infrastructure and Civil Engineering for mountain regions, and a B. Tech. program in Civil Engineering with 25 undergraduate students joining in August 2015. This program was carefully planned in a series of 3 brainstorming workshops held between April, 2014 and March, 2015. Civil engineering experts from academia and industry from India and Germany participated in these workshops. Experts included Prof. V.S. Raju, former Director, IIT-Delhi and one of India's foremost experts on foundation design; and, Prof. Balthasar Novak, University of Stuttgart, an expert in structural design. Already, 4 young faculty have joined and more are expected shortly.

BioX



IIT Mandi has expanded in BioX with new faculty joining in different BioX areas. These areas include Human Health, Environment, and Agriculture. Here, the Institute's focus is on developing technologies for improving agricultural practices for farmers in the Himalayan region and for biomedical applications

Teaching

In 2014, the Design Practicum (DP) saw a number of successful projects from the graduating batch of students. Some of these projects included: Low cost 3D Printer, Intelligent Parking System, and Volumetric 3D LED Display. The low cost 3D printer project won the 1st prize in the 2014 DP Open House.

A low-cost 3D Printer – Design Practicum Project by graduating batch

In 2014, the second Interactive Socio-Technical Practicum (ISTP) was conducted at IIT Mandi with several of the graduating students participating in it. As part of this course, the graduating students worked on socio-technical problems under the guidance of Institute faculty. Some of these projects included: Study of landslides in hilly terrain, Garbage disposal in Mandi city and Milk Adulteration in Mandi district. These projects and several others were presented at an Open House held in May, 2014.

The project titled, "Garbage Disposal in Mandi City," by Jyoti Lakra, Vishnu Priyanka, Saket Panwar, Gnaneshwar Reddy, and Bhupesh Kumar under the mentorship of Dr. Arti Kashyap won the 1st prize in the 2014 ISTP Open House. The project titled, "Milk Adulteration in Mandi Town and Surrounding Villages," by Ritesh Rana, Harkaran Singh, Abhinav Singh, and Surendra Anuragi under the mentorship of Dr. P. C. Ravikumar and Dr. Ramna Thakur won the 2nd prize in the 2014 ISTP Open House. Finally, the project titled, "Construction in Hilly Areas," by Abhay Chowdary, Nishank Kumar Gupta, Mohit Rawat, Ankit Srivastava, and Omair Azmi under the mentorship of Dr. Aniruddha Chakraborty won the 3rd prize in the 2014 ISTP Open House.

MTP: Brain-Controlled Robotic Arm

Several of the graduating batch of students participated in their capstone Major Technical Projects (MTPs) in 2014-15. Among the Computer Science and Engineering MTPs, one of the noteworthy projects included, "Human activity recognition," by Pranav Kumar Singh and Syed Jafar Shahid Rizvi (Mentor: Dr. Arnav Bhavsar).

Among the Electrical Engineering MTPs, one of the noteworthy projects included, "Connected DC Grid System," by Nagarjun Narayan and Suleman Alam (Mentor: Prof. Ramesh Oruganti). Finally, among the Mechanical Engineering MTPs, one of the noteworthy projects included, "Brain-Controlled Robotic Arm," By Ankit Gupta and Chamundeshwar Nadh (Mentor: Dr. Rajeev Kumar).

Teaching is one of the pillars of IIT Mandi. To improve the standards of teaching and learning, IIT Mandi has taken the help of the Teaching and Learning Centre (TLC) of IIT Madras to conduct several workshops on teaching for its young faculty members during 2014-15.

International Linkages

IIT Mandi provides international Bachelor's, Master's and Ph.D. students with possibilities for spending up to a year at IIT Mandi. By visiting IIT Mandi, international students can work with the Institute's faculty on collaborative research topics involving institutional, regional, and national interests. IIT Mandi also provides possibilities for faculty members at international universities to spend some time at the Institute for teaching and research.

Between April and August 2014, IIT Mandi had 2 students spend a semester from HES-SO, Haute école du paysage, d'ingénierie et d'architecture de Genève (HEPIA). These two students from HEPIA worked on their capstone projects under the mentorship of IIT Mandi faculty. In addition, in 2014, IIT Mandi had one student each from the following institutions: University of Durham, U.K.; University of Benin, Nigeria; Georg-August Universität Göttingen, Germany; and, Asian Institute of Technology, Thailand. Recently, in 2015, IIT Mandi also had two students visit from Rose-Hulman Institute of Technology, USA.

IIT Mandi and TU9, Germany jointly organized a collaborative workshop on "Emerging Semiconductor Technologies (IECRAIETS – 2014)" at the Institute's Kamand Campus in September, 2014. The objective of this collaborative confluence was to involve experts from semiconductor fields, especially micro/nano electronics, VLSI technology, and explore possible future collaborations.

Furthermore, IIT Mandi's graduate and undergraduate students have visited several EU institutions under academic exchange in the last 1-year. These visits include: 12 students to TU9 and 1 to Friedrich-Alexander University Erlangen-Nürnberg in Germany; 5 students to Blekinge Institute of Technology, Karlskrona, Sweden; and 1 student as a part of Indian Government's Youth Delegation to China. Two of these students were awarded the 2014 DAAD-WISE scholarship. In addition, one PhD student went to Oxford University with a UK EXPERTS4Asia scholarship.

We initiated long-term faculty exchange programmes with the TU9 in Germany, with generous funding from MHD and the German BMBF. Three faculty from IIT Mandi each spent 2-3 months with their collaborators in Stuttgart University and TU-Berlin. German Professors from Stuttgart University and Karlsruhe Institute of Technology visited IIT Mandi. A further 3 such exchange visits have been approved for 2015. In addition, Dr. Astrid Kiehn (IIIT Delhi) and Prof. Mark Yoder (Rose-Hulman Institute of Technology, USA) visited IIT Mandi for 1-semester each in 2015.

In 2014, a MoU was signed between the Consortium of Finish Higher Education Institutions, Finland and Indian Institutes of Technology, India (including IIT Mandi). The MoU covers research collaboration, and exchange of faculty and students.

Sponsored Research and Industry Interactions

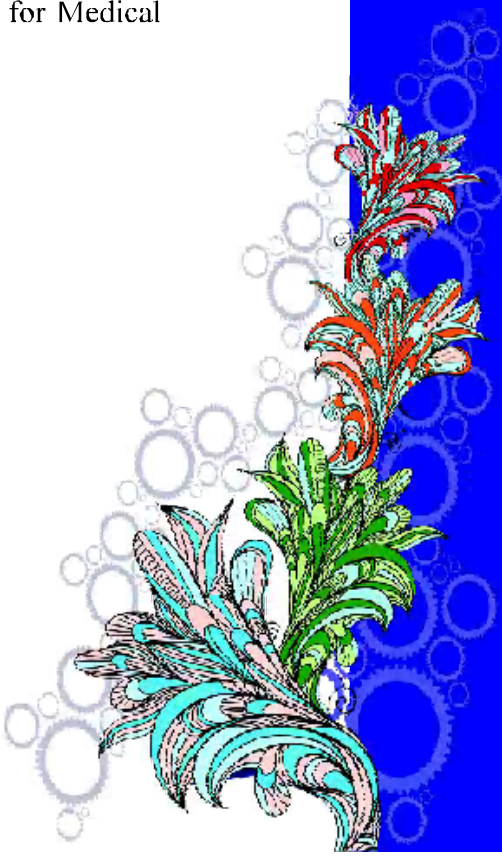
Most of our faculties are active in sponsored research. Much of the funding is from Indian Government agencies as DBT and DST; however, a few faculties have funding from international agencies and industry too.

To encourage industry interactions, IIT hosted the 2nd Industry Academia Conclave jointly with CII Northern Region at Kamand. About 20 participants came from regional and national industries. This conclave was instrumental in developing R&D interactions and in opening up placement and internship opportunities for our students.

During the year, enhanced industry-sponsored R&D has included AIndra, Bangalore (medical image-processing) and Purdue Pharma, USA (decision-making in the Pharmaceutical industry). The latter has funded a project worth close to US$100,000 over a 3 year period. The Intel Project, sponsored by Intel, USA to the tune of $350,000 has entered its 3rd year. Now, state-of-art results have been achieved and Intel is considering further funding.

The first patent was filed by IIT Mandi. Dr. Om Prakash Singh and his students have claimed protection for their invention Dye Sensitized Solar Panels using 3D printing technique.

IIT Mandi faculties were active in organizing workshops and conferences for bringing industry and academia together. A three-day Workshop was held on May 2015, on theme, "Computational Intelligence Techniques for Smart Grid Applications". The main objective of this Workshop was to discuss the various computational intelligence techniques that can be applied to Smart Grids. A workshop on Machine Learning for Medical Image Analysis (WMLMIA 2015) was held in June 2015.



The workshop focused on improving the awareness of research in medical image analysis, among young researchers, both from theoretical and practical perspectives. It also aimed to facilitate networking of domain experts in machine learning and medical image analysis from academia, industry and hospitals.

Campus Development

The year 2014-15 saw IIT Mandi completing 6 years and consolidating our achievement as the only new IIT to develop and occupy its new campus. All of our B. Tech. students and over half the PG students, 35% of the faculty and a number of staff live and work in Kamand. The campus has all the basic amenities of a residential IIT with the addition of some sports fields and several canteens. Currently, 20,000 square metres of space is in use. This consists of a mix of renovated buildings, pre-engineered LGSF buildings that are economical and well insulated, and some regular masonry buildings. The pace of construction has picked up with the help of NBCC and CPWD. We expect most of the remaining students to shift to Kamand by early 2016, along with a substantial fraction of the 90+ faculty and 100+ staff.

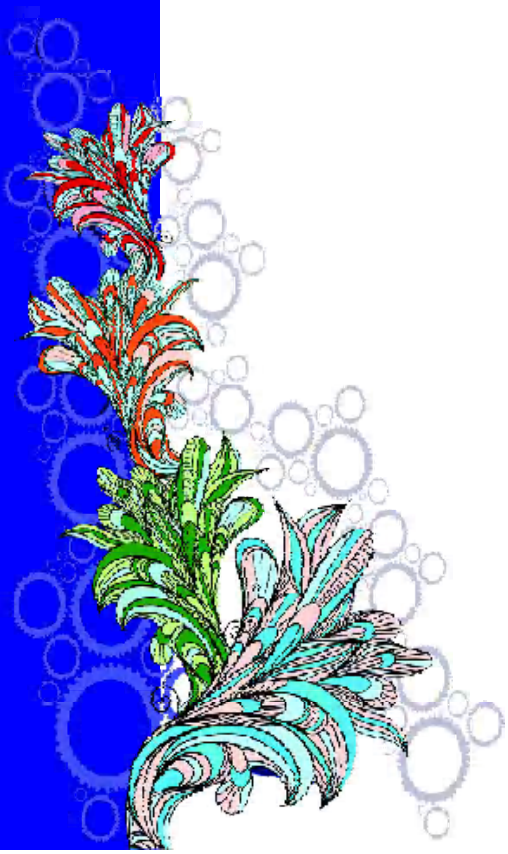
About 1,50,000 square metres of space is being constructed primarily in the North Campus using RCC technology. This space will cater to about 2,000 students, serving the Institute for the next 5 years. It will become available from early 2016 to late 2017.

Situated in a pristine Himalayan river valley, in 2014, IIT Mandi followed its "Green Agenda" by setting up a Green Panel. The campus is planned such that most movement will be on foot or on bicycles. Furthermore, in order to preserve the Bio-diversity of the Kamand campus, a project on ethno-botanical mapping of the IIT Mandi vicinity has been started.

IIT Mandi North and South Campuses in 2015

This project aims at mapping the existing plant species and identification of unique medicinal plants within 10-12 km of area surrounding the Kamand campus. A first-aid Herbal garden has been created to provide herbal products to campus residents for health and cooking. A Botanical Garden cum Children's Park has been started to popularize native flora of this area. These gardens will also serve the needs of some of our BioX researchers.

The Kamand campus already possesses basic facilities like banks, medical unit, day care, indoor and outdoor sports facilities, shops and canteens. In 2014, we started the IIT Mandi Takshila School. Currently, the School has over 40 students in classes ranging from KG to 4th Std. As a gesture of our commitment to the development of the Kamand Valley, about 75% students are from nearby villages, many of them with scholarships provided by IIT.



AAGAZ '14 Success

Extracurricular

Developing extracurricular facilities on our permanent campus at Kamand is a priority. Currently, the Kamand campus has volleyball, tennis, basketball, badminton, football, and cricket facilities on its South campus. Dr. S.N. Jha recently joined IIT Mandi as Principal Sports Officer to lead student's sports activities at Kamand. He had been working in the physical Education section at IIT Bombay for over 30 years and his experience is proving invaluable in improving the sports and outdoor activities at IIT Mandi. Thanks to Dr. Jha's efforts, I'm confident that we'll win several medals in the Inter-IIT Meet in December 2015!

In sports, the girls' Table Tennis Team won the first medal (bronze) for IIT Mandi in the 50th Inter-IIT Students' Sports Meet, 2014 held at IIT Bombay during December, 2014. In the 22nd Inter-IIT Staff Meet, IIT Mandi continued its leadership in cricket by winning the bronze medal.

Beyond sports, there is a music room and a Student Lounge, where students can perfect their extracurricular skills. In November, 2014, the Science & Technology Council (STC), IIT Mandi organised Utkarsh 2014, the first Intra-college technical festival. Also, in the same month, the Cultural Society organised YUVYOM 2014, the first youth festival organised on the Institute's Kamand campus.

Inter IIT Tech Meet'15

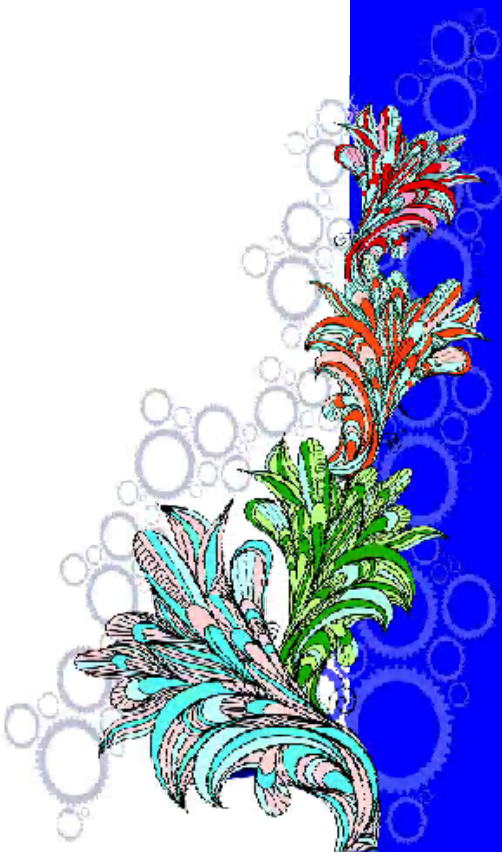
Beyond these intra-IIT events, students from IIT Mandi won a gold medal in the "Data Analytics" event and silver medal in the events "Hardware Modelling" and "Tech-Biz Quiz" in 3rd Inter-IIT Tech Meet, held at IIT Kharagpur in January, 2015. IIT Mandi obtained the 3rd place in the overall General Championship Tally, beating a number of Institutes including the older IITs. The graduating batch has several students who were a part of the 3rd Inter-IIT Tech Meet. Inspired by this success, IIT Mandi will be hosting the 4th Inter-IIT Tech Meet in January 2016.

It is clear that our students, staff, and faculty are an outstanding lot, not only in academics, but also in extracurricular activities. In this Convocation, we are awarding prizes to those students who stand out exceptionally. Here, I congratulate those students who are the proud recipients of IIT Mandi's Institute awards, and all those who have set the highest standards for themselves even if they have not won awards.

Conclusion

You graduates are now embarking on a new phase in your lives. In the years ahead, you will often recall moments you have known at our IIT, the friendships made, and the wise words and helping hands of your teachers. You are going forth into the world to make your mark, and I hope to serve your fellow humans, especially those less advantaged than you.

Your successes in the future will bring satisfaction to you and enhance the prestige of your *alma mater*. May the world welcome you with open arms and may you leave the world a better place for your passage through it.



SCHOOLS

Currently, IIT Mandi has four schools. The institute encourages multi- and inter- disciplinary research for a balanced growth of its students and scholars. Hence, the labs and other resources of the schools are mixed and shared with each other. Subject specialist faculties are proactively dedicated to improve the schools continuously. IIT Mandi has national and international linkages and practices collaborations with leading and developing institutes and industries.

School of Computing and Electrical Engineering

This School brings together faculty involved in the key technologies of the Information Age. These include computer science, cognitive science, communication, VLSI and microelectronics, and electrical energy. The underlying fundamental principles are machine learning, information theory, theory of computation, communication theory, quantum mechanics and the laws of electromagnetism.

Faculty members and their specialisation

Dr. Anil K. Sao (Chairperson; Image processing)

Dr. Samar Agnihotri (Information Theory, Communication Complexity, Wireless Communications)

Dr. Arnav Bhavsar (Image Analysis, Computer Vision)

Prof. B. D. Chaudhary (Software Technology)

Dr. Dileep A. D. (Pattern Recognition, Kernel Methods for Pattern Analysis, Machine Learning, Speech Technology, Computer Vision)

Dr. Subashish Datta (Control Theory)

Dr. Yvonne Dittrich (Software Development and Software Engineering)

Dr. Abhishek Dixit (Internet Networks and Protocols)

Dr. Varun Dutt (Artificial Intelligence, Human-Computer Interaction, Judgment and Decision Making, Environmental Decision Making)

Dr. Kunal Ghosh (Solar Photovoltaics)

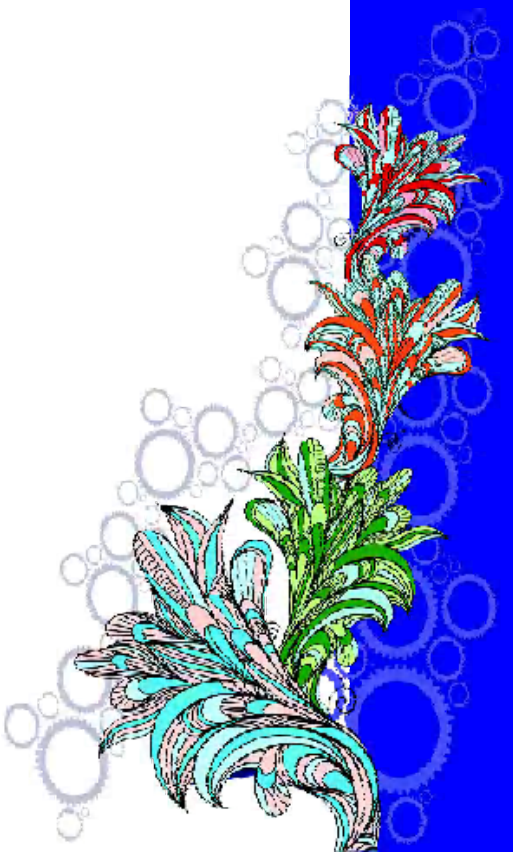
Prof. Timothy A. Gonsalves (Computer networks and Distributed Software Systems)

Dr. Tushar Jain (Control Theory, Fault-tolerant Control, Industrial-Process Control)

Dr. Sriram Kailasam (Distributed Systems with emphasis on Cloud Computing)

Dr. Arti Kashyap (Magnetism and Magnetic Materials)

Dr. Bhakti Madhav Joshi (AC Drives and Control)



Dr. Aditya Nigam (Biometrics, Computer Vision, Image Processing)

Dr. Ramesh Oruganti (Power Electronics, Solar Photovoltaic Energy Systems)

Dr. Maben Rabi (Control Systems)

Dr. Padmanabhan Rajan (Speech Processing, Speaker Recognition)

Dr. Bharat Singh Rajpurohit (Power Electronics Application to Power Systems)

Dr. Renu M. Rameshan (Image Processing)

Dr. Shubhajit Roy Chowdhury (Biomedical Embedded Systems, Non-Invasive Diagnostic Systems, Near Infrared Spectroscopy, VLSI Architectures)

Dr. Satinder Kumar Sharma (Nanoelectronics, Sensors, Photovoltaic & Self Assembly)

Dr. Satyajit Thakor (Communication Theory, Information Theory, Network Coding)

Dr. Hitesh Shrimali (Analog and Mixed Signal VLSI design, Analog-to-Digital Converters & Design of Radiation Hard Circuits for Space Applications)

Dr. Mark A. Yoder (Embedded processing, DSP)

School of Basic Sciences

This School includes Mathematics, Physics, Chemistry and Life-Sciences. While some faculty may work in pure research, others work on applied research in collaboration with colleagues in the Engineering Schools.

Faculty members and their specialisation

Dr. Prasanth P. Jose (Chairperson; Soft Condensed Matter Physics)

Dr. Subrata Ghosh (Organic Chemistry)

Dr. Syed Abbas (Differential Equations and Ecological Modelling)

Dr. Sarita Azad (Statistical Time Series Analysis)

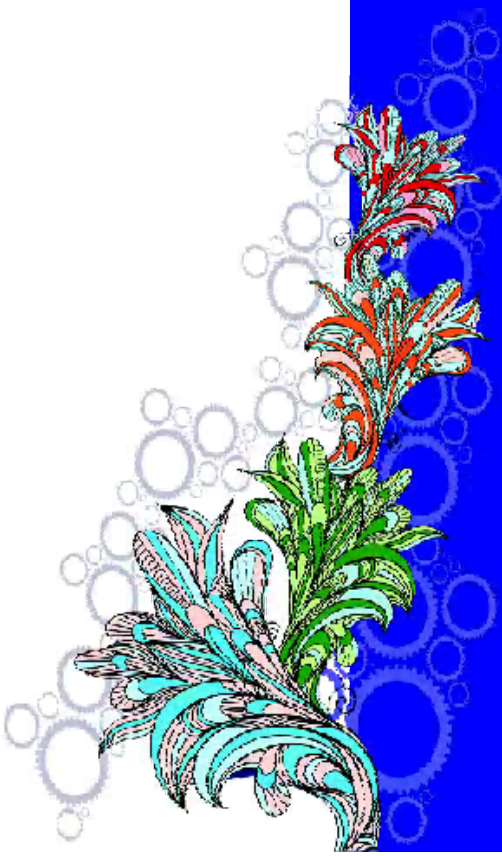
Dr. A. Chakraborty (Theoretical Chemistry)

Dr. P. C. Deshmukh (Atomic and Molecular Physics)

Dr. Abhimanew Dhir (Supramolecular Chemistry)

Dr. Pratibha Garg (Topology, Functions Spaces, Measure Theory)

Dr. Rajanish Giri (Biophysics and Protein Folding, Intrinsically Disordered Proteins, Chimeric Antigen Receptor based Cancer Immunotherapy, Protein Engineering)



Dr. Kenneth Gonsalves (Materials Synthesis)

Dr. Aditi Halder (Design and Development of New Functional Nanomaterials for the Application of Renewable Energy, Nano-Electronics and Sensors)

Dr. Amit Jaiswal (Nano-Biotechnology)

Dr. Arti Kashyap (Magnetism and Magnetic Materials)

Dr. Venkata Krishnan (Materials Chemistry, X-ray Science)

Dr. Pradeep Kumar (Raman and Infrared Spectroscopy)

Dr. Nitu Kumari (Applied Mathematics)

Dr. Lalit Malhotra (Thin Film Physics and Technology)

Dr. Shyam Kumar Masakapalli (Metabolic Systems Biology - Fluxomics and Metabolomics, Plant and Microbial Metabolism, NMR and GC- MS)

Dr. Prosenjit Mondal (Molecular Endocrinology and Metabolism)

Dr. Kaustav Mukherjee (Experimental Condensed Matter Physics)

Dr. Chayan K. Nandi (Physical Chemistry)

Dr. Suman Kalyan Pal (Fast and Ultrafast Laser Spectroscopy)

Dr. Pradeep Parameswaran (Inorganic, Materials, Nano-Chemistry)

Dr. Pradyumna Kumar Pathak (Quantum Optics, Quantum Information, and Nanophotonics)

Dr. Amit Prasad (Immunology/Microbiology)

Dr. Bindu Radhamany (X-ray Spectroscopy)

Dr. P. C. Ravikumar (Organic Chemistry)

Dr. Rajendra K. Ray (Computational Fluid Dynamics, Numerical Methods for PDEs)

Dr. Ramesh Chand Sawhney (Endocrinology & Metabolism, High Altitude Physiology, Herbal Medicines)

Dr. Prem Felix Siril (Chemistry of Nanomaterials)

Dr. Ajay Soni (Nanomaterials and Experimental Condense Matter Physics)

Dr. Tulika Prakash Srivastava (Bioinformatics, Systems Biology, Metagenomics, Comparative Genomics, Protein Function, and Structural Analysis)

Dr. Manoj Thakur (Optimization, Soft Computing, Machine Learning with applications to Computational Finance, Protein Function and Structural Analysis)

Dr. Muslim Malik (Differential Equations)

Dr. Hari Varma (Atomic and Molecular Physics)

Dr. C. S. Yadav (Low Temperature Physics)

School of Engineering

This School covers tangible physical structures and artifacts such as transport vehicles, transport systems, machines, materials, manufacturing, designs etc. The underlying principles are classical mechanics, atomic physics, and thermodynamics. Many faculty from the traditional departments of Mechanical, Civil, Aerospace, and Metallurgy Engineering are a part of this School.

Faculty members and their specialisation

Dr. Rajeev Kumar (Chairperson; Solid Mechanics, Vibration, FEM, Optimization)

Dr. Rahul Vaish (Glasses & Glass-ceramics)

Dr. Viswanath Balakrishnan (Growth of Functional Materials/Thin Films, Electron Microscopy & in-situ Exploration of structure-property Relationships)

Dr. Satish Chandra Jain (Mechanical Engineering, Machine Design, Tribology, Vibration and Noise, Computer Aided Design)

Dr. Vishal Singh Chauhan (Design Engg., Electromagnetic Radiation during Deformation of metals and alloys, Solid Mechanics, FEM)

Dr. Atul Dhar (Alternative Fuels & Emission Control)

Dr. Rajesh Ghosh (Solid Mechanics, Biomechanics, Finite Element Analysis)

Dr. Arpan Gupta (Acoustics, Vibration, Bio-mechanics, Computational methods - FEM, CFD, Lattice Boltzmann Method)

Dr. Arpan Gupta (Acoustics, Vibration, Bio-mechanics, Computational Methods - FEM, CFD, Lattice Boltzmann Method)

Dr. Prasun Jana (Solid Mechanics, Vibration Damping, Composites, Finite Element Analysis, Plate Buckling)

Dr. Dhiraj V. Patil (Lattice-Boltzmann Method, Multi-physics, Multiphase Flows and Complex Fluids Rheology)

Dr. Satvasheel Powar (Dye-sensitized Solar Cells, Perovskite Solar Cells)

Dr. Venkata Uday Kala (Geotechnical Engineering)

Dr. Sunil R. Kale (Heat Transfer, Fluid Mechanics, Particle-laden flows, Combustion and Energy Conversion)

Dr. P. Anil Kishan (Computational Fluid Dynamics)

Dr. Pradeep Kumar (Fluid and Thermal Science)

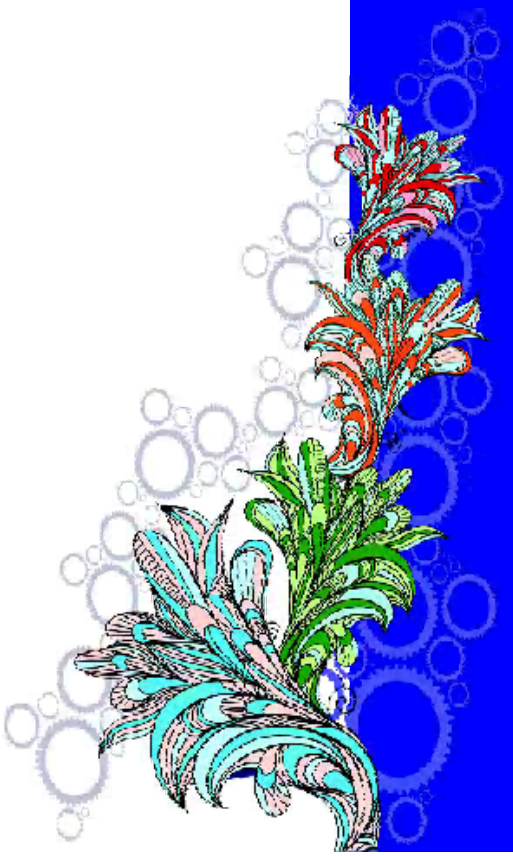
Prof. Shripad P. Mahulikar (Heat Transfer, Thermodynamics, Aerospace)

Dr. B. K. Mishra (Composite Materials, Fracture mechanics, Wave Propagation)

Dr. Sudhir Kumar Pandey (Condensed Matter Physics & Material Science)

Dr. Jaspreet Kaur Randhawa (Nanomaterials)

Dr. Kaustav Sarkar (Durability Design of Concrete, Sustainable Concrete Production, Finite-Element Analysis, Soft-computing)



Dr. Harish Sivasankaran (Nanoscale Thermal Transport)

Dr. Rajneesh Sharma (Image based Finite element Methods, Cohesive Zone Modeling, Insitu Characterization of Fracture Process, Homogenization and Multiscale Modeling, Analysis and Design of Composites under Extreme Loading Environments)

Dr. Subrata Ray (Physical Metallurgy, Composites and Tribology)

Dr. Dericks Praise Shukla (Remote Sensing & GIS, Hydro-geo-chemistry, Water contamination mostly as and other Heavy metals, Natural Hazards Assessment and Mapping)

Dr. Om Prakash Singh (Heat and Mass Transfer, Double Diffusive convection, IC Engines)

Dr. Deepak Swami (Groundwater Flow and Transport Modelling, Water Resources Development and Management, Disaster Mitigation specially related to Floods and Flash flood)

Dr. Mohammad Talha (Solid Mechanics, Composite Structures, Functionally Graded Materials, Structural Mechanics, Uncertainty Quantification and Imperfection Sensitivity in Composites)

School of Humanities and Social Sciences

Modern engineers work in teams to create, improve and apply technology for the good of society. A good understanding of language, culture, sociology, economics, management, ecology, etc. is essential for the well-rounded engineer and development of technologies, products and processes that will see widespread use. This School is thus an important part of IIT Mandi.

Faculty members and their specialisation

Dr. Rajeshwari Dutt (Chairperson; Latin America, Social and Cultural History, Indigenous studies)

Dr. Ashok Kumar M (Sociology of Religion, Caste and Christianity in India)

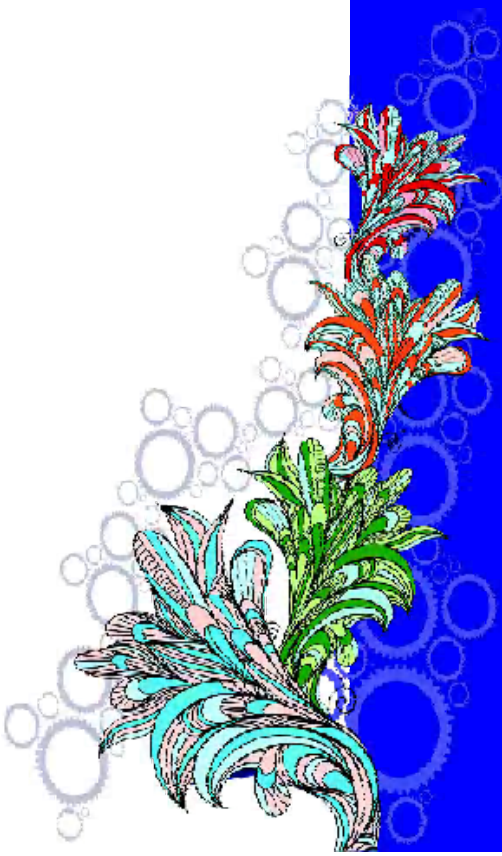
Dr. Aruna Bommareddi (Comparative Literature, Indian Literatures in English)

Dr. Manu V. Devadevan (Literary practices in South Asia, Political and Economic Processes in Pre-modern South Asia & South Asian Epigraphy)

Ms. Sara Ladas (German and Roman Philology)

Dr. Varun Dutt (Artificial Intelligence, Human-Computer Interaction, Judgment and Decision Making, Environmental Decision Making)

Dr. Bhavender Paul (Management Strategy, Managerial Finance, Biotechnology & Pharmaceutical Technology)



Dr. Ramna (Development Economics)

Dr. Devika Sethi (Modern Indian History, Colonialism and Decolonization, Free Speech and Censorship)

Dr. Puran Singh (Corporate Finance, Microfinance)

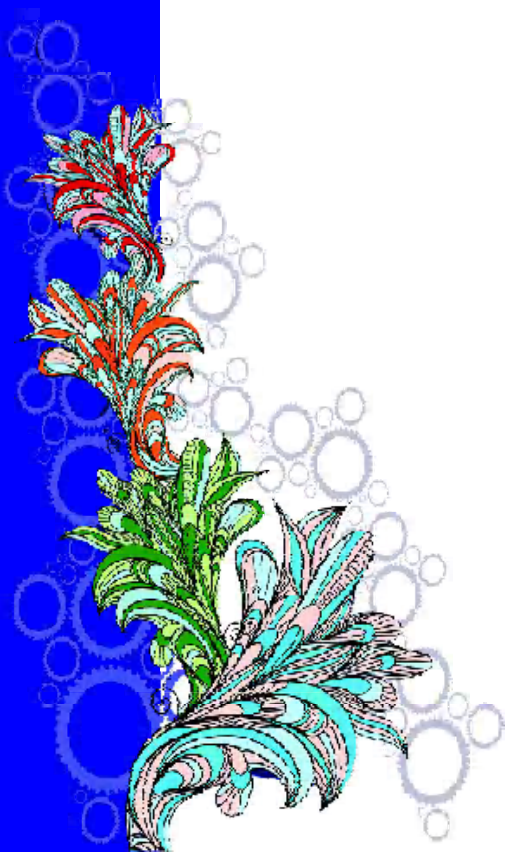
Dr. Shail Shankar (Identity and Group Dynamics, Health and Well Being)

Dr. Tripti Singh (Indian Digital Arts, Visualisation, New Media Arts and Visual Content Development)

Dr. Balasundaram Subramanian (German Studies and Political Philosophy)

Dr. Suman (Colonialism, Postcolonialism, Imperialism, and Romance Literature)

Dr. Surya Prakash Upadhyay (Sociology of Religion, Urban Sociology, Post-Reform India)



Medal and Prizes

PRESIDENT OF INDIA GOLD MEDAL

Mr. Sachin S. Bhat
(B11029)
Computer Science and Engineering

DIRECTOR'S GOLD MEDAL

Mr. Prashant Prazapati
(B11133)
Mechanical Engineering

INSTITUTE SILVER MEDALS

Mr. Sachin S. Bhat
(B11029)
Computer Science and Engineering

Ingale Swapnil Sushil
(B11120)
Mechanical Engineering

BALASUNDRAM ENDOWMENT PRIZE FOR GERMAN

Mr. Prashant Prazapati
(B11133)
Mechanical Engineering

RANI GONSALVES MEDAL FOR OUTSTANDING FEMALE B. TECH. STUDENT

Ms. Makhijani Nidhi Manoj
(B11020)
Computer Science and Engineering

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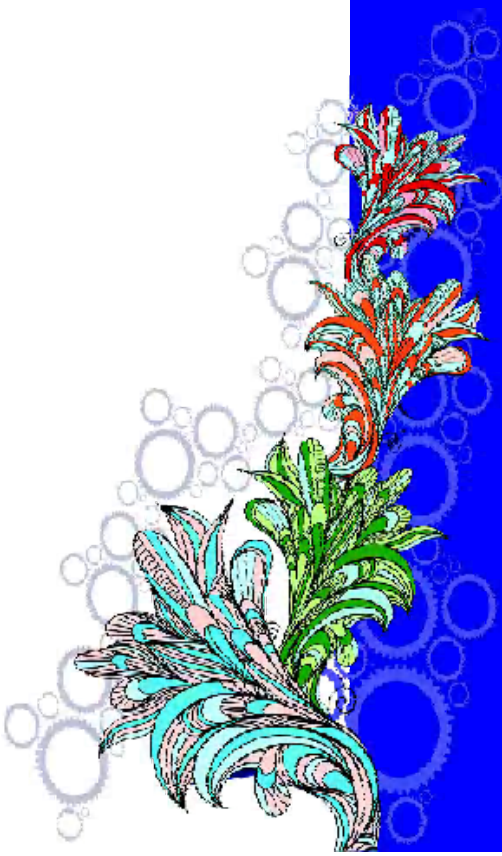

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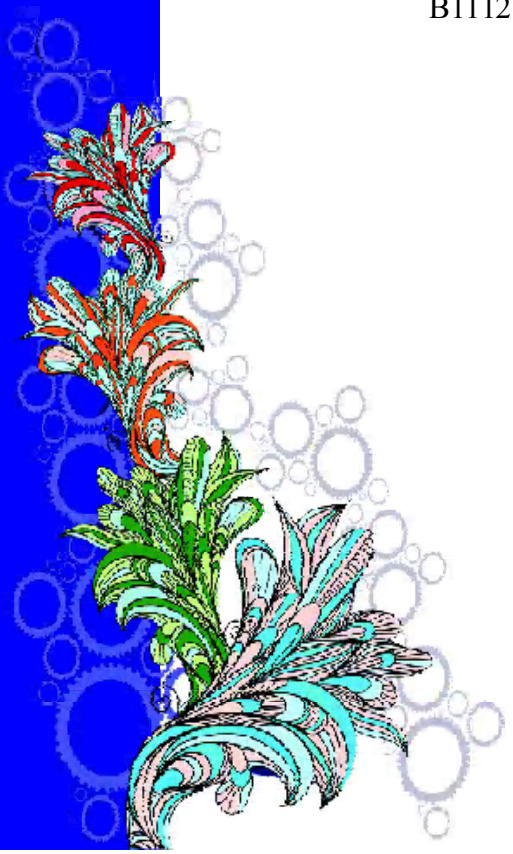

B. TECH. (Mechanical Engineering)

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B11019	KSHITIZ SARASWAT kshtzsaraswat@gmail.com

Master of Science (By Research)

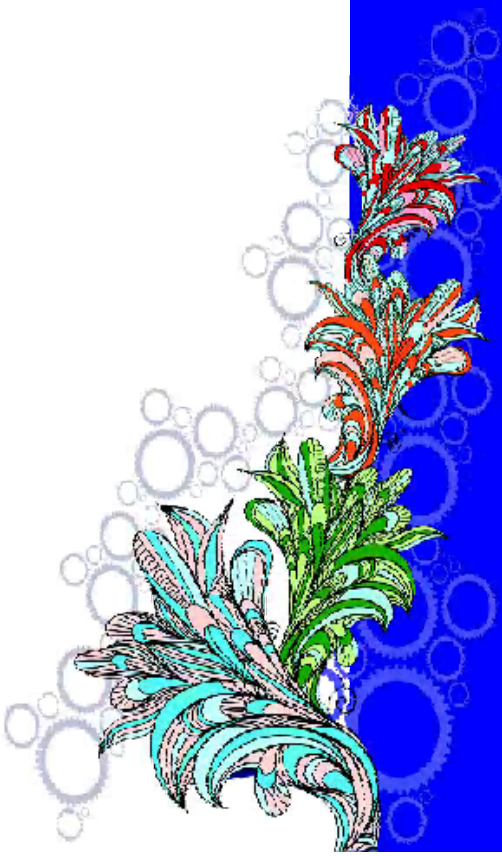
Name: Anshul Kumar Mishra
Roll No.: S11015

Thesis Title: Design and Development of Induction Machine Drive for Performance Optimization

Abstract: Mr. Anshul Kumar Mishra worked on design and development of Induction Machine Drive for performance optimization in terms of torque ripple minimization and power factor improvement. He performed extensive simulation to validate his design suggestions.

Mr. Mishra is now pursuing his Ph .D. at School of Computing and Electrical Engineering, IIT Mandi.

Guide: Dr. Bharat Singh Rajpurohit



Master of Science (By Research)

Name: Aditya Chauhan
Roll No.: S12021

Thesis Title: Stress-Mediated Tuning of Ferroelectric Properties in 0.68Pb (Mn1/3Nb2/3)O_3-0.32PbTiO_3 Single Crystals

Abstract: Ferroelectrics form an important class of materials and are employed for a variety of applications. However, specific systems and devices dictate the need of tailored ferroelectric response. This creates a requirement to obtain ferroelectric materials with tunable properties. It is an established fact the ferroelectric behavior is a function of the domain response/switching behavior when subjected to external impetus. Thus, domain engineering is the key for inception of tunable material attributes. Generally, chemical modifications are employed to this effect in the form of doping or solid-solutions. However, this step complicates the material system unnecessarily and leads to long term predicaments including functional fatigue, electrical hardening and costly fabrication processes. Therefore, need has been felt for a physical alternative leading to desired domain engineering. In this regards, this study attempts to shed light on the use of compressive pre-stresses for tuning and enhancing the ferroelectric properties.

Guide: Dr. Rahul Vaish

Master of Science (By Research)

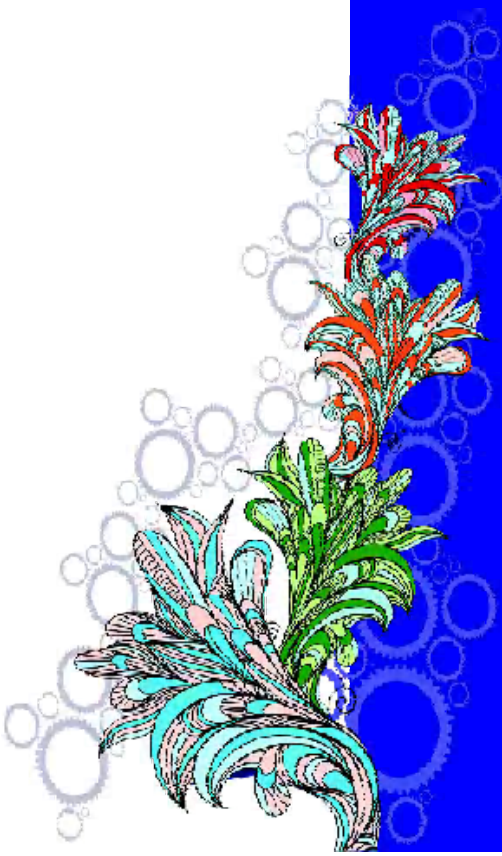
Name: Ankit Sharma
Roll No.: S12022

Thesis Title: Numerical Simulation of Radiation Losses in a Decaying Laser Spark Using LBL Method

Abstract: A numerical investigation has been carried out to numerically simulate the radiation losses which occur due to laser energy deposition. For radiation modelling, detailed spectral line by line radiation code "*radLBL*" was used and integrated with OpenFOAM for solving RTE. The current study shows almost *500 times* higher radiation losses as compared to the past reported data but still these losses are very less as compared to the deposited energy.

Currently he has enrolled for his PhD at IIT Roorkee.

Guides: Dr. Anil P Kishan and Dr. Ankit Bansal (External)



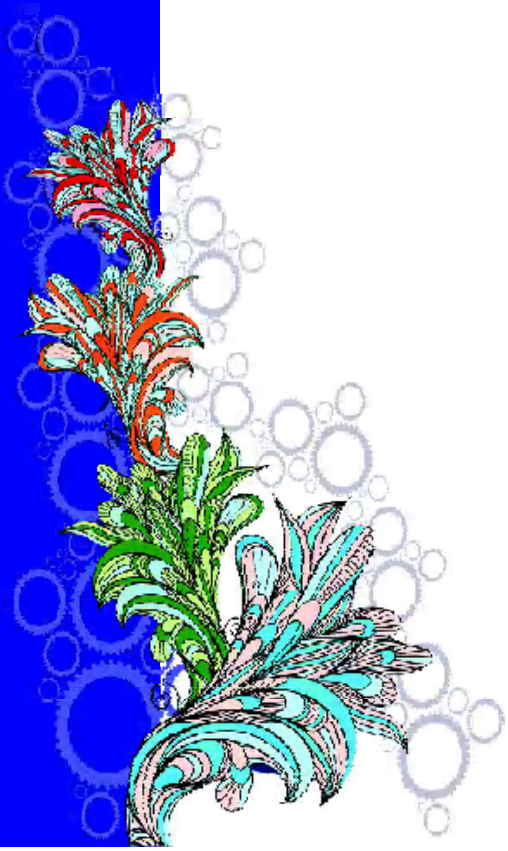
Master of Science (By Research)

Name: Anmol Kothari
Roll No.: S12023

Thesis Title: Effect of Strain Hardening Parameters on Deformation Induced Electromagnetic Radiation from Metals and Alloys

Abstract: A theoretical model to explain electromagnetic radiation during strain hardening of the metals and alloys has been developed in terms of the vibrations of mobile dislocations. The thesis emphasizes the effect of strain hardening parameters and the Peierls' stress on electromagnetic radiation. The results suggest that the damping coefficient undergoes variation during progressive plastic deformation and this variation has dependence on strain hardening parameter m.

Guides: Dr. Vishal Singh Chauhan (Guide), Dr. Rajeev Kumar (Co-Guide)



Master of Science (By Research)

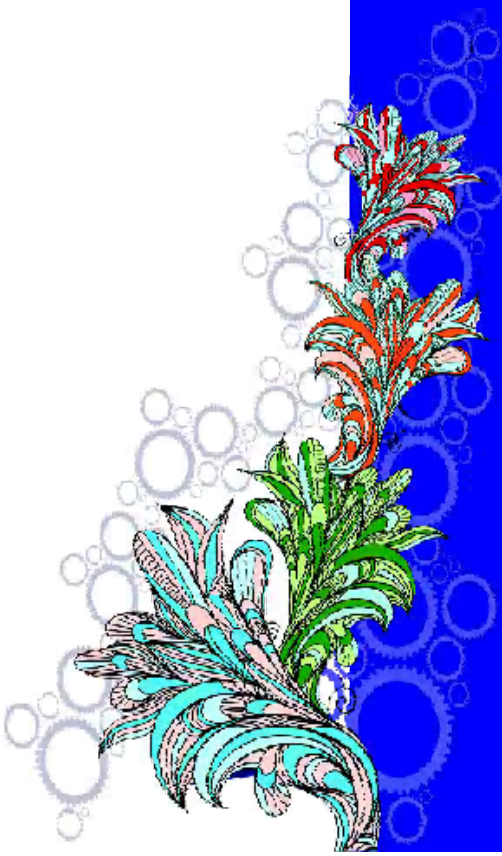
Name: Deepak Kumar Sharma
Roll No.: S12027

Thesis Title: High- k TiOxNy based MFIS Structure for Next Generation FeRAM Applications

Abstract: Mr. Deepak Kumar Sharma, earned their MS, from School of Computing & Electrical Engineering (SCEE), IIT Mandi. In his MS thesis, he worked on next generation Ferroelectric Random Access Memory (FeRAM) because of its potential advantages such as fast read and write time and low voltage operations than other emerging nonvolatile memories. In this work, Mr. Sharma fabricated gate stack of optimized MFIS structures which yield best nonvolatile behavior with multilevel operations and stored data retention time of ~15 years or beyond. He published their research outcomes in the number of international peer reviewed journals & conferences.

Presently Mr. Deepak Sharma is pursuing his PhD at Department of Electrical Engineering, IIT Gandhinagar

Guide: Dr. Satinder Kumar Sharma



Master of Science (By Research)

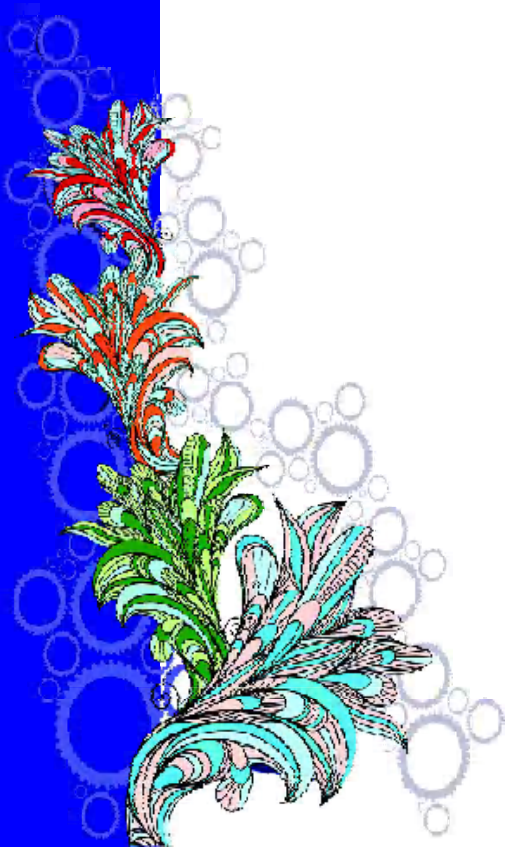
Name: Sujeet Kumar

Roll No.: S10002

Thesis Title: Design and Implementation of cross bar switch in Network Simulator, NS-2.

Abstract: Mr. Sujeet worked on the problem of implementing various types of crossbar switches in a network simulator, NS-2. This is first such work that provides an implementation of various types of crossbar switches in the same simulation platform. He is soon taking up a PhD position in one of the topmost universities in Ireland.

Guide: Dr. Samar Agnihotri



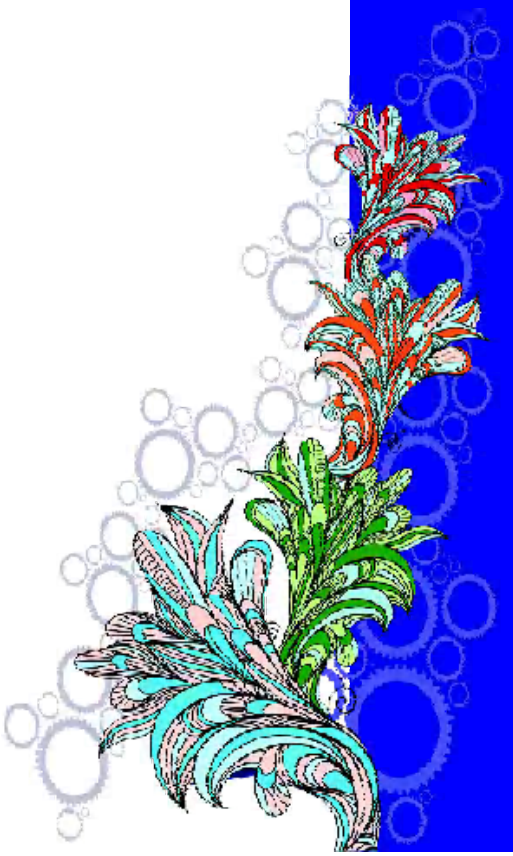
Master of Science (By Research)

Name: Tarun Kumar
Roll No.: S12026

Thesis Title: Finite Element Modeling and Analysis of a Bistable Piezoelectric Energy Harvester.

Abstract: Mr Tarun Kumar worked on a Bistable Piezoelectric Energy Harvester for lightweight electronic devices without traditional batteries. The harvester has been modeled using Finite Element Method. To harvest the energy over the wide frequency range of environmental vibrations nonlinearity is introduced in the stiffness by mean of two neodymium magnets. Further the bistable varying width PEH is optimized using genetic algorithm technique to maximize mean power density. The proposed varying width bistable PEH is used to power to wireless mouse. Mr. Tarun is now looking forward to pursue his

Guides: Dr. Rajeev and Dr. Vishal



Doctor of Philosophy

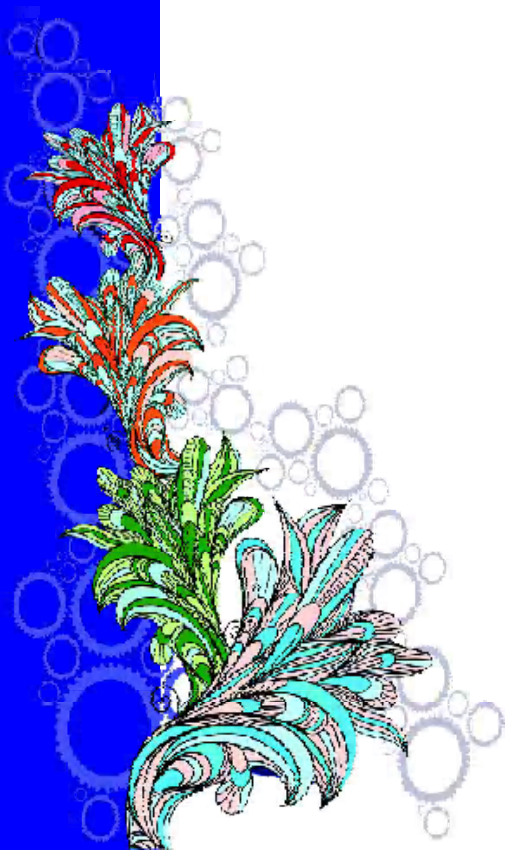
Name: Jai Prakash Tripathi

Roll No.: D10005

Thesis Title: Dynamical Analysis of Some Predator-Prey Models with Help and Refuge

Abstract: This thesis analyses different types of predator prey systems with different types of functional response and refuge. The role of prey refuge, help and mutual inference among predators in the dynamics of the system is analyzed. Several kinds of functional responses are considered. Extensive dynamical analysis such as, stability, permanence, persistence and bifurcation are established. The numerical simulations are done using particular values of the parameters to validate analytical findings. At the end, ecological interpretations of the theoretical findings are also discussed.

Guides: Dr. Syed Abbas and Dr. Manoj Thakur



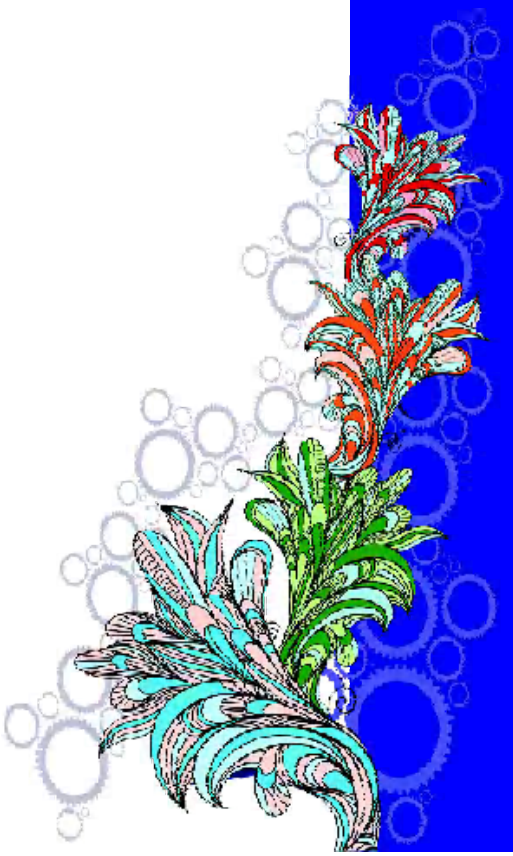
Doctor of Philosophy

Name: Sunil Dutt
Roll No.: D10008

Thesis Title: Morphology Controlled Synthesis of Polyaniline Nano structures and its Nano composites using swollen liquid crystals as templates

Abstract: Mr. Sunil Dutt worked on the development of swollen liquid crystals as 'soft' templates for the synthesis of nanostructures of polyaniline and its nanocomposites with metals, metal oxides and graphene. The prepared nano-materials were found to have interesting applications in glucose biosensing, catalysts and adsorbents for pollutant removal, surface enhanced Raman scattering and supercapacitors.

Guide: Dr. Prem Felix Siril



Doctor of Philosophy

Name: Ansul Sharma
Roll No.: D11027

Thesis Title**:** Active Vibration Control of Smart Structure using Fuzzy Logic Controller and its Experimental Implementation

Abstract: Mr. Anshul Sharma designed an effective active fuzzy logic controller for vibration suppression of antenna reflector used in satellite communication in his Ph.D. thesis. He provided a solution to suppress the vibrations from the antenna reflector using piezoelectric smart structure technology. He modeled the antenna reflector using finite element method and develops a non-conventional controller (Fuzzy logic controller) to control/suppress the vibration in real time domain. He fabricated an experimental set up to validate numerical results. The numerical simulations reveal that the fuzzy logic controller can suppress the structural vibrations 17% faster compared to optimal PD controller. He also concluded that the sensor sensitivity and actuation capability of piezoelectric material is influenced significantly by temperature variation.

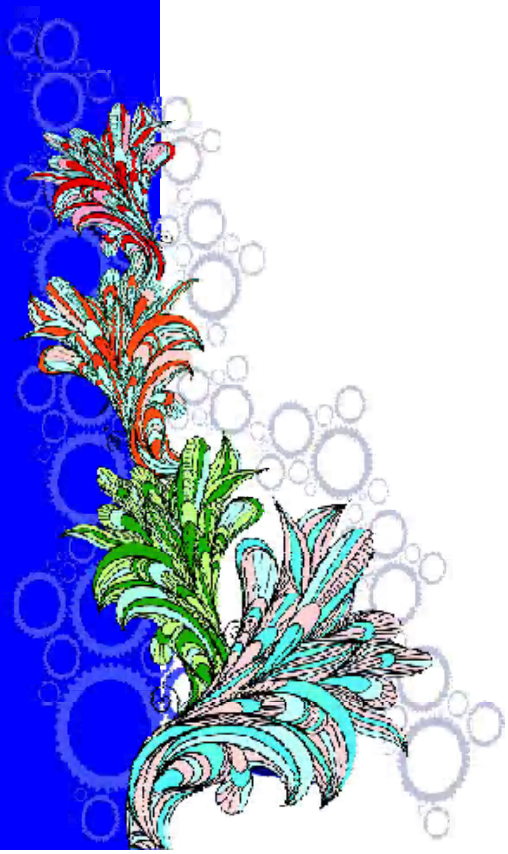
Guides: Dr. Rajeev Kumar and Dr. Vishal Singh Chauhan

CONVOCATION DRESS

The tradition of wearing a specific convocation dress has been adopted world-wide for the graduating class. The attire used on this occasion has specific values attached to it. IIT Mandi convocation dress, especially designed by NIFT, Kangra, is a simple but elegant cape, which can be conveniently worn over any other normal dress. The colours of the capes are inspired by those present in IIT Mandi logo. To give the dress a special flavour of local tradition, IIT Mandi has designed a special pattern inspired by Himachali traditional dresses. This pattern is used as a border on the convocation cape. Finally, the cape carries the IIT Mandi logo embroidered on it. A special brooch has been designed which is worn with the cape to give it a professional appearance.

IIT MANDI GRADUATES' PLEDGE

We, the graduates and post-graduates of the Indian Institute of Technology Mandi, hereby pledge: That we will be scrupulously honest in all our activities and act with integrity at all times to uphold the honour and dignity of our profession and of our Institute; That we will be environmentally responsible and will actively protect and promote the well-being of our environment; That we will uphold and promote the unity and secular ideals of our country; That we will utilize our knowledge in the service of our country in its march towards a just, inclusive, and sustainable society.



VALEDICTORIAN'S ADDRESS

Apoorva Bhatia
B11054

Good evening everyone present here today for the 3rd Convocation ceremony.

On behalf of the graduating batch of 2015, it gives me great pleasure to extend a warm welcome to Respected Chief Guest, Prof. Sathyamurthy; Guests of Honour, Shri M. Natarajan, Chairman, Board of Governors, IIT Mandi, Prof. T. A. Gonsalves, Director, IIT Mandi; members of Board of Governors, and the members of the Senate of the Institute, distinguished guests, family members of the graduating students, faculty and staff members.

This journey of four years finally culminates when we officially graduate today after formally receiving our degrees. But I am sure that this trip back to IIT Mandi after 4 months would have refreshed so many memories of the greatest four years of our lives.

Reflecting back to the days in 2011, when I was coming to IIT Mandi for the first time, I was so excited that I would be a part of a college situated amidst the hills and rivers that that took over my initial fear of joining a new IIT. Nevertheless, I used to get those pangs of thoughts if my decision of joining a new IIT would be worth it. But now as I see it, IIT Mandi has groomed me in a way which, had I joined an older IIT, I would not have had. Being a part of an institute that was just building up, being a part of a family that was trying to make it, and going ourselves on that adventure where we were unsure of what will happen at the end of four years and literally carving ourselves a path we wanted to go on, was one of the most enriching and augmenting experiences for me. And I am sure most of us share similar experience.

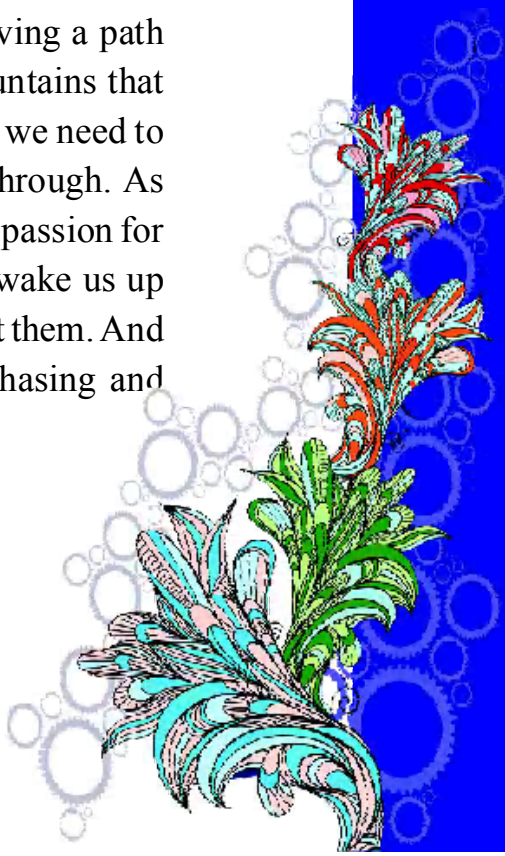
Although we are the 3rd graduating batch of IIT Mandi, yet we were one of the first to shift to this campus which can be seen so well developed today. Three years back when we shifted here, we just had a couple of hostels, few labs and one major classroom. And, now we have almost full flourishing campus running here. This gives such a sense of belonging for this campus that I think no future batch will ever be able to have.

Apart from infrastructure, our batch witnessed the sowing of seeds of so many extracurricular activities that happen in college now, for instance our technical and cultural festival, Exodia, and the idea of the sports fest, Rann-Neeti. We were trained to handle all the pressure that comes our way and come out successfully.

Most of us who sit here today are capable of taking up a new venture even if there isn't any proper guidance because we have been prepared enough to work without the spoon feedings. Also, being so less in numbers and trying to take up so many activities in our college to make it at par with others, has taught us all the art of multitasking and taking-up multiple responsibilities at the same time and handling them efficiently. The experience at IIT Mandi and the grooming given to us by the Institute's faculty and staff has prepared us well for our new phase of life and the real world, the expression of gratitude for which would never be enough.

The thing to remember is that we have to carry forward and showcase to the world what this Institute has transformed us into. We need to realize that we are the glasses through which this world is going to see our college and we have to display the best of our capabilities. We need to be aware that it is our responsibility now, the responsibility of the alumni of IIT Mandi, to establish the brand name of our Institute. This one is a demanding responsibility. But we need to have faith in ourselves that we are capable of taking it up and IIT Mandi has prepared us well for the same.

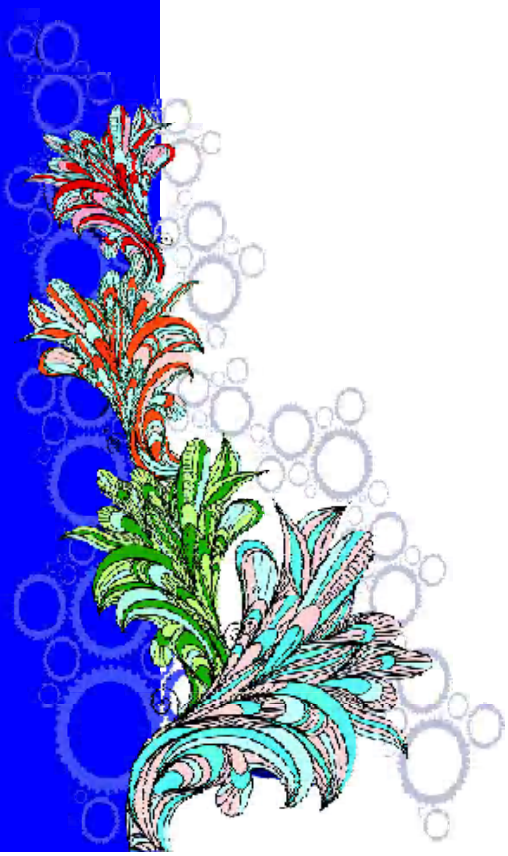
Having seen Manjhi, the mountain Man, recently, I realized that there can hardly be any task more difficult than carving a path through that mountain. There would be several mountains that would be coming in our way of our dreams now; but, we need to have confidence in ourselves that we can make it through. As love drove that man, we also need to be driven by our passion for perfection. We all need to have a dream that could wake us up every morning and drive us to push through till we get them. And I know each one of us sitting here is capable of chasing and achieving their dreams.



As I come to an end of it, I would like to wish you all the very best for the different professions that you have chosen to get into. Always keep faith in what you are doing and keep working tirelessly in the direction of your dreams. As was said by Eleanor Roosevelt, “The future belongs to those who believe in the beauty of their dreams.”

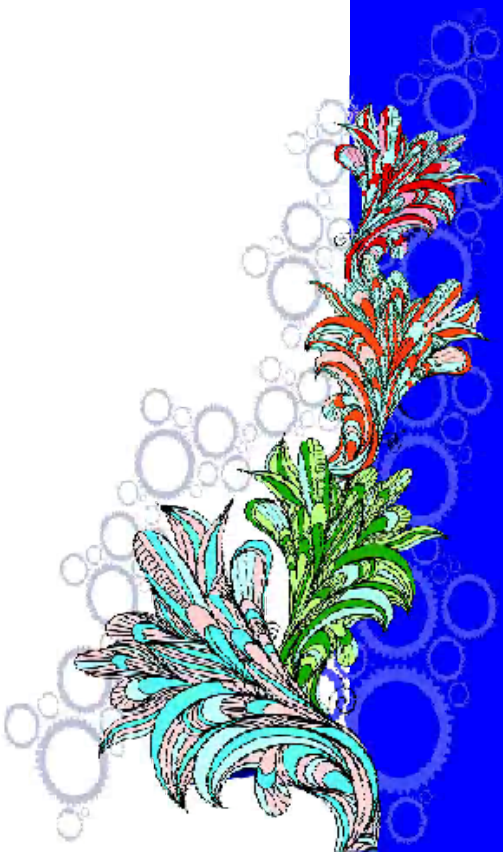
I would finally like to thank each one of you present here, friends, faculty, and everyone else and my Institute, IIT Mandi, for making this journey of four years so memorable, unique and enriching.

Apoorva Bhatia



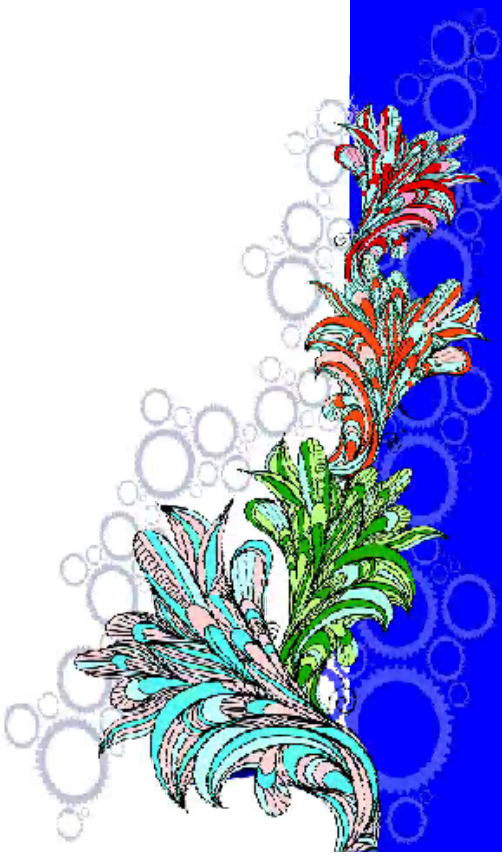
CONVOCATION COMMITTEE

Prof. B. Subramanian	Convocation Advisors
Prof. R. Oruganti	Convocation Advisors
Prof. S. C. Jain	Convocation Advisors
Dr. Bharat Singh Rajpurohit	Coordinator
Mr. M. Shakeel	Nodal Officer
Dr. Ajay Soni	Chair
Prof. B. D. Chaudhary	Chair
Dr. Chander Singh	Chair
Dr. Padmanabhan Rajan	Chair
Dr. P. C. Ravikumar	Chair
Dr. Rajendra Ray	Chair
Dr. Suman Kalyan Pal	Chair
Dr. Vishal Singh Chauhan	Chair
Dr. Viswanath Balakrishnan	Chair
Dr. Aniruddha Chakraborty	Team Leader



Dr. Dericks P. Shukla	Team Leader
Col. Devang Naik	Team Leader
Dr. Manoj Thakur	Team Leader
Dr. Pradeep Parameswaran	Team Leader
Er. Sunil Kapoor	Team Leader
Dr. Subrata Ghosh	Team Leader
Dr. Tripti Singh	Team Leader
Dr. Varun Dutt	Team Leader
Mr. Akshay Kapoor	Member
Dr. Amit Jaiswal	Member
Dr. Amit Prasad	Member
Mr. Anuj Dubey	Member
Dr. Anil Kishan	Member
Dr. Ashok Mocherla	Member
Mr. Ashok Pathania	Member
Dr. Ashok Solanki	Member
Mr. Brajesh Kumar	Member
Mr. C. L. Sharma	Member
Dr. C. S. Yadav	Member

Mr. Chaman Lal	Member
Ms. Chandan Sharma	Member
Er. Chirag Vaidya	Member
Mrs. Debleena Mukherjee	Member
Dr. Devika Sethi	Member
Dr. Deepak Swami	Member
Dr. Dhiraj V. Patil	Member
Er. Deendayal	Member
Dr. Ghanshyam Kapoor	Member
Ms. Gunjan Kapoor	Member
Dr. Hitesh Srimali	Member
Mr. J. R. Sharma	Member
Dr. Jyoti Sharma	Member
Dr. K. C. Sharma	Member
Dr. Kaustav Mukherjee	Member
Dr. Kaustav Sarkar	Member
Mr. Kuldeep Sharma	Member
Dr. Kunal Ghosh	Member
Dr. Kushi Ram Bhagat	Member



Mr. Lalit Malhotra	Member
Dr. Manu Devadevan	Member
Ms. Monika Kashyap	Member
Dr. Muslim Malik	Member
Er. Neeraj Chouhan	Member
Dr. N. S. Bhandari	Member
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Dr. Shail Shankar	Member
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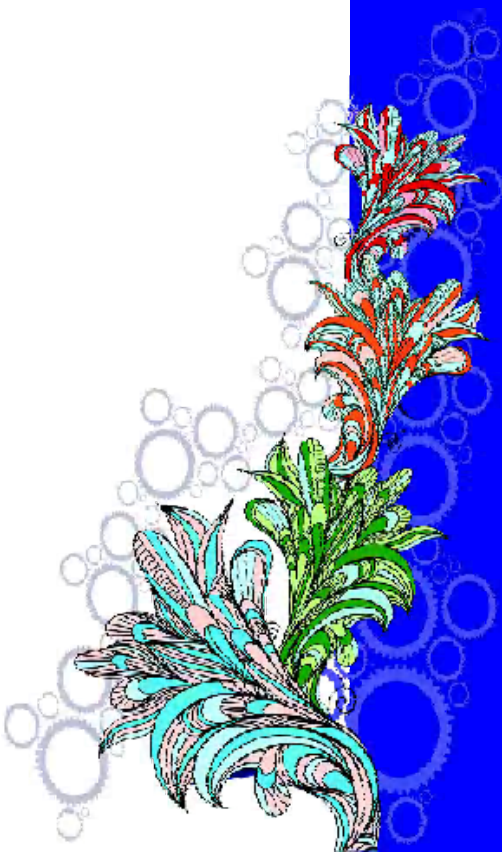
Dr. Syed Abbas	Member
Dr. Tulika Srivastava	Member
Dr. Tushar Jain	Member
Dr. Uday Kala V.	Member
Mr. Vivek Sheel	Member



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