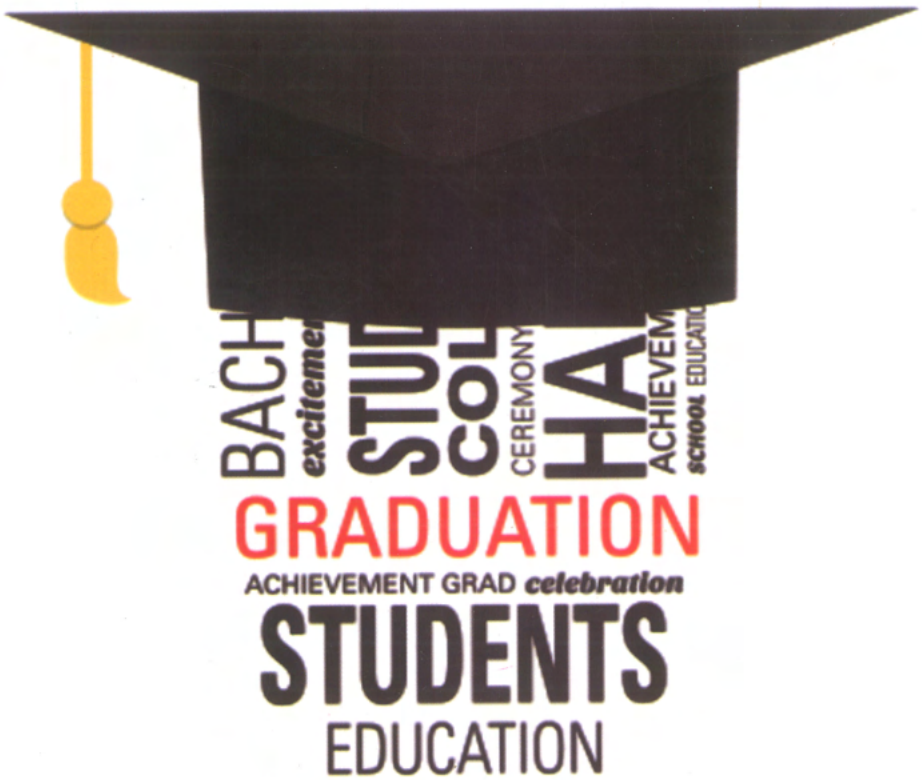
Indian Institute of Technology Mandi



INDIAN INSTITUTE OF TECHNOLOGY MANDI

Second Convocation

2015

Chief Guest

Shri Pranab Mukherjee

The President of India

Guests of Honour

Shri Kalyan Singh

The Governor of Himachal Pradesh

Smt. Smriti Zubin Irani

The HRD Minister of India

Shri Virbhadra Singh

The Chief Minister of Himachal Pradesh

Welcome to IIT Mandi

Indian Institute of Technology (IIT) Mandi, the youngest of all IITs and the only IIT in Himalayas, welcomes you to its second convocation ceremony on 15th March, 2015. In this convocation, 116 B.Tech., 8 M.S. and 3 Ph.D. students would graduate from IIT Mandi.

IIT Mandi, known for its flexible academic curriculum, is also the first among the new IITs to shift to its permanent campus in Kamand (18 kilometres from the Mandi town). The move to the main campus, which began in July-September 2012 has been steadily gaining momentum. By mid 2015, it is expected that the shifting to the fully residential campus will be essentially complete and that all activities of IIT Mandi will be carried out at the Kamand Campus. The fully constructed Kamand campus in the serene landscape by the river Uhl will offer a world-class academic environment with a high quality of life in a setting of natural splendour.

Indian Institute of Technology Mandi

Convocation Programme

The activities commence at **11:15hrs** and end at **12:55hrs** on March 15, 2015

Arrival of Chief Guest and Guests of Honour

Start of Academic Procession

National Song

Chairman (BoG) Declares the Convocation "Open"

Welcome Speech and Report by the Director, IIT Mandi

Felicitation of Dignitaries

Award of Degrees

Pledge by Degree Recipients

Address by the Chief Minister of Himachal Pradesh

Address by the Minister of HRD, Govt. of India

Address by the Governor of Himachal Pradesh

Award of Medals

Convocation Address by the President of India

Closing of Convocation Ceremony

National Anthem

Return of Academic Procession

Indian Institute of Technology Mandi

IIT Mandi

Vision

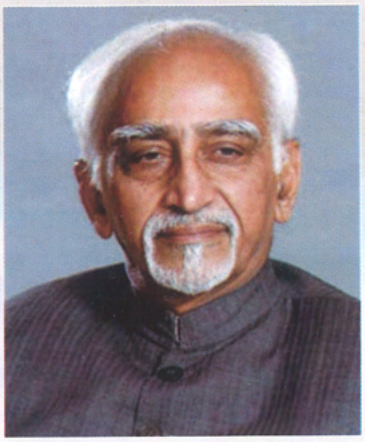
To be a leader in science and technology education, knowledge creation and innovation, in an India marching towards a just, inclusive and sustainable society.

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.

Indian Institute of Technology Mandi

Message from Vice President of India



Shri Mohammad Hamid Ansari
(The Vice President of India)

Honourable Vice President of India is happy to know that the Indian Institute of Technology (IIT) Mandi, Himachal Pradesh is organizing its Second Convocation on March 15, 2015.

The Vice President of India extends his greetings and good wishes to the students, teachers and staff and wishes the event all success.

(NAGESH SINGH)

(On behalf of Vice President of India)

Indian Institute of Technology Mandi

हिमाचल प्रदेश के राज्यपाल का सन्देश

श्री कल्याण सिंह

(राज्यपाल, हिमाचल प्रदेश)

मुझे यह जानकार प्रसन्नता हुई है कि भारतीय प्रौद्योगिकी संस्थान मण्डी द्वारा 15 मार्च, 2015 को दीक्षांत समारोह का आयोजन किया जा रहा है |

भारतीय प्रौद्योगिकी संस्थानों को देश में बेहतरीन तकनीकी शिक्षा प्रदान करने का गौरव प्राप्त है | ये संस्थान गुणात्मक तकनीकी शिक्षा के साथ-साथ अनुसन्धान की दिशा में भी महत्वपूर्ण भूमिका निभा कर देश विकास में अहम् योगदान दे रहे हैं |

इस मौके पर मैं, विद्यार्थियों को बधाई देता हूँ | उनके उज्जवल भविष्य की कामना करता हूँ तथा आशा करता हूँ कि युवा इंजीनियर अपने ज्ञान और कौशल के माध्यम से देश में विज्ञान और प्रौद्योगिकी के विकास को नए आयाम देंगे |

कल्याण सिंह

Message from HRD Minister, Government of India

Smt. Smriti Zubin Irani
(The HRD Minister of India)

Convocation Day is a day of celebration, excitement and great optimism. It is the day for celebrating the results of hard work and successful achievements. I am sure this second Convocation ceremony at Indian Institute of Technology, Mandi on March 15, 2015 will be etched in the memory of all graduating students.

IIT Mandi stands as a proud example of the Government's commitment to create new world class institutions to provide quality education to the youth of this country. The Government, the Administration and the Faculty are infusing their best in collaboration with other stake holders to take the institution to new heights. To realize the goals of the "**Make in India**" initiative announced by the Hon'ble Prime Minister, we need to inculcate a spirit of entrepreneurship among the youth and work in cohesion with the industry to develop cutting edge technologies. I am happy to learn that IIT Mandi is focusing more on research and innovation to achieve this.

I hope that the distinguished students graduating from IIT Mandi will always remember that knowledge is the most powerful tool to get access to opportunities and advancement. I would also like to implore you to contribute to our national development in a meaningful way, no matter what career you pursue.

I congratulate and wish the faculty and students of IIT Mandi all the very best on this occasion of accomplishment.

SMRITI ZUBIN IRANI

Indian Institute of Technology Mandi

Message from Chief Minister of Himachal Pradesh

Shri Virbhadra Singh
(The Chief Minister of Himachal Pradesh)

I am delighted to learn that the Indian Institute of Technology (IIT), Mandi is organizing its second Convocation on 15th March, 2015 and a brochure is also being brought out to mark the occasion.

Established in the year 2009, this institution has progressed gloriously ahead by achieving brilliance in the field of research and education. It is emerging as one of the pioneering institutes of the country imparting quality education to the students. I extend my heartiest congratulations to the staff and faculty members on the occasion and also the student's of 2010 batch who will be awarded degrees during the Convocation. I hope it would continue its endeavour to provide quality education to the students in future too.

My best wishes for the convocation.

VIRBHADRA SINGH

Indian Institute of Technology Mandi

Message from MHRD Secretary

Shri Satya N. Mohanty
(The MHRD Secretary)

It is indeed a memorable day in the life of our graduates, who have been looking forward to this eventful day with great expectations. This day marks the happy ending of your dream to secure a qualification of your choice from an Institution known for its eminence and excellence. Education is never a solitary pursuit. The enviable position that you are in today is undoubtedly because of your perseverance and hard work. But remember, equally important is the sacrifices made by your parents and selfless contribution of the faculty, who committed so much time and energy in transforming your lives.

The process of globalization continues to transform the economic play field. Knowledge has acquired a new significance. This is an era, wherein "Intellectual Capital" has become the prime mover of organizations and nations. Thus opportunities are very many and avenues are unlimited for you to explore and benefit from. You are embarking on a most exciting journey. The world out there is fiercely competitive, but you should have no fear for you have been tempered by one of the most rigorous programs in the world and are now ready to test your mettle in your respective fields. Please do not forget that all this becomes meaningful only when it touches and improves the community around you. Use your knowledge to better the world around you and therein lie the satisfaction of both.

(Satya N.Mohanty)

Message from Chairman, Board of Governors, IIT Mandi

Shri M. Natarajan
(Chairman, Board of Governors, IIT Mandi)

I am indeed delighted to associate myself with the second convocation IIT Mandi. As IIT Mandi's first Chairman, BoG, I am honoured to extend a hearty welcome to the Chief Guest; Guests of Honour; Members of Senate; Director, IIT Mandi; graduating students; family members of degree recipients; and members of IIT Mandi students, faculty, and staff.

Established in 2009, IIT Mandi is the country's newest IIT, the only institute of its kind for the advancement of knowledge and education in science and technology in this beautiful Himalayan landscape. In a short span of 5 years, the institute has grown in strength, accommodating 620 students, 455 in B. Tech., 28 students in M.S., 3 students in M. Tech., 10 students in M. Sc. and 124 students in Ph.D. My thanks to the Government of Himachal Pradesh, which generously accommodated IIT Mandi in Vallabh College Campus, where this IIT started functioning from its transit campus at Mandi in 2010. This generosity certainly helped kick-start activities, while we were scouting for over 538 acres of forested land on the banks of river Uhl for the institute's permanent campus at Kamand. The sustained efforts by all concerned led to the acquisition of this land and development of the architectural plan of the entire campus. The construction activities of phase 1, comprising of new buildings for Hostels, Administrative Block, Mess, Labs, and Classrooms are nearing completion. While it may take a couple of more years for the campus to be fully built, the academic and research activities are already flourishing here with vigour and vitality. I would like to convey my thanks to IIT Mandi's Director, faculty, staff and enthusiastic students for pursuing their activities unmindful of inconveniences and hardships.

A growing economy like India has challenges not only in disciplines such as space, atomic energy, defence, communication, renewable energy and medicine; but also in housing and living conditions; food and nutrition; water and sanitation; and, healthcare, agriculture and

transportation. Dear students, India is a vibrant democracy that looks for opportunities to develop science and technology for bridging social disparities. The creative minds, equipped with knowledge and expertise, can help find pragmatic solutions to our problems and provide for a variety of products, services and systems to our society. While our growth in successive 5 year plans is impressive, the rising population demands innovative solutions that are practical and affordable.

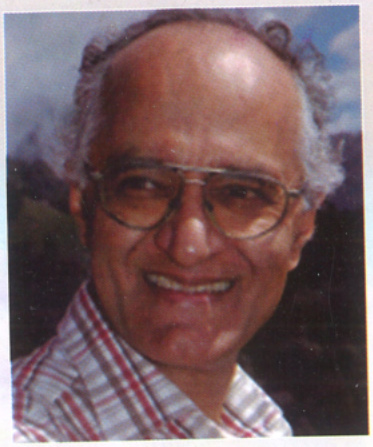
We are a 5000 year old civilization with rich traditional knowledge and skill sets. Here, it is vital to study and capitalize on traditional knowledge related to medicine, architecture, arts, crafts, and culture. We must find an appropriate blend of old and new knowledge and expertise to arrive at innovative solutions to some of our problems and lift the country from the malaise of poverty and hunger that stalks over a third of our population. For us to really change things, we need to look inward. Our country can only achieve development through outstanding contributions of intelligent, well qualified and professionally committed work force that looks for opportunities in challenges within a resource limited environment.

I am confident that the constant efforts of the faculty here to present innovative teaching and research will help us build our knowledge and skills further. I would also urge each one of you to appreciate the talent in every individual and seek ways and means of working effectively as a team member and as a leader. I have no doubt that as you enter the society as new graduates, you will make a strong impact and, at later stages, share your experiences and expertise with your alma mater. It is only through your constant engagement that IIT Mandi can become the torch bearer for science and technology and for the advancement of the nation and its society at large.

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

Shri M. Natarajan

Director's Report



Prof. Timothy A. Gonsalves

Welcome

Shri Pranab Mukherjee, President of India, Visitor of IIT Mandi, and Chief Guest of the Convocation; Guests of Honour, Shri Kalyan Singh, Governor, H.P., Smt. Smriti Irani, Union Minister of Human Resource Development, Government of India, and Shri Virbhadra Singh, Chief Minister, H.P.; 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 Second Convocation of the Indian Institute of Technology Mandi.

We feel privileged as our graduating students stand here today ready to set foot into the real world. It is a proud moment for each of the graduating students and their families. Today is a momentous occasion and I thank all the guests present here for joining me in applauding the students for reaching this significant milestone in their lives.

It is a privilege to have with us Shri Pranab Mukherjee, President of India and Visitor of IIT Mandi, who graciously accepted our invitation to be the Chief Guest on our 2nd Convocation. His kind presence will inspire the graduating students in many different ways and make this day a memorable one that they will cherish for a lifetime.

IIT Mandi – On a path of steady growth

In the last five years, the journey for IIT Mandi, has been a challenging but rewarding one. 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. I would like to share with you a brief account of our journey in the last five years, highlighting significant milestones of the last academic year.
Our successes have resulted from the diligent effort of all sections of the IIT Mandi family – the

students, faculty members and the staff. It has also been made possible by the generous help given to us by other institutes. IIT Roorkee served as the mentoring Institute of IIT Mandi in the early stages. After moving to Mandi in 2010, we were privileged to have the best of neighbours in Vallabh Government College who graciously and generously gave us the space and infrastructure we needed to begin operating in Mandi. Faculty members from a number of other IITs have given unstintingly their time to help us towards our vision. The continuous support of numerous people and organizations in the Government of India and the Government of Himachal Pradesh has been critical to our growth.

IIT Mandi has the distinction of being the first (and currently the only) new IIT to develop and use its main campus. We have adopted a 3-stage approach to our campus development:

1. *Renovate and use the existing Animal Husbandry buildings.* E.g., the renovated Stable Complex houses a sophisticated X-ray Diffractometer, a PC Lab and a 120-seat Electronic classroom with 100 Mb/s Internet connectivity.
2. *Rapidly construct a few pre-engineered buildings.* Currently, 16,454 sqm area is being used to provide a residential campus for 388 students, 26 faculty, and 13 staff, including classrooms, labs, hostels and homes.
3. *Over a longer period, construct the bulk of the buildings.* 1,25,000 sqm of space to accommodate 1,800 students, 160 faculty and staff, serving the growing IIT until 2020.

The year 2013-14 saw a number of developments related to the Kamand campus of IIT Mandi. There were around 1,500 square meters of semi-permanent LGSF structures completed currently. The construction work of an additional 3,500 square meters of semi-permanent LGSF structures is in progress, to be completed by April, 2015. Also, construction of about 83,000 square meters of permanent buildings are planned to be executed between June, 2015 and June, 2016. Between 2013 and 2014, there has been a significant increase in the occupancy of the campus for student, staff, and faculty.

The north campus construction started in October, 2013 with the ground breaking for the construction of hostels and faculty residences. The total gross floor area of this construction in north campus is expected to be 73,500 square meters. It would provide space and infrastructure for shelter and activities for 1,500 students, 150 faculty members and about 300 technical and admin staff members. The current construction in the north campus is expected to accommodate the Institute's growth until about 2020.

In 2014, IIT Mandi followed its "Green Agenda" by setting up a Green Panel with the Director as the Chair. An Ecological Management Plan was developed and this plan has been used by the architects in developing the Master Plan and in the design of the buildings. The campus is planned such that most movement will be on foot or on cycles. Motor vehicles will not be allowed in the academic areas and students are not permitted to have motor vehicles on campus.

Furthermore, in order to preserve the Bio-diversity of the Kamand campus, a project on "Ethno botanical mapping of IIT Mandi Kamand Campus, Uhl Valley and Prashar Lake areas" has been started for mapping the existing plant species and identification of unique Medicinal plants existing on the campus and within the 10-12 km of the adjoining area. A Herbarium of all the existing plants and an e-Herbarium are being created as a repository of the existing plant species to ensure their maintenance

and preservation. A first-aid Herbal garden has been created to provide herbal products to campus residents for health and cooking.

At an early stage, we have reached the point where some of our students enjoy the benefits of a residential campus, which is the hallmark of the IITs. For example, the Kamand campus already possesses basic facilities like banks, medical unit, day care and primary school for small children, and indoor badminton and table-tennis facilities as part of hostels. Also, there is a student Lounge, which serves as the hub of student extracurricular activities. At each stage in our campus development, we have learnt from the mistakes of the previous one for creating an improved infrastructure.

Academic Activities

Despite the challenges of constructing and occupying our permanent campus, the academic activities of the Institute have flourished. Currently, we have 600+ students including 152 research scholars. About 65% of the students are in the Kamand campus. In addition, several Post-Doctoral Fellows are also working at IIT Mandi assisting and contributing to research. There are 455 B. Tech. students in the three disciplines of Mechanical, Electrical and Computer Engineering.

In 2014, IIT Mandi expanded the breadth of its academic programs by starting two Masters programme: M.Tech. in Energy Materials and M.Sc. in Chemistry. In the near future, the Institute plans to increase the variety of M.Tech. and M.Sc. programmes offered.

IIT Mandi is also planning to start research in infrastructure and civil engineering for mountain regions, and a B. Tech. in Civil Engineering this year. To these ends, IIT Mandi conducted the 1st Brainstorming Workshop on Civil Engineering in April 2014 in which experts broadly identified the issues related to mountain regions. A 2nd workshop was organized in October, 2014. Prof. V S Raju, Former Director of IIT Delhi was chairman of the workshop. The workshop was also attended by Prof. Balthasar Novak, an esteemed professor and structural engineer from Stuttgart University and Mr. Thomas Mutscler, a geotechnics expert from KIT, Germany and experts from IIT Madras, IIT Guwahati, and IIT Mandi. Most recently, IIT Mandi conducted a 3rd workshop on Civil Engineering to formalize the B. Tech. Civil Engineering curriculum. This workshop was chaired by Prof. Koshy Varghese from IIT Madras and was attended by Prof Balthasar Novak, 4 of our new civil engineering faculty and others.

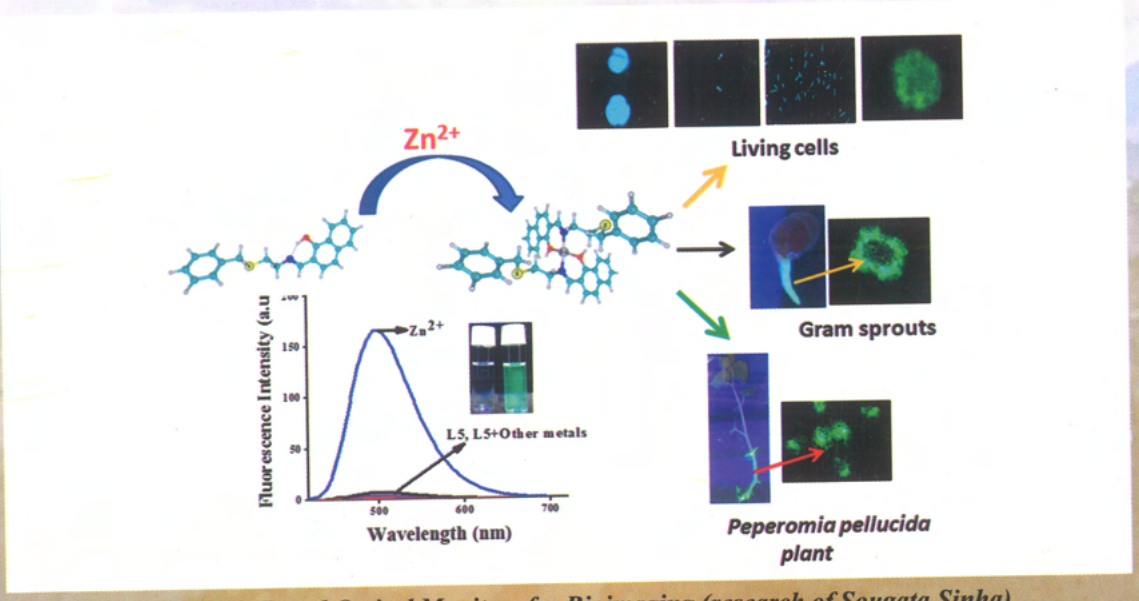
IIT Mandi has expanded in BioX with new faculty joining to form a group of 8 faculty members. Here, the Institute's focus is on developing technologies for improving agricultural practices for farmers in the Himalayan region, and for biomedical applications.
The Institute is dedicated to the betterment of educational standards in Himachal Pradesh (HP) and Jammu & Kashmir (J&K). For this purpose, in June, 2014, IIT Mandi organized a Vice Chancellor's Interaction Conclave at its permanent campus in Kamand. The objective of this conclave was to foster cooperation and collaboration among educational institutions in HP and J&K. The conclave involved Vice Chancellors (VCs) and Directors of several science and technology universities and institutes in HP and J&K.

Research

We place a great emphasis on the development of our research scholars. The first research scholars joined in October 2010, soon after we started operating in Mandi. Despite the difficulties of doing globally competitive research in a nascent institute, I am pleased to report that some of the students from this pioneering batch will be graduating today.

35 17 Lakshman Mahto, who worked under the guidance of Dr. Syed Abbas for his thesis titled, "*Analysis of Impulsive Fractional Functional Differential Equations*," will be awarded a PhD degree. In his work, he has analyzed very general form of differential equations, which are fractional order differential equations with impulsive conditions.

35 17 Sougata Sinha, who worked under the guidance of Dr. Subrata Ghosh for his thesis titled, "*Small Molecule Based Optical Monitors: Synthesis, Characterization and Applications in Bioimaging*," will be receiving his PhD degree today as well. Sougata used a plant model as a cheap and easy method for screening potential of new fluorescent molecular materials. Both Sougata and Laksman joined as part of the 1st batch of Ph.D. students at IIT Mandi in October, 2010.



Small Molecule Based Optical Monitors for Bioimaging (research of Sougata Sinha)

35 17 Pankaj Kumar who worked under the guidance of Dr. Arti Kashyap in his thesis titled, "*Ab-initio, Analytical and Micromagnetic Study of Low-Dimensional Materials and Intermetallic Alloys*," will also be awarded a PhD degree. This thesis covers theoretical investigations of the magnetic anisotropy in low dimensional (chain) systems and in inter-metallic compounds of light and heavy transition metals.

35 17 Runa Barik under the guidance of Dr. Dinil Mon Diwakaran and Dr. Sukumar Bhattacharaya will receive the M.S. degree for his thesis titled *Improving Latency of Mice in the Internet: An Approach Based on TCP Initial Window. This thesis focused on reducing data delivery time by deciding the initial number of Internet data packets to send at the beginning of a file transfer*. In addition, Runa was one of the first 3 students to shift to the Kamand campus in July 2012. He helped set-up and run the Kamand IT network from its inception. He is now doing a PhD in the University of Oslo, Norway.

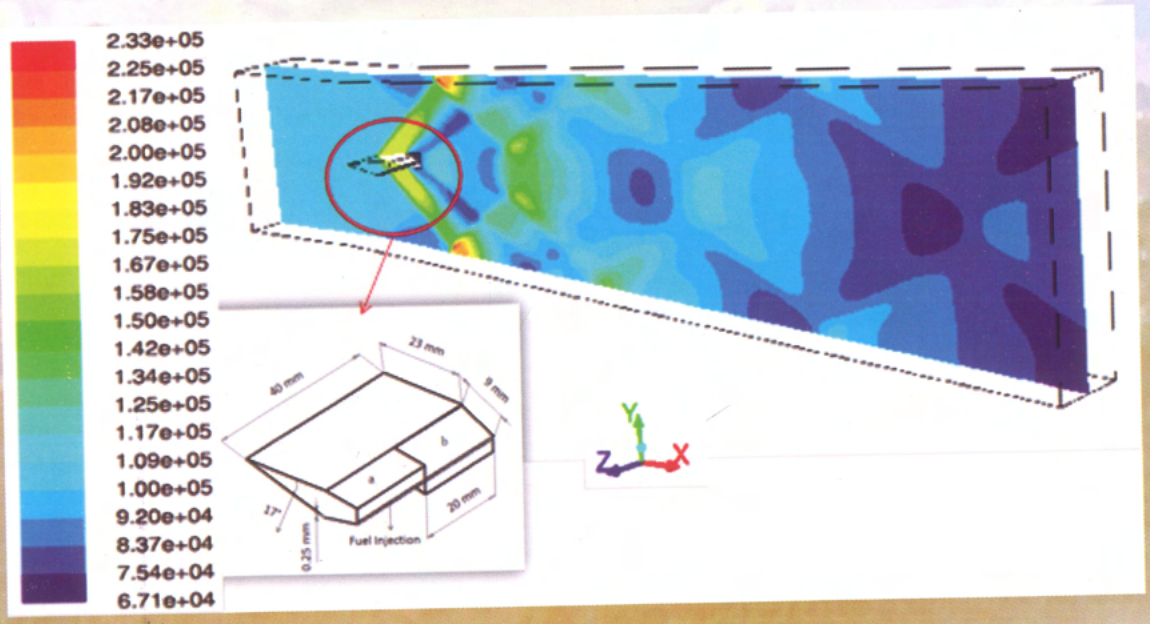
35 17 Vijay Chauhan under the guidance of Dr. P. Anil Kishan and Dr. Sateesh Gedupudi will receive the M.S. degree for his thesis titled, "*Combined Cycle for Cold Storage and Power Generation Using Low Temperature Renewable Heat Sources*." In his thesis, Vijay had devised a combined cycle that is useful for producing refrigeration effect and power.

He applied this in a proposal for use of geo-thermal energy in Himachal for cold storage of apples.

35 17 Anjana Babu under the guidance of Dr. Anil Kumar Sao will receive the M.S. degree for her thesis titled, "*A Probabilistic Approach to Select Units Based on Acoustic Similarity for Speech Synthesis*." This thesis proposed a probabilistic base approach to select units in unit selection based speech synthesis (USS), which gives best results among the available speech synthesizers.

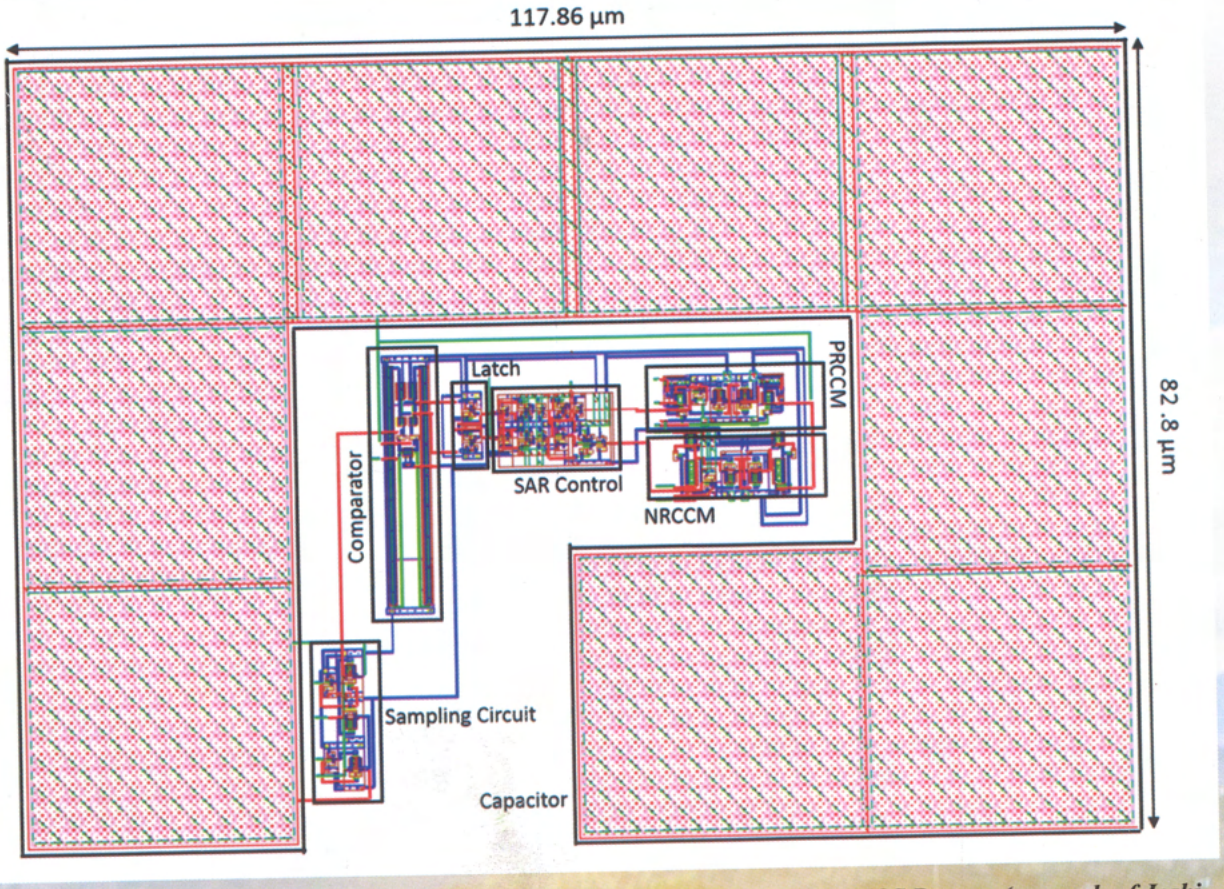
35 17 Anuruddh Kumar under the guidance of Dr. Rajeev Kumar will receive the M.S. degree for his thesis titled, "*Design and Simulation of Piezoelectric Energy Harvester.*" In this thesis, an array of piezoelectric energy harvesters has been designed and analyzed to obtain maximum mean energy density at wide frequency range from random environment vibration.

35 17 Tushar Kant Swain under the guidance of Dr. P. Anil Kishan will receive the M.S. degree for his thesis titled, "*Comparison of the Performance of Symmetric and Asymmetric strut Based Fuel Injection Systems for Scramjet Combustor.*" Mr. Tushar Kant Swain developed a new design of the strut for Supersonic combustors.



Asymmetric strut based fuel injection systems for scramjet combustor (research of Tushar Kant Swain)

35 17 Joshi Ashish Shirish under the guidance of Dr. Satinder Sharma and Dr. Sanjeev Manhas will receive the M.S. degree for his thesis titled, "*A Novel Single Switch-Capacitor DAC SAR ADC Design.*" Joshi proposed a design of hardware efficient successive approximation A-to-D convertor for low power - low cost VLSI applications such as RFID.



Switch Capacitor DAC based SAR ADC Layout in GPDK 90 nm CMOS Process (research of Joshi Ashish Shirish)

35 17 Khoisnam Steela under the guidance of Dr. Bharat Singh Rajpurohit will receive the M.S. degree for her thesis titled, "*Modeling and Performance Analysis of Shunt Active Power Filter for Power Distribution System.*" Ms. Steela worked on intelligent schemes for improving performance of active power filters to improve power quality in power distribution systems.

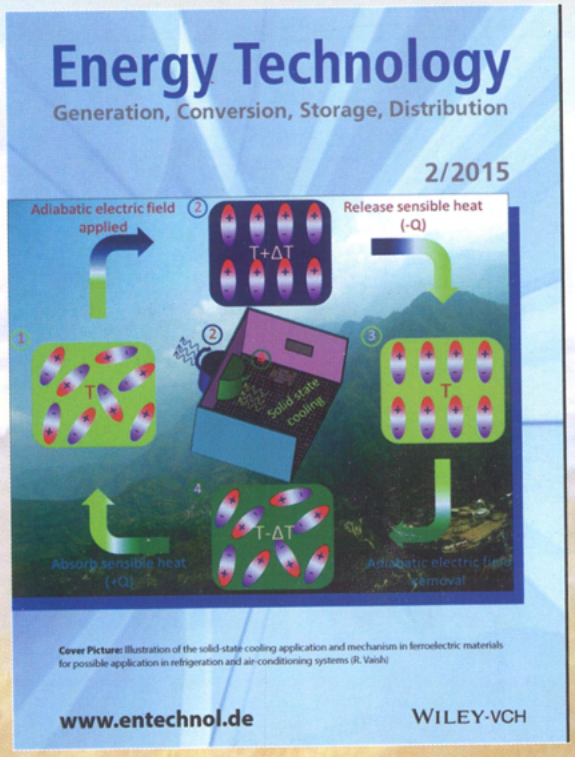
35 17 Gaurav Vats under the guidance of Dr. Rahul Vaish will receive the M.S. degree for his thesis titled, "*Lead-Free Ferroelectric Materials Selection and Energy Harvesting Investigations.*" He worked on Materials Selection for Engineering Design and he has published more than 14 research papers in peer reviewed journals of international repute. Gaurav will be pursing his Ph.D. in IIT Bombay.

Besides these student successes, our faculty members have been successful in competing for research grants from several agencies, both in India and abroad. As a notable achievement, Dr. Varun Dutt, Assistant Professor, School of Computing and Electrical Engineering and School of Humanities and Social Sciences, IIT Mandi was successful in bagging a large International project of close to USD 100,000 from a U.S.-based pharmaceutical company, Purdue Pharma, for the next three years. This project involves using social network analysis and social media information for finding prescribing histories and relationships among doctors, and for pinpointing highly connected physicians.

Dr. Rahul Vaish, Assistant Professor and Chair, School of Engineering, was honoured with The Council of the Indian Ceramic Society's Dr. R L Thakur Memorial Award - 2013. He shared this award with Dr. Amartya Mukhopadhyay, IIT Bombay. The award was given for his valuable contributions in the field of Material Science and Engineering.

Aditya Chauhan, an MS student, received the Young Scientist Award (2014-2015) in the Materials Science category in the 102nd Indian Science Congress. Aditya is working in the area of materials selection, energy harvesting and solid state refrigeration using piezoelectric ceramics under the guidance of Dr. Rahul Vaish. Aditya has published over twenty research articles in peer reviewed international journals, gaining over 160 citations in just 2 years.

Aditya's paper titled, "Enhanced Electrocaloric Effect in Pre-stressed Ferroelectric Materials," was also featured on the cover of the Feb 2015 issue of the journal Energy Technology.



Solid state refrigeration cycle (research of Aditya Chauhan)

In addition, Sunil Dutt (PhD student), guided by Dr. Prem Felix Siril, got a paper titled, "Morphology controlled synthesis of polyaniline nanostructures using swollen liquid crystal templates" featured in the inside cover of the Journal of Applied Polymer Science.

A society for Nanobiotechnology was formally launched at IIT Mandi, in December, 2013, during a national symposium on nanobiotechnology. Leading experts from across the country presented their research work on various aspects of nanobiotechnology including policy issues, advances in bioimaging, nanomedicine and biomimetics. The society will strive to promote applications of nanobiotechnology in agriculture and health research keeping in view of the challenges and opportunities before the nation.

In June 2014, the Institute witnessed the second Research Fair ANUSANDHAN '14, an intra-institute research event. This event gave an opportunity to the research scholars to present their ideas live in front of an interested audience of students and faculty.

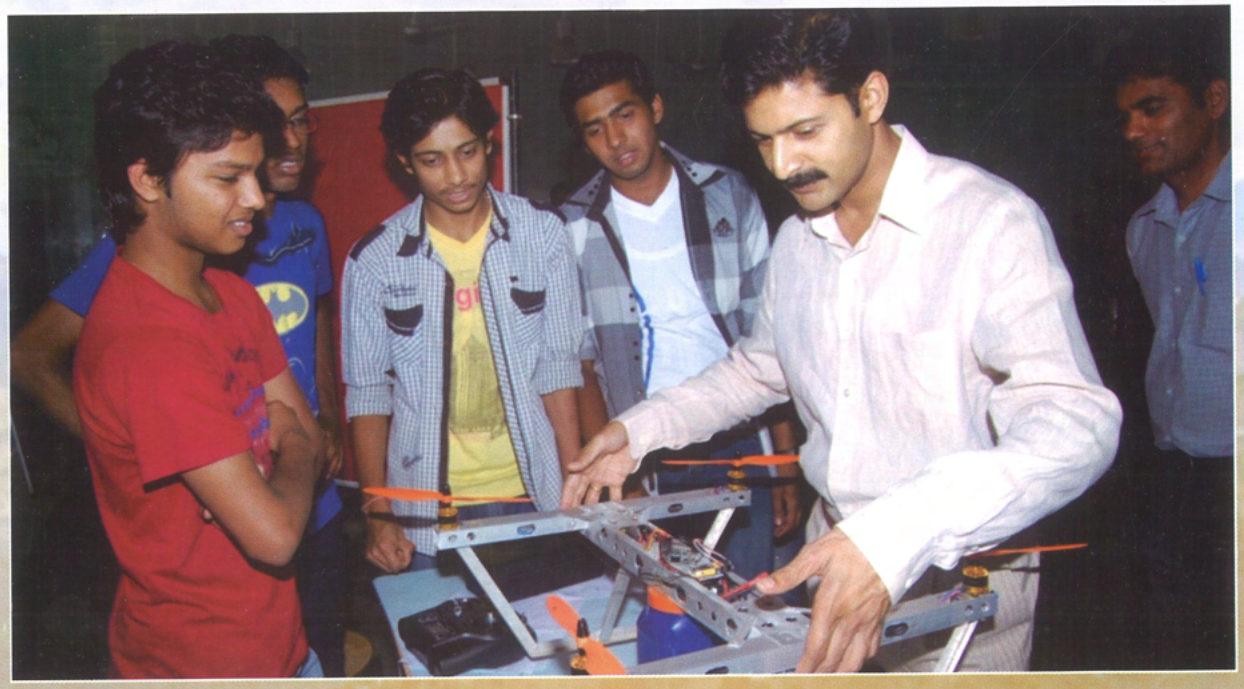
Teaching

A core activity in any premiere educational institution, such as IIT Mandi, is the maintenance of high standards in the teaching and learning process. To improve the standards of teaching, IIT Mandi took the help of the Teaching and Learning Centre (TLC) of IIT Madras to conduct Faculty Development Programmes for its young faculty members during the last winter vacation. The first was at IIT Mandi itself and was exclusively for IIT Mandi faculty members. The second workshop was at IIT Madras and included faculty members from both IIT Madras and IIT Mandi.

We have designed the B. Tech. curriculum from the ground up to produce technology-savvy leaders and product designers for the future India. The curriculum has a broad base of courses in sciences, engineering, humanities, creative arts and management. Two of the innovative features of the curriculum are Practicums and the Design & Innovation stream. A Practicum is a lab-based course that precedes the corresponding theory course. It encourages self-learning by doing. In some cases, there is no formal theory course.

The Design & Innovation Stream exposes students to various facets of real-world engineering activities throughout their 4 years. Students learn to work in teams to conceive, solve and deploy useful products. This Stream comprises:

1. *Reverse Engineering* in 1st year: understand existing products.
2. *Design Practicum* (DP) in 2nd year: given a need of society, devise a solution and build a working prototype by the end of the semester.



Unmanned Aerial Vehicle (Design Practicum)

1. *Interactive Socio-technical Practicum* (ISTP) in 3rd year: explore the interaction of technology and society.
2. *Major Technical Project* (MTP) in 4th year: capstone project of the B. Tech. programme demonstrating a high degree of technical competence in the discipline.

Some of the notable 2nd year projects in the DP, 2014, included an autonomous garbage collection machine for parks and beaches, a voice commanded desiccant dehumidifier, and an automated road repairing system.

In 2013, the first ISTP was conducted at IIT Mandi with 15 students from the WPI, USA participating. The project titled, "Solar Lighting Mandi," won the ISTP Open House award in May 2013. The project was done by Siddant Mohan, Abhishek Nalam, Vivek Vishwakarma along with WPI students and co-advised by Dr. Bharat Singh Rajpurohit and Dr. Ingrid Shockey (WPI). The WPI 2014 President's IQP Award was won by the project "Proposal for Traffic Congestion Alleviation in Mandi, Himachel Pradesh, India." The winning team included graduating students, Shiv Baishya, Shoubhik Debnath, Suraj Malode, and Sachin Saini along with WPI students, and was co-advised by Dr. Arti Kashyap and Dr. Ingrid Shockey.

A notable Major Technical Project (MTP) done by graduating EE students, Nalam Abhishek and Siddhant Mohan, involved proposing two schemes to tightly characterize the capacity of a class of relay networks with low computational complexity, an open problem for many years in information theory. This team was guided by Dr. Samar Agnihotri and they published a paper in the WCNC-2015 conference.

Extracurricular

In November, 2014, IIT Mandi witnessed 'Utkarsh'14', the first Intra-college technical festival organized by the Science & Technology Council (SnTC). Also, in the same month, IIT Mandi witnessed 'YUVYOM'14', the first youth festival organized by the Cultural Society. 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 held at the end of January, 2015. IIT Mandi obtained the 3rd place in the overall General Championship Tally.

Inter IIT Tech Meet'15

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 maintained its high standard in cricket and won a bronze medal after beating IIT Roorkee for the third position. Before this feat, IIT Mandi's faculty-staff cricket team won a gold medal in the 21st Inter-IIT Staff Sports meet at IIT Guwahati defeating IIT Delhi, IIT Roorkee and IIT Kanpur. This is the first gold medal won in sports by a New IIT. In the same Sports meet, IIT Mandi was ranked 5th in the overall point table (Men) following IIT Kanpur, IIT Delhi, IIT Bombay and IIT Roorkee. Dr. S.N. Jha has recently joined IIT Mandi as Senior Sports Officer to lead students' sports activities at Kamand. He has been working in the Physical Education section at IIT Bombay for over 30 years and his experience will be very helpful in improving the sports infrastructure at IIT Mandi.

Inter-IIT Students' Sports Meet 2014

It is clear that our students, staff, and faculty are an outstanding lot. 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.

International Linkages

IIT Mandi has been proactive in establishing strong academic links with universities and institutions abroad in order to give its students and faculty broader opportunities for their academic and research pursuits. Students (B. Tech., M.S., and Ph.D.) as well as faculty members at IIT Mandi have made use of these agreements for enriching research work and quality. Under the MoU with the TU9 institutions of Germany, IIT Mandi students could go up to one year to one of these TU9 institutions for academic, internship, and research opportunities.

IIT Mandi has earmarked Rs. 1.42 Crore (□175k) for promoting collaboration with the TU9 and □240k from BMBF for bilateral exchange visits between IIT Mandi and TU9. Under this exchange scheme, a number of faculty members visited IIT Mandi in 2013-14. Some of these faculties include, Prof. Dr.-Ing. Wolfram Ressel, Rector, University of Stuttgart; Dr. Wolfgang Holtkamp, Dr. Heiko Richter, Mr. Phillipp-Georg Stephan, International Affairs, University of Stuttgart; Prof. Jörg Schulze and Prof. B. Novak, University of Stuttgart; Mr. Thomas Mutschler, KIT.

Under the IIT Mandi-TU9 exchange scheme, a number of IIT Mandi faculty members visited different TU9 institutions in 2014 for short visits lasting up to a week. These include, Prof. B. Subramanian to TU, Dresden; Dr. Varun Dutt to TU, Munich; and Dr. Prem Filix Siril to TU, Stuttgart and other TUs. Also, a number of IIT Mandi faculty made use of the BMBF scheme to visit a number of TUs for longer visits of 1-3 months duration. These include Dr. Tulika Srivastava and Dr. Satinder Sharma to the University of Stuttgart, and Dr. Arti Kashyap to TU Berlin. Dr. Tulika Srivastava jointly conducted a research workshop in Stuttgart University with her host Prof. G. Sprenger.

In September, 2014, Dr. Satinder Sharma and Prof. Schulze of Stuttgart University organized a collaborative workshop on "Emerging Semiconductor Technologies" at Kamand. The objective of this collaborative confluence was to involve experts from the semiconductor field, especially micro/nano electronics, VLSI technology to explore possible future joint common interest on research & development among both the countries. As part of this workshop, about 90 participants from other IITs, semiconductor industries and nearby elite institutes participated.

TU9 (Germany) – IIT Mandi Collaboration Workshop on Emerging Semiconductor Technologies, 2014

Eleven students, i.e., about 10% of one year's strength, have visited different German universities for semester exchange or under DAAD fellowship in 2013-14. These universities included TU Munich, Stuttgart University, TU Aachen, UAS Zwickau, and Tubingen University. A number of German students also visited IIT Mandi under the DAAD fellowship programme. They included Jonas Dehning from Georg-August Universität Göttingen, Torsten Zache from Ruprecht-Karls University and Florian Schäfer from University of Bonn, all of whom worked with Dr. Aniruddha Chakraborty. Jayro Aldaz and Thomas Bertrand, students from Hepia, Switzerland visited IIT Mandi to work on their senior projects co-guided by Dr. T.A. Gonsalves and Dr. Varun Dutt respectively. Nachapol Wongwantanee, a student from the Asian Institute of Technology, Thailand, visited IIT Mandi for 3-months under INSA JRD-TATA fellowship to work on his project at IIT Mandi under the mentorship of Dr. Bharat Singh Rajpurohit.

Connecting with Industry

Our faculty was active in organizing workshops and conferences for bring industry and academia together. Some of the recent workshops included:

- One week short course on "Computer Aided Drafting for Engineers and Designers" in 2014.
- IIT Mandi in collaboration with the Confederation of Indian Industry (CII) organized the 2nd Industry-Academia Interaction Conclave on Friday, 23rd May 2014 at its permanent campus in Kamand. The objective of the current conclave was to showcase the strengths of IIT Mandi to partner with the industry, to understand the problems being faced by industry and society at large, and to explore possible solutions to such problems.
- Dr. O. P. Singh along with two B.Tech. (ME) students, Shaik Moiz Ahmed and M. Abhilash, filed the patent entitled, "Dye Sensitized Solar Panels by an aerosol jet 3D printing mechanism".

Placements

The second placement of IIT Mandi students took place in 2014. Companies like Amazon, Microsoft IT, Directi, GridAnts, Sigmoid Analytics, Tescra, eClerx, IP Infusion, Grofers, KhoslaLabs, Amber Group, L&T, Cognizant, Tata Motors, TCS (IT) and others visited IIT Mandi and hired 90% of eligible students from different branches.

Several of our graduates have already made an impact on our society, state, and country. Although all students from the graduating batch are gifted and possess unique talents, given the time constraints, I will be narrating a few of the many examples.

- Mohit Malhotra and Pramod Jayant, B.Tech. students from Electrical Engineering class of the 2009 of IIT Mandi, were selected to join the Aeronautical Development Agency (ADA), Government of India, as Scientists / Engineers 'B' in 2013. These students were responsible for carrying out the Flight Data Analysis and worked on the design of the ejection seat of "TEJAS" - India's First Indigenous Fighter Aircraft. Their efforts contributed to the successful Initial Operational Clearance I in Dec 2013.
- Dhirendra Kumar Singh, a student of 2010 B. Tech. (EE) batch, who has started a company "IITians Technology" in Shimla. Being the first startup by an IIT Mandi alumnus, the company provides training in electronics and communications to engineering college students. IITians Tech also plans to take up R&D projects.

Faculty Achievements and Awards

Exceptional students flourish under exceptional faculty. During the past year, research by our faculty has resulted in 130^{+} publications in peer-reviewed journals and book chapters. Our faculty have received a number of awards and honours, some are listed below:

- Prof. B. Subramanian was invited as Fellow of the International Goethe Society in Weimar in 2014. He was also elected the Asia Representative of the International Society for Intercultural German Studies in the same year.
- The poster entitled "Novel Non-Chemical Amplified (n-CARs) Resists for Next Generation Lithography (NGL) Applications" co-authored by Vikram Singh, V. S. V. Satyanarayana, Viswanath Kalyani, Satinder Sharma, Subrata Ghosh, Pradeep Parameswaran and Kenneth E. Gonsalves received the best poster award at the International Conference on Nano Science and Technology, (ICONSAT) sponsored by the Royal Society of Chemistry, U.K. at Chandigarh in March, 2014. The poster was presented by Dr. Satinder Sharma.
- Dr. Bharat Singh Rajpurohit was elected in 2013 to the Executive Committee of IEEE Delhi Section and currently serves as the Secretary, IEEE Delhi PES/IAS Chapter due to his excellent track record in organising IEEE activities.
- Dr. Varun Dutt was nominated as the Vice-Chair of the IEEE Computer Society Chapter India Council (Conference/Workshop Committee) in 2014.
- Dr. Tulika Srivastava was invited to Brussels as an expert in Bioinformatics to evaluate EU projects submitted under the Horizon 2020 call for projects in 2014. Dr. Srivastava evaluated a number of projects in the first, second, and final review phases. Later, she

became the reporter of two projects during the final review meeting of which one was finally selected for funding under the grant call.

35 17 Dr. Arti Kashyap was selected as a Simons Associate of The Abdus Salam International Centre for Theoretical Physics, Italy from 2015 to 2020.

In a new, growing IIT, faculty take up many "Institute building" tasks. Many of our young faculty have enthusiastically given of their time well beyond the call of duty for building the academic programmes, the hostels, extra-curricular activities, planning the new campus, etc. They have not grudged the sacrifice of time from the more usual academic pursuits. Without their unstinting efforts, we would not be where we are today.

Conclusions

As I stand here today at the end of these six momentous years, I am deeply thankful to everyone who has made this journey possible. Today, the journey of the graduating students towards an IIT education is complete. You graduates are now embarking on the journey towards the rest of your life. In your journey into the future, always cherish the years that you spent in this growing Institute, and hold high the banner of IIT Mandi.

Board of Governors

CHAIRMAN	**Shri M. Natarajan**
MEMBERS	**Prof. Timothy A Gonsalves** Director, IIT Mandi **Mr. Sanjay Gupta, IAS** Principal Secretary, Technical Education Government of Himachal Pradesh **Ms. Sarita Chauhan, IAS** Secretary(HE) Government of Jammu & Kashmir **Prof. S.C. Sahasrabudhe** Director Dhirubhai Ambani Institute of Information and Communication Technology (DAIICT) **Prof. (Mrs.) Basabi Bhaumik** Head, Dept. of Electrical Engineering IIT-Delhi **Mr. Satish K. Kaura** CMD, Samtel Group **Shri Raj Khilnani, IPS** DG, Anti-Corruption Bureau **Prof. Subrata Ray** Distinguished Visiting Professor Indian Institute of Technology Mandi **Prof. S. R. Kale** Head, Mechanical Engineering Department Indian Institute of Technology Delhi
SECRETARY	**Mohammad Shakeel** Registrar Indian Institute of Technology Mandi

Schools

The Indian Institute of Technology (IIT) Mandi encourages the synergistic mingling of minds. The faculty is organized in broad multi-disciplinary schools. The offices and labs of the different schools are mixed and shared. While some faculty work in pure research, others work on applied research in collaboration with industry. IIT Mandi has a strategic focus on partnerships with like-minded institutions and industries in India and abroad.

School of Computing & Electrical Engineering

This school brings together faculty involved in the key technologies of the Information Age. These include computer science, communications, VLSI, microelectronics, and electrical energy. The faculty is interested in delving into the underlying fundamental principles of information theory, theory of computation, artificial intelligence, communication theory, quantum mechanics, and the laws of electromagnetism and applying the understanding gained to pressing needs of society, through initiatives such as Information and Communications Technology (ICT) for sustainable development, and green and renewable energy technologies.

Faculty members and their specialization

- Dr. Anil K. Sao (Chairperson; Image processing)
- Dr. Samar Agnihotri (Information Theory, Communication Complexity, Wireless Communications)
- Dr. Arnav Bhavsar (Image Analysis, Computer Vision)
- Dr. Dileep A. D. (Pattern Recognition, Kernel Methods for Pattern Analysis, Machine Learning, Speech Technology, Computer Vision)
- Dr. Varun Dutt (Artificial Intelligence, Judgment and Decision Making, and Environmental Decision Making)
- Prof. Timothy A. Gonsalves (Computer networks and distributed software systems)
- Dr. Arti Kashyap (Magnetism and magnetic materials)
- Prof. Ramesh Oruganti (Power Electronics, Solar photovoltaic energy systems)
- Dr. Bharat Singh Rajpurohit (Power Electronics Application to Power Systems)
- Dr. Satinder Kumar Sharma (Nanoelectronics, Sensors, Photovoltaic & Self Assembly)
- Prof. B. D. Chaudhary (Software Technology)
- Dr. Subashish Datta (Control Theory)
- Dr. Kunal Ghosh (Solar Photovoltaic)
- Dr. Bhakti Madhav Joshi (AC drives and Control)
- Dr. Aditya Nigam (Biometrics, Computer Vision, Image Processing)
- Dr. Padmanabhan Rajan (Speech processing, Speaker recognition)
- Dr. Renu M. Rameshan (Image Processing)
- Dr. Satyajit Thakor (Communication Theory, Information Theory, Network coding)
- Dr. Hitesh Shrimali (Analog and mixed signal VLSI design, analog-to-digital converters and design of radiation hard circuits (space application))

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. Faculty from the traditional departments of mechanical, civil, aerospace, metallurgy, and material engineering are part of this school.

Faculty members and their specialization

- Dr. Rahul Vaish (Chairperson; Glasses & Glass-ceramics)
- Dr. Vishal Singh Chauhan (Design Engg., Electromagnetic Radiation during Deformation of metals and alloys, Solid Mechanics, FEM)
- Dr. P. Anil Kishan (Computational Fluid Dynamics)
- Dr. Rajeev Kumar (Solid Mechanics, Vibration, FEM, Optimization)
- Prof. Shripad P. Mahulikar (Heat Transfer, Thermodynamics, Aerospace)
- Dr. Sudhir Kumar Pandey (Condensed Matter Physics and Materials Science)
- Prof. Subrata Ray (Materials Engineering and Engineering Education)
- Dr. Om Prakash Singh (Heat and mass transfer, Double diffusive convection, IC engine)
- Dr. Viswanath Balakrishnan (Growth of functional materials/thin films, electron microscopy & in situ exploration of structure-property relationships)
- Dr. Atul Dhar (Alternative Fuels, Engine emissions control)
- Dr. Mohammad Talha (Solid mechanics, Composite structures, Functionally graded materials, Structural mechanics, Uncertainty quantification and Imperfection sensitivity in composites.)
- Dr. Jaspreet Kaur (Nanomaterials)
- Dr. Prasun Jana (Solid Mechanics, Vibration Damping, Composites, Finite Element Analysis, Plate buckling)
- Prof. Satish Chandra Jain (Mechanical Engineering, Machine Design, Tribology, Vibration and Noise, Computer Aided Design)
- Dr. Rajesh Ghosh (Solid Mechanics, Biomechanics, Finite Element Analysis)
- Dr. Arpan Gupta (Vibrations, NVH Studies, Computational Fluid Dynamics)
- Dr. Dericks Praise Shukla (Remote Sensing & GIS, Hydro-geo-chemistry, Water contamination mostly As and other Heavy metals, Natural Hazards Assessment and Mapping)
- Dr. Deepak Swami (Groundwater flow and transport modeling, Water resources development and management, Disaster mitigation specially related to floods and flash flood)

School of Basic Sciences

The School of Basic Sciences includes mathematics, physics, chemistry, and life sciences. The faculties are involved in theoretical and experimental research. They work closely with their engineering colleagues on R&D projects.

Faculty members and their specialization

- Dr. Subrata Ghosh (Chairperson; Organic Chemistry)
- Dr. Syed Abbas (Differential Equations and Ecological modeling)
- Dr. Sarita Azad (Statistical Time Series Analysis)
- Dr. A. Chakraborty (Theoretical Chemistry)
- Prof P. C. Deshmukh (Atomic and Molecular Physics)
- Dr. Abhimanew Dhir (Supramolecular Chemistry)
- Prof. Kenneth Gonsalves (Materials Synthesis)
- Dr. Prasanth P. Jose (soft condensed matter physics)
- Dr. Arti Kashyap (Magnetism and magnetic materials)
- Dr. Venkata Krishnan (Materials Chemistry, X-ray Science)
- Dr. Nitu Kumari (Applied Mathematics)
- Prof. Lalit Malhotra (Thin Film Physics and Technology)
- 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. Bindu Radhamany (X-ray spectroscopy)
- Dr. P. C. Ravikumar (Organic Chemistry)
- Dr. Rajendra K. Ray (Computational Fluid Dynamics, Numerical Methods for PDEs)
- Prof. 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 & its Application to Computational Finance, Protein Function and Structural analysis)
- Dr. Hari Varma (Atomic and Molecular physics)
- Dr. C. S. Yadav (Low Temperature Physics)
- Dr. Patibha 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. Aditi Halder (Design and development of new functional nanomaterials for the application of renewable energy, nano-electronics and sensor)

- Dr. Amit Jaiswal (Nanobiotechnology)
- Dr. Pradeep Kumar (Raman and Infrared Spectroscopy)
- 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. Amit Prasad (Immunology/Microbiology)
- Dr. Muslim Malik (Differential Equations)

School of Humanities and Social Sciences

Modern engineers work in teams to create, improve, and apply technology for the benefit of society. For modern engineers developing technologies, products, and processes that will see widespread use, a good understanding of language, history, culture, policy, sociology, economics, management, ecology, and psychology is essential. This school is thus an important part of IIT Mandi. Along with the goal to train the engineering students, the school aims to conduct advanced research in history, language, literature, cultural studies, psychology, economics, management, and policy studies, etc.

Faculty members and their specialization

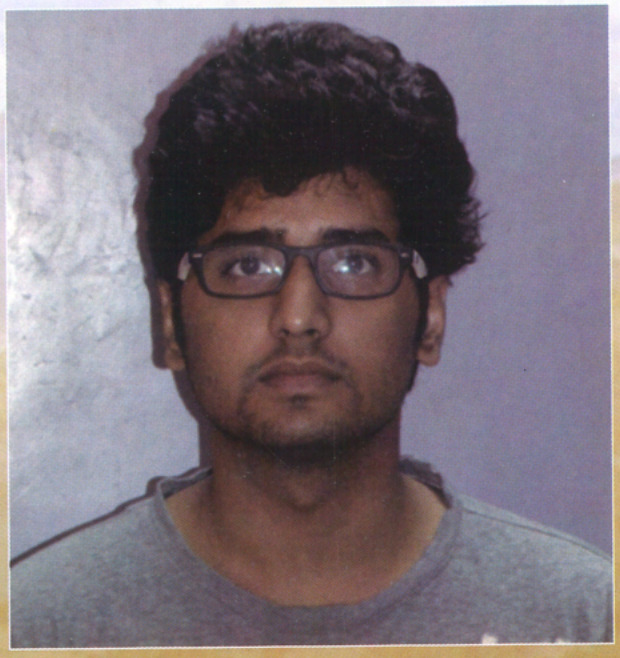
- Dr. Ashok Kumar M(Chairperson; Sociology of Religion, Caste and Christianity in India)
- Dr. Manu V. Devadevan (Literary practices in South Asia, Political and economic processes in pre-modern South Asia & South Asian Epigraphy)
- Dr. Rajeshwari Dutt (Latin America, Social and Cultural History, Indigenous studies)
- Dr. Varun Dutt (Artificial Intelligence, Judgment and Decision Making, and Environmental Decision Making)
- Dr. Bhavender Paul (Management Strategy, Managerial Finance, Biotechnology & Pharmaceutical Technology)
- Dr. Ramna (Development Economics)
- Dr. Shail Shankar (Identity and group dynamics, Health and Well Being)
- Prof. Balasundaram Subramanian (German Studies and Political Philosophy)
- Dr. Suman (Colonialism, Postcolonialism, Imperialism, and Romance Literature)
- Dr. Sara Ladas (German and Roman Philology)
- Dr. Tripti Singh (Indian Digital Arts)

Medals and Prizes

PRESIDENT OF INDIA GOLD MEDAL

Mr. Shoubhik Debnath
(B10032)
Computer Science and Engineering

DIRECTOR'S GOLD MEDAL



Mr. Anand Dhandhania
(B10053)
Electrical Engineering

Indian Institute of Technology Mandi

INSTITUTE SILVER MEDALS

Mr. Shoubhik Debnath
(B10032)
Computer Science and Engineering

Mr. Krishna Karnani
(B10060)
Electrical Engineering

Mr. Deepak Sharma
(B10109)
Mechanical Engineering

RANI GONSALVES MEDAL FOR OUTSTANDING FEMALE B. TECH. STUDENT

Ms. Damini Singal
(B10107)
Computer Science and Engineering

Indian Institute of Technology Mandi

Details of Degree Recipients

B. TECH. COMPUTER SCIENCE AND ENGINEERING

Sr. No.	Enrol. No.	Student's Name
1	B10001	Abhra Basak
2	B10002	AjayKumar
3	B10003	Aman Agrawal
4	B10004	Antra
5	B10005	Apoorva Kumar
6	B10006	Ashish Mahaver
7	B10007	Ashish Singh
8	B10008	Ashwini Kumar Dautaniya
9	B10009	Badavath Sampath Kumar
10	B10010	Boga Saikiran
11	B10011	Divya Goyal
12	B10012	Gaurav Chaudhary
13	B10013	Amit Krashnakant Gore
14	B10014	Himanshu Dewan
15	B10015	Aakash S. Hingu
16	B10016	Jai Prakash
17	B10017	Jitendra Prasad Keer
18	B10018	K Saithejosh
19	B10019	Khushali Modi
20	B10020	Nikhil Nandkumar Lonkar
21	B10021	Mahesh Yadav
22	B10022	Manav Agarwal
23	B10023	Nandini Kapoor
24	B10024	Neeraj Kumar
25	B10025	Piratla Vihari
26	B10026	Prashant Kumar Singh
27	B10027	Raheja Vishal Jagdish
28	B10028	Sadique Rasool
29	B10029	Sanchit Khattry
30	B10030	Shiv Sankar Baishya
31	B10031	Shivansh Agarwal
32	B10032	Shoubhik Debnath
33	B10033	Saiteja Sirikonda
34	B10034	Sudhanshu Gaur
35	B10035	Sukrit Aggarwal
36	B10036	Suman Sourav Sunderroy
37	B10037	Tushar Dublish
38	B10038	Vivek Vishwakarma
39	B10040	Achal Thakur
40	B10041	Saveena Rajput
41	B10042	Ankur Bhatt
42	B10076	Saumya Singh
43	B10074	Sachin Kumar Saini
44	B10107	Damini Singal
45	B10080	Suraj B Malode
46	B09003	Aman

B. TECH. ELECTRICAL ENGINEERING

Sr. No.	Enrol. No.	Student's Name
1	B10051	Abhijeet Kumar Meena
2	B10052	Akash Trivedi
3	B10053	Anand Dhandhania
4	B10054	Ankur Dixit
5	B10055	Athar Aamir Ull Shafi Khan
6	B10056	Bharat
7	B10057	Dhirendra Kumar Singh
8	B10058	Himanshu Singh
9	B10060	Krishna Karnani
10	B10061	Lalit Sahota
11	B10062	Manoj Kumar Meena
12	B10063	Mohit Goyal
13	B10064	Mohit Yadav
14	B10065	Nalam Venkata Abhishek
15	B10066	Narender Kumar Meena
16	B10067	Narendra Prajapat
17	B10068	Paliya Aditya Vedprakash
18	B10069	Rahul Kumar Gautam
19	B10070	Ram Garg
20	B10071	Rohit Goyal
21	B10072	Rohit Sangral
22	B10073	S.Bhuvaneswari
23	B10075	Sachin Sharma
24	B10077	Shashank Mathur
25	B10078	Siddhant Mohan
26	B10079	Sunil Yadav
27	B10082	Vikas Yadav
28	B10083	Vivek Kumar
29	B10084	Vivek Singh Chandel
30	B10085	Devendra Kumar Meena
31	B10086	Hariom Meena
32	B10087	Amit Kumar Meena
33	B10039	Yogesh Kumar Meena
34	B09065	Manish Jhingoniya

B. TECH. MECHANICAL ENGINEERING

Sr. No.	Enrol. No.	Student's Name
1	B10101	Abhishek Verma
2	B10102	Adhish Bhandari
3	B10103	Akash Patel
4	B10104	Akash Pathak
5	B10105	Aneesh Monga
6	B10106	Anupam
7	B10108	Deepak Chaudhary
8	B10109	Deepak Sharma
9	B10110	Eshaan Aggarwal
10	B10112	Gurbir Singh
11	B10113	Himanshu Khandelwal
12	B10115	Jayesh Chandra Gupta
13	B10116	Kanv Garg
14	B10117	Kshitij Bansal
15	B10118	Kumar Shanu Meena
16	B10119	Kunal Kishore
17	B10120	Kunal Vijay Thakkar
18	B10121	Lalin T Divan
19	B10122	M.Abhilash
20	B10123	Pranjal Jain
21	B10124	Prithish Seth
22	B10125	Rahul Chandel
24	B10127	Sachin Roongta
25	B10128	Sahil Kapila
26	B10129	Salil Jain
27	B10130	Santosh Kumar Meena
28	B10131	Savla Diler Taran
29	B10132	Shaik Moiz Ahmed
30	B10133	Shashwat Sharma
31	B10134	Shivanshu Singh
32	B10135	Sreevalsan P
33	B10136	Sumit Kant
34	B10137	Surendra Khoja
35	B10138	Vipul Gautam
36	B10139	Asheesh Kumar Meena

MASTER OF SCIENCE (BY RESEARCH) IN ENGINEERING

1. **Vijay Chauhan (S10006)**

   Title of thesis: Combined Cycle for Cold Storage and Power Generation Using Low Temperature Renewable Heat Sources.

2. **Anuruddh Kumar (S11011)**

   Title of thesis: Design and Simulation of Piezoelectric Energy Harvester.

3. **Gaurav Vats (S11020)**

   Title of thesis: Lead-Free Ferroelectric Materials Selection and Energy Harvesting Investigations.

4. **Tushar Kant Swain (S11014)**

   Title of thesis: Comparison of the Performance of Symmetric and Asymmetric strut Based Fuel Injection Systems for Scramjet Combustor.

5. **Runa Barik (S10001)**

   Title of thesis: Improving Latency of Mice in the Internet: An Approach Based on TCP Initial Window.

6. **Ashish S. Joshi (S11017)**

   Title of thesis: A Novel Single Switch-Capacitor DAC SAR ADC Design.

7. **Khoisnam Steela (S11019)**

   Title of thesis: Modeling and Performance Analysis of Shunt Active Power Filter for Power Distribution System.

8. **Anjana Babu (S11009)**

   Title of thesis: A Probabilistic Approach to Select Units Based on Acoustic Similarity for Speech Synthesis.

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1. **Lakshman Mahto (D10005)**

   Title of thesis: Analysis of Impulsive Fractional Functional Differential Equations.

2. **Sougata Sinha (D10009)**

   Title of thesis: Small Molecule Based Optical Monitors: Synthesis, Characterization and Applications in Bioimaging.

3. **Pankaj Kumar (D11047)**

   Title of thesis: b-initio, Analytical and Micromagnetic Study of Low-Dimensional Materials and Intermetallic Alloys

IIT Mandi Degree Recipients' 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.

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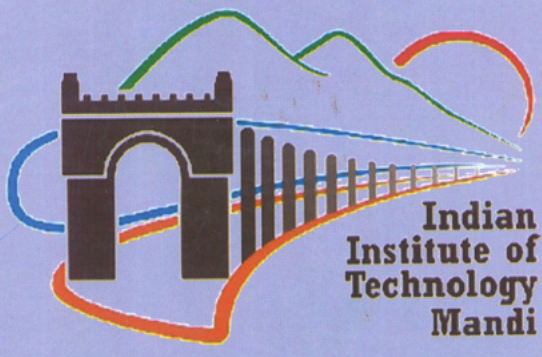
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