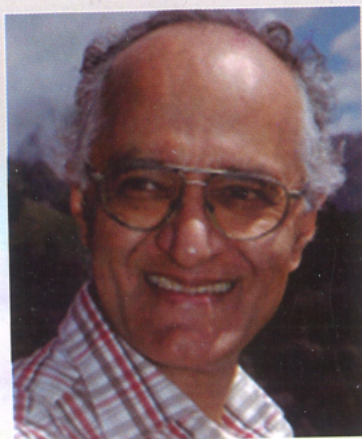


Director's Report



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.

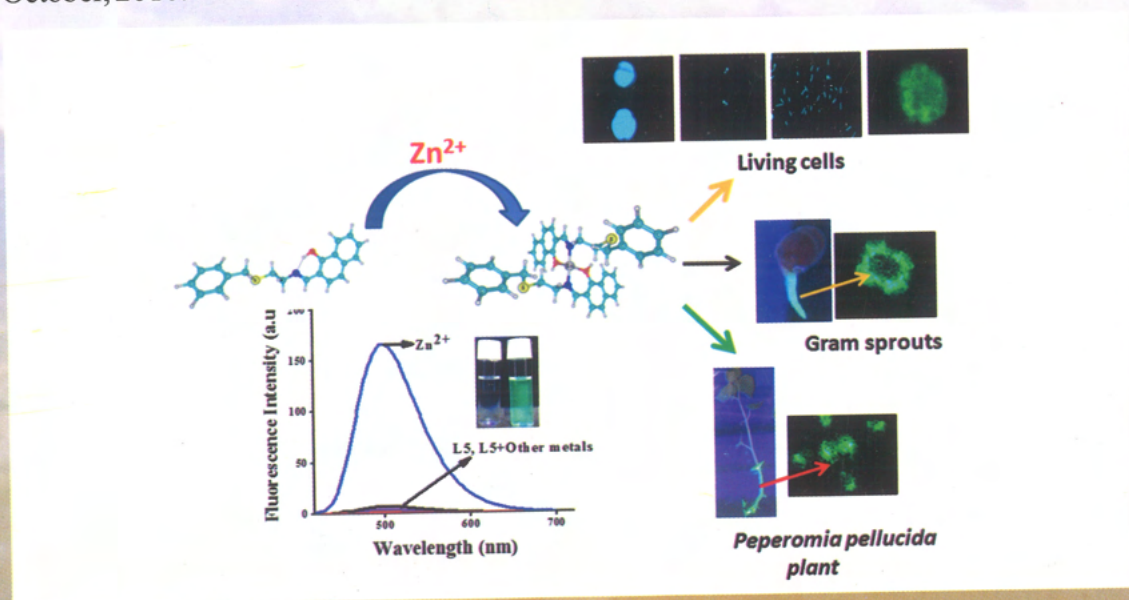
IIT Mandi has expanded in BioX with new faculty joining to form a group of 8 faculty members. Here, the Institute's focus is on developing technologies for improving agricultural practices for farmers in the Himalayan region, and for biomedical applications.

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.

- ³⁵₁₇ 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.
- ³⁵₁₇ 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)

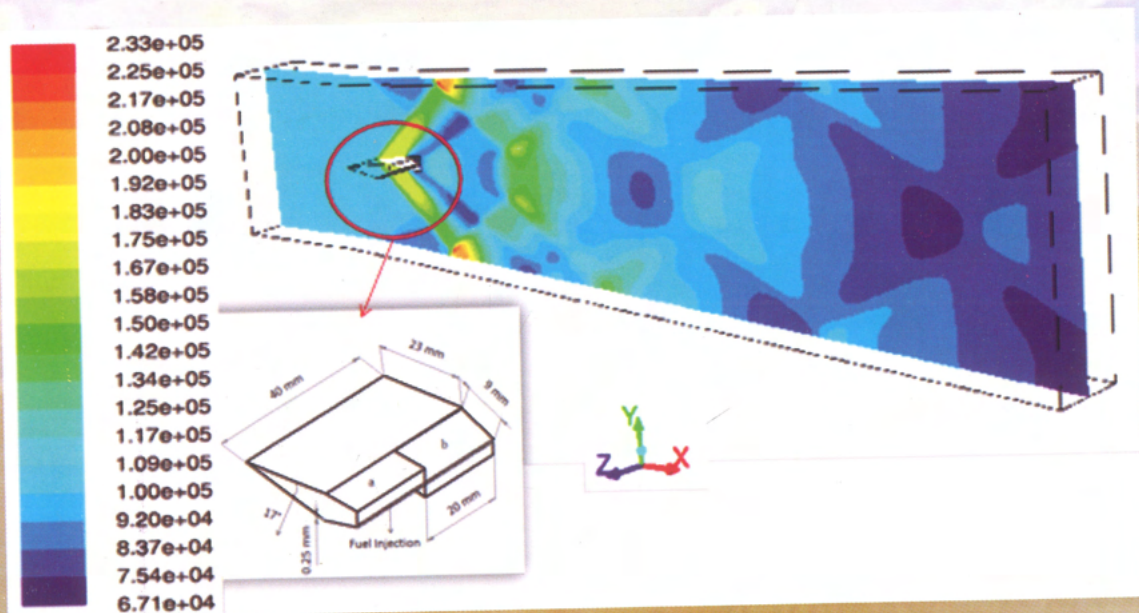
- ³⁵₁₇ Pankaj Kumar who worked under the guidance of Dr. Arti Kashyap in his thesis titled, "*Ab-initio, Analytical and Micromagnetic Study of Low-Dimensional Materials and Intermetallic Alloys*," will also be awarded a PhD degree. This thesis covers theoretical investigations of the magnetic anisotropy in low dimensional (chain) systems and in inter-metallic compounds of light and heavy transition metals.
- ³⁵₁₇ 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.
- ³⁵₁₇ 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.

³⁵₁₇ 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.

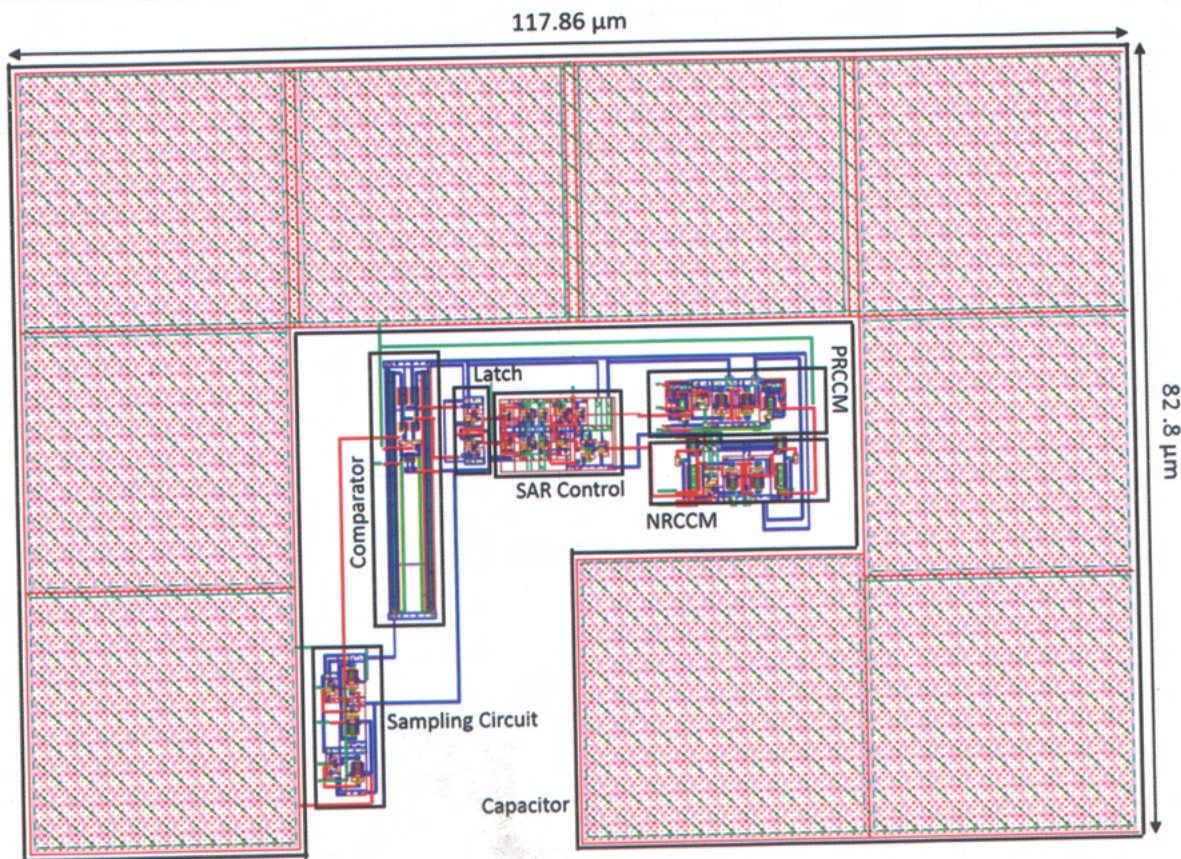
³⁵₁₇ Anuruddh Kumar under the guidance of Dr. Rajeev Kumar will receive the M.S. degree for his thesis titled, "*Design and Simulation of Piezoelectric Energy Harvester.*" In this thesis, an array of piezoelectric energy harvesters has been designed and analyzed to obtain maximum mean energy density at wide frequency range from random environment vibration.

³⁵₁₇ 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)

³⁵₁₇ 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 pursuing 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.

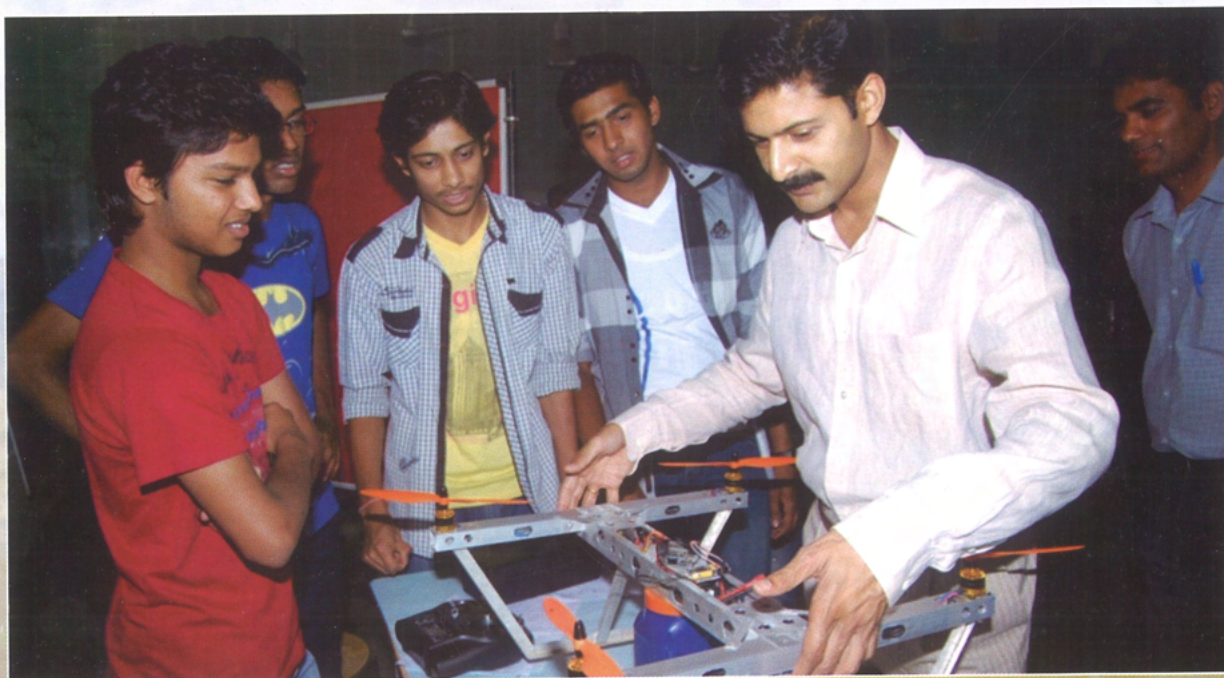
Teaching

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 Tübingen 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, Tesco, 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.

³⁵₁₇ 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.

³⁵₁₇ Dharendra 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:

³⁵₁₇ 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.

³⁵₁₇ 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.

³⁵₁₇ 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.

³⁵₁₇ Dr. Varun Dutt was nominated as the Vice-Chair of the IEEE Computer Society Chapter India Council (Conference/Workshop Committee) in 2014.

³⁵₁₇ 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.

³⁵₁₇ 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.