

DIRECTOR'S REPORT

Dr Ajit Kumar Mohanty, the chief guest, **Prof. RP Singh, Dr Anirban Bandyopadhyay, Dr Balvinder Singh and Mr. Anand Vora**, the guests of honor; **Lt Gen (Retd) Kanwal Jeet Singh Dhillon, Chairman, BoG**; Members of the Board of Governors, IIT Mandi; Members of the Senate; Faculty and Staff Members of the Institute; graduating students and their family members; and distinguished guests from media, I welcome you all on this occasion of the 11th Convocation of IIT Mandi. I offer my congratulations to all graduating students on the successful completion of their degrees. I am sure this will be a memorable day for you and your families. Today, we are delighted to have Dr. Ajit Kumar Mohanty with us as the Chief Guest. Dr. Mohanty has an illustrious career. Dr. Mohanty is currently the Secretary, Department of Atomic Energy & Chairman Atomic Energy Commission. We are grateful that he is with us in this auspicious occasion to deliver the convocation address to our graduating students that would motivate them to scale the heights in their professional careers. I also greatly acknowledge the presence of our guests of honour, Prof RP Singh, Dr. Anirban Bandyopadhyay, Dr Balvinder Singh and Anand Vora, for graciously accepting our invitation to address our graduating students. I greatly acknowledge the presence of our honorable Chairman, BoG, Lt. General Dhillon under whose guidance and inspiration, this convocation ceremony is being organized.

1. Graduating Students

On the occasion of the 11th Convocation, IIT Mandi confers degrees upon five hundred sixty five (565) students. A total of two hundred forty four (244) BTech students are graduating this year that includes twenty BTechs in Civil Engineering; eighty nine BTechs in Computer Science and Engineering; fifty BTechs in Electrical Engineering; eleven BTechs in Bio-engineering, thirty four in Data Science and Engineering, seventeen BTechs in Engineering Physics and twenty three BTechs in Mechanical Engineering.

Additionally, one hundred twelve MTech students are graduating, which includes (a) seventeen in Biotechnology, (b) eighteen in Communication and Signal Processing, (c) eight in Power Electronics and Drives, (d) seventeen in Mechanical Engineering with a specialization in Energy Systems, (e) fourteen in Materials and Energy Engineering, (f) fourteen in VLSI, (g) ten in Structural Engineering, (h) eleven in Computer Science and Engineering and (i) three in Fluid and Thermal Engineering.(j) Fifteen (15) in MA studies. A total of one hundred twenty four MSc students that includes thirty five students in Physics, forty five students in Chemistry and forty four students in Applied Mathematics will also receive degrees. In addition, ten students in MS (by Research) are also graduating in this convocation. We are also delighted to announce that sixty PhD

scholars are graduating during this convocation that includes two i-PhD and one integrated MTech-PhD scholars as well.

I, on behalf of the Senate, congratulate all our graduating students and wish them a successful professional career.

2. New Centers Established

2.1 Center for Quantum Science and Technologies

In order to harness the potential of the second technological revolution in Quantum Mechanics and aligning with the ‘National Quantum Mission’ of the Government of India, IIT Mandi has established a ‘Center for Quantum Science and Technologies (CQST)’. The center has set an objective of the development of an Optical vortex-based Quantum Computer, besides the cutting edge research in field of Quantum Communication, Quantum Metrology, Sensing and allied areas. The CQST team is collaborating with the researchers across the globe (Japan, USA, UK, Germany), and is in the process of developing a world class research center, along with a prototype development facility for an optical quantum computer and cryptographic devices.

2.2 Center for Human Computer Interaction

The institute has established DST supported section eight company, iHub and the HCI Foundation as the Technology Innovation Hub (TIH). To complement the efforts of this TIH, this centre will pursue those research ideas that can be translated into marketable products. Currently more than 25 researchers are working in this center in areas such as digital smell, digital touch, digital taste, AR/VR driven products, air-ambulance and many other interesting areas.

3. New Dean Office Established

3.1 Digital Infrastructure and Computing Services

IIT Mandi recognizes the need for a separate administrative unit for the Digital infrastructure and Computing Services (DCS) and established the Dean, DCS office in March 2023. It is a much needed and timely step because our digital and computing services have grown in an exponential way in the past decade. It is the right time now to consolidate, regulate and plan the whole digital infrastructure which was hitherto managed by the dean office of Infrastructure. DCS envisions providing hassle free, uninterrupted, and efficient digital and computing services to the campus community by deploying/managing/maintaining the state of art digital infrastructure.

This dean office has taken initiatives like (a) decentralizing the website updates through schools/offices, (b) establishing IT helpdesk for efficiency (Single point of contact for all IT support/assistance) and (c) myIIT for all internal and external links. The major tasks which are completed/ongoing are as follows:

- Setting up a central recording facility for all kinds of activities (like Recording lectures, Webcasting, distance teaching)
- Upgrading the institute's Virtual Classroom and Conference Hall with the latest technology
- Revamping institute's wireless infrastructure of both (a) Guest House as well as (b) boys' and Girls' hostels of the South campus
- Upgradation of institute's servers with high end configuration and also upgrading the high-performance computing nodes with more storage capacity
- Setting up new computing lab with a capacity of 100 desktop computers
- Upgrading institute's Internet Lease from 1 Gbps to 10 Gbps
- Setting up the data centers and undergrounding of optical fiber cables in both campuses

4. Academic Excellence in Research and Teaching

The institute takes pride in hiring best faculty members who are highly motivated for both quality teaching as well as high impact research work. We have 187 bright faculty members working in various disciplines in their pursuit of excellence. Since October 2022, 46 new faculty members have joined the institute. We have instituted two awards, **Young Achiever Award** and **Young Faculty Fellow**, to motivate and encourage the young faculty members of the institute. Through this initiative, we adhere to our commitment that young talents must be recognized and nurtured. These awards were given for the first time on 14th Foundation Day this year. The Young Achievers Awards have been conferred to,

- Dr Garima Agrawal, Assistant Professor, School of Chemical Science
- Dr Sunny Zafar, Assistant Professor, School of Mechanical and Material Engineering

I am also happy to state the recipient of the Young Faculty Fellow awards are:

- Dr Hitesh Shrimali, Associate Professor, School of Computing and Electrical Engineering
- Dr. Atul Dhar, Associate Professor, School of Mechanical and Material Engineering
- Dr Amit Jaiswal, Associate Professor, School of Bio-science and Bio-Engineering
- Dr Nitu Kumari, Associate Professor, School of Mathematical and Statistical Sciences
- Dr Shyamasree Dasgupta, Associate Professor, School of Humanities and Social Sciences

While quality research work is the hall mark of this great institute so also quality teaching is greatly emphasized to inculcate strong fundamentals among students in both science and Technology. On the occasion of Teachers Day, 2023, the institute has conferred the teaching excellence awards to,

- Dr Gaurav Bhutani, Assistant Professor, School of Mechanical and Material Engineering
- Dr Aditya Nigam, Associate Professor, School of Computing and Electrical Engineering
- Dr Nirmalya Kajuri, Assistant Professor, School of Physical Science
- Dr. Satyajit Thakor, Associate Professor, School of Computing and Electrical Engineering
- Dr Jagdish Kadian, Assistant Professor, Center for Artificial Intelligence and Robotics

In addition, Dr Amit Kumar Shukla, Dr Narendra Dhar, Dr Jagdish K and Dr Radhe Shyam Sharma also received director's special appreciation for running the Foundations of Design Practicum course efficiently. Foundations of Design Practicum course is a compulsory course for all first year students where students learn CAD design, fabrication using 3D printers and CNC machines, embedding a mechanical chassis with electronics and sensors and building an automated product from the scratch.

I am hopeful that our faculty members will rise to the occasion and will be known both nationally and internally for their research and teaching.

5. G20 and S20 Event at IIT Mandi

IIT Mandi organized the G20-S20 Meet 2023 during 21st to 30th June, 2023 with the overarching slogan One Earth - One Family - One Future.

The G20-S20 Summit started with the sacred International Yoga Day and consisted of following seven themes:

1. International Yoga Day: Celebrating the physical and mental benefits through yoga
2. Holistic Health: Exploring holistic approaches to health and well-being
3. Skill India: Addressing the importance of skill development for inclusive growth
4. Technology for Defence: Discussing advancements in technology for defence and national security
5. Technology for Society: Highlighting the role of technology in fostering societal development
6. Renewable Energy: Focusing on sustainable energy solutions and their impact on development.

The event featured an insightful keynote address, interactive panel discussions, hands-on workshops, and networking sessions related to each theme.

Some of the Key Speakers of the G20-S20 event include:

Sh. Shiv Pratap Shukla, Governor, Himachal Pradesh

Shri Mukesh Agnihotri, Deputy Chief Minister, Himachal Pradesh

Prof. Ashutosh Sharma, Co-Chair S20 and former DST secretary

Padma Shri Satish Kumar, Chairman, ARB

Prof K K Pant Director IIT Roorkee
Prof Manoj S Gaur, IIT Jammu
Dr. Sat Bir Singh Khalsa, Harvard Medical School, USA
Prof. Baldev Setia, Director, PEC Chandigarh
Dr. Kingshuk Banerjee, Director, Hitachi India
Dr. Vikas Kumar, Chairman, AR & DB

6. Infrastructure Push

The area of the institute campus is approximately 508 acres after HP government recently transferred a forest land of 308 acres. The built-up area as of now is approximately 2.2 lakh sq meter that includes academic buildings, hostels and residential quarters. Currently the institute houses approximately 2800 students, 165 faculty members and 120 staff members. By 2027, we plan to have more than 5000 students and 350+ faculty members and 350+ staff members. This requires an infrastructure push for which we have already obtained the HEFA loan of INR 333 crores. This will help us to build the hostel facilities for 2100 students, two academic buildings and a lecture hall theater. The work has been awarded to CPWD and the work for hostel facility for 1600 students in the North campus is going to start very soon.

We have also applied for another HEFA loan of INR 326 crores that will help us to build 150 3BHK apartments, 150 2BHK apartments, two academic buildings, a state-of-the-art student activity center that would include sporting facilities. We are expecting that all of these projects will be completed much before 2027.

To make our campus unified as well as commutable, following projects are in progress:

- (a) The construction of a bridge over Kataula Khad.
- (b) The construction of a road from South to North for the unification of the two campuses. The work pertaining to the road has been assigned to the contractors and executed by the Construction Wing of IIT Mandi. It will be a two-lane road with (i) street lights, (ii) footpaths and (iii) ducts/trenches for carrying electrical and other cables. The bridge and the road work is expected to be completed by April 2024.
- (c) MoE has also agreed to sanction INR 65 crores to take various safety measures such as building Gabion and protecting walls, advanced drainage system and boundary wall given the damage caused by the recent cloud bursts and landslides. These works are being undertaken on a war-footing.
- (d) A hostel of approximately 300 capacity is being built in the south campus and is expected to be completed by April 2024.

- (e) A married hostel consisting of 1BHK apartments is going to be built in the south campus. The tender has been floated and the work is going to start within a month.

7. New Degree Programs

Following the NEP 2020 spirit, Five new degree programs have been initiated and first batch has been admitted in August 2023.

B. Tech. in Materials Science and Engineering: This program aims to create a comprehensive blend of science and engineering, enabling students to understand the correlation between material structure and properties, advanced processing, and service behavior of engineering materials, fostering innovation and optimization of manufactured products and modern tools.

B.Tech. in General Engineering: The interdisciplinary general engineering program will equip students with a comprehensive foundation of theoretical and practical knowledge essential for a successful engineering career. Through active learning, an interdisciplinary approach, and meaningful collaborations with industry and academia, students will gain specialized skills and expertise for future advancements in engineering.

B.Tech. in Mathematics and Computing: The objective of the program is to integrate the principles of mathematics and computing, providing students with a robust foundation in both fields. This comprehensive course aims to develop analytical and problem-solving skills, fostering strong logical thinking, and equipping students with advanced computing expertise.

B.Tech. in Microelectronics and VLSI Engineering: The objective of the program is to support the growth of the semiconductor industry in India, specifically in the area of VLSI. By providing training in VLSI with industrial standard EDA tools and advanced courses in device level, design, fabrication, and tools, the program aims to equip students with theoretical knowledge and practical skills for pursuing higher education and careers in VLSI specialization and chip designing, meeting the manpower demands of the semiconductor industry in the future.

BS in Chemical Sciences: The objective of the program is to equip graduates with a strong foundation in fundamental Chemistry and Engineering, fostering a harmonious blend between various sciences, including chemical, physical, mathematical, computational, data, and engineering, for advancements in atomic-level understanding of chemical and biochemical phenomena, as well as the design and development of new molecules, materials, and devices in today's research and technology-driven world.

In addition, the senate and BoG have approved to start a new program on Integrated MBA from Aug 2024. This is an exciting program that has many novel features:

Program: 5-year integrated program (BBA + MBA dual degree)

Objective: Nurture future business leaders with a strong appreciation for technology and cross-functional management capabilities.

Program Focus: Imparting training in management, analytics, data science, mathematics and statistics; along with relevant courses from other areas such as Humanities, Communication, and Indian Knowledge System

Program offering: Holistic learning, Project-based learning, industry internships, entrepreneurship avenues

8. Newly Established Labs

The following labs have been established in the School of Mechanical and Materials Engineering

- Advanced Manufacturing Lab
- Product Realization Lab
- Optical Diagnostics lab
- Numerical Thermofluid Laboratory
- Electric vehicle Design and Analysis lab

The following labs have been established in the School of Civil and Environmental Engineering

- Rock Mechanics and Earth Science Lab
- Water Resource Engineering lab
- Environmental Engineering and Biogeochemistry Research Laboratory

9. Research Publications and Research Grants

A culture of excellence has always been the hallmark of IIT Mandi scholars including faculty members and students alike. I feel very happy to state that our scholars have done a terrific job in terms of publishing papers, books, book chapters. In the academic year 2022-2023, our faculty members and research scholars have published more than 400 journal papers. The institute has received 83 projects with a total grant of INR 21.28 crores in 2022-23. The institute is currently carrying out 158 research projects worth INR 87 crores.

10. Student Placements

The career placement cell has been working tirelessly to ensure that all the students are well placed. This year IIT Mandi hosted 201 companies which is about 10% increment

on the previous year's number. Some of the special mentions include Über, Oracle, Microsoft, Google, Adobe, Amazon, Zomato, Samsung Bangalore, Walmart, Sprinkl, Schrödinger, Flipkart, Tata 1 mg, Jaguar Land Rover, Maruti Suzuki, Mercedes Benz, Mahindra & Mahindra, Pentair, Qualcomm, Texas Instruments, Nvidia, AMD, Synopsys, Accenture Japan, HDFC, L&T, HPCL, C-DOT, BEL, Robert Bosch, Honeywell, IBM, TCS, LTI, Wipro, HCL etc. In total, about 17 sessions were conducted to make students aware of various career options. This year our first batch of BTech DSE, EP, and Bioengineering, and M.Tech CSE, FTE students graduated. The BTech median salary was about 22 LPA and about 94.11 were placed on the other hand, MTech mean salary was about 10 LPA with 78.72% of the students placed.

11. Achievements of Faculty Members

Our exceptionally talented faculty members have achieved both national and international laurels:

- **Prof. Laxmidhar Behera**, received the SSI National Systems Gold Medal award, the highest honour of the Society conferred to the distinguished systems scientist for outstanding contributions to society by the Systems Society of India (SSI).
- **Dr Shubhajit Roy Chowdhury**: (a) Mentioned by *Nature India* for a Device that does an early Stroke detection in the year 2022 (b) Selected as a *Mentor by the IEEE Instrumentation and Measurement Society mentoring programme* in the year 2022 (c) Elected as *Associate Editor of Frontiers in Medical Technology* in the year 2022
- **Dr Baskar Bakthavachalu**: Achieved the *EMBO Global Investigator Award*
- **Dr Amit Jaiswal**: (a) Recognised as an *Emerging Investigator*, Biomaterials Science, *Royal Society of Chemistry* (b) Received the *Young Faculty Fellow Award 2023*
- **Dr Shyam Kumar Masakapalli**: (a) Joined as *Board of Editors* of the *American Society of Microbiology Journal Systems* (2023-2026) (b) Awarded the “*Chaiti Award* for contribution to Science and Technology”, Rayagada District 2023 (c) Established a *Farmer-Academia-Industry-NGO model network* that benefitted ~100 farmer families
- **Dr Trayambak Basak**: (a) Elected as the *Executive Council* member of the *Proteomics Society of India* PSI (b) Elected as the Executive Council (EC) member of the *International Society for Heart Research* — Indian Section
- **Dr Amit Parsad**: (a) Speaker at *Molecular Helminthology 2023* (b) Invited to participate in *Hydra conference* (Only 100 selected scientists are invited) (c) Guest Editorial member of *Molecular Parasitology, Vaccine, JOEV* (d) *Associate Editor Front Molecular Biology*
- **Dr Prasad Kasturi**: *Ramalingaswami Fellowship*

- **Prof Tulika Srivastava:** (a) Invited *Session Chair* at the *International Human Microbiome Consortia 2022 Meeting* held at Kobe, Japan in Nov 2022 (b) Invited *Speaker* in the Winter School on “*Molecular Diagnosis of Anti Microbial Resistant pathogen causing Mastitis in Cattle and Buffalo*” at *Animal Biotechnology Centre, National Dairy Research Institute Karnal* in 2023 (c) Invited *resource person* for hands-on “*Bioinformatics Workshop On Plant and Microbial Genomics*” at the *University of Jammu* 2023. (d) Invited *Speaker* at a hands-on workshop on “*Advancing Microbiology: from Culture to Sequencing*” at *IISER Kolkata* in December 2022
- **Dr Mousumi Mukherjee:** (a) Awarded *Mathematical Research Impact Centric Support Grant* in 2023 by SERB, India (b) Awarded with the *IGS - Prof. C.S. Desai Biennial Award* in 2022 for best paper on “*Constitutive Modelling for Geologic Materials*” by *Indian Geotechnical Society* (c) Selected for the *SERB International Research Experience* for the year 2023-2024
- **Dr Shivang Shekhar:** (a) Selected as an *Early Career Editorial Board Member* for the prestigious *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems* (b) Selected for “*IAStructE Promising Young Structural Engineer Award 2022*” by the *Indian Association of Structural Engineers*
- **Dr Sandip Kumar Saha:** (a) Awarded *Dr Jai Krishna Prize* by *The Institution of Engineers (India)* (2022) (b) Elected as an executive member of the *Indian Society of Earthquake Technology* (c) Selected as a *resource person* for the *Technical Appraisal Committee, HP-SDMA*
- **Dr Ashutosh Kumar:** (a) Recipient of *IACMAG John Carter Award – 2022* from *International Association for Computer Methods and Advances in Geomechanics, USA*. (b) Recipient of *Royal Society London, United Kingdom International Exchanges Award* with Professor Xyueu Geng of the *University of Warwick, UK*
- **Dr Mrityunjay R Doddamani:** (a) *Prof. Satish Dhawan Award* for research on *Additive Manufacturing* (Engineering Science Category) (b) Presented at the *Indian Institute of Science* in Bangalore in 2023
- **Dr Rik Rani Koner:** Awarded *WISER fellowship* by *IGSTC*
- **Dr Sumit Murab:** (a) Cover page of *Journal of Materials Chemistry B, RSC* (b) Invited *Speaker* and *Session Chair* in *Asian Polymer Conference 2023, Goa*
- **Dr Mohammad Talha:** *Guest Lecturer*, *School of Mechano-Electronic Engineering, Xidian University, China* during *International week program* to teach *Fundamental of Finite Element Method*, 15-30 June, 2023
- **Dr Parmod Kumar:** (a) Presented an *invited lecture* on *Understanding of film boiling heat transfer over curved surfaces* at *NIT Delhi* (b) Presented an *invited lecture* on *Waste heat recovery systems* at *MGGEC Jeori, Rampur, H.P.*
- **Dr Garima Agrawal:** Awarded *Platinum Jubilee Young Scientist Award 2022* by *The National Academy of Sciences, India*

- **Dr Muslim Malik:** Elected as a *member of AICTE expert committee*
- **Prof Syed Abbas:** (a) Indo-UK *networking grant* (b) nominated as a *member of AICTE expert committee* (c) *Guest editor* for special issues of various journals
- **Prof. Rajendra Kumar Ray:** Elected as the *Vice-President* of the *Indian Society of Theoretical and Applied Mechanics*
- **Dr Nitu Kumari:** Received *CSIR-EMR Grant, 2023* (c) Elected as *Member of AICTE Expert committee*
- **Dr. Saumya Malviya:** Awarded the prestigious *Bharat Bhushan Agarwal Award*, for his poetry collection *Ghar Ek Namumkin Jagah Hai* by *Raza foundation, Delhi*
- **Dr. Puran Singh:** (a) Selected as panel Co-Convener of Startup & Education for year 2023-24 by CII Himachal Pradesh State Council (b) Appointed as *Regional Coordinator* in 2022 for the northern cluster of incubators of *Indian Science and Technology Entrepreneurs Parks and Business Incubator Association*
- **Dr Ajay Soni:** Elected as *Member of Royal Society of Chemistry, London, UK*

12. Student's Gymkhana

With the start of IIT Mandi, the Student Gymkhana was established. Since its inception, the Gymkhana has been playing an instrumental role in the growth and development of the Institute. The students regularly organize activities and hallmark festivals such as Exodia, a techno-cultural festival; Ruvaan, the Annual Literary Festival; Astrex, The annual festival of Space, Technology and Astronomy Cell; and, RannNeeti, the annual inter-college sports event. The Science and Technology Council (SnTC) organizes events through the Programming Club, Robotics Club, Space Technology and Astronomy Cell (STAC), E-Cell, Yantrik Cell, and Nirmaan Cell. Similarly, the Cultural Club is organized around Art Geeks, Dance Club, Drama Club, Music Club, and Photography Club. The Literary Society is organized around the Debating Club, Writing Club, and Quizzing Club.

IIT Mandi students enthusiastically make use of the location of the campus and utilize avenues for various adventure sports such as mountain biking, hiking, trekking, rock climbing and so on.

I take this opportunity to especially mention Yuva Sangam 2.0 in the month of May, 2023. IIT Mandi hosted 45 students, faculty and staff members from Goa. In exchange, the institute sent a group of 40 persons (including students, staff and faculty) from Himachal Pradesh to Goa.

12.1 Students' Achievements & Activities

Some of the noteworthy students' achievements include the following.

- Our students have performed really well in the PAN IIT Meet, securing 5 medals in total. This includes (a) two silver medals in design marathon and creative writing and (b) three bronze medals in Slam poetry, Word Games and movie making competition
- On the sports' front our students had a magnificent performance. We were first runner up in Inter IIT Sports Meet 2022 bagging silver medals in cricket (boys) and table tennis (girls). We stood 8th in Inter IIT sports meet 2022. We were also the winners of cricket trophy in Inter College Tournament Rann-Neeti. We won gold medals in all categories in Pan IIT Cycling event
- Science & Technology: We stood 2nd in Smart India Hackathon 2022 by SNTC and received a cash prize of INR 75000 and a Gold Trophy

We strive hard to provide our students the best possible facilities for an all-round development of their personalities. In this regard, I am happy to share that

- From May 2023, a new Gymnasium near Peepal Mess in the North Campus has started, housing modern equipment
- A new Volleyball ground in North Campus has been established.
- We hired 13 coaches for various games in addition to hiring Yoga, swimming and gym trainers
- Two new Juice Corners, one in each campus, have started

I would also like to mention some of the major events organized by various clubs under Dean of Students

- Group discussion on millets, invited speaker Padma Shri Shri Nek Ram Sharma
- TEDx IIT Mandi was organized with distinguished speakers from various fields.

Our students have brought a lot of academic achievements:

- **Ms. Muskan Dhandhi (PhD):** (a) Shastri Indo-Canadian MITACS Global link Research Award for 2022-23
- **Ms Mithuna P. (MA):** The “Best Student Presentation” award at the 2nd International Conference on Women in Colombo, Sri Lanka.
- **Dr. Abhilash M (Alumni):** Won the N. V. Krishna Warriar best science literature award of the Kerala Bhasha Institute (GoI) for his book “Ryotwari”.
- **Ms Aditi Rana (PhD):** Visiting Student to the *Institute of Hazard, Risk and Resilience* of Durham University, UK
- **Mr Sonu Kumar (PhD):** Awarded the prestigious *Commonwealth Split-Site Scholarship* by UK government
- **Mr Dharani Raj (PhD):** Secured *fully funded PhD position* at the *University of Adelaide, Australia*

- **Mr Madhu Sudan (PhD):** Awarded the *SERB international travel grant* for attending the NUMGE2023 conference in *Imperial College London, U.K*
- **Ms Neha Aswal (PhD):** Received Marie-Curie Bienvenue postdoctoral fellowship
- **Mr Himanshu Rana (MTech):** Secured fully funded PhD position in France.
- **Mr Shubham Kumar (PhD):** Selected for *LARAM International Summer School 2023 on Landslide Risk Assesment and Mitigation, Italy*
- **Ms Mamta Devi (PhD):** Received the *International Travel Support from SERB* for attending the conference entitled *Diamond and Carbon Materials* in Spain
- **Mr Ajit Kumar:** Presented paper in ISAM-2023 (*International Society for Aerosols in Medicine*) in Germany
- **Mr Diwakar Singh:** *Overseas Visiting Doctoral Fellowship (OVDF)* Program at *Mechanical Engineering Department University of Alberta Canada*, under Prof Xiaodong Wang
- **Dr Prashant Saini:** Joined the PostDoc position at *National Renewable Energy Laboratory, USA*
- **Mr Rahul Kumar Mondal (PhD):** Received the *SERB international travel support* to present his work in ICMF-2023 at Kobe, Japan
- The student contingent of pioneering batch of MBA DS&AI students, **Parnika Kapoor, Shreya Agarwal, Rahul panda, Harshit Kalra, Harsha Harod, Vikram Singh and Tejas Bhimate** won First and Third Positions respectively in *Consularium, the Consulting Event of Samanvay - IIT Madras*, organized by the DoMS, IIT Madras in 2022.
- Student contingent of **Harshit Kalra, Surinderpal Singh, and Gyanjyoti Kalita** represented IIT Mandi at the Inter IIT Tech Meet and won Bronze medal in paradime.io's Product Challenge
- **Dr Anil Kumar:** Qualified HPPSC "Assistant Professor, Govt. College Banjar (Distt. Kullu H.P.)"
- **Dr Pawan Kumar Mondal:** Qualified BPPSC "Assistant Professor Mathematics Govt. Engineering Collage"
- **Ms Swetha R & Ms Naziya Faizy (MTech):** Awarded *Khorana fellowship 2023*
- **Ms Nancy Choudhary:** Availed the *DAAD Kospie* fellowship at *Technical University Braunschweig Germany*
- **Ms Vanshika Saxena, Mr Akash Kumaran and Ms Sanchita Sarkhel:** Received *Prime Minister's Research Fellowship Award*
- **Dr. Niraj Kumar Singh:** Awarded *The Best Thesis award* in SHODH-2023, "Emerging Strategies in Research: Going Beyond Disciplinary Boundaries" at SVVV Indore.

- **Mr Ankit Kashyap:** Won the *best technical Presentation award* in the *International Conference On Smart Materials for Sustainable Technologies (SMST-2022)*, held at IIT Bombay
- **Dr. Juhi Pandey:** Won the *best poster award* in *The International Conference on Electronic Materials and Nanotechnology for Green Environment (ENGE-2022)*, held at Jeju, Korea
- **Yuvraj Mishra (EP):** Joined the *University of Illinois, Urbana-Champaign (USA)* for higher studies on a fully funded scholarship.

13. Achievements of Alumni

Dean of Resource Generation and Alumni Relation was established on 2022 to help our alumni well-networked and to celebrate their achievements. I am extremely elated to relate some of our Alumni's achievements to you:

- *Young Achiever Award for Academic & Professional Excellence* to Dr Vinayak Abrol (*Assistant Prof, IIT Delhi*) & Dr Faria Rehman (*Deputy Manager, Havells India, Ltd*)
- Dr Manoj Kumar (Batch 2023), has secured the position of Assistant Professor at IIT Madras, Zanzibar (Tanzania).
- Ms Sushmita Chaudhary (Batch 2018): Senior Scientist at ISRO was a part of the team for mission Chandrayaan-3.
- Mr Harsh Katakwar (Batch 2022) and Dr Palvi Aggarwal (Batch 2018) got the Best Paper Award along with Dr. Varun Dutt, Associate Professor, SCEE, IIT Mandi for the paper "Modeling the effects of different Honeypot proportions in a deception-based security game"
- Dr Ankit Sharma (Batch 2015) got the prestigious Global 5 Under 35 SFPE Award in 2023 selected worldwide.

14. International Linkages

IIT Mandi has remained an attractive destination for international students and faculty and fostered its linkages with the wider academic world through student and faculty mobility, as well as joint research projects and MoUs. Presently IIT Mandi has 19 active MoUs with international partners.

Since 2013, over 108 of our students have had the chance to go for semester exchange to RWTH Aachen University, Technical University of Munich, Blekinge Institute of Technology, Hepia, Switzerland, IT University of Copenhagen and University of Stuttgart. Over 145 international students have experienced the project-based learning and other academic offerings of IIT Mandi since 2015, the majority from Worcester Polytechnic Institute (WPI), USA.

14.1 International Students at IIT Mandi: At present there are 16 International students enrolled for UG, Masters and PhD programs at IIT Mandi. Of these, 4 are from Bangladesh and 6 from Nepal. 3 students joined IIT Mandi from Ethiopia in April 2021 and May 2022 for the PhD programs. Three students, one each from Pakistan, Canada and America, are enrolled in the BTech program.

Caleb Ian Watson Beckwith, Sahil Krishnani, Roger Enhanli, Shrihit Saxena, and Kayla Lyn Andersen visited IIT Mandi for Research (International Summer Internship) from the USA in July 2023. Mr. Akke Schotten from RWTH Aachen is visiting IIT Mandi under the semester exchange program from August to December 2023.

14.2 International Visits of IIT Mandi Students: 25 IIT Mandi students enrolled in master's and undergraduate programs visited several EU institutions under academic exchange programs in the year 2022-2023. The UG visits include: (a) 6 to RWTH Aachen (b) 4, 3, 6 and 2 respectively to Technical Universities of Munich, Darmstadt, Dresden and Braunschweig (c) 2 students visited the Norwegian University of Science and Technology, Norway and (d) 2 MTech students had a German visit under DAAD (KOSPIE) program. In October 2023, 33 IIT Mandi students (32 BTech and 1 MTech) are expected to visit Germany, Norway and Japan to our partner institutions on semester exchange programs. **14.3 International Visitors at IIT Mandi**

- Mr. Woochan Chang, Director KOICA India, visited IIT Mandi in November and December 2022 along with his team of 7 members
- Prof. Stuart Hameroff, Professor at the University of Arizona, Tucson, USA visited IIT Mandi in December 2022.
- Mr. Michael Oppenheimer, International Relationship and Student Recruitment Manager from Dalarna University, Sweden visited IIT Mandi in December 2022.
- Dr. Ingrid Shockey and Dr. Uma T Kumar, from Worcester Polytechnic Institute visited IIT Mandi in March to May 2023 under Interactive Socio-Technical Practicum (*ISTP*) project.
- Dr. Porraccia Jean Francois, Head (R&d Office), Himalaya, Dubai from France visited IIT Mandi in May 202.
- Mr. Rajnish Khanna and Ms. Melindan Rose visited IIT Mandi from the USA to participate in a seminar/workshop at the IKSHMA Centre in June 2023.
- Dr. Yong Jung Park, visited IIT Mandi from Korea to attend the G20 and S20 Event in June 2023.
- Mr. Raj G Asava and Ms. Aradhana Asava from the USA visited IIT Mandi in July 2023 to deliver lectures.

- Prof. Akm Samsur Rahman, and Prof. Nikhi Gupta, visited IIT Mandi as Collaborators from USA in July 2023.
- Dr. Adriana Aguilera Gonzalez visited IIT Mandi from France under the INSA-JRD TATA FELLOWSHIP in June to September 2023.
- Dr. Arnaud Charles Deraemaeker, visited IIT Mandi from Belgium in July 2023 as a collaborator
- Prof. Masamichi Kohno visited IIT Mandi for a meeting with SMME Chairperson and SMME faculty members from Kyushu University of Japan in September 2023.

14.4 International Visits by IIT Mandi Faculty

- Dr. Mohammad Talha has invited as a guest researcher at the Université de Technologie Belfort-Montbéliard, 90010, Belfort Cedex, France, during October-December 2022.
- Dr. Himanshu Pathak visited Bangkok, Thailand for an oral presentation in the International Conference on Computational Modeling, Simulation and Optimization (ICCMO-2022).
- Dr. Subhamoy Sen visited INRIA in Rennes, France for a research collaboration with Dr. Laurent Mevel.
- Dr. Ashutosh Kumar visited Durham University, UK, as Visiting Researcher at the Institute of Hazard, Risk and Resilience, Durham University.
- Dr. Vivek Gupta visited Chicago, USA for poster presentation titled “Impact of Climate Change on River Flow Characteristics in the Western Himalayas”.
- Dr. Syed Abbas visited Bizkaia Aretoa Center, Bilbao to participate in an International conference.
- Dr. Shashank Pathak visited Université Libre de Bruxelles (ULB), Brussels, Belgium to perform research in collaboration with Prof. Arnaud Deraemaeker and his research group
- Dr. Sayantan Sarkar visited the University of Dhaka, Bangladesh to attend Collaborative International Research Project meeting on “Coal-based economies in developing countries”.
- Dr. Arti Kashyap visited University of Kelaniya, Sri Lanka and attended International Postgraduate Research Conference (IPRC-2022).
- Dr. Prateek Saxena visited TU Berlin, Germany for fellowship.
- Prof. Bharat Singh Rajpurohit visited Maldives National University, Male City (Maldives) IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT).

- Dr. Sayantan Sarkar visited Center Vienna (ACV) in Vienna, Austria for the International Conference European Geosciences Union General Assembly 2023 (EGU 2023).
- Dr. Ashutosh Kumar visited Cardiff University, United Kingdom for International Conference Geo-Resilience 2023.
- Dr. Parmod Kumar visited Kobe, Japan for 11th International Conference on Multiphase Flow (ICMF 2023).
- Dr. Mohammad Talha visited Prince Mohammad Bin Fahd University, Saudi Arabia for the International Conference on Advanced Topics in Mechanics of Materials, Structures and Construction (ATOMECH1- 2023).
- Dr. Shyamasree Dasgupta visited (a) University of Dhaka and Rajshahi, Bangladesh to Peruse research visit for Collaborative International Research Project on Coal-based economies in developing countries and (b) University of Magdalena, Santa Marta, Colombia to attend the 17th Biennial Conference of the International Society for Ecological Economics.
- Dr. Varun Dutt, visited Corfu Greece, to organize a Workshop title “CogTech: a workshop on low-cost, not-invasive technologies for decision-making, cognitive wellness, and mental health” at PETRA 2023.
- Dr. Harshad Vijay Kulkarni visited Lanzarote, Spain to attend the 4th International Planetary Caves Conference.
- Dr. Varun Dutt visited Chicago, Illinois USA to attend the convening focused on education and equity in a changing climate hosted by The Spencer Foundation in partnership with the Mac Arthur Foundation.
- Dr. Aruna Bommarreddi visited Yogyakarta, Indonesia to attend the International Conference on Humanities, Social Science and Business Management (ICHSSBM-2023)
- Dr. Prasad Kasturi visited Srebreno-Dubrovnik, Croatia & Germany, to attend EMBO Workshop on protein quality control: From molecular mechanisms to therapeutic intervention.
- Prof. Rajeev Kumar visited Canada for Research Visit/Doctoral Visiting Fellowship.
- Dr. Ramna Devi Thakur visited Captown, South Africa to participate as a speaker/deliver a lecture on titled “Magnitude of Health Expenditure Induced Removable Poverty in India: Some Reflections on Ayushman Bharat” at the 2023 i-HEA Biennial World Congress.
- Dr. Neha Kaushik visited London, UK to give a lecture titled “Translating Bachmann into Hindi: The Feminist Way” at the conference ‘Ingeborg Bachmann Now’.

- Dr. Varun Dutt visited London, UK to present his research work/give a talk on his research in AI, HCI, Cognitive Science and Indian Knowledge System also to discuss research collaborations.
- Dr. Dinesh Singh visited Queensland, Australia to Present paper on “International Joint Conference on Neural Networks (IJCNN 2023).
- Dr. Chadra Shekhar Yadav visited (a) Madrid, Spain, to attend the International Quantum Matter Conference, Quantum Matter 2023 and (b) Tsukuba, Japan for research at World Premier International (WPI) neibarch Center for Materials Nanoarchitectonics (MANA) National institute for Materials Science (NIMS).
- Dr. Pradeep Kumar visited Thessaloniki, Greece to attend the 10th International Symposium on Radiative Transfer, RAD-23.
- Dr. Amit Prasad visited Wisconsin, USA to attend the International Conference Molecular Helminthology 2023.
- Dr. Nitu Kumari visited Jeju Island, Republic of Korea to deliver an invited talk at the 8th CIJK Conference on Mathematical and Theoretical Biology.
- Dr. Pratim Kundu visited Orlando, USA to attend the 2023 IEEE Power & Energy Society General Meeting (PESGM).
- Dr. Mousumi Mukherjee visited Turin, Italy to attend the 8th International Conference on Debris Flow Hazard Mitigation (DFHM8).
- Dr. Anirban Sarkar visited University of Manitoba, Canada as a Visiting Researcher/Visiting Academics to pursue research and other collaborative research works.
- Dr. Pradeep Kumar visited Incheon, Korea to attend the International Conference on Strongly Correlated Electron Systems 2023 (SCES 2023).
- Dr. Arko Roy visited Barcelona, Spain to attend the Bose-Einstein Condensation 2023 Conference.
- Dr. Hari Verma R. visited Ottawa, Canada for the poster presentation at the International Conference on Photonic Electronic and Atomic Collisions 2023 (ICPEAC 2023).
- Dr. Baskar Bakhavachalu visited (a) Mount Snow, Vermont, USA to attend the 2023 CAG Triplet Repeat Disorders Gordon Research Conference and (b) Singapore to attend the 17th Meeting of the Asian-Pacific Society for Neurochemistry.
- Dr. Rajeshwari Dutt visited the UK to present her research paper / presentation in 46th Annual Conference of the Society for Caribbean Studies.
- Dr. Amit Shukla visited Washington DC, USA to attend the NSF-IHFC DST workshop.

- Dr. Moupriya Das visited Stockholm, Sweden, NORDITA at Nordic Institute for Theoretical Physics.
- Dr. Bhaskar Mondal visited RWTH Aachen University, Germany for Academic/Scientific visit.
- Dr. Gopi Shrikanth Reddy visited Japan to attend the XXXVth URSI General Assembly and Scientific Symposium (URSI GASS 2023).
- Dr. Mousumi Mukherjee visited Kazakhstan to attend the 17th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering 2023 (17ARC).
- Dr. Padmanabhan Rajan visited New York, USA to attend the IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA-2023) and SANE Workshop to be held in New York, USA.
- Dr. Rajendra Kumar Ray visited Jeju Island, Republic of Korea to attend the joint conference of Asian Pacific Conference on Aerospace Technology and Science (APCATS-2023), Asian Joint Symposium on Aerospace Engineering (AJSAE-2023) and Advances in Aerospace and Mechanical Engineering (AAME-2023).
- Dr. Prosenjit Mondal visited Institute Cochin in Paris, France to pursue a research visit and productive collaboration under the sponsored fellowship program by the Embassy of France in India.
- Prof. Suman Kalyan Pal visited Boston, Massachusetts, USA to attend the 2023 Materials Research Society (MRS) Fall Meeting and Exhibit.
- Prof. Laxmidhar Behra, Director IIT Mandi and Dr CS Yadav visited National institute for Materials Science (NIMS), Tsukuba, Japan and initiated the collaboration between NIMS and IIT Mandi in quantum technology.

14.5 Events with International Participation

There were a number of workshops/Talks conducted online/offline at IIT Mandi involving visitors from universities abroad including:

- IIT Mandi successfully concluded the 67th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM-2022), an international conference, held in offline mode during 14th to 16th December, 2022 at IIT Mandi. More than 250 participants and 20 invited speakers from all over the globe graced the event.
- Darshil Shah, a Master's student from the Freie Universitat Berlin, who did his Master's thesis under Dr. Varun Dutt's guidance at ACS Lab, IIT Mandi on the effects of tDCS and repeated experience in N - back and Sternberg working memory tasks, has got the best grade (1.0) in his thesis exam.

- Ms. Muskan Dhandhi, has been awarded the prestigious Charles Wallace India Trust Research Grant for 2023-24. This grant will allow her to access archives at King's College London and British Museums
- Ms. Aditi Rana (M.Tech by Research student) from School of Civil and Environmental Engineering has secured a fully funded PhD position within the School of the Environment, Geography and Geosciences at University of Portsmouth, United Kingdom.
- Mr. Armanul Hoda, an MTech student in Structural Engineering, has been offered fully funded PhD positions from both the University of New Hampshire and the University of Nevada.
- Mr. Fahed Mohd (MS by Research student) guided by Dr. Mohammad Talha, Computational Design Lab, School of Mechanical and Materials Engineering has secured a fully funded PhD position at University of Nottingham, United Kingdom.
- The School of Mathematical & Statistical Sciences has successfully organized the International Conference on Differential Equations and Control Problems (ICDECP23) during 15th to 17th June, 2023. The inauguration ceremony was graced by the chief guest Prof. Anuj Mubayi from Illinois State University, USA. The inaugural ceremony was attended by around 210 great minds of India and abroad.

15. Entrepreneur Ecosystem

IIT Mandi Catalyst and iHub and HCI foundation are at the forefront of business incubation are established as national incubator. I am very glad to inform you that we have taken steps to make entrepreneurship a part of academic curriculum. With the help of TCS, many of our students will get monthly fellowship for eighteen months in a very competitive and supportive eco-system. I am expecting that this model will make many of our students to become successful entrepreneurs.

16. The Way Forward

IIT Mandi has just begun its journey. We have a long way to go. This year, we have recruited more than 43 faculty members and recruitment of more faculty members is under progress. We are also committed to filling backlog seats through the special drive. In the next five years, we have planned to increase the faculty strength to 350+ from the current strength of 187. Currently, we have 2800 (approx.) students which will be increased to over 5000 in the next five years. Steps are taken to increase PhD intake such that PhD graduation per year satisfies the norm given by the Ministry of Education. In this convocation, 59 PhD and one iPhD scholars are graduating. This is

a significant improvement over the previous convocation but still below the required norm.

As said earlier, in the year 2022-2023, our faculty members and research scholars have published 257 journal papers, 71 conference papers, 3 books and 15 book chapters. In the coming years, my focus will be to encourage faculty members and research scholars to publish impactful research works that are at par with the best Universities across the world. We must be solving real-life problems around us that will impact the lives of the people around us. To encourage the research ecosystem, we have raised the seed grant to faculty members from 5 lacs to 15 lacs.

Research scholars are given Rs 25000 per annum for the first five years in addition to the travel grant of Rs one lakh to attend a one-tier International Conference. I am sure that with hard work and dedication our research community will be able to rise to the occasion and will be counted among the best. Internal Revenue Generation (IRG) is vital for supporting seed grants, travel grants and other supports for faculty members and students. The current state of internal resource generation is that almost all of it is spent in paying towards HEFA loans. That is why initiatives such as DORA are meant to boost internal resource generation. Research grants in terms of grand projects, consultancies, and outreach activities through CCE will also boost IRG. Thus, the annual research grant per faculty needs to improve significantly.

Currently, the filing and grant of patents is very low. As it stands, a total of 26 patents have been granted and 98 patents are filed this year. This number has to be improved. The IP&TT Cell shall set goals for each year and strive to achieve the targets. In NIRF 2023, the Institute ranked 33 in the Engineering stream, however, we can do much better. To be visible, we must strive for high-impact research publications and good citations along with getting more research grants. Our undergraduate students must become part of the research ecosystem. By improving the quality of research and teaching, we will be able to attract the best teachers and students. If we adhere to a culture of excellence, then good ranking will naturally follow.

At the end, I wish my heartiest greetings to all our graduating students. You will become the torch bearer of the Institute. I am sure that your professional competencies and uncompromising character will empower you to lead the society in various ways. Your success will also be the success of IIT Mandi. That is the real Guru Dakshina we expect from each one of you. Lord bless you all. Jai Hind