Himalayan Griffon over Kamand

Director's Message, New Year 2018

The ethos of IIT Mandi is to make an impact on Indian society through inter-disciplinary and collaborative endeavours. Our faculty and students have shown that it is possible to excel in a new IIT in a remote location. They have a can-do spirit, overcoming many hurdles, adapting to and embracing local conditions, en route to solving society's problems through academic excellence.

The year 2017 has been a year of growth and consolidation. While taking some new initiatives, IIT Mandi has focussed on building on the foundations of previous years. Below are some of the highlights of the Old Year and our goals for the New Year, and a report card on achievement of goals for 2017.

The Year 2017

We are privileged that Mr. Subodh Bhargava kindly accepted to serve as the Chairman of the IIT Mandi Board of Governors for 3 years from January 2017. Mr. Bhargava is no stranger to IIT Mandi, having been the Chief Guest in our 1st Convocation on 20th October 2013. Mr. Bhargava is the first Distinguished Alumnus of the University of Roorkee, in mechanical engineering. He was Group Chairman and CEO of Eicher Group, Chairman of Tata Communications and President of CII.

Mr. Subodh Bhargava (2nd from left): Chief Guest at 1st Convocation in 2013; currently Chairman of our Board

An eminent industrialist, Mr. Bhargava has provided an impetus to our interactions with industry. He was instrumental in persuading Mr. Banmali Agrawala, President, Tata Sons and former CEO of GE South Asia, to come as Chief Guest of our 5th Convocation in October. These stalwarts of Indian industry are helping us to define and execute ambitious projects with industry and the State administration to benefit the region. These include:

Faculty and students "Scaling the Heights" at the head of the Kamand Valley

- An initiative to convert Mandi district fully to electric public transportation. This would use off-the-shelf technology in the short run with new R&D for the long run.

- *FarmerZone*, an initiative of DBT and IIT Mandi, to bring the benefits of data analytics and machine learning to small and medium farmers. The goal is to enable farmers to optimise resource usage and crop practices to increase total farm productivity.

During the year, IIT Mandi Catalyst and EWOK, our business incubators, received Rs. 60 lakhs grant from the HP CM's Startup Scheme. This generous support has helped them to incubate a number of startup ventures, led by IIT faculty and students and others in Himachal.

Noteworthy among these is *The Solar Labs*, founded by graduating students Siddharth Gangal, Ankush Jindal and Mudit Sahai, who gave up lucrative job offers to pursue their dream in our incubation space. *MedSamaan* is an incubatee of Catalyst that aims to make medical instruments affordable. Romita Ghosh, founder of MedSamaan, won the "Inspiring Woman Entrepreneur of the Year Award" at the Orange Flower Digital Summit 2017 organised by Women's Web in Mumbai on Dec 9, 2017. Promising ventures under EWOK are aimed at tulsi cultivation and mushroom cultivation.

The *BioX Centre* was conceived in 2012 with a vision of affordable health care for India, and advanced technology for agriculture and for pre-servation of the environment in the Himalayan Region. The Centre bridges the gap between life sciences, physical sciences, and engineer-ing. The BioX Centre was formally inaugurated in its new building on May 13, 2017 by Prof. K. VijayRaghavan, Secretary, Dept. of Biotechno-logy, Govt. of India in the presence of Prof. Sar-it Kumar Das, Director, IIT Ropar.

"Gang of 22" Women in 1st BTech, Maple Mess

Reflecting the growth of research at IIT Mandi, the number of MS/PhD research scholars who graduated in the 5th Convocation in October was almost equal to the total number who graduated during the first 4 Convocations. They have already started on their careers in teaching, postdoc research, and industry.

Diversity is the strength of India. The future prosperity of India depends on full participation of women. IIT Mandi is committed to improving the gender ratio in all areas. During 2017, IIT Mandi led an effort to

Samriddhi Jain receives PGM from Chief Guest Banmali Agrawala

increase the very low percentage of women admitted to BTech in IITs, barely 8% across all IITs. After a concerted campaign over several months, we succeeded in attracting 22 aspiring young women to join BTech in IIT Mandi in July 2017. This raised our gender ratio from 4% in 2016 to 15% in 2017! Overall, the number of women admitted to BTech in all IITs increased from 846 to 1,006.

A related milestone: in the 5th Convocation, for the first time, more than half the BTech prizes (including the President's Gold Medal) were bagged by women, although they were barely 10% of the batch. Hats off to Samriddhi Jain, President's Gold Medal winner, and Shivangi Kataria for their record-setting achievements!

Staff Retreat, Taragarh Palace Hotel, 9th December 2017

The staff are the unsung heroes of an academic institution. While the faculty and students are in the limelight, their achievements are possible only with diligent, dedicated and efficient supporting staff. In December, we held a 1-day Staff Retreat with about 25 of the middle and senior staff and some faculty involved in administration. The Retreat was held in the Taragarh

Palace Hotel against the backdrop of the Dhauladhars. Led by Saurabh Mittal and Preeti Mann of QYON, the participants worked in teams to figure out how to improve the effectiveness of IIT's administration. The Retreat helped build a spirit of teamwork, trust and ownership of the Institute. These augur well for achieving the goals of 2018.

Nitesh Kumar wins gold in Ireland

Our students continue to amaze us with their initiative and achievements against stiff national and global competition. Some of the many notable laurels:

- Nitesh Kumar, 3rd BTech, won the Gold Medal for India at the FZ Forza Irish Para-Badminton International, 2017, in Dublin, Ireland in June.

- A team of students led by Vivek Sharma and Sagar Ghai, 4th B.Tech., organized *TEDx IITMandi* on 14th May. Incidentally, Vivek Sharma was awarded the Director's Gold Medal in the 5th Convocation for his all-round excellence in BTech.

- Adil Usman, PhD student, became the first member from India to be a part of the Electrical Machinery Committee (EMC), IEEE Power & Energy Society, 2017-18. He is also the first student from an IIT to be an Associate Member of the Institute for Defence Studies and Analyses, Ministry of Defence, for the period 2015-2020.

- Ayush Yadav, 4th BTech, received funding of $25,860 for his project "A Deep Field Legacy Database". The award is from the Space Telescope Science Institute, operated for NASA by the Johns Hopkins University.

We started occupying the North Campus in August 2016. In 2017, the North Campus has become home to almost 1/3rd of the students and faculty, and many staff. Some classes are held in the North Campus. These pioneering students, faculty and staff have had to put up with some inconveniences owing to the ongoing construction. Theirs is the spirit that has brought IIT Mandi renown and that will keep it *Scaling the Heights*! With Academic blocks expected to be completed in February 2018, the North Campus will soon see full-fledged academic activities along with greater amenities, to rival the South Campus.

Civil Engg students inspect Guest House construction, North Campus

The Year Ahead

We have come a long way in the past 8 years, starting from a green field, towards our long-term goal of being the best in the world in some aspect. The road ahead to our goal is still long and steep. Sustained effort is needed towards excellence in research, teaching and administration. This requires qualitative improvements that are difficult to measure. At the same time, there are quantifiable targets that will help provide a sense of momentum towards achieving IIT's Vision. In consultation with the Deans, the Chairs of the Schools, and others, we have put together a set of measurable targets for 2018. These targets listed below are the minimum expected, we will strive to exceed them.

Women's 5-km Freedom Run: the final lap

Academics:

- Increase student strength by 30% to 1,300

- Start 2 new Master's programmes

- Admit 20% female students to BTech 2018

- Assist 25% of our PhD scholars to visit abroad during their first 2 years, and 80% to visit abroad during their first 4 years

- Attract two more partners for ISTP

- Organise two large conferences with 100+ participants

- Host one conference or workshop for some other institution in our North Campus conference facility

- Host 10 faculty from abroad for 1 week or longer, and 50 students for 1 month or longer

- Increase per-faculty publications by 33% from 2.4 to 3.2

- Felicitate our PhD graduates who join as faculty in an IIT, at least 3

Sponsored Research and Industry Interactions:

- Initiate Rs. 30 crores new sponsored projects, at least Rs. 5 crores industry-related

- Initiate 6 new sponsored projects with international partners

- Initiate one major project for Himachal. Either, converting Mandi district fully to electric transportation. Or, distributed machine intelligence crop advisories for small and medium farmers to increase total farm productivity.

- Arrange monthly public lectures and interactions by VP-level industrial personnel

- Incubate 20 companies, with 5 in commercial operation

- License or commercially exploit 2 patents

Campus:

- Complete three fully functional academic blocks in the North Campus, with one UG and one PG batch having all their academic activities here

North Campus (left) & South Campus (right)

- Complete the Village Square in North Campus with Guest House, Conference Centre + auditorium, hospital and gym + swimming pool

- Make Clean Room fully functional

- Construct a pedestrian bridge to the Ghadpa Guest House and road bridge to the Village Square in the North Campus

- Plant 700 trees

- Install solar power/heating in 15 buildings, including several hostels and residences

- Provide 6 electric vehicles for inter-campus mobility

- Complete provision of water supply from the Uhl River

- Eliminate disposable plates, cups and cutlery in food and beverage service

Spiderman: 2nd BTech Design Practicum

Administration:

- Complete automation of all administration

- Set target completion times for all administration processes

- Provide regular training programmes for all staff

- Send at least 10 staff for training in India and 2 abroad

Student Life:

- Host one mountain biking event, with participation from other IITs

- Carve a unique identity for Exodia that is in consonance with the ethos of IIT Mandi

- Win 3 medals in Inter-IIT Sports Meet

- Incubate 3 start-ups by our students

- Cultivate and celebrate the cultural and linguistic diversity that is the hallmark of India

Novel event in Exodia '17: Rapeling down a 3-storey hostel

Report Card on Goals for 2017

On 1ˢᵗ January 2017, we had set forth goals for 2017. The table below lists our progress towards these. Many of the goals have been achieved or exceeded. A few are works in progress, which are carried forward in the goals for 2018 above. Click here for details

BioX brainstorming with Prof VijayRaghavan & Dr. Shailja, DBT

Prof Novak from Stuttgart Univ with civil engg students+faculty

Conclusions

In 2018, I look forward to working with every one of the faculty, students and staff of IIT Mandi and with well- wishers elsewhere in scaling ever more imposing heights. Striving together in the serene Uhl River Valley in the Himalayas, new technologies will emerge for the benefit of India!

Gourmet Club: Hawaiian Lunch in the Recreation Centre on the Uhl

With Best Wishes for a Happy and Rewarding New Year!

Timothy A. Gonsalves
director@iitmandi.ac.in
+91-1905-267-001