It is a pleasure as well as an honor to be the part of IIT Mandi, an institute of national importance situated in the Himalayan lap. I wish you all (IIT Mandi faculty, staff and students) a happy new year greeting, though belated. We are starting the new year with a new dream as the foundation of an institute is very important and how it would grow in coming years. Last year, July, 2021, I visited Himachal Pradesh for the first time and I got a first-hand experience of Himachal Pradesh. Way back in 2005, I was invited to give a talk in the workshop on Endo-physics, time, quantum and subjectivity in Bielefeld, Germany. There were a group of researchers from Israel who animatedly narrated their experience in Kulu, Manali and Dharmashala. By the arrangement of the providence, I am here in the same place about which the world is fascinated. While the natural beauty of Himalayan range attracts the world community to this place, we have to think what we can offer special through IIT Mandi such that best talents – students and teachers are attracted to this place.
Some time back, we did a research work on classical Indian music Raag Darbari, and how it helps in enhancement of cognition. We also did a work on CBT (Cognitive Behavior Therapy) based on Indian classical meditation techniques to improve sleep quality. My realization is that there are many Indian Value systems in the form of classical music, classical dance form, yoga, meditation and other forms of Indian Values which are not normally treated from a scientific perspective. We, being part of a technological institute, can formulate a course curriculum on these subjects both at masters’ and PhD level. Using the brain signals such as EEG, brain imaging data, we should explore various bio-markers by which we can provide a much better holistic way to treat mental health. Can IIT Mandi take a lead on developing a holistic approach to the study of mind, matter and consciousness? Let’sdo some brainstorming on this topic.
I also want to tell you my experience on establishing a traditional Gurukul in Vrindavan. We managed to get a 100 acres of alkaline and salty land away from the crowded Vrindavan city. District agricultural officers and soil conservationists declared the land to be infertile. Today you will be surprised to know that in the same place more than 500 inmates are leading a complete holistic life and we can grow everything on that piece of land starting from wheat to mustard and all kinds of vegetables. Simply using certain holistic approaches – the microbes in the cow dung if they are cultured with certain formula, then the soil can be made highly fertile. I learnt that a soil is fertile if it is livable in terms of friendly microbes and earthworms. Indian value system taught us to recognize the symbiotic relationship that exists among innumerable species that make up our environment and ecology. A scientific view of such traditions is need of the hour.
In this regard, my visit to Bio-X centre at IIT Mandi is noteworthy as this center is dedicated to interdisciplinary research where biologists and other Engineering disciplines come together to solve some of the pressing problems of societal needs. Some of the things I am looking forward from this centre are climate controlled agriculture, biomedicine and bioenergy. Some years ago, as the IEEE-chair on Robotics and Automation on Agriculture, I traveled across India to collect user input. During this exercise, I leaned that a tiny country – Netherland – is the second highest exporter of food after United States of America – and the credit goes to climate controlled agriculture. The location of Himachal Pradesh makes it suitable for such a technology to be developed. With the help of our Bio-X colleagues and with the partnership of experts from Netherlands and Israel we can move forward to such innovation. In spite of the rapid development in technology, food safety and food security remain one of the top 10 global problems of the world. It is important to contribute towards self-sufficient sustainable society.
A few days ago, I interacted with many faculty members from SCEE and got to know about C4DFED facility under the leadership of Prof Satinder Sharma. This excellent facility can serve the entire nation. We must look forward on how we can partner with the National Semiconductor Mission of the Government of India and take this effort to its logical destination, and how IIT Mandi colleagues and fraternity is competent enough to contribute to the nation building in an exemplary manner.

We have a Technological Innovation Hub (TIH) here on human computer interface with a goal to develop assistive technologies using brain computer interface, digital smell, digital taste and so forth. Given my expertise in robotics and artificial intelligence, it will be nice to have a world-class state of the art laboratory on Cognitive Robotics and HCI(Human–computer interaction) to find smart solutions in healthcare, education, agriculture and Defense.
Robotics is an excellent tool to teach science. With the help of on-board computers such as Arduino boards, and Raspberry pi, sensors (e.g. camera, sonars) and basic components such as motors, we can teach children basic concepts of science and technology. Tool kits such as LEGO kits can be also used for this purpose. We can start with school level competitions for Himachal Pradesh. It is my dream to develop a techno stadium where both national an international level competitions can take place. Let IIT Mandi set the standard here.

I am quite impressed with various research facilities such as Advanced Material Research Centre (AMRC), Bio-X, C4DFED facility for the fabrication of semiconductor chips at IIT Mandi. This makes my dream to make IIT Mandi primarily a research institute easily achievable. I would encourage all under-graduate students also to be part of research ambience through undergraduate projects, lab interns and techno-entrepreneurial initiatives. Let's create an ambience where undergraduate students can participate in both national and international level competitions as well.
Through these few ideas, I initiated a dialogue with all of you - students, staff and teachers of IIT Mandi and as well as well-wishers of IIT Mandi. I would like to listen from you and your vision to make this campus vibrant in terms of scientific and technological temper. While we shape scientific and technological vision for this beautiful campus, we must think about building a holistic campus – a campus where we are physically fit, mentally alert and spiritually connected. The campus life in terms of facilities for campus kids, sports, cultural activities must also be vibrant and wholesome. The campus beautification is a priority so also ease of communication around the campus from north to south. A nice entrance to the campus with an aesthetic and sturdy gate also needs urgent attention. We are in the lap of nature and so the campus must seamlessly converge to that ambience. A happy campus will be vital to the success of IIT Mandi to reach its desired glory. I assure all our faculty members, staff and students that I am here to facilitate so that you can dream BIG and work fearlessly to achieve that dream as well. Let’s keep IIT Mandi and her ideals always in the forefront as we strive hard to contribute to the nation building.

**With warm greetings and best wishes,**

* Laxmidhar Behera

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