PRESS RELEASE

DST sanctions Rs. 7.25 cr to IIT Mandi to establish a Technology Innovation Hub

The hub will focus on technology (interface) development and evaluation, human resource and skill development, entrepreneurship and collaboration with other leading academic and research Institutions

MANDI, 11th March 2020: Under its National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS), the Department of Science and Technology (DST) has sanctioned Rs. 7.25 crore to IIT Mandi to establish a Technology Innovation Hub (TIH) at the Institute. The major focus of the TIH in IIT Mandi will be on human-computer interaction (HCI) research, where projects will focus on design and development of computer technology (interfaces) and the study of interaction between humans (users) and computers. Also, the TIH will focus on human resource and skill development, entrepreneurship and collaboration with other leading institutions.

HCI is focused on the ways in which humans interact with computers and design technologies that let humans interact with computers in novel ways. As a field of research, HCI is situated at the intersection of computer science, behavioural sciences, design, and media studies among others.

Speaking about the short and long term objectives of the TIH, Dr. Varun Dutt, Principal Investigator, TIH, and Associate Professor, School of Computing and Electrical Engineering, School of Humanities and Social Sciences, IIT Mandi, said, “The TIH provides exciting opportunities for IIT Mandi to become a world leader in HCI and allied areas, where national research has been nascent.”

Nestled in Sivalik Range of the Himalayas, IIT Mandi has a mission of addressing challenges of the Himalayan region. Given the location of the hub at the Institute, some of the technologies will have a focus on the mountain region as well. A team of experienced faculty of IIT Mandi will participate in the establishment of the TIH. Apart from older faculty, newly joined faculty members at the Institute will also be a part of the TIH. Together, the Institute faculty will provide intellectual expertise on research in HCI with inputs from Artificial Intelligence and Machine Learning areas.
Speaking about the grant, Dr. Arnav Bhavsar, Co-Principal Investigator, TIH, and Associate Professor, School of Computing and Electrical Engineering, IIT Mandi, said, “In line with the culture at IIT Mandi of collaborative research and nurturing entrepreneurship, the TIH will further enable significant strides by the institute in industry collaboration and in the development of indigenous technology.”

The TIH will develop tools, education material, hands-on experiments with specialised tool kits, connecting with existing innovation ecosystems. It will inter-link with different stakeholders and connect with other initiatives of the Government of India by providing an innovation platform for schools, colleges and advanced technical training institutes in the targeted areas. The deliverables include:

- **Technology Deliverables:** To develop technology interface for challenges concerning landslides, environment (including climate change), air pollution, agriculture, cybersecurity, defence forces, healthcare, and forensics.

- **Human Resource and Skill Development Deliverables:** To generate skilled manpower in HCI area at graduate, post-graduate, doctoral, post-doctoral and faculty level by organising workshops and seminars.

- **International Collaborations Deliverables:** To develop and sustain existing and new collaboration with universities and organisations in India and abroad.

- **Entrepreneurship and Startup Deliverables:** To create a startup ecosystem by working with the technology-business incubator of IIT Mandi, Catalyst, with an approach of Knowledge Generation – Technology Development – Technology Translation – Technology Commercialisation.

A number of industry, academic and research partners are partnering with IIT Mandi in the TIH. So far the industry and research partners include, Centre for Development of Advanced Computing (C-DAC), Mohali; Defence Research and Development Organization (DRDO); National Disaster Management Authority (NDMA); Regional Forensic Science Laboratory (RFSL); Himachal Pradesh state government; Adobe; RxDataScience; Dattendriya; Aindra; and, Bioedha. The academic partners include Carnegie Mellon University, USA; London Metropolitan University, UK; Norwegian University of Science and Technology (NTNU), Norway; and, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh.
The TIH will also work on the development and evaluation of interfaces of IoT-based Cyber-Physical Systems (CPS), where CPS contains physical elements (sensors) for collecting data and cyber elements (analytics and visualization software) for alerting/educating people for directed action. Here, data collected from CPS will be evaluated via human experiments and cognitive models for training and improving decisions of the human stakeholders for better outputs.

Cyber Physical Systems (CPS) are a new class of engineered systems that integrate computation and physical processes in a dynamic environment. CPS encompasses technology areas of Cybernetics, Mechatronics, Design and Embedded systems, Internet of Things (IoT), Big Data, Artificial Intelligence (AI) among others. To harness the potential of this new wave of technology and make India a leading player in CPS, the Union Cabinet approved the launch of National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) in 2018, with a total outlay of INR 3,660 crores for a period of five years.

###

**About IIT Mandi**

Since the first batch of 97 students joined in July 2009, IIT Mandi has grown to currently host 125 faculty and 1,655 students who are enrolled in various programmes of studies in undergraduate, postgraduate and research programmes, and 1,141 alumni. IIT Mandi is a fully residential campus with 1.4 lakh sq. m. buildings completed. It has a guest house with 88 rooms, an 750-seater Auditorium, campus school, sports complex and hospital.

IIT Mandi has four Academic Schools and three major Research Centers. The Schools are: School of Computing and Electrical Engineering, School of Basic Sciences, School of Engineering, and School of Humanities and Social Sciences. The Centers are: Advanced Materials Research Centre (AMRC; set up with an investment of Rs. 60 crore), Centre for Design and Fabrication of Electrical Devices (C4DFED; has Rs. 50 crore worth of fabrication tools), and BioX Centre (has acquired research equipment worth Rs. 15 crore). In 2017, the Department of Biotechnology, Government of India, selected IIT Mandi to lead the prestigious Rs. 10 crore FarmerZone® Project.

To cater to the growing and changing needs of Indian industry and the aspirations of students, IIT Mandi has introduced 7 B.Tech., 7 M.Tech., 5 M.Sc., 4 Ph.D., 1 I-Ph.D and 1 M.A programmes in the past 10 years. The unique, project-oriented B.Tech. curriculum is centered around its 4-year long Design and Innovation stream. From August 2019, IIT Mandi started 3 new and unique B. Tech. programmes in Data Science and Engineering, Engineering Physics, and Dual Degree in Bioengineering.
Since the inception of the Institute, IIT Mandi faculty have been involved in over 275 Research and Development (R&D) projects worth more than Rs. 120 crore. In the past 10 years, the Institute has signed Memorandum of Understanding (MoU) with as many as 11 international and 12 national universities.

Launched in 2016, IIT Mandi’s Catalyst is the first Technology Business Incubator in Himachal Pradesh. Enabling Women of Kamand Valley (EWOK) is another innovative programme run by IIT Mandi, which focuses on imparting skills training to rural women to enable them to start village-scale businesses.

IIT Mandi has been ranked No. 20 in the Engineering Institutions Category in the India Rankings 2019 released by National Institutional Ranking Framework, Ministry of Human Resources Development, Govt. of India. In the Outreach and Inclusivity metric of NIRF, IIT Mandi is 1st among all 23 IITs.

Website: [https://www.iitmandi.ac.in](https://www.iitmandi.ac.in)

**Media contact for IIT Mandi:**

**IIT Mandi Media Cell:** mediacell@iitmandi.ac.in / Landline: 01905267832

Bhavani Giddu - Footprint Global Communications
Cell: 9999500262 / Email: bhavani.giddu@footprintglobal.com

Akhil Vaidya – Footprint Global Communications
Cell: 9882102818 / Email ID: akhil.vaidya@footprintglobal.com

Palak Sakhuja - Footprint Global Communications
Cell: 9582338333 / Email: palak.sakhuja@footprintglobal.com