

# HACKTRONICS

2020

*"Best innovators make  
their own hardware."*



[aavesh-iiitu.tech](http://aavesh-iiitu.tech)



April 11-12,  
2020



IIT Mandi,  
Himachal Pradesh

presented by:



in collaboration with:





*“Innovation distinguishes between  
a leader and a follower.”*

~ Steve Jobs

## IIIT UNA

On March 18 2013, the Ministry of Human Resource Development introduced a bill in the Parliament to establish 20 new IIITs in different parts of the country. The new IIITs are envisaged to be Institutes of National Importance. Aimed at generating highly competent workforce of global standards for the Information Technology Industry, the institutes are also expected to act as significant catalysts to develop new knowledge in the field of Information Technology.

Indian Institute of Information Technology - Una, Himachal Pradesh is amongst 20 new IIITs approved by MHRD and started to intake students from 2014.

At present, IIIT Una operates from its temporary premises of Transit Campus-I (NIT Campus, Hamirpur) and Transit Campus-II (DevBhumy Group of Institutes, Haroli, Una, H.P.). The permanent campus is coming up in the district of Una in Himachal Pradesh.

The institute has MOU signed with IIT Ropar and IIT Mandi to facilitate collaborative development.

## AAVESH



Aavesh is an Electronics Society that strives to teach and help students acquire new skills in an era of rapidly evolving technology in the field of electronics and communication engineering. The Society aims to provide potential minds of IIITU a platform to discuss innovative ideas and nurture their skills to tackle real-life challenges in the world today and contribute to the technical society through various projects, patents, and research publications. We organize numerous expert lectures, workshops, mentorship programs as well as competitions throughout the year to keep the students enthusiastic about hardware and software, and providing them the necessary resources to implement their ideas.

# **COLLABORATION WITH IEEE, IIT MANDI**

---

Indian Institute of Technology Mandi (IIT Mandi) is an autonomous engineering and technology university located in Mandi, Himachal Pradesh. It is one of the eight new Indian Institutes of Technology (IITs) established by the Ministry of Human Resource Development, Government of India under The Institutes of Technology (Amendment) Act, 2011.

IEEE IIT Mandi is a student chapter of the Institute of Electrical and Electronics Engineers (IEEE). It is a student-run organization at the IIT Mandi with the motive to help students find their passion, to meet new people, gather new experiences, to learn industrial skills, and bring innovation in technology.

Aavesh of IIIT Una has collaborated with IEEE Students' Chapter, IIT Mandi for the first edition of Hacktronics intending to reach out to as many innovators as possible and induce a great electronics and hardware spirit among both institutes. The event is scheduled to be held at the campus of IIT Mandi, Himachal Pradesh.

# HACKTRONICS

Hacktronics is a wide spectrum hackathon that incorporates both hardware and software to bring innovation in the field of engineering. The event is open to all ideas that aim to develop projects providing solutions to daily life problems or could help in reducing human effort.

Hackathons have eventually become the origin of the most creative ideas that later take shape into some of the best products and start-ups of the 21st century. This kind of an event where one could use all available resources to bring their ideas to life should be encouraged in all spheres. This event is also envisioned to provide a platform for technical enthusiasts to redesign and improvise existing technologies and gadgets to make them more efficient.

Hacktronics is one of its kind hackathon where innovators from all over the nation will get a platform to shape their innovations into prolific products, which would have the potential to change the world.

# WHY HACKTRONICS?

---

Through this event, IIIT Una has taken the initiative to provide an opportunity for young technocrats to showcase their technical skills. The event is unique in all aspects as it shall incorporate projects involving the use of a wide variety of hardware and software technologies. We aim to promote a new level of healthy competitive fervour and electronics culture among various institutes. In the years to come, the event shall serve as a huge platform for students across different colleges to contribute to the field of electronics with their innovative ideas.

The amalgamation of hardware and software extensively widens the horizon of ideas and opens up the possibilities for the development of projects that are economical and have significant industrial applications.

Hacktronics 2020 has been thought to be an event with no restrictions based on themes, unlike other institutions.

TinkerHack of IIIT Delhi is the only such hackathon that is currently being organized in north India. Hacktronics would be the only Hardware Hackathon organised by any college in the North Indian States besides IIIT Delhi.

## EVENT DETAILS:

- The event will run for two days from 8:00 AM onwards on Day 1 (April 11th) and Day 2 (April 12th).
- Both day will include two sessions (pre-lunch and post-lunch), but the participants will be allowed to continue their work in between the two sessions.
- The participants must report on both days before 9:00 AM regardless of the status of their project.
- Participants are free to exhibit their idea in any field relating to **robotic hardware** whatsoever.
- Any project based solely on software programming and/or merely on the use of computer peripherals or other devices would not be selected for the physical round.
- There is no restriction on the scale of the project as long as the participants are able to present their prototype.
- The projects will be judged based on numerous criteria including but not limited to practical application, social impact, innovation and completion of the project.
- Basic components will be provided to aid the participants, but they need to carry their own hardware components/devices/ peripherals/designing kits.
- The participants are required to prepare a presentation for their project, which will be presented by them at the end of Day 2.
- The idea and the status of the project will be judged at the end of each session on both days.
- Participants who are unable to complete their projects within the given duration will be judged based on whatever work is done.

# REGISTRATION PROCESS:

- The registration needs to be done online at the Hacktronics website.
- All participants are expected to register and form teams on the registration portal.
- We encourage the participation of female students as we believe in a diverse team.
- They will be required to furnish basic personal and contact details.
- Participants will be required to upload an abstract of their project which should be in the format as displayed on the website.
- One team will be allowed to submit only one abstract.
- Registered teams will be shortlisted on the basis of their uploaded abstract.
- The shortlisted teams will be considered for the final round only after successful payment of ₹250 per participant has been made.
- If any shortlisted team is not selected for the final round, whole of the registration fee will be refunded within 15-30 working days.
- The finally selected teams need to be present at the decided venue for further round.
- The selected teams must be present at event location at 9:00 AM on Day 1 for physical registration.
- The selected participants need to carry a Government/College ID, a passport size photograph and an acknowledgement letter received from the Hacktronics Team of IIIT Una for physical registration.

## **ACCOMMODATION:**

- To facilitate the stay of the participants, we will provide accommodation to the participants, the requirement of which needs to be stated by the participants at the time of online registration.
- The participants will be provided with meal coupons which they will have to purchase then and there.

## **ELIGIBILITY CRITERIA\***

- This innovation platform is open for all the students of undergraduate, postgraduate and Ph.D. courses.
- Students from Science, Engineering, Design or Management institutes from all across India can participate.
- Students can participate either as individual or a team of maximum of four members.
- The team configuration is restricted to participants from the same college/institution.

## **AWARDS AND CERTIFICATES:**

- Top teams will be awarded cash prizes worth ₹50,000 and certificate of excellence.
- Participation certificates will be given to all the participants.
- Disqualified teams will not be considered for any certificates.
- The certificates will have to be collected immediately after the event and will not be delivered to any participant later.

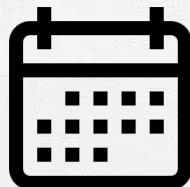
\*The Eligibility criteria and rules are provisional and are subject to change. The participants must regularly bring themselves up to date with the same.

# CODE OF CONDUCT\*

- Participants should go through the event rules and adhere to the specifics.
- Any queries regarding the event must be clarified by contacting us at [aavesh@iiit.ac.in](mailto:aavesh@iiit.ac.in) and no grievance will be entertained once the results are declared.
- The judgment rendered in any round will be final and not subject to consideration unless there is a technical mistake.
- The participants shall accept the judgment of the organizers at any stage of the event.
- The participants must arrange for their hardware and software components/devices/peripherals/designing kits. The organizers will not be responsible for the unavailability of any component required.
- The participants' work in the physical round must not deviate entirely from the submitted abstract. Any team found working on any other idea than the one submitted in the abstract is liable to be dismissed.
- The organizers reserve the right to dismiss any project/team on the grounds of misconduct.

\*The Eligibility criteria and rules are provisional and are subject to change. The participants must regularly bring themselves up to date with the same.

## Event Details:



April 11th and 12th,  
2020



IIT Mandi,  
Himachal Pradesh

## Contact Information:



[hacktronics@iitmandi.ac.in](mailto:hacktronics@iitmandi.ac.in)



[aavesh-iitmandi.tech](http://aavesh-iitmandi.tech)



[/TeamAAVESHTech](https://www.facebook.com/TeamAAVESHTech)



[/aavesh-iitmandi/](https://www.linkedin.com/company/aavesh-iitmandi/)



[/teamaavesh/](https://www.instagram.com/teamaavesh/)

---

Naveen Katiyar  
+91-8934871006

Kashish Arora  
+91-9501132476

Pranjal Joshi  
+91-8006980617