

# NANOTECH HACKATHON

*Innovative solutions for societal problems through nanotechnology...*

India can play a substantial role in the field of nano electronics through cost effective innovation enabling products and services for societal needs that are affordable and of high quality.

## Why Hackathon....??

INUP- i2i invites applications for participating in a contest on innovative nanoelectronics - based device fabrication targeting technologies at affordable costs addressing societal needs.



INNOVATION



Indian Nanoelectronics Users' Programme - Idea to Innovation (INUP-i2i), is initiated to take the MeitY initiated nanocenters (IITD, IITG, IITKgp and IITM) also termed as the 'open national nanocenters' accessible to the users from across India.

## What are the current challenges faced by the country....??

The diversity and abundance of high-end technical facilities in our country provide a strong foundation to develop solutions for the challenges facing by our nation. Nanotech Hackathon through INUP at IIT Bombay provides the country's first such nanotechnology-based platform in various areas described below but not limited to the illustrated examples.



- ☐ Production (e.g. Moisture and soil sensors)
- ☐ Protection (e.g. Ultra sound insect repellents)
- ☐ Storage (e.g. Acetylene gas sensors)



- ☐ Quality Improvement (e.g. Non-degradable notebooks, Dust-free chalks, Lead-free pencils)



- ☐ Low-cost (e.g. Alternatives for existing PV cells)
- ☐ High efficiency technologies
- ☐ Energy harvesting devices



- ☐ Air and water quality
- ☐ Low carbon devices (e.g. Biodegradable electronic devices)



- ☐ Diagnostic devices (e.g. Blood testers)
- ☐ Control (e.g. Food alteration testers)
- ☐ Cure (e.g. Low cost lasers to kill cancer cells)



- ☐ Detection (e.g. Explosive and metals)
- ☐ Control (e.g. PUF based cyber security)



- ☐ Passenger security (e.g. Fatigue and jerk sensors)
- ☐ Obstacle detectors (e.g. low cost car parking solutions)



- ☐ Tracking (e.g. Low cost motion sensors)
- ☐ Recognition (e.g. Object ID scanners)
- ☐ Communication (e.g. Low cost transceivers)

## Support from INUP



## ELIGIBILITY

- ✓ Minimum 18 years as on 01-07-2022. No upper age limit.
- ✓ Applicant should be from academia [either faculty/ registered student(s)].

## GUIDELINES

- ✓ Proposal submission can be done by a single participant or a group of 2-3 team members.
- ✓ For detailed guidelines on registration and proposal submission visit:

<http://www.inup.iitb.ac.in/hackathon/>

## IMPORTANT DATES

- ✓ Submission deadline: 15-09-2022
- ✓ Declaration of results: 25-10-2022

## Facilities at IITBNF

IITBNF - 21 Labs, 158 tools

For more details about the equipment, visit ....  
<http://www.iitbnf.iitb.ac.in/iitbnf/index.php/infrastructure?layout=edit&id=18>

