



# Announcement

## SERB-INAE Conclave

under the aegis of

Science & Engineering Research Board  
(SERB)  
and  
Indian National Academy of Engineering  
(INAE)

## Atmanirbhar Technologies Engineering a Secure Future

on  
November 5-6, 2022



Jointly organized by  
INAE – Kanpur Chapter  
Indian Institute of Technology Kanpur  
Kanpur (UP) 208016

### Background

*Atmanirbhar Bharat* is a movement for making India self-reliant and its journey to become a developed nation. In this regard, INAE-Kanpur chapter, under the auspices of SERB-INAE, is organizing a two-day national level conclave at IIT Kanpur, portraying the success stories of indigenously developed technologies, and brainstorming on the future needs of the nation. The conclave will showcase the technological strength of the country and will motivate the youth to take up engineering as a career and work towards self-reliance.

### Technical Sessions

The conclave will primarily focus on the following three themes:

1. Clean energy and carbon capture
2. Medical technology, implantable devices, and noninvasive imaging
3. Semiconductor technology and the future of electronics

The following activities will be undertaken during the two-day event.

### Talks by eminent personalities

Plenary and technical sessions will include lectures from eminent personalities, who have developed/are involved in developing *atmanirbhar* technologies.

### Panel discussion

A panel discussion session is planned on 'Driving India forward through frugal innovations' to highlight the importance of frugal ideas and the means to take them forward for commercialization on the above three themes.

### Confirmed Speakers

- Prof. V. Ramgopal Rao, IIT Delhi
- Prof. Ashutosh Sharma, IIT Kanpur
- Dr. Pushpendra Kumar, Oil and Natural Gas Corporation Ltd.
- Prof. Milind Atre, IIT Bombay
- Dr. Rishi Sethi, Professor of Cardiology, King George's Medical University
- Prof. Pramod P Kulkarni, NSB-NTPC School of Business
- Prof. Neetu Singh, IIT Delhi

### Competitions

Competitions are planned catering to the aspiring minds of college students and startups. Awards will be in the form of prizes, opportunity to interact with eminent mentors and interaction with experts from the IIT Kanpur startup ecosystem.

### (A) Student competitions

#### (i) Innovative products – prototypes

Teams will showcase their innovative prototypes at TRL 2 – TRL 4, broadly related to the themes of the conclave. Proposals must include relevant pictures, scientific evaluation and commercialization feasibility.

#### TECHNOLOGY READINESS LEVEL (TRL)

RESEARCH	DEVELOPMENT	DEPLOYMENT	TRL	DESCRIPTION
			9	ACTUAL SYSTEM PROVEN IN OPERATIONAL ENVIRONMENT
			8	SYSTEM COMPLETE AND QUALIFIED
			7	SYSTEM PROTOTYPE DEMONSTRATION IN OPERATIONAL ENVIRONMENT
			6	TECHNOLOGY DEMONSTRATED IN RELEVANT ENVIRONMENT
			5	TECHNOLOGY VALIDATED IN RELEVANT ENVIRONMENT
			4	TECHNOLOGY VALIDATED IN LAB
			3	EXPERIMENTAL PROOF OF CONCEPT
			2	TECHNOLOGY CONCEPT FORMULATED
			1	BASIC PRINCIPLES OBSERVED

## (ii) Grand ideas challenge

Teams will present 'grand ideas' leading to a technological advancement/solutions to contemporary issues. Proposals must be backed by a thorough technical and conceptual evaluation. Grand ideas can also be outside the theme of the conclave.

## (B) Ideation of Startups

Teams will showcase their prospective products/services, start-up ideas where the maturity level is TRL 4 – TRL 6. Video proposals describing the key features have to be uploaded.

## Proposal submission guidelines

Teams participating in student competitions (A) must submit a two pageproposal (12 font, 1.5 spacing)in pdf format. Size must be limited to 2 MB.

Teams participating in Ideation of Startups (B) must submit a 2 min video proposal in mp4 format. Size must be limited to 10 MB.

- Student competition (A) is open to college students, pursuing science and engineering degrees.
- Each team can have up to three members.
- Women candidates are encouraged to apply.
- Last date for proposal submission is **5 Oct., 2022 by 11:59 PM.**

## Evaluation criteria

Based on the proposal's technical strength, maturity and the relevance to Atmanirbhar Bharat, an expert panel will first shortlist six teams per competition. Subsequently, the shortlisted teams will present (15 min presenation) their proposals for a final round of evaluation during the conclave.

## Who can participate in the conclave?

The conclave is open to start-ups, students, and faculty members from all engineering colleges, universities, and institutes.

## Registration

Registration link:

<https://forms.gle/yCBiatdcU3UgSH33A>

The following details are required for registration

Name, Title, Organization, Address, Institutional E-mail, Second E-mail, Telephone, Tentative arrival date

Accommodation required: Yes/No

Note:

- There are limited seats available
- Rights to participation is reserved with the organizers
- Submission of application does not guarantee participation

Undertaking form: The form must be signed by the participants and the Head of the Department/ Institution (if required). Format is available in the registration web-link.

All correspondence will be via email.

## How to reach IIT Kanpur

**Road:** IIT Kanpur lies in NH-2, connecting Delhi and Kolkata

**Rail:** IIT Kanpur is located at a distance of about 15 kilometers from the Kanpur Central Railway Station.

**Air:** IIT Kanpur is served by the airports at Lucknow (2 hours) and Kanpur (1 hour).

## Accommodation

On request, non-AC rooms/student dormitories may be arranged (if available) for the participants and shortlisted team members of the competitions. Lodging expenses should be paid by the individuals, as per the existing institute rates.

## Organizing Committee

### Patron

Prof. Abhay Karandikar, Director - IIT Kanpur  
Prof. Indranil Manna, President - INAE  
Prof. Sandeep Verma, Secretary - SERB

### Members

- Sameer Khandekar
- K. Muralidhar
- Abheejeet Mohapatra
- Sathesh Mariappan
- Kantesh Balani
- Y. M. Joshi, President – INAE Kanpur chapter

### Contact

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