



Symposium on **National Frontiers of Engineering (NaTFoE) and Innovation in Manufacturing Practices (IMP) 2026**



 August 8th-10th, 2026

 IIT(ISM) Dhanbad

Organized under the aegis of the
Indian National Academy of Engineering (INAE)
Jointly hosted by
INAE and IIT(ISM) Dhanbad

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Strategic Vision & Technical Symposium Themes

Introduction

The Symposium on National Frontiers of Engineering (NaTFoE) is the premier flagship initiative of the Indian National Academy of Engineering (INAE), established in 2006. The overarching objective of this apex convergence is to bring together the country's most promising Young Engineers (typically aged 27–45 years) spanning cutting-edge industries, academia, national laboratories, deep-tech start-ups, and premier R&D organizations. NaTFoE 2026 serves as a high-velocity platform for interdisciplinary dialogue, enabling next-generation engineering leaders to deliberate on pioneering research, emerging technologies, translational innovations, and pressing engineering challenges of vital national importance. By facilitating cross-sectoral networking, the symposium intentionally cultivates future leadership, strategic knowledge transfer, and public-private partnerships within India's engineering ecosystem.

RF & STEALTH SYSTEMS





Technical Core Themes (NaTFoE 2026)

Theme 1

Advanced Manufacturing, Critical Metals, and Process Technologies

Scope:

Highlighting breakthrough materials processing, strategic metallurgical extractions, next-generation automation lines, and advanced manufacturing workflows essential for strengthening sovereign defense manufacturing capabilities.

Theme 2

Manufacturing & Integration of Antenna, RF Structures and RCS Control Technologies for Stealth Defence Platforms

Scope:

Deliberating on advanced electromagnetic architectures, RF integration, microwave engineering, and innovative Radar Cross Section (RCS) suppression/stealth manufacturing methodologies tailored for modern strategic defense platforms.

Session Architecture:

Each theme will be driven by Keynote Lecture delivered by an eminent INAE Fellow/Domain Expert, 3 Technical Presentations by decorated young engineers (with an explicit emphasis on pioneering women engineering leaders), and high-impact Startup Showcase slots. The Selected papers presented in the Thematic Area will be published in "Transactions of Indian National Academy of Engineering" and in INAE e-Magazine. Awards & Certificate for IMP & Research Papers will be provided.

Call for Papers & The National IMP Competition

Participants are strongly encouraged to submit original research papers aligned with the identified theme areas of the symposium.

The IMP Competition Framework

Running parallel to NaTFoE: culminating in a massive showcase track on Day 2-the Innovation in Manufacturing Practices (IMP) competition is organized to stimulate and challenge the nation's engineering youth. IMP provides an institutional crucible for researchers, engineering students, and practitioners to pitch, demonstrate, and evaluate leading-edge technical solutions before a jury of industry stalwarts, defense scientists, and elite academicians.

Submission Track Classifications

Innovators and project teams are invited to present operational prototypes or comprehensive research models across Four competitive tracks:

- Undergraduate Track (B.Tech / B.E. / Equivalent)
- Postgraduate Track (M.Tech / M.E. / Researcher's)
- PhD Track (Doctoral Scholars)
- MSME & Startups (Incubated Ventures)

Laurels & Recognition

A screening committee will shortlist a minimum of Eight high-potential finalists across the Four categories to enter the live exposition gallery. Two Principal Awards (First & Second Prize) will be conferred within each individual track during the valedictory proceedings. The honors include official certificates and substantial institutional cash rewards:

1st Place Award: ₹25,000 in each category

2nd Place Award: ₹10,000 in each category

Eligible Branches:

Aeronautical, Biomedical, Chemical, Civil, Computer/Information, Design, Electrical, Electronics & Communication, Industrial, Instrumentation, Material Science, Mechanical, Power, Production, and other allied branches.

Eligible Startups:

Entrepreneurs-in-Residence (EiR) and Startups. The entries are to be submitted along with a three-minute video [.mp4] of their working model to demonstrate the operation of the innovation and a write-up of a maximum of 250 words.

These selected entries would be allowed to showcase their innovation through physical demonstration / presentation during the NATFOE 2026 Symposium (8th-9th August 2026).

From the twenty-four shortlisted entries, a national committee comprising domain experts will select eight prize winners (2 each from each group)



Chronological Timelines

Events	Date
Last Date for Abstracts Submission	June 30, 2026
Last Date for Registration for IMP-2026	July 10, 2026
Early bird Registration for Paper Presentation	July 10, 2026
Notification of Final Delegate Selection	July 20, 2026
Commencement of Symposia & Expo	August 08, 2026



Sponsorship Details

PSU, Industry leaders, defense enterprises, and technology aggregates are invited to leverage high-visibility branding and corporate alignment by partnering with INAE through the following sponsorship tiers:

Platinum	Diamond	Gold	Silver	Bronze
₹ 10 Lakhs and above	₹ 7.5-10 Lakhs	₹ 5-7.5 Lakhs	₹ 2.5-5 Lakhs	₹ 1-2.5 Lakhs

Note: Sponsors receive premium logo propagation across all event websites, abstract booklets, media backdrops, and physical banners, alongside designated delegate passes and networking dinner access slots.

Conference Registration Structure (Only for Symposium and Conference)

Delegate		Delegate	
UG Students	NIL	Faculty	₹ 10,000/-
Startups / MSME	NIL	R&D	₹ 15,000/-
PG Students	₹ 1,500/-	Industry	₹ 15,000/-
PhD / PDF	₹ 2,500/-	Note: No fee for IMP 2026	



Bank Details

Bank Name	Canara Bank, Seraidhela Branch, Dhanbad, 828127		
Account Name	IIT ISM CEP ACCOUNT	IFSC Code	CNRB0000986
Account Number	110261358281	SWIFT Code	CNRBINBBBFD



PROGRAM AGENDA & LEADERSHIP

Day 1 Technical Deliberations & NaTFoE Focus

Opening Ceremony & Welcome Address	09:30 AM - 10:00 AM
Inauguration of Exposition by Chief Guest	10:00 AM - 10:30 AM
Theme-1: Advanced Manufacturing, Critical Materials & Process Technologies	10:30 AM - 12:30 PM
Startup Presentations	12:30 PM - 01:30 PM
Lunch	01:30 PM - 02:30 PM
Theme-2: Antenna, RF Structures & RCS Control Technologies for Stealth Defense Platforms	02:30 PM - 04:30 PM
Startup Presentations	04:30 PM - 05:30 PM
Cultural Evening followed by Dinner	07:00 PM - 08:00 PM

Day 2 Combined Parallel Tracks & IMP Exposition

Theme-1: Advanced Manufacturing, Critical Materials & Process Technologies	09:00 AM - 10:00 AM
Mentoring Session for Young Engineers & Startup Development	11:00 AM - 12:00 PM
Poster Presentation Session	12:00 PM - 01:00 PM
Lunch	01:00 PM - 02:00 PM
Theme-2: Stealth Defense Manufacturing & Integration Technologies	02:00 PM - 04:00 PM
Short Presentations by IMP Awardees	04:00 PM - 04:30 PM
Awards & Certificate Distribution Ceremony	04:30 PM - 05:00 PM

Day 2 Combined Parallel Tracks & IMP Exposition

Exposition for BTech, MTech, PhD Scholars, Startups & MSMEs	10:00 AM - 01:00 PM
Lunch	01:00 PM - 02:00 PM
Judging of Exposition	02:00 PM Onwards

Day 3 Research Paper & Poster Presentation Sessions

Track 1: Advanced Manufacturing — Keynote & Paper Presentations	10:00 AM - 01:00 PM
Track 2: Critical Materials & Process Technologies — Expert Talk & Paper Presentations	10:00 AM - 01:00 PM
Track 3: Antenna, RF Structures & RCS Control Technologies for Stealth Defense Platforms	10:00 AM - 01:00 PM
Lunch	01:00 PM - 02:00 PM
Best Paper Awards & Certificate Distribution Ceremony	02:30 AM - 03:30 PM

Organizing Committee

Patron

Prof. Sukumar Mishra

Fellow (INAE) Director IIT(ISM) Dhanbad

Prof. Sivaji Chakravorti

Vice-President INAE Professor, Electrical Engineering Department, Jadavpur University, Kolkata

Convener

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Senior Member (INAE), Dean (Infra) & Professor, Mech Engg

Co-Convener FatFoE-2026 & Coordinator IMP-2026

Prof. Alok Kumar Das

Dean (IIE), Professor, Mech Engg

Co-Convener FatFoE-2026

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