

# Centre of Excellence in Advanced Manufacturing Technology



CENTRE OF EXCELLENCE  
IN  
ADVANCED MANUFACTURING TECHNOLOGY

## Journey started



Established in 2018 with the support of **Department of Heavy Industry**, Ministry of Heavy Industries and Public Enterprises, Govt. of India, and a **consortium of Industry members**

## 6 Industry Partners



## 16 Faculty Members from 5 Departments

## 4 Research Verticals

Specialty Materials

Design & Automation

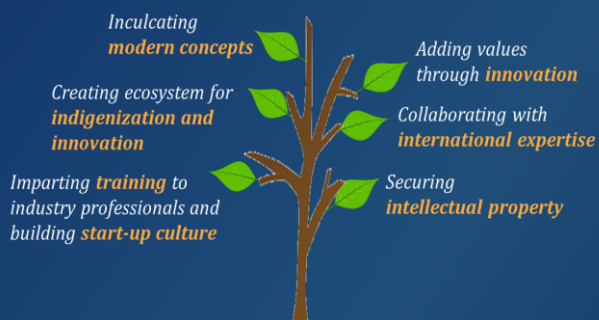
Additive Manufacturing

Industry 4.0

## Vision

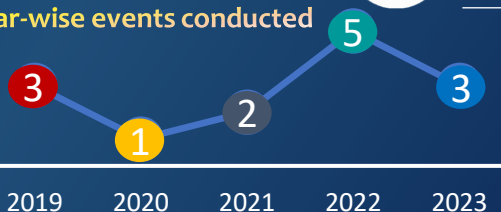


- Becoming the **TRUE PLATFORM** for Industry-Academia collaboration
- Manufacturing Catapult in **TRL 4-6**
- One-stop destination** for industrial manufacturing solutions at IIT Kharagpur



## Events

Year-wise events conducted



Events conducted by CoEAMT

Composites 4.0: Present and Future	● ●
One-day workshop on Metallography	●
Hands-on training programme on CNC	● ● ● ● ● ● ● ●
Saturday Manufacturing Talks	●
Machine Vision for Robot Applications in Manufacturing	●
5G & Beyond in Smart Manufacturing	●
Specialized training programme on Industrial Robots for Tata Metaliks	●



<https://www.coeamt.com/>



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# Infrastructure



5-axis metal hybrid additive manufacturing



Industry 4.0 compliant robotic friction stir welding



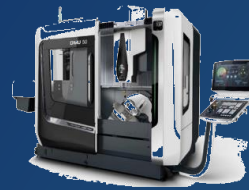
Submerged type 5-axis CNC wire-cut EDM



Robot-assisted structural vibration testing



450 kV CT-scan with large scanning area (*Upcoming*)



Full 5-axis CNC machining centre



UTM with non-contact video extensometer



Robotic TIG and MIG welding



Foundry-robot



CNC turning centre



## Sustainability Model

**52.78** Cr.  
INR  
MHI Phase-I projects

**0.48** Cr.  
INR  
Other industrial projects

## Success Stories



**4** Patents

**1** Book



### Developed Solutions



Real-time weld quality monitoring and control of FSW

**Delivered to TCS**

Algorithm developed to boost profit in India's manufacturing sector

**Implemented in Tata Metaliks**



**Delivered to GRSE**

Weld quality inspection from radiography images

**MoU/MoA signing**

### Participation in conferences

- National Conference on Industry 4.0: Challenges Ahead at Kevadiya, Gujarat
- 1st Digital Economic Working Group G20 Meeting at Lucknow



With GRSE



With RDCIS-SAIL