FOUNDRY 4.0
STUDENT ACTIVITY CENTER
(F4SAC)

भारतीय प्रौद्योगिकी संस्थान तिरुपति

IIT TIRUPATI

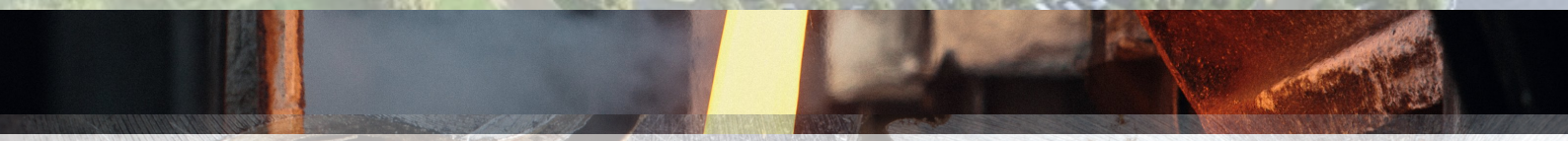
THE INSTITUTE OF INDIAN FOUNDRYMEN
Since 1950

In Association with

The Institue of Indian Foundrymen

About IIT Tirupati

The Indian Institute of Technology Tirupati (IIT Tirupati), established in 2015, is an autonomous Institute under the Ministry of Education, Government of India. It is declared as an Institute of National Importance under the Act of Parliament of India (Institutes of Technology Act, 1961). Indian Institute of Technology Tirupati is the first among the 3rd phase of IITs, announced in 2014, to have its foundation stone laid in March 2015.



Mechanical Engineering Department

The Department of Mechanical Engineering at IIT Tirupati is dedicated to providing high-quality education. We have started our journey in the year 2015. We have a strong undergraduate program in Mechanical Engineering and a master's (M. Tech) in Design and Manufacturing specialization. The department housed a central workshop and several state-of-the-art instructional and research laboratories. Our faculties are actively engaged in teaching, research and consultancy projects.

The Institute of Indian Foundrymen

The Institute of Indian Foundrymen (IIF) was set up in 1950 to promote education, research, training, and development to Indian foundrymen and to serve as a nodal point of reference between the customers and suppliers of the Indian foundry industry on a global scale. With its Head Quarter in Kolkata, IIF presently services the entire country through its 26 Chapters under four Regional Offices located at Kolkata, Delhi, Mumbai & Chennai. The Institute is a member of the World Foundrymen Organisation (WFO) and Confederation of Indian Industry (CII).

Foundry 4.0 Student Activity Center

Foundry 4.0 centers around smart manufacturing and what the future will hold with greater computing power, connectivity, feedback, and digitization of the physical world. Foundry 4.0 Student Activity Center at IIT Tirupati includes many aspects, including the use of robotics, artificial intelligence, data and process automation, and other emerging technologies. Foundry 4.0 is a totally interconnected workspace where the equipment and the machines are connected and making decisions based on data rather than having human interaction. The machining cells are the decision-makers. They request parts and tell it when the parts are complete.

DESIGN

SIMULATION

PROCESS

3D PRINTING

SENSING AND MONITORING

IoT

What do we offer?

- Demonstration of Basic Foundry Tools
- Design, Monitoring, Casting Simulation, 3D Printing, and IoT
- Hands on Experiments in Metal Casting
- Education, Training and Research
- Metallurgical Skill Development
- Outreach Activities

Our Facilities

- Sand Testing Equipment
- Sand Mould Making Equipment and Tool
- Casting Simulation
- Data Analysis
- Melting Furnaces
- Furnaces for Heat Treatment
- Vacuum Induction Furnace
- Pressure Infiltration
- Twin-Rolling System
- Vacuum Arc Melting System
- True Centrifugal Casting
- Gravity Die Casting
- Squeeze Casting
- Stir Casting

The Team Members

- **Dr. Ajay Kumar**
  Faculty, Mechanical Department
- **Tumula Tirumala**
  Research Scholar
- **Ramesh Krishnan A**
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