



# AICTE Training & Learning (ATAL) Academy



## Faculty Development Program(FDP) on **ADVANCES IN MANUFACTURING: SPECIAL PROCESSES AND PRACTICES**

02<sup>nd</sup> to 07<sup>th</sup> December 2024



BIT Sindri



Organized by

Department of Metallurgical Engineering  
BIT Sindri, Dhanbad-828123

COORDINATORS

Prof. B. N. Roy  
Dr. Sumit K. Sharma

### About the Institute

BIT Sindri is one of the premier institutes of Jharkhand. The Branch of Science and Technology, Govt. of Jharkhand, Ranchi, controls the institute administration. It is academically associated with the Jharkhand University of Technology, Ranchi, which leads assessments, conducts examinations, and awards degrees. All the courses are approved by the All India Council of Technical Education (AICTE). Also, most undergraduate programs are accredited by the National Board of Accreditation (NBA), New Delhi

### About the Department

The Department of Metallurgical Engineering, being among the oldest branches of BIT Sindri, was started in the year 1956. Ever since then, it has been playing a vital role in offering and producing skilled engineers to compete in this up-scaling industry. The department offers four years B. Tech degree courses and Two years postgraduate program is also offered to lead to an M. Tech degree with a specialization in metallurgical and Materials Engineering, and Nano Technology. The department is also engaged in research activities, several full-time as well as part-time PhD scholars are currently enrolled and doing research in cutting age technology.

### About the FDP

This workshop aims to explore cutting-edge manufacturing techniques, focusing on special processes and best practices that are shaping the future of industrial production. It will bring together experts, researchers, and industry professionals to discuss recent advancements, challenges, and opportunities in advanced manufacturing.

### Broad topics to be covered in FDP:

1. Advanced Welding and Joining Techniques
2. Additive Manufacturing Technologies
3. Surface Engineering and Modification
4. Processing of High-Performance Alloys
5. Industry 4.0 and Smart Manufacturing
6. Novel Material Characterization Methods
7. Corrosion and Wear Resistance Improvements
8. Sustainable Manufacturing Practice

## Details of Registration

Registration has to be done only through

<https://atalacademy.aicte-india.org>

1. Visit: <https://atalacademy.aicte-india.org>
  2. Login to the Portal:
  3. Select Mode: Online, Select Month: December
  4. Search and Select: 1730868780 or Advances in Manufacturing: Special Processes and Practice
  5. Click on "Apply"
- For Queries contact: +91 9564440159



## FREE REGISTRATION for all participants

### Online Platform

The entire program will be conducted through online mode. The details of the online platform and meeting link will be communicated to the selected candidates through their registered email. Assessment of topics covered will also be done through online mode. A minimum of 80% attendance is required to earn the certificate.

### AICTE – Training and Learning (ATAL) Academy

The Government of India in association with AICTE launched the ATAL academy in 2018. The Vision of ATAL Academy is to empower faculty to achieve goals of Higher Education such as access, equity, and quality.

### Patron

Prof. Pankaj Rai (Director of B.I.T. Sindri)

### Organising Committee

Dr. Anil Kumar Rajak  
Dr. Sagram Hembrom  
Md Izhar Hussain  
Dr. Nand Kishor Kumar  
Ms. Kirty Madhavi  
Mr. Babul Das  
Ms. Monika Gotam

### Student Coordinators

Pappu Kumar  
Vikash Kr. Singh  
Ritika Kumari  
Nazia Afreen

# TENTATIVE LIST OF RESOURCE PERSONNEL

## NAME & DESIGNATION

## TOPIC



### Dr. Gururaj Telasang

Scientist E, International Advanced Research Center for Powder Metallurgy and New Materials (ARCI), Hyderabad,

Powder Bed Fusion by Laser Beam Melting - Tooling applications



### Dr. Lalit Thakur

Assistant Professor, Department of Industrial and Production Engineering, National Institute of Technology, Kurukshetra

Low cost wear resistant claddings developed by Automated TIG welding process



### Dr. Anish Kumar Sachdeva

Professor Department of Industrial and Production Engineering, Dr. B.R. Ambedkar NIT, Jalandhar, Punjab 144011, India

MCDM for manufacturing processes



### Mr. Ravi Shankar

Sr. Manager, Bokaro steel plant, Steel Authority of India Limited (SAIL) Bokaro, Bokaro, 828120, Jharkhand

Reducing Carbon Footprints in Steel Companies:- Challenges and Way Forward.



### Dr. Subhasisa Nath

Senior Research Engineer- Electrification High-Value Design/ Advanced Production Systems, Manufacturing Technology Centre, Coventry, UK

Laser in Battery Manufacturing



### Mr. Gopi Shankar

Sr. Manager, Sintering Plant, Bokaro steel plant, Steel Authority of India Limited (SAIL) Bokaro, Bokaro, 828120, Jharkhand

Sintering: Measures to improve productivity



### Dr. Akhlaqur Rahaman

School of Industrial Automation Engineering Institute of Technology (EIT), Melbourne Campus, Australia

Transitioning from Industry 4.0 to 5.0



### Dr. M. Gopi Nath

Assistant Professor, Department of Mechanical and Aerospace Engineering, IIT Hyderabad

Laser surface engineering and its real-time monitoring



### Dr. Alok K. Das

Professor, Department of Mechanical Engineering, IIT-ISM Dhanbad

Unconventional Machining of Materials



### Dr. Ratnesh Kumar Raj Singh

Associate Professor, Thapar Institute of Engineering & Technology, Patiala, India ratnesh.kumar@thapar.edu

Advancement in wire arc additive manufacturing



### Dr. J. Dutta Majumdar

Professor Department of Metallurgical and Materials Engineering, Indian Institute of Technology, Kharagpur,

Advanced materials processing techniques



### Mr. Nitesh Kumar Nirala

Aditya Birla Group, unit Head, Heading Cement Business for 4 plants like Baga, Bagheri, Rajpura & Roorkee unit, House No.C1/1 C/o UltraTech Cement Ltd. Village Baga, PO Kandhar Tehsil Arki, District Solan HP

Advance iron making process



### Dr. Chaitanya Sharma

Associate Professor, Department of Mechanical Engineering, BIT Sindri

Additive Manufacturing through Friction Stir Welding

|              |  |   |
|--------------|--|---|
| <b>Day 1</b> | 6:00PM to 6:30PM<br>Inaugural Session                              | 8:00PM to 9:30PM<br>Session 2<br><br>Dr. Lalit Thakur   |
|              | 6:30PM to 8:00PM<br>Session 1<br>Dr. Gururaj Telasang              |   |
| <b>Day 2</b> | 6:00PM to 7:30PM<br>Session 3<br><br>Prof. Anish Kumar Sachdeva    | 7:30PM to 9:00PM<br>Session 4<br><br>Mr. Ravi Shankar   |
|              |  |   |
| <b>Day 3</b> | 6:00PM to 7:30PM<br>Session 5<br><br>Dr. Subhasisa Nath            | 7:30PM to 9:00PM<br>Session 6<br><br>Mr. Gopi Shankar   |
|              |  |   |
| <b>Day 4</b> | 6:00PM to 7:30PM<br>Session 7<br><br>Dr. Akhlaqur Rahman           | 7:30PM to 9:00PM<br>Session 8<br><br>Dr. Muwala Gopinath  |
|              |  |   |
| <b>Day 5</b> | 6:00PM to 7:30PM<br>Session 9<br><br>Prof. Alok Kumar Das          | 7:30PM to 9:00PM<br>Session 10<br><br>Dr. Ratnesh Kumar Raj Singh   |
|              |  |   |
| <b>Day 6</b> | 2:00PM to 3:30PM<br>Session 11<br><br>Prof. Jyotsna Dutta Majumdar | 3:30PM to 5:00PM<br>Session 12<br><br>Mr. Nitesh Kumar Nirala<br><br>5:00PM to 7:30PM<br>Session 13<br><br>Dr. Chaitanya Sharma |
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## CONTACT DETAILS OF COORDINATORS

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## INSTITUTE DETAILS AND ADDRESS

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