

## Registration Form

**Interested participants are required to send the scan copy of the Registration Form, and Payment details to [dindask@nitrkl.ac.in](mailto:dindask@nitrkl.ac.in)**

**Name:** \_\_\_\_\_

**Gender:**     Male     Female

**Email ID:** \_\_\_\_\_

**Contact No.:** \_\_\_\_\_

**Category:**     Industry and R&D Personnel  
                   Faculty  
                   Research Scholar/Student  
                   Technical staff

**Organization:** \_\_\_\_\_

**Payment Details:**

**Rs.** \_\_\_\_\_ **Date of Transaction:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Transaction ID:** \_\_\_\_\_

**Signature of the Applicant:**

**OR**

**Use the following link/QR code for registration.**  
**<https://forms.gle/st18gMw3VuPKEnQR6>**



## Address of Communication

**Dr. Soumitra Kumar Dinda**  
Assistant Professor, Dept of MME  
Email: [dindask@nitrkl.ac.in](mailto:dindask@nitrkl.ac.in)  
Contact no: 09836287376

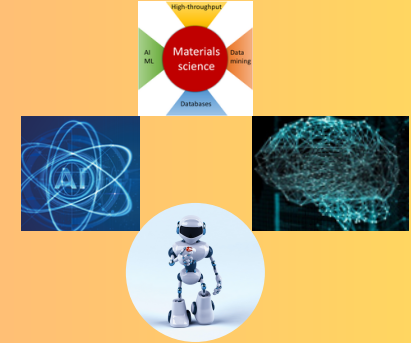
## ABOUT NIT ROURKELA

The National Institute of Technology (NIT), Rourkela, was founded as Regional Engineering College, Rourkela, in 1961 and declared as an institution of national importance by the act of parliament in 2007. The institute's mission is to become an internationally acclaimed institution of higher learning that will serve as a source of knowledge and expertise for society and be a preferred destination for undergraduate and postgraduate studies. It is a prestigious Institute with a reputation for excellence at both undergraduate, postgraduate, and PhD levels, fostering the spirit of national integration among the students, close interaction with industry, and a strong emphasis on basic and applied research. NIT Rourkela has ranked 32nd, 15th, and 24th in NIRF Overall, Engineering and Research for the year 2022-23, respectively.



## ABOUT US

Department of Metallurgical and Materials Engineering Established in 1964. This Department has emerged as a powerhouse for academics, scientific research, and cutting-edge technologies. The department is actively involved in fundamental research in diversified fields like steel technology, advanced manufacturing processes, alloy designing, nanotechnology, composites, computational materials, and machine learning. The department attracts highly qualified faculties and bright students from the entire nation. At present, various research projects are being run in the department by external sponsoring agencies like the Department of Science and Technology (DST), Council of Scientific and Industrial Research (CSIR), Naval Research Board (NRB), Defence Research and Development Organization (DRDO), Board of Research in Nuclear Sciences (BRNS), National Aluminium Company (NALCO), TATA Steel, Steel Authority of India Ltd. (SAIL). The Metallurgical and Materials Engineering Department at the NIT Rourkela has a strong and gracious history of organizing technical national/international conferences, workshops, and short-term courses.



## Online Workshop

on

## Artificial Intelligence in Materials Engineering: Theory and Hands-on Practice

**Date : September 21-25,2023**

**Virtual Mode**

*Coordinators*

**Prof. Soumitra Kumar Dinda**  
Assistant Professor  
Email: [dindask@nitrkl.ac.in](mailto:dindask@nitrkl.ac.in)

**Prof. Snehanshu Pal**  
Associate Professor  
Email: [pals@nitrkl.ac.in](mailto:pals@nitrkl.ac.in)

*Organized by*



**Department of Metallurgical and  
Materials Engineering**  
National Institute of Technology, Rourkela  
Odisha-769008, India

## Objective

21st Century in the age of Artificial Intelligence (AI). AI is already developed in different sectors, including defense, automotive, aerospace, etc., but for other metallurgical processes and, during its application, is a brand new and low-hanging fruit. Data generation and data collection is the essential or primary intention of all. The five days workshop would provide crucial information on the basics of AI with different algorithms and utilization. Advanced research for postgraduate and doctoral scholars who want to gain or step forwards to the new world, implementing artificial intelligence to solve scientific/technical problems and bring innovation in science and specialized technology. The workshop tutorials/hand on sessions will cover the basic principle. This is the 1st part of the series workshop where the invention will accumulate the technology, innovation, and application should consist within one umbrella for one interested in exploring the world in this machine learning age.

## Resource Person

Academicians from IITs, NITs, Foreign universities and R&D Organizations having expertise in the relevant field will be invited as Resource Person for the workshop.

## Course Content

The five days' online workshop will be divided approximately equally theoretical and hands-on exercise on using artificial Intelligence applications in different metallurgical processes. The workshop will cover but is not limited to the following topics:

- Basic theory and programming introduction using Python and MATLAB
- Different Neural Network (ANN, CNN, RNN) theory and case studies
- Comparative prediction studies with different algorithms
- Artificial Intelligence in Process Metallurgy
- Artificial Intelligence in Welding Metallurgy
- Artificial Intelligence in Corrosion Metallurgy
- Hands-on machine Learning using Python
- Assessment and Feedback

### Patron

**Prof. K Umamaheshwar Rao**

**Director (NIT Rourkela)**

### Chairman

**Prof. Debasis Chaira,**

**Head, Department of Metallurgical and**

**Materials Engineering**

### Coordinator

**Prof. Soumitra Kumar Dinda**

**Department of Metallurgical and**

**Materials Engineering**

### Co-coordinator

**Prof. Snehanshu Pal**

**Department of Metallurgical and**

**Materials Engineering**

## Important Guidelines

Faculty members, Research scholars, PG students, Industry personnel, and Technical Staff- members of different academic institutes are eligible to apply for the workshop.

### • Registration Fee (Including 18%GST):

For Industry and R&D Personnel: Rs.1770/-

Faculties from institutes: Rs. 1180/-

Research Scholars/ Students/ Technical Staff:

Rs. 590/-

### • Mode of Payment:

Online payment should be made in favor of the following:

Account Name: CONTINUING EDUCATION  
NIT ROURKELA

Payable Bank: [State Bank of India](#)

Branch: [NIT Campus, Rourkela-769008](#)

Account No.: [10138951784](#)

IFSC Code: [SBIN0002109](#)

MCIR No.: [769002007](#)

SWIFT Code: [SBININBB137](#)

### • NB:

Only a complete registration form (with proof/details of online transaction) will be considered.

The registration fee is non-refundable.

[E-Certificate](#) will be provided for the candidates attending all the sessions.

There is no registration fee for the participants from the host institute.

Online joining link(s) through [Google-meet/MS- Team](#) will be shared in due course.

**Last date for receiving applications: 10th Sept 2023.**