The Indian Institute of Metals Short Professional Educational Courses(Online) on

"A Workshop on Machine Learning and Industrial Process Metallurgy" (Course Number IIM-25-105)

Online Mode 8th to 10th January 2025, 09:30 – 13:30 each day

Background: Machine Learning techniques used in metallurgy include supervised learning, unsupervised learning, reinforcement learning, and deep learning, each playing a role in optimizing various aspects of the production process. The benefits of ML include increased efficiency, improved product quality, reduced downtime, and cost reduction. However, challenges exist, such as ensuring data quality, managing the complexity of metallurgical processes, and integrating ML into existing systems. Future trends in metallurgy include the rise of autonomous systems, edge computing for real-time data processing, and more advanced predictive models to further optimize complex processes. In a nutshell, ML is transforming industrial process metallurgy by making operations more efficient, sustainable, and cost-effective. However, addressing challenges related to data quality, system integration, and process complexity is essential for maximizing the benefits of ML in the field.

Speaker Profile: The faculty of the course consists of the following professors of eminence from IIEST, Shibpur and IIP-CSIR, Dehradun

1. Dr. Snehanshu Pal, Associate Professor, Department of Metallurgy and Materials Engineering, Indian Institute of Engineering Science and Technology
2. Dr. Manojit Ghosh, Professor, Department of Metallurgy and Materials Engineering, Indian Institute of Engineering Science and Technology
3. Dr. Debdulal Das, Professor, Department of Metallurgy and Materials Engineering, Indian Institute of Engineering Science and Technology
4. Dr. Sailesh Kumar Singh, Senior Scientist, Indian Institute of Petrolium, CSIR-Dehradun
5. Dr. Dmitry Eskin, Professor, Brunel Centre for Advanced Solidification Technology, Brunel University, UK

The course Content would be covered in Class Room Lectures accessible through Virtual on-line route on 8th to 10th January, 2025.

Who should attend: The course is useful for practising industrial professionals dealing with new products, research professionals, academic professionals, students, materials professionals from R&D laboratories, Government research institutions, etc. It will immensely benefit students and researchers.

Course Content:

Theory Classes Day-1		Theory Classes Day-2
Fundamentals of Machine Learning: Industrial Perspective		Property control in Al alloys through alloy chemistry
Steel casting and defect eliminations		Continuous Casting of Steels and Break-out Prediction System

Theory Classes Day-3
AI casting and defect removal
Material design for Hydrogen storage

Registration Fees and Payment Methods

Participant type	Only Theory Course
IIM Members	5000 + 900* = 5900
IIM Non Member	7500 + 900* = 8400
Student Member	500 + 90* = 590
Student Non-member	750 + 135* = 885
*(18% GST)	

- Participants may join either of the Theory or training of the course.
- Advance payment of Registration fees is mandatory
- Participation fee is non-refundable; however, change in nomination is possible.
- Students may furnish suitable proof of they being students while filling in the online form.
- 10% discount shall be offered for registering more than 5 person Participants are requested to register via http://surl.li/dtxzqp [For Individuals], http://surl.li/patmrp [For Organizations] and pay online as per the details given below.

The online transaction receipt, mentioning the course number IIM-25-105 may be uploaded by using the link provided in google form. Alternately, a demand draft in favour of "The Indian Institute of Metals" payable at Salt Lake, Kolkata can be sent to The Indian Institute of Metals, Metal House, Plot 13/4, Block AQ, Salt Lake, Sec V, Kolkata : 700 091.

Contact Persons :

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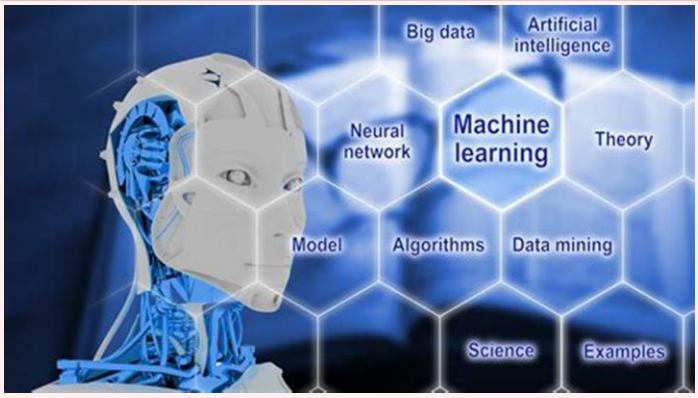

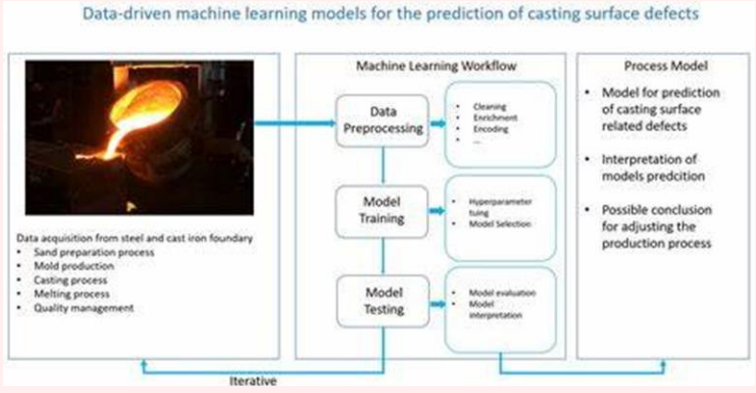

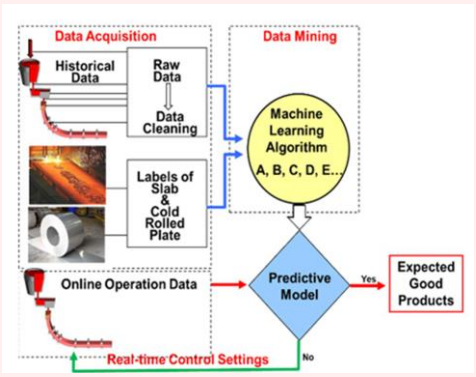

Metallurgy
Materials Engineering