Short-Term Training Programme (STTP)
on

AI/ML in Computational Material Science

AI/ML-CMS 2024

02-06th Sep. 2024

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Organized by:
Dept. of Materials & Metallurgical Engineering
Maulana Azad National Institute of Technology, Bhopal
(An Institution of National Importance under Ministry of Education, GOI)

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It is our great pleasure to announce the Short-Term Training Programme (STTP) on "AI/ML in Computational Material Science" (AI/ML-CMS) organized by the Department of Materials and Metallurgical Engineering, MANIT Bhopal, from 02-06th Sep. 2024.

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Note: All email correspondence must be addressed with the subject "AI/ML-RMCMS"

About MANIT Bhopal

Maulana Azad National Institute of Technology (M.A.N.I.T), Bhopal stands tall as a trailblazing institution in the engineering landscape of India, renowned for nurturing numerous exceptional engineers. Named in honour of the distinguished scholar, educationist, and India's first Education Minister, Maulana Abul Kalam Azad, the institute was established in 1960. At present, M.A.N.I.T offers a diverse array of academic programs, encompassing 09 Undergraduate, 30 Postgraduate, and Ph.D. programs across all engineering disciplines and applied sciences. Additionally, the institute also hosts an esteemed M.B.A. program. This educational repertoire is supported by a dedicated cadre of approximately 280 proficient faculty members. A distinguishing hallmark of M.A.N.I.T is its unwavering commitment to fostering interdisciplinary, application-oriented research. This strategic emphasis serves to bridge the divide between academia and industry, ensuring that research outcomes are not only innovative but also have tangible real-world implications.

STTP Structure

The STTP will be conducted over a span of five days, structured to include both theoretical sessions and hands-on practical exercises. Each day will focus on a specific theme, with expert-led sessions and interactive discussions.

Day 1: Introduction to AI/ML
- Understanding the fundamentals of AI/ML
- Exploring the applications of AI/ML in research
- Hands-on exercises on AI/ML tools and techniques

Day 2: Modelling and Simulation of Material Processing
- Overview of modelling techniques in material science
- Practical demonstrations of simulation software
- Case studies and group exercises on material processing simulations

Day 3: Design of Experiment and Optimization
- Principles of experimental design
- Techniques for optimization in research
- Practical applications and case studies in experimental design and optimization

Day 4: AI/ML in Computational Material Science
- Introduction to computational methods in material science
- Hands-on sessions on computational tools and software
- Applications of computational material science in research and industry

Day 5: Introduction to Research Proposal
- Strategies for crafting compelling research proposals.
- Guidance on navigating the grant acquisition process.
- Workshop on developing successful grant proposals.

Target Audience

This STTP is designed for faculty members, industrial (R&D) researcher, B.Tech/M. Tech/Ph.D as well as research fellow from diverse academic and research backgrounds who are involved in research and teaching. It is particularly beneficial for those seeking to enhance their research skills and stay updated with the latest methodologies and technologies.

In today's rapidly evolving academic/ research/ industrial landscape with the latest tools and methodologies is paramount for advancing research excellence. The proposed workshop aims to empower faculty members, industrial (R&D) researcher, as well as research fellow from diverse academic and research backgrounds with comprehensive training in research methodology, particularly focusing on cutting-edge areas such as Artificial Intelligence/Machine Learning (AI/ML), Modelling and Simulation of Material Processing, Design of Experiment & Optimization, Computational Material Science, Patent filling and Proposal Writing.

STTP Objectives

i. Provide participant with a deep understanding of AI/ML applications in research methodology.
ii. Equip participants with advanced techniques for modelling and simulating material processing.
iii. Familiarize participant with the principles of experimental design and optimization.
iv. Explore the interdisciplinary field of computational material science and its applications.
v. Enhance proposal writing skills to increase success rates in securing research grants and funding.

Expected Outcomes

i. Enhanced understanding of AI/ML, and computational material science.
ii. Acquired skills in modelling, simulation, design of experiment, and optimization.
iii. Improved proficiency in proposal writing and grant acquisition.

Summary

The Advancing Faculty Excellence in AI/ML in Computational Material Science, STTP promises to be a transformative learning experience for participant, equipping them with the knowledge and skills needed to excel in contemporary research endeavours. Through a combination of theoretical insights, practical exercises, and collaborative discussions, participants will emerge empowered to drive innovation and make significant contributions to their respective fields.

- Over a span of five days, structured to include both theoretical sessions and hands-on practical exercises.
- Each day will focus on a specific theme, with expert-led sessions and interactive discussions

Registration fees

The registration fee includes the following

1- STTP lunch, tea and snacks
2- STTP participation certificate

Registration Type		Regular Registration	International Participant
Students:	UG/PG	500/-INR	60 USD
	Ph.D.	800/-INR	
Faculty of Academic Institution		1,000/-INR	
Members from Industry Or R&D Organisation		1500 / Page	

Details of Money-Transfer by net-banking:

Account Name: Director, MANIT, Bhopal

Bank Name: State Bank of India

Bank Address: MANIT, Bhopal

Account No. 10020150107

IFSC Code: SBIN0001608

Short-Term Training Programme (STTP) on "AI/ML in Computational Material Science"

AI/ML-CMS 2024

02-06th Sep. 2024

Registration Form (online/offline/spot)

Name of the Candidate (Capital letters):

Address: --

Fax: ---

Phone No.: --

E-mail: --

Qualification: ---

Current Position: --

Relevant Experience: ---------------------------------------

PAYMENT DETAILS:

Amount: Bank Name.:

Online Transfer Reference Number: -----------------

Date: Signature of Applicant