

Five Days Workshop on
Computational Materials Engineering

22-27 January, 2024



Organized by

Department of Metallurgical and Materials Engineering
Malaviya National Institute of Technology Jaipur

Organizing Committee

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Prof. Narayana Prasad Padhy

Director, MNIT Jaipur

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Dr. Brij Mohan Mundotiya

About MNIT Jaipur

Malaviya National Institute of Technology (MNIT) Jaipur is one of the premier NITs, designated “Institute of National Importance” by MHRD, Govt. of India. The Institute was established in 1963, and its campus spreads over 325 acres of lush green area in the central location of Jaipur city. The Institute offers undergraduate (B.Tech.) and postgraduate (M.Tech. / MBA / M.Sc. & Ph.D.) courses to about 5000 students in almost all leading engineering, technology, management, and sciences fields. Through the internationally renowned faculty, laboratories with state-of-the-art equipment, and excellent infrastructure, the Institute is actively engaged in research, consultancy, and developmental activities, besides imparting regular teaching.

About the Department

The Department of Metallurgical and Materials Engineering is one of the oldest departments established in 1965. The department offers B.Tech., M.Tech., and Ph.D. programmes. The UG and PG programme of the department is NBA accredited. The department’s motto is to provide quality education through highly qualified and experienced faculty members. The department has received total sponsored funding of Rs. 605 lakhs during 2015-2023. The department received Rs. 141 lakhs in funding under FIST-2021 from DST.

About the Workshop

Computational materials engineering involves the application of computers to understanding and predicting the structures and properties of materials and their relationships to processing conditions, based on fundamental physics, thermodynamics, kinetics, mechanics, and numerical algorithms. The rise of computing power is allowing for exciting new methods of material characterization and design. Many materials studies now use computational approaches, which will only become more common as computer power improves in the coming decades. A key, cross-cutting strength is the computational prediction of material properties from atomic to microstructural scales.

The objective is to promote the exchange of new developments and achievements in the field of Computational Materials Engineering and to support their applications. This workshop is dedicated to the most recent advances in the theory and simulation of materials.

Topics to be covered

- Density functional theory (DFT)
- CALPHAD: Fundamentals and hands-on training
- Phase field modeling: Fundamentals and hands-on training

Key Resource Persons

Prof. Amarendra Kumar Singh

Professor, Department of MSE, IIT Kanpur

Dr. Somnath Bhowmick

Associate Professor, Department of MSE, IIT Kanpur

Dr. K. Guruvidyathri

Assistant Professor School of Engg. Sciences,
University of Hyderabad

Dr. Rahul M R

Assistant Professor, Dept. of Fuel, Minerals, & Met. Engg.,
IIT ISM, Dhanbad

Dr. Shelaka Gupta

Assistant Professor, Chemical Engg., IIT Hyderabad

Dr. Supriyo Ghosh

Assistant Professor, Dept. of Met. & Matl. Engg.,
IIT Roorkee

Target audience & programme requirements

✓ This workshop is for faculty members, research scholars, UG & PG students, and participants from Research Institutions and Industries.

✓ The workshop will be conducted in online/offline mode. Participants should have the provision of a laptop/desktop with an internet connection.

For Registration

Registration Form: <https://forms.gle/HighqNAXL4ZAUpxEA>

Registration Fees (including 18% GST)

- Offline registration fees: Rs. 2000/- (includes lodging)
- Online registration fees: Rs. 500/- (for external participants)
- For MNIT participants fees: Rs. 250/-

Mode of Payment: Online Transaction

Registrar MNIT Jaipur, Acc. No: 676801700388

ICICI Bank (MNIT Jaipur)

IFSC: ICIC0006768

Note

- E-certificate will be given *only if the participants attend all the sessions actively.*
- Detailed schedule and session links will be shared later through e-mail and WhatsApp.

Address for Correspondence

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Last Date of Registration: 20th Jan 2024