



A two-day workshop on

“High Performance Computing Methods for complex and moving geometries”

(December 1-2, 2023)

Jointly Organized by **IIT Kanpur and Nodal Centre for Training in HPC and AI (IIT Kharagpur)**

Under the aegis of the **National Supercomputing Mission**

OBJECTIVE AND SCOPE

The workshop will cover fundamental and advanced computational methods for handling complex and dynamic geometries. It includes a dedicated session on the basics of advanced high-performance computing techniques for solving multidimensional problems. Participants will engage in hands-on exercises. They will also receive training in using OpenFOAM to tackle complex issues. Additionally, the workshop will address GPU-based computing and demonstrate its capabilities. This event aligns directly with the vision and mission of the NSM challenges undertaken jointly by the Department of Science and Technology (DST) and the Department of Electronics and Information Technology (DeitY).



**PARAMSHAKTI SUPERCOMPUTER
AT IIT KHARAGPUR**

TOPICS OF INTEREST

- Introduction to HPC
- Finite Difference Method
- Pressure-based and density based Finite Volume Method (FVM)
- OpenFOAM
- Immersed boundary method for moving geometries
- Parallel programming using MPI and OpenMP
- CUDA and GPU optimization

SPEAKERS:

- Prof. Arnab Kr. De, IIT Guwahati
- Prof. Sandip Sarkar, JU
- Prof. Somnath Roy, IIT Kharagpur
- Prof. Ashoke De, IIT Kanpur

WHO CAN ATTEND

Scientists, Faculty Members, Postdoctoral Fellows, Doctoral Students, Postgraduate Students, Researchers from DRDO, CSIR and other Research Labs, Centrally/state/private funded R & D Institutes.

WORKSHOP MODE

The workshop will take place at Jadavpur University, Kolkata, in a physical format. It includes lectures and hands-on sessions, with participants expected to bring their own laptops for the practical exercises.

PARTICIPANTS SELECTION

Participants interested in attending the workshop at Jadavpur University, Kolkata in physical mode will be required to submit an abstract in 200 words stating that how the workshop would be useful to them. Participants willing to attend the workshop at JU would be shortlisted based on the abstract received. Participants who are not selected to attend the workshop in physical mode (due to the limited number of seats) will be able to access the recorded material later.

TRAVEL SUPPORT

Travel support will be provided to selected outstation participants as per norms.

ACCOMMODATION

Free accommodations will be provided to selected outstation participants as per norms. Other participants will be required to arrange for their own stay.

REGISTRATION FEE (NON REFUNDABLE)

Rs. 200/- per person (Registration fee is charged for logistics support)

ORGANIZING COMMITTEE

- Prof. Sandip Sarkar, JU
- Prof. Arnab Kr. De, IIT Guwahati
- Prof. Somnath Roy, IIT Kharagpur
- Prof. Ashoke De, IIT Kanpur
- Ashish Kuvelkar, CDAC

[CLICK HERE
FOR
REGISTRATION!](#)

IMPORTANT DATES

November 20, 2023

Last date for registration

(Registration may close earlier, if capacity is reached. Early registration is recommended.)

November 25, 2023

Acceptance
notification

CONTACT US:

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VENUE:

Seminar Room, Department of
Mechanical Engineering,
Jadavpur University, Kolkata
700032