

# MALYADEEP BHATTACHARYA

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## Education

- **Sudhir Memorial Institute, Madhyamgram**  
AISSE (Class – XII) – 93.3% | Year - 2018
- **National Institute of Technology, Durgapur**  
Bachelor of Technology | Department of Mechanical Engineering | 2018 – 2022 (tentative)  
CGPA – 9.07 (After completion of 7<sup>th</sup> Semester)  
Departmental rank 6<sup>th</sup> out of 149 students.

## Skills

- **Programming Languages:** C, C++, Python, LaTeX, PyDMD, MPI.
- **Tools:** OpenFOAM, CATIA, MATLAB, ANSYS, SU2, Paraview, Tecplot, Microsoft Office, Adobe Photoshop, Adobe Premiere Pro.

## Research Interests

Computational Fluid Dynamics and Heat Transfer, Multiphase flows, Lattice Boltzmann Modelling, Data-driven modelling, High Performance Computing.

## Projects

- “**Dynamics of a bottle emptying process**” (Ongoing)  
*Project Guide: Prof. R. Lakkaraju, IIT Kharagpur.*
  - Investigating the complex flow structures, macroscopic characteristics and bubble formation involved in a bottle emptying process through OpenFOAM simulations.
  - Meshed the 3D CAD geometry in ICEM-CFD and converted it to OpenFOAM compatible file to run large scale simulations in High Performance Computing clusters.

## Conference Papers

- Malyadeep Bhattacharya<sup>1</sup>, Shantanu Pramanik<sup>2</sup>, Tanmoy Mondal<sup>3</sup>, “*Lattice Boltzmann Simulation of Convective Heat Transfer from Embedded Surface Heaters in a Laminar Wall Jet Flow*”, Proceedings of the ISHMT-ASTFE Heat and Mass Transfer Conference, 2021, pages 781-787. (DOI : 10.1615/IHMTC-2021.1170 )

## Relevant Coursework and Certifications

- “*Simulation and Modelling of Natural Processes*” online course from University of Geneva through Coursera.Org.
- “*Introduction to Numerical Analysis*” online course from HSE University, Moscow through Coursera.Org.

## Experience

- **Summer trainee at Central Tool Room and Training Centre(CTTC), Bhubaneswar, (May 2019)**
  - Fundamentals of CAD and CAM with CATIA and submission of a design report.
- **Winter trainee at Calcutta Electric Supply Corporation(CESC) Ltd., (December 2019)**
  - Hands on experience of monitoring and maintenance of different units in a Thermal Power Plant.
- **Indian Academy of Sciences’ Summer Research Fellow at IIT Madras, (June 2021) (Remote)**
  - Worked on the validation of an in-house Navier-Stokes solver for compressible flows and did a comparative study of different flux-reconstruction schemes followed by the submission of a final report.

## Extra-Curricular Activities and Achievements

- Treasurer of Enteract, official dramatics club of NIT Durgapur.
- Won 2<sup>nd</sup> prize in Inter-college street play and Monoacting competition at IIT Kharagpur.
- Won 1<sup>st</sup> prize in inter-college street play and stage play competition at IIT-ISM Dhanbad.

## Positions of Responsibility

- Class Representative (2020 – present).
- Treasurer, Enteract Club, NIT Durgapur.