

ARNOB KUNDU

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EDUCATION

PhD CANDIDATE

DT-HATS Marie Curie Doctoral Candidate
University of Perugia, Italy
 April 2026 – Present

FLUID MECHANICS & ENERGETICS

Master's Degree
Grenoble INP, ENSE3, France
 Sep 2024 – Sep 2025

APPLIED MECHANICS

Master 1
Université Grenoble Alpes, France
 Sep 2022 – Apr 2023

MECHANICAL ENGINEERING

Bachelor of Technology
APG Shimla University, India
 Apr 2016 – Jun 2019

Pre-University Training & One Semester

Moscow Engineering Physics Institute, NRNU
 Russian Federation, Sep 2014 – Mar 2016

SKILLS

TECHNICAL SOFTWARE:

- **Simulation:** Ansys Fluent, Trio-CFD, COMSOL, Matlab Simulink, Ansys Mechanical, Career HAP.
- **CAD:** SolidWorks, AutoCAD, Tflex CAD.
- **Programming:** Python, MATLAB, Linux, Arduino.

KEY RESEARCH STRENGTHS

- Computational Fluid Mechanics.
- Turbulence, Flow Instabilities & Vortex Dynamics
- High Performance Computing
- Heat Transfer & Thermo-fluid Systems
- Optimization & DOE (Taguchi, ANN, Regression)

LANGUAGES

- **English:** IELTS 7.5 (Speaking 8)
- **French:** Beginner, **Russian:** Elementary
- **Bengali:** Native, **Hindi:** Conversational

SOFT SKILLS

- Autonomy, Intercultural Competence, Technical Communication

INTERESTS

- Hiking, Cycling, Culinary Experiments

OBJECTIVE

Motivated Phd candidate with industry experience, committed to pursuing a lifelong career in research on **fluid mechanics**, **heat transfer**, and **energetics**.

RESEARCH EXPERIENCE

PUBLICATION

S. S. Dipta, A. Ghosh, **A. Kundu**, and A. Saha, “**2-D Motion based Real Time Wireless Interaction System for Disabled Patients,**” *2019 (WiSPNET)IEEE Xplore*, Chennai, India.

DOI: [10.1109/WiSPNET45539.2019.9032719](https://doi.org/10.1109/WiSPNET45539.2019.9032719) ↗

CFD – INTERN (Master Thesis) ↗

CNRS – PROMES (ZRR), Perpignan, France

Feb 2025 – Aug 2025

- **Title:** Simulation of Anisothermal Fluid-Particle Flows
- Performed DNS of anisothermal solid-liquid and gas-solid flows using TrioCFD on the CEA-IRENE HPC cluster, focusing on heat transfer at fluid-particle interfaces
- Evaluated different heat-flux post-processing methods in single-particle cases to assess accuracy and prepare for future extensions to multiparticle CSP studies

Wind Tunnel INTERN (Master 1 Project) ↗

Laboratoire des Écoulements Géophysiques et Industriels (**LEGI**), Grenoble, France

Jan 2023 – Apr 2023

- **Title:** Effect of Water Vapor Fog on Cooling of a Radiative Surface in a Wind Tunnel
- Conducted velocity measurements with Cobra probe and temperature profiling with thermocouples in katabatic flow experiments
- Analyzed flow and temperature profiles, estimating turbulent viscosity to assess fog influence on radiative cooling and mixing

Undergraduate Project (B.Tech Mechanical) ↗

APG Shimla University, India

Jan 2019 – Jun 2019

- **Title:** Tool Vibration Analysis Based on Cutting Parameters in Turning Operation
- Conducted turning experiments on brass, aluminium, and mild steel with vibration measurements (ADXL345 + Arduino), applying **Taguchi DOE, regression, and ANN** methods to analyze the influence of cutting parameters

APPLIED ENGINEERING EXPERIENCE

HVAC Engineer (MEP), 11 Month+

POSCO E&C

Matarbari 1200 MW Power Plant Project, Bangladesh

Oct 2021 – Aug 2022

- **Achievement:** Led the installation & on site design modifications of HVAC and firefighting systems across 15 sites, including critical sites like the Power House and Central Control Building, as per ASHRAE standard and Building Codes.

Refrigeration Cooling R&D Engineer 2 years +

Minister Hi-Tech Park Electronics LTD

Mymensingh, Bangladesh

Aug 2019 – Sep 2021

- **Achievement:** Designed and optimized vapor compression cooling circuits, reducing material usage by 3% while maintaining system performance in line with industry standards