PIYUSH OLIVKAR



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EDUCATION

IIT Madras — Jul 2023 - 2027
PhD (Applied Mechanics) (9 CGPA) — Chennai

IIT Jammu — Sept 2021 - 2023
M.Tech (Thermal And Energy System) (8.97 CGPA) — Jammu

Nagpur University — 2018
B. Tech (Mechanical) (8.95 CGPA) — Nagpur

SCHOLASTIC ACHIEVEMENTS

- University 1st topper in 3rd year Mechanical engineering
- 4 times consecutive college topper in bachelor's.
- Secured 92.56 percentile in GATE (2021)

PROJECTS

Computational Study of the Hydrodynamics Effect of a Flagella Beating of a Sperm — Chennai
Research Scholar, IIT Madras
Studied sperm motility through fluid mechanics. Analyzed the motion and responses of microscale swimmers. Understood the implications for reproductive biology and medical device design

A Numerical Investigation of Blood Flow in the Carotid Bifurcation Under Microgravity and Hypergravity — Chennai
Research Scholar, IIT Madras
Analyzed vascular resistance in acute microgravity. Studied the effect of vascular resistance on flow. Evaluated flow measurements through RCR inlet and outlets. Developed a systemic methodology for fluid flow in microgravity. Examined flow from aortic root to cerebral flow in microgravity

Instabilities in Flow Between 2 Rotating Toroid — Jammu and Delhi
Student Researcher, IIT Jammu and IIT Delhi
Studied the possibility to explore a new viscometer. Determined the transition of laminar to the turbulent in the 3D torus geometry. Studied the early mixing of the fluid compare to Taylor-Couette flow and Critical taylor's number for this geometry

SKILLS

Programming Languages	MATLAB, Python
Softwares	ANSYS Fluent, OpenFoam, Paraview, COMSOL, LaTex
Research expertise	CFD, Space Physiology, Biofluid Mechanics, Numerical methods, Sperm dynamics, Active matter theory, Microhydrodynamics, Incompressible fluid flows

ADDITIONAL DETAILS

Awards on extracurricular activities

- Winner at IIT Madras talent show

Publications

- Published paper named "Effect of sensible heat storage materials on the performance of the solar air heaters" in the renewable and sustainable energy reviews by Elsevier publications with an impact factor 14.98 and cite score 30.5

Hobbies: Geopolitics, Drama, Reading research papers, Rap music

Languages: English, Hindi, Marathi