Monalisha

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EDUCATION

Indian Institute of Space Science and Technology, Thiruvananthapuram, Kerala
Master of Technology in Structure and Design (07/2022 – 07/2024)
SGPA (9.43/10)

- Achievement: I have been awarded Future Research Talent Awards -2023 by Australian National University.
- Relevant Courses: Structural Dynamics, Advanced Strength of Materials, Finite Element Methods, Advanced Mathematics, Aerospace Materials, Non-Linear Dynamics, Smart Material, Mechanics of Composites.

Birla Institute of Technology, Mesra, Ranchi
Bachelor of Civil and Environmental Engineering (07/2016 – 07/2020)
CGPA (8.96/10)

Achievements: Won National Fellowship Competition "FOSSEE", organized by IIT, Bombay (04/2020)
Relevant Courses: Fluid Dynamics, Structural Analysis, Computational Fluid Dynamics, Engineering Mathematics, StructuralDesign, Basic and Advanced Engineering Mathematics, Strength of Materials, Fundamental of C programming.

Notre Dame Academy, Patna, Bihar
Higher Secondary Education (06/2013 -03/2015)
Percentage (95.2%)

- Achievements: 3rd topper in the final board exam, Physics topper in 11th standard, IMO 13th school rank holder.
- Relevant Courses: Mathematics, Physics, Chemistry, Economics, English.

Indian Public School, Purnea, Bihar
Secondary Education (2013)
CGPA (10/10)

- Relevant courses: Mathematics, Physics, Chemistry, Biology, English.

INTERNSHIPS AND PROJECTS

Final Year MTech Project (1/08/2023 – 1/08/2024)

- ***Project Title: Wave Energy Harvester using Synchronous Pendula system***
  This project studies about the non-linear motion of synchronous pendulum in order to harvest the wave vibrational energy.

Australian National University (22/05/2023 – 28/07/2023)

- *Project Title: Investigating the thermal properties of the Sea Ice in GFD Laboratory*
  This project aims to find out the relationship between the thermal Conductivity of the sea ice and Temperature of it.

Indian Institute of Technology, Bombay (20/04/2020 -20/06/2020)

- *Projects:1. Simulation of 3-Dimensional spray and optimizing the coverage area of spray using OpenFOAM.*
  (https://cfd.fossee.in/case-study-project/case-study-run/148)
  2. Simulation of flow around 2-Dimensional hydrofoil NACA 0015 and reduce cavitation using appendage usingOpenFOAM. (https://cfd.fossee.in/case-study-project/case-study-run/149)

Indian Institute of Technology, Indore (13/05/2019 – 30/06/2019)

- *Work: Read 12 Research papers, learnt about the research field and basics of Fluent (ANSYS).*
- *Projects:1. Simulation of flow around 6 in-line Cylinders using OpenFOAM.*
  2. Simulation of Laminar and turbulent flow in a circular pipe using OpenFOAM.

PROJECTS

1. Coding for 1-Dimensional Flow through Convergent-Divergent Nozzle using Mackcormack's Technique in MatLAB.
2. Solving steady and unsteady 2- Dimensional Heat Conduction equation using Numerical Schemes in MatLAB
3. Simulation of flow over Backward Facing step using Converge Studio.
4. Simulation of flow through the expansion waves using Converge Studio.

EXTRA COURSES

Advance Aerodynamics Course
Basics of OpenFOAM
Artificial Intelligence and Machine Learning (1 Year Course by IIT Kanpur and Simplilearn)

SKILLS

a. Technical Skills: MatLAB, OpenFOAM, Paraview, Ansys,Python
b. Teaching Assistant for Strength of material lab and course, Teaching students from class 8 to 12 (as a tutor).