

PRABHAT KUMAR MAURYA

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Areas of Interest

Computational Fluid Dynamics

Finite Element Analysis

Fluid mechanics

Strength of materials

Thermodynamics

Heat and mass transfer

Education

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2018 (Ongoing)	PhD	Ocean Engineering Department, IIT MADRAS	8.8
2017	M.Tech.	Disaster Mitigation and Management, IIT Roorkee	7.8
2014	Mechanical Engineering	PSIT KANPUR	74.9 %
2009	Twelth	C.N.S.I.COLLEGE GOVIND NAGAR KANPUR	75.4 %
2007	Tenth	C.N.S.I.COLLEGE GOVIND NAGAR KANPUR	83.17 %

Internships

BOILER AND TURBINE MAINTENANCE DEPARTMENT | NTPC UNCHAHAR

- During the internship period we studied the brief working of boiler and turbine in a power plant . The boiler and its accessories (economiser, air preheater, reheat, superheater, feedpump), turbine working (HPT,INTERMEDIATE,LPT) , overhauling of boiler , handling and processing of its fuel (coal) ash.

Projects

• PhD Research Area 1 | Numerical Simulation of Floating Bodies in Waves using SPH | IIT MADRAS

My research field is to simulate the response of ocean waves over fixed and floating structures in order to calculate the forces and other structural parameters to design the same efficiently. I am solving Navier-Stokes equation for fluid with a mesh-free method, **Smoothed Particle hydrodynamics**, which has been proved efficient over other available mesh-free methods as well as mesh-based methods in terms of capturing wave breaking and simulating free surface flows.

M.Tech. Project | Feature Extraction Using Maximum Likelihood Approach for Risk Assessment | IIT ROORKEE

The master's work was to assess the risk involved during mass gatherings at a particular site by using Maximum Likelihood Approach. The work involved the feature extraction from a satellite image of that area. The features were divided into different classes which were assumed to have a Gaussian distribution. The parameters of the distribution for each class were estimated from the training samples using maximum likelihood estimates.

B.Tech Project | WAVE ENERGY CONVERTER | PSIT KANPUR

My topic in bachelors as my final year project was WAVE ENERGY CONVERTER. In this project we constructed a model which converts the wave energy of water into useful electrical energy. For generation of waves inside the model flap type motion was provided ad the generated waves created the heave motion of a magnet inside the coil. The output of the coil was connected to the ammeter to check the flow of electricity. This model generated significant amount of electricity depending its capacity and was effectively can be seen on ammeter. The large capacity WEC can be used along the coast of oceans and proved to be as a renewable source of energy.

Skill | Programming Lanuage

Computer languages Fortran , Python, Matlab
Languages Known English (SRW) , Hindi (SRW)

