CHANDRABHAN

Roll No.:234103102
M.Tech - Computational Mechanics
Department of Mechanical Engineering
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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
M.Tech	Indian Institute of Technology, Guwahati	6.9(Current)	2023-Present
B.Tech	Swami Vivekanand Institute of Engineering & Technology, Banur	8.61	2016-2020
Senior Secondary	CBSE Board	83.8%	2015
Secondary	CBSE Board	95%	2013

Projects

- **Dynamic analysis of a pump resting on functionally graded sandwich plate using finite element analysis.** *Ongoing*
  Dr. S.K. Dwivedy /Professor /Dept. of Mechanical Engineering /IIT Guwahati
  – Evaluate the dynamic response of LPRE viscoelastic core embedded with functionally graded constraining layer.
  – Dynamic analysis of pump resting on LPRE core sandwich plate with constraining layer either isotropic or FGM.
- **Analysis of Vehicle Suspension System Using MatLab and Simulink** *Nov 2023*
  Dr. S.K. Dwivedy /Professor /Dept. of Mechanical Engineering/ IIT Guwahati
  – Using Lagrange's equation to derive the governing differential equations of motions, describing the bounce and pitch motions.
  – With the help of MatLab and SimuLink obtain the transfer function for the bounce and pitch motions.
- **Estimation of Stress Intensity Factor (SIF) using Finite Element Analysis** *April 2024*
  Dr. K.S.R. Krishna Murthy /Professor /Dept. of Mechanical Engineering /IIT Guwahati
  – SIF values of center cracked, edge cracked and double edge crack plates were numerically estimated by finite element analysis using Ansys structure.
- **Failure Analysis of Fiber Reinforced Polymer (FRP) Composites** *April 2024*
  Dr. Debabrata Chakraborty /Professor /Dept. of Mechanical Engineering /IIT Guwahati
  – Developed a code to find the nth ply failure load and last failure load, considering complete and partial degradation of failed plies using classical laminate theory.
- **Computational Fluid Dynamics Project** *July 2023-Nov 2023*
  Dr. Amaresh Dalal / Professor /Dept. of Mechanical Engineering /IIT Guwahati
  – To solve stream function and steady heat conduction equation using Explicit and Implicit Iterative methods.
  – Develop C code to solve the non-dimensional partial differential equation for Couette Flow using FDM.
  – Develop C code to solve Lid driven cavity problem to calculate stream functions and vorticity using FDM.

Experience

- **Teaching Assistant** *July 2024 - Present*
  Dr. Poonam Kumari & Dr. S.K. Dwivedy /Professor(s) /Dept. of Mechanical Engineering IIT Guwahati
  – Assisting undergraduate students for the course ME-215 (Machine Drawing Lab) & ME-226 (Kinematics Lab)
- **Summer Internship** *5June 2019 - 30July 2019*
  S.R.K. Tools Industries Patiala, Punjab
  – Worked in the field of manufacturing of Gear Hobs, Gear Shaper Cutters, Milling Cutters.

Technical Skills

- **Programming Skills**: C/C++*, MATLAB*
- **Design Analysis Software**: Ansys Workbench, Solidworks, Autocad
- **Miscellaneous**: MS Excel, MS Visio, Latex*

** Elementary proficiency*

Key courses taken

- Finite Element Methods in Engineering
- Advance Mechanics of Solids
- Fracture Fatigue and Failure Analysis
- Continuum Mechanics
- Computational Fluid Dynamics
- Mechanical Vibration
- Numerical Analysis
- Introduction to Composite Materials

Achievements

- **GATE(ME)**,Secured 97.22 Percentile in GATE 2022 *2022*
- **Silver Medalist, Topper**,Mechanical Engineering Department. *2020*