

Mandeep saini

Curriculum Vitae

Career Objectives

Self motivation and self discipline leads to perseverance in ones nature. I believe that persevere efforts towards your goal will always be fruitful. With this attitude I love to explore versatile problems. My objective is to get myself into challenging, growth oriented tasks in technical field which can feed the never ending yearning for knowledge.Eventually develop expertise in computational research.

Education

- 2017 - 2019 **M.Tech Mechanical engineering department (Major-Aerodynamics and propulsion), IIT, Guwahati, CGPA – 8.84.**
- 2012 - 2016 **B.Tech (Mechanical engineering), NIT, Hamirpur, CGPA – 7.17.**
- 2011 - 2012 **Higher Secondary Education, CBSE, DAV una (HP), %age – 84.**
- 2009 - 2010 **Senior Secondary Education, CBSE, DAV una (HP), CGPA – 8.8.**

Selected Projects

Title Development of a pressure-based flow solver for compressible Euler equations

Guided by Dr. G. Natarajan & Dr. A. Dalal (Associate Prof. IIT Pallakad & Guwahati)

Description A fractional step method based finite volume pressure-based formulation for is extended to regimes of high Mach numbers. A Helm-Holtz equation for evolution of pressure is solved applicable to general equation of state similar to literature. The equation transform to well known pressure Poisson equation at very low mach numbers.

Link <https://drive.google.com/file/d/1oLEEVBUg0wFivigr6ImsscAn1VkXBsJu/view?usp=sharing>

Title Comparative analysis of engine oils using condition monitoring

Guided by Dr Rajesh Sharma (Associate Prof. NIT Hamirpur)

Description Various tribological properties of lubrication oils used in engines of different kinds of vehicle were studied and compared.Performed Tribological tests include 1)Viscosity testing. 2)Ferrography. 3) EP test and wear scar measurement test on Four ball testing machine. 4)Ferrous debris measurement. Tests were performed as per ASTM standards.

Link https://drive.google.com/open?id=1ZmIA9X7912jE0fVr80I_M3AAY2BGEiPH

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Title Development of 3D models using CATiA V5R20
Domain Software application
Description Number of geometries were developed for analysis on Catia V5R20 software.
Idea was to enrich the understanding of usage of the software.

Internships

2015 Vocational training at NFL nayanangal
2014 3D modelling using CATiA V5R40 at CADDESK Chandigarh
2014 Industrial training at International cars and motors limited Amb (HP)

Technical Skill

Programming Language C/C++, Python
Other Softwares ANSYS(Fluent), CATiA, LaTeX, Tecplot, Visual studio 10.0
Platforms/Framework Ubuntu, Windows

Domains of

- Interests**
- Computational Fluid Dynamics
 - Air breathing and IC engines
 - Combustion
 - Turbulent Flows
 - Material science

Position of responsibilities and Achievements

2018 Academic topper of Aerodynamics and Propulsion specialization of M.tech
2018 Teaching Assistant in NPTEL course on abrasive machining and finishing and Teaching assistant at Thermal science lab IITG
2018 Event organizer TEDx, Member of TEAM SAATHI and volunteer at DISHA, at IITG
2015 Runnerup in Interbranch badminton tournament
2015 Core coordinator of team MEDEXTROUS during annual technical fest NIMBUS at NITH