ABHISHEK JAIN
B.Tech Mechanical Engineering
UG (IV Year I Semester)
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Indian Institute of Technology Roorkee

Area(s) Of Interest : Manufacturing Technologies, CAM, Hybrid Vehicles, Optimization Techniques

Educational Qualifications	Year	Board/Institution	CGPA*/ %
UG (III Year II Semester)	2009	IIT Roorkee	9.252
Twelfth Class	2006	Punjab School Education Board	81.780
Tenth Class	2004	Punjab School Education Board	87.290

*GPA on a scale of 10

INTERNSHIP

Pfleiderer-Institute of Turbomachinery, TU Braunschweig, Germany
Flow field investigation of an axial-flow pump under near stall and stall conditions (May 2009 - July 2009)
The performance drop due to stall inception is a well-known problem in axial flow pumps. Project involved the experimental measurements and testing over four different casings at and near stall conditions. Optical Measurements using high speed camera resulted into significant findings regarding the rotating phenomena at high staggered angles. Recorded performance curve, sound and radial vibrations from LabView controlled test-rig, and processed data using MATLAB and TechPlot established that the suppression action of Double-Inlet-Nozzle is better than other casings, and promises the best curative method against stall, till date.

RESEARCH PUBLICATIONS

Abhinav Pandey, Abhishek Jain, Vipul Arora & Satish C. Sharma **" Integration and Performance Analysis of Flywheel Energy Storage System in an ELPH Vehicle "** IJRTE, Academy Publishers, Finland (ISSN 1797-9617) , 2009

PROJECTS

Bachelor Thesis Project, IIT Roorkee
Development and Testing of Cavitation Jet Erosion Test Rig (B.Tech Project) (Ongoing)
Design, development and testing of an experimental set-up to estimate 'cavitation erosion resistance' of various materials following the standards of ASTM G-134:Cavitation Jet Erosion Test. The setup has the capability to change the cavitation intensity through accurate control of hydrodynamic parameters, and thus can simulate several cavitating conditions, not achieved by other methods. The first set up in India and sixth in the world, would be of a great help for industrial research in the nation.

Summer Undergraduate Research Award, IIT Roorkee
Integration and performance analysis of Flywheel Energy Storage System (FESS) in an ELPH vehicle (March - August 2008.)
The work involved the integration of an FESS with an available model of Parallel Hybrid Vehicle with pre-transmission torque coupling. A MATLAB/SIMULINK model was developed to simulate the effects on the performance of the system, under standard driving cycles of urban and highway driving. The results evinced that the FESS can perform satisfactorily and the use of FESS can enhance the performance of the hybrid vehicle in comparison to the chemical batteries. The work initiated a new field in the applications of FESS on hybrid vehicles.

Department of Mechanical & Industrial Engineering, IIT Roorkee

Development of a spur gear design software in MATLAB. (September - November 2009)
A MATLAB software has been developed to aid the design process of spur gears set. Frequently used spur gears, have a highly cumbersome manual design process. Software intends to design the gears considering application requirements and design logics.

Department of Mechanical & Industrial Engineering, IIT Roorkee
Design of a Mechanical Regenerative Braking System (November 2007 - March 2008)
A novel Regenerative Braking System was designed using mechanical components & flywheel, to save the energy otherwise lost due to friction during the braking process in automobiles & machinery.

SKILLS

Computer Languages:	Java, C++, php, perl, jsp, xml
Software Packages:	AutoCad, MATLAB, LabView, SolidWorks
Academic Achievements:	Department Rank 3 & among top 2% in the Institute. State Rank of 7 in AIEEE. DAAD scholarship awardee for WISE 2009 program.
Additional Courses Taken:	CAM, Optimization Techniques, Industrial Sociology, Renewable Energy Resources
Languages Known:	English (S/R/W); Hindi (S/R/W); Punjabi (S/R/W);

EXTRA CURRICULARS

Design Coordinator, Information Management Group (2009-10)
Leading a team of 35 intellectually sparked minds, including 10 designers. IMG is a student body working directly under administration, responsible for Institute website & e-resources. Varying roles in the group, first as a learner, then as a manager and now as a leader honed my skills not just technically, but also made me learn group dynamics & organization behaviors.

Disha, NSS (IIT Roorkee) (2006-2007)
As a volunteer, made several visits to the nearby villages to teach needy students of primary Govt. school. Motivated parents to send their wards to school.

Coordinator, Robosapiens 09 (2009)
Technically challenged event with the highest number of participants, during Cognizance'09. Coordinating the 400+ geeky brains required skills at technical as well as managerial level.

Co-coordinator (Website), Cognizance 09, IIT Roorkee (2009)
Designed and developed the much applauded website of Cognizance '09. Being a member of 'Central Organizing Team', a balanced combination of technical skills, responsibility and management resulted into a website with more than 60 thousand visits.

PERSONAL DETAILS

Fathers name : Janesh Jain **Date of Birth :** 02-09-1988
Gender : Male **Category :** General
Permanent Address : H.No: b-v-1268, Brahampuri, Purana bazar, Ludhiana 141008
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REFERENCES

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