

NITESH KUMAR

B-TECH MECHANICAL ENGINEERING
U.G. (3rd YEAR, 5th SEMESTER)
INDIAN INSTITUTE OF TECHNOLOGY, PATNA
BIHAR, INDIA.

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RESEARCH INTEREST: Automobile Engineering, Thermodynamics, Mobile robotics, Fluid Mechanics, Aerodynamics, CAD/CAM, Renewable energy resources.

EDUCATION: Presently in the 3rd year and pursuing my studies towards acquiring degree of **Bachelor of Technology** from **Indian Institute of Technology, Patna**. I am majoring in **Mechanical Engineering**.

Educational Qualifications	Board/Degree	Year	Name of Institution	CPI/%Marks
U.G. (3 rd year, 5 th semester)	B-TECH	2013-2017	Indian Institute of Technology, Patna	8.62/10
A.I.S.S.C.E (Intermediate)	CBSE	2012	DAV Public School BSEB Colony, Patna	95.2%
A.I.S.S.E. (High School)	CBSE	2010	Ishan International Public School, Patna	91.2%

PROJECTS :

09/14 – Now **Bio-inspired Robotic fish**

Study, design and fabrication of a bio-inspired robotic fish which can swim and dive-in water. In the first step design of the fish was done on solidworks and corresponding simulation was carried out. Parts of the robotic fish was manufactured using 3D printer followed by electric connections. Programming was done on Arduino platform. Currently, material selection for the outer covering and fins is in progress.

Position – Research intern.

Mentor – Dr. Atul Thakur, IIT Patna.

03/15 – Now **BAJA'16 SAE INDIA (Terra-Griffins)**

Designing and fabrication of an all terrain vehicle which can travel in difficult terrains. The objective of this project was to design an efficient steering and suspension system of an automobile. Various design parameters were considered and iterated to select parameters which satisfy the aim of the project. Static analysis on the force bearing components was done on Ansys software, while dynamic analysis of the vehicle was performed on Adams/car software. Currently, in a process of **publishing research paper** on the topic “Steering and Suspension design of an ATV’s”.

Position – Core-committee member for steering and suspension design.

Mentor – Dr. Somnath Roy, IIT Patna.

01/15-05/15 **Adjustable Unified Multi Nut Opener**

Design and fabrication of adjustable unified multi nut opener. Study, design and implementation of forces, Stress analysis on Ansys. Material was chosen after static analysis and a working prototype was manufactured using institute facilities as one of my workshop project, which has been awarded ‘AA’ grade.

Mentor – Dr. Probir Saha, IIT Patna

04/14 – 02/15 **BAJA'15 SAE INDIA**

Qualified in the virtual round and successfully manufactured an all-terrain vehicle to participate in main Event of BAJA'15 held at Indore in feb 2015.

Position – Team member.

Mentor – Dr. Akhilendra Singh, IIT Patna.

SKILLS

- **Application software:** Auto-Cad, Solid works, Ansys, Adams/car, Matlab, Microsoft office, excel.
- **Operating software:** Microsoft XP/vista/7/8/10 & Linux.
- **Programming language:** C & Java.
- **Advanced Manufacturing Machines:** CNC Lathe & Milling, Rapid prototyping, Wire EDM, Laser cutting machines etc.
- **Conventional Machining:** Lathe, Milling, MIG & Arc welding, Casting and Forming etc.
- **Material Testing Machines:** Impact & Hardness testing machine, UTM, Metallography techniques.

RELEVANT COURSES UNDERTAKEN

Design of machine elements	Manufacturing technology	Material science
Kinetics of machinery	Mechanical measurements	Heat and mass transfer
Introduction to computing	Thermodynamics-1	Electrical Machinery
Engineering Mechanics	Fluid Mechanics-1, 2	Mechanical Engg. Laboratory-1 & 2
Machine Drawing	Solid Mechanics-1, 2	Workshop-1, 2
Engineering Drawing	Mathematics-1, 2, 3	Object Oriented Programing

ACADEMIC ACHIEVMENTS

- Represented IIT Patna in virtual round of **BAJA'16** SAE INDIA in july 2015 and qualified for the same.
- Secured a CPI of **8.62/10** and currently holding **4th** position in mechanical engineering department.
- Qualified up to 2nd level in **International Mathematics Olympiad** organized by Silver Zone, New Delhi.
- Was among top 5 students qualified in AISSCE 2012 from my school in a batch of 700 students.
- Awarded **Merit-Cum-Means Scholarship** twice by **IIT Patna** in the academic year 2013-2014 & 2014-2015.

POSITION OF RESPONSIBILITY

- Coordinator, **SCME** club (Students Council of Mechanical Engineers), IIT Patna.
- Sub-Coordinator, Technical committee , Anwasha (Annual Techno cultural fest), IIT Patna.
- Event Organizer, Celesta(Annual Techno management fest), IIT Patna.
- Active member of SAE INDIA.