



# Rachit Thukral

Mechanical Engineering  
Indian Institute of Technology, Bombay

09010079  
UG Second Year(B.Tech)  
Male  
DOB:12 December 1990

Examination	University	Institute	Year	CPI/%
Graduation	IIT Bombay	IIT Bombay	2011	8.60
Intermediate/+2	CBSE	M.R.A Senior Secondary School, Chandigarh	2009	84.60
Matriculation	CBSE	Bhavan Vidyalaya, Chandigarh	2007	93.80

## ACADEMIC ACHIEVEMENTS

- Among **top 0.1%** students (**A.I.R 292**) in **IIT-JEE '09**.
- Ranked **75** all over India and **3<sup>rd</sup>** in state in **AIEEE'09**.
- Awarded **CBSE Merit Scholarship** for securing All India Rank of 75 in AIEEE'09.
- Recipient of award for **Information and Technology** and **Best Quizzer** award in 10<sup>th</sup> standard.
- Qualified for the **First National Aerospace Olympiad** organised by Aeronautical Society of India and was among the **Top-5 teams** of the country.
- Placed in National top 1% in National Standard Examination in Physics.
- Ranked **83<sup>rd</sup>** all over India in 10<sup>th</sup> **National Science Olympiad**.

## IMPORTANT PROJECTS

### Summer Internship

**Shock Response of Synbone (Defence Academy, United Kingdom)** (May 2011-July 2011)  
(Guide-Dr Paul Hazell)

- **Performed impact tests** on a Bone Simulant "Synbone" using a Shock Gun.
- **Observed the changes in microstructure** of Bone Simulant under a microscope.
- Obtained the elastic properties of the material by sound speed measurements.
- **Obtained the stresses** during the shock using gauges and oscilloscope and **constructed stress graphs** and used it to **derive the Hugoniot Equation** for the material.

### Mini Unique ID Project

(Guide-Prof Deepak Phatak) (July 2009-Nov 2009)

- **Received data (fingerprints)** from a biometric device and stored it in a data base and assigned it an ID (programming in C++).
- **Matched** a given **finger print** with the fingerprints from the database and identified the person.
- **Created various utilities** (marking attendance, etc) with the help of software developed.

## KEY COURSES UNDERTAKEN(to be completed by November 2011)

- **Mechanical**- Manufacturing Processes, Thermodynamics, Fluid Mechanics, Solid Mechanics, Engineering Mechanics, Heat Transfer.

- **Mathematics**- Introduction to Numerical Analysis, Calculus, Ordinary differential Equations, Linear Algebra.
- **Statistics**- Data Analysis and Interpretation.
- **Computing and Electronics**-Computer programming and Utilisation, Introduction to Electric and Electronic circuits.
- **Management**- Marketing Management, Human Resource Management, Accounting and Finance, Industrial Engineering and Operations Research.

#### TECHNICAL ACTIVITIES

##### Remote operated F1 car

- **Designed** a small remote operated **F1 car** which could turn using differential drive.

##### Cross Over

- Prepared a remote controlled **robot** which **created a bridge** using a designed mechanism.
- Prepared a **remote controlled car** which moved over the bridge and completed the given track.
- **Placed in Top-8** teams of the competition(Techfest'2010)

#### POSITION OF RESPONSIBILITY

##### Coordinator, NSS, IIT Bombay

- Currently working as Coordinator for **Public relations** in NSS-IIT Bombay.

##### Coordinator, Media Department, Mood Indigo'2010.

- Managed the photography of the entire event.

##### Coordinator, Alumni-Student Mentorship Program,IIT Bombay

- **Prepared** the entire **structure**(in team of 8) for the first **Student-Alumni Mentorship Programme** of IIT Bombay.

#### SOFTWARE SKILLS

- Working experience with **C++** and **Ms-Office**.
- Operating Systems- **MS Windows** and **Linux**.

#### EXTRA CURRICULAR INTERESTS

- **Mountaineering**-
  - Successfully completed the Basic Mountaineering Course organised by ABVIMAS, Manali.
  - Acquired proficiency in basic techniques of **Rock, Snow and Ice climbing**.
  - Completed the height gaining event by attaining the required height of **15,600 feet**.
- **Sports**-An avid Badminton and Table Tennis player.