



**Akshay Gupta**  
**Mechanical Engineering**  
**Indian Institute of Technology Bombay**

**110100043**  
**UG Third Year (B.Tech.)**  
**Male**  
**DOB: 18/04/1993**

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2014	6.64
Intermediate/+2	Lawrence and Mayo Public School, Kota	Lawrence and Mayo Public School	2011	85.00
Matriculation	Spring Dales School	Spring Dales School	2009	90.60

## SCHOLASTIC ACHIEVEMENTS

- Secured All India Rank 375 in IIT-JEE 2011 [2011]
- Secured All India Rank 1235 in AIEEE 2011 [2011]
- Accomplished Elementary German Language course conducted by the German Academic Exchange Service at IIT Bombay [2012]
- Achieved All India Rank 78 in National Science Talent Search Exam 2008 and All India Rank 112 in year 2009 [2008-09]
- Secured International Rank 51 in Round 1 and International Rank 132 in Round 2 of International Maths Olympiad 2008 conducted by Science Olympiad Foundation [2008-09]

## PROJECTS AND INTERSHIPS

### Internship at Creative Concepts [Dec 2013]

- Conceptualised a beverage making machine capable of delivering beverages based on our choice of ingredients, quantity and mood
- Designed the heating, filtering, stirring, cleaning, exhaust and waste disposal mechanisms for the machine customised for making beverage tea (using Solidworks)
- Analysed the model further and built a similar design capable of faster delivery

### Mono Propellant combustion [Ongoing]

- Designed the droplet combustion chamber for burning and analysis of monopropellants like Otto-fuel 2, IPN etc. (using Solidworks)
- Experimentally found out the temperature profile and flame diameter for strand combustion of IPN
- Future study involves the use of FTIR Spectroscopy to study the flame developed around the droplet and to identify the combustion products

### Laser Cladding modelling analysis [Sept-Nov 2013]

- Modelled and analysed Powder Injection Laser Cladding on Abaqus software
- Determined the temperature profile for cladding using Ti alloy substrate and Ti-Co mixture clad using Element Birth and Death model

### Noise Reduction System [Oct-Nov 2013]

- Generated a Band pass filter using MATLAB, employed the model for removal of White noise from sound signals and prepared a presentation
- Awarded a certificate of appreciation for leading the class in project and presentations

Industrial Visit to Technocrafts, examined various aspects of working of a manufacturing company

Spacecraft mission analysis for Venera-4. Studied the mission and spacecraft trajectory qualitatively as well as quantitatively and prepared a presentation

Technology Management- Studied Industrial Engineering applied to Technology Management using Teece model and prepared a presentation

Defects in crystals- Studied various crystalline defects and their applications and prepared a presentation

## TECHNICAL SKILLS

- Designed a Wireless Remote-Controlled Car to be run on a rough and sandy track for Tech-One competition conducted by Student Technical Activity Body [2011]
- Designed a Wireless Line-Follower bot for a competition conducted by Student Technical Activity Body [2011]
- **Software Skills:** Abaqus, Solidworks, MATLAB, GIMP, 3-D Studio Max, Easy Scope, Labview

## POSITION OF RESPONSIBILITY

**Associate Secretary** in Mechanical Engineering Association, IIT Bombay [2013-14]

- Management and proper execution of various events like Department Trips, Valedictory function, Orientations and competitions

**Co-ordinator** in Career Cell, IIT Bombay [2012-13]

- Designing of posters, flexes etc. and video editing for the IITB UG Academics You Tube Channel, the official channel of Academic Council IIT Bombay

**Co-ordinator** in Mood Indigo 2012, the cultural festival of IIT Bombay [2012]

- Management of Worldfest involving more than 100 international participants and Art Arena involving over 20 Limca record holder artists

## EXTRA-CURRICULAR ACTIVITIES

- Awarded a certificate for participation in Sahara Force India Pit Stop Challenge conducted at Mood Indigo, IIT Bombay [2013]
- Accomplished a 15-day 3-D animation course conducted by Xplora Design School, Kota [2012]
- Part of winning team in Intra-hostel Cricket tournament [2013]
- Manager of a playing team in Institute Tennis Championship [2013]
- Attended a 10-day long Beginner's Tennis camp [2013]
- Part of successfully completed world record by IIT-Bombay for maximum number of people solving Rubik's cube at a place [2011]
- Secured 2<sup>nd</sup> Runner-up position in Freshiezza Group Dance Competition, organized by Cultural Council IIT Bombay [2011]
- Participated in various Fine Arts competitions including Face Painting, Thumb Painting and Poster Making competitions [2011]
- Awarded a certificate for accomplishing 1-year B-certificate Course in National Cadet Corps [2011]
- Won Silver medal for Shotput and Bronze medal for Sprinting in Intra-School Competitions [2008-09]