



**Ratan Sunil Guha**  
**Mechanical Engineering**  
**Indian Institute of Technology Bombay**

**110100018**  
**UG Third Year (B.Tech.)**  
**Male**  
**DOB: 31/05/1993**

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2014	8.80
Intermediate/+2	Maharashtra State Board	Dr. Ambedkar College Nagpur	2011	91.83
Matriculation	CBSE	Kendriya Vidyalaya Ajni, Nagpur	2009	96.80

### SCHOLASTIC ACHIEVEMENTS

- All India Rank of **141** in the IIT- Joint Entrance Examination 2011, amongst **485,000** students.
- All India Rank of **345** and state rank of **38** in AIEEE 2011, amongst **1.1 million** students.
- Scored **408** marks out of **450** in BITSAT 2011. Scores **above 400** are considered **exceptional**.
- 10<sup>th</sup>** in All India Kendriya Vidyalaya Sangathan (KVS: a body of about **1,000** schools and **5 lakh** students) in **All India Senior Secondary Exam** (X<sup>th</sup> Board CBSE) 2009.
- 14<sup>th</sup>** in Maharashtra and Goa in Regional Maths Olympiad 2010.
- Qualified for Kishore Vaigyanik Protsahan Yojana (KVPY: A central govt. scheme aimed to promote young scientists) interview round (**top 500 rank** in India) 2009.
- Winner of **Student of the Year** Award in the school in 2008 for an exceptional all round performance.
- Was **13<sup>th</sup>** amongst more than **50,000** students in KVS Junior Mathematics Olympiad 2008.
- Among **top 1%** in Maharashtra in National Physics Olympiad and National Chemistry Olympiad 2011.

### INTERNSHIP PROJECT

#### ➤ Robust Optimization of Supply Chain Network Design under Stochastic Demand and Congestion

Guide: Prof. Sachin Jayaswal, Production and Quantitative Methods, IIM Ahmadabad [May – July 2013]

- Worked for the formulation and solution of a **new method** for solving **network design problems**, presenting a robust solution for the **first time**.
- Learnt various aspects of **Operation Research**, **Quant**, and Optimization etc. **Gained proficiency** in an optimization software, **IBM CPLEX**, to code and solve the problem.

### ACADEMIC AND TECHNICAL PROJECTS

#### • Teaching Assistant in Engineering Thermodynamics Workshop 2012

Guide: Prof. Uday Gaitonde, Thermodynamics and Fluid Engineering, IIT Bombay [December 2012]

- Worked as a Teaching Assistant in the workshop in which close to **10,000** Engineering Thermodynamics **teachers** from various colleges across India were **trained**.
- Prepared notes** and **solved various doubts** of the participants on an online medium, moodle.

#### • Institute Technical Summer Project (ITSP) 2012, IIT Bombay

[May – July 2012]

Ideated and built a **Cell phone Controlled Bot**, using concepts of circuit designing, mechanical part designing, microcontroller coding and programming.

#### • Voting Machine

Guide: Prof. Dipankar Saha, Electrical Engineering Department, IIT Bombay

[November 2012]

Build a prototype using basic electronic components like flip flops and registers. The team got an **AA grade**.

#### • AUTODESK Workshop

Trained for making various 2D and 3D structures specially related to machine parts and automobile.

#### • UG Research Symposium 2012

Participated for summer project **research work (ITSP Project)**. Well appreciated by professors and students.

### ACADEMIC COURSES

CORE	NON-CORE
Solid Mechanics, Engineering Mechanics	Calculus I and II
Strength of Materials, Mechanics of Machines	Linear Algebra
Fluid Mechanics, Thermodynamics, Heat Transfer	Data Analysis and Interpretation,
CFD and Heat Transfer*, Cryogenics*	Basic Electrical and Electronics circuits
Refrigeration and Air Conditioning*,	Computer Programming and Utilization
Manufacturing Processes, Engineering Metallurgy	Numerical Analysis, Economics, Environment Studies
Operation Research, Applied Thermodynamics*	Psychology, Astrophysics, Evolution

**Minor Course-** Digital Electronics course completed. Completed 'Discrete Structures' course as a part of minor degree in CSE. Currently pursuing 'Data Structure and Algorithms' in CSE department.

**Others:** Electronics at Higher Secondary Level (2 years). Psychology from Coursera.

## COMPUTER SKILLS

- **PROGRAMMING:** C, C++, MATLAB, HTML.
- **SOFTWARE**
  - Optimisation : IBM CPLEX
  - Electrical and Electronics: LABVIEW
  - Graphics: Photoshop and Coral Dram
- **OPERATING SYSTEMS:** Windows, Linux (Ubuntu).

## INTERNATIONAL EXPOSURE: SEMESTER EXCHANGE PROGRAM

- Studying at **National University of Singapore (NUS)** for the fall semester of 2013-14. *[August-December 2013]*
- Selected for Temasek Foundation Leadership Enrichment and Regional Networking (TF LEaRN) program scholarship. **Only 4** students from **India**, **just 2** from the IIT's, were selected.
- Participating in **Leadership Enrichment Program**, organised by **ASEAN**, with fellow scholars from various Asian countries like China, South Korea, Philippines, and Indonesia etc. .

## POSITIONS OF RESPONSIBILITY

- **Institute Cultural Council: Convener, "Vaani" - The Hindi Club of IITB** *[March 2012-February 2013]*
  - **Organized the first ever Hindi Utsav**, a three day event for promoting Hindi speaking and literary arts.
  - Part of the Team "*Spandan*"- The **first ever** Hindi Magazine to be published in IIT Bombay.
  - **Initiated** and **administered** Hindi blog '*Vaani*', which got more than **10,000 hits** in 6 months.
  - **Lead** the contingent securing **positions** in **3 out of 5** Hindi events in IITD cultural fest *Rendezvous '12*.
  - **Planned** and organized the **inauguratory 'Aksharit'**, the Hindi lit games night.
- **Mood Indigo and Techfest: Coordinator** *[March 2012-January 2013]*
  - **Conceptualised** and **organized** "*Kavi Sammelan – The Poetry Competition*" event held in Mood Indigo 2012.
  - **Negotiated** with Hindi literature artists to be invited in Mood Indigo.
  - **Managed** 'International Robotics Challenge' in Techfest 2012 and Karaoke event in Techfest 2013.
- **Performing Arts Festival (PAF), Hostel 4: Dramatics Incharge, PAF no. 4 (Bisaat)** *[Feb-March 2013]*
  - **Conceptualised** the theme, script and screenplay etc. **Managed** the auditions and practices.
  - **Co-writer** of the script. Gave voiceover to the **lead actors**.

## EXTRA CURRICULAR ACTIVITIES

- **Entrepreneurship: Jagriti Yatra (Awakening Journey) 2013** *[December 2013 – January 2014]*
  - It's a 15 day, **8000 km train journey** across India, aimed at promoting **entrepreneurship**.
  - Would visit 15 selected centres and 12 role models chosen for their **exceptional enterprise**.
  - Got selected for the final round of Google Biz-Gyan Tree: an idea pitching competition.
- **Speaking and Literary Arts**
  - **Secured positions** in many **debating** competitions like: **second** in Hindi debating in *Rendezvous '12*, the IITD fest; **first** among **900** freshmen in Hindi debating at Freshizza '11, the cultural fest for freshmen; etc.
  - **Won** many **literary arts** competitions like: **2<sup>nd</sup>** in Hindi Lit competition at *Malhaar '11*, Cultural fest of St. Xavier's College Mumbai; **4<sup>th</sup>** in JAM at *Rendezvous '12*; **2<sup>nd</sup>** in Nagpur city in Tata Building India Essay '08.
  - Has done **compeering** and **anchoring** in many cultural events.
- **Dramatics**
  - **Scripted** and **directed** a play in *Sophomore Prod '12*. **Mentored** juniors for *Sophomore Prod '13*.
  - Stood **first** in street play event in Freshizza '11.
- **Sports and Social Services**
  - Received **Rajya Puraskar**, the **second highest award** for a scout, in Indian scouts and guides association.
  - Was a part of **National Sports Organisation** as a **football player**. Participated in Athletics Grand Championships for the hostel. Also participated in Mini-Marathon event 'Crossy' for the hostel.