Shivam J. Baria
Mechanical Engineering
Indian Institute of Technology Bombay
Specialization: M. Tech (Design Engineering)

123100020
M. Tech
Male
DOB: 05-12-1990

Examination	University	Institute	Year	CPI/ %
Post Graduation	IIT Bombay	IIT Bombay	2014	8.98
Graduation	Gujarat Technological University	B.V.M. Engineering College	2012	9.33
Intermediate/+2	Gujarat State Board	R.P.T.P High School	2008	90.20
Matriculation	Gujarat State Board	M. U. Patel School	2006	95.57

Academic Achievements

- Secured **36th rank in Gate 2012**, among **112320 students** with gate score of 880, and **99.9688** percentile [2012]
- Recipient for **Excellence Award** by Gujarat Technological University for securing highest CPI till 6th semesters [2011]
- Recipient of **merit scholarship** by **Government of India** [2008-2012]
- Got **8 medals** and **20 merit prizes** at undergraduate level for the academic performance [2008-2012]
- Secured **7th rank in merit list in Gujarat State** in intermediate/+2 Exam [2008]
- Secured **10th rank in Gujarat State** in Matriculation Exams [2006]
- Recipient of **Dhirubhai Ambani Merit Scholarship** [2006]

M. Tech Project

Title: Design Optimization of Electrostatic MEMS
Objective: To optimize the natural frequency of Electrostatic MEMS devices via providing intermediate elastic supports and altering their location
Motivation: To enable MEMS devises to be used in high frequency applications, and to tune device properly.
Domain of Project: Solid Mechanics, Electrostatic Sensors and Actuators, Optimization, Finite Element Method and Numerical Methods.
Project Description and future plan:

- Literature review on optimizing natural frequency by providing and altering elastic support on beams without different boundary conditions without external load
- Apply this theory to beams having non linear electrostatic forcing term
- Applying Finite Element Method to solve Boundary Value Problems
- Studying numerical techniques for nonlinear differential equations
- Studying various optimization schemes
- Analysing the result and optimising the support locations for optimising the natural frequency

Position of Responsibility

Institute Masters Representative (IMR) **[2013-14]**

- **Representative of Masters Students** (M. Tech, M. Mgt, M. Des, M. Phil) at **IIT Bombay**
- **Member of Senate (Highest Academic body at IIT B)**, among 3 student representatives from PG Community, and member of PGPC.

- **Leading the team of 19 people**, among executive members, web designers and respective department representatives
- **Planned and executed PG Orientation 2013**, in association with Academic Section and Dean Offices, IIT Bombay
- Planned the sitting arrangement of 1100 PG entrants with Academic section and led the team to accommodate 1100 students in 30 minutes as per the planning
- Designed PG Handbook for PG Freshmen 2013 along with the cover page design
- Proposed and implemented the **Departmental Handbook** for all the departments **first time**
- Proposed and implemented the **collection of passing out PG batch 2013** along with their project details and current status (i.e. job or higher study) for future guidance and studying patterns of jobs and higher studies for the first time
- Actively participated and gave creative feedback in revamping the PG Academic Council webpage, suggested changes to library comity for the betterment of students, implemented the stalls for PG orientation by various independent bodies first time
- Currently focusing on **Bridge Courses** and **Industry Defined Problem**
- Assisted UG Academic Council for UG Orientation 2013

Group Coordinator at TIFAC, government of India and DST initiative [2012]

- Prepared an article covering the scenario of renewable energy sector in India, the potential for the growth as well as **FDI** in India along with the policy of government of India to boost the sector to part actively in **GDP** of India
- Analysed the energy sector scenario and pattern along with the **renewable energy sector** and its **financial implications**

Class representative for 2012-13 [2012]

Technical Skill Set

Area of interest: Solid Mechanics, Stress Analysis, Vibrations, Numerical Techniques, Fracture Mechanics, Optimization, Finite Element Method

Software Skills:

Programming Languages: Matlab, Python, C++

Documentation Tools: MS Office, Latex

Extra Curricular Activities

- Got 1st rank in Essay writing at district level two times [2004,2005]
- Completed basic **Japanese Language** course in June 2013 as a part of summer school, IIT Bombay [2013]
- Learning basic module of **German Language** at IIT Bombay [2013]
- Interested in chess and photography
- My photographs were selected in **Vision 2012**, photography exhibition at IIT Bombay [2012]