Saurav Talukdar			08005024		
Mechanical Engineering			Dual Degree (B.Tech+M.Tech.)		
Indian Institute of Technology, Bombay			Male		
Specialization: Computer Aided Design (CAD) & Automation			DOB: 03-05-1990		

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	8.75

Awards and Achievements

- Recipient of **Undergraduate Research Award 01** in 2011 for excellence in research
- **Published** and **presented** two technical papers at **SAE World Congress and Exhibition 2011**
- Received **AP** grades in the courses **Vibro-Acoustics** and **Automatic Control** for excellent performance
- Awarded **Hostel Technical Colour** in 2010 for commendable inputs in technical events to Hostel 9
- Recipient of the **National Talent Search Examination (NTSE)** scholarship from **NCERT**
- Awarded **Certificate of Merit** by **CBSE** for securing 100% marks in Mathematics in 2006

List of Publications

- S.Talukdar, S.S.Kulkarni, *A Comparitive Analysis of a Rigid Bicycle Model with an Elastic Bicycle Model for Small Trucks*, SAE World Congress and Exhibition - 2011, USA
- S.Talukdar, Dr.A.Hameed, *Implementation of Low Cost Inertial Measurement Unit (IMU) Integrated with a Global Positioning System (GPS) Receiver - A Study*, SAE World Congress and Exhibition - 2011, USA

Internships

Preview based Vehicle Steering Control
Guide: Prof. D. J. Purdy, Cranfield University, United Kingdom *May '12 – July '12*

- Implemented **autonomous vehicle steering** controllers and validated them against real track data
- Evaluated the various controllers and specified optimum performance speed range for each
- These controllers will be used by the Vehicle Systems Group, Cranfield University to **model a driver**

Vehicle State Estimation using a Inertial Measurement Unit integrated with a GPS
Guide: Prof. A. Hameed, Cranfield University, United Kingdom *May '10 – July '10*

- Devised a measurement system by intefacing **inertial sensors** and **GPS** with the data acquisition system
- Designed a software program which provides estimates of unmeasured vehicle states using **Kalman Filter**
- This system is used to implement **skid steering controller** on a steer-by-wire vehicle

Academic Projects

Integrated Chassis Control for Vehicle Safety *Dual Degree Project*
Guide: Prof. S. S. Kulkarni and Prof. S. C. Patwardhan *July '12 – Present*

- Analyzed the **interaction** between the different vehicle safety technologies
- Currently designing a controller to improve vehicle safety using **Adaptive** and **Model Predictive Control**
- Future goal is to propose a single controller for the various subsystems

Modeling and Simulation of Vehicle Handling Dynamics *Undergraduate Research Project*
Guide: Prof. S. S. Kulkarni *August '09 – September '10*

- Investigated the **rigid bicycle model** for vehicle handling and developed a non dimensional model
- **Remodeled** vehicle handling dynamics considering the effect of **chassis flexibility**
- Analysed the reasons of differences between the elastic model and the rigid bicycle model

Extra-Curricular Activities

- Secured **1st** position in **MechView**, a short film making contest organised as a part of **Radiance** 2011
- **Conducted *MATLAB* Workshop** in the Department of Civil Engineering, IIT Bombay in 2011
- Represented IIT Bombay in **Robocon – National Robotic Contest 2010** held in Pune, India
- Participated in **Full Throttle** – a scaled down IC engine car racing event in Techfest 2010
- Awarded **Certificate of Merit** for swimming 12 hours in Swimathon 2009

Technical Skills

Modeling & Analysis	: MATLAB/Simulink, Mathematica
Microcontrollers	: Atmel AVR – ATmega 8/16/32/640, Freescale XEP100
Programming	: C/C++