SCHOLASTIC ACHIEVEMENTS

- Currently ranked **second** in the institute among more than 750 students as per core CPI
- Awarded a perfect S.P.I of **10** in the spring and autumn semesters-2010
- Awarded **Silver** medal at the 41st **International Chemistry Olympiad** held in the United Kingdom in July 2009 in which students from **54 countries** participated
- Placed among top **one** percent students in the country in **Indian National Physics Olympiad** 2009
- Placed **first** in the practical examination amongst 37 students from the country and was awarded a Gold Medal at the **Orientation cum Selection Camp** in Chemistry in May 2009
- Secured All India Rank **28** in **I**ndian **I**nstitute of **T**echnology **J**oint **E**ntrance **E**xamination 2009
- Secured All India Rank **25** from over a million students in **A**ll **I**ndia **E**ngineering **E**ntrance **E**xamination 2009
- Secured All India Rank **3** in **V**ellore **I**nstitute of **T**echnology **E**ngineering **E**ntrance **E**xamination 2009
- Awarded **AP** grade in Differential equations-I (given to 9 from 721 students), Differential equations-II (given to 2 from 440 students) and Economics (given to 7 from 870 students) courses
- One of the **70** students selected from the country for the National Initiative on Undergraduate Science programme 2010 conducted by Homi Bhabha Centre for Science Education

INTERNSHIP

OPTIMIZATION FRAMEWORK TO MODEL SWARM BEHAVIOR *(May-Jul 2011)*
Prof. José M.F. Moura, Carnegie Mellon University

- Presented an **optimal control** framework to model swarm behaviour
- Proposed a **distributed** algorithm to minimize the cost function subject to dynamics of the agents in the swarm moving towards a target
- Demonstrated that the algorithm reproduces stable swarm behaviour with smaller values for the cost function compared to the existing algorithms
- Proposed a centralized and greedy algorithm to solve the problem of guiding the network of agents to split and move towards two targets

ACADEMIC PROJECTS

HARDWARE IMPLEMENTATION OF FREQUENCY FILTER *(Feb-Apr 2011)*
Prof. Sachin Patkar, IIT Bombay (Course Project)

- Designed a digital system to output the required harmonic component of the input periodic signal
- The system transforms the input analog signal into digital domain which is passed through a digital filter and then transformed back into analog domain.
- Designed the filter, tested it using MATLAB simulations and implemented it on a **Spartan-3E FPGA** kit
- Programmed the FPGA using Verilog and demonstrated the working of the ADC, filter, and DAC modules of the system

NETWORK THEORY *(Nov 2011)*
Prof. H.Narayanan, IIT Bombay (Term paper)

- Proved that the cutset vectors of a complete graph satisfy vector space like properties under mod2 addition
- Proved the nonexistence of dual graph for a non-planar graph using incidence matrices

MINI UNIQUE IDENTIFICATION FOR IIT BOMBAY *(Oct-Nov 2009)*
Prof. Deepak B. Phatak, IIT Bombay (Course Project)

- Involved in designing software to assign a Unique Identity to every IIT Bombay student using fingerprint images
- Developed a C++ program to compare the templates in the database and classify the files between unique and prospective matches

AWARDS AND MAJOR SCHOLARSHIPS

- **Only** student from six IITs to get selected for **Inlaks** award 2010 based on academic performance, extracurricular activities and overall attitude
- One of the 350 students selected for CBSE Merit scholarship for professional courses
- Awarded IIT Bombay institute prize in 2010 and 2011 for excellence in academics
- Received Aditya Choubey Memorial prize and Urvish Medh memorial prize for securing department first rank (B.Tech) in 2010

TEACHING ASSISTANT *(Jan-Feb 2011)*

- Teaching assistant for the course **Linear Algebra** under Prof. Anant R.Shastri

TECHNICAL PROFICIENCY

- **Programming:** C++, Verilog HDL, 8085 Assembly
- **Microcontroller programming:** AVR, Philips 8051
- **Software Packages:** MATLAB, Xilinx ISE, LaTeX, Ngspice, Scilab
- **Web Development:** HTML, PHP, MySQL, JavaScript

EXTRA CURRICULAR ACTIVITIES

- Took an active part in activities like group discussions, cloth collection drive, blog-writing and a field trip to Surgana, Nashik as a part of Personality Development Program
- Received a **special** certificate in appreciation of my altruistic efforts towards the **National Service Scheme** in 2010 which was awarded only to twelve members of 250 students involved
- **Coordinator** for the event Lecture Series in Techfest 2011, annual technical festival of IIT Bombay
- Represented hostel 8 in the Inter Hostel General Championship 2010 in carrom
- Received **first** prize for district level elocution competition from **Chief Minister** of Andhra Pradesh in 2006
- Avid **elocutionist** in Telugu; won several awards in district and state level talent search examinations, elocution and quiz competitions

RELEVANT COURSES TAKEN *(till Apr 2012)*

Electrical Engineering: Signals and systems, Digital Signal Processing, Principles of Communication Systems, Digital Communications, Microprocessors, Control Systems, Electronic devices and circuits, Digital systems, Power Systems, Electrical machines and power electronics, Analog circuits, Network theory, Probability and Random Processes, EM Waves

Computer science (Minor): Operating Systems, Data structures and algorithms, Discrete structures, Computer programming and utilization

Mathematics and statistics: Calculus, Linear algebra, Complex analysis, Differential equations, Data analysis and interpretation, Experimentation and measurements lab