



Sankeerth
Electrical Engineering
Indian Institute of Technology, Bombay
Specialization: Microelectronics

09D07044
UG Third Year(Dual Degree)
Male
DOB: 15/11/1991

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2011	8.52
Intermediate/+2	APBIE	VRJC	2009	90.90
Matriculation	SSC	Little Flower School	2007	85.30

SCHOLASTIC ACHIEVEMENTS

- Stood **136** in IIT-JEE (2009) out of over **350,000** students
- Awarded the competitive Kishore Vaigyanik Protsahan Yojana (**KVPY**) Scholarship (2007) which was awarded to **145** research-minded students from all over the country
- Attended the orientation-cum-selection camp (OCSC) in astronomy which is conducted by Homi Bhabha Centre Science Education (**HBCSE**) on the basis of merit shown in the Indian National Astronomy Olympiad (**INAO**)
- Cleared RMO (Regional Mathematics Olympiad) **twice** (2007 and 2009). Only **300** students all over the country clear the RMO every year
- Was among the top 1% of the candidates selected for the Indian National Astronomy Olympiad, on the basis of the National Science Examination in astronomy.

SUMMER INTERNSHIP

- List Decoding of Polar Codes** (Information Theory): (May 2011 - July 2011)
Professor Alexander Vardy, University of California, San Diego
 - Generated polar codes and showed that 32 list decoding of polar codes beats the performance of LDPC wimax codes, which are the best known error correcting codes to date.
 - Worked on building the open source tool POLAR LIST useful for experimenting on list decoding of polar codes.
 - Successfully simulated many trials on the SDSC Supercomputer present in the UCSD campus, thus gaining a good experience on writing batch files and writing parallel threaded programs in the process of submitting jobs.
 - Currently working on extending the idea of mixed kernels in polar codes.

PROJECTS

- Research Project: (Ongoing) (Prof. Sachin B. Patkar, IIT Bombay)**
 - Implementing Fast On-line/Off-Line Algorithms for Optimal Reinforcement of a Network and its Connections with Principal Partition on Python using **NETWORKX** package
- Mini UID Project**
Guide: Dr. D. B. Phatak; Programming Language: C++
 - Led** my team in successfully designing and developing an efficient method to compare fingerprints. Devised an **algorithm** in which the center of mass and slope of the best-fit line of the coordinates were considered to compare the fingerprints
- Tum-Tum Tracker (Ongoing)**
 - Working with six other sophomores on developing an on-campus vehicle tracker. (Tum-Tum is the Shuttle Service of IITB).
- Air Traffic Simulator**
Guide: Prof. Udayan Ganguli; Programming Language: Verilog HDL, EAGLE
 - Implemented and demonstrated an Air Traffic Simulator on CPLD boards
 - Included a weather simulator using a pseudo random number generator based on LFSRs

SOFTWARE SKILLS

- Programming languages : C, C++, JAVA, Python
- Web Coding : HTML, PHP, MySQL, ANDROID SDK
- Software skills : MATLAB, LT Spice, Latex, Verilog HDL, Adobe Photoshop, EAGLE

POSTIONS OF RESPONSIBILITY

- **Coordinator**, Techfest 2011. (Dec'10)
 - Led a team of organisers for the successful execution of the event **Exhibitions**, and involved in the organisation of the Event

COURSES COMPLETED

<u>CORE</u>	<u>MATHEMATICS</u>	<u>OTHER</u>
<ul style="list-style-type: none">• Microprocessors• Communication Systems• Electronic Devices and Circuits• Signals and Systems• Analog Circuits• Electrical Machines and Power Electronics• Digital Systems• Digital Signal Processing• Power Systems• Digital Communications	<ul style="list-style-type: none">• Probability and Random Processes• Network Theory• Linear Algebra• Complex Analysis• Differential Equations• Calculus	<ul style="list-style-type: none">• Computer Programming and Utilization (C++)• Project Management• Marketing Management• Human Resource Management• Electricity and Magnetism• Chemistry

EXTRA CURRICULAR ACTIVITIES

- Can solve a **Rubik's** cube in 2 minutes
- Took training for **NSS** and involved in many rural development activities
- Constructed a **RF controlled car** as a part of competition held by the Technic Club of IIT Bombay
- Designed my own website which is updated regularly with my current projects
- Proficient in Table Tennis, Tennis and Badminton