

FIRSTNAME LASTNAME

D-303, HJB Hall of Residence,
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Date of Birth: 11th Dec, 1985

Academic Record

Year	Examination/Degree Institution/University	CGPA/	Percentage
2009 M.Tech.	(Microelectronics & VLSI Design)	Indian Institute of Technology, Kharagpur	8.19 (up to 2 nd semester)
2006 B.E.	(Electronics & Communication Engg.)	IITM, Gwalior	78.63 %
2002	Higher Secondary Exam.	M.P. State Board, Bhopal	86.2 %
2000	High School Exam.	M.P. State Board, Bhopal	75.6 %

Technical Skills

Design Tools:

EDA & Simulator Tools: Cadence (Virtuoso, Encounter), Mentor Graphics (IC Studio, ModelSim.), Magma(Blast Create, Blast Power), Synopsys (Design Vision, Prime Power), PSPICE, Circuit maker, LT Spice, Xilinx, TSUPREM4.

Layout Tools: MAGIC, Cadence's Virtuoso Layout editor.

Computational Tools: Origin, MATLAB.

Languages:

Programming Languages: C, Assembly Language (8085).

Hard ware Description Languages: Verilog, VHDL.

Relevant Courses Covered

Device Physics, Semiconductor Device Modeling, VLSI Technology, Digital VLSI Circuits Design, Analog VLSI Circuits design, Architectural Design of ICs, Low Power Circuits Designing, CAD for VLSI, Digital Signal Processing.

M. Tech Project

Title: "Digitally Controlled Analog Microprocessor" (Under Prof. A.S. Dhar at IIT Kharagpur)

Description of the Project: Aim is to develop a mixed signal board level system that has analog data path and digital control path. Analog ALU processes sampled analog data and desired control signal generated using digital controller. Analog memory, Analog multiplier, Analog integrator and analog adder have been simulated in switched capacitor and switched current techniques using Cadence's Virtuoso Spectre Tool. Currently, working on the instruction set design for the digital controller in Verilog.

B. E. Project

Title: “Intelligent Robot for surveillance applications”

Description of the Project: This project was based on the robotic surveillance system that was implemented onto a robotic car. The feature implemented includes controlled movement of the car and capability of capturing the object using the camera that was facilitated with 360 ° rotations in horizontal plane & 180 ° rotations in vertical plane. The data from the robot was successfully retrieved at the controlling center.

Term Projects

Microelectronics & Simulation projects:

Fabricated a **Tunnel Diode** & Verified its characteristics.

Simulated Capacitance of a MOS Device in high and low frequency regions using **TSUPREM4**.

Simulated the MOS Device Process using **TSUPREM4**.

VLSI Design projects:

Designed “**CORDIC Processor**” using Verilog, generated the placement and routing using Cadence Encounter Tool and finally GDS-II File was extracted.

Designed, Laid out “**4X1 MUX**” using Cadence’s Virtuoso Spectre Tool & Verified its characteristics.

Designed “**32 Bit Ripple carry adder**” using Cadence’s Virtuoso Spectre Tool & Verified the operation.

Designed “**High Gain & High bandwidth OPAMP**” using Cadence’s Virtuoso Spectre Tool & verified its characteristics.

Internships & Experiences

1Month internship in “**Karnataka Power Corporation Limited**” Shaktinagar, Raichur (KA) in Jun 2004.

Positions of Responsibility / Activities

PG Representative of the Electronics & Electrical Comm. Engg. Society of E&ECE dept. IIT Kharagpur for 2008-2009.

General Secretary (Library) of the H.J.B. Hall of Residence, IIT Kharagpur for 2008-2009.

Co-Curricular & Extra Curricular activities

Awarded “**Letter of Appreciation**” by the H.O.D. (E&CE Dept, IITM Gwalior) for the **project Development** in 2006.

Volunteer in **COSMOS’05** an International Symposium conducted by **ITM UNIVERSE**, Gwalior.

Finalist in “**Nebula Analog Design contest’2008**” conducted by the **COSMIC CIRCUITS PVT LTD.** in 2008.