RAJIV KUMAR SINGH .

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PERSONAL DETAILS

NAME	**RAJIV KUMAR SINGH**
DEPARTMENT	ELECTRICAL ENGINEERING
EXPECTED DATE OF MASTERS	MAY 2004
DEGREE	B.TECH. (BACHELOR OF TECHNOLOGY)
DATE OF BIRTH	18TH AUGUST 1981
TEMPORARY ADDRESS	310 D / 7 IIT KANPUR – 208 016, INDIA
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NATIONALITY	INDIAN

ON GOING EDUCATION

Presently in the 6th semester and pursuing my studies towards acquiring a Bachelor of Technology from **Indian Institute of Technology, Kanpur, India**. I am majoring in Electrical Engineering department.

Performance at IIT Kanpur :					
Semester	**1st**	**2nd**	**3rd**	**4th**	**5th**
SPI*(out of 10)	7.2	8.1	9.3	9.3	8.1
Cumulative Performance Index (CPI) : 8.4 (out of 10) ***SPI – Semester Performance Index**					

AREAS OF INTEREST

- Solid state Devices
- Power Electronics
- Analog/Digital circuit Design and VLSI design
- Digital Electronics and Microprocessors Technology

PROJECTS DONE

• **Title**: **Interfacing of HP Network Analyzer**
• **Under**: Dr. **Animesh Biswas** , Prof. Electrical Engineering Dept., I.I.T Kanpur
• **Period**: May – June, 2002
• **Description:** The project involved making interconnection between HP network Analyzer and a digital computer so that it can be controlled directly from computer. For interconnection Of devices General Purpose Interface Bus (GPIB) was used. We used Labview to make various VI's with details of every block so that even those who are working for the first time feel comfortable while working with it .

•**Title** : **Ball Accelerating Machine (Bowling Machine)**
• **Under**: **Dr.Deepak Mazumdar**, professor IME Dept. I.I.T Kanpur
• **Period**: Jan - April, 2002
• **Description**: This was a mechanical device consisting of bevel gears, shafts, housing etc. It was a hard-core mechanical project-using Lathe, milling machine, shaper, and driller .It took 3 months to complete the project. Final product was a working compact model that was able to provide a speed of approximately 50 miles per hour and it can also be used to through more than one ball if feeded initially.

• **Title** : **Experimental data analysis to measure dielectric capacitance**
• **Under** : **Dr. Samres Kar**, Prof. Electrical Engineering Dept., I.I.T Kanpur
• **Period** : November 2002 onwards
• **Description** : I am currently working on this project which includes the analysis of data and finding the interconnecting relations among various variable . we use Matlab and origin software for the analysis purpose , like finding equation of curve using polynomial approximation.

- **Title**: **Interfacing of HP Spectrum Analyzer**
- **Under**: Dr. **Animesh Biswas** , Prof. Electrical Engineering Dept., I.I.T Kanpur
- **Period**: June – July, 2002
- **Description**: This project was an extension of first project related to network analyzer The project involved making interconnection between HP spectrum Analyzer and a digital computer so that it can be controlled directly from computer. For interconnection Of devices General Purpose Interface Bus (GPIB) was used. We used Labview to make various VI's with details of every block so that even those who are working for the first time feel comfortable while working with it.

- **Title**: **Design of Differential Amplifier and Analysis of its non ideal characteristic**
- **Under**: **Dr. Josef John**, Prof. Electrical Engineering Dept., I.I.T Kanpur
- **Period**: January 2002 onwards
- **Description:** This project is a part of course Electronic Instrumentation. I, along with three other students, am working on this project which is basically related to complete characterization of Differential Amplifier.

- **Title**: **Analysis of Mathematical approximation used in paper**
- **Under**: **Dr. Samres Kar**, Prof. Electrical Engineering Dept., I.I.T Kanpur
- **Period**: December 2002 onwards
- **Description**: We are trying to make the appropriate correction in the mathematical expression in the paper titled "**Determination of the MOS oxide capacitance**"published by M. J. Mcnutt and C.T.Sah so that we could predict a more reliable.

COURSES DONE

Professional courses that will be done by April 2003 :

- Power Systems
- Power Electronics
- Signals, Systems and Networks
- Digital Signal Processing
- Control System Analysis
- Electronic Circuit and Instrumentation I
- Electronic Circuit and Instrumentation I
- Principles of Communication
- Digital Electronics & Microprocessor Technology
- Measurements, Parameter Extraction and VLSI Tools
- Electromagnetic Theory
- Introduction to Electrical Engineering
- Electrical Engineering Lab I
- Electrical Engineering Lab II

Other basic science courses done:

- Linear Algebra
- Quantum Physics
- Mathematical Statistics
- Fundamentals of computing
- Thermodynamics
- Engineering graphics
- Nature & Properties of Material
- Introduction to Manufacturing Process
- Three courses on Engineering Mathematics

LABORATORY EXPERIENCE

I have worked on a wide variety of test and measurement devices including Network Analyzer, spectrum analyzer, oscilloscopes (both sampling and storage), function generators, multimeters, counters and semiconductor devices, integrated circuits, breadboards and hardware. Apart form these I have used software for design and simulation of digital and analog systems, microprocessor systems (8085 workstation at IIT Kanpur) and programming tools for design and simulation of microprocessor based systems .

PROGRAMMING LANGUAGES

- C/C++
- HTML

PROFICIENCY

- MS office tools
- Circuit Simulators: Micro Cap and PSpice.
- Mathematical Tools: Matlab, Mathematica, Origin.
- I have a sound knowledge of the hardware part of the computer and have assembled a number of computers.

OPERATING SYSTEM

- MICROSOFT WINDOWS
- LINUX

SCHOOLING & SCHOLASTIC ACHEIVEMENT

Examination	Year	Institution	Performance
Class X	1998	Queens Inter College , Varanasi	82.8%
Class XII	2000	Queens Inter College , Varanasi	82.0%

- Member of EEA (Electrical Engineering association) IIT Kanpur.
- Active member of Electronics Club at IIT Kanpur.
- Participated in various Competitions like ECDE (Electronic Circuit Design Competition) at IIT Kanpur.

- Was the topper of class for most of my schooling career.
- Was among top 25 students of entire state and topped the city in class 10 (99.9 % percentile).
- Was among top 15 students of entire state and topped the city in class 12 (99.9 % percentile).
- Selected for National Talent Search Scholarship interview (only 400 students in country).
- Secured a percentile of 99.7 in joint entrance exam conducted by IIT's.
- Has won several prizes in science exhibition at the school level Secured 8th place in Recruitment exam conducted by Railway board of India (Out of 1.5 lacks)

EXTRA CURRICULAR ACTIVITIES

- Secretary in transport cell in Antragni 2001, cultural festival at IIT Kanpur.
- Volunteer in control room in Antragni 2000.
- Member of EEA (Electrical Engineering association) IIT Kanpur.
- Control room in Techkriti 2001, technical festival at IIT Kanpur.
- Been in core committee of many other institute festivals.
- Participated in several other Debates at Inter College and School level.
- I was the head boy of Government Queens Inter College Varanasi.
- **Sports** - Have played Cricket, Football and Chess at the school level

LANGUAGE FAMILIARITY

I am well conversant in reading, speaking and writing skills of two languages: English and Hindi.

HOBBIES AND INTERESTS

Quizzing of any type be it general, computers, mathematics, sports etc.

I promise that the above information is true to the best of my knowledge.

Rajiv Kumar Singh,
IIT KANPUR