

Curriculum Vitae

Lalit Prakash Vatsal

B.Tech (3rd year)

Electronics and Communication Engineering with
Specialization in Wireless Communication

Indian institute of Technology - Roorkee

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Uttarakhand, India – 247667

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OBJECTIVE: To apply my academically acquired knowledge for real world practical applications and get some industrial and technical exposure to “real engineering”.

AREA OF INTEREST:

- **Desktop Application Development**
- **Programming**
- Algorithms and Logical Puzzle Solving
- **Digital and Analog Circuits Design**
- Microprocessors and Microcontrollers
- Control Systems
- **Robotics**

EDUCATION:

Period	Education
2009 – Present	Indian Institute of Technology – Roorkee Currently in Integrated Dual Degree (IDD) program in Electronics and Communication Engineering with specialization in Wireless Communication (Enrolment No. 09213009)
2009	Higher Secondary Board Examination(12th Class) conducted by M.P.B.S.E.(Madhya Pradesh Board of Secondary Education) With 77.5% marks (aggregate) and 87% marks in Science stream(Mathematics, Physics and Chemistry)
2007	High School Board Examination(10th Class) conducted by M.P.B.S.E. With 84.8% marks (aggregate)

SOFTWARE SKILLS:

Programming Languages

C/C++, Visual C++, Visual C#, Python (Basic), Java (Basic), 8085 Assembly language

Software Packages known

Microsoft Visual Studio, MATLAB, Microsoft Office, T – Spice, HSPICE, ngspice, Adobe Flash, OrCAD, Multisim, Microstation

Design

Adobe Flash

Web

HTML

Platforms

Windows 9x/XP/Vista/7

RELEVANT COURSES UNDERTAKEN:

- Object Oriented Programming (C++)
- Data Structures
- Digital Electronics
- Computer Architecture and Microprocessors
- Advanced Microprocessors (8086 and higher) and Interfacing(Studying)
- Computer Networks (Studying)
- Communication Systems
- Energy Resources and Conservation
- Basic Electronics
- Linear IC Applications Lab

PROJECTS:

- **Developed various Desktop Applications using .NET framework in C# language** such as various scientific calculators, web-browsers, file copiers, various types of puzzle – solvers etc.
- **Voice transmission through LASER / LASER voice communication (2012 at Electronics Section, Hobbies Club, IITR)**

In this project, I designed and implement a LASER voice communicator using opamps, microphone, speakers, LASER torch, photo-detector, passive elements, and simple popular analog ICs. It includes fabrication and designing of a transmitter made up of microphone, amplifier circuit and LASER - torch switching circuitry and receiver made up of phototransistor, Audio amplifier and Speaker.

- **Designing a 2 – stage operational amplifier(2011 during Analog Electronics Course):**

In this project, we designed a two stage operational amplifier using a cascode amplifier stage followed by a voltage follower stage with a significant gain of 10000.

- **Delay and Setup-time measurement and analysis of digital sequential circuit using transmission gates(2011 summer project):**

This project involves study of digital sequential circuits and concepts of pass - transistor logic and transmission gates. In this project, simulation of the circuits (inverters & D-latch) were carried out using HSPICE software package and calculations, analysis and interpretation were carried out using MATLAB software package.

- **Designing n – bit comparator to compare 2 numbers in any given base(2010 during Digital Electronics Course):**

In this project we designed an n – bit comparator which compares any 2 numbers in any base specified by the user and gives the output whether the 1st no. is greater than, less than or equals to the 2nd no. It first converts both the given numbers into binary from the base provided and then compares both of them using simple digital combination comparator circuit and gives the corresponding output.

ACHIEVEMENTS:

- Secured JEE (Joint Entrance Exam for IITs) – 2009 Rank of SC – 282 (top 5% among 0.4 million applicants).
- One among the 277 selected candidates from all over the country in SCRA (Special Class Railway Apprentices) – 2009.
- Awarded scholarship of Rs. 5000 for outstanding 92% marks in Sanskrit by M.P.B.S.E. in Class – VII (2005).
- Awarded scholarship of Rs. 1000 and zero balance bank account by State Bank of India (Gwalior Branch) for excellent performance in competitive exams in 2009.
- Secured Rank 49 in MPPET (Madhya Pradesh Pre – Engineering Test) – 2009.

EXTRA CURRICULAR:

- Actively participated many school – level quizzes and competitions.
- Represented school team and went to final round in Boston Quiz contest conducted by Boston College of Science – Gwalior (2008).
- Member of Electronics section of Hobbies Club in IITR (2011 - present).
- Attended NCC (National Cadet Corps) – Winter Camp of 12 days (2010).
- Attended Texas Instruments Workshop on MSP – 430 held during Cognizance (Technical Festival of IITR).

PRESENTATIONS GIVEN:

I have participated in various discussions, talks and debates conducted in class and given few presentations on some technical and social topics such as: Ground Water Depletion(2009), Media and its Impact on Economy(2011), Micro-Electro-Mechanical-Systems(MEMS) (2012).

PERSONAL DETAILS:

Name	Lalit Prakash Vatsal
Father's Name	Sri Prakash Chandra
Date of Birth	7 th July 1992
Sex	Male
Permanent Address	51, Saket Nagar, Tansen Road, Gwalior, Madhya Pradesh, India – 474002
Languages (Speak/Read/Write)	English, Hindi
Marital Status	Unmarried
Hobbies	Programming, Application development, Puzzle Solving, Computer Gaming, Cricket, Technical Magazines
Nationality	Indian

REFERENCES: Will be made available as per requirement.