

AKSHAY GARG

Junior Undergraduate Student
LN Mittal Institute of Information Technology, Jaipur, India.
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DOB: 19th March 1986

OBJECTIVE

Seeking an opportunity for undergoing a Summer Research Internship in your esteemed institute.

EDUCATION

Year	Degree/Certificate	Institute/School	CGPA/%	Rank
2007	B.Tech (Communication and Computer Engineering)	LN Mittal Institute of Information Technology, Jaipur.	9.1140	1
2002	Class XII: CBSE, INDIA.	India International School, Jaipur, India.	92.00	1
2000	Class X: CBSE, INDIA.	St Pauls School, Beawar, Dist Ajmer, India.	87.00	2

RESEARCH INTERESTS

- **Multi User Communication Theory:** Interference mitigation and Power allocation techniques for Multi User Transmission systems (e.g. Dynamic Spectrum Management (DSM) techniques for Multi user OFDM systems, DMT based DSL systems) with their applications to Wireless and Wire line communications, MIMO systems etc.
 - **Communication Systems:** High performance Analog and Digital Modulation Schemes, Carrier and Bit Time Recovery techniques etc.
 - **Digital Signal Processing Applications:** Carrier Synchronization for DSP based Digital Modems etc.
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RESEARCH EXPERIENCE

PAPERS:

- **A Hybrid Time Divisioning Scheme For Power Allocation In DMT based DSL systems** – Selected for Publication in © **IEEE Communication Letters** on October 14, 2005. Expected to appear in the February, 2006 Volume. **Authors-** Akshay Garg, Dr A.K Chaturvedi, Dept of Electrical Engineering, IIT, Kanpur.
 - **Using Time Divisioning to Improve the Performance of Existing Dynamic Spectrum Techniques for DSL systems.** -- An efficient continuation of the previous work, leading to significant performance improvements. **Authors-** Akshay Garg, Dr A.K Chaturvedi, Dept of Electrical Engineering, IIT, Kanpur. Review sent for the © **IEEE Communication Letters**. Result expected to come up in 2-3 months.
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IMPORTANT COURSES UNDERTAKEN (till the completion of 5th semester)

Electronics and Communications

- Electromagnetic Theory
- Semiconductor Devices

- Signals and Systems
- Digital Electronics
- Probability Theory and Stochastic processes
- Analog and Digital Communications
- Digital Signal Processing
- Control Systems
- Mobile Communications
- Telecommunication Transmission technologies (Satellite and Optical Fibre Communications)

Computer Sciences

- Data Structures and Algorithms
- Computer Organization and Architecture
- Operating System Concepts
- Computer Networks
- Database Management Concepts
- Compiler Designing

KEY ACADEMIC PROJECTS (till the completion of 5th semester)

- **Simulation:** *Software Emulation for the Intel 8085 microprocessor, Mar-Apr'04*
- **Simulation:** *Performance Analysis for different Job Scheduling Algorithms (Operating Systems), Oct-Nov'04*
- Design and Implementation of a Basic 8 signal Function Generator, Oct-Nov'04
- **Simulation:** Performance Benchmarking of Different Packet routing and Switching Techniques in a simulated Computer Networking environment, Mar-Apr'05
- Implementation of 8 bit PCM, 4-ASK, 4-FSK and QPSK Transmitter and Receiver Systems in the Digital Communication Lab, Oct-Nov'05
- An Online Energy Audit Database Management System, Oct-Nov'05

COMPUTER SKILLS

- Programming Languages: Java, C++, C, JSP, HTML, VB, Socket Programming.
- Environments: Unix (Linux), Windows XP/NT/98/2000
- Software and Tools: Orcad-Pspice, AutoCAD, Matlab, Lab view.

ACADEMIC ACHIEVEMENTS

- Cleared the regionals and awarded with the "*Certificate of Excellence*" at the IBM sponsored International Collegiate Programming Contest (ICPC-2005) conducted by ACM.
- Awarded a gold medal with 100% percentile in the All India NTA mathematics Olympiad-2002 conducted by the National Teachers Association, New Delhi.
- Got the 99.99 percentile certificate from Central Board of Secondary Education (CBSE), India for excellent performance in the Science Board Examination 2001.
- From semester 1 onwards holding the Departmental Rank-1 position in the institute with an average CGPA of 9.1140 for the first five semesters.
- Awarded with Best All Rounder of the year award for 2004-05 at the institute level.

ABOUT MYSELF

The past few years of my life have introduced me to a broad spectrum of knowledge and provided a solid foundation for innovation and the development of new ideas. Commitment and dedication is what that has shaped my life, and it is the desire to succeed in whatever I do that continuously drives me to strive harder to achieve my goals.
