ANKIT GOYAL

Education

- **University of Toronto** Toronto, Canada
  Master of Applied Science, Electrical and Computer Engineering (GPA: 4/4) *Sept '08 - June '10*
  - Thesis title: On-chip Power Grid Verification with Reduced Order Model
  - Advisor: Prof. Farid Najm, Professor and Chair
  - Relevant courses: Computer Methods for Circuit Simulation, Behavioral Synthesis of Digital Integrated Circuits, CAD for Digital Circuit Synthesis and Layout, Integrated Circuit Engineering
- **Indian Institute of Technology (IIT)** Roorkee, India
  Bachelor of Technology, Electrical Engineering (GPA: 8.93/10) *July '04 - May '08*
  - **National University of Singapore (NUS)** Singapore
    Visiting Student, Electrical and Computer Engineering *Jan '07- Apr '07*

Work Experience

- **ASIC Design Engineer** Toronto, ON
  Advanced Micro Devices (AMD), Inc. *Aug '10 - present*
- **Research Assistant, Computer Engineering Group** Toronto, ON
  Department of Electrical and Computer Engineering, University of Toronto *Sept '08 - June '10*
  - Worked on improving time efficiency of IC power grid verification
  - Proposed a novel technique to reduce problem size and implemented it in C++
  - Achieved speed-up of upto 2.5× while maintaining excellent accuracy
  - Supported by Advanced Micro Devices, Inc. (AMD) and Semiconductor Research Co-orporation (SRC) grant
- **Teaching Assistant** (VLSI Design, Digital & Computer Systems, Computer Organization) Toronto, ON
  Department of Electrical and Computer Engineering, University of Toronto *Jan '09 - Jun '10*
  - Graded examinations, assignments and lab reports
  - Supervised tutorials and laboratory sessions
  - Scheduled regular office hours to meet students individually
- **Summer Intern** India
  ABB (Asea Brown Boveri) Limited *May '07 - July '07*
  - Re-engineered ABB's motor design software to provide better power performance
  - Tested against a number of benchmarks and results show upto 7% energy savings

Selected Projects

- **Scale and Rotation Invariant Object Detection (Best B.Tech Project Award)** *Jan-May'08*
  Identified objects and their 3D location when they appear in different pose, size or even if partially occluded
- **Active Noise Control System** *Aug-Nov'07*
  Reduced noise by introducing a cancelling "anti-noise" wave through an appropriate array of secondary sources
- **Implementation of I2C protocol using VHDL** *Sept-Dec'06*
  I2C protocol enables FPGA device to communicate with audio codec chip on Altera DE1 board to play music

Awards and Achievements

- **Gave a technical talk** on Power Grid Intergrity Analysis during *Connections-2010*, ECE Graduate Symposium, Univ. of Toronto
- **Recipient of Edward Rogers Sr. Graduate Scholarship (08-09, 09-10)**
- **6th Indo-German Winter Academy -** Guwahati, India, December 13-19, 2007
  Delivered a lecture on 'Silicon-Germanium Heterojunction Bipolar Transistor (SiGe-HBT)'
- **2nd Prize, Inter University Tech Quiz '07**
  Annual event of IEEE Singapore Section
- **IEEE Student Paper Contest and Technical Symposium, SPCTS-07**
  Paper on 'Application of Multi-Resolution Image Pyramids in Image Restoration and Compression'
- **Cognizance '06: Annual Technical Festival of IIT Roorkee**
  - 1^{st} Prize: *Eureka :Short Term Hardware Design and Simulation Contest*
  - 2^{nd} Prize: *Electrojam*
- **Shristi '05 : An All India Techno Hobby Exhibition**
  Presented a project in 'Electronics Automation & Control' category
- **1st rank in district** for securing highest marks in *Senior Secondary Examination '04*

Skills

Programming Languages: C/C++ (with STL) and Assembly Language

Hardware Descriptive Languages: VHDL/Verilog

CAD Tools: Synopsys Design Analyzer, Cadence First Encounter, Micro Magic Sue & Max, Altera Quartus II

Operating Systems: Linux, UNIX, Windows

Other Software: MATLAB, SPICE, LabVIEW, LaTeX

Management: Course on *Management and Organisation* from NUS Business School, Coordinator of *Information Management Group* and member of *Cultural Council* at IIT, Organised several events

Miscellaneous: Excellent programming skills, strong verbal and written communication skills, good problem solving and analytical skills, teamwork skills, quick learner

Interests

- Reading novels, watching movies and following the news
- Playing Cricket, Squash and Chess
- Participating in quizzes and debate

References

Available upon request