Raghu Nandan Chilukuri

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Education

University of Cincinnati **Cincinnati,OH,USA**
M.S.(Electrical Engineering) 2011 - 2014
GPA: 3.34/4

Birla Institute of Technology and Science(BITS)-Pilani (Goa campus) **Goa,India**
B.Eng.(Hons) (Electrical & Electronics Engineering) 2006 - 2010
GPA: 8.06/10

Research

Spintronics and Vacuum Nanoelectronics Laboratory **2012 - 2014**

- Numerical simulation of quantum random walks and modelling noisy quantum walks. (Spintronics laboratory, University of Cincinnati).

Teaching Experience

Athletic Tutoring **Fall 2012**

- Tutored introductory physics for student athletes at the University of Cincinnati.

Work Experience

Intel Corporation **Bangalore, India**
Component Design Engineer March 2016-present

- Worked in Front-End (FE) verification team, and the support and methodology owner for VCS, Certitude (both Synopsys), and Intel specific internal tools.
- Scripting support for internal EDA tools of Intel.

JustDial India Private Ltd. **Bangalore, India**
Data Scientist September 2015-February 2016

- Worked on implementing a recommender system for the e-commerce shopfront of JustDial
- Implemented features using custom versions of clustering algorithms

Cambridge Silicon Radio(CSR) India Private Ltd. **Bangalore, India**
Firmware test Intern February 2011-August 2011

- Characterizing physical parameters such as power, gain and stress-test of bluetooth chips.
- Testing the Bluetooth lower stack firmware for these new chips.
- Designed and implemented an audio test system to test different profiles for audio streaming and BLE (Bluetooth low energy) file transfer between multiple devices.

Dept. of Electrical Engineering,IIT-Delhi **Delhi, India**
Change Detection Algorithms October 2010-January 2011

- Change detection algorithms using segmentation and defocussing.
- Implemented using open-source computer vision libraries on a smart camera system.

Infinera India Private Ltd. **Bangalore, India**
System Verification January 2010-June 2010

- Board simulation and system level testing of a system of line cards.
- Implemented a basic Verilog parser for netlist parsing and verification.

Summer Intern

Vikram Sarabhai Space Center (VSSC) **Thiruvananthapuram, India**
Testing of control module electronics May 2008-July 2008

- Interfaced and programmed a PIC microcontroller to generate waveforms for testing control electronics module and mechanical characteristics of an electro-mechanical system.

Academic Projects

- Noisy Quantum walks: Working on quantum-operator representation of noisy quantum walks in order to generalize noisy discrete quantum walk. (*2016*)
- Developed a routing tool (in C++) based on Channel Routing. The tool also produces a layout file for viewing with Magic layout editor. (*2012*)
- Implemented a variant of Kerninghan-Lin graph partition algorithm in C.(*2012*)
- Quantum Error Correction: Quantum error correction methods and a comparison of classical error correction techniques with their quantum counterparts. This project discusses few quantum error correction techniques as an extension of their classical counterparts. (*2009*)
- Selected Topics in Quantum Optics-Generation of Coherent States and Squeezed States : A study of semi-classical and non-classical optical states and their generation. (*2009*)

Papers/Technical Reports

- Dr.A.K.Biswas, Ch.Raghu Nandan, V.Jayanth,"A sphere moving down the surface of a static sphere and a simple phase diagram". (arXiv classical physics: `http://arxiv.org/abs/0808.3531v2`)
- "Design of a virtual Hawk-Eye system using LabVIEW" : A project to simulate the 3 dimensional motion of a projectile (a tennis ball in this case). This was submitted to 'VI Mantra 2009' contest by National Instruments, India, as a paper with the same name.

Graduate Courses

Semiconductor microfabrication	Fundamentals of MEMS
Electromagnetic Theory	Characterization of materials by optical methods
Quantum Mechanics	Quantum Computation
Semiconductor Physics	Advanced Solid State Physics(Many body theory-Green's function formalism)

Technical Skills

Languages: C, C++, Julia, Fortran, Verilog, Perl, Python, Assembly, LaTeX.
Software Packages: Matlab/Octave, Pspice, Xilinx ISE, Altera Quartus, Magic, LabVIEW
Operating systems: GNU/Linux, Windows

Academic Achievements

- Recipient of University Graduate Scholarship(UGS) at University of Cincinnati.
- Selected for Indian National Chemistry Olympiad (INChO), 2006 (top 1% among an estimated 20,000 aspirants who appeared for National Standard Exam in Chemistry- NSEC).
- Recipient of Merit cum Need scholarship of Bits-Pilani, Goa campus for six semesters.