

## OBJECTIVE:

To be admitted into a Ph.D. program in the field Electrical Engineering.

## EDUCATION:

- University of Minnesota Twin Cities, 2002 - Present  
Institute of Technology Honor's Program, **BS in Electrical Engineering, minor in Business Management.**  
Expected graduation date: **May, 2006**, GPA: **3.99/4.00**

## QUALIFICATIONS:

- **Computer language:** C++
- **Hardware:** Motorola Microcontroller, VHDL
- **Software programs:** Cadence, HSPICE, Matlab, PSPICE
- **Languages:** Chinese
- **Relevant Coursework:** VLSI Design, Advanced Analog Electrical Design with Lab, Digital Design and Programmable Logic, Analog and Digital Electronics, Circuits and Electronics lab, Signal and Systems, Statistical method in EE, Semiconductor Devices, Transmission Lines, Accounting, Finance, Marketing

## EXPERIENCE:

- **Circuit Design and Modeling** of a transceiver with Professor Harjani in the ECE department, U of MN, 2004 - Present  
Working with two other undergrads to design a CMOS 20Gb/s digital transceiver for network on chip using .13u technology.  
Main responsibilities include:
  - Modeling of the transmission line characteristics
  - Design of the transmitting/receiving amplifier
- **SPICE++ augmentation** with Professor Jaijeet Roychowdhury in the ECE department, U of MN, 2005 - Present  
SPICE++ is an open source project aimed at becoming the most convenient, efficient SPICE tool.
  - Augmentation for basic circuit simulation in SPICE++
  - Design high gain, high bandwidth amplifier with SPICE++
  - Utilizing macro-model simulation capability to design and model a PLL.
- **Nanofabrication Research Assistant** for Professor Stadler in the ECE Department, U of MN, 2003 – Present
  - Pattern Transferring of long-range ordered nanopores into Si using pre-patterned anodic alumina oxide.  
**Presented** "E-Beam Lithography of Nitride Imprint Stamps" at the National Conference for Undergraduate Research, 2005.  
**Publications:**
    - In the process of writing a paper to be submitted to the *Applied Physics Letters* as first author.
    - Patrick D. McGary, Liwen Tan, Jia Zou, Bethanie J.H. Stadler, Patrick R. Downey, Alison B. Flatau, "Magnetic Nanowires for Acoustic Sensors (Invited)"; MMM Proceeding 2005 (accepted).
    - Bethanie J. H. Stadler, Na hyoung Kim, Liwen Tan, Jia Zou, Kate Kelchner, Ryan K Cobian, "Nanowire Arrays with Specialized Geometries for Magnetolectronics (Invited)"; MRS Proceedings: Fabrication and Applications of Nanomagnetic Structures I6.3 (2005).
- **Director of Fundraising and Director of Sports** in Friendship Association of Chinese Students and Scholars (FACSS), University of Minnesota, 2002-2003
  - Raised \$3,900 alone, worked with others in the organization in applying for student fee, receiving status of \$10,000 a year for FACSS.
  - Worked with another person and organized a total of 8 sporting events in 2 years.
- **Peer Advisor** for University of Minnesota IT Honors Program Freshmen Orientation, 2004
- **Tutor** for University of Minnesota Institute of Technology Honors Program, 2004 – 2005
- **Tutor** for the Institute of Technology in University of Minnesota, 2004 – current

## AWARDS RECEIVED:

- University of Minnesota Institute of Technology Honors Program Undergraduate Research Scholarship, 2003
- University of Minnesota department of Electrical and Computer Engineering Hamilton scholarship, 2005
- University of Minnesota IT Undergraduate Merit Frank Louk Scholarship, 2004, 2005
- University of Minnesota Institute of Technology Honors Program, 2002 – 2006
- Dean's List. 2003, 2004, 2005