Tong Ren

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Education

Expected Ph.D. in Electrical and Computer Engineering, May 2008.
Duke University, Durham, NC.

Graduate Coursework:

Advanced Digital System Design and Lab	Devices for Integrated Circuits
Microwave Electronic Circuits and Lab	Electromagnetic Theory
Optical Communication Systems and Lab	Academic Writing

B.S. in Electrical Engineering with a minor in English, 2003
Tsinghua University, Beijing, China.
Thesis: *Design of USB interface for power electronics motor control platforms*.

Research and Industrial Experience

ECE department *Graduate Student Research assistant*
Duke University Aug. 2003 ~ present
Perform experiments and device simulations on engineered electromagnetic materials. Use analytical and numerical methods to solve electromagnetic problems. Study the properties and applications of left-handed metamaterials.

Power Electronics and Motor Control Lab *Undergraduate Student Research assistant*
Tsinghua University Sep. 2001 ~ Jul. 2003
Designed, constructed, tested and debugged the Universal Serial Bus interface of power electronic motor control systems. Wrote programs for USB Firmware and source code to drive the PDIUSBD12 via the parallel Port. Established the communication pattern between TMS320LF2407 DSP on the motor control system and the computer.

Institute of Electrical Engineering *Undergraduate Student Internship*
Chinese Academy of Sciences, Beijing, China May. 2002~ Dec. 2002
Conducted the research of high-frequency power supply systems, studied the athermal effect of impulse electromagnetic fields.

Computer Hardware Lab *Undergraduate Student Research Assistant*
Tsinghua University 2002 Summer Research Program
Successfully designed and built an MP3 system using AT90S8515 as MCU and MAS3507D as DSP.

EE department *Undergraduate Student Research Assistant*
Tsinghua University 2000 ~ 2001 Student Research Training Program
Designed the Robot Driven by Shape Memory Alloys (SMA) and constructed a crawling robot driven by SMA to imitate earthworm motion.

Teaching Experience - Duke University

Lab teaching assistant, *Integrated Circuits (ECE 163L),* Spring 2004
Lead laboratories for 30 students. Prepare lab devices and materials. Supervise three weekly lab sessions. Arrange students in groups. Grade lab reports. Help students with difficulties and handle special student issues.

Teaching assistant, *Introduction to Electromagnetic Fields (ECE 170L),* Fall 2003
Led weekly recitations for a class of 40 students. Held office hours. Prepared homework solution sets. Conducted extra exam review sessions. Gave substitute lectures when the professor was away. Coordinated undergraduate graders. Provided help to students with special needs.

Pathways to the Professoriate: *Introduction to College Teaching (GS302),* Fall 2003
Attended the 6 session workshop on developing college teaching skills. Learned various approaches to course planning and design; engaged in interdisciplinary conversations about teaching; discussed ways to handle difficult students and classroom situations; learned ways to obtain and use student feedback to improve teaching; practiced writing course syllabus and statement of teaching philosophy.

Awards and grants

Teaching assistantship, ECE department, Duke University, 2003~2004
Tsinghua University Scholarship Awards for distinct students, 2000~2001, 2002~2003
Tsinghua University Scholarship Awards for progressive students, 2002~2003
Third-Class Mountaineering Athlete of China

Computer Skills

Matlab, LabView, Cadence Design System, SPICE, VHDL, Protel, AutoCAD, JavaScript, C, C++, VB, HTML, ASP, Premiere, Photoshop, Unix, Linux, Macintosh, Windows.