



# Ming Jiang

## Curriculum Vitæ

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### Objective

To pursue a Ph.D. degree for graduate study.

### Education

2004.8 – 2008.7 (expected) **B.S. Electronic Engineering (Microelectronics Major)**, *Tsinghua University*, Beijing, China  
Major GPA: **93.5/100**, Overall GPA: **93.1/100**, Ranking: **1/66**, Total Credits: **202**

### Languages

GRE Verbal 660 (93%), Quantitative 800 (94%), Analytical Writing 5.0 (71%)  
TOEFL Total 106/120, Reading 27, Listening 27, Speaking 22, Writing 30

### Experience

#### Academic Research

- 2007.10 – Present **Research Assistant**, *Communication Network Laboratory*, Dept. of EE  
**Implementation of Multi-AP Research Platform for RRM over High-Density WLAN**  
Utilize the StarEast development board to obtain MAC-layer information by reprogramming the NIC driver and enable the AP controlling and scheduling by implementing CAPWAP protocol. Make further tests to analyze the Multi-AP architecture on RRM over HD-WLANs based on this testbed.
- 2007.7 – 2007.10 **Research Assistant**, *IC and System Design Research Division*, Inst. of Microelectronics  
**Development of RISC Architectural Simulator**  
Modify current OpenRISC 1000 architectural simulator (or1ksim) source code to be compatible with own developed CPU architecture in order for software simulation and functional verification.
- 2006.9 – 2007.1 **Research Assistant**, *Complex Engineered Systems Laboratory*, Dept. of EE  
**Development of Greenhouse Monitoring Wireless Sensor Network**  
Design specific protocols of wireless sensor network for this low power temperature measurement system and implement them on our own developed hardware platform. Make further investigations on integrating embedded OS and designing multi-hopped protocols.
- 2006.3 – 2006.8 **Research Assistant**, *Complex Engineered Systems Laboratory*, Dept. of EE  
**Development of Security Monitoring Wireless Sensor Network for Olympic Stadium**  
Review previous protocols realized in the platform of Flexible LOW cost Wireless Sensor systems (FLOWS) and productionize the sensor nodes specifically for the Olympic Stadium project. Deploy a wireless sensor system to monitor steel beams' temperature and tension information.

#### Work and Internship

- 2007.7 – 2007.9 **Software Engineer Intern**, *Google Inc.*, Beijing, China  
**Development of Mapplets upon China Google Maps**  
Utilize AJAX technology to develop some gadgets called Mapplets for China Google Maps based on Google Mapplets API and make user experience analysis to build friendly interactive interface.
- 2006.9 – 2006.12 **Research Assistant**, *School of Economics & Management*, Tsinghua University  
**Analysis and Modeling on Fit of Values and Voluntary Turnover**  
Analyze the collected data using SAS — the professional statistical software and construct a model between MBAs' voluntary turnover and their fit of values to explain their job attitude.

## Course Projects

- Spring, 2007 **Stochastic Processes**, *Prof. Hao Zhang*, Dept. of EE  
– Analyze different algorithms for PCA and apply them to handwritten digit recognition.  
– Explore new methods to compute generalized Marcum Q-Function.  
– Research on Markov Chain and its application in PageRank technology.
- Spring, 2007 **Analog IC Analysis and Design**, *Prof. Ziqiang Wang*, Inst. of Microelectronics  
– Design and simulate two-stage MOS operational amplifiers with Folded-Cascodes and Bootstrapped structure using HSpice under  $0.6\mu\text{m}$  CMOS technology.
- Fall, 2006 **Digital IC Analysis and Design**, *Prof. Leibo Liu*, Inst. of Microelectronics  
– Design 32bits digital adder with Berkeley Full Adder units and Carry-bypass structure using HSpice under 80nm CMOS logic technology.
- Fall, 2006 **Principles of Microcomputers**, *Prof. Liping Zhang*, Dept. of EE  
– Design 32bits MIPS CPU using MIT developed simulator — jsim and run assembly programs on it.  
– Provide a data-streaming image processing architecture along with an FPGA-based realization.
- Fall, 2006 **Communication RF Circuits Design**, *Prof. Guolin Li*, Dept. of EE  
– Analyze TDOA localization algorithms in RF communications, simulate the scheme on Matlab Simulink and implement the circuits using PSpice.
- Summer, 2006 **Advanced Matlab Programming and Application**, *Prof. Yuantao Gu*, Dept. of EE  
– Program in Matlab to process speech signal using pattern recognition related knowledge.

## Volunteer Activities

- Nov. 2007 Volunteer of ICUCT 2007 International Conference on UCT, Beijing  
Nov. 2007 Volunteer of the 6th Tsinghua/Hitachi Ubiquitous IT Forum, Beijing

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## Awards and Honors

- 2007 National scholarship for Overall Excellence, Tsinghua University (**top 3%**)  
2006 First-class scholarship for Overall Excellence, Tsinghua University (**top 3%**)  
2005 First-class scholarship for Overall Excellence, Tsinghua University (**top 3%**)  
Mar. 2007 Excellence Awards for Microsoft ImagineCup Embedded Development Competition  
Sep. 2006 Excellence Awards for China Undergraduate Mathematical Contest in Modeling  
May. 2006 Second Prize for the 3rd Hardware Design Competition  
Nov. 2005 Excellence Prize for the 7th Electronic Design Competition  
May. 2005 First Prize for the 3rd Duishi AI Program Design Competition  
Jan. 2004 Bronze Medal for Chinese Mathematical Olympiad Contest (nation-wide)  
Oct. 2003 Bronze Medal for Chinese Physics Olympiad Contest (nation-wide)

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## Membership and Affiliations

- 2006.6 – Present Vice president of Science and Technology Association of Inst. of Microelectronics  
2005.6 – 2007.6 Vice president of Science and Technology Association of Dept. of EE  
2006.9 – Present Departmental system administrator of web servers  
2004.9 – 2006.3 Member of Tsinghua Students Union of Journalism and Communication

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## Technical Skills

- Proficient in C/C++, Matlab and Verilog HDL programming.
- Skilled in using various popular EDA and IDE software.
- Familiar with Unix/Linux application and development.
- Acquainted with web application technologies.