XIAOFAN JIANG

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EDUCATION

University of California, Berkeley 8/2005-9/2010

- Ph.D. in Computer Science, completed 9/2010
- Master in Electrical Engineering and Computer Science, completed in 12/2007

University of California, Berkeley 9/2001-12/2004

- Bachelor of Science in Electrical Engineering and Computer Science, graduated with honors
- Minor in Business Administration
- Cumulative GPA 3.8, technical GPA 3.9

EXPERIENCES

Microsoft Research Asia, Beijing 10/2010-Present

Researcher

- Currently working on a number of research projects in the wireless and mobile space.

Google, Palo Alto CA 6/2007-8/2007

Engineering Intern

- Designed scheduling and data exchange protocols of a novel CDMA/TDMA hybrid MAC, optimized for a next generation MIMO-based ultra-wideband PHY, targeted at "C" and "whitespace" TV bands.
- Three U.S. patents granted.

Intel Corporation, Santa Clara CA 2/2005-7/2005

Component Design Engineer

- Validation of Baseboard Management Controller (BMC) chip using SpecmanElite and Verilog. Constructed infrastructure to validate interrupts to the embedded ARC microcontroller from internal and auxiliary sources. Validated watchdog, SerialIRQ, GPIO, and several other components.

Xilinx, San Jose CA 1/2004-7/2004

Intern Engineer

- Worked on the Gigabit System Reference Design (GSRD) project for high bandwidth systems. Designed part of the Communication Direct Memory Access Controller (CDMAC). Added coalescing interrupts, timers, support for all byte lengths and byte offsets in memory addressing.
- Designed a system to perform 3:2 video pull-down in hardware using ML300 board. Allowed video to be displayed in a moving window with animated background, using virtually no CPU time. It was used to demonstrate bandwidth and CPU utilizing of GSRD.
- Wrote interface to access and demonstrate "SystemMonitor" features of the upcoming Virtex-4 FPGA chip on the ML300 board. Worked closely using Xilinx's Embedded Development Kit (EDK).

HONORS & INTERESTS

- National Science Foundation (NSF) Graduate Fellowship (GRFP). 8/2006 – 8/2009
- Vodafone-US Foundation Fellows Initiative scholarship for research in wireless communications. 8/2004
- Engineering Joint Console Representative. Eta Kappa Nu (HKN) Electrical Engineering and Computer Science honor society. Berkeley 2002
- Avid badminton player. 1999-Present

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BACKGROUND & SKILLS

- Signal processing, system design, control systems, wireless communications
- Digital components and design, FPGA design
- Analog design, integrated circuits, mixed signal design, microelectronic devices and circuits
- Sensors and actuators design, digital-analog interfacing, wireless sensor networks
- Database systems, PostgresSQL, MySQL, PHP
- E, C++, C, NesC, JAVA, Verilog, EDK, Perl, SPICE, Matlab, Assembly, ModelSIM, Javascript, TinyOS
- Fluent in spoken and written Chinese

SELECTED PUBLICATIONS

- Experiences with a High-Fidelity Wireless Building Energy Auditing Network
  Xiaofan Jiang, Minh Van Ly, Jay Taneja, Prabal Dutta, and David Culler
  The Seventh ACM Conference on Embedded Networked Sensor Systems (SenSys'09), Nov. 4-6, 2009
- Design and Implementation of a High-Fidelity AC Metering Network
  Xiaofan Jiang, Stephen Dawson-Haggerty, Prabal Dutta, and David Culler
  The 8th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN'09) Track on Sensor Platforms, Tools, and Design Methods (SPOTS '09), Apr. 2009
- An Architecture for Local Energy Generation, Distribution, and Sharing
  Mike M. He, Evan M. Reutzel, Xiaofan Jiang, Randy H. Katz, Seth R. Sanders, David E. Culler, Ken Lutz
  IEEE Conference on Global Sustainable Energy Infrastructure (Energy2030' 08), Nov. 17-18, 2008
- An Architecture for Energy Management in Wireless Sensor Networks
  Xiaofan Jiang, Jay Taneja, Jorge Ortiz, Arsalan Tavakoli, Prabal Dutta, Jaein Jeong, David Culler, Philip Levis, and Scott Shenker
  International Workshop on Wireless Sensor Network Architecture (WSNA '07) April, 2007
- Micro Power Meter for Energy Monitoring of Wireless Sensor Networks at Scale
  Xiaofan Jiang, Prabal Dutta, David Culler, and Ion Stoica
  The Sixth International Conference on Information Processing in Sensor Networks: Special track on Platform Tools and Design Methods for Network Embedded Sensors (IPSN/SPOTS), April, 2007
- Perpetual Environmentally Powered Sensor Networks **[Received Best Paper award]**
  Xiaofan Jiang, Joseph Polastre, and David Culler
  The Fourth International Conference on Information Processing in Sensor Networks: Special track on Platform Tools and Design Methods for Network Embedded Sensors (IPSN/SPOTS), April, 2005