

LAN BAI

Contact

1301 Beal Ave, EECS Dept.
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EDUCATION

- 01/2009 to present
Ph.D. student, Department of EECS, University of Michigan
Advisor: Robert P. Dick
- 09/2005 to 12/2008
M.S., Department of EECS, Northwestern University
GPA: 3.85/4.0
Advisor: Robert P. Dick
- 09/2001 to 07/2005
B.S., Department of Electronic Science and Technology, University of Sci. & Tech. of China
Overall GPA: 3.87/4.3
Major GPA: 3.9/4.3
Rank: Top 5 among 100 students in the department

MAJOR COURSES

- Computer Architecture, Advanced Computer Architecture, Operating Systems, Design and Analysis of Algorithms, Introduction to VLSI CAD, VLSI System Design, Adaptive Operating System for Embedded System, Compiler Construction, Formal Techniques in Design and Verification, Parallel Computing, Embedded System Design and Synthesis, Design and Analysis of High-Performance Integrated Circuits, Information Processing in Sensor Networks, Artificial Intelligence, Advanced Programming.

SKILLS

- C, C++, Java, VHDL, Python, and MATLAB

CURRENT RESEARCH

- 09/2007-present, Advisor: Prof. Robert Dick.
Project: Programming Languages for Wireless Sensor Networks.
- 10/2006-03/2008, Advisor: Prof. Robert Dick.
Project: Adaptive filesystem compression.
- 09/2005-01/2007, Advisor: Prof. Robert Dick.
Project: Automated compile-time and run-time memory compression techniques on MMU-less embedded systems.

RESEARCH EXPERIENCE

- 06/2006-09/2006, Summer research assistant in NEC Labs America.
Project: Improve performance of JFFS2 file system compression by using unsymmetric compression algorithm for executables.

- As a course project for "Modern Electrical System Design", designed a fee and time recording system for cell phone using VHDL.
- As a course project for "Embedded System Theory and Application", designed and implemented a photoelectrical counter.
- Worked in the System Design Laboratory from 09/2003 to 07/2005. During that time, worked as a student leader in the UAV automatic control system design group.
- Took part in the project to design and implement an electrical arc eliminating system for electrical power system.

HONORS & AWARDS

- Outstanding Student Scholarship (Grade 2), 2004
- Outstanding Performance Awards (grade 3) in "Huawei Cup Sci. & Tech. Design Competition", 2004
- Excellent Project Awards in "Undergraduate Research Project", 2004
- Outstanding Student Scholarship (Grade 2), 2003
- Outstanding Student Scholarship (Grade 2), 2002
- Outstanding Freshman Scholarship (Grade 3), 2001

PUBLICATION

- L. S. Bai, R. P. Dick, and P. A. Dinda: Archetype-Based Design: Sensor Network Programming for Application Experts, Not Just Programming Experts. To appear in *Proc. Information Processing in Sensor Networks* (Apr. 2009).
- L. S. Bai, L. Yang, and R. P. Dick: MEMMU: Memory Expansion for MMU-Less Embedded Systems. To appear in *ACM Trans. Embedded Computing Systems*.
- L. S. Bai, H. Lekatsas, and R. P. Dick: Adaptive Filesystem Compression for Embedded Systems. In *Proc. Design, Automation, and Test in Europe Conf* (Mar. 2008).
- L. S. Bai, L. Yang, and R. P. Dick: Automated Compile-Time and Run-Time Techniques to Increase Usable Memory in MMU-Less Embedded Systems. In *Proc. Int. Conf. Compilers, Architecture & Synthesis for Embedded Systems* (Oct. 2006), pp. 125-135.