

Christopher Lupo

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EDUCATION

University of California, Davis

Electrical and Computer Engineering Department

Ph.D., Computer Engineering, September 2008

M.S., Computer Engineering, June 2007

Dissertation Title, "Precise Register-Allocation Spill-Code Costing and Placement"

Advisor: Professor Kent Wilken

California State University, Fresno

Electrical and Computer Engineering Department

B.S., Electrical Engineering, Magna Cum Laude, May 1997

APPOINTMENTS

California Polytechnic State University,
Assistant Professor, Computer Engineering Program,
Computer Science Department

Fall 2008 –
Present

TEACHING EXPERIENCE

Associate Instructor positions: Instructor of record. Responsible for all aspects of instruction. Designed and delivered syllabus, lectures, laboratory assignments, exams, homework, projects grading. Held office hours, managed teaching assistants and readers, assigned final grades.

Computer Architecture, EEC 170

Digital Systems I, EEC 180A

Microcomputer-Based System Design, EEC 172

Computer Structure and Assembly Language, EEC 70

Teaching Assistant positions: Assisted instructors with design of laboratory and homework assignments, led laboratory sessions, proctored exams, held office hours, assisted with grading.

Microcomputer-Based System Design, EEC 172

Parallel Computer Architecture, EEC 171

Computer Structure and Assembly Language, EEC 70

Teaching Assistant Consultant

2003 – 2004

Teaching Resources Center, UC Davis. Campus wide graduate fellowship position, mentored and consulted with other teaching assistants to help improve teaching effectiveness. Worked with teams to develop and deliver workshops and presentations on teaching topics and engaged in continuing professional development activities.

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RESEARCH EXPERIENCE

Doctoral Research

2000 – 2008

Investigating and developing algorithms to improve code quality for heuristic register allocation that are sensitive to program structure, variable usage patterns, and compiler and operating system register usage conventions. Code quality measured through spill code reduction. Other metrics of interest include performance, code size, and power consumption.

Research Assistant

1997 – 2000

Performed development and design work on UC Davis's Optimal Register Allocator (ORA), modeling the register allocation problem as a 0-1 integer linear programming problem.

Undergraduate Research Semester

Fall 1993

Selected for a Science and Engineering Research Semester at Oak Ridge National Laboratory, Tennessee. Under the direction of Dr. Francois G. Pin, implemented a device driver for an omni-directional robotic platform, and simulated a path planning algorithm with obstacle avoidance for a robotic manipulator.

PUBLICATIONS

Christopher Lupo and Kent Wilken, "Post Register Allocation Spill Code Optimization," CGO, pp. 245-255, International Symposium on Code Generation and Optimization (CGO'06), 2006.

OTHER RELATED EXPERIENCE

Systems Administrator

2004 – 2008

UC Davis Electrical and Computer Engineering Department. Responsible for core services, network infrastructure, software package installation and maintenance.

Consulting Expert

2000 – 2002

California Department of Justice. Developed software test procedures to prove or disprove manufacturer's technological claims. Measured and analyzed hardware performance.

PROFESSIONAL AFFILIATIONS

Association for Computing Machinery (ACM).

HONORS AND AWARDS

Teaching Assistant Consultant Fellowship

2003 – 2004

UC Davis GAANN (Graduate Assistance in Areas of National Need) Fellowship Recipient

1998 – 1999

UC Davis GAANN Fellowship Recipient

1997 – 1998