WALTER CHANG

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EDUCATION

Doctor of Philosophy in Computer Science — August 2010
The University of Texas at Austin — Austin, TX

Bachelor of Arts in Computer Science — May 2002
Cornell University — Ithaca, NY

SKILLS

Languages (Computer): Java, C++, C, JavaScript, Standard ML, OCaml, Scheme, Lisp, HTML, XML, LaTeX
Languages (Human): English, Mandarin Chinese (conversational)
Technical Background: Compilers, Program Analysis, Security, Software Testing
Operating Systems: Linux, Windows, Mac OS X

EXPERIENCE

Software Engineer — 2010-present
Google, Inc — Mountain View, CA
Designed and implemented systems and processes for internal infrastructure information security.

Research Assistant — 2002–2010
The University of Texas at Austin — Austin, TX
Designed and implemented a system that enforces powerful user-specified security policies by automatically finding and containing possible violations. Designed and implemented an automated software testing system that uses user-provided guidance to automatically generate test inputs that stress high-priority or buggy sections of code. Advised by Prof. Calvin Lin.

Teaching Assistant — 2004
The University of Texas at Austin — Austin, TX
Overhauled and revamped programming assignments, implemented automated testing and grading software for class projects, and rewrote and enhanced class projects. Led discussion sections, held office hours, and graded for CS315H, Honors Algorithms and Data Structures. Won annual departmental TA Excellence Award.

Developer (Intern) — 2002
IBM Server Group — Endicott, NY
Developed firmware update utility for the Hardware Management Console for IBM pSeries servers.

Developer (Intern) — 2001
IBM Almaden Research Center — Almaden, CA
Designed and developed a prototype digital media set-top box and server.

Research Assistant — 1999–2002
Cornell University — Ithaca, NY
Founded the Cornell Autonomous Underwater Vehicle team. Designed, built, and programmed an embedded computer as part of a fully autonomous robotic submarine. Worked with the Cornell Network Research Group, developing software for automatic network topology discovery and mapping.

PUBLICATIONS

Efficient and Extensible Security Enforcement Using Dynamic Data Flow Analysis, with Brandon Streiff and Calvin Lin. In *Proceedings of the 15th ACM Conference on Computer and Communication Security (CCS 2008)*
Improving Directed Test Case Generation with Static Analysis and Automated Boundary Condition Testing, with Calvin Lin. In submission.
Securing Legacy C Applications Using Dynamic Data Flow Analysis, with Steve Cook and Calvin Lin. In *Crosstalk - The Journal of Defense Software Engineering*, September 2008.