

Shay Artzi

Email: artzi@mit.edu

Cell: 617-513-0073

Address: 60 Wadsworth st, Apt 23F, Cambridge, MA 02142

Accomplished technologist with great interest in entrepreneurial organizations.
Looking to apply my software engineering and managerial skills to company goals.

EDUCATION

- Ph.D. in Computer Science, Minor: Management** **2004 – 2009**
MIT—Massachusetts Institute of Technology
Thesis: *Dynamically Fighting Bugs: Prevention, Detection, and Elimination*
- M.Sc. in Computer Science** **1997 – 2000**
Technion—Israel Institute of Technology
Thesis: *Achieving Better Lower Bounds on the Complexity of Polynomial Multiplication over Finite Fields*
- B.A. Cum Laude in Computer Science** **1994 – 1997**
Technion—Israel Institute of Technology

PROFESSIONAL EXPERIENCE

- IBM Watson Research Center, Hawthorne NY** **2009 – today**
Post Doc, Program Analysis and Transformation Group.
Developed automatic exploration of PHP programs to discover security vulnerabilities in web applications.
- IBM Watson Research Center, Hawthorne NY** **Summer 2007, 2008**
Research Intern, Program Analysis and Transformation Group, Testing Group.
Developed a novel bug detection method in web applications. My work led to two publications and a patent.
- WebLayers, Cambridge MA** **Summer 2005**
Consultant, R&D team.
Greatly improved the usability of the policy designer, and the throughput of the policy enforcer. Created infrastructure to expedite the development process of the R&D team.
- MyDreams Ltd, Israel** **2004**
VP Engineering
Held final responsibility for all technical aspects including architecture, design, and final product quality. Wrote the requirements, designed the system, and led in-house developers and an external software company to achieve the time-to-market goal of four months.
- Rafael (Israel Armament Development Authority)** **1999 – 2004**
Software Manager, Physical Electronics Department
Lead a small team to produce, in time and under budget, a complex command and control software for a \$20M new hardware testing facility.
- IBM Haifa Labs, Israel** **1996 – 1997**
Software Developer, Programming Languages and Compilers Department.
Worked on the development for the Montana project, open and extensible programming environment with an incremental C++ compiler.

TEACHING EXPERIENCE

Awards: Six Citations for Excellence in Teaching, Best Teacher Based on Student Evaluations.

Institutions: Technion—Israel Institute of Technology, Israel College of Management
Sela University High-Tech Instruction Dept

Classes: *Intro to Computer Science, Programming Languages, C, C++, Operating Systems*
Object-Oriented Programming, Digital Systems, Design Patterns, Theory of Compilation

PROFESSIONAL HONORS and AWARDS

Citation for the Analysis and Design of a Very Complex Product Using Advanced Technology and Showing Commendable Teamwork	Rafael, July 2003
Citation for the Successful Fulfillment of an Important Experiment	Rafael, June 2003
Citation for Solving a Crucial Failure in a Testing System	Rafael, June 2002
Citation for the Successful Completion of a Major Project	Rafael, March 2001
Citation for Exemplary Execution of a Development Mission and a Major Contribution in Achieving Project Goals	Rafael, December 2000
Citation for Outstanding Contribution in Obtaining the Goals of a Core Division Project	Rafael, September 2000

ACADEMIC HONORS and AWARDS

ACM SIGSOFT Distinguished Paper Award, ESEC/FSE	2007
Best Paper Selection(Extended Journal), ASE	2007
Best Paper Selection(Extended Journal), ASE	2005
President's High Honors List, Technion	1996
President's Honors List, Technion	1995 - 1996

RECENT PUBLICATIONS (broader list is available upon request)

Conference Papers

- Shay Artzi, Julian Dolby, Frank Tip, Amit Paradkar, Michael D. Ernst, "Automatic bug detection in web applications", *ISSTA 2008*, International Symposium on Software Testing and Analysis, Seattle, WA, July 2008.
- Shay Artzi, Jaime Quinonez, Adam Kiezun, and Michael D. Ernst, "A Formal Definition and Evaluation of Parameter Immutability", *accepted to J.ASE* Journal of Automated Software Engineering.
- Shay Artzi, Sunghun Kim, and Michael D. Ernst, "ReCrash: Making crashes reproducible by preserving objects' states", *ECOOP 2008*, Cyprus, July, 2008.
- Shay Artzi, Adam Kiezun, and Noam Shomron. "miRNAMiner: a tool for homologous microRNA gene search", *BMC bioinformatics*, January, 2008.

Patents

- Shay Artzi, Julian Dolby, Frank Tip, "Method for Fault Localization and Test Generation in Dynamic Web Applications", Submitted

References can be provided upon request