

Research Interests

Software Engineering: Software requirements engineering, Software testing, Specification-based testing, Requirements-driven testing, Automated test oracles.

Education

Doctor of Philosophy (Expected graduation 2010)
Donald Bren School of Information and Computer Sciences, University of California Irvine.
Advisor: Debra J. Richardson

Bachelor of Science May 2004
Department of Computer Engineering and Computer Science, California State University, Long Beach

Honors & Awards

Pedagogical Fellowship 2008, The Learning and Teaching Center, University of California, Irvine

Dean's Fellowship 2005, *Donald Bren School of Information and Computer Sciences.* University of California, Irvine.

Department Outstanding Baccalaureate Graduate 2004, *Department of Computer Engineering and Computer Science.* California State University, Long Beach

President's honor list, 2002-2004, *Department of Computer Engineering and Computer Science.* California State University, Long Beach

Academic Experience

University of California, Irvine - Donald Bren School of Information and Computer Sciences Research, August 2005 – present

Includes current Ph.D. research on developing a requirements-driven testing approach with automated tool support with the purpose of showing how testing against requirements addresses many of the commonly recognized problems with creating software under acceptable budget and time constraints, and Ph.D. and Masters level coursework.

Teaching Assistant in In4Matx 191b [Senior Design Project], Winter 2009

Group supervised project in which students analyze, specify, design, construct, evaluate, and adapt a significant information processing system. Topics include team management, professional ethics, and systems analysis. In-progress grading. Informatics 191A-B-C must be taken in the same academic year.

Teaching Assistant in In4Matx 41 [Informatics Core I], Fall 2008

Fundamental concepts of computer software design and construction. Data, algorithms, functions, and abstractions. Overview of computer systems: data representation, architectural components, operating systems, networks. Introduction to information systems: parties involved, architectural alternatives, usability, organizational and social concerns.

Teaching Assistant in In4matx 111 [Software Methods and Tools], Summer 2008

Concepts and techniques of constructing software in a systematic fashion, including detailed design techniques, specifications, programming methods, quality-inducing procedures, development tools, team techniques, testing, estimation, and performance improvement. Laboratory work involves exercises to illustrate important concepts, methods, and tools.

Teaching Assistant in In4matx 43 [Informatics Core III], Spring 2008

Concepts, methods, and current practice of software engineering. Large-scale software production, software life cycle models, principles and techniques for each stage of development. Laboratory project applying these concepts.

Teaching Assistant in In4matx 42 [Informatics Core II], Winter 2008

As the middle course in the first-year sequence, this course continues to focus on software design, from a variety of approaches for modeling problems to the alternatives and tradeoffs of data structure design and implementation to analyzing the performance of those data structures and the associated algorithms.

Teaching Assistant in In4matx 122 [Software Design II], Fall 2007

Introduction to advanced software design principles, paradigms, and techniques. Topics include large-scale design, software reuse, product-line architectures, design recovery, refactoring, application frameworks, real-time systems, design-for-context. Case studies of existing designs and extensive practice with real-world designs.

Royal Institute of Technology (KTH), Sweden - *Center for Autonomous Systems*
Research Assistant, Summer 2004 – Summer 2005

Worked on a haptic interface for teleoperating a robot and investigated the tradeoff between visual and haptic cues.

California State University, Long Beach -*Department of Computer Engineering and Computer Science*

Student Assistant, Fall 2003

Worked with educating undergraduate students in the introductory course in programming in C++.

Professional Experience

Google, Irvine CA. **Summer 2007**
Intern in Software Test Engineering. Worked on automating regression testing.

Microsoft Mobile Internet, Stockholm Sweden **Summer 2000, 2001**
Intern in Software testing. Worked as a test engineer on automating testing for mobile applications.

Related Professional / Academic Experience

Organizing chair **2007**
Graduate Student Research Symposium, sponsored by the Institute for Software Research at the University of California Irvine

Graduate Policy Committee **2007-2008**
Donald Bren School of Information and Computer Sciences, University of California Irvine, 2007-2008

Publications

Eliciting Required Characteristics for Usable Requirements Engineering Approaches, Kristina Winbladh, Hadar Ziv, and Debra J. Richardson. *ACM SAC*, 2009.

In the Requirements Lies the Power, Rand Waltzman, Kristina Winbladh, Thomas A. Alspaugh, and Debra J. Richardson. *International Conference on Software Engineering and Knowledge Engineering (SEKE'07)*.

An Automated Approach for Goal-driven, Specification-based Testing, Kristina Winbladh, Thomas A. Alspaugh, Hadar Ziv, and Debra J. Richardson, *International Conference on Automated Software Engineering*, Tokyo, Japan, September 2006.

Architecture-based Testing Using Goals and Plans, Kristina Winbladh, Thomas A. Alspaugh, Hadar Ziv, and Debra J. Richardson, *Second International Workshop on the Role of Software Architecture for Testing and Analysis*, Portland, ME, July 2006.

Requirements Engineering - Closing the Gap Between Academic Supply and Industry Demand” Kristina Winbladh, *ACM Crossroads*, Volume 10. Issue 4 2004.

Presentations

TRUST – Testable Requirements Are Powerful, *Google Test Automation Conference (GTAC)*, Summer 2007, New York, NY. [<http://www.youtube.com/watch?v=caEIFKbceP0>]

Architecture-Based Testing Using Goals and Plans, *Workshop on the Role of Software Architecture for Testing and Analysis (ROSATEA) Workshop*, July 17, 2006. Portland, Me

An Automated Approach for Goal-driven, Specification-based Testing, *International Conference on Automated Software Engineering (ASE)*, Tokyo, Japan, September 2006.

Professional Memberships

Association for Computing Machinery
ACM Special Interest Group on Software Engineering
ACM SIGAPP
WICS at UC Irvine

Skills

Languages: English, Swedish

Programming languages: Java, C++, Jess, Scheme.

Web technologies: XML, HTML, javascript.

Software tools: Eclipse, Subversion.

Other applications: LAT EX, common Windows Office software.

Operating Systems: Unix/Linux, Windows, Mac OS X.

References

References are available upon request.