Franziska Roesner

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RESEARCH STATEMENT

My research interests are in security and privacy, with a focus on system design and evaluation. I am interested in helping users understand and control the sharing of their data in a broad range of scenarios, from third-party tracking on the web to permission granting for applications in modern operating systems.

EDUCATION

PhD Student, Computer Science and Engineering
University of Washington
Area: Security; Advisor: Tadayoshi Kohno

M.S., Computer Science and Engineering **June 2011**
University of Washington
Qualifying Project: *User-Driven Access Control: A New Model for Granting Permissions in Modern Operating Systems*
Advised by: Tadayoshi Kohno and Helen Wang

B.S., Turing Scholars Honors Computer Science **May 2008**
The University of Texas at Austin
Focus: Computer Architecture; Advisor: Doug Burger

B.A., Plan II Honors Program (Liberal Arts) **May 2008**
The University of Texas at Austin
Graduated with Highest Honors.

HONORS

Microsoft Research PhD Fellowship (2012-2014)
Madrona Venture Group Prize Runner-Up (for ShareMeNot) (2011)
National Science Foundation Graduate Research Fellowship (2010-2015)
Marilyn Fries Endowed Regental Fellowship (2009-2010)
UTCS Best Undergraduate Honors Thesis Award (2008)
UT College of Natural Sciences Dean's Honored Graduate (2008)
CRA Outstanding Undergraduate Award Finalist (2008)
University of Texas Unrestricted Endowed Presidential Scholarship (2007-08)
Intel Undergraduate Research Fellowship (2007-2008)
Cisco Systems Computer Science Scholarship (2006)
National Merit Finalist and Scholarship Recipient (2004)

PUBLICATIONS

Available for download at http://www.cs.washington.edu/homes/franzi/

CONFERENCE

F. Roesner, T. Kohno, A. Moshchuk, B. Parno, H.J. Wang, and C. Cowan. U*ser-Driven Access Control: Rethinking Permission Granting in Modern Operating Systems.* To appear in the Proceedings of the 33rd IEEE Symposium on Security and Privacy, May 2012.

F. Roesner, T. Kohno, and D. Wetherall. *Detecting and Defending Against Third-Party Tracking on the Web.* To appear in the Proceedings of the 9th USENIX Symposium on Networked Systems Design and Implementation, April 2012.

S. Checkoway, D. McCoy, B. Kantor, D. Anderson, H. Shacham, S. Savage, K. Koscher, A. Czeskis, **F. Roesner**, and T. Kohno. *Comprehensive Experimental Analyses of Automotive Attack Surfaces.* Proceedings of the 20th USENIX Security Symposium, August 2011.

K. Koscher, A. Czeskis, **F. Roesner**, S. Patel, T. Kohno, S. Checkoway, D. McCoy, B. Kantor, D. Anderson, H. Shacham, S. Savage. *Experimental Security Analysis of A Modern Automobile.* Proceedings of the 31st IEEE Symposium on Security and Privacy, May 2010.

F. Roesner, D. Burger, and S.W. Keckler. *Counting Dependence Predictors*. Proceedings of the 35th International Symposium on Computer Architecture, June 2008.

S. Sethumadhavan, **F. Roesner**, D. Burger, S.W. Keckler and J. Emer. *Late-Binding: Enabling Unordered Load-Store Queues*. Proceedings of the 34th International Symposium on Computer Architecture, June 2007.

TECH REPORT

F. Roesner, T. Kohno, A. Moshchuk, B. Parno, H.J. Wang, and C. Cowan. U*ser-Driven Access Control: Rethinking Permission Granting in Modern Operating Systems.* Microsoft Research Tech Report #MSR-TR-2011-91, August 2011.

THESES

F. Roesner. *User-Driven Access Control: A New Model for Granting Permissions in Modern Operating Systems*. Advised by Tadayoshi Kohno and Helen Wang. University of Washington, CSE Qualifying Examination Project, April 2011.

F. Roesner. *Counting Dependence Predictors*. Advised by Doug Burger. The University of Texas at Austin, Tech Report #HR-08-08 (CS Undergraduate Honors Thesis), May 2008.

RESEARCH EXPERIENCE

Graduate Researcher, University of Washington
Security and Privacy Research Lab
September 2009 – Present
with Tadayoshi Kohno and David Wetherall
- Analysis of web tracking and defenses.
- Firefox add-on ShareMeNot to protect users against social widgets like the Facebook "Like" button (http://sharemenot.cs.washington.edu)

with Tadayoshi Kohno and Stefan Savage (UCSD)
- Analysis of the security properties of a modern automobile.

Contracted Researcher, Microsoft Research (Seattle, WA)
Security & Privacy Research Group
September 2010 – Present
with Tadayoshi Kohno (UW), Helen Wang, Alex Moshchuck, & Bryan Parno
- Design and implementation of user-driven access control, a new model for permission granting in modern OSes (such as smartphones and browsers).

Research Intern, Microsoft Research (Seattle, WA)
Extreme Computing Group (XCG)
June 2010 – September 2010
with Doug Burger
- Security and privacy for a cloud-based data and services platform.

Undergraduate Researcher, The University of Texas at Austin
Computer Architecture and Technology Laboratory
August 2006 – June 2008
with Doug Burger and Steve Keckler
- Design, simulation, analysis of a distributed counting dependence predictor.
- Verilog implementation and analysis of an unordered load-store queue.

TEACHING EXPERIENCE

CSE 564: Computer Security and Privacy **Spring 2011**
University of Washington
with Tadayoshi Kohno
- Graded homework and forum posts, participated in class discussions.

OTHER EMPLOYMENT

Amazon.com (Seattle, WA) **June 2009 – August 2009**
Security Engineering Intern

Lycee Louis Armand (Mulhouse, France) **Oct. 2008 – April 2009**
English Language Teaching Assistant

Amazon.com (Seattle, WA) June 2008 – August 2008
Software Development Engineering Intern

Winn Tutoring (Austin, TX) May 2005 – May 2008
Tutor in math, science, and English

SERVICE

New Graduate Orientation Organizer September 2011
UW CSE Department
Co-organized and co-led new graduate student orientation.

Roadshow & Outreach 2010 – Present
UW CSE Department
Co-created and co-led an outreach seminar, organizing graduate and undergrad students to create a presentation and visit local grade schools (2010-2011). Visited multiple local high schools to give presentations about my research, computer science, and/or the UW CSE department (ongoing).

Roadshow Coordinator 2007 – 2008
UT CS Department
Co-created and co-led a computer science roadshow presentation for local middle and high schools.