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# Kami Vaniea

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## Research Interests

I am interested in Human Computer Interaction (HCI) as it applies to Security and Privacy. Managing security as part of everyday life can be challenging for anyone, even security professionals. My research focuses on helping people control access to their devices, data, and other digital objects. My current research projects focus on software updates and building interfaces that guide users in protecting themselves.

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## Education

- 2005–2012 **Doctor of Philosophy in Computer Science**, *Carnegie Mellon University*, Pittsburgh, PA,  
Advisors: Prof. Lorrie Cranor & Prof. Lujo Bauer  
Thesis Title: Proximity Displays for Access Control.
- 2001–2005 **Bachelor of Science in Computer Science**, *Oregon State University*, Corvallis, OR.

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## Experience

- Aug. 2015–Present **Lecturer (Assistant Professor)**, *The University of Edinburgh*, Edinburgh, United Kingdom.
- Aug. 2014–July 2015 **Assistant Professor**, *Indiana University*, Bloomington, IN.
- Sept. 2012–Aug. 2014 **Postdoctoral Researcher**, *Michigan State University*, East Lansing, MI.  
Exploring the relationship between users' mental models of security and their security choices. Constructing a software program to measure end user security behaviors, both positive and negative, on their personal computers.
- Sept. 2005–Aug. 2012 **Ph.D. Research Assistant**, *Carnegie Mellon University*, Pittsburgh, PA.  
Conducted research on Usable Access Control as a member of the Cylab Usable Privacy and Security (CUPS) Lab.
- July–Oct. 2010 **Microsoft Research Intern**, *Microsoft Research*, Redmond, WA.  
Implemented a email based file sharing system based on laissez-faire access-control principles.

- May–Sep. 2007 **IBM Research Intern**, *IBM Research TJ Watson*, Hawthorn, NY.
- Conducted research on the design of a user interface to support the composition of machine readable privacy policies using natural language.
  - Implemented a new authoring interface and ran a user study which evaluated its effect on policy authors' efficiency and accuracy.
- June–Aug. 2004 **Center for Cyber Defenders Intern**, *Sandia National Laboratories*, Livermore, CA.
- Undergraduate and graduate program to encourage students to consider a research career in computer security.
- Conducted a security analysis, red team, on several video conferencing systems with team of fellow students.
  - Assisted in the creation of a network sniffer/analysis tool designed to monitor network traffic passively and build profiles on each node.
- 2002–2005 **Undergraduate Research Assistant**, *Oregon State University*, Corvallis, OR.
- Attached to a research lab working on machine learning solutions for recommendation systems.
- Assisted with research on recommender systems including running studies to test new algorithms and creating web applications.
  - Integrated a search engine and a recommender system to test how users make use of recommendations while searching online.
- June–Aug. 2003 **Undergraduate Research Assistant**, *Columbia University*, New York, NY.
- Distributed Research Experiences for Undergraduates (DREU)
- Designed and taught classes using Lego Mindstorms at a Harlem community center, an upper west side 6th grade classroom and a pre-college program. Presented and taught the final curriculum at a workshop for teachers as part of Technology Integration Partnerships.
  - Personal duties included: designing curriculum, collaborating with teachers and other students, teaching classes/workshops and building a web page.
- 1999 **Forestry Aid**, *US Forest Service*, La Grande, OR.
- Assisted in testing and improving a new method of assessing soil compression after logging operations. Worked on a team of three people assessing soil compression in the field.

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## Publications

### Dissertation

Kami Vaniea, "**Proximity Displays for Access Control**", *Carnegie Mellon University*, 2012, Committee: Lujó Bauer, Lorrie Faith Cranor, Jeannette Wing, Michael K. Reiter, Stuart Schechter.

### Peer Reviewed Conferences

Katie Hoban, Emilee Rader, Rick Wash, and Kami Vaniea, "**Computer Security Information in Stories, News Articles, and Education Documents.**", *SOUPS: Poster in Symposium on Usable Privacy and Security*, 2014.

Rick Wash, Emilee Rader, Kami Vaniea, and Michelle Rizor, "**Out of the Loop: How Automated Software Updates Cause Unintended Security Consequences**", *SOUPS: Proceedings of the 4th Symposium on Usable Privacy and Security*, 2014.

Kami Vaniea , Emilee Rader and Rick Wash, “**Betrayed By Updates: How Negative Experiences Affect Future Security**”, *CHI: Proceedings of the 32nd international conference on Human factors in computing systems*, 2014.

Kami Vaniea , Lujo Bauer, Lorrie Faith Cranor, and Michael K. Reiter, “**Out of sight, out of mind: Effects of displaying access-control information near the item it controls**”, *PST: Proceedings of the 10th international conference on Privacy, Security and Trust*, 2012.

Robert W. Reeder, Lujo Bauer, Lorrie Faith Cranor, Michael K. Reiter, and Kami Vaniea, “**More than skin deep: Measuring effects of the underlying model on access-control system usability**”, *CHI: Proceedings of the 29th international conference on Human factors in computing systems*, 2011.

Michelle L. Mazurek, J.P. Arsenault, Joanna Breese, Nitin Gupta, Iulia Ion, Christina Johns, Daniel Lee, Yuan Liang, Jenny Olsen, Brandon Salmon, Richard Shay, Kami Vaniea, Lujo Bauer, Lorrie Faith Cranor, Gregory R. Ganger and Michael K. Reiter, “**Access control for home data sharing: Attitudes, needs and practices**”, *CHI: Proceedings of the 28th international conference on human factors in computing systems*, 2010.

Lujo Bauer, Lorrie Faith Cranor, Robert W. Reeder, Michael K. Reiter and Kami Vaniea , “**Real life challenges in access-control management**”, *CHI: Proceedings of the 27th international conference on human factors in computing systems*, 2009.

Lujo Bauer, Lorrie Faith Cranor, Robert W. Reeder, Michael K. Reiter and Kami Vaniea , “**A user study of policy creation in a flexible access-control system**”, *CHI: Proceedings of the 26th international conference on human factors in computing systems*, 2008.

Kami Vaniea, Clare-Marie Karat, Joshua B. Gross, John Karat, and Carolyn Brodie, “**Evaluating Assistance of Natural Language Policy Authoring**”, *SOUPS: Proceedings of the 4th Symposium on Usable Privacy and Security*, 2008.

Lujo Bauer, Lorrie Faith Cranor, Michael K. Reiter and Kami Vaniea , “**Lessons learned from the deployment of a smartphone-based access-control system**”, *SOUPS: Proceedings of the 3rd Symposium on Usable Privacy and Security*, 2007.

Jason Cornwell, Ian Fette, Gary Hsieh, Madhu Prabaker, Jinghai Rao, Karen Tang, Kami Vaniea, Lujo Bauer, Lorrie Cranor, Jason Hong, Bruce McLaren, Mike Reiter, and Norman Sadeh, “**User-controllable security and privacy for pervasive computing**”, *HotMobile: Eighth IEEE Workshop on Mobile Computing Systems and Applications* , 2007.

### Peer Reviewed Workshops

Kami Vaniea , Lujo Bauer, Lorrie Faith Cranor, and Michael K. Reiter, “**Studying access control usability in the lab: Lessons learned from four studies**”, *LASER: Learning from Authoritative Security Experimental Results*, 2012.

Kami Vaniea , Qun Ni, Lorrie Cranor and Elisa Bertino, “**Access control policy analysis and visualization tools for security professionals**”, *USM: Workshop on Usable IT Security Management*, 2008.

### Non-reviewed Conferences

Kami Vaniea , Rick Wash and Emilee Rader, “**Mental models of software updates**”, *ICA: International Communication Association*, 2014.

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## Teaching Experience

- Spring 2015 **Legal and Social Aspects of Security**, *Indiana University*, Primary Instructor.
- Fall 2014 **Today’s Privacy Challenges**, *Indiana University*, Primary Instructor.
- Spring 2013 **Interactive Graphics for the Creative Mindset**, *Michigan State University*, Primary Instructor.
- Fall 2009 **Web Commerce, Security and Privacy**, *Carnegie Mellon University*, Teaching Assistant for Norman Sadeh-Konieczpol.
- Fall 2008 **Fundamental Data Structures and Algorithms**, *Carnegie Mellon University*, Teaching Assistant for Bill Scherlis.
- Fall 2007 **Usable Security and Privacy**, *Carnegie Mellon University*, Teaching Assistant for Lorrie Faith Cranor.

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## Scholarly Service

### Program Committees

- 2016, 2017 **PETS**, *Privacy Enhancing Technologies Symposium*.
- 2013, 2016 **LASER**, *Learning from Authoritative Security Experiment Results workshop*.
- 2015 **SOUPS**, *Symposium On Usable Privacy and Security*.
- 2014 **PASSAT**, *ASE International Conference on Privacy, Security, Risk and Trust*.
- 2014, 2016 **USEC**, *Workshop on Usable Security*.
- 2009 **CHIMIT**, *Symposium on Computer Human Interaction for Management of Information Technology*.

### Reviewed For:

- 2014, 2015 **CSCW**, *Computer Supported Cooperative Work and Social Computing*.
- 2014 **GHC**, *Grace Hopper Conference, Security and Privacy track*.
- 2013, 2014, 2015, 2016 **CHI**, *Computer Human Interaction*.

2013 **TDSC**, *Transactions on Dependable and Secure Computing*.

#### Grant Review Panels

2013 **SATC**, *National Science Foundation panel for Secure and Trustworthy Cyberspace*.

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### Awards and Honors

2005 **Barbara Lazarus Women@IT Fellowship**

Presented to promising first year Carnegie Mellon graduate students

2004 **Google's Anita Borg Scholarship**

Award for outstanding female student computer scientists

2004 **Burgess Tektronix Award for outstanding Engineering senior of the year**

Awarded to one outstanding Electrical Engineering and Computer Science student at Oregon State University each year.

2003,2004 **Waldo - Cummings Outstanding student Honorable Mention Recipient**

Awarded to exceptional students at Oregon State University for extracurricular activities and dedication to their community. Ten receive award and additional ten get honorable mentions.

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### Outreach

2014 **Michigan State University Women's Alliance panel on Working Women**

Panel member discussing the issues surrounding women in Science, Technology, Engineering, and Math (STEM) fields.

2009 **Gwens Girls**

Taught a class on Internet safety to minority middle school-age girls.

2008–2010 **Technights for Girls**

Group organized by Women@SCS which exposes middle school girls to creative technologies. I taught a class on the importance of privacy and security on the internet and the use of cryptography and cipher technologies.

2001–2002 **Cyber Sisters**

Mentored a high school girl interested in Science and Engineering.

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### Extracurricular Activities / Leadership

2013 **Michigan State University Hackathon**

On organizing committee for planning and running the fall 2013 Hackathon for Michigan State University staff, faculty, and students.

2005–2012 **Women@SCS**

- o Women in Computer Science student organization designed to support and promote women in the field.
- o Outreach Roadshow – do presentations at schools, teachers and outreach events

2005–2012 **Tea Time**

Organize a weekly departmental tea tasting social event designed to promote communication between graduate students with different interests and backgrounds. As well as a healthy understanding of tea.

2004 **Joint Conference on Digital Libraries Volunteer Coordinator**

Coordinated volunteers and worked as a go-between for volunteers and conference center staff. Organized poster/demo session with over 60 presenters.

- 2003–2004 **Women and Minorities in Engineering**
- Action counsel representative for Computer Science.
  - Presented at outreach events and talked with potential students about career options in computer science.
  - Mentored and tutored incoming female computer science majors.
  - Web master for Women and Minorities in Engineering and the Action Counsel.
- 2002–2003 **Aerial Robotics**
- As part of the computer science team I assisted in the design of the helicopter control algorithm.
- 2001–2005 **Association for Computing Machinery (ACM)**
- President of local chapter (2003-2005), Secretary (2002-2003)
  - Designed and ran the first Electrical Engineering and Computer Science departmental graduation ceremony in over 30 years.
  - Initiated, taught, and participated in weekly student taught workshop sessions on basic skills not taught in the classroom such as bash shell scripting and LaTeX.
  - Tutored underclassmen in Java and C programming.
  - Hosted and spoke at several dinners and receptions to assist graduating seniors in connecting with corporate representatives.
- 2001–2005 **Society for Women Engineers**
- Participated in events as a member.