Sauvik Das

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Education

Carnegie Mellon University, 2011-Present
Ph.D. in Human-Computer Interaction
Advisers: Dr. Jason I. Hong and Dr. Laura A. Dabbish

Georgia Institute of Technology, 2006-2011
B.S. Computer Science—Media and Intelligence Threads
GPA: 4.0/4.0 (Top 1%)
Adviser: Dr. Mark O. Riedl

Nanyang Technological University, 2008-2009
Exchange Student

Research Summary

I construct quantitative and qualitative models of human behavior with respect to online privacy and computer security. I use these models to invent usable security tools that help people interact with their digital resources in secure, privacy-preserving ways.

Research areas of expertise: usable privacy & security, data science, machine learning and UbiComp.

Selected Honors & Awards

2016 **CHI Best Paper Award – Honorable Mention [C12]**

2015 **NSA Best Scientific Cybersecurity Paper Award – Honorable Mention [C8]**

Facebook Fellowship Finalist

CHI "Excellent Review" Designation

2014 **Qualcomm Innovation Fellowship**

2013 **UbiComp Best Paper Award [C5]**

2012 **National Defense Science and Engineering Graduate Fellowship (2012-15)**

National Science Foundation Graduate Research Fellowship, Honorable Mention

2011 Stu Card Graduate Fellowship (2011-2012)

CMU CyLab CUPS Doctoral Training Program Fellowship (2011-13)

National Science Foundation Graduate Research Fellowship, Honorable Mention

Outstanding Undergraduate Researcher, College of Computing, Georgia Tech

Most Innovative Video Nomination, AAAI Video Competition [V1]

Awards not relevant my research career listed in the "Extended Honors & Awards" section below.

Grants & Graduate Fellowships Awarded

2014 Qualcomm Innovation Fellowship (w/ Gierad Laput) [worth $100,000]

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2013 Assisted with *NSF EAGER Grant* entitled "Social Cybersecurity: Applying Social Psychology to Improve Cybersecurity" (w/ Jason Hong & Laura Dabbish) [worth $200,000]

2012 National Defense Science and Engineering Graduate Fellowship (2012-15)

2011 CMU CyLab CUPS Doctoral Training Program Fellowship (2011-13)

Academic Publications

Google Scholar: http://scholar.google.com/citations?user=laPvCf4AAAAJ&hl=en&oi=ao

Peer-Reviewed Conference Publications

[C12] Haiyi Zhu, **Sauvik Das**, Yiqun Cao, Shuang Yu, Aniket Kittur and Robert Kraut. A Market in Your Social Network: The Effects of Extrinsic Rewards on Friendsourcing and Relationships. *In Proceedings of the 34th SIGCHI Conference on Human Factors in Computing Systems (CHI), 2016*. (Acceptance Rate: 23%) **BEST PAPER HONORABLE MENTION** (TOP 4% OF SUBMISSIONS)

[C11] **Sauvik Das**, Jason I. Hong and Stuart Schechter. Testing Computer-Aided Mnemonics and Feedback for Fast Memorization of High-Value Secrets. *In Proceedings of the NDSS Workshop on Usable Security (USEC)*, 2016.

[C10] **Sauvik Das**, Alexander Zook, and Mark Riedl. Examining Game World Topology Personalization. *In Proceedings of the 33rd SIGCHI Conference on Human Factors in Computing Systems (CHI), 2015*. (Acceptance Rate: 23%)

[C9] **Sauvik Das**, Adam Kramer, Laura Dabbish and Jason I. Hong. The Role of Social Influence in Security Feature Adoption. *In Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work (CSCW), 2015*. (Acceptance Rate: 28.3%)

[C8] **Sauvik Das**, Adam Kramer, Laura Dabbish and Jason I. Hong. Increasing Security Sensitivity with Social Proof: A Large Scale Experimental Confirmation. *In Proceedings of the 21st Conference on Computer and Communications Security (CCS), 2014*. (Acceptance Rate: 19.5%). **HONORABLE MENTION FOR NSA BEST SCIENTIFIC CYBERSECURITY PAPER IN 2014** (TOP 3 OUT OF 50 ANONYMOUS NOMINATIONS)

[C7] **Sauvik Das**, Tiffany Hyun-Jin Kim, Laura Dabbish and Jason I. Hong. The Effect of Social Influence on Security Sensitivity. *In Proceedings of the 8th International Symposium on Usable Privacy and Security (SOUPS), 2014*. (Acceptance Rate: 26.5%)

[C6] Eiji Hayashi, **Sauvik Das**, Shahriyar Amini, Jason Hong and Ian Oakley. CASA: Context-Aware Scalable Authentication. *In Proceedings of the 7th International Symposium on Usable Privacy and Security (SOUPS), 2013*. (Acceptance rate: 27%)

[C5] **Sauvik Das**, Eiji Hayashi, and Jason Hong. Exploring Capturable Everyday Memory for Autobiographical Authentication. *In Proceedings of the 2013 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), 2013*. (Acceptance rate: 23%). **BEST PAPER AWARD** (TOP 1% OF ALL SUBMISSIONS)

[C4] **Sauvik Das** and Adam Kramer. Self-Censorship on Facebook. *In Proceedings of the 7th International AAAI Conference on Weblogs and Social Media (ICWSM), 2013*. (Acceptance rate: 20%)

[C3] Manya Sleeper, Rebecca Balebako, **Sauvik Das**, Amber McConohy, Jason Wiese, and Lorrie Cranor. The Post That Wasn't: Examining Self-Censorship on Facebook. *In Proceedings of the 16th annual ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW), 2013. (Acceptance Rate: 35.6%)*

[C2] Emmanuel Owusu, Jun Han, **Sauvik Das** and Adrian Perrig. ACCessory: Keystroke Inference using Accelerometers on Smartphones. *In Proceedings of the 12th annual ACM/SIG International Workshop on Mobile Computing Systems and Applications (HotMobile), 2012*. (Acceptance rate: 20.6%)

[C1] Ken Hartsook, Alexander Zook, **Sauvik Das**, and Mark Riedl. Toward supporting storytellers with procedurally generated game worlds. *In Proceedings of the 2011 IEEE Conference on Computational Intelligence in Games, 2011*.

Technical Reports

[TR1] **Sauvik Das**, LaToya Green, Beatrice Perez, Michael Murphy, and Adrian Perrig. Detecting User Activities Using the Accelerometer on Android Smartphones. 2010.

Lightly Peer-reviewed Workshop Papers

[W3] Jason Hong, **Sauvik Das**, Tiffany Hyun-Jin Kim, Laura A. Dabbish. Social Cybersecurity: Applying Social Psychology to Cybersecurity. *Human Computer Interaction Consortium (HCIC), 2015*.

[W2] **Sauvik Das**, Thomas Zimmermann, Nachiappan Nagappan, Bruce Phillips, and Chuck Harrison. Revival Actions in a Shooter Game. *Workshop on Designing and Evaluating Sociability in Online Video Games, in the 31st Annual Conference on Human Factors in Computing Systems (CHI), 2013*.

[W1] Eiji Hayashi, **Sauvik Das**, Shahriyar Amini, Emmanuel Owusu, Jun Han, Jason Hong, Ian Oakley, Adrian Perrig and Joy Zhang. CASA: context-aware scalable authentication. *Workshop on Usable Privacy & Security for Mobile Devices, in the 8th annual Symposium on Usable Privacy and Security (SOUPS), 2012*.

Demos & Videos

[V1] Mark O. Riedl, Ken Hartsook, **Sauvik Das**, Alexander Zook, and Boyang Li. Game Forge: An intellingent system that generates computer role playing games. *In Association for the Advancement of Artificial Intelligence, Video Competition, 2011*. **Nominated for Most Innovative Video.**

Selected Industry Research Experience

2015 **Google**

Zurich, Switzerland
Summer Privacy Research Intern
Mentor: Dr. Sebastian Schnorf

Worked on improving the value of privacy notifications using social and contextual cues, and explored people's willingness to share their privacy behaviors with others.

2014 **Microsoft Research**

Seattle, WA, USA
Summer Research Intern
Mentor: Dr. Stuart Schechter

Created a tool that lets lay people learn strong, randomly-assigned passwords with computer-assisted mnemonics.

2013 **Facebook**

Menlo Park, CA, USA
Summer Data Science Intern
Mentor: Dr. Adam D.I. Kramer

Analyzed how security tools diffuse through social networks and ran an experiment using social cues to improve security tool adoption.

2012 **Facebook**

Menlo Park, CA, USA
Summer Data Science Intern
Mentor: Dr. Adam D.I. Kramer

Defined, implemented and conducted a large-scale analysis of "self-censorship" on Facebook.

2011 **Microsoft Research**

Seattle, WA, USA
Summer Research Intern
Mentor: Dr. Thomas Zimmermann

Ran a large-scale analysis associating pro-social behavior in a popular shooter game with retention and other metrics.

Work experience prior to graduate school listed in the "Extended Professional Experience" section below.

Selected Press & Coverage

Self-Censorship

The Atlantic. *71% of Users Engage in Self-Censorship*, http://www.theatlantic.com/technology/archive/2013/04/71-of-facebook-users-engage-in-self-censorship/274982/

Mashable. *71% of Users Engage in Self-Censorship*, http://mashable.com/2013/04/15/71-of-facebook-users-engage-in-self-censorship/

Huffington Post. *Self-Censorship on Facebook Is Common, Study Finds*, http://www.huffingtonpost.com/craig-kanalley/self-censorship-facebook_b_3095101.html

Digital Trends. How The Internet Has a Chilling Effect on Jokes. http://www.digitaltrends.com/opinion/context-internets-chilling-effect-jokes/#!HjbRo

US News. Consumers seek online privacy.

Pittsburgh City Paper. *Saving Face(book).* http://www.pghcitypaper.com/pittsburgh/saving-facebook/Content?oid=1718331

… many more (https://www.google.com/#q=self-censorship+on+facebook)

GameForge

Gamasutra. *A World Just For You.* http://www.gamasutra.com/blogs/MichaelCook/20130722/196678/The_Saturday_Paper__A_World_Just_For_You.php

Social Cybersecurity

Serene RISC Quartlery Knowledge Digest, http://www.serene-risc.ca/files/prod/page_files/7/SERENE-RISC-Quarterly-Knowledge-Digest-Sample.pdf

Financial Times. *Geeks like me put others of safe surfing.* http://www.ft.com/cms/s/0/b1b5e5d6-0dc9-11e5-aa7b-00144feabdc0.html#axzz3iy7j8sEy

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Academic Service

Program Committee

2016 ICWSM

External Reviewer

2012+ ACM SIGCHI, ACM DIS

2013+ ACM UbiComp, ACM MobiSys, IEEE Pervasive Computing

2014+ ACM CSCW, Social Science Review, ACM IUI

2015+ MobileHCI, ToCHI, ISWC

Student Volunteer

2013 ACM SIGCHI (applied)

2014 HCII 20th Anniversary Celebration

Teaching Experience

05-4/633: Software Structures for User Interfaces – Mobile Lab, Carnegie Mellon University

Fall Semester 2012, Fall Semester 2013

I was the Instructor for this lab course, which focused on teaching students how to implement user interface software engineering techniques on Android. My responsibilities included:

- Making and teaching weekly lectures,
- Holding weekly office hours,
- Creating and grading five project-based assignments

CS2340: Objects and Design, Georgia Institute of Technology

Spring Semester 2008

I was a Teaching Assistant for this course. I taught students about object-oriented programming. My responsibilities included:

- Personally mentoring 4 groups of students for a semester long software engineering project
- Creating and grading assignments

CS1332: Data Structures & Algorithms, Georgia Institute of Technology

Fall Semester 2007

I was a Teaching Assistant for this course. I taught students about basic data structures and algorithms, including arrays, linked lists, hashes, trees, heaps, Big O, sorts, searches, dynamic programming. My responsibilities included:

- Teaching weekly recitations,
- Creating and grading several assignments,
- Creating a final exam review

Extended Professional Experience

OpenStudy, August 2010-May 2011
Atlanta, GA, U.S.A.
Software Development Engineer

Carnegie Mellon University, June 2010-August 2010
Atlanta, GA, U.S.A.
TRUST-REU Research Intern
Mentor: Dr. Adrian Perrig

Fukui Byora, May 2009-May 2010
Daishoji, Ishikawa, Japan
3D Modeling and Animation Intern

Georgia Institute of Technology, August 2006-May 2007
Atlanta, GA, U.S.A.
Work-Study Student at the Office for Graduate Admissions

Extended Honors & Awards

2011	Invited Student Panelist: Models for Preparing the Global Workforce
2010	WACE International WIL student achievement award
2008	International Plan Stipend, Georgia Tech
2006	Intel Opportunity Scholarship (2006-08)
	HOPE Scholarship (2006-11)
	India America Cultural Association Scholarship
	Golden Key, The Scholastic Arts and Writing Awards, Senior Portfolio for Region-at-Large

Individual Research Mentorship: Students Supervised

Joanne Lo	Fall 2015 – Present. CMU SDS
Haley Bryant	Spring 2015. CMU SDS
Taehoon Lee	Fall 2014 – Present. CMU CS
David Lu	Fall 2014 – Present. CMU CS
Solon Mao	Fall 2014. CMU IS.
Ethan Chan	Spring 2014. CMU IS.
Barath Chandrashekhar	Spring 2014. CMU HCI

References

Dr. Jason Hong, Carnegie Mellon University (adviser)

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Dr. Laura Dabbish, Carnegie Mellon University (adviser)

Dr. Adam D.I. Kramer, Facebook, Inc.

Dr. Stuart Schechter, Microsoft Research

Dr. Thomas Zimmermann, Microsoft Research

Dr. Mark Riedl, Georgia Institute of Technology