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Georgia Institute of Technology School of Interactive Computing

Assistant Professor

January 2018— Present

Selected Honors and Awards \Psi

2019	CCC Leadership in Science Policy (LiSPI) Institute Fellow
	GVU People's Choice Award—First Place
2018	USENIX Enigma 2018 Invited Presentation
2017	CHI Best Paper Honorable Mention [P16]
2016	CHI Best Paper Honorable Mention [P12]
	NSF EAPSI Fellowship
2015	NSA Best Scientific Cybersecurity Paper Award – Honorable Mention [P8]
2014	Qualcomm Innovation Fellowship
2013	UbiComp Best Paper [P5]
2012	National Defense Science and Engineering Graduate Fellowship (2012-15)
2011	Stu Card Graduate Fellowship (2011-2012)
	CMU CyLab CUPS Doctoral Training Program Fellowship (2011-13)
	Most Innovative Video Nomination, AAAI Video Competition [V1]

Grants

2019	Facebook Improving Ad Experiences Grant entitled "Explainable Ads: Improving Ad Targeting Transparency with Explainable Al". \$50,000
2018	NSF CRII: SaTC Grant entitled "Systems That Facilitate Cooperation and Stewardship to Improve End-User Security Behaviors". \$175,000
2016	Assisted with <i>NSF SaTC Grant</i> entitled "Social Cybersecurity: Applying Social Influence to Cybersecurity" (w/ Jason Hong & Laura Dabbish). \$500,000
2013	Assisted with NSF EAGER Grant entitled "Social Cybersecurity: Applying Social Psychology to Improve Cybersecurity" (w/ Jason Hong & Laura Dabbish). \$200,000

Academic Training & Education

Carnegie Mellon University, 2011-2017 M.S. / Ph.D. in Human-Computer Interaction

Advisers: Dr. Jason I. Hong and Dr. Laura A. Dabbish

Committee: Dr. Jeffrey P. Bigham (CMU) and Dr. J.D. Tygar (UC Berkeley)

University of Tokyo, 2016

Visiting Student Researcher (as part of NSF EAPSI Grant)

Adviser: Dr. Koji Yatani

Georgia Institute of Technology, 2006-2011

B.S. Computer Science—Media and Intelligence Threads

Adviser: Dr. Mark O. Riedl

Nanyang Technological University, 2008-2009

Exchange Student

Academic Publications

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

Semantic Scholar: https://www.semanticscholar.org/author/Sauvik-Das/37531797

Dblp: https://dblp.uni-trier.de/pers/hd/d/Das:Sauvik

Refereed Conference and Journal Papers

- [P21] Hue L.P. Watson, Eyitemi Moju-Igbene, Akanksha Kumari and **Sauvik Das**. "We Hold Each Other Accountable": Unpacking How Social Groups Approach Cybersecurity and Privacy Together. To appear In Proceedings of the 38th SIGCHI Conference on Human Factors in Computing Systems (CHI), 2020. (Acceptance rate: 24.3%)
- [P20] **Sauvik Das**, David Lu, Taehoon Lee, Joanne Lo and Jason Hong. <u>The Memory Palace</u>: Exploring Visual-Spatial Paths for Strong, Memorable, Infrequent Authentication. In Proceedings of the 32nd ACM User Interface Software and Technology Symposium (UIST), 2019. (Acceptance rate: 24.4%)
- [P19] **Sauvik Das**, Tiffany Hyun-Jin Kim, Laura Dabbish and Jason Hong. <u>Security and Privacy Behavioral Triggers: Unpacking What Drives Decisions to be Secure</u>. *In Proceedings of the Fifteenth Symposium on Usable Privacy and Security (SOUPS)*, 2019. (Acceptance Rate: 23%)
- [P18] **Sauvik Das**, Joanne Lo, Laura Dabbish and Jason Hong. <u>Breaking! A Typology of Security and Privacy News and How It's Shared</u>. *In Proceedings 36th SIGCHI Conference on Human Factors in Computing Systems (CHI), 2018*. (Acceptance Rate: 26%)
- [P17] Jason Wiese, **Sauvik Das**, John Zimmerman and Jason Hong. <u>Evolving the Ecosystem of Personal Behavioral Data</u>. *HCl Journal Special Issue on The Examined Life: Personal Uses for Personal Data (2017)*.
- [P16] **Sauvik Das**, Gierad Laput, Chris Harrison and Jason I. Hong. <u>Thumprint: Socially-Inclusive Local Group Authentication Through Shared Secret Knocks</u>. *In Proceedings of the 35th SIGCHI Conference on Human Factors in Computing Systems (CHI)*, 2017. (Acceptance Rate: 25%) **Best Paper honorable mention** (top 4% of submissions)



[P15] **Sauvik Das**. Social Cybersecurity: Understanding and Leveraging Social Influence to Increase Security Sensitivity. *German Journal of it – Information Technology Special Issue on Usable Security and Privacy, 2016.* **Invited paper**



- [P14] **Sauvik Das**, Jason Wiese and Jason I. Hong. <u>Epistenet: Facilitating Programmatic Access & Processing of Semantically Related Personal Mobile Data</u>. *In Proceedings of the 18th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI), 2016.* (Acceptance Rate: 23%).
- [P13] Alexander de Luca, Sauvik Das, Iulia Ion, Martin Ortlieb and Ben Laurie. Expert and Non-Expert Attitudes towards (Secure) Instant Messaging. In Proceedings of the 10th International Symposium on Usable Privacy and Security (SOUPS), 2016. (Acceptance Rate: 28%)



[P12] 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)



- [P11] **Sauvik Das**, Jason I. Hong and Stuart Schechter. <u>Testing Computer-Aided</u> Mnemonics and Feedback for Fast Memorization of High-Value Secrets. *In* Proceedings of the NDSS Workshop on Usable Security (USEC), 2016.
- [P10] **Sauvik Das**, Alexander Zook, and Mark Riedl. <u>Examining Game World Topology</u>

 <u>Personalization</u>. *In Proceedings of the 33rd SIGCHI Conference on Human Factors in Computing Systems (CHI), 2015*. (Acceptance Rate: 23%)
 - [P9] **Sauvik Das**, Adam Kramer, Laura Dabbish and Jason I. Hong. <u>The Role of Social Influence in Security Feature Adoption</u>. *In Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work (CSCW)*, 2015. (Acceptance Rate: 28.3%)



[P8] **Sauvik Das**, Adam Kramer, Laura Dabbish and Jason I. Hong. <u>Increasing Security Sensitivity with Social Proof: A Large Scale Experimental Confirmation</u>. *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)



[P7] 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%)



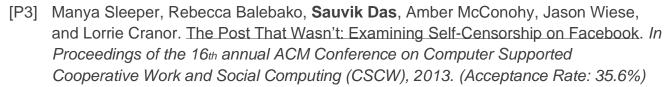
- [P6] Eiji Hayashi, **Sauvik Das**, Shahriyar Amini, Jason Hong and Ian Oakley. <u>CASA</u>: <u>Context-Aware Scalable Authentication</u>. *In Proceedings of the 7th International* Symposium on Usable Privacy and Security (SOUPS), 2013. (Acceptance rate: 27%)
- [P5] **Sauvik Das**, Eiji Hayashi, and 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)



[P4] **Sauvik Das** and Adam Kramer. <u>Self-Censorship on Facebook</u>. *In Proceedings of the 7th International AAAI Conference on Weblogs and Social Media (ICWSM)*, 2013.



(Acceptance rate: 20%)





- [P2] Emmanuel Owusu, Jun Han, **Sauvik Das** and Adrian Perrig. <u>ACCessory: Keystroke Inference using Accelerometers on Smartphones</u>. *In Proceedings of the 12th annual ACM/SIG International Workshop on Mobile Computing Systems and Applications (HotMobile), 2012*. (Acceptance rate: 20.6%)
- [P1] Ken Hartsook, Alexander Zook, **Sauvik Das**, and Mark Riedl. <u>Toward supporting</u> storytellers with procedurally generated game worlds. *In Proceedings of the 2011 IEEE Conference on Computational Intelligence in Games (CIG)*, 2011.



Refereed Workshop Papers

- [W3] David Lu, Taehoon Lee, **Sauvik Das** and Jason Hong. Examining Visual-Spatial Paths for Mobile Authentication. Who Are You?! SOUPS Workshop on Authentication in Usable Security (WAY). 2016
- [W2] **Sauvik Das**, Thomas Zimmermann, Nachiappan Nagappan, Bruce Phillips, and Chuck Harrison. Revival Actions in a Shooter Game. *CHI Workshop on Designing and Evaluating Sociability in Online Video Games (DESVIG)*. 2013.
- [W1] Eiji Hayashi, **Sauvik Das**, Shahriyar Amini, Emmanuel Owusu, Jun Han, Jason Hong, Ian Oakley, Adrian Perrig and Joy Zhang. <u>CASA: context-aware scalable</u> authentication. *SOUPS Workshop on Usable Privacy & Security for Mobile Devices*. 2012.

Patents

- [PT3] **Sauvik Das**, Gierad Laput, Chris Harrison and Jason Hong. <u>Inclusive Group</u> Authentication. *Provisional Patent Filed*
- [PT2] **Sauvik Das** and Adam Kramer. <u>Systems and Methods for Managing Shared Content</u>. *US Patent 2017/0041408*. 2017
- [PT1] **Sauvik Das** and Adam Kramer. <u>Systems and Methods for Increasing Security Sensitivity Based on Social Influence</u>. *US Patent 2016/0140341*. 2016

Visioning Workshop Papers

- [V2] Sauvik Das, Laura Dabbish and Jason Hong. Improving End-User Security Sensitivity by Making Security More Social. CCC Sociotechnical Cybersecurity Workshop. 2017
- [V1] Jason Hong, **Sauvik Das**, Tiffany Hyun-Jin Kim, Laura A. Dabbish. <u>Social Cybersecurity</u>: Applying Social Psychology to Cybersecurity. *Human Computer Interaction Consortium (HCIC)*. 2015.

Theses and Technical Reports

- [T2] **Sauvik Das.** Social Cybersecurity: Reshaping Security Through an Empirical Understanding of Human Social Behavior. *CMU-HCII-17-100*. Doctoral Dissertation.
- [T1] **Sauvik Das**, LaToya Green, Beatrice Perez, Michael Murphy, and Adrian Perrig. Detecting User Activities Using the Accelerometer on Android Smartphones. 2010.

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.



Invited Talks

- [T28] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *Distinguished Lecture, American University. November 2019*
- [T27] Invited Keynote Speaker for Gartner Security & Risk Summit, August 2019 (declined).
- [T26] Reshaping End-User Cybersecurity: Finding the Next Dominant Design Pattern. *Google Fuschia Team, June 2019*
- [T25] Reshaping End-User Cybersecurity: Finding the Next Dominant Design Pattern. Symantec Research Labs, May 2019
- [T24] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *Johns Hopkins Applied Physics Lab Seminar Series, November 2018*
- [T23] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *GVU Brown Bag Seminar Series*, October 2018
- [T22] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. Georgia Tech IISP *Cybersecurity Lecture Series, August 2018*
- [T21] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. GTRI Seminar Series, April 2018
- [T20] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *USENIX Enigma, January 2018*
- [T19] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *Stanford University, November 2017*
- [T18] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. CCC Research Symposium Early Career Researcher Poster, October 2017
- [T18] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *Georgia Institute of Technology IC, April 2017*
- [T17] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *University of Washington CSE, April 2017*
- [T16] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *University of California, Berkeley iSchool, April 2017*
- [T15] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. Princeton University CS, March 2017

- [T14] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *University of Washington iSchool, February 2017*
- [T13] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *University of Minnesota CS&E, February 2017*
- [T12] Social Cybersecurity: Reshaping Security Through An Empirical Understanding of Human Social Behavior. *University of Michigan CSE, February 2017*
- [T11] Thumprint: Socially-Inclusive Local Group Authentication through Shared Secret Knocks. *CMU CHIMPS Lab, September 2016*
- [T10] Social Cybersecurity: Understanding and Leveraging Social Influence to Increase Security Sensitivity. TU Darmstadt, May 2016
- [T9] Increasing Security Sensitivity with Social Proof: A Large-Scale Experimental Confirmation. NSA Best Scientific Cybersecurity Paper Award Ceremony, November 2015
- [T8] Social Cybersecurity: Understanding and Leveraging Social Influence to Increase Security Sensitivity. Georgia Tech Entertainment Intelligence Lab, October 2015
- [T7] Thumprint: Socially-Inclusive Local Group Authentication through Shared Secret Knocks. *Qualcomm Innovation Fellowship, Winners Day, September 2015*
- [T6] The Role of Social Influence in Security Feature Adoption. *Google UX-Privacy Lunch, June 2015*
- [T5] The Role of Social Influence in Security Feature Adoption. CUPS Lunchtime Seminar, March 2015
- [T4] Increasing Security Sensitivity with Social Proof: A Large-Scale Experimental Confirmation. *CUPS Lunchtime Seminar*, *October 2014*
- [T3] Everyday Objects for Physical Space Authentication. *Qualcomm Innovation Fellowship, Winners Day,* September 2014
- [T2] Self-Censorship on Facebook. Facebook Faculty Summit, July 2013
- [T1] Pro-Social Behavior in a Shooter Game. Microsoft Research, December 2011

Selected Industry Research Experience

2015 Googl e

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

Worked on improving the value of privacy notifications using social and contextual cues.

2014 Microsoft Research

Seattle, WA, USA 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 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 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 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.

Selected Press & Coverage

Self- The Atlantic. 71% of Users Engage in Self-Censorship,

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.

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

... much 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

Serene RISC Quartlery Knowledge Digest, http://www.serene-

Cybersecurity

risc.ca/files/prod/page_files/7/SERENE-RISC-Quarterly-Knowledge-Digest-Sample.pdf

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

<u>Vice.</u> People Can't Tell What Apps Use Encryption, And Don't Really Care, Study Finds. http://motherboard.vice.com/read/people-cant-tell-what-apps-use-encryption-and-dont-really-care-study-finds

SCS@CMU. Skip the Password, Use "Secret Knocks" Instead. http://www.cs.cmu.edu/news/skip-password-use-secret-knock-instead

<u>Tech Target.</u> Social cybersecurity: Influence people, make friends and keep them safe. http://searchcio.techtarget.com/feature/Social-cybersecurity-Influence-people-make-friends-and-keep-them-safe

Academic Service

Program Committee / Associate Editor

2020 ACM IMWUT (Associate Editor)

ACM SIGCHI (Associate Chair—Engineering Interactive Systems & Technology Subcommittee)

2019 ACM IMWUT (Associate Editor)

ACM SIGCHI (Associate Chair—Engineering Interactive Systems & Technology Subcommittee)

2018 ACM IMWUT [formerly UbiComp] (Associate Editor)

ACM SIGCHI (Associate Chair—Privacy, Security and Visualization Subcommittee)

2017 WWW (Security & Privacy Track)

AAAI ICWSM

USENIX SOUPS Poster Jury

2016 AAAI ICWSM

External Reviewer

2017	Transactions on Social Computing
2015+	MobileHCI, ToCHI, ISWC
2014+	ACM CSCW, Social Science Review, ACM IUI
2013+	ACM UbiComp, ACM MobiSys, IEEE Pervasive Computing
2012+	ACM SIGCHI (Excellent Review Designation, 2015 - 2018), ACM DIS

Teaching Experience

As Primary Instructor

CS 4/8803: Usable Privacy & Security, Georgia Institute of Technology

Spring Semester 2019

CS4001: Computers, Society & Professionalism, Georgia Institute of Technology

Spring, Fall Semester 2018

As Teaching Assistant or Invited Lecturer

05-3/820: Social Web: Content, Communities and Context, Carnegie Mellon University

• Guest lecturer, Fall semester 2015

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

Head TA Fall Semester 2012, Fall Semester 2013

CS2340: Objects and Design, Georgia Institute of Technology

TA Spring Semester 2008

CS1332: Data Structures & Algorithms, Georgia Institute of Technology

TA Fall Semester 2007

Students Supervised

Georgia Institute of Technology

Ph.D. Students (as primary or co-advisor)

Youngwook Do Fall 2018 – Present (w/ Gregory Abowd)
Yuxi Wu Fall 2019 – Present (w/ W. Keith Edwards)

P. Jacob Logas Fall 2019 – Present

Ph.D. Students (as project advisor)

Sena Sahin Spring 2019 – Present Suood AlRoomi Fall 2020 – Present

Sindhu Ernala Spring 2019 – Present

Ph.D. Students (dissertation committee)

Alan Dingtian Zhang 2020 Towards Ubiquitous Self-Powered Ambient Light Sensing Surfaces

Ph.D. Students (quals committee)

Sindhu Ernala Fall 2018
Clayton Feustel Fall 2018
Sucheta Ghoshal Fall 2018

Jung Wook Park Fall 2019 – Fall 2020

Master's Students

Sepideh Karimi Spring 2019 – Fall 2020
Aditi Shah Spring 2019 – Fall 2020
Bharath Chandrasekar Spring 2019 – Fall 2020
Eyetemi Moju-Igbene Fall 2018 -- Present
Linh Hoang Fall 2018 -- Present

Cooper Colglazier Fall 2018
Shweta Singhal Fall 2018
Timothy Deeb-Swihart Fall 2018
Priyanshu Jaiwar Fall 2018
Tina Johnson Fall 2018

Akanksha Kumari Fall 2018 – Fall 2020

Jason Paul Summer 2018

Hue Watson Summer 2018 – Summer 2019

Undergraduates

Valerie Fanelle Spring 2019 – Fall 2020
Siddhant Singh Spring 2019 -- Present
Rachel Zhong Fall 2018 -- Present
Nancy Wang Fall 2018 -- Present

Nancy Tao Fall 2018

Ziang Ren Fall 2018 -- Present Ryan Qin Fall 2018 - Spring 2019 Tong Peng Fall 2018 - Present Nikole McLeish Fall 2018 - Spring 2019 Fall 2018 - Spring 2019 Jenny Li Fall 2018 - Spring 2019 Akum Kang Kris Satya Fall 2018 - Spring 2019 Vamsi Desu Fall 2018 - Spring 2019 Ilya Golod Fall 2018 - Fall 2020 Davit Gabrielyan Fall 2018 - Fall 2020

Carnegie Mellon University

Tuan Ahn Le Fall 2016 – Fall 2017. CMU EE

Joanne Lo Fall 2015 – Fall 2017. CMU SDS

Haley Bryant Spring 2015. CMU SDS

Taehoon Lee Fall 2014 – Spring 2016. CMU CS.

Publications: W3

David Lu Fall 2014 – Fall 2017. CMU CS

Publications: W3

Yiqun Cao Spring 2014 – Fall 2015. CMU BA

Publications: P12

Shuang Yu Spring 2014 – Fall 2015. CMU IS

Publications: P12

Solon Mao Fall 2014. CMU IS.
Ethan Chan Spring 2014. CMU IS.
Barath Chandrashekhar Spring 2014. CMU MHCI