Scott Ruoti

Security & Privacy · Human-Computer Interaction · Usable Security
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Summary

- I take an interdisciplinary approach to research that starts with measuring real-world systems to identify their limitations, proceeds to designing and prototyping interventions and systems that address those limitations, and concludes with evaluating those interventions theoretically and empirically to demonstrate their real-world feasibility
- Research areas include authentication, key management, smart agriculture, and usable security
- PI of multiple programs, having obtained $4,049,979 in funding
- Recipient of the John Karat Award, identifying emerging leaders in the field of usable security
- Recipient of the UTK Tickle College of Engineering Professional Promise in Research Award

Education

Ph.D. in Computer Science Dec 2016
Brigham Young University GPA: 4.0
- Dissertation: *Usable, Secure Content-Based Encryption on the Web*
- Advisor: Kent Seamons
- President of the Computer Science Graduate Student Association

M.S. in Computer Science Apr 2015
Brigham Young University GPA: 4.0
- Thesis: *Authentication Melee: A Usability Analysis of Seven Web Authentication Systems*

B.S. in Computer Science, B.A. in Chinese Apr 2011
Brigham Young University GPA: 3.83
- Minor in Mathematics
- Participated in the Chinese Language Flagship Program
  - 2 years intense Chinese study building professional-level language proficiency in Computer Science
  - Semester of graduate-level Chinese Computer Science classes at Nanjing University (南京大学)

Professional Experience

Assistant Professor Aug 2018–Present
University of Tennessee, Knoxville, Knoxville, Tennessee
- Director of the Usable Security Empirical Research (USER) lab
- Graduated 1 Ph.D. and 5 MS students
- Helped create and develop UTK's online MS degree for Computer Science
- Developed courses on introducing cybersecurity to undergraduates and graduate students, applied cryptography, software security, and human factors in cybersecurity

Technical Staff Aug 2016–Aug 2018
MIT Lincoln Laboratory, Lexington, Massachusetts

- Chief architect for a cybersecurity architecture designed to protect all U.S. Federal Government Departments and Agencies
- PI leading research on blockchain technology
- PI leading research on high-performance encrypted databases

Funding

Total funding: $4,049,979
My portion: $3,129,734

External Awards

Total funding: $3,936,229
My portion: $3,115,984

Co-PI Precision Dairy Management: Measuring Deployment, Examining Data Security and Privacy Perceptions, and Modeling Potential Threats
Agriculture and Food Research Initiative (AFRI)
National Institute of Food and Agriculture (NIFA),
United States Department of Agriculture (USDA)
2023–2028
Total: $300,000
Mine: $151,751

PI Identifying, Quantifying, and Explaining Design Principles and User Practices that Enable Effective Long-Term Key Management
Faculty Early Career Development Program (CAREER)
National Science Foundation (NSF)
2023–2028
Total: $670,235

PI Identifying and Quantifying Design Principles For Improving Password Manager Usage
Secure and Trustworthy Computing (SaTC)
National Science Foundation (NSF)
2022–2025
Total: $515,999

Co-PI A Cyber-Attack Detection Platform for Cyber Security of Digital Instrumentation and Control Systems
Nuclear Engineering University Program (NEUP)
Office of Nuclear Energy (ONE), Department of Energy (DoE)
2019–2022
Total: $799,995
Mine: $127,999

PI Secure Data Provenance
Air Force Research Laboratory (AFRL)
2017–2019
Total: $1,650,000

Internal Awards

Total funding: $113,750
My portion: $13,750

Co-PI Broadband-Enabled Precision Agriculture: 5G in Turfgrass Science and Education
SPARKS: Broadband Seed Competition
The University of Tennessee, Knoxville
2023
Total: $75,000

Co-PI UT-Canada Catalyst: Development and Implementation of Novel Intelligent Sensing Systems to Forecast and Mitigate Cascading Microbio-Geohazards
Global Catalyst Grants Faculty Research Grant
The University of Tennessee, Knoxville
2023
Total: $30,000
Mine: $5,000

PI Exploring Users Perceptions Towards and Understanding of Browser Extension Security
Student Research Award
The University of Tennessee, Knoxville
2022
Total: $5,000

PI Investigating Middle Eastern Immigrants' Security and Privacy Practices and Norms
Student Research Award
The University of Tennessee, Knoxville
2022
Total: $3,750

Publications

Journals

[J7] Sean Oesch, Ruba Abu-Salma, Oumar Diallo, Juliane Krämer, James Simmons, Justin Wu, **Scott Ruoti**. User Perceptions of Security and Privacy for Group Chat, *ACM Digital Threats: Research and Practice*, Vol. 3, No. 2, June 2022. ACM, 2022.
ACM DTRAP

[J6] Yunhe Feng, Qing Cao, Hairong Qi, **Scott Ruoti**. SenCAPTCHA: A Mobile-First CAPTCHA Using Orientation Sensors, *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, Vol. 4, No. 2, June 2020. ACM, 2020.
ACM IMWUT (UbiComp 2020)

[J5] **Scott Ruoti**, Ben Kaiser, Arkady Yerukhimovich, Jeremy Clark, Rob Cunningham. Blockchain Technology: What Is It Good For?, *Communications of the ACM*, Vol. 63, No. 1, pages 46–53. ACM, 2020.
Communications of the ACM

[J4] **Scott Ruoti**, Ben Kaiser, Arkady Yerukhimovich, Jeremy Clark, Rob Cunningham. Blockchain Technology: What Is It Good For?, *ACM Queue*, Vol. 17, No. 5, pages 60–87. ACM, 2019.
ACM Queue

[J3] **Scott Ruoti**, Kent Seamons. Johnny's Journey Toward Usable Secure Email, *IEEE Security & Privacy*, Vol. 17, No. 6, pages 72–76, November/December 2019. IEEE, 2019.
IEEE Security & Privacy

[J2] **Scott Ruoti**, Jeff Andersen, Luke Dickinson, Scott Heidbrink, Tyler Monson, Mark O'Neill, Ken Reese, Brad Spendlove, Elham Vaziripour, Justin Wu, Daniel Zappala, Kent Seamons. Usability Study of Four Secure Email Tools Using Paired Participants, *ACM Transactions on Privacy and Security*, Vol. 22, No. 2, pages 22–29, April 2019. ACM, 2019.
ACM TOPS

[J1] Mark O'Neill, **Scott Ruoti**, Kent Seamons, Daniel Zappala. TLS Proxies: How Often and Who Cares?, *IEEE Internet Computing*, Vol. 21, No. 3, pages 22–29, May/June 2017. IEEE, 2017.
IEEE Internet Computing

Conferences

[C24] Michael Clark, **Scott Ruoti**, Michael Mendoza, Kent Seamons. A Comparison of Three Approaches to Assist Users in Memorizing System-Assigned Passwords, *Proceedings of the 13th Symposium on Usable Security and Privacy*. ACM, 2024. — USEC 2024

[C23] Garret Smith, Tarun Yadav, Jonathan Duston, **Scott Ruoti**, Kent Seamons. "If I could do this, I feel anyone could:" The Design and Evaluation of a Secondary Authentication Factor Manager, *Proceedings of the 33rd USENIX Security Symposium*. USENIX, 2023. — USENIX Security 2023

[C22] Anuj Gautam, Shan Lalani, **Scott Ruoti**. Improving Password Generation Through the Design of a Password Composition Policy Description Language, *Proceedings of the 18th Symposium on Usable Privacy and Security*. USENIX, 2022. — SOUPS 2022 Acceptance: 27%

[C21] Sean Oesch, James Simmons, Anuj Gautam, **Scott Ruoti**. "It Basically Started Using Me:" An Observational Study of Password Manager Usage, *Proceedings of the 40th ACM Conference on Human Factors in Computing Systems*. ACM, 2022. — CHI 2022 Acceptance: 24%

[C20] James Simmons, Oumar Diallo, Sean Oesch, **Scott Ruoti**. Systematization of Password Manager Use Cases and Design Paradigms, *Proceedings of the 37th Annual Computer Security Applications Conference*. ACM, 2021. — ACSAC 2021 Acceptance: 24%

[C19] Sean Oesch, Anuj Gautam, **Scott Ruoti**. The Emperor's New Autofill Framework: A Security Analysis of Autofill on iOS and Android, *Proceedings of the 37th Annual Computer Security Applications Conference*. ACM, 2021. — ACSAC 2021 Acceptance: 24%

[C18] Fan Zhang, Christopher Spirito, Ronald Boring, Stacy Baskin, Jamie Coble, **Scott Ruoti**. Development of a Hardware-in-the-Loop Fancy Testbed to Support Cybersecurity Research, Training, and Education for Nuclear Power Plants, *Proceedings of the 12th Nuclear Plant Instrumentation, Control and Human-Machine Interface Technologies*. ANS, 2021. — NPIC 2021

[C17] Jeremy Clark, P.C. van Oorschot, **Scott Ruoti**, Kent Seamons, Daniel Zappala. SoK: Securing Email—A Stakeholder-Based Analysis, *Proceedings of the 25th International Conference on Financial Cryptography and Data Security*. Springer, 2021. — FC 2021 Acceptance: 25%

[C16] Sean Oesch, Ruba Abu-Salma, Oumar Diallo, Juliane Krämer, James Simmons, Justin Wu, **Scott Ruoti**. Understanding User Perceptions of Security and Privacy for Group Chat: A Survey of Users in the US and UK, *Proceedings of the 36th Annual Computer Security Applications Conference*. ACM, 2020. **Nominated for Best Presentation**. — ACSAC 2020 Acceptance: 23%

[C15] Sean Oesch, **Scott Ruoti**. That Was Then, This Is Now: A Security Evaluation of Password Generation, Storage, and Autofill in Browser-Based Password Managers, *Proceedings of the 30th USENIX Security Symposium*. USENIX, 2020. — USENIX Security 2020 Acceptance: 16%

[C14] **Scott Ruoti**, Jeff Andersen, Tyler Monson, Daniel Zappala, Kent Seamons. A Comparative Usability Study of Key Management in Secure Email, *Proceedings of the 14th Symposium on Usable Privacy and Security*. USENIX, 2018. — SOUPS 2018 ACCEPTANCE: 23%

[C13] Joshua Reynolds, Trevor Smith, Ken Reese, Luke Dickinson, **Scott Ruoti**, Kent Seamons. A Tale of Two Studies: The Best and Worst of YubiKey Usability, *Proceedings of the 38th IEEE Symposium on Security and Privacy*. IEEE, 2018. — IEEE S&P 2018 ACCEPTANCE: 11%

[C12] **Scott Ruoti**, Kent Seamons, Daniel Zappala. Layering Security at Global Control Points to Secure Unmodified Software, *Proceedings of the 2nd IEEE Secure Development Conference*. IEEE, 2017. **Best Paper Award**. — IEEE SECDEV 2017 ACCEPTANCE: 32%

[C11] **Scott Ruoti**, Ben Kaiser, Ariel Hamlin, Cassandra Sparks, Robert Cunningham. PACE: Proactively-Secure Accumulo with Cryptographic Enforcement, *Proceedings of the 21st IEEE High Performance Extreme Computing Conference*. IEEE, 2017. **Nominated for Best Paper Award**. — IEEE HPEC 2017

[C10] Mark O'Neill, Scott Heidbrink, **Scott Ruoti**, Jordan Whitehead, Dan Bunker, Luke Dickinson, Travis Hendershot, Joshua Reynolds, Kent Seamons, Daniel Zappala. TrustBase: An Architecture to Repair and Strengthen Certificate-Based Authentication, *Proceedings of the 27th USENIX Security Symposium*. USENIX, 2017. — USENIX SECURITY 2017 ACCEPTANCE: 16%

[C9] **Scott Ruoti**, Scott Heidbrink, Mark O'Neill, Eric Gustafson, Yung Ryn Choe. Intrusion Detection with Unsupervised Heterogeneous Ensembles using Cluster-based Normalization, *Proceedings of the 24th IEEE International Conference on Web Services*. IEEE, 2017. — IEEE ICWS 2017 ACCEPTANCE: 22%

[C8] **Scott Ruoti**, Tyler Monson, Justin Wu, Kent Seamons, Daniel Zappala. Weighing Context and Tradeoffs: How Suburban Adults Selected Their Online Security Posture, *Proceedings of the 13th Symposium on Usable Privacy and Security*. USENIX, 2017. — SOUPS 2017 ACCEPTANCE: 27%

[C7] Mark O'Neill, **Scott Ruoti**, Kent Seamons, Daniel Zappala. TLS Proxies: Friend or Foe?, *Proceedings of the 17th ACM Internet Measurement Conference*. ACM, 2016. — ACM IMC 2016 ACCEPTANCE: 25%

[C6] **Scott Ruoti**, Jeff Andersen, Travis Hendershot, Kent Seamons, Daniel Zappala. Private Webmail 2.0: Simple and Easy-to-Use Secure Email, *Proceedings of the 29th ACM Symposium on User Interface Software and Technology*. ACM, 2016. — ACM UIST 2016 ACCEPTANCE: 20%

[C5] **Scott Ruoti**, Mark O'Neill, Kent Seamons, Daniel Zappala. User Attitudes Toward the Inspection of Encrypted Traffic, *Proceedings of the 12th Symposium on Usable Privacy and Security*. USENIX, 2016. — SOUPS 2016 ACCEPTANCE: 28%

[C4] **Scott Ruoti**, Jeff Andersen, Scott Heidbrink, Mark O'Neill, Elham Vaziripour, Justin Wu, Daniel Zappala, Kent Seamons. "We're on the Same Page": A Usability Study of Secure Email Using Pairs of Novice Users, *Proceedings of the 34th ACM Conference on Human Factors in Computing Systems*. ACM, 2016. **Honorable Mention for Best Paper**. — ACM CHI 2016 ACCEPTANCE: 23%

[C3] **Scott Ruoti**, Brent Roberts, Kent Seamons. Authentication Melee: A Usability Analysis of Seven Web Authentication Systems, *Proceedings of the 24th International Conference on World Wide Web*. ACM, 2015. — WWW 2015 — Acceptance: 14%

[C2] **Scott Ruoti**, Nathan Kim, Ben Burgon, Timothy W. van der Horst, and Kent Seamons. Confused Johnny: When Automatic Encryption Leads to Confusion and Mistakes, *Proceedings of the 9th Symposium on Usable Privacy and Security*. ACM, 2013. — SOUPS 2013 — Acceptance: 29%

[C1] Chris Robison, **Scott Ruoti**, Timothy W. van der Horst, and Kent Seamons. Private Facebook Chat, *Proceedings of the 2012 International Conference on Privacy, Security, Risk, and Trust and 2012 International Conference on Social Computing*. IEEE, 2012. — IEEE PASSAT/SocialCom 2012 — Acceptance: 22%

Peer-Reviewed Archival Workshops

[W3] Tyler Monson, Joshua Reynolds, Trevor Smith, **Scott Ruoti**, Daniel Zappala, Kent Seamons. A Usability Study of Secure Email Deletion, *Proceedings of the 3rd European Workshop on Usable Security*. Internet Society, 2018. — Euro USEC 2018 — Acceptance: 47%

[W2] **Scott Ruoti**, Kent Seamons. End-to-End Passwords, *Proceedings of the 20th New Security Paradigms Workshop*. ACM, 2017. — NSPW 2017 — Acceptance: 41%

[W1] Alexander Afanasyev, J. Alex Halderman, **Scott Ruoti**, Kent Seamons, Yingdi Yu, Daniel Zappala, Lixia Zhang. Content-based Security for the Web, *Proceedings of the 19th New Security Paradigms Workshop*. ACM, 2016. — NSPW 2016 — Acceptance: 46%

Other Workshops

[O3] Trevor Smith, **Scott Ruoti**, Kent Seamons. Augmenting Centralized Password Management with Application-Specific Passwords, *Proceedings of the 3rd Workshop on "Who Are You?! Adventures in Authentication"*. USENIX, 2017. — WAY 2017

[O2] **Scott Ruoti**, Kent Seamons. Standard Metrics and Scenarios for Usable Authentication, *Proceedings of the 2nd Workshop on "Who Are You?! Adventures in Authentication"*. USENIX, 2016. — WAY 2016

[O1] **Scott Ruoti**, Jeff Andersen, Kent Seamons. Strengthening Passwords-based Authentication, *Proceedings of the 2nd Workshop on "Who Are You?! Adventures in Authentication"*. USENIX, 2016. — WAY 2016

Posters

[P5] Senjuti Dutta, Rhema Linder, Alex Williams, Anastasia Kuzminykh, **Scott Ruoti**. Beyond a One-Size-Fits-All Approach: Towards Personalizing Multi-device Setups in Crowdwork, Poster at the *23rd ACM International Conference on Ubiquitous Computing*. — UbiComp 2022

[P4] **Scott Ruoti**, Jeff Andersen, Tyler Monson, Daniel Zappala, Kent Seamons. A Comparison of PGP, IBE, and Password-based Secure Email, Poster at the *12th Symposium on Usable Privacy and Security*. — SOUPS 2015

[P3] **Scott Ruoti**, Jeff Andersen, Scott Heidbrink, Mark O'Neill, Elham Vaziripour, Justin Wu, Daniel Zappala, Kent Seamons. "We're on the Same Page": A Usability Study of Secure Email Using Pairs of Novice Users, Poster at the *12th Symposium on Usable Privacy and Security*. SOUPS 2015

[P2] **Scott Ruoti**, Brent Roberts, Kent Seamons. Authentication Melee: A Usability Analysis of Seven Web Authentication Systems, Poster at the *11th Symposium on Usable Privacy and Security*. **Distinguished poster award**. SOUPS 2015

[P1] Mark O'Neill, **Scott Ruoti**, Kent Seamons, Daniel Zappala. TLS Proxies: Friend or Foe?, Poster at the *21st ACM SIGSAC Conference on Computer and Communications Security*. ACM CCS 2014

Students Graduated

Doctoral Students

Sean Oesch, Oak Ridge National Laboratories — Spring 2021
Dissertation: *An Analysis of Modern Password Manager Security and Usage on Desktop and Mobile Devices*

Master's Students

Blake Childress, Battelle — Spring 2023
Project: *Security Advice for Parents and Children About Content Filtering and Circumvention as Found on YouTube and TikTok*

John Sadik, pursuing a Ph.D. at the University of Tennessee, Knoxville — Spring 2023
Thesis: *Survey of Input Modalities in the Western World*

Jared Staman — Spring 2023

Anuj Gauatam, pursuing a Ph.D. at the University of Tennessee, Knoxville — Spring 2022

Benjamin Greenberg, FedEx — Spring 2022

Ethan Partelow, OSIsoft — Spring 2022

Daniel Troutman, Clayton — Spring 2022

Christian Atwater, Varian — Spring 2021

Austin S1aporito, Department of Defense — Spring 2021
Project: *Introducing A Secure Password Entry Channel into A Web Browser*

Shan Lalani, Eastman Chemical Company — Fall 2020

Ryan Flint, Innovative Defense Technologies — Spring 2020

Pengxiang Xu — Spring 2020

Undergraduate Students

Charles Martin, REU student from Roane State Community College — Aug 2023–Dec 2023

Conor O'Malley — Jun 2023–Aug 2023

Matthew Hurst, REU student from Roane State Community College — Jun 2023–Aug 2023

Jacob Leonard, Mercedes-Benz	Aug 2022–Dec 2022
Knox Cavitt, K&P Remodeling	Aug 2021–May 2022
Cara Scott, Raytheon	Aug 2019–Aug 2020
Oumar Souleymane Diallo, Parsons	Aug 2019–May 2020
James Simmons, OpenBB, pursuing a MD degree	Jan 2019–Dec 2021

Presentations

31.	Towards Secure and Usable Password Managers Colloquium Lecture, Brigham Young University	Jan. 17, 2023
30.	Johnny's Journey Toward Usable Secure Email Distinguished Lecture, Ruhr-Universität Bochum	Dec. 16, 2021
29.	Systematization of Password Manager Use Cases and Design Paradigms 37th Annual Computer Security Applications Conference, Online	Dec. 9, 2021
28.	Future of the Cyber Workforce Pane Invited Panelist, Knoxville Technology Council/ Cyber Information Security Consortium	Nov. 18, 2021
27.	Securing The Passwords You Use Everyday Invited Talk, Brigham Young University	Jan. 22, 2021
26.	Understanding Blockchain Technology and Its Use Cases Invited Talk, Tennessee Tech University	Nov. 26, 2019
25.	Securing Email for the Masses Invited Talk, CURRENT Research Center, University of Tennessee, Knoxville	Jul. 10, 2019
24.	Securing Email for the Masses Invited Talk, Oak Ridge National Laboratories	Jan. 24, 2019
23.	Understanding Blockchain Technology and Its Use Cases Distinguished Seminar, Carnegie Mellon University	Dec. 3, 2018
22.	A Comparative Usability Study of Key Management in Secure Email 14th Symposium on Usable Privacy and Security, Baltimore, Maryland	Aug. 14, 2018
21.	Securing Email for the Masses Invited Talk, Clemson University	Mar. 9, 2018
20.	Securing Email for the Masses Invited Talk, University of Tennessee	Feb. 26, 2018
19.	Securing Email for the Masses Invited Talk, New York University	Feb. 16, 2018
18.	Securing Webmail for the Masses Invited Talk, University of Massachusetts Lowell	Feb. 8, 2018
17.	End-to-End Passwords 20th New Security Paradigms Workshop, Santa Cruz, California	Oct. 4, 2017
16.	Weighing Context and Tradeoffs: How Suburban Adults Selected Their Online Security Posture 13th Symposium on Usable Privacy and Security, San Jose, California	Jul. 14, 2017

15.	Cryptographically Enforcing Visibility Fields Accumulo Summit, College Park, Maryland	Oct. 13, 2016
14.	Standard Metrics and Scenarios for Usable Authentication 2nd Workshop on "Who Are You?! Adventures in Authentication", Denver, Colorado	Jun. 22, 2016
13.	User Attitudes Toward the Inspection of Encrypted Traffic 2nd Workshop on "Who Are You?! Adventures in Authentication", San Jose, California	May 10, 2016
12.	User Attitudes Toward the Inspection of Encrypted Traffic 12th Symposium on Usable Privacy and Security, Denver, Colorado	Jun. 23, 2016
11.	"We're on the Same Page": A Usability Study of Secure Email Using Pairs of Novice Users 34th ACM Conference on Human Factors in Computing Systems, Denver, Colorado	Jun. 22, 2016
10.	Securing Webmail for the Masses Invited Talk, University of Utah	Apr. 13, 2016
9.	Securing Webmail for the Masses Invited Talk, Massachusetts Institute of Technology Lincoln Laboratory	Mar. 2, 2016
8.	Securing Webmail for the Masses Invited Talk, University of Tennessee	Feb. 17, 2016
7.	When the Rubber Meets the Road Invited Talk, Sandia National Laboratories	Jan. 28, 2016
6.	Helping Individuals and Organizations Protect Their Online Communication and Data Invited Talk, Sandia National Laboratories	Nov. 23, 2015
5.	Security and Usability Research at BYU Invited Talk, College of Physical and Mathematics, College Volunteer Leadership Council, Brigham Young University	Oct. 9, 2015
4.	The Conundrum of Secure Email Lightning Talk, 11th Symposium on Usable Privacy and Security, Ottawa, Canada	Jul. 23, 2015
3.	Usable Security for Webmail and Single Sign-on Invited Talk, Symantec CTO Tech Exchange, Culver City, California	Oct. 17, 2013
2.	Confused Johnny: When Automatic Encryption Leads to Confusion and Mistakes 9th Symposium on Usable Privacy and Security, New Castle, United Kingdom	Jul. 25, 2013
1.	Private Facebook Chat 2012 International Conference on Privacy, Security, Risk, and Trust and 2012 International Conference on Social Computing, Amsterdam, Netherlands	Sep. 5, 2012

University Service

Department

6.	Advisor, HackUTK student club	2020–Present
5.	Member, Undergraduate committee	2019–Present
4.	Chair, ad-hoc undergraduate curriculum update committee	2022–2023
3.	Member, Faculty search committee	2021–2022
2.	Member, Online Master's committee	2020–2022
1.	Member, Faculty search committee	2019–2020

Other Responsibilities

1.	Member, CITC Program Advisory Board, Roane State Community College	2018–Present

Professional Service

Organizing Committee

4.	Mentoring chair, Symposium on Usable Privacy and Security	2022–2023
3.	Video chair, IEEE Symposium on Security and Privacy	2021–2023
2.	Publicity chair, IEEE Symposium on Security and Privacy	2018–2021
1.	Lightning talks chair, Symposium on Usable Privacy and Security	2017–2019

Award Committee

2.	Member, John Karat Award, Symposium on Usable Privacy and Security	2020–2022
1.	Member, Test of Time Award, Symposium on Usable Privacy and Security	2020

Program Committee

4.	Member, USENIX Security Symposium	2023–present
3.	Member, European Symposium on Usable Security	2018–present
2.	Member, Symposium on Usable Privacy and Security	2018–present
1.	Member, IEEE European Symposium on Security and Privacy	2018

Workshop Committee

3.	Member, International Workshop on Socio-Technical Aspects in Security and Trust	2018
2.	Member, Workshop on Usable Security	2018
1.	Member, Workshop on "Who Are You?! Adventures in Authentication"	2020–2021

Reviewing for Journals and Magazines

8.	ACM Transactions on Networking	ACM ToN
7.	ACM Computing Surveys	ACM CSUR
6.	ACM Transaction on Privacy and Security	ACM TOPS
5.	Behavioral Public Policy	BPP
4.	Future Generation Computer Systems	FGCS
3.	IEEE Security & Privacy Magazine	IEEE S&P Magazine
2.	IEEE Transactions on Dependable and Secure Computing	IEEE TDSC
1.	IEEE Transactions of Information Forensics and Security	IEEE TIFS

Reviewing for Conferences

12.	38th ACM Conference on Human Factors in Computing Systems	ACM CHI 2020
11.	37th ACM Conference on Human Factors in Computing Systems	ACM CHI 2019
10.	18th Privacy Enhancing Technologies Symposium	PETS 2018
9.	36th ACM Conference on Human Factors in Computing Systems	ACM CHI 2018
8.	13th Symposium on Usable Privacy and Security Posters	SOUPS Posters 2017
7.	30th ACM Symposium on User Interface Software and Technology	ACM UIST 2017
6.	35th ACM Conference on Human Factors in Computing Systems	ACM CHI 2017
5.	23rd ACM SIGSAC Conference on Computer and Communications Security	ACM CCS 2016
4.	12th Symposium on Usable Privacy and Security Posters	SOUPS Posters 2016
3.	34th ACM Conference on Human Factors in Computing Systems	ACM CHI 2016
2.	4th IEEE Workshop on Mobile Security Technologies	IEEE MOST 2015
1.	33rd ACM Conference on Human Factors in Computing Systems	ACM CHI 2015

Courses Taught

Average teacher evaluation: 4.8/5

University of Tennessee, Knoxville

COSC 466/566	Software Security	Spring 2023 Spring 2022 Spring 2021 Spring 2020 Spring 2019 Spring 2018
COSC 483/583	Applied Cryptography	Fall 2023 Fall 2022 Fall 2021 Fall 2020
COSC 366	Introduction to Cybersecurity	Spring 2023
COSC 494/594	Human Factors in Computer Security	Fall 2018 Fall 2019

COSC 690	LLMs and Secure Software Development	Fall 2023
COSC 690	IoT Security and Authentication	Spring 2021

Brigham Young University

CS 465	Computer Security	Winter 2016

Honors and Awards

2023 *Professional Promise in Research Award*
Tickle College of Engineering, The University of Tennessee, Knoxville

2017 *Best Paper Award*
2nd IEEE Secure Development Conference (SecDev 2017)

2017 *John Karat Usable Privacy and Security Student Research Award*
13th Symposium on Usable Privacy and Security

2017 *Excellent Reviewer Recognition*
37th ACM Conference on Human Factors in Computing Systems (CHI 2017)

2016 *Honorable Mention for Best Paper*
34th ACM Conference on Human Factors in Computing Systems (CHI 2016)

2016 *Excellent Reviewer Recognition*
34th ACM Conference on Human Factors in Computing Systems (CHI 2016)

2015 *Distinguished Poster Award*
12th Symposium on Usable Privacy and Security

Languages

English Native Language

Mandarin Chinese Fluent, near native reading, writing, and speaking
- 汉语水平考试 (HSK)—Level 6 (highest Level)
- Oral Proficiency Interview—Superior (highest Level)

Professional Skills

Programming C/C++, C#, Java, JavaScript, Python, SQL
- Familiar with: F#, MatLab, Mathematica, PHP, Ruby, Scheme, Visual Basic .NET

Web HTML5, JavaScript, ES6+, ASP .NET

Frameworks Bootstrap, ExtJS, JQuery, MooTools, NodeJS, WinForms, WPF

Databases Essent, FireBird, Microsoft Access, Microsoft SQL Server, MySQL, Oracle iSQL, SQLite

Platform Centos-Based Linux, Debian-Based Linux, Docker, MacOS, Windows