Yixin Zou

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Research interests

Understanding people's adoption of protective measures in reaction to security and privacy risks; Addressing the unique threat models and safety needs of at-risk populations; Developing human-centered solutions that combine technology, public policy, and educational efforts to help people protect themselves from perceived risks.

Keywords: Human-Computer Interaction; Cybersecurity; Privacy; Public Policy; Digital Inequity

Education

Expected 2022 **University of Michigan** | Ann Arbor, MI, United States
Ph.D. in Information (advisor: Florian Schaub)
Affiliate graduate researcher at Center for Ethics, Society, and Computing
Affiliate student and coordinator at Michigan Interactive and Social Computing Group

2017 **University of Illinois at Urbana-Champaign** | Champaign, IL, United States
B.S. in Advertising, minor in Communication and Informatics
Graduated with the Highest Honor (top 5% in College of Media)

Honors & Awards

2021 **Finalist, Facebook Fellowship**
Facebook
Among the top 3.5% of about 2,100 applicants worldwide.

2021 **Privacy Papers for Policymakers – Student Paper Honorable Mention**
Future of Privacy Forum
For *"It's a scavenger hunt": Usability of Websites' Opt-Out and Data Deletion Choices.*

2020 **CHI Best Paper Honorable Mention**
ACM Conference on Human Factors in Computing Systems
For *Examining the Adoption and Abandonment of Security, Privacy, and Identity Theft Protection Practices.*

2020 **Finalist, Facebook Fellowship**
Facebook
Among the top 4% of about 1,800 applicants worldwide.

2019 **NortonLifeLock Fellowship**
NortonLifeLock Research Group
Awarded $20,000 USD. One of the three recipients selected worldwide.

2019   **CHI Best Paper Honorable Mention**
ACM Conference on Human Factors in Computing Systems
For *Putting Your Warning Where Your Link Is: Improving and Evaluating Email Phishing Warnings.*

2018   **SOUPS Distinguished Paper Award**
SOUPS 2018: Symposium on Usable Privacy and Security
For *"I've Got Nothing to Lose": Consumers' Risk Perceptions and Protective Actions after the Equifax Data Breach.*

Publications

Conferences are the top-tier academic publishing venues in computer science and information science (CS/IS). Thus, the majority of my research is published in CS/IS conference proceedings.
* after author names indicates co-first authorship.

Peer-reviewed Conference Proceedings (12)

2022   **Trauma-Informed Computing: Towards Safer Technology Experiences for All**
Janet Chen*, Allison McDonald*, <u>Yixin Zou</u>*, Emily Tseng, Kevin Roundy, Acar Tamersoy, Florian Schaub, Thomas Ristenpart, Nicola Dell
ACM Conference on Human Factors in Computing Systems. (Acceptance rate: 24.7%)

2021   **The Role of Computer Security Customer Support in Helping Survivors of Intimate Partner Violence**
<u>Yixin Zou</u>, Allison McDonald, Julia Narakornpichit, Nicola Dell, Thomas Ristenpart, Kevin Roundy, Florian Schaub, Acar Tamersoy
USENIX Security Symposium. (Acceptance rate: 18.7%)
https://www.usenix.org/system/files/sec21-zou.pdf

2021   **"Now I'm a bit angry:" Individuals' Awareness, Perception, and Responses to Data Breaches that Affected Them**
Peter Mayer*, <u>Yixin Zou</u>*, Florian Schaub, Adam J. Aviv
USENIX Security Symposium. (Acceptance rate: 18.7%)
https://www.usenix.org/system/files/sec21-mayer.pdf
Also presented at FTC PrivacyCon 2021.

2021   **Toggles, Dollar Signs, And Triangles: How to (In)Effectively Convey Privacy Choices with Icons and Link Texts**
Hana Habib*, <u>Yixin Zou</u>*, Yaxing Yao, Alessandro Acquisti, Lorrie Faith Cranor, Joel Reidenberg, Norman Sadeh, Florian Schaub
ACM Conference on Human Factors in Computing Systems. (Acceptance rate: 26.3%)
https://doi.org/10.1145/3411764.3445387
Icon recommendation adopted into the California Consumer Privacy Act (CCPA) regulations.

2020   **Examining the Adoption and Abandonment of Security, Privacy, and Identity Theft Protection Practices** 🎗
<u>Yixin Zou</u>, Kevin Roundy, Acar Tamersoy, Saurabh Shintre, Johann Roturier, Florian Schaub
ACM Conference on Human Factors in Computing Systems. (Acceptance rate: 24.3%)
https://doi.org/10.1145/3313831.3376570
CHI Best Paper Honorable Mention Award. Also presented at FTC PrivacyCon 2020.

2020   **"It's a scavenger hunt": Usability of Websites' Opt-Out and Data Deletion Choices** 🎗
Hana Habib, Sarah Pearman, Jiamin Wang, <u>Yixin Zou</u>, Alessandro Acquisti, Lorrie Faith Cranor, Norman Sadeh, Florian Schaub
ACM Conference on Human Factors in Computing Systems. (Acceptance rate: 24.3%)
https://doi.org/10.1145/3313831.3376511
FPF 2020 Privacy Papers for Policy Makers Student Honorable Mention. Also presented at FTC PrivacyCon 2020.

2019   **"We Can't Live Without Them!" App Developers' Adoption of Ad Networks and Their Considerations of Consumer Risks**
Abraham H. Mhaidli, <u>Yixin Zou</u>, Florian Schaub
Symposium on Usable Privacy and Security. (Acceptance rate: 22.9%)
https://www.usenix.org/conference/soups2019/presentation/mhaidli

2019   **An Empirical Analysis of Data Deletion and Opt-Out Choices on 150 Websites**
Hana Habib, <u>Yixin Zou</u>, Aditi Jannu, Neha Sridhar, Chelse Swoopes, Alessandro Acquisti, Lorrie Faith Cranor, Norman Sadeh, Florian Schaub
Symposium on Usable Privacy and Security. (Acceptance rate: 22.9%)
https://www.usenix.org/conference/soups2019/presentation/habib
Also presented at FTC PrivacyCon 2020.

2019   **You 'Might' Be Affected: An Empirical Analysis of Usability Issues in Data Breach Notifications**
<u>Yixin Zou</u>, Shawn Danino, Kaiwen Sun, Florian Schaub
ACM Conference on Human Factors in Computing Systems. (Acceptance rate: 23.8%)
https://doi.org/10.1145/3290605.3300424
Also presented at FTC PrivacyCon 2019.

2019   **Put Your Warning Where Your Link Is: Improving and Evaluating Email Phishing Warnings** 🎗
Justin Petelka, <u>Yixin Zou</u>, Florian Schaub
ACM Conference on Human Factors in Computing Systems. (Acceptance rate: 23.8%)
https://doi.org/10.1145/3290605.3300748
CHI Best Paper Honorable Mention Award.

2018 **"I've Got Nothing to Lose": Consumers' Risk Perceptions and Protective Actions after the Equifax Data Breach** 🎖
<u>Yixin Zou</u>, Abraham H. Mhaidli, Austin McCall, Florian Schaub
Symposium on Usable Privacy and Security. (Acceptance rate: 22.8%)
https://www.usenix.org/conference/soups2018/presentation/zou
SOUPS Distinguished Paper Award.

2017 **Users' Attitudes towards the "Going Dark" Debate**
Aseel Addawood, <u>Yixin Zou</u>, Masooda Bashir
International Conference on Applied Human Factors and Ergonomics.
https://doi.org/10.1007/978-3-319-60585-2_28

Journal & Magazine Articles (3)

2021 **Child Safety in the Smart Home: Parents' Perceptions, Needs, and Mitigation Strategies**
Kaiwen Sun, <u>Yixin Zou</u>, Jenny Radesky, Christopher Brooks, Florian Schaub
Proceedings of the ACM on Human-Computer Interaction, 5(CSCW2), 471:1–471:41.
https://doi.org/10.1145/3479858

2020 **Listen Only When Spoken To: Interpersonal Communication Cues as Smart Speaker Privacy Controls**
Abraham H. Mhaidli, Manikandan K. Venkatesh, <u>Yixin Zou</u>, Florian Schaub
PoPETS: Proceedings on Privacy Enhancing Technologies, 2020(2), 251-270. (Acceptance rate: 26.8%)
https://doi.org/10.2478/popets-2020-0026
Also presented at PETS 2020.

2019 **Beyond Mandatory: Making Data Breach Notifications Useful for Consumers**
<u>Yixin Zou</u> & Florian Schaub
IEEE Security & Privacy, 17(2), 67-72. (Invited paper)
https://doi.org/10.1109/MSEC.2019.2897834
Also presented at FTC PrivacyCon 2019.

Workshop Proceedings and Posters (6)

2018 **An Empirical Analysis of Online Consent and Opt-Out Experience**
Hana Habib, <u>Yixin Zou</u>, Chelse Swoopes, Aditi Jannu, Lorrie Faith Cranor, Florian Schaub
Privacy Law Scholars Conference. Washington D.C., USA. May 2018.

2018 **An Empirical Analysis of Website Data Deletion and Opt-Out Choices**
Hana Habib, <u>Yixin Zou</u>, Aditi Jannu, Chelse Swoopes, Alessandro Acquisti, Lorrie Faith Cranor, Norman Sadeh, Florian Schaub
CHI '18 Workshop on General Data Protection Regulation: An Opportunity for the HCI Community? Montreal, Canada. Apr 2018.

2018 **Concern But No Action: Consumers' Reactions to the Equifax Data Breach**
<u>Yixin Zou</u> & Florian Schaub
ACM Conference on Human Factors in Computing Systems: Late Breaking Work. Montreal, Canada. Apr 2018.

2018   **Concern But No Action: Consumers' Reactions to the Equifax Data Breach**
<u>Yixin Zou</u> & Florian Schaub
Midwest Security Workshop. Champaign, IL, USA. Mar 2018.

2017   **Really Being There?: Telepresence in Virtual Reality Branded Content.**
Jie Shen, M. Stenger, J. Lechowicz, Chen Chen, Rachel Yang, Aparna Sivasankaran, Yanyun Wang, Ji Zhang, <u>Yixin Zou</u>, H. Katz, Michelle R. Nelson
Annual Conference of the Association for Education in Journalism and Mass Communication. Chicago, USA. Aug 2017.

2017   **The Impacts of Privacy Hypocrisy, Victim Characterization, Gender, and Context on Bystanders' Guilt Attribution in a Cyberbullying Suicide**
Mike Zhengyu Yao, <u>Yixin Zou</u>, Daniel Linz, P. Jaoude
Annual Conference of International Communication Association. San Diego, USA. May 2017.

Technical Reports (3)

2020   **CCPA Opt-Out Icon Testing – Phase 2**
Lorrie Faith Cranor, Hana Habib, Yaxing Yao, <u>Yixin Zou</u>, Alessandro Acquisti, Joel R. Reidenberg, Norman Sadeh, Florian Schaub
Report submitted to the Office of the California Attorney General.
https://www.oag.ca.gov/sites/all/files/agweb/pdfs/privacy/dns-icon-study-report-052822020.pdf

2020   **User Testing of the Proposed CCPA Do-Not-Sell Icon**
Lorrie Faith Cranor, Hana Habib, <u>Yixin Zou</u>, Alessandro Acquisti, Joel R. Reidenberg, Norman Sadeh, Florian Schaub
Report submitted to the Office of the California Attorney General.
http://cups.cs.cmu.edu/pubs/CCPA2020Feb24.pdf

2020   **Design and Evaluation of a Usable Icon and Tagline to Signal an Opt-Out of the Sale of Personal Information as Required by CCPA**
Lorrie Faith Cranor, Hana Habib, <u>Yixin Zou</u>, Alessandro Acquisti, Joel R. Reidenberg, Norman Sadeh, Florian Schaub
Report submitted to the Office of the California Attorney General.
https://oag.ca.gov/sites/all/files/agweb/pdfs/privacy/ccpa-cranor.pdf

Invited Talks and Panels

2022   **Improving People's Security and Privacy Behaviors**
Invited speaker. *Department of Computer Science, University College London.* Online. Feb 2022.

2022   **Improving People's Security and Privacy Behaviors**
Invited speaker. *College of Computing & Informatics, Drexel University.* Online. Feb 2022.

2022   **Improving People's Security and Privacy Behaviors**
Invited speaker. *School of Information, University of Texas at Austin.* Online. Feb 2022.

2022   **Improving People's Security and Privacy Behaviors**
Invited speaker. *Department of Computer Science, Duke University.* Online. Feb 2022.

2022   **Improving People's Security and Privacy Behaviors**
Invited speaker. *Department of Information Systems and Analytics, National University of Singapore.*
Online. Feb 2022.

2021   **"Now I'm a bit angry:" Consumer Reactions to Data Breaches that Affected Them and Opportunities for Interventions**
Invited speaker. *Capital-Area Colloquium on Trustworthy and Usable Security/Privacy (CACTUS/P).*
College Park, MD, USA. Dec 2021.

2021   **Improving People's Adoption of Protective Behaviors Against Security and Privacy Risks**
Invited speaker. *Usable Security and Privacy Lab, the George Washington University.* Washington
D.C., USA. Dec 2021.

2021   **Consumers' Reactions to Data Breaches, Deficiencies of Breach Notifications, and Opportunities for Public Policy**
Invited speaker (w/ Florian Schaub). Internal seminar at *the US Federal Trade Commission.* Online.
Nov 2021.

2021   **Why Most Consumers Do Not Take Countermeasures Against Identity Theft**
Guest lecturer. *University of Michigan course "Problem Solving Initiative, Identity Theft: Causes and Countermeasures".* Ann Arbor, MI, USA. Nov 2021.

2021   **"Now I'm a bit angry:" Individuals' Awareness, Perception, and Responses to Data Breaches that Affected Them**
Invited speaker (w/ Peter Mayer). *SECUSO Research Group, Karlsruhe Institute of Technology.* Online. May 2021.

2021   **Toggles, Dollar Signs, and Triangles: How to (In)Effectively Convey Privacy Choices with Icons and Link Texts**
Invited speaker (w/ Hana Habib). *ACM Conference on Human Factors in Computing Systems.* Online. May 2021.

2021   **"Now I'm a bit angry:" Individuals' Awareness, Perception, and Responses to Data Breaches that Affected Them**
Invited speaker (w/ Peter Mayer). *Usable Security and Privacy Lab, the George Washington University.* Online. Apr 2021.

2021   **Spyware and Digital Intimate Partner Abuse**
Invited speaker (w/ Allison McDonald). *Sexual Assault Prevention and Awareness Center, University of Michigan.* Online. Mar 2021.

2020   **Examining the Adoption and Abandonment of Security, Privacy, and Identity Theft Protection Practices**
Invited speaker. *PrivacyCon, the US Federal Trade Commission.* Online. Jul 2020.

2019   **Information and Regulation: Net Neutrality and Privacy**
Guest lecturer. *University of Michigan course "Introduction to Information Studies".* Ann Arbor, MI, USA. Oct 2019.

2019	**An Empirical Analysis of Data Deletion and Opt-Out Choices on 150 Websites**
	Invited speaker. *Symposium on Usable Privacy and Security.* Santa Clara, CA, USA. Aug 2019.

2019	**Lengthy, Vague, and Inactionable: Issues with Data Breach Notifications and Implications for Public Policy**
	Invited speaker. *PrivacyCon, the US Federal Trade Commission.* Washington D.C., USA. Jun 2019.

2019	**An Empirical Analysis of Readability and Usability Issues in Data Breach Notifications**
	Invited speaker. *ACM Conference on Human Factors in Computing Systems.* Glasgow, UK. May 2019.

2018	**Designing Effective and Actionable Data Breach Notices: Implications for Firefox Monitor**
	Invited speaker (w/ Florian Schaub). *Firefox Monitor Team, Mozilla.* Online. Nov 2018.

2018	**Information Regulation: How information regulates and is regulated & Privacy**
	Guest lecturer. *University of Michigan course "Introduction to Information Studies".* Ann Arbor, MI, USA. Oct 2018.

2018	**"I've Got Nothing to Lose": Consumers' Risk Perceptions and Protective Actions after the Equifax Data Breach**
	Invited speaker. *Symposium on Usable Privacy and Security.* Baltimore, MD, USA. Aug 2018.

Teaching Experience

Graduate Student Instructor

Fall 2019	**SI 501: Contextual Inquiry (University of Michigan)**
	Led two weekly discussion sections, held office hours, and graded assignments. Oversaw ten consulting projects with local clients led by master students.
	4.8 (of 5.0) median rating (37 of 48 students).

Fall 2018	**SI 110: Introduction to Information (University of Michigan)**
	Led two weekly discussion sections, held office hours, and graded assignments. Also gave a guest lecture on net neutrality and privacy.
	4.5 (of 5.0) median rating (20 of 48 students).

Mentoring Students

2021-Present	**Tanisha Afnan**. Ph.D. in Information, University of Michigan.
2021-Present	**Khue Le**. B.S. in Computer Science, University of Michigan.
2021	**Cami Goray**. Ph.D. in Information, University of Michigan.
2021	**Carlo Sugatan**. M.S. in Information, University of Michigan.
2021	**Jeremy Hazan**. M.S. in Information Science – Health Tech, Cornell Tech.
2021	**Rui Maki**. M.S. in Information Science – Health Tech, Cornell Tech.
2020	**Julia Narakornpichit**. M.S. in Information Science – Connective Media, Cornell Tech.
2019-2020	**Michael Ni**. B.S. in Computer Science, University of Michigan.
2019-2020	**Jamie Lai**. B.S. in Information, University of Michigan.

2018	**Aditi Jannu**. M.S. in Information Technology, Carnegie Mellon University.
2018	**Chelse Swoopes**. M.S. in Electrical and Computer Engineering, Carnegie Mellon University.
2018	**Kaiwen Sun**. M.S. in Information, University of Michigan.
2018	**Shawn Danino**. M.S. in Information, University of Michigan.
2018	**Austin McCall**. B.S. in Information, University of Michigan.

Community Workshops

Fall 2021 **Workshops about Online Self-Defense for Older Adults**
Organized and led a multi-week workshop series in partnership with local senior centers to teach older adults common risks in technology use as well as tools, strategies, and resources they can use to protect themselves.

External Service

Conference Organization

2022	Symposium on Usable Privacy and Security: Publicity Junior Co-Chair
2021	Symposium on Usable Privacy and Security: Poster Junior Co-Chair

Program Committee Member / Associate Chairing

2021	European Symposium on Usable Security (EuroUSEC)
2021	ACM CSCW Posters
2020-2021	ACM CHI Late Breaking Work
2020	IEEE PerCom Workshop on Context Systems Design, Evaluation and Optimization

External Reviewer

2020-2022	Proceedings on Privacy Enhancing Technologies (PoPETs)
2020-2021	ACM Conference on Human Factors in Computing Systems (CHI)
2020-2021	Proceedings of the ACM on Human-Computer Interaction (CSCW)
2020-2021	ACM Conference on Designing Interactive Systems (DIS)
2020-2021	Journal of the Association for Information Science and Technology (JAIST)
2020	International Journal of Human-Computer Interaction (IJHCI)

University Service

University of Michigan

2020, 2022 **Privacy@Michigan Privacy Day Symposium**
Contributed to organizing the Privacy@Michigan symposium in celebration of International Data Privacy Day. Led a series of privacy workshops to raise public awareness of tips on securing personal data online. More about the workshops in this article.

2019, 2020 **Mentor, Undergraduate Research Opportunity Program**
Mentored undergraduate students on research projects. Helped students build research skills and identify academic & career interests through close collaborations.

U-M School of Information

2021   **Student coordinator, Michigan Interactive and Social Computing (MISC)**
Organized speaker series at the confluence of human-computer interaction, social computing, and computer-supported cooperative work from researchers at the University of Michigan and beyond.

2021   **Invited panelist, info sessions for PhD students**
Shared advice and experience on topics such as finding summer internships, completing milestones, and navigating advisor-advisee relationships.

Professional Experience

Jun – Aug 2020   **User Experience Research Intern**
Facebook, Privacy & Data Use Team | Remote

May – Aug 2019   **Research Intern**
Norton Labs (previously Symantec Research Labs) | Culver City, CA

Jan – Apr 2019   **User Experience Research Intern**
Mozilla, Firefox Monitor Team | Remote

Media Coverage

2021   **Quoted by WXYZ**
TV interview with WXYZ (Detroit ABC affiliate) on the dangers of data breaches and findings from our USENIX Security 2021 paper. Jul 2021.

2021   **California Attorney General adopts Privacy Options icon into CCPA**
The Privacy Options icon we designed in a CHI 2021 paper has been adopted into the official CCPA regulations through an amendment. Reported on by IAPP and JD Supra. Mar 2021.

2020   **Article on data breach notification research**
Chicago Policy Review reported on our research in "Data Breach Notifications Are Too Complex." Sep 2020.

2020   **Quoted by CIO Dive**
Quoted on potential changes of online safety practices during the COVID-19 pandemic in CIO Dive article "The Remote Playbook." Apr 2020.

2018   **The Equifax data breach study and implications for credit freezes**
New York Times and Detroit Free Press quoted our SOUPS 2018 paper in discussing the importance of credit freezes. The Detroit Free Press article was picked up by the Associated Press and subsequently appeared in over 80 regional and local media outlets. Sep 2018.

Op-Eds

2021   **An open letter to the U-M community**
Co-wrote an op-ed on Michigan Daily (w/ Heeryung Choi, Jane Im, and Cindy Lin) on anti-Asian racism in the United States and in academia. Apr 2021.