Yixin Zou

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Research Interest

My research interests span privacy, security, and human-computer interaction. My dissertation focuses on understanding and improving people's adoption of protective behaviors in the face of privacy and security threats, e.g., in reacting to data breaches or exercising privacy choices on websites. I am also interested in understanding the privacy risks and needs of exposure-sensitive populations, such as survivors of intimate partner violence and older adults. I am a mixed-method researcher, with the most experience in survey, experiment, interview and focus group.

Education

Exp. 2022 Ph.D. in Information, University of Michigan

Advisor: Dr. Florian Schaub

2017 B.S. in Advertising, University of Illinois at Urbana-Champaign

Graduated with the Highest Honor (top 5% in the college)

Honors and Awards

[H8] Facebook Fellowship, Finalist

Among the top 3.5% of about 2,100 applicants worldwide. 2021.

[H7] Privacy Papers for Policymakers Award, Student Paper Honorable Mention

"It's a scavenger hunt": Usability of Websites' Opt-Out and Data Deletion Choices, with H. Habib, S. Pearman, J. Wang, A. Acquisti, L. Cranor, N. Sadeh and F. Schaub. Awarded by Future of Privacy Forum. 2021.

[H6] ACM SIGCHI Best Paper Honorable Mention Award

Examining the Adoption and Abandonment of Security, Privacy, and Identity Theft Protection Practices, with K. Roundy, A. Tamersoy, S. Shintre, J. Roturier and F. Schaub. 2020.

[H5] Facebook Fellowship, Finalist

Among the top 4% of about 1,800 applicants from over 100 universities worldwide. 2020.

[H4] Field Prelim Milestone Distinction Award

Awarded by the University of Michigan School of Information (UMSI) for exemplary completion of the milestone. The award is given to top 10% of students in this endeavor. 2019.

[H3] ACM SIGCHI Best Paper Honorable Mention Award

Putting Your Warning Where Your Link Is: Improving and Evaluating Email Phishing Warnings, with J. Petelka and F. Schaub. 2019.

[H2] Symposium on Usable Privacy and Security (SOUPS) Distinguished Paper Award

"I've Got Nothing to Lose": Consumers' Risk Perceptions and Protective Actions after the Equifax Data Breach, with A. H. Mhaidli, A. McCall, and F. Schaub. 2018.

[H1] Pre-candidacy Project Milestone Distinction Award

Awarded by the University of Michigan School of Information (UMSI) for exemplary completion of the milestone. The award is given to top 10% of students in this endeavor. 2018.

Fellowships

[F2] NortonLifeLock Research Group Graduate Fellowship

NortonLifeLock (formerly known as Symantec), \$20,000, 2019-2020 (1 of 3 recipients selected worldwide).

[F1] Annual Fund Scholarship

University of Illinois at Urbana-Champaign College of Media, \$2,000, 2016-2017.

Grants

- [G4] **SIGCHI Student Travel Grant**, ACM SIGCHI, \$1,800, 2019.
- [G3] SOUPS Student Grant, USENIX, \$695, 2018.
- [G2] UMSI PhD Travel Grant, University of Michigan School of Information, \$1,000, 2018-2019.
- [G1] Rackham Conference Travel Grant, University of Michigan Rackham Graduate School, \$1,000, 2018.

Publications

(* indicates these authors contributed equally to the paper.)

Journal & Magazine Publications

[J2] Listen Only When Spoken To: Interpersonal Communication Cues as Smart Speaker Privacy Controls

Mhaidli, A. H., Venkatesh, M., Zou, Y., & Schaub, F. 2020. *Proceedings on Privacy Enhancing Technologies (PoPETs)*, 2020(2), 251–270.

Acceptance rate: 26.8%.

[J1] Beyond Mandatory: Making Data Breach Notifications Useful for Consumers

Zou, Y., & Schaub, F. 2019. *IEEE Security & Privacy*, 17(2), 67-72. Invited paper.

Conference Publications

[C10] "Now I'm a bit angry:" Individuals' Awareness, Perception, and Responses to Data Breaches that Affected Them

Mayer, P.*, Zou, Y.*, Schaub, F & Aviv, A. 2021. *USENIX Security Symposium*. Acceptance Rate: TBD.

[C9] Toggles, Dollar Signs, and Triangles: How to (In)Effectively Convey Privacy Choices with Icons and Link Texts

Habib, H.*, Zou, Y.*, Yao, Y., Acquisti, A., Cranor, L. F., Reidenberg, J., Sadeh, N., & Schaub, F. 2021. *ACM Conference on Human Factors in Computing Systems (CHI)*. Acceptance Rate: 26.3%.

[C8] Examining the Adoption and Abandonment of Security, Privacy, and Identity Theft Protection Practices

Zou, Y., Roundy, K., Tamersoy, A., Shintre, S., Roturier, J., & Schaub, F. 2020. *ACM Conference on Human Factors in Computing Systems (CHI)*, Article 443. Acceptance Rate: 24.3%.

[C7] "It's a scavenger hunt": Usability of Websites' Opt-Out and Data Deletion Choices

Habib, H., Pearman, S., Wang, J., Zou, Y., Acquisti, A., Cranor, L. F., Sadeh, N., & Schaub, F. 2020. *ACM Conference on Human Factors in Computing Systems (CHI)*, Article 384. Acceptance Rate: 24.3%.

[C6] An Empirical Analysis of Data Deletion and Opt-Out Choices on 150 Websites

Habib, H., Zou, Y., Jannu, A., Sridhar, N., Swoopes, C., Acquisti, A., Cranor, L. F., Sadeh, N., & Schaub, F. 2019. *Symposium on Usable Privacy and Security (SOUPS)*, pp. 387–406. Acceptance Rate: 22.7%.

[C5] "We Can't Live Without them!" App Developers' Adoption of Ad Networks and Their Considerations of Consumer Risks

Mhaidli, A. H., Zou, Y., & Schaub, F. 2019. *Symposium on Usable Privacy and Security (SOUPS)*, pp. 225–244.

Acceptance Rate: 22.7%.

[C4] You 'Might' Be Affected: An Empirical Analysis of Readability and Usability Issues in Data Breach Notifications

Zou, Y., Danino, S., Sun, K., & Schaub, F. 2019. *ACM Conference on Human Factors in Computing Systems (CHI)*, Article 194.

Acceptance Rate: 23.8%.

[C3] Put Your Warning Where Your Link Is: Improving and Evaluating Email Phishing Warnings

Petelka, J., Zou, Y., & Schaub, F. 2019. ACM Conference on Human Factors in Computing Systems (CHI), Article 518.

Acceptance Rate: 23.8%.

[C2] "I've Got Nothing to Lose": Consumers' Risk Perceptions and Protective Actions after the Equifax Data Breach

Zou, Y., Mhaidli, A. H., McCall, A., & Schaub, F. 2018. *Symposium on Usable Privacy and Security (SOUPS)*, pp. 197–216.

Acceptance Rate: 22.8%.

[C1] Users' Attitudes towards the "Going Dark" Debate

Addawood, A., Zou, Y., & Bashir, M. 2017. Proceedings of the International Conference on Applied Human Factors and Ergonomics (AHFE).

Highly-Reviewed Workshop and Non-Proceedings Conference Publications

[W5] An Empirical Analysis of Online Consent and Opt-Out Experiences

Habib, H., Zou, Y., Jannu, A., Swoopes, C., Cranor, L. F., & Schaub, F. 2018. *Annual Privacy Law Scholars Conference (PLSC)*.

[W4] Concern But No Action: Consumers' Reactions to the Equifax Data Breach

Zou, Y. & Schaub, F. 2018. ACM Conference on Human Factors in Computing Systems (CHI), Late Breaking Work.

[W3] An Empirical Analysis of Website Data Deletion and Opt-Out Choices

Habib, H., Zou, Y., Jannu, A., Swoopes, C., Acquisti, A., Cranor, L. F., Sadeh, N., & Schaub, F. 2018. *CHI Workshop: The General Data Protection Regulation, an opportunity for the HCI Community?*

[W2] Really Being There?: Telepresence in Virtual Reality Branded Content

Shen, J., Stenger, M., Lechowicz J., Chen C., Yang, R., Sivasankaran, A., Wang Y., Zhang, J., Zou, Y., Katz, H., & Nelson M. R. 2017. *Annual Conference of the Association for Education in Journalism and Mass Communication (AEJMC)*.

[W1] The Impacts of Privacy Hypocrisy, Victim Characterization, Gender, and Context on Bystanders' Guilt Attribution in a Cyberbullying Suicide

Yao, M., Zou, Y., Linz, D., & Jaoude, P. 2017. *Annual Conference of International Communication Association (ICA)*.

Technical Reports

[TR3] CCPA Opt-Out Icon Testing - Phase 2

Cranor, L., Habib, H., Yao, Y., Zou, Y., Acquisti, A., Reidenberg, J., Sadeh, N., & Schaub, F. May 28, 2020. Report submitted to the California Office of the Attorney General to support the preliminary rulemaking of the California Consumer Privacy Act (CCPA).

[TR2] User Testing of the Proposed CCPA Do-Not-Sell Icon

Cranor, L., Habib, H., Zou, Y., Acquisti, A., Reidenberg, J., Sadeh, N., & Schaub, F. February 24, 2020. Report submitted to the California Office of the Attorney General to support the preliminary rulemaking of the California Consumer Privacy Act (CCPA).

[TR1] Design and Evaluation of a Usable Icon and Tagline to Signal an Opt-Out of the Sale of Personal Information as Required by CCPA

Cranor, L., Habib, H., Zou, Y., Acquisti, A., Reidenberg, J., Sadeh, N., & Schaub, F. February 4, 2020. Report submitted to the California Office of the Attorney General to support the preliminary rulemaking of the California Consumer Privacy Act (CCPA).

Employment

06/2020- Facebook Privacy & Data Use Team, remote.

08/2020 User Experience Researcher Intern.

- Conducted a content analysis of internal databases to surface the core privacy-related data practices at Facebook.
- Planned and led 1:1 qualitative interviews with Facebook users on the alignment and misalignment between company practices and user expectations.
- Worked closely with other researchers, product teams, and data scientists to define research questions and communicate insights.

05/2019- NortonLifeLock Research Group (formerly Symantec Research Labs), Culver City, CA. Research Intern.

- Conducted an online survey to examine the adoption and abandonment of recommended practices for security, privacy, and identity theft protection.
- Planned, organized, and ran focus groups to understand how customer support at security companies and spyware notifications could be improved to serve the need of intimate partner abuse victims.

01/2019- Mozilla Corporation, remote.04/2019 User Experience Researcher Intern.

- Ran usability testings on wireframe prototypes for Firefox Monitor, a data breach notification service. Insights were integrated to the product's new site to refine risk communications and design. (More details in this blog post)
- Conducted an online experiment to investigate how content and format impact users' decision to react to data breach notifications.

Invited Talks

[T9] Toggles, Dollar Signs, and Triangles: How to (In)Effectively Convey Privacy Choices with Icons and Link Texts

ACM Conference on Human Factors in Computing Systems (CHI); online; May 12, 2021.

[T8] Spyware and Digital Intimate Partner Abuse

Sexual Assault Prevention and Awareness Center (SAPAC), University of Michigan; Ann Arbor, MI, USA; March 22, 2021.

[T7] Examining the Adoption and Abandonment of Security, Privacy, and Identity Theft Protection Practices

The Federal Trade Commission's annual PrivacyCon; Washington D.C., USA; July 21, 2020.

[T6] Panelist: Social Implications of Data Privacy

Tech for Social Good, University of Michigan; Ann Arbor, MI, USA; March 12, 2020. [Cancelled due to COVID-19]

[T5] An Empirical Analysis of Data Deletion and Opt-Out Choices on 150 Websites

Symposium on Usable Privacy and Security (SOUPS); Santa Clara, CA, USA; August 13, 2019.

[T4] Lengthy, Vague, and Inactionable: Issues with Data Breach Notifications and Implications for Public Policy

The Federal Trade Commission's annual PrivacyCon; Washington D.C., USA; June 27, 2019.

[T3] An Empirical Analysis of Readability and Usability Issues in Data Breach Notifications ACM Conference on Human Factors in Computing Systems (CHI); Glasgow, UK; May 7, 2019.

[T2] **Designing Effective and Actionable Data Breach Notices: Implications for Firefox Monitor** Mozilla's Firefox Monitor team; online; November 14, 2018.

[T1] "I've Got Nothing to Lose": Consumers' Risk Perceptions and Protective Actions after the Equifax Data Breach

Symposium on Usable Privacy and Security (SOUPS); Baltimore, MD, USA; August 14, 2018.

Media Coverage and Op-eds

[P5] An open letter to the U-M community | April 2021

Co-wrote an op-ed on Michigan Daily with Heeryung Choi, Jane Im, and Cindy Lin about anti-Asian racism in the United States and in academia; April 5, 2021.

[P4] Data Breach Notifications Are Too Complex | September 2020

The Chicago Policy Review covered key findings from our CHI 2019 paper on issues with data breach notifications.

[P3] The Remote Playbook: Logged on at home, employees are an attacker's dream | April 2020 Quoted by CIO Dive on potential changes in online safety practices for remote workers.

[P2] Freezing Credit Will Now Be Free. Here's Why You Should Go for It. | September 2018 A New York Times article quoted our SOUPS 2018 paper as supporting evidence for why credit freezes should be free.

[P1] Credit freeze: A Misunderstood Freebie That You Actually Want | September 2018

Interviewed by the Detroit Free Press on why consumers should take action to protect themselves after the Equifax data breach. The article was reprinted by over 80 regional and local media outlets.

Undergraduate/Master Student Research Advising

Year	Name	Placement
2019-2021	Michael Ni (CSE Undergrad)	-
2019-2020	Jamie Lai (SI Undergrad)	UX Designer, IBM
2018	Kaiwen Sun (SI Master)	Ph.D. student, University of Michigan
2018	Shawn Danino (SI Master)	Policy Research Lead, Building Matters Ann Arbor
2018	Austin McCall (SI Undergrad)	Advisory Consultant, Deloitte

Teaching Experience

Graduate Student Instructor

SI 407	User Experience Design Capstone , <i>University of Michigan</i> Undergraduate course in BS Information program Primary instructor: Florian Schaub	Fall 2021
SI 501	Contextual Inquiry, University of Michigan Graduate course in MS Information program Primary instructor: Kentaro Toyama 4.8 / 5.0 median rating (37 of 48 students)	Fall 2019
SI 110	Intro to Information, University of Michigan Prerequisite course for BS Information program Primary instructor: Chris Teplovs 4.4 / 5.0 median rating (20 of 48 students)	Fall 2018

Service

External

Program Committee:

- ACM Conference on Human Factors in Computing Systems (CHI) Late Breaking Works: 2020, 2021
- IEEE PerCom Workshop on Context Systems Design, Evaluation and Optimization (CoSDEO): 2020

Conference Organizing:

• Symposium on Usable Privacy and Security (SOUPS) Poster Junior Co-Chair: 2021

Invited External Reviewer:

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

University and Department

Mentoring:

- Undergraduate Research Opportunity Program: 2019-2020
- UMSI Peer Mentorship Program: since 2018

• Invited speaker for UMSI student panels: 2020-2021 (example topics: finding summer internships, completing milestones, and navigating advisor relationships)

Organizing:

- Michigan Interactive and Social Computing (MISC) student coordinator: 2021
- University of Michigan Privacy Day: 2020
- University of Michigan Dissonance Event Series: since 2019

Skills

Quantitative Methods Survey, Experiment, Log analysis

Qualitative Methods Interview, Focus group, Participatory design, Usability testing, Content analysis

Statistical Analysis R, SPSS, Microsoft Excel **Survey Design** Qualtrics, SurveyGizmo **Qualitative Coding** ATLAS.ti, NVivo

Python, JavaScript, HTML, CSS **Programming Languages**

Mandarin (native), English (full proficiency) Languages