Yixin Zou

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Research Interest

My main research focuses on understanding and improving user behaviors in the face of privacy and security threats, e.g., when their personal information is compromised in a data breach, or when they want to exercise privacy choices on websites. I am also involved in research on understanding the privacy risks and expectations of exposure-sensitive populations, such as IPV survivors, older adults, and children. 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 (UIUC)

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

Honors and Awards

[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. 2021.

[H6] **SIGCHI Honorable Mention Award (Best Paper Nominee)**

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 Distinction

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

[H4] UMSI Field Prelim Milestone Distinction Award

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

[H3] **SIGCHI Honorable Mention Award (Best Paper Nominee)**

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

[H2] USENIX 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] UMSI Pre-candidacy Project Milestone Distinction Award

Awarded by the University of Michigan School of Information 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., <u>Zou, Y.</u>, & Schaub, F. 2020. *Proceedings on Privacy Enhancing Technologies (PoPETs)*, 2020(2), <u>251–270</u>. 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

[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 SIGCHI Conference on Human Factors in Computing Systems (CHI)*, forthcoming. 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 SIGCHI 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., <u>Zou, Y.</u>, Acquisti, A., Cranor, L. F., Sadeh, N., & Schaub, F. 2020. *ACM SIGCHI 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. *USENIX 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., <u>Zou, Y.</u>, & Schaub, F. 2019. *USENIX 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 SIGCHI 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 SIGCHI 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. *USENIX 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)*.

$[W4] \quad \textbf{Concern But No Action: Consumers' Reactions to the Equifax Data Breach}$

Zou, Y. & Schaub, F. 2018. ACM SIGCHI 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* '18 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., <u>Zou, Y.</u>, 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

$\textbf{06/2020-} \qquad \textbf{Facebook Privacy \& Data Use Team}, remote.$

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.08/2019 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. Insights were integrated to the product's new site to refine risk communications and design.
- Conducted an online experiment to investigate how content and format impact users' decision to react to data breach notifications.

Invited Talks

[T8] Examining the Adoption and Abandonment of Security, Privacy, and Identity Theft Protection Practices

The Federal Trade Commission's 5th annual PrivacyCon, Washington D.C., USA, July 21, 2020.

[T7] 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]

[T6] Spyware and Digital Intimate Partner Abuse

Sexual Assault Prevention and Awareness Center (SAPAC), University of Michigan, Ann Arbor, MI, USA, March 11, 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 4th 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, Firefox Monitor. Mountain View, CA, USA, 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

[P6] Data Breach Notifications Are Too ComplexGiovanni Serrapere, Chicago Policy Review, September 16, 2020.

- [P5] The Remote Playbook: Logged on at home, employees are an attacker's dream Robert Torres, CIO Dive, April 30, 2020.
- [P4] Website Privacy Options Aren't Much of A Choice Since They're Hard to Find and Use Hana Habib and Lorrie Cranor, the Conversation, October 31, 2019.
- [P3] Companies Send Confusing Alerts About Data Breaches Laurel Thomas, futurity.org, May 19, 2019.
- [P2] **Freezing Credit Will Now Be Free. Here's Why You Should Go for It.** Ann Carrns, New York Times, September 14, 2018.
- [P1] Credit freeze: A Misunderstood Freebie That You Actually Want Susan Tompor, Detroit Free Press, September 6, 2018. (Reprinted by over 80 regional and local media outlets)

Undergraduate/Master Student Research Advising

| Year | Name | Placement |
|--------------|------------------------------|--|
| 2019-present | 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

| Fall 2019 | Graduate Student Instructor , SI 501: Contextual Inquiry, University of Michigan (39 students). |
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| | Primary instructor: Kentaro Toyama. |
| Fall 2018 | Graduate Student Instructor, SI 110: Introduction to Information, University of Michigan (47 |
| | students). Primary instructor: Chris Teplovs. |

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

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 AnalysisR, SPSS, Microsoft ExcelSurvey DesignQualtrics, SurveyGizmo

Qualitative Coding ATLAS.ti, NVivo

Programming Languages Python, JavaScript, HTML, CSS

Languages Mandarin (native), English (full proficiency)