임제인 Jane Im

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Research Interests

I design and build social computing systems (e.g., social media, workplace software) that are grounded in affirmative consent, an idea that a person or a system must ask for, and earn, enthusiastic approval before interacting with an individual. Existing social platforms enable or exacerbate two classes of problems that negatively impact society: 1) interpersonal harm people cause one another, such as online harassment, and 2) institutional exploitation of users, such as companies' invasive data tracking of users. Both are closely related to people's consent (e.g., "Do I decide to interact with this user?", "Do I opt into tracking for targeted ads?"). Thus, consent is an important concept to define when it comes to software design. My research defines theoretical properties of affirmative consent and provides design ideas on how to encode them into software. Based on the ideas, I build systems to ensure people's consent boundaries are protected during interactions—especially in contexts where individuals make high-risk decisions, such as navigating abuse of power in workplace settings. And, because there is a power imbalance between companies and users, I design interfaces to help users make less burdensome data-related consent decisions. I am also interested in studying how users perceive social media's business models, which are a basis for companies' power.

Education

Sept. 2018 - present
University of Michigan
PH.D. in Information & Computer Science and Engineering
(enrolled in both PhD programs via U-M's Student Initiated Doctoral Program)
Thesis: Social Computing Systems Grounded in Consent (passed proposal)
Committee: Kentaro Toyama (advisor), Emily Mower Provost, Mark S. Ackerman, Amy J. Ko

Mar. 2013 - June 2018
Korea University
B.B.A. in Business Administration and B.S. in Computer Science and Engineering

Awards, Honors & Grants

2024 Heidelberg Laureate Forum Young Researcher

2023 EECS Rising Stars

2023-2025 Meta PhD Research Fellowship
21 fellows were selected out of 3,200 applications. Full coverage of tuition and $42,000 stipend for two academic years. (Selected on my fourth try—I started applying from my second year.)

2022 Google Grant (Unrestricted Gift; PI: Florian Schaub)
Contributed to ideation and grant writing, which led to winning an unrestricted gift of $75,000 from Google.

2022 Finalist for CSE Graduate Student Honors Competition
Recognizes "top research done by PhD students" at CSE. One of the five finalists. Awarded $600.

2022-2023 Barbour Scholarship
Among the oldest and most prestigious awards granted by the University of Michigan, offering one year of funding to female students from Asia and the Middle East since 1917. Covers stipend of $36,084 and tuition.

2022 Finalist for Meta PhD Research Fellowship

2021 ACM CHI Best Paper Honorable Mention Award

2020 ACM WebSci Best Paper Runner Up Award

2015 SK Telecom Big Data Analytics Competition 3rd Prize

2014-2015 Korea University Honor Scholarships
Spring & Fall 2014, Fall 2015

Publications

Select Conference Proceedings, Journals, and Extended Abstracts (Archival)

CHI EA 24 LBW **Jane Im**, Kentaro Toyama. Understanding How to Design a Social Computing System That Helps PhD Students Collectively Navigate Mistreatment or Abuse in Advising Relationships. *Extended Abstracts of the ACM CHI Conference on Human Factors in Computing Systems (CHI EA 2024).* [pdf]

CHI EA 24 Panel **Jane Im**, Himanshu Zade, Steve Oney, Pamela Wisniewski, Kentaro Toyama. Improving Advising Relationships Between PhD Students and Faculty in Human-Computer Interaction. *Extended Abstracts of the ACM Conference on Human Factors in Computing Systems (CHI EA 2024).* [pdf] [project website]

CHI 23 **Jane Im**, Ruiyi Wang, Weikun Lyu, Nick Cook, Hana Habib, Lorrie Cranor, Nikola Banovic, Florian Schaub. Less is Not More: Improving Findability and Actionability of Privacy Controls for Online Behavioral Advertising. *ACM Conference on Human Factors in Computing Systems (CHI 2023).* **Coverage: The Wall Street Journal** [pdf] [acm]

CHI 21 **Jane Im**, Jill Dimond, Melody Berton, Una Lee, Katherine Mustelier, Mark Ackerman, Eric Gilbert. Yes: Affirmative Consent as a Theoretical Framework for Understanding and Imagining Social Platforms. *ACM Conference on Human Factors in Computing Systems (CHI 2021).* **Best Paper Honorable Mention Award** [pdf] [acm] [project website]

Other Conference Proceedings and Journals

CHI 24 Sumit Asthana, **Jane Im**, Zhe Chen, Nikola Banovic. "I know even if you don't tell me": Understanding Users' Privacy Preferences Regarding AI-based Inferences of Sensitive Information for Personalization. *ACM Conference on Human Factors in Computing Systems (CHI 2024).* [pdf]

CSCW 24 Shubham Atreja, **Jane Im**, Paul Resnick, Libby Hemphill. AppealMod: Inducing Friction to Reduce Moderator Workload of Handling User Appeals. *Proceedings of the ACM on Human-Computer Interaction (CSCW 2024).* [pdf]

CI 23 Paul Resnick, Aljohara Alfayez, **Jane Im**, Eric Gilbert. Searching For or Reviewing Evidence Improves Crowdworkers' Misinformation Judgments and Reduces Partisan Bias. *ACM Collective Intelligence (CI 2023).* [sage]

CSCW 23 Lia Bozarth, **Jane Im**, Christopher Quarles, Ceren Budak. Wisdom of Two Crowds: Current Practices of Misinformation Moderation on Reddit and How to Improve this Process—A Case Study of COVID-19. *Proceedings of the ACM on Human-Computer Interaction (CSCW 2023).* [pdf] [acm]

CSCW 22 **Jane Im**, Sarita Schoenebeck, Marilyn Iriarte, Gabriel Grill, Daricia Wilkinson, Amna Batool, Rahaf Alharbi, Audrey N. Funwie, Tergel Gankhuu, Eric Gilbert, Mustafa Naseem. Women's Perspectives on Harm and Justice after Online Harassment. *Proceedings of the ACM on Human-Computer Interaction (CSCW 2022).* [pdf] [acm]

CHI 22 Hariharan Subramonyam, **Jane Im**, Colleen Seifert, Eytan Adar. Solving Separation-of-Concerns Problems in Collaborative Design of Human-AI Systems through Leaky Abstractions. *ACM Conference on Human Factors in Computing Systems (CHI 2022).* [pdf] [acm]

WebSci 20 **Jane Im**, Eshwar Chandrasekharan, Jackson Sargent, Paige Lighthammer, Taylor Denby, Ankit Bhargava, Libby Hemphill, David Jurgens, Eric Gilbert. Still Out There: Modeling and Identifying Russian Troll Accounts on Twitter. *ACM Conference on Web Science (WebSci 2020).* **Best Paper Runner Up Award** [pdf] [acm]

CHI 20 **Jane Im**, Sonali Tandon, Eshwar Chandrasekharan, Taylor Denby, Eric Gilbert. Synthesized Social Signals: Computationally-Derived Social Signals from Account Histories. *ACM Conference on Human Factors in Computing Systems (CHI 2020).* [pdf] [acm]

CSCW 18 **Jane Im**, Amy X. Zhang, Christopher J. Schlling, David Karger. Deliberation and Resolution on Wikipedia: A Case Study of Request for Comments. *Proceedings of the ACM on Human-Computer Interaction (CSCW 2018)*. **Coverage: Motherboard, Campus Technology** [pdf] [acm]

CTE 17 **Jane Im**, Paul Medlock-Walton, Mike Tissenbaum. App Inventor VR Editor for Computational Thinking. *Computational Thinking in Education Conference (CTE 2017)*. [pdf]

Other Extended Abstracts, Posters, and Panel Proposals

SOUPS 23 Poster Annie Chen, Sean Scarnecchia, **Jane Im**, Tanisha Afnan, Byron M. Lowens, Florian Schaub. FB Privacy Helper: A Browser Extension That Simplifies Facebook Ad Privacy Settings. *Symposium on Usable Privacy and Security*. Anaheim, CA. August 2023.

CSCW 23 Panel Douglas Zytko, **Jane Im**, Jonathan Zong. Consent: A Research and Design Lens for Human-Computer Interaction. *Companion Publication of the 2022 Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2022 Companion)*. Virtual. November 2022.

T & S 22 Poster **Jane Im**, Nikola Banovic, Florian Schaub. Designing and Building Social Platforms Grounded in Consent. *Trust & Safety Research Conference*. Stanford, CA. September 2022.

Select Workshop Papers

CHI 20 Workshop **Jane Im**, Jeeyoon Hyun, Jill Dimond, Melody Berton, Eric Gilbert. Building Social Platforms around Affirmative Consent. *Moving Forward Together: Effective Activism For Change Workshop at ACM Conference on Human Factors in Computing Systems (CHI 2020)*.

CHI 19 Workshop **Jane Im**. Non-consensual Images & Videos and Consent in Social Media. *Sensitive Research, Practice, and Design in HCI Workshop at ACM Conference on Human Factors in Computing Systems (CHI 2019)*.

Media Writing

2021 Heeryung Choi, **Jane Im**, Cindy Lin, Yixin Zou. An open letter to the U-M community. *The Michigan Daily*.

Select Research Experience

Sept. 2018 - present **University of Michigan**, PhD Research
Designing and researching social computing systems that better protect people's consent boundaries in user-to-system and user-to-user interactions [CHI 20, CHI 21, CHI 23, CHI EA 24].

Jun. 2021 - Aug. 2021 **Meta**, User Experience Research Intern
advised by Scarlett Sheng, Rui Yang & Ayesha Zafar
Impacted Meta's privacy strategy by doing foundational mixed-method research to understand users' perception of consent in the context of online behavioral advertising and App Tracking Transparency. Quantitatively analyzed survey data to understand Facebook advertisers' goals.

May 2020 - Aug. 2020 **Sassafras Tech Collective**, Software Development & Research Intern
advised by Jill Dimond
Built and conducted (remote) usability testing of a moderation system. Based on the usability testing results, designed mockups and further developed the moderation system.

Apr. 2017 - Apr. 2018 **Haystack Group, MIT**, Undergraduate Research
advised by Amy X. Zhang & David Karger
Investigated how various factors affect the outcome of Request for Comments (RfC), a deliberative discussion on Wikipedia, by using mixed methods: 1) interviewing Wikipedia editors and 2) creating and quantitatively analyzing an English RfC dataset [CSCW 18].

Oct. 2016 - May 2017 **App Inventor, MIT**, Undergraduate Research
advised by Paul Medlock-Walton & Hal Abelson
Enabled novice programmers to create modular code in the App Inventor, by developing customized blocks within the system that can execute any functions of an imported API. Implemented virtual reality blocks in the App Inventor to help novice users build VR apps [CTE 17].

Sept. 2016 - Feb. 2017 **Soft Active Materials Lab, MIT**, Undergraduate Research
advised by Hyunwoo Yuk
Developed 3D printing based soft robotic hands with stand-alone actuation and control system. Implemented the software interface for precise 3D printing for advanced soft materials.

Teaching

University of Michigan

Winter 20 **SI 539: Web Design, Development, and Accessibility**, Graduate Student Instructor
A graduate course providing hands-on approach to learning responsive, accessible front-end programming for Web Design. Topics covered include HTML5, CSS3, JavaScript, and the POUR design principles of accessible design.

Fall 19 **SI 339: Web Design, Development, and Accessibility**, Graduate Student Instructor
An undergraduate version of the course above.

Invited Talks and Panels

2024 PrivacyCon, Federal Trade Commission
Less is Not More: Improving Findability and Actionability of Privacy Controls for Online Behavioral Advertising

2024 Professor Hyejin Youn's group, Northwestern University Kellogg School of Management
Consent and Consensus on Social Computing Systems

2024 Faculty Media Skills: Ask the Experts, University of Michigan School of Information
Invited to talk about my experience interacting with the media as a PhD student (panel discussion).

2023 Cornell Information Science PhD Seminar, Cornell University Information Science
Affirmative Consent and Power Dynamics as Lenses for Designing Social Computing Systems

2023 Radical Futures for Social Media, Yale Law School's Social Media Governance Initiative
Interface Designs and Business Models for Safer Social Platforms (panel presentation)

2022 GermSyllabus talk series, Germ Network
Affirmative Consent in Platform Design

2022 Expertise@Scale Lab, Carnegie Mellon University
Designing and Building Social Platforms Grounded in Consent

2021 DUB Shorts Seminar, University of Washington
Yes: Affirmative Consent as a Theoretical Framework for Understanding and Imagining Social Platforms

2021 MetaGov Seminar, Metagovernance Project
Reimagining and Building Social Platforms Grounded in Consent

2021 HCI Seminar, Seoul National University
Reimagining and Building Social Platforms Grounded in Consent

2018 Wikimedia Showcase, Wikimedia Foundation
Deliberation and Resolution on Wikipedia: A Case Study of Requests for Comments

2018 IAR Seminar, University of Michigan School of Information
Deliberation and Resolution on Wikipedia: A Case Study of Requests for Comments

Invited Guest Lectures

2023 SE 17702 Current Topics in Privacy Seminar, Carnegie Mellon University
Less is Not More: Improving Findability and Actionability of Privacy Controls for Online Behavioral Advertising

2020 CS 598 Antisocial Computing Guest Lecture, University of Illinois at Urbana-Champaign
Building Social Platforms Grounded in Consent

2020 EECS 598 Human-Computer Interaction Guest Presentation, University of Michigan
Synthesized Social Signals: Computationally-Derived Social Signals from Account Histories

Workshop and Consortium Participation

2024 Consortium for the Science of Sociotechnical Systems (*selected*)
Selected among 21 applicants out of 52 applicants.

2023 Accelerating Independent Research on Prosocial Digital Interventions
Google Jigsaw and Prosocial Design Netowrk. Invited on behalf of Shubham Atreja, who could not make it.

2023 Human-Computer Interaction Consortium (*selected*)
Selected as one of the two funded students from University of Michigan to participate.

2023 Preparing Future Faculty Seminar (*selected*)
Rackham Graduate School & Center for Research on Learning and Teaching

2023 Social Media Governance Initiative Spring 2023 Convening: Beyond Moderation (*invited*)
Yale Law School's Social Media Governance Initiative

Press

(Quoted in) How to Make It Easier for Consumers to Control the Ads They See Online.
The Wall Street Journal. Suman Bhattacharyya. Sept. 27, 2023.
2022 CSE Graduate Student Honors Competition highlights outstanding research.
University of Michigan CSE News. Nov 10, 2022.
(Quoted in) Privacy by Design laws will kill your data pipelines.
Protocol. Hirsh Chitkara. May 16, 2022.
Predictive Model Identifies Wikipedia Arguments that Will Never Get Resolved.
Campus Technology. Dian Schaffhauser. Nov. 27, 2018.
A Third of Wikipedia Discussions Are Stuck in Forever Beefs.
Vice Motherboard. Samantha Cole. Nov. 7, 2018.

Academic Mentoring

I listed the next positions of students for whom I helped faculty write a letter of recommendation (these students tend to have been interested in Masters/PhD programs; just noting this as other students have also been amazing). If you are a student who feels uncomfortable having your name included for whatever reason, please let me know—I would completely understand. I have also informally mentored other students by giving them advice on research and career.

University of Michigan

Paige Lighthammer, Nuclear Engineering (Undergraduate) [WebSci 20]

Jackson Sargent, CSE (Undergraduate) [WebSci 20]

Ankit Bhargava, CSE (Undergraduate) [WebSci 20]

Taylor Denby, Cognitive Science (Undergraduate) [WebSci 20, CHI 20]
Next: University of Michigan, Master of Science in Information

Sonali Tandon, School of Information (Masters) [CHI 20]

Katherine Mustelier, School of Information (Undergraduate) [CHI 21]

Jake Klaristenfeld, CSE (Undergraduate)

Eleanor Desmond, Electrical Engineering (Undergraduate)

Jolie Kaplan, CSE (Undergraduate)

Alice Li Wang, Stephen M. Ross School of Business
& School of Information (Undergraduate)

Ruiyi Yang, CSE (Undergraduate) [CHI 23]
Next: Carnegie Mellon University, Master of Science in Intelligent Information Systems

Weikun Lyu, Math & CS (Undergraduate) [CHI 23]
Awarded the Blue Ribbon Certificate for his presentation at the UROP symposium.
Next: Meta, Software engineer

Nick Cook, Computer Science (Undergraduate) [CHI 23]

Sean Scarnecchia, CSE (Undergraduate) [SOUPS 23 Poster]

Annie Chen, CS (Undergraduate) [SOUPS 23 Poster]

Sumit Asthana, CSE (PhD student) [CHI 24]

Academic Service

Reviewing

Recognitions for Outstanding Review: UIST 22, CSCW 23-24, CHI 23 (4 times), CHI 24 LBW
CHI (21 - 24), CSCW (19 - 21, 23 - 24), ICWSM (22, 24), UIST (22, 24), FAccT (23), IEEE Pervasive Computing (22), PLoS ONE (21), IEE ICDM (19)
CHI LBW (20, 24), CSCW Poster (20)

Others (Selected)

Fall 22 - Spring 23 **UMSI Diversity, Equity, and Inclusion Committee**, PhD student representative
PhD student representative for UMSI's DEI committee, which focuses on "school level efforts to promote an equitable and inclusive community across students, staff, and faculty." Contributed to shaping School of Information's DEI 2.0 Strategic Plan by ensuring PhD students' perspectives are reflected in the proposal.

Fall 20 - Winter 21 **Michigan Interactive and Social Computing (MISC)**, Student Organizer
Co-organized speaker series on HCI and social computing.

Leadership and Outreach

Fall 21 **UMSI PhD Student Internship Information Session**, Organizer
Organized a panel to give junior PhD students advice on finding and securing internships.

Fall 20 **UMSI & CSE Student Initiated Doctoral Program (SIDP) Design**, Assistant to faculty
Assisted faculty members in drafting a proposal for evaluating students that want to pursue a PhD in both SI and CSE. Led the effort as the only PhD student. I was told that I may be the first PhD student to be *formally evaluated* by SI and CSE PhD program committees and enrolled in the two programs via U-M's Student Initiated Doctoral Program.

Fall 19 - Winter 20 **Doctoral Executive Committee (DEC)**, Member
DEC is a group of PhD students that represents the voice of UMSI PhD students.