

Tanusree Sharma

tanusree.sharma@psu.edu tanusreesharma.github.io

Research interests

security and safety of information systems; AI governance; democratic and participatory AI; decision mechanism design; human-computer interaction

Employment

Academic Positions

08/2024 - now Assistant Professor, Pennsylvania State University

Industry / Research

05/22-08/22 Visiting Scholar, Max Planck Institute (Responsible Computing Group)
06/21-08/21 Privacy Engineer Intern, Google (SFDC -Third Party Privacy Group)
05/20-08/20 Researcher, Cisco (Cloud Privacy)
01/18-07/18 European Union (Data Privacy in Health Scheme)

Education

8/2019- 7/2024 Ph.D. in Informatics, University of Illinois at Urbana-Champaign

Honors & Awards

2024 2024 John Karat Usable Privacy and Security Research Award
2024 Two ACM CHI 2024 Best paper honorable mention for crypto papers
🏆 "I Can't Believe It's Not Custodial!": Usable Trustless Decentralized Key Management
CHI 24
🏆 "Don't put all your eggs in one basket": How Cryptocurrency Users Secure Their Wallets
CHI24
2023 SIGCHI Gary Marsden Travel Grant \$2500
2023 IC3 Blockchain Summit Student Travel Award - Awarded \$2,000
2022 Plurality Student Travel Grant \$2000
2022 Nomination by UIUC Grad College for Google PhD Fellowship (in top 5)
2022 Nomination by UIUC Grad College for Apple AI/ML Ph.D. Fellowship (in top 5)

Grants and Gifts

Google Scholar Research Grant 2025

Project Title: Designing Accessible Tools for Blind and Low-Vision People to Navigate Deepfake Media

Role: PI. Awarded \$60000, Co-PI: Jaron Mink

Seed Grant, Penn State 2024-2025

Project Title: Personhood Credential for Digital Identity Crisis

Role: PI. Awarded \$40000

OpenAI 2023: Democratic inputs to AI

Role: Co-PI. Awarded \$110,000 with PI: Yang Wang

Team: Yun Huang, Dawn Song, Jeff Hancock

Meta 2022, Social Media Advertisement Technology Design for the Global South

Role: Co-PI; Awarded \$100,000 with PI: Yang Wang

Team: Yang Wang, Tanusree Sharma, Smirity Kaushik, Yaman Yu

Publications

See [Google Scholar](#) for citation records

Journal Articles and Conference Proceedings (Peer-reviewed)

- | | |
|--------------------|--|
| AAAI'25 | PRAC3 (Privacy, Reputation, Accountability, Consent, Credit, Compensation):
Voice Actors in AI Data Economy
<u>Tanusree. Sharma</u> , Yihao Zhou, Visar Berisha
Proceedings of 8th AAAI/ACM Conference on AI, Ethics, and Society. |
| AAAI'25 | Aligning AI with Public Values: Deliberation and Decision-Making for Governing
Multimodal LLMs in Political Video Analysis
<u>Tanusree Sharma</u> , Yujin Potter, Zachary Kilhoffer, Yun Huang, Dawn Song, Yang
Wang
Proceedings of 8th AAAI/ACM Conference on AI, Ethics, and Society |
| Useenix
PEPR'25 | Verifying Humanness: Personhood Credentials for the Digital Identity Crisis
Ayae Ide, <u>Tanusree Sharma</u>
2025 USENIX Conference on Privacy Engineering Practice
and Respect (PEPR)
https://www.usenix.org/conference/pepr25/presentation/sharma |
| ACM
ASSETS'25 | "Before, I Asked My Mom, Now I Ask ChatGPT": Visual Privacy Management with
Generative AI for Blind and Low-Vision People.
<u>Tanusree Sharma</u> , Yu-Yun Tseng, Lotus Zhang, Ayae Ide, Kelly Avery Mack, Leah
Findlater, Danna Gurari, and Yang Wang.
To appear in 27th International ACM SIGACCESS Conference on Computers and
Accessibility (ASSETS 2025) |

- IEEE S&Pa
'25 Exploring Parent-Child Perceptions on Safety in Generative AI: Concerns, Mitigation Strategies, and Design Implications
Yaman Yu, Tanusree Sharma, Melinda Hu, Justin Wang, Yang Wang
IEEE Symposium on Security and Privacy 2025
<https://ieeexplore.ieee.org/abstract/document/11023500/>
- IEEE S&Pb
'25 Security Perceptions of Users in Stablecoins: Advantages and Risks within the Cryptocurrency Ecosystem
Maggie Yongqi Guan, Yaman Yu, Tanusree Sharma, Molly Zhuangtong Huang, Kaihua Qin, Yang Wang, Kanye Ye Wang
IEEE Symposium on Security and Privacy 2025
<https://ieeexplore.ieee.org/abstract/document/11023350>
- IEEE
WACV'25 BIV-Priv-Seg: Locating Private Content in Images Taken by People With Visual Impairments
Yu-Yun Tseng, Tanusree Sharma, Lotus Zhang, Abigale Stangl, Leah Findlater, Yang Wang, Danna Gurari Yu-Yun Tseng, Danna Gurari
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) 2025
<https://ieeexplore.ieee.org/abstract/document/10943502/>
- PoPETS'25 Privacy Perceptions and Behaviors Towards Targeted Advertising on Social Media: A Cross-Country Study on the Effect of Culture and Religion
Smirity Kaushik, Tanusree Sharma, Y. Yu, A. F. Ali, B. P. Knijnenburg, Y. Wang, Y. Zou
Proceedings on Privacy Enhancing Technologies, 2025(2), 188-210. 2025.
<https://doi.org/10.56553/popets-2025-0057>
- NDSS'25 Exploring User Perceptions of Security Auditing in the Web3 Ecosystem.
Molly Zhuangtong Huang, Rui Jiang, Tanusree Sharma, Kanye Ye Wang.
Network and Distributed System Security (NDSS) Symposium 2025
<https://www.ndss-symposium.org/wp-content/uploads/2025-775-paper.pdf>
- ACM
COMPASS'25 COINFUSED: Social Norms, Current Practices and Perceived Risks among the Cryptocurrency Users.
Tanusree Sharma, Atm Mizanur Rahman, Silvia Sandhi, Yang Wang, Rifat Shahriyar, SM Taiabul Haque.
ACM Computing and Sustainable Societies (COMPASS 2025)
<https://dl.acm.org/doi/10.1145/3715335.3735466>
- Usenix
Security'24 "I'm not convinced that they don't collect more than is necessary": User-Controlled Data Minimization Design in Search Engines
Tanusree Sharma, Lin Kyi, Yang Wang, Asia J Biega
Proceedings of the USENIX Security Symposium (USENIX Security2024)
<https://www.usenix.org/conference/usenixsecurity24/presentation/sharma>

- CHI'24a "I Can't Believe It's Not Custodial!" Usable Trustless Decentralized Key Management
 
Tanusree Sharma, Vivek Nair, Henry Wang, Yang Wang, Dawn Song
 ACM Conference on Human Factors in Computing Systems.
<https://dl.acm.org/doi/full/10.1145/3613904.3642464>
- CHI'24b "Don't Put All Your Eggs In One Basket": How Cryptocurrency Users Choose and Secure Their Wallets 
 Yaman Yu, Tanusree Sharma, Sauvik Das, Yang Wang
 ACM Conference on Human Factors in Computing Systems.
<https://dl.acm.org/doi/full/10.1145/3613904.3642534>
- CHI'24c Designing Accessible Obfuscation Support for Blind Individuals' Visual Privacy Management
 Lotus Zhang, Abigale Stangl, Tanusree Sharma, Yu-Yun Tseng, Inan Xu, Danna Gurari, Yang Wang, Leah Findlater
 ACM Conference on Human Factors in Computing Systems. 
<https://dl.acm.org/doi/full/10.1145/3613904.3642713>
- CHI'24d Understanding User-Perceived Security Risks and Mitigation Strategies in the Web3 Ecosystem
 Janice Jianing Si, Tanusree Sharma, Kanye Ye Wang
 2024 CHI Conference on Human Factors in Computing Systems
<https://dl.acm.org/doi/full/10.1145/3613904.3642291>
- IEEE ICBC'24 Unpacking How Decentralized Autonomous Organizations (DAOs) Work in Practice
Tanusree Sharma, Yujin Kwon, Kornrapat Pongmala, Henry Wang, Andrew Miller, Dawn Song, Yang Wang
 2024 IEEE International Conference on Blockchain and Cryptocurrency
<https://ieeexplore.ieee.org/abstract/document/10634404/>
- PoPETs'24 Cross-Contextual Examination of Older Adults' Privacy Concerns, Behaviors, and Vulnerabilities
Y. Zou, K. Sun, T. Afnan, R. Abu-Salma, R. Brewer, F. Schaub
 Proceedings on Privacy Enhancing Technologies, 2024(1), 133-150. 2024.
- Usenix Security'23 A Mixed-Methods Study of Security Practices of Smart Contract Developers
Tanusree Sharma, Zhixuan Zhou, Andrew Miller, Yang Wang
 32nd USENIX Security Symposium (USENIX Security 23)
<https://www.usenix.org/conference/usenixsecurity23/presentation/sharma>
- SOUPS'23a Iterative design of an accessible crypto wallet for blind users
 Zhixuan Zhou*, Tanusree Sharma*, Luke Emano, Sauvik Das, Yang Wang
 Symposium on Usable Privacy and Security (SOUPS 2023)
<https://www.usenix.org/conference/soups2023/presentation/zhou>

- SOUPS'23b {GuardLens}: Supporting Safer Online Browsing for People with Visual Impairments
Smirity Kaushik, Natã M Barbosa, Yaman Yu, Tanusree Sharma, Zachary Kilhoffer, JooYoung Seo, Sauvik Das, Yang Wang
Symposium on Usable Privacy and Security (SOUPS 2023)
<https://www.usenix.org/conference/soups2023/presentation/kaushik>
- CHI'23a Disability-first design and creation of a dataset showing private visual information collected with people who are blind
Tanusree Sharma, Abigale Stangl, Lotus Zhang, Yu-Yun Tseng, Inan Xu, Leah Findlater, Danna Gurari, Yang Wang
Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems
<https://dl.acm.org/doi/abs/10.1145/3544548.3580922>
- CHI'23b User perceptions and experiences of targeted ads on social media platforms: Learning from bangladesh and india
Tanusree Sharma, Smirity Kaushik, Yaman Yu, Syed Ishtiaque Ahmed, Yang Wang
Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems
<https://dl.acm.org/doi/abs/10.1145/3544548.3581498>
- ACM COMPASS'23 A First Look into Software Security Practices in Bangladesh
Tanusree Sharma*, Ankit* Shrestha*, Pratyasha Saha, Syed Ishtiaque Ahmed, Mahdi Nasrullah Al-Ameen
ACM Journal on Computing and Sustainable Societies
<https://dl.acm.org/doi/full/10.1145/3616383>
- ACM CUI'23 Using ChatGPT in HCI Research—A Trioethnography
Smit Desai, Tanusree Sharma, Pratyasha Saha
Proceedings of ACM Conversational User Interfaces (CUI) 2023
<https://dl.acm.org/doi/abs/10.1145/3571884.3603755>
- CESEC'22 It's A Blessing and A Curse": Unpacking Creators' Practices with Non-Fungible Tokens (NFTs) and Their Communities
Tanusree Sharma, Zhixuan Zhou, Yun Huang, Yang Wang
Crypto Economics Security Conference (CESEC)
<https://arxiv.org/abs/2201.13233>
- ACM COMPASS'21 Privacy during pandemic: A global view of privacy practices around COVID-19 apps
Tanusree Sharma, Md Mirajul Islam, Anupam Das, SM Taiabul Haque, Syed Ishtiaque Ahmed
Proceedings of the 4th ACM SIGCAS Conference on Computing and Sustainable Societies
<https://dl.acm.org/doi/abs/10.1145/3460112.3471958>
- ACM TOIT'21 Enabling User-centered Privacy Controls for Mobile Applications: COVID-19 Perspective
Tanusree Sharma, Hunter A Dyer, Masooda Bashir
ACM Transactions on Internet Technology (TOIT)
<https://dl.acm.org/doi/abs/10.1145/3434777>

- Mboile
HCI'20 Advocating for users' privacy protections: a case study of COVID-19 apps
Tanusree Sharma, Tian Wang, Masooda Bashir
Human-Computer Interaction with Mobile Devices and Services
<https://dl.acm.org/doi/abs/10.1145/3406324.3410711>
- Nature'20 Use of apps in the COVID-19 response and the loss of privacy protection
Tanusree Sharma, Masooda Bashir
Nature Publishing Group
<https://www.nature.com/articles/s41591-020-0928-y>
- ACNS' 20 Towards Inclusive Privacy Protections
Tanusree Sharma, Tian Wang, Carlo Di Giulio, Masooda Bashir
Applied Cryptography and Network Security
https://link.springer.com/chapter/10.1007/978-3-030-61638-0_19
- HCI'20 Privacy apps for smartphones: An assessment of users' preferences and limitations
Tanusree Sharma, Masooda Bashir
International Conference on Human-Computer Interaction
https://link.springer.com/chapter/10.1007/978-3-030-50309-3_35
- AHFE'20 An Analysis of Phishing Emails and How the Human Vulnerabilities are Exploited
Tanusree Sharma, Masooda Bashir
International Conference on Applied Human Factors and Ergonomics
https://link.springer.com/chapter/10.1007/978-3-030-52581-1_7
- Cloud'18 A restful e-governance application framework for people identity verification in cloud
Ahmedur Rahman Shovon, Shanto Roy, Tanusree Sharma, Md Whaiduzzaman
International Cloud Computing Conference 2018
https://link.springer.com/chapter/10.1007/978-3-319-94295-7_19
- IEEE'17 A dynamic data placement policy for heterogeneous hadoop cluster
Santa Maria Shithil, Tushar Kanti Saha, Tanusree Sharma
2017 4th International Conference on Advances in Electrical Engineering (ICAEE)
<https://ieeexplore.ieee.org/abstract/document/8255371/>
- IEEE'17 PSO-NF-based vertical handoff decision for ubiquitous heterogeneous wireless network (UHWN)
Saoreen Rahman, Tanusree Sharma, SM Reza, MM Rahman, MS Kaiser
International Conference on Computational Intelligence 2016
<https://ieeexplore.ieee.org/abstract/document/7860357/>
- Workshop Papers and Posters (Lightly Peer-reviewed)
- CHI EA'25 Honey Trap or Romantic Utopia: A Case Study of Final Fantasy XIV Players PII Disclosure in Intimate Partner-Seeking Posts
Yihao Zhou, Tanusree Sharma

	ACM Conference on Human Factors in Computing Systems, Late-Breaking Work. 2025 https://dl.acm.org/doi/abs/10.1145/3706599.3719831	
CHI EA'24	Cross-Country Examination of People's Experience with Targeted Advertising on Social Media Smirity. Kaushik, <u>Tanusree Sharma</u> , Yaman Yu, A. F. Ali, Yang. Wang, Yixin Zou ACM Conference on Human Factors in Computing Systems, Late-Breaking Work. 2024.	Teaching
SOUPS'23 Poster	Examining User Perceptions of Stablecoins: Understandings and Risks Yongqi Guan, Yaman Yu, <u>Tanusree Sharma</u> , Kaihua Qin, Yang Wang, Ye Wang Symposium on Usable Privacy and Security (SOUPS 2023) (Poster) https://www.usenix.org/system/files/soups2023-poster160_guan_abstract_final.pdf	
Usenix PERP'23	Rethinking Data Minimization from a {User-Centered} Approach: A Paradigm Shift <u>Tanusree, Sharma</u> 2023 {USENIX} Conference on Privacy Engineering Practice and Respect ({PEPR} 23) https://www.usenix.org/conference/pepr23/presentation/sharma	
IoT'19	Preserving Privacy in Cyber-physical-social Systems: An Anonymity and Access Control Approach. <u>Tanusree Sharma</u> , John C Bambenek, Masooda Bashir Workshop on Cyber-Physical Social Systems (CPSS2019)	

Experience

	Primary or Co-Instructor
Spring 2025	CYBER 342- Incident Handling & Response (Undergraduate Class), Penn State
Fall 2024	IS-597- Usable Security in Blockchain (Graduate Class), Penn State
Spring 2020	INFO- 490: Python for Data Science; Spring 2020 (UIUC)
Spring 2019	COSC- 4377: Computer Network; Spring 2019 (UH)

Guest Lectures

Fall 2023	IS 236A: User Research & Evaluation; Host: Yang Wang (UIUC)
Fall 2023	IS 226: Introduction to HCI; Host: Yun Huang (UIUC)
Spring 2022	ECE 598: Principles of Blockchain; Host: Pramod Viswanath
Spring 2022	IS 400: Research Colloquium; Host: Ted Underwood

Invited Talk & Seminar

AgenticaI'25	Clontract: A Multi-Agent System for Spotting Risks in Voice Acting Contracts and Negotiating Control Over Voice Data Invited talk at Agentica AI Summit at UC Berkeley Host: in person August 2nd, 2025
Usenix	Verifying Humanness: Personhood Credentials for the Digital Identity Crisis

	Invited talk at the 2025 USENIX Conference on Privacy Engineering Practice and Respect Host: in person June 9-10, 2025
Berkeley RDI	Governing People's Values in Multimodal Generative AI Models: Political Videos Invited talk at Berkeley RDI Host: Cornell Tech, in person, August 6, 2024
IC3 Blockchain	Tooling and Method to Engage Various Stakeholders in Governing AI: Gender Stereotypes Invited talk at IC3 Blockchain Camp Host: Cornell Tech, in person June 15, 2024
ASU	Trustworthy and Democratic Design for Emerging Technologies. Invited talk at Arizona State University Host: Rakibul Hasan, in person Oct 24, 202
OpenAI	Inclusive.AI: Democratic Tooling to engage the underserved population in AI Invited talk at OpenAI, San Francisco, CA Host: OpenAI, in person Sept 28, 2023
Usenix	Rethinking Data Minimization in AI System from a User-Centered Approach: A Paradigm Shift. Usenix Privacy Engineering Practice and Respect 2023 at Santa Clara, CA, Sept 11-12, 2023
Stanford	Utilizing DAO Tooling for non-DAO Context: Democratic input to AI DAO workshop at the Science of Blockchain conference at Stanford University Host: Stanford Center for Blockchain Research; Aug 31, 2023
IC3 Blockchain	Workings and metrics to evaluate Decentralized Autonomous Organizations (DAOs). Invited Talk at IC3 Blockchain Camp Host: Cornell Tech, In-person Jun 12-17, 2023
IEEE	Women in Computing & Higher Studies Invited Talk at IEEE Computer Society Bangladesh Chapter, July 22, 2023
UC Berkely	DAOs as early adopters: How DAOs work in practice Plurality Conference at UC Berkeley Host: Glen Weyl & Audrey Tang; Jan. 13-15, 2023
UIUC ischool	BIV-Priv Dataset: Disability-First Design and Creation of a Dataset with Private Visual Information Collected With People Who Are Blind Invited Talk at iSchool Research Showcase Host: UIUC iSchool, Nov 15, 2022

Academic Advising & Mentoring

As a Faculty member at Penn State

Fall, 2025-	Aljawharah M. Alzahrani, PhD Student, Penn State (Thesis Advisor)
Fall, 2025-	Farhad Hossain, PhD Student, Penn State (Thesis Advisor)
Fall, 2024-	Ayae Ide, PhD Student, Penn State (Thesis Advisor)
Fall, 2024-	Yihao Zhou, Master's Student, Penn State (Thesis Advisor)
Jan, 2025-	Tory Park, Undergraduate Student, Penn State
Jan, 2025-	Ryan John Oommen, Undergraduate Student, Penn State (Honors Advisor)
Jan, 2025-	Gwendolyn Elizabeth Powell, Undergraduate Student, Penn State (Honors Advisor)
Mar'25-May, 25-	Winston Jen White, Undergraduate Student, IUG, Penn State (Part-time Researcher)

Aug, 25- Rohan Samuel, Undergraduate Student (Researcher)
 Aug, 25- Anish Krishnagiri, Undergraduate Student (Researcher)

As a PhD Student at the University of Illinois at Urbana-Champaign

2023- now Silvia Sandhi, Jahangirnagar University, Bangladesh
 2023- now ATM Mizanur Rahman (BUET, Bangladesh > incoming PhD Student, UIUC)
 2023 Pinky Rani Sarkar (BUP, Bangladesh > PhD student, UVA)
 2023 Jongwon Park (Bachelor Student, UIUC) [Nature Sci Report under review]
 2023 Melinda Hu (High School Student)
 2023 Justin Wang (High School Student)
 2022-2023 Henry Wang (High School Student, UIUC) [CHI'24, IEEE ICBC 2024]
 2022-2023 Inan Xu (Undergrad > MS student, UC Santa Cruz) [CHI' 2024, CHI' 2023]
 2022-2023 Luke Emano (Undergrad student, UIUC) [SOUPS' 2023]
 2022 Kornrapat Pongmala (UC Berkeley > ML Engineer, TikTok) [IEEE ICBC 2024]
 2022 Jessica Mack (Undergrad student, UIUC) [Usenix' 2023]
 2020 Pratyasha Saha, MS Student, Brac University [ACM Compass, ACM CUI]
 2020 Hunter Dyer (Undergrad student, UIUC)

Service

Program Committee & Chair

2025 2026 USENIX Security Symposium
 2025 2026 ACM Conference on Human Factors in Computing Systems 2026
 2025 2026 ACM Conference on Computer and Communications Security
 2025 2026 ACM DIS Plurality, Equity, and Accessibility Chair
 2025 2025 SOUPS Mentoring Co-Chair
 2025 The 28th International Symposium on Research in Attacks, Intrusions and Defenses (RAID 2025)
 2025 SBC 2025 Science of Blockchain Conference
 2025 CCS 2025 ACM Conference on Computer and Communications Security
 2025 USEC 2025 at Network and Distributed System Security (NDSS) Symposium
 2025 ACM Conference on Human Factors in Computing Systems 2025
 2024 ACM Conference on Computer-Supported Cooperative Work July 2024 cycle
 2024 Workshop on Usable Security and Privacy (Mentoring Co-Chair with Sauvik Das, Sana Maqsood)
 2023 WIPS: Workshop on Inclusive Privacy and Security
 2022 WIPS: Workshop on Inclusive Privacy and Security
 2021 WIPS: Workshop on Inclusive Privacy and Security

Track Chair Assistant

2024 ACM CHI: Privacy and Security Subcommittee (with Yang Wang)
 2023 ACM CHI: Privacy and Security Subcommittee (with Yang Wang)

External Reviewer

I have served as an external reviewer for the following venues for one or more times:

ACM Conference on Human Factors in Computing Systems
ACM Conference on Designing Interactive Systems (DIS)
ACM Transactions on Computer-Human Interaction (TOCHI)
ACM Conference on *Computer-Supported Cooperative*
ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)
ACM International Conference on Mobile Human-Computer Interaction (MobileHCI)
ACM COMPASS
IEEE Transactions on Dependable and Secure Computing
IEEE Symposium on Security and Privacy

Media Coverage

[Forbes 2020](#)

Privacy Risks of COVID-19 Application, published in Nature Communication 2020

[Meta Grant 2022](#)

Social Media Advertising and Privacy in Global South – Covered by iSchool UIUC.

[OpenAI Grant 2023](#)

Democratic Input to AI – Covered by OpenAI

[Top Tech News 2024](#)

Is OpenAI's 'moonshot' to integrate democracy into AI tech more than PR? | The AI Beat

[Crypto.news 2024](#)

Crypto claims to be inclusive. Not for the visually impaired as it turns out.

[Hapticsdao 2024](#)

Web3 Accessibility

[Oasis Lab](#)

DAO should enable private voting for decentralization