Tanusree Sharma

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

Research interests

Security and safety of information systems; computational social science, democratic AI; AI Governance; 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

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

Publications

See *Google Scholar* for citation records

	Journal Articles and Conference Proceedings (Peer-reviewed)
IEEE WACV 2026	Hierarchical Instance Tracking to Balance Privacy Preservation with Accessible Information
	Jarek Tyler Reynolds, Neelima Prasad, Neel Karsanbhai, Tanusree Sharma, Lotus Zhang, Abigale, Stangl, Yang Wang, Leah Findlater, Danna Gurar.
	https://openreview.net/forum?id=zqDMprwlL5
AAAI'25	PRAC3 (Privacy, Reputation, Accountability, Consent, Credit, Compensation): Voice Actors in AI Data Economy
	Tanusree. Sharma, 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
	Tanusree Sharma, Yujin Potter, Zachary Kilhoffer, Yun Huang, Dawn Song, Yang Wang
	Proceedings of 8th AAAI/ACM Conference on AI, Ethics, and Society
Usenix PEPR'25	Verifying Humanness: Personhood Credentials for the Digital Identity Crisis
	Ayae Ide, Tanusree Sharma
	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.
	Tanusree Sharma, 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, <u>Tanusree Sharma</u>, 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, <u>Tanusree Sharma</u>, 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, <u>Tanusree Sharma</u>, 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, <u>Tanusree Sharma</u>, 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, <u>Tanusree Sharma</u>, 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. <u>Tanusree Sharma,</u> 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 <u>Tanusree Sharma,</u> 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 <u>Tanusree Sharma</u>, 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, <u>Tanusree Sharma</u>, 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, <u>Tanusree Sharma,</u> 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, <u>Tanusree Sharma</u>, 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
	<u>Tanusree Sharma</u>, 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/
Usenix Security'23	A Mixed-Methods Study of Security Practices of Smart Contract Developers
	<u>Tanusree Sharma,</u> 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*, <u>Tanusree Sharma*</u>, 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, <u>Tanusree Sharma</u>, 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
	<u>Tanusree Sharma</u>, 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
	<u>Tanusree Sharma</u>, 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   A First Look into Software Security Practices in Bangladesh
COMPASS'23   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

CESC'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 (CESC)
                https://arxiv.org/abs/2201.13233

ACM   Privacy during pandemic: A global view of privacy practices around COVID-19 apps
COMPASS'21   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   Enabling User-centered Privacy Controls for Mobile Applications: COVID-19 Perspective
TOIT'21   Tanusree Sharma, Hunter A Dyer, Masooda Bashir
                ACM Transactions on Internet Technology (TOIT)
                https://dl.acm.org/doi/abs/10.1145/3434777

Mboile   Advocating for users' privacy protections: a case study of COVID-19 apps
HCI'20   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

HCII'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, Tanusree Sharma, Yaman Yu, A. F. Ali, Yang. Wang, Yixin Zou
	ACM Conference on Human Factors in Computing Systems, Late-Breaking Work. 2024.
SOUPS'23 Poster	Examining User Perceptions of Stablecoins: Understandings and Risks
	Yongqi Guan, Yaman Yu, Tanusree Sharma, 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
	Tanusree, Sharma
	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.
	Tanusree Sharma, John C Bambenek, Masooda Bashir
	Workshop on Cyber-Physical Social Systems (CPSS2019)

Teaching 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 Agentic 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 Berkeley 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