

Yunqing Sun

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Department of Computer Science
Northwestern University
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EDUCATION

Northwestern University	<i>Evanston, US</i>
◦ <i>Ph.D. Candidate in Computer Science</i>	Sep 2021 - Jun 2026 (expected)
◦ <i>Advisor: Prof. Xiao Wang</i>	
Xidian University	<i>Xi'an, China</i>
◦ <i>M.E. in Cyber Security (Advisor: Prof. Jin Cao)</i>	Sep 2018 - June 2021
◦ <i>B.E. in Information Security</i>	Sep 2014 - June 2018

TEACHING EXPERIENCE

Co-Instructor	<i>Northwestern University</i>
◦ <i>CS 307 Intro to Cryptography</i>	Sep 2025 - Dec 2025 (expected)
Guest Lecturer	<i>Northwestern University</i>
◦ <i>CS 407 Advanced Topics in Modern Cryptography</i>	Feb 2025
Teaching Assistant	<i>Northwestern University</i>
◦ <i>CS 217 Data Management and Information Processing</i>	Mar 2025 – Jun 2025
◦ <i>CS 496 Advanced Cryptography</i>	Jan 2024 – Mar 2024
◦ <i>CS 307 Intro to Cryptography</i>	Sep 2023 – Dec 2023
◦ <i>CS 396 Intro to Cryptography</i>	Sep 2022 – Dec 2022

PUBLICATIONS

- Yunqing Sun**, Hanlin Liu, Kang Yang, Yu Yu, Xiao Wang, Chenkai Weng, "Committed Vector Oblivious Linear Evaluation and Its Applications", *In ACM Conference on Computer and Communications Security (CCS)*, 2025. (Acceptance rate: TBD)
- Yunqing Sun**, Jonathan Katz, Mariana Raykova, Phillipp Schoppmann, Xiao Wang, "Actively Secure Private Set Intersection in the Client-Server Setting", *In ACM Conference on Computer and Communications Security (CCS)*, 2024. (Acceptance rate: 16.9%)
- Yunqing Sun**, Jin Cao, Xiongpeng Ren, Canhui Tang, Ben Niu, Yinghui Zhang, Hui Li, "An Anonymous and Secure Data Transmission Mechanism with Trajectory Tracking for D2D Relay Communication in 3GPP 5G networks," *IEEE Transactions on Intelligent Transportation Systems (IEEE TITS)*, 2024. (Impact factor: 8.4)
- Hao Xu, **Yunqing Sun**, Xiaoshuai Zhang, Erwu Liu, When web 3.0 meets reality: A hyperdimensional fractal polytope p2p ecosystems, *IEEE Network*, 2024. (Impact factor: 6.3)
- Hao Xu, Lei Zhang, **Yunqing Sun**, Chih-Lin I, "BE-RAN: Blockchain-enabled Open RAN for 6G with DID and Privacy-Preserving Communication," arXiv: 2101.10856. *IEEE Globecom Workshop*, 2024.
- Haiyang Luo, Zhe Sun, **Yunqing Sun**, Ang Li, Binghui Wang, Jin Cao, Ben Niu, Recipient-Aware Photo Automatic Deletion Control Policy Recommendation Scheme in Online Social Networks, *IEEE Transactions on Dependable and Secure Computing, IEEE TDSC*, 2024. (Impact factor: 7.5)
- Hao Xu, **Yunqing Sun**, Zihao Li, Yao Sun, Xiaoshuai Zhang and Lei Zhang, "deController: A Web3 Native Cyberspace Infrastructure Perspective," *IEEE Communication Magazine*, 2023. (Impact factor: 8.2)
- Zihan Zhou, Zihao Li, Xiaoshuai Zhang, **Yunqing Sun**, Hao Xu, A review of gaps between web 4.0 and web 3.0 intelligent network infrastructure, *WF-IoT*, 2023.
- Yunqing Sun**, Jin Cao, Maode Ma, Yinghui Zhang, Hui Li, Ben Niu, "EAP-DDBA: Efficient Anonymity Proximity Device Discovery and Batch Authentication Mechanism for Massive D2D Communication Devices in 3GPP 5G HetNet," *IEEE Transactions on Dependable and Secure Computing (IEEE TDSC)*, 2020. (Impact factor: 7.5)
- Jin Cao, Maode Ma, Hui Li, Ruhui Ma, **Yunqing Sun**, Pu Yu, Lihui Xiong, "A Survey on Security Aspects for 3GPP 5G Networks," *IEEE Communications Surveys and Tutorials*, 2020. (Impact factor: 46.7)
- Yunqing Sun**, Jin Cao, Maode Ma, Hui Li, Ben Niu, Fenghua Li, "Privacy-Preserving Device Discovery and Authentication Scheme for D2D Communication in 3GPP 5G HetNet," *IEEE ICNC*, 2019.

PREPRINT

- Kaiwen Yang, Hao Xu, **Yunqing Sun**, Jiacheng Qian, Zihan Zhou, Xiaoshuai Zhang, Erwu Liu, Lei Zhang, Chih-Lin I, "A Mathematical Theory of Hyper-simplex Fractal Network for Blockchain: Part I", 2024.

OPEN SOURCE PROJECTS AND PATENTS

1. OVUF-based PSI: <https://github.com/YunqingSun0-0/ovuf-psi/tree/main>.
2. Patents under PCT:
 - (a) Yang Xu, Jin Cao, **Yunqing Sun**, Xumeng Bu, Hui Li, PCT/CN2020/086778, WO2021212495A1.
 - (b) Yang Xu, Jin Cao, **Yunqing Sun**, Lihui Xiong, Hui Li, PCT/CN2020/086786, WO2021212497A1.
 - (c) Yang Xu, Jin Cao, Lihui Xiong, **Yunqing Sun**, Hui Li, PCT/CN2020/110081, WO2022036600A1.

INVITED TALKS

- UIUC SPRAI Seminar: “Actively Secure Private Set Intersection in the Crowd”, Jan. 2025.
- ACM Conference on Computer and Communications Security (Salt Lake City) : “Actively Secure PSI in the Client-Server Setting”, Oct. 2024.
- NYU Crypto & Sec Group Seminar: “Actively Secure PSI in the Client-Server Setting”, Oct. 2024.
- NIST Workshop on Privacy-Enhancing Cryptography: “Actively Secure PSI in the Client-Server Setting”, Sep. 2024.

SERVICE

- Journal Reviewer:
 1. ACM Computing Surveys
 2. IEEE Transactions on Information Forensics & Security
 3. IEEE Transactions on Dependable and Secure Computing
 4. IEEE Transactions on Industrial Informatics
 5. IEEE Transactions on Computers
 6. IEEE Internet of Things Journal
 7. IEEE System Journal
 8. Annals of Telecommunications
 9. Archives Of Physiology And Biochemistry
- Technical Program Committee Reviewer: WF-IoT 2024, 2025
- Mentored: Xinran Cai

PROFESSIONAL DEVELOPMENT

- Supporting Student Success Practicum, Searle Center, Northwestern
- Pedagogical Innovations in STEM, Searle Center, Northwestern

FELLOWSHIPS AND AWARDS

- CRA-WP Grad Cohort for Women, 2023
- Student Funding Support, Crypto, 2022
- Ph.D. Fellowship, Northwestern, 2021-2022
- National Scholarship, Ministry of Education of P.R. China, 2020