

Yunqing Sun

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Department of Computer Science
Northwestern University
Evanston, IL 60201

EDUCATION

Northwestern University

Evanston, US

- *Ph.D. in Computer Science*
- *Advisor: Prof. Xiao Wang*
- *Dissertation: Practical Private Set Operators in the Client-Server Setting*

Sep 2021 - Sep 2026

Xidian University

Xi'an, China

- *M.E. in Cyber Security (Advisor: Prof. Jin Cao)*
- *B.E. in Information Security*

Sep 2018 - June 2021

Sep 2014 - June 2018

TEACHING EXPERIENCE

Co-Instructor

Northwestern University

- *CS 307 Intro to Cryptography*

Sep 2025 - Dec 2025

Guest Lecturer

University of Illinois Urbana-Champaign

- *ECE 407 Cryptography: From Theory to Practice*
- *CS 591 SP: Advanced Seminar, Security and Privacy*

Sep 2025

Jan 2025

Guest Lecturer

Northwestern University

- *CS 217 Data Management and Information Processing*
- *CS 407 Advanced Topics in Modern Cryptography*

May 2026

Feb 2025

Teaching Assistant

Northwestern University

- *CS 217 Data Management and Information Processing*
- *CS 217 Data Management and Information Processing*
- *CS 496 Advanced Cryptography*
- *CS 307 Intro to Cryptography*
- *CS 396 Intro to Cryptography*

Jan 2026 – Mar 2026

Mar 2025 – Jun 2025

Jan 2024 – Mar 2024

Sep 2023 – Dec 2023

Sep 2022 – Dec 2022

PUBLICATIONS

1. **Yunqing Sun**, Xinran Cai, Hanlin Liu, Xiao Wang, Wei Dong, "Communication-Efficient Private Join and Compute over Distributed Input Sets", *In ACM Conference on Computer and Communications Security (CCS)*, 2026. (Acceptance rate: 19.5%)
2. **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: 13.9%)
3. **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%)
4. **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)
5. 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)
6. 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.
7. 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)
8. 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)
9. 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.

10. **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)
11. 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)
12. **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.

INVITED TALKS

- Committed Vector Oblivious Linear Evaluation and its Applications
 - *ACM Conference on Computer and Communications Security (Taipei)*, Oct. 2025.
- Actively Secure Private Set Intersection in the Client-Server Setting
 - *ACM Conference on Computer and Communications Security (Salt Lake City)*, Oct. 2024.
 - *NYU Crypto & Sec Group Seminar*, Oct. 2024.
 - *NIST Workshop on Privacy-Enhancing Cryptography*, Sep. 2024.

OPEN SOURCE PROJECTS AND PATENTS

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

PROFESSIONAL TRAINING AND CERTIFICATES

- Supporting Student Success Practicum, Searle Center, Northwestern
- Pedagogical Innovations in STEM, Searle Center, Northwestern
- Student Experiences in STEM, Searle Center, Northwestern
- Effective Assessment Strategies for Large Undergraduate Courses Workshop, CIRTL

SERVICE

- Journal Reviewer: *IEEE Transactions on Information Forensics & Security* (2025); *IEEE Transactions on Dependable and Secure Computing* (2021, 2025, 2026); *Computer Networks* (2025, 2026); *Archives of Physiology and Biochemistry* (2025); *The Journal of Supercomputing* (2026); *Journal of Information Security and Applications* (2026); *ACM Computing Surveys* (2024); *IEEE Transactions on Industrial Informatics* (2023, 2024); *IEEE Transactions on Computers* (2023); *IEEE Internet of Things Journal* (2024); *IEEE Systems Journal* (2021).
- Technical Program Committee Reviewer: *WF-IoT* 2024, 2025, 2026
- Mentoring: Xinran Cai, visiting undergraduate from Tsinghua University

FELLOWSHIPS AND AWARDS

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