XUECHAO WANG

The Hong Kong University of Science and Technology (Guangzhou)
No.1 Duxue Road, Nansha, Guangzhou, China
Web: https://xuechao2.github.io/

EDUCATION

Ph.D. in Electrical and Computer Engineering *December 2020 - May 2023*
Advisor: Pramod Viswanath
University of Illinois Urbana-Champaign, Illinois, GPA: 4.00/4.00
Dissertation: "Scalable and Fungible Blockchain Consensus via Proof of Resource"

Master of Science in Electrical and Computer Engineering *August 2018 - December 2020*
Advisor: Pramod Viswanath
University of Illinois Urbana-Champaign, Illinois, GPA: 4.00/4.00
Thesis: "Proof-of-Stake Longest Chain Protocols: Security vs Predicability"

Bachelor of Science in Electronic Engineering *August 2014 - July 2018*
Tsinghua University, Beijing, China, GPA: 92/100, Rank: 12/239

RESEARCH INTEREST

My research interest is in blockchains, including blockchain infrastructure (layer-1, layer-2, cross-chain), Central Bank Digital Currency (CBDC), Decentralized Finance (DeFi), and the intersection of AI and blockchains.

APPOINTMENTS

Assistant Professor, Fintech Thrust, Society Hub *July 2023 - Present*
HKUST(GZ), Guangzhou, Guangdong, China

Assistant Professor, IoT Thrust, Information Hub *July 2024 - Present*
HKUST(GZ), Guangzhou, Guangdong, China

Visiting researcher at Princeton *August 2022 - July 2023*
Advisor: Pramod Viswanath
Princeton University, New Jersey, USA

Research assistant at Coordinated Science Lab *August 2018 - May 2023*
Advisor: Pramod Viswanath
University of Illinois Urbana-Champaign, Illinois, USA

Research fellow at ConsensusLab *May 2022 - November 2022*
Mentor: Sarah Azouvi
Protocol Labs, remote

Teaching assistant of ECE598PV Principles of Blockchains *Spring 2021 & Spring 2022*
Instructor: Pramod Viswanath
University of Illinois Urbana-Champaign, Illinois, USA

PUBLICATIONS

***** Google Scholar: https://scholar.google.com/citations?user=2NXOKQ8AAAAJ&hl=en

1. Q. Yu, J. Villacis, G. Losa, Z. Xiang, **X. Wang**, "Simple-IT: Practical Low-Latency Signature-Free BFT Consensus", *IEEE S&P 2027*.

2. Z. Peng, J. Liu, H. Jia, J. Yang, Y. Xue, **X. Wang**, "Protected Exercise for Bridgeless Cross-Chain Options Without Upfront Holder Collateral", *IEEE TDSC 2026*.

3. Q. Yu, G. Losa, N. Shrestha, **X. Wang**, "Angelfish: Leader, DAG, or Anywhere in Between", *ACM CCS 2026*.

4. J. Yao, H. Su, T. Liao, Z. Cheng, H. Zhang, **X. Wang**, P. Viswanath, "TAO: Tolerance-Aware Optimistic Verification for Floating-Point Neural Networks", *EuroSys 2026*.

5. Y. Cao*, M. Zheng*, L. W. Cong, S. Li, **X. Wang**, "The Price of Interoperability: Exploring Cross-Chain Bridges and Their Economic Consequences", *ACM SIGMETRICS 2026*.

6. J. Liu, B. Zhang, L. W. Cong, S. Li, **X. Wang**, "From PBS to ePBS: the Microstructure of Block Building", *The 2026 INFORMS Conference on Financial Engineering and Fintech*.

7. Z. Peng, Y. Liu, Z. Sun, M. Li, Z. Luo, J. Zheng, W. Dong, X. He, **X. Wang**, Y. Xue, S. Xu, X. Huang, "JALMBench: Benchmarking Jailbreak Vulnerabilities in Audio Language Models", *ICLR 2026*.

8. Z. Peng, J. Zheng, Y. Liu, H. Jia, Q. Ye, J. Liu, X. Yang, M. Li, Q. Gong, **X. Wang**, X. He, "TxSum: User-Centered Ethereum Transaction Understanding with Micro-Level Semantic Grounding", *EMNLP 2026*.

9. Y. Huang, J. Luo, **X. Wang**, "Heterogeneous Tasks Offloading in Vehicular Edge Computing: A Federated Meta Deep Reinforcement Learning Approach", *IEEE/ACM IWQoS 2026*.

10. B. Zhang, **X. Wang**, "Effective-Balance Design in Ethereum Proof-of-Stake", *IJTCS-FAW 2026*.

11. M. Liu*, H. Su*, J. Xu, X. Jia, **X. Wang**, "GasLiteAA: Optimizing ERC-4337 for Efficient and Secure Gas Sponsorship", *ICBC 2026*.

12. N. Shrestha*, Q. Yu*, A. Kate, G. Losa, K. Nayak, **X. Wang**, "Optimistic, Signature-Free Reliable Broadcast and Its Applications", *ACM CCS 2025* (**Distinguished Paper Award**, 30 out of 2186 submissions).

13. J. Lin, M. Liu, S. Li, **X. Wang**, "SecurePay: Enabling Secure and Fast Payment Processing for Platform Economy", *IEEE/ACM IWQoS 2025*.

14. S. Wang, Y. Huang, W. Zhang, Y. Huang, **X. Wang**, J. Tang, "Private Order Flows and Builder Bidding Dynamics: The Road to Monopoly in Ethereums Block Building Market", *ACM WWW 2025*.

15. C. Che, S. Li, **X. Wang**, "Manifoldchain: Maximizing Blockchain Throughput via Bandwidth-Clustered Sharding", *NDSS 2025*.

16. W. Tang, P. Sheng, R. Ni, P. Roy, **X. Wang**, G. Fanti, and P. Viswanath, "CFT-Forensics: High-Performance Byzantine Accountability for Crash Fault Tolerant Protocols", *AFT 2024*.

17. Q. Yu, G. Losa, **X. Wang**, "TetraBFT: Reducing Latency of Unauthenticated, Responsive BFT Consensus", *ACM PODC 2024*.

18. P. Sheng*, **X. Wang***. S. Kannan, K. Nayak, and P. Viswanath, "TrustBoost: Boosting Trust among Interoperable Blockchains", *ACM CCS 2023*.

19. **X. Wang**, S. Azouvi, and M. Vukolic, "Security Analysis of Filecoin's Expected Consensus in the Byzantine vs Honest Model", *AFT 2023*.

20. M. Fitzi*, **X. Wang***, S. Kannan, A. Kiayias, N. Leonardos, P. Viswanath, and G. Wang, "Minotaur: Multi-Resource Blockchain Consensus", *ACM CCS 2022*.

21. V. Bagaria, A. Dembo, S. Kannan, S. Oh, D. Tse, P. Viswanath, **X. Wang**, and O. Zeitouni, "Proof-of-Stake Longest Chain Protocols: Security vs Predictability", *ACM CCS 2022 Workshop on developments in consensus (ConsensusDay)*. (Authors listed alphabetically)

22. **X. Wang**, V. V. Muppirala, L. Yang, S. Kannan, and P. Viswanath, "Securing Parallel-Chain Protocols under Variable Mining Power", *ACM CCS 2021*.

23. S. Sankagiri*, **X. Wang***, S. Kannan, and P. Viswanath, "Blockchain CAP Theorem Allows User-Dependent Adaptivity and Finality", *Financial Cryptography 2021*.

24. **Illinois Information Theory Students**, S. Basu, and L. R. Varshney, "The Twelvefold Way of Non-Sequential Lossless Compression", *DCC 2021*.

25. A. Dembo, S. Kannan, E. N. Tas, D. Tse, P. Viswanath, **X. Wang**, and O. Zeitouni, "Everything is a Race and Nakamoto Always Wins", *ACM CCS 2020*. (Authors listed alphabetically)

26. **X. Wang**, G. Kamath, V. Bagaria, S. Kannan, S. Oh, D. Tse, and P. Viswanath, "Proof-of-Stake Longest Chain Protocols Revisited", *Stanford Blockchain Conference 2020*.

27. **X. Wang**, X. Zhu, and Z. Sha, "A Low-Complexity Iterative Transmit Precoding Algorithm for Spatial Modulation Systems", *2018 IEEE 87th Vehicular Technology Conference (VTC Spring)*, pp. 1-5. IEEE, 2018.

Preprints

1. C. Che, S. Li, **X. Wang**, "OptChain: Achieving Optimal Throughput of Permissionless Blockchains", *arXiv preprint arXiv:2606.23405*.

2. H. Su, J. Yao, H. Zhang, **X. Wang**, P. Viswanath, "OVIG: Optimistic Verification of AI Training Integrity via Gradient Signals", *arXiv preprint arXiv:2606.21045*.

3. D. Wu, Y. Bai, S. Ren, X. Zhang, Y. Cao, **X. Wang**, W. Wen, J. Liu, "Ordering Power is Sanctioning Power: Sanction Evasion-MEV and the Limits of On-Chain Enforcement", *arXiv preprint arXiv:2603.27739*.

4. Z. Peng, Y. Huang, A. Lu, Q. Ye, P. Zhang, J. Zheng, Y. Liu, **X. Wang**, X. He, J. Wei, "What Your Posts Reveal: A Benchmark and Agentic Framework for User-Level Privacy Leakage on Social Media", *arXiv preprint arXiv:2606.06784*.

5. J. Liu, Y. Xue, D. Wu, J. Liu, **X. Wang**, "Zeus: Defending against Fee Stealing and Griefing Attacks in Multi-Hop Payments", *Cryptology ePrint Archive, Paper 2025/1070*.

6. C. Li, Z. Sun, J. X. Yuu, **X. Wang**, "The Walls Have Ears: Unveiling Cross-Chain Sandwich Attacks in DeFi", *arXiv preprint arXiv:2511.15245*.

7. D. Wu, J. Liu, **X. Wang**, J. Liu, Y. Xue, K. Ren, C. Chun, "Your Trust, Your Terms: A General Paradigm for Near-Instant Cross-Chain Transfer", *arXiv preprint arXiv:2403.15191*.

8. M. Bastankhah, V. Nadkarni, **X. Wang**, P. Viswanath, "AgileRate: Bringing Adaptivity and Robustness to DeFi Lending Markets", *arXiv preprint arXiv:2410.13105*.

9. M. Bastankhah, V. Nadkarni, **X. Wang**, C. Jin, S. Kulkarni, P. Viswanath, "Thinking Fast and Slow: Data-Driven Adaptive DeFi Borrow-Lending Protocol", *arXiv preprint arXiv:2407.10890*.

10. Z. Zhao, Z. Fang, **X. Wang**, X. Chen, H. Su, H. Xiao, Y. Zhou, "Proof-of-Learning with Incentive Security", *arXiv preprint arXiv:2404.09005*.

11. S. Bhat, C. Chen, Z. Cheng, Z. Fang, A. Hebbar, S. Kannan, R. Rana, P.Sheng, H. Tyagi, P. Viswanath, **X. Wang**, "Sakshi: Decentralized AI Platforms", *arXiv preprint arXiv:2307.16562*.

12. L. Yang, **X. Wang**, V. Bagaria, G. Wang, M. Alizadeh, G. Fanti, D. Tse, and P. Viswanath, "Practical Low Latency Proof of Work Consensus", *arXiv preprint arXiv:1909.11261.*

TEACHING

UFUG2101 Introduction to Multivariable Calculus, Coordinator & Instructor, Fall 2024 & Fall 2025 & Fall 2026, HKUST(GZ)
FTEC5320 Decentralized Finance, Instructor, Spring 2024 & Spring 2025 & Spring 2026, HKUST(GZ)
ECE598PV Principles of Blockchains, Teaching Assistant, Spring 2021 & Spring 2022, UIUC

AWARDS AND HONORS

Academic Research Award, Stellar Development Foundation	11/2025
ACM CCS 2025 Distinguished Paper Award, ACM SIGSAC	10/2025
Academic Research Award, Stellar Development Foundation	11/2023
Excellent Graduates, Tsinghua University	07/2018
Academic Excellence Scholarship, Tsinghua University (Continued 3 years)	09/2015 - 09/2017
Changhong Scholarship, Tsinghua University	09/2015
2nd Prize in Chinese Mathematical Olympiad (CMO)	12/2013
1st Prize in National High School Mathematical Competition	10/2013
1st Prize in American Invitational Mathematics Examination (AIME) (Top 1% in China)	03/2013

PROFESSIONAL SERVICE

PC member of ACM CCS 2027, Blockchain and Distributed Systems Track
PC member of USENIX Security 2027
PC member of ACNS 2027
PC member of Financial Cryptography and Data Security 2027
PC member of ACM CCS 2026, Blockchain and Distributed Systems Track
PC member of USENIX Security 2026
PC member of ACM AsiaCCS 2026
PC member of Financial Cryptography and Data Security 2026
PC member of IJTCS-FAW 2026
PC member of ACM CCS 2025, Blockchain and Distributed Systems Track
PC member of USENIX Security 2025
PC member of Financial Cryptography and Data Security 2025
PC member of ACM CCS 2024, Blockchain and Distributed Systems Track
PC member of Financial Cryptography and Data Security 2024
PC member of ACM CCS 2022 Workshop on developments in consensus (ConsensusDay)