Zhonghui Li

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Hefei, Anhui

GitHub

Homepage

Google Scholar

Honors

- Outstanding Paper Award, China Association for Science and Technology, 2022.
- Outstanding Doctoral Dissertation Award, Anhui Province, 2025.

Services

- **TPC Member:** IEEE Global Communications Conference (GLOBECOM 2024, 2025); International Wireless Communications & Mobile Computing Conference (IWCMC 2025).
- **Session Chair:** The International Conference on Wireless Communications and Signal Processing (WC&SP), 2024.
- **Reviewer:** IEEE Network, IEEE JSAC, China Communications, IEEE TNSM, IEEE/ACM ToN, IEEE Computational Intelligence Magazine, Quantum Information Processing, IET Quantum Communications.

Interests

Quantum Networking, Distributed Quantum Computing, Quantum Artificial Intelligence.

Anhui University

Biography

I am currently an Associate Professor at the School of Electronic and Information Engineering, Anhui University. I received my Ph.D degree from the School of Cyber Science and Technology, University of Science and Technology of China (USTC) in 2023, supervised by Prof. Kaiping Xue. From 2023 to 2025, I served as a postdoctoral researcher at the School of Information Science and Technology, USTC. My current research interests include quantum networking, distributed quantum computing, and quantum artificial intelligence. So far, I have published more than 20 papers in international journals or conferences such as IEEE Communications Surveys & Tutorials, IEEE/ACM Transactions on Networking (ToN), IEEE Network, IEEE Transactions on Network and Service Management (TNSM). In addition, I have been invited many times to be a reviewer for international journals such as China Communications, IEEE Network, IEEE TNSM, and IEEE/ACM ToN.

Experiences

Anhui University 2025–Now
School of Electronic and Information Engineering, Associate Professor.

University of Science and Technology of China 2023–2025
School of Information Science and Technology, Post-Doctoral Researcher.

University of Science and Technology of China 2018–2023
School of Cyber Science and Technology, Ph.D

University of Electronic Science and Technology of China 2014–2018
School of Information and Software Engineering, Bachelor.

Projects

National Natural Science Foundation of China 2025.01–2027.12
Research on Key Technologies for End-to-End Entanglement Delivery in Future Large-Scale Quantum Information Networks, ongoing, PI.

Anhui Provincial Natural Science Foundation 2024.09–2026.08
Research on Key Network Technologies for Data Qubit Transmission in Entanglement-assisted Quantum Communication Networks, ongoing, PI,

Selected Publications

- **Zhonghui Li,** Kaiping Xue*, Jian Li, Nenghai Yu, David S. L. Wei, Ruidong Li. "Connection-oriented and Connectionless Remote Entanglement Distribution Strategies in Quantum Networks," *IEEE Network,* vol. 36, no. 6, pp. 150-156, 2022.
- **Zhonghui Li,** Kaiping Xue*, Jian Li, Lutong Chen, Ruidong Li, Zhaoying Wang, Nenghai Yu, David S. L. Wei, Qibin Sun, Jun Lu. "Entanglement-Assisted Quantum Networks: Mechanics, Enabling Technologies, Challenges, and Research Directions," *IEEE Communications Surveys and Tutorials,* vol. 25, no. 4, pp. 2133-2189, 2023.
- **Zhonghui Li,** Kaiping Xue*, Jian Li, Nenghai Yu, David S. L. Wei, Ruidong Li. "Efficient Remote Entanglement Distribution in Quantum Networks: A Segment-based Method," *IEEE Transactions on Network and Service Management,* vol. 21, no. 1, pp. 249-265, 2024.
- **Zhonghui Li,** Jian Li*, Kaiping Xue*, Lutong Chen, Nenghai Yu, Qibin Sun, Jun Lu. "NarrowGap: Reducing Bottlenecks for End-to-End Entanglement Distribution in Quantum Networks," *IEEE/ACM Transactions on Networking,* vol. 33, no. 1, pp. 162-177, 2025.
- Jian Li, Peng Zheng, **Zhonghui Li*,** Yuqi Yang, Nenghai Yu, Qibin Sun, Jun Lu. "Decentralized Key Management and Service in Quantum Key Distribution Networks: An Experimental Implementations," accepted by *IEEE Journal on Selected Areas in Communications,* 2025.