Zhonghui Li

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📍 Hefei, Anhui

 GitHub

 Homepage

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Honors & Awards

- Best Paper Award, IEEE International Conference on Communications (ICC), Jun 2025.

- Outstanding Doctoral Dissertation Award, Anhui Province, Feb 2025.

- Outstanding Paper Award, China Association for Science and Technology, Qct 2022.

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 working 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 Jun 2023 to May 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 JSAC, IEEE/ACM ToN, IEEE TCOM, IEEE 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.

Funding

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,"** *IEEE Journal on Selected Areas in Communications,* doi: 10.1109/JSAC.2025.3568040, 2025.