

CURRICULUM VITAE

Jian Li

Associate Professor

School of Cyber Science and Technology, University of Science and Technology of China (USTC)

USTC Hi-Tech Zone Camp., Chuangxin Blvd, Hefei, Anhui, China, 230027

IEEE Senior Member · ACM Member · CCF Member

Email: lijian9@ustc.edu.cn

Homepage: infonetlijian.github.io/homepage Google Scholar: scholar.google.com/ZuP2MtEAAAAJ

EDUCATION AND EMPLOYMENT

Position/Degree	Institution & Department	Period
Associate Professor	School of Cyber Science and Technology University of Science and Technology of China	2026-present
Associate Researcher	School of Cyber Science and Technology University of Science and Technology of China	2022-2026
Postdoctoral Fellow	School of Cyber Science and Technology University of Science and Technology of China <i>Advisor: Prof. Jun Lu (Academician of CAE)</i>	2020-2022
Visiting Scholar	Dept. of Electrical and Computer Engineering, University of Florida <i>Supervisor: Prof. Yuguang Fang (IEEE/AAAS/ACM Fellow)</i>	2019-2020
Ph.D.	Dept. of Electronic Engineering and Information Science University of Science and Technology of China <i>Advisors: Prof. Yongdong Zhang & Prof. Kaiping Xue</i>	2015-2020
B.E.	Dept. of Electronic and Information Engineering Anhui University	2011-2015

SUMMARY ON KEY ACCOMPLISHMENTS

- 100+ refereed conference/journal papers
- 2600+ citations (Google Scholar)
- 28 h-index (Google Scholar)
- 10+ patents
- 2 journal editorship
- 2 conferences chaired/co-chaired
- 4 honors and awards
- 20+ students under supervision/graduated

HONORS AND AWARDS

- IEEE ComSoc Internet Technical Committee (ITC) Early Career Award 2025
- Outstanding Scientific and Technological Paper Award,
China Association for Science and Technology 2022
- Mozi Outstanding Youth Award, USTC 2021
- National Scholarship for Doctoral Students, Ministry of Education of China 2019

LIST OF PUBLICATIONS

Note: * denotes corresponding authorship. # denotes equal contribution.

Refereed Journal Papers

2026

- J1 [IEEE TIFS] Wenjian Liu, Kaiping Xue*, Yuyang Fu, Yaxuan Huang, Jingcheng Zhao, Yingjie Xue, **Jian Li**, David S.L. Wei. “P3H-I and P3H-II: Dual-Mode Privacy-Preserving Hierarchical Heavy Hitters Detection with Matrix Storage and Tree Optimization,” *IEEE Transactions on Information Forensics and Security (TIFS)*, 2026.
- J2 [IEEE ToN] Jiasi Sun, Kaiping Xue*, Xuanbo Huang, Lutong Chen*, **Jian Li**, David S.L. Wei. “QDCR: DNS–QUIC Cross-Protocol Traffic Amplification for Denial-of-Service Attacks,” *IEEE Transactions on Networking (ToN)*, 34: 6796–6811, 2026.
- J3 [IEEE TDSC] Shaoxian Yuan, Kaiping Xue*, Jingcheng Zhao, Yaxuan Huang, Yingjie Xue, **Jian Li**, Lutong Chen, David S.L. Wei. “CompactDB: Compact and Secure Collaborative Relational Data Analytics,” *IEEE Transactions on Dependable and Secure Computing (TDSC)*, 2026.
- J4 [IEEE TMC] **Jian Li**, Qiuqing Long, Kaiping Xue*, Hyundong Shin*. “CoCaTS: A Cooperative Caching-enabled Transmission Scheme in Ultra-dense LEO Satellite Networks,” *IEEE Transactions on Mobile Computing (TMC)*, 25(9): 14688–14704, 2026.
- J5 [IEEE ToN] Guanqiao Qu, Zheng Lin, Qian Chen, **Jian Li**, Fangming Liu, Xianhao Chen*, Kaibin Huang. “TrimCaching: Parameter-sharing Edge Caching for AI Model Downloading,” *IEEE Transactions on Networking (ToN)*, 34: 5207–5222, 2026.
- J6 [IEEE TNSE] Xuanbo Huang, Kaiping Xue*, Lutong Chen, Zixu Huang, **Jian Li**, Hyundong Shin*. “DynNet: A Lightweight Distributed Framework for Topology Obfuscation in Dynamic Networks,” *IEEE Transactions on Network Science and Engineering (TNSE)*, 13: 7684–7701, 2026.
- J7 [IEEE TMC] Lei Ding, Kaiping Xue*, Mingrui Ai, Yingjie Xue*, Lutong Chen, **Jian Li**, David S.L. Wei. “PUF-Based Lightweight Decentralized Authentication for UAV Networks,” *IEEE Transactions on Mobile Computing (TMC)*, 25(9): 14193–14209, 2026.
- J8 [IEEE TCOM] Zhonghui Li, **Jian Li**, Kaiping Xue*, Hyundong Shin*. “MixED: A Mixed Entanglement Distribution Design for Efficient Quantum Teleportation in Quantum Communication Networks,” *IEEE Transactions on Communications (TCOM)*, 74: 9376–9390, 2026.

2025

- J9 [Nat. Commun.] Fengyu Lu#, Zehao Wang#, Yao Zhou#, Yuxuan Fan, Shuang Wang*, Zhenqiang Ying*, **Jian Li**, Deyong He, FangXiang Wang, Wei Chen, Kaiping Xue, Guangcan Guo, Zhengfu Han. “Fully Heterogeneous Prepare-and-measure Quantum Network for the Next Stage of Quantum Internet,” *Nature Communications (Nat. Commun.)*, 16(11487), 2025.
- J10 [IEEE TNSE] Xuanbo Huang, Kaiping Xue*, Lutong Chen, Jiangping Han, **Jian Li**, Ruidong Li. “Adaptive Software-Defined Perimeter Placement for Dynamic User Distributions in Zero-Trust Networks,” *IEEE Transactions on Network Science and Engineering (TNSE)*, 13: 5505–5521, 2025.
- J11 [IEEE TNSE] Jiesheng Tan, Zhonghui Li, **Jian Li**, Bin Liu*, Nenghai Yu. “Distributed Entanglement Routing Scheme with Fidelity Guarantee in Quantum Networks,” *IEEE Transactions on Network Science and Engineering (TNSE)*, 13: 3320–3334, 2025.
- J12 [IEEE TNSE] Ziwei Peng, Kaiping Xue, Bin Zhu, Yaxuan Huang, **Jian Li**, Meng Hao, Tianwei Zhang. “PrivTF: Efficient and Privacy-Preserving Transformer Inference with Optimized Protocols for Secure NLP,” *IEEE Transactions on Network Science and Engineering (TNSE)*, 13: 1887–1901, 2025.
- J13 [IEEE ToN] Yuxin Chen, **Jian Li***, Zhonghui Li, Kaiping Xue*, Nenghai Yu, Qibin Sun, Jun Lu. “An Asynchronous Key Relay Protocol Design for Large-scale Quantum Key Distribution Networks,” *IEEE Transactions on Networking (ToN)*, 33(6): 3024–3039, 2025.
- J14 [IEEE Net.] Xuanbo Huang, Kaiping Xue*, Lutong Chen, Jiangping Han, **Jian Li**, David S.L. Wei.

“ForenSiX: Automated Network Forensics and Diagnostics for Beyond-5G and 6G Networks Using Large Language Models,” *IEEE Network (Net.)*, 39(5): 74–80, 2025.

- J15 [IEEE TNSM] Jiangping Han, Yitao Xing, Jinhao Liu, Kaiping Xue*, **Jian Li**, David S.L. Wei, Qibin Sun, Jun Lu. “From An In-Depth Understanding of Multipath TCP Enhancement Schemes to an Adaptive Control Framework in Wireless Networks,” *IEEE Transactions on Network and Service Management (TNSM)*, 22(5): 4950–4963, 2025.
- J16 [IEEE TNSM] Peng Zheng, **Jian Li***, Zhonghui Li, Kaiping Xue*, Nenghai Yu, Ruidong Li, Qibin Sun, Jun Lu. “An Efficient and Robust Resource Allocation Method for Quantum Key Distribution Networks,” *IEEE Transactions on Network and Service Management (TNSM)*, 22(5): 4083–4095, 2025.
- J17 [IEEE TNSM] Wentao Wang, Jiangping Han*, Kaiping Xue*, Jiayu Yang, **Jian Li**, Qibin Sun, Jun Lu. “RGuide: Fast and Accurate Congestion Control Guided via Explicit Rate Control in Data Center Networks,” *IEEE Transactions on Network and Service Management (TNSM)*, 22(5): 4070–4082, 2025.
- J18 [IEEE Commun. Mag.] Xumin Gao, Kaiping Xue*, **Jian Li***, Zhonghui Li, Jiaqi Wu, Nenghai Yu, Qibin Sun, Jun Lu. “IPSeQ: A Security-Enhanced IPsec Protocol Integrated with Quantum Key Distribution,” *IEEE Communications Magazine (Commun. Mag.)*, 63(9): 148–155, 2025.
- J19 [IEEE TMC] Haodong Wang, Jiangping Han*, Kaiping Xue*, Jiayu Yang, **Jian Li**, Qibin Sun, Jun Lu. “CAAF: An NDN-Based Cache-Aware Adaptive Forwarding Strategy for Reliable Content Delivery in VANETs,” *IEEE Transactions on Mobile Computing (TMC)*, 24(7): 6361–6375, 2025.
- J20 [IEEE JSAC] **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 Implementation,” *IEEE Journal on Selected Areas in Communications (JSAC)*, 43(8): 2782–2797, 2025.
- J21 [IEEE Net.] **Jian Li**, Peng Zheng, Zhonghui Li, Kaiping Xue*, Zhilin Xie, Nenghai Yu, Qibin Sun, Jun Lu. “Integration of Quantum Key Distribution Networks and Classical Networks: An Evolution Perspective,” *IEEE Network (Net.)*, 39(3): 180–187, 2025.
- J22 [IEEE Commun. Mag.] Yao Sun, Lan Zhang*, Linke Guo, **Jian Li**, Dusit Niyato, Yuguang Fang. “S-RAN: Semantic-aware Radio Access Networks,” *IEEE Communications Magazine (Commun. Mag.)*, 63(4): 207–213, 2025.
- J23 [IEEE ToN] 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 Transactions on Networking (ToN)*, 33(1): 162–177, 2025.

2024

- J24 [IEEE TCOM] Zhaoying Wang, **Jian Li***, Kaiping Xue*, Zhonghui Li, Ruidong Li, Nenghai Yu, Qibin Sun, Jun Lu. “Fair-EAS: Entanglement Allocation and Selection for Process-Oriented Fairness in Quantum Communication Networks,” *IEEE Transactions on Communications (TCOM)*, 73(7): 4841–4854, 2024.
- J25 [IEEE ToN] **Jian Li**, Zhaoying Wang, Kaiping Xue*, Zhonghui Li, Ruidong Li, Nenghai Yu, Qibin Sun, Jun Lu. “DRM-ETP: A Dynamic Rate Matching-Based Entanglement Transport Protocol in Quantum Network,” *IEEE Transactions on Networking (ToN)*, 33(2): 835–848, 2024.
- J26 [IEEE/ACM ToN] Jiayu Yang, Yuxin Chen, Kaiping Xue*, Jiangping Han*, **Jian Li**, Ruidong Li, Qibin Sun, Jun Lu. “Adaptive Multi-source Multi-path Congestion Control for Named Data Networking,” *IEEE/ACM Transactions on Networking (ToN)*, 32(6): 5049–5064, 2024.
- J27 [Commun. Phys.] Zirui Xiao, **Jian Li**, Kaiping Xue*, Nenghai Yu, Ruidong Li, Qibin Sun, Jun Lu. “Purification Scheduling Control for Throughput Maximization in Quantum Networks,” *Communications Physics (Commun. Phys.)*, 7 (Article number: 307), 2024.
- J28 [IEEE/ACM ToN] Kunpeng Ding, Jiayu Yang, Kaiping Xue*, Jiangping Han, **Jian Li**, Qibin Sun, Jun Lu. “SLP: A Secure and Lightweight Scheme against Content Poisoning Attacks in Named Data Networking Based on Probing,” *IEEE/ACM Transactions on Networking (ToN)*, 32(6): 5128–5143, 2024.
- J29 [IEEE TNSE] Rui Zhuang, Jiangping Han*, Kaiping Xue*, **Jian Li**, David S.L. Wei, Ruidong Li, Qibin Sun, Jun Lu. “Pushing the Performance Limits of Datacenter Networks with Fine-grained Priority Assignment,” *IEEE Transactions on Network Science and Engineering (TNSE)*, 11(6): 6298–6312, 2024.

- J30 [IEEE TNSM] Rui Zhuang, Jiangping Han*, Kaiping Xue*, **Jian Li**, Qibin Sun, Jun Lu. “ProactMP: A Proactive Multipath Transport Protocol for Low-Latency Datacenters,” *IEEE Transactions on Network and Service Management (TNSM)*, 21(4): 3919–3932, 2024.
- J31 [IEEE TIFS] Meiqi Li, Xinyi Luo, Kaiping Xue*, Yingjie Xue, Wentuo Sun, **Jian Li**. “A Secure and Efficient Blockchain Sharding Scheme via Hybrid Consensus and Dynamic Management,” *IEEE Transactions on Information Forensics and Security (TIFS)*, 19: 5911–5924, 2024.
- J32 [J. Commun.] Jiangping Han, Haodong Wang, Jiayu Yang, Kaiping Xue, **Jian Li***. “Reliable forwarding strategy based on multiple attribute decision-making in NDN-Ad Hoc networks,” *Journal on Communication*, 45(5): 151–164, 2024.
- J33 [IEEE TMC] Jin Tang, **Jian Li***, Lan Zhang, Xianhao Chen, Kaiping Xue, Qibin Sun, Jun Lu. “Opportunistic Content-aware Routing in Satellite-Terrestrial Integrated Networks,” *IEEE Transactions on Mobile Computing (TMC)*, 23(11): 10460–10474, 2024.
- J34 [IEEE TVT] Jin Tang, **Jian Li***, Xianhao Chen, Kaiping Xue, Lan Zhang, Qibin Sun, Jun Lu. “Cooperative Caching in Satellite-Terrestrial Integrated Networks: A Region Features aware Approach,” *IEEE Transactions on Vehicular Technology (TVT)*, 73(7): 10602–10616, 2024.
- J35 [IEEE Net.] Lutong Chen, Kaiping Xue*, **Jian Li**, Zhonghui Li, Nenghai Yu. “Q-CSKDF: A Continuous and Security Key Derivation Function for Quantum Key Distribution,” *IEEE Network (Net.)*, 37(5): 123–130, 2024.
- J36 [IEEE JSAC] Lutong Chen, Kaiping Xue*, **Jian Li**, Zhonghui Li, Ruidong Li, Nenghai Yu, Qibin Sun, Jun Lu. “REDP: Reliable Entanglement Distribution Protocol Design for Large-scale Quantum Networks,” *IEEE Journal on Selected Areas in Communications (JSAC)*, 42(7): 1723–1737, 2024.
- J37 [IEEE Net.] Zirui Xiao, **Jian Li***, Kaiping Xue*, Zhonghui Li, Nenghai Yu, Qibin Sun, Jun Lu. “A Connectionless Entanglement Distribution Protocol Design in Quantum Networks,” *IEEE Network (Net.)*, 38(1): 131–139, 2024.
- J38 [IEEE TCOM] Jiangping Han, Kaiping Xue*, **Jian Li**, Yitao Xing, Ruozhou Yu, David S.L. Wei, Guoliang Xue. “FMPTCP: Achieving High Bandwidth Utilization and Low Latency in Data Center Networks,” *IEEE Transactions on Communications (TCOM)*, 72(1): 317–333, 2024.
- J39 [IEEE TNSE] Zhaoying Wang, **Jian Li***, Kaiping Xue*, David S.L. Wei, Ruidong Li, Nenghai Yu, Qibin Sun, Jun Lu. “An Efficient Scheduling Scheme of Swapping and Purification Operations for End-to-End Entanglement Distribution in Quantum Networks,” *IEEE Transactions on Network Science and Engineering (TNSE)*, 11(1): 380–391, 2024.
- J40 [IEEE TNSE] Jiangping Han, Kaiping Xue*, **Jian Li**, Jing Zhang, Zixuan Huang, David S.L. Wei. “Enabling In-Network Caching in Traditional IP Networks: Selective Router Upgrades and Cooperative Cache Strategies,” *IEEE Transactions on Network Science and Engineering (TNSE)*, 11(1): 696–709, 2024.
- J41 [IEEE/ACM ToN] Lutong Chen, Kaiping Xue*, **Jian Li**, Ruidong Li, Nenghai Yu, Qibin Sun, Jun Lu. “Q-DDCA: Decentralized Dynamic Congestion Avoid Routing in Large-Scale Quantum Networks,” *IEEE/ACM Transactions on Networking (ToN)*, 32(1): 368–381, 2024.

2023

- J42 [IEEE TDSC] Feng Liu, Kaiping Xue*, Jinjiang Yang, Jing Zhang, Zixuan Huang, **Jian Li**, David S.L. Wei. “Volume-Hiding Range Searchable Symmetric Encryption for Large-Scale Datasets,” *IEEE Transactions on Dependable and Secure Computing (TDSC)*, 21(4): 3597–3609, 2023.
- J43 [Opt. Express] Yan-Lin Tang[#], Zhi-Lin Xie[#], Chun Zhou[#], Dexiang Zhang, Mu-Lan Xu, Jian Sun, De Sun, Yong-Xiang Xu, Li-Wei Wang, Yan Ma, Yu-Kang Zhao, Mu-Sheng Jiang, Yang Wang, **Jian Li**, Kaiping Xue, Nenghai Yu, Mei-Sheng Zhao, Dong-Dong Li, Wan-Su Bao, Shi-Biao Tang*. “Field test of quantum key distribution over aerial fiber based on simple and stable modulation,” *Optics Express (Opt. Express)*, 31(16): 26301–26313, 2023.
- J44 [IEEE TNSM] Zhonghui Li, **Jian Li**, Kaiping Xue*, David S.L. Wei, Nenghai Yu, Qibin Sun, Jun Lu. “Efficient Remote Entanglement Distribution in Quantum Networks: A Segment-Based Method,” *IEEE Transactions on Network and Service Management (TNSM)*, 21(1): 249–265, 2023.

- J45 [IEEE COMST] Zhonghui Li, Kaiping Xue*, **Jian Li**, David S.L. Wei, Ruidong Li, Nenghai Yu, Qibin Sun, Jun Lu. “Entanglement-Assisted Quantum Networks: Mechanics, Enabling Technologies, Challenges, and Research Directions,” *IEEE Communications Surveys and Tutorials (COMST)*, 25(4): 2133–2189, 2023.
- J46 [IEEE TNSM] Yi Liu, Jiangping Han*, Kaiping Xue*, **Jian Li**, Qibin Sun, Jun Lu. “DECC: Achieving Low Latency in Data Center Networks with Deep Reinforcement Learning,” *IEEE Transactions on Network and Service Management (TNSM)*, 20(4): 4313–4324, 2023.
- J47 [IEEE Commun. Mag.] Kaiping Xue*, Xinyi Luo, **Jian Li**, Ruidong Li, David S.L. Wei. “Make Rental Reliable: Blockchain-based Network Slice Management Framework with SLA Guarantee,” *IEEE Communications Magazine (Commun. Mag.)*, 61(7): 142–148, 2023.
- J48 [IEEE TWC] Jiangping Han, Kaiping Xue*, **Jian Li**, Rui Zhuang, Ruidong Li, Ruozhou Yu, Guoliang Xue, Qibin Sun. “EdAR: An Experience-driven Multipath Scheduler for Seamless Handoff in Mobile Networks,” *IEEE Transactions on Wireless Communications (TWC)*, 22(10): 6839–6852, 2023.
- J49 [IEEE/ACM ToN] Yitao Xing, Kaiping Xue*, Yuan Zhang, Jiangping Han, **Jian Li**, David S.L. Wei. “An Online Learning Assisted Packet Scheduler for MPTCP in Mobile Networks,” *IEEE/ACM Transactions on Networking (ToN)*, 31(5): 2297–2312, 2023.
- J50 [IEEE Commun. Mag.] Mingjun Wang, **Jian Li***, Kaiping Xue*, Ruidong Li, Nenghai Yu, Yangyang Li, Yifeng Liu, Qibin Sun, Jun Lu. “A Segment-based Multipath Distribution Method in Partially-Trusted Relay Quantum Networks,” *IEEE Communications Magazine (Commun. Mag.)*, 61(12): 184–190, 2023.
- J51 [IEEE Net.] Lutong Chen, Kaiping Xue*, **Jian Li***, Nenghai Yu, Ruidong Li, Qibin Sun, Jun Lu. “SimQN: a Network-layer Simulator for the Quantum Network Investigation,” *IEEE Network (Net.)*, 37(5): 182–189, 2023.
- J52 [IEEE TNSM] Jiayu Yang, Jiangping Han*, Kaiping Xue*, **Jian Li**, Yitao Xing, Hao Yue, David S.L. Wei. “TCCC: A Throughput Consistency Congestion Control Algorithm for MPTCP in Mixed Transmission of Long and Short Flows,” *IEEE Transactions on Network and Service Management (TNSM)*, 20(3): 2652–2667, 2023.
- J53 [IEEE TNSM] Zhonghui Li, **Jian Li***, Kaiping Xue*, David S.L. Wei, Ruidong Li, Nenghai Yu, Qibin Sun, Jun Lu. “Swapping-based Entanglement Routing Design for Congestion Mitigation in Quantum Networks,” *IEEE Transactions on Network and Service Management (TNSM)*, 20(4): 3999–4012, 2023.
- J54 [IEEE TMC] **Jian Li**, Lan Zhang, Kaiping Xue, Yuguang Fang*, Qibin Sun. “Secure Transmission by Leveraging Multiple Intelligent Reflecting Surfaces in MISO Systems,” *IEEE Transactions on Mobile Computing (TMC)*, 22(4): 2387–2401, 2023.

2022

- J55 [IEEE TWC] Xitao Xing, Kaiping Xue*, Yuan Zhang, Jiangping Han, **Jian Li**, David S.L. Wei, Ruidong Li, Qibin Sun, Jun Lu. “A Stream-Aware MPQUIC Scheduler for HTTP Traffic in Mobile Networks,” *IEEE Transactions on Wireless Communications (TWC)*, 22(4): 2775–2788, 2022.
- J56 [IEEE TNSM] Rui Zhuang, Jiangping Han*, Kaiping Xue*, **Jian Li**, David S.L. Wei, Ruidong Li, Qibin Sun, Jun Lu. “Achieving Flexible and Lightweight Multipath Congestion Control Through Online Learning,” *IEEE Transactions on Network and Service Management (TNSM)*, 20(1): 46–59, 2022.
- J57 [IEEE TCOM] Lutong Chen, Kaiping Xue*, **Jian Li***, Nenghai Yu, Ruidong Li, Jianqing Liu, Qibin Sun, Jun Lu. “A Heuristic Remote Entanglement Distribution Algorithm on Memory-Limited Quantum Paths,” *IEEE Transactions on Communications (TCOM)*, 70(11): 7491–7504, 2022.
- J58 [IEEE TNSM] Jiayu Yang, Yuxin Chen, Kaiping Xue*, Jiangping Han, **Jian Li**, David S.L. Wei, Qibin Sun, Jun Lu. “IEACC: An Intelligent Edge-Aided Congestion Control Scheme for Named Data Networking With Deep Reinforcement Learning,” *IEEE Transactions on Network and Service Management (TNSM)*, 19(4): 4932–4947, 2022.
- J59 [IEEE TCOM] **Jian Li**, Mingjun Wang, Kaiping Xue*, Ruidong Li, Nenghai Yu, Qibin Sun, Jun Lu. “Fidelity-Guaranteed Entanglement Routing in Quantum Networks,” *IEEE Transactions on Communications (TCOM)*, 70(10): 6748–6763, 2022.
- J60 [IEEE Net.] Zhaoying Wang, **Jian Li***, Kaiping Xue, Shaoyin Cheng, Nenghai Yu, Qibin Sun, Jun Lu.

“An Asynchronous Entanglement Distribution Protocol for Quantum Networks,” *IEEE Network (Net.)*, 36(5): 40–47, 2022.

- J61 [IEEE TQE] **Jian Li**, Qidong Jia, Kaiping Xue*, David S.L. Wei, Nenghai Yu. “A Connection-Oriented Entanglement Distribution Design in Quantum Networks,” *IEEE Transactions on Quantum Engineering (TQE)*, vol. 3: 1–13, 2022.
- J62 [IEEE Net.] 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 (Net.)*, 36(6): 150–156, 2022.
- J63 [Quantum Inf. Process.] Zhonghui Li, Kaiping Xue*, Qidong Jia, **Jian Li**, David S.L. Wei, Jianqing Liu, Nenghai Yu. “A Cluster-based Networking Approach for Large-scale and Wide-area Quantum Key Agreement,” *Quantum Information Processing (Quantum Inf. Process.)*, 21 (article number 192), 2022.
- J64 [IEEE TVT] Kaiping Xue*, Xinyi Luo, Yongjin Ma, **Jian Li***, Jianqing Liu, David S.L. Wei. “A Distributed Authentication Scheme Based on Smart Contract for Roaming Service in Mobile Vehicular Networks,” *IEEE Transactions on Vehicular Technology (TVT)*, 71(5): 5284–5297, 2022.
- J65 [IEEE TVT] Kaiping Xue, Xinyi Luo, Hangyu Tian, Jianan Hong, David S.L. Wei, **Jian Li***. “A Blockchain based User Subscription Data Management and Access Control Scheme in Mobile Communication Networks,” *IEEE Transactions on Vehicular Technology (TVT)*, 71(3): 3108–3120, 2022.
- J66 [IEEE TNSM] Kaiping Xue*, Jiayu Yang, Qiudong Xia, David S.L. Wei, **Jian Li***, Qibin Sun, Jun Lu. “CSEVP: A Collaborative, Secure, and Efficient Content Validation Protection Framework for Information Centric Networking,” *IEEE Transactions on Network and Service Management (TNSM)*, 19(2): 1761–1775, 2022.

2021

- J67 [China Commun.] Zhonghui Li, Kaiping Xue*, **Jian Li**, Nenghai Yu, Jianqing Liu, David S.L. Wei, Qibin Sun, Jun Lu. “Building a Large-Scale and Wide-Area Quantum Internet Based on an OSI-alike Model,” *China Communications (China Commun.)*, 18(10): 1–14, 2021.
- J68 [IEEE TNSM] Jin Qin, Kaiping Xue*, **Jian Li**, Qibin Sun, Jun Lu. “Service Prioritization in Information Centric Networking with Heterogeneous Content Providers,” *IEEE Transactions on Network and Service Management (TNSM)*, 18(4): 4476–4488, 2021.
- J69 [IEEE TWC] Yitao Xing, Kaiping Xue*, Yuan Zhang, Jiangping Han, **Jian Li**, Jianqing Liu, Ruidong Li. “A Low-Latency MPTCP Scheduler for Live Video Streaming in Mobile Networks,” *IEEE Transactions on Wireless Communications (TWC)*, 20(11): 7230–7242, 2021.
- J70 [IEEE TWC] Jiangping Han, Kaiping Xue*, Yitao Xing, **Jian Li**, Wenjia Wei, David S.L. Wei, Guoliang Xue. “Leveraging Coupled BBR and Adaptive Packet Scheduling to Boost MPTCP,” *IEEE Transactions on Wireless Communications (TWC)*, 20(11): 7555–7567, 2021.

2020

- J71 [IEEE WCL] **Jian Li**, Kaiping Xue*, Jianqing Liu, Yongdong Zhang. “A User-Centric Handover Scheme for Ultra-Dense LEO Satellite Networks,” *IEEE Wireless Communications Letters (WCL)*, 9(11): 1904–1908, 2020.
- J72 [IEEE Net.] **Jian Li**, Kaiping Xue*, Jianqing Liu, Yongdong Zhang, Yuguang Fang. “An ICN/SDN-based Network Architecture and Efficient Content Retrieval for Future Satellite-Terrestrial Integrated Networks,” *IEEE Network (Net.)*, 34(1): 188–195, 2020.
- J73 [IEEE TWC] **Jian Li**, Kaiping Xue*, David S.L. Wei, Jianqing Liu, Yongdong Zhang. “Energy Efficiency and Traffic Offloading Optimization in Integrated Satellite/Terrestrial Radio Access Networks,” *IEEE Transactions on Wireless Communications (TWC)*, 19(4): 2367–2381, 2020.

2019

- J74 [IEEE TVT] **Jian Li**, Hancheng Lu*, Kaiping Xue, Yongdong Zhang. “Temporal Netgrid Model-based Dynamic Routing in Large-Scale Small Satellite Networks,” *IEEE Transactions on Vehicular Technology*

Refereed Conference Papers

2027

- C1 [NDSS] Xuanchao Xie, Lutong Chen*, Kunjie Shang, **Jian Li**, Huanjie Zhang, Kaiping Xue*. “DoubleAgent: Agent-Driven Egress Abuse in LLM Agent Ecosystems,” *Network and Distributed System Security Symposium (NDSS)*, 2027.

2026

- C2 [IEEE INFOCOM] Minfei Long, Jiangping Han*, Kaiping Xue*, Jinhao Liu, **Jian Li**. “LR2: Accelerating Long-Distance RDMA Recovery via In-Network Retransmission Decoupling,” *IEEE Conference on Computer Communications (INFOCOM)*, 2026.
- C3 [IEEE INFOCOM] Yuxin Chen, Zite Xia, **Jian Li***, Kaiping Xue*, Zhonghui Li, Ruidong Li. “QuIKS: Near-Zero Latency Key Supply with Adaptive Buffering for Resource-Efficient Quantum Key Distribution Networks,” *IEEE Conference on Computer Communications (INFOCOM)*, 2026.
- C4 [ACM CCS] Pengfei Ren, Lutong Chen*, Xuanbo Huang, Jiankang Sun, Huanjie Zhang, **Jian Li**, Kaiping Xue*. “RT-MD: Host-Centric Real-Time Detection of Multi-Domain DNS Data Exfiltration,” *ACM Conference on Computer and Communications Security (CCS)*, 2026.

2025

- C5 [IEEE ICC] Dongfang Hu, Lutong Chen*, **Jian Li**, Zixu Huang, Chensa Du, Kaiping Xue*. “PureFlow: An Unsupervised Autoencoder-Based Dataset Purification Framework for Malicious Traffic Detection,” *IEEE International Conference on Communications (ICC)*, 2025.
- C6 [IEEE INFOCOM] Wentao Wang, Jiangping Han*, Kaiping Xue*, **Jian Li**, Kunpeng Ding, Ruidong Li. “NetRT: Enhancing RDMA with Retransmission Offloading in Data Center Networks,” *IEEE Conference on Computer Communications (INFOCOM)*, 2025.
- C7 [IEEE ICC] Yuanxin Yan, **Jian Li***, Jiangping Han, Qiuqing Long, Kaiping Xue, Hao Chen, Naiqiang Qiao. “A Handover-aware Congestion Control Algorithm Assisted by DRL in LEO Satellite Networks,” *IEEE International Conference on Communications (ICC)*, 2025.
- C8 [IEEE QCNC] Yuqi Yang, **Jian Li***, Zhonghui Li, Shaochuang Heng, Lutong Chen, Qibin Sun, Jun Lu. “An On-demand Routing Scheme with QoS Provisioning for QKD Networks,” *IEEE International Conference on Quantum Communications, Networking, and Computing (QCNC)*, 2025.

2024

- C9 [IEEE WCSP] Qiuqing Long, Yuanxin Yan, **Jian Li***, Jiangping Han, Jin Tang, Kaiping Xue. “PLMS: A Packet Loss Memory-Based Transmission Enhancement Scheme for GEO Satellite Networks,” *International Conference on Wireless Communications and Signal Processing (WCSP)*, 2024.
- C10 [IEEE ICC] Jiaqi Wu, Lutong Chen, Jing Zhang, Zixuan Huang, Zhonghui Li, **Jian Li***, Kaiping Xue*, Nenghai Yu. “A Distributed Routing Protocol Based on Key Reservation in Quantum Key Distribution Networks,” *IEEE International Conference on Communications (ICC)*, 2024.
- C11 [IEEE ICNC] Lutong Chen, Kaiping Xue*, **Jian Li***, Zhonghui Li, Nenghai Yu. “Security-Enhanced WireGuard Protocol Design using Quantum Key Distribution,” *IEEE International Conference on Computing, Networking and Communications (ICNC)*, 2024.
- C12 [IEEE QCNC] Zhaoying Wang, **Jian Li***, Zhonghui Li, Lutong Chen, Nenghai Yu, Qibin Sun, Jun Lu. “Efficient Routing Design Based on Entanglement Flow Loss Effect in Quantum Networks,” *IEEE International Conference on Quantum Communications, Networking, and Computing (QCNC)*, 2024.

2023

- C13 [IEEE GLOBECOM] Yuandong Xie, Jingcheng Zhao, Bin Zhu, **Jian Li**, Ruidong Li, Kaiping Xue*.

“Achieving Privacy-Preserving Outsourced SVM Training with Non-Linear Kernel,” *IEEE Global Communications Conference (GLOBECOM)*, 2023.

- C14 [IEEE ICCCN] Yuxin Chen, Jiayu Yang, Xuanbo Huang, Jiangping Han, Bobo Wang*, **Jian Li**, Kaiping Xue. “PLR: An In-Network Proactive Loss Recovery Scheme for Named Data Networking,” *IEEE International Conference on Computer Communications and Networks (ICCCN)*, 2023.
- C15 [IEEE ICDCS] Yi Liu, Jiangping Han*, Kaiping Xue*, Ruidong Li, **Jian Li**. “L2BM: Switch Buffer Management for Hybrid Traffic in Data Center Networks,” *IEEE International Conference on Distributed Computing Systems (ICDCS)*, 2023.

2022

- C16 [IEEE GLOBECOM] Jinjiang Yang, Feng Liu, Xinyi Luo, Jianan Hong, **Jian Li**, Kaiping Xue*. “Forward Private Multi-Client Searchable Encryption with Efficient Access Control in Cloud Storage,” *IEEE Global Communications Conference (GLOBECOM)*, 2022.
- C17 [IEEE GLOBECOM] Jingchen Zhao, Bin Zhu, **Jian Li**, Shaoxian Yuan, Kaiping Xue*, Xianchao Zhang. “Privacy-preserving Truth Discovery with Outlier Detection in Mobile Crowdsensing Systems,” *IEEE Global Communications Conference (GLOBECOM)*, 2022.
- C18 [IEEE GLOBECOM] Jin Tang, **Jian Li***, Lan Zhang, Kaiping Xue, Qibin Sun, Jun Lu. “Content-Aware Routing based on Cached Content Prediction in Satellite Networks,” *IEEE Global Communications Conference (GLOBECOM)*, 2022.
- C19 [IEEE HPSR] Jinyuan Zhang, Xuanbo Huang, **Jian Li***, Kaiping Xue*, Qibin Sun, Jun Lu. “A Dynamic Flow Table Management Method Based on Real-time Traffic Monitoring,” *IEEE International Conference on High Performance Switching and Routing (HPSR)*, 2022.
- C20 [IEEE HPSR] Zixu Huang, Xuanbo Huang, **Jian Li***, Kaiping Xue*, Qibin Sun, Jun Lu. “LLDM: Low-Latency DoS Attack Detection and Mitigation in SDN,” *IEEE International Conference on High Performance Switching and Routing (HPSR)*, 2022.
- C21 [IEEE ICC] Meiqi Li, Xinyi Luo, Wentuo Sun, **Jian Li**, Kaiping Xue. “AvecVoting: Anonymous and Verifiable E-voting with Untrustworthy Counters on Blockchain,” *IEEE International Conference on Communications (ICC)*, 2022.

2021

- C22 [IEEE GLOBECOM] Shaoxian Yuan, Bin Zhu, Feng Liu, **Jian Li**, Kaiping Xue*. “A Fog-Aided Privacy-Preserving Truth Discovery Framework over Crowdsensed Data Streams,” *IEEE Global Communications Conference (GLOBECOM)*, 2021.
- C23 [IEEE GLOBECOM] Feng Liu, Bin Zhu, Shaoxian Yuan, **Jian Li**, Kaiping Xue*. “Privacy-Preserving Truth Discovery for Sparse Data in Mobile Crowdsensing Systems,” *IEEE Global Communications Conference (GLOBECOM)*, 2021.
- C24 [IEEE GLOBECOM] Yuan Zhang, **Jian Li***, Jiayu Yang, Yitao Xing, Rui Zhuang, Kaiping Xue. “Low Priority Congestion Control for Multipath TCP,” *IEEE Global Communications Conference (GLOBECOM)*, 2021.

2020

- C25 [IEEE HotICN] Mengjie Liu, Yongqiang Gui, **Jian Li**, Hancheng Lu*. “Large-scale Small Satellite Network Simulator: Design and Evaluation,” *International Conference on Hot Information-Centric Networking (HotICN)*, 2020.

2017

- C26 [IEEE GLOBECOM] Zhikai Zhu, Hancheng Lu*, **Jian Li**, Xiaoda Jiang. “Service Function Chain Mapping with Resource Fragmentation Avoidance,” *IEEE Global Communications Conference (GLOBECOM)*, 2017.
- C27 [IEEE ICC] **Jian Li**, Hancheng Lu*, Yali Wang. “Temporal Netgrid Model based Routing Optimization

in Satellite Networks,” *IEEE International Conference on Communications (ICC)*, 2017.

- C28 [IEEE ICC] Yali Wang, Hancheng Lu*, Zexue Li, **Jian Li**. “Robust Satellite Image Transmission over Bandwidth-constrained Wireless Channels,” *IEEE International Conference on Communications (ICC)*, 2017.

2016

- C29 [IEEE GLOBECOM] Hao Wu, **Jian Li**, Hancheng Lu*, Peilin Hong. “A Two-Layer Caching Model for Content Delivery Services in Satellite-Terrestrial Networks,” *IEEE Global Communications Conference (GLOBECOM)*, 2016.

PROFESSIONAL ACTIVITIES

Journal Editorship and Editorial Boards

- Editor, *IEEE Transactions on Communications* Jul. 2025 – Present
- Editor, *China Communications* Feb. 2022 – Present

Conference Organizations

2027

- TPC Member, *IEEE ICC*, Washington, DC, USA, 30 May-3 June, 2027

2026

- TPC Co-Chair, *IEEE IWCMC, Quantum Networks and Computing (QNC) Symposium*, Shanghai, China, June 1-6, 2026
- TPC Member, *IEEE GLOBECOM*, Macau S.A.R., China, Dec. 7-11, 2026
- TPC Member, *IEEE QCE*, Toronto, Ontario, Canada, Sep. 13-18, 2026

2025

- TPC Co-Chair, *IEEE IWCMC, Quantum Networks and Computing (QNC) Symposium*, Abu Dhabi, UAE, May 12-16, 2025
- Session Chair (Online), *IEEE IWCMC*, Abu Dhabi, UAE, May 12-16, 2025
- TPC Member, *IEEE INFOCOM (Poster)*, London, United Kingdom, May 19–22, 2025
- TPC Member, *IEEE QCE*, Albuquerque, New Mexico, USA, Aug. 31–Sep. 5, 2025
- TPC Member, *IEEE GLOBECOM*, Taipei, Taiwan, Dec. 8-12, 2025.

2024

- TPC Member, *IEEE INFOCOM (Poster)*, Vancouver, Canada, May 20–23, 2024
- TPC Member, *IEEE GLOBECOM*, Cape Town, South Africa, Dec. 8–12, 2024
- Session Chair, *IEEE QCNC*, Kanazawa, Japan, July 1-3, 2024
- TPC Member, *IEEE ICDCS*, New Jersey, USA, July 23-26, 2024
- TPC Member, *IEEE QCE*, Montréal, Québec, Canada, Sep. 15–20, 2024
- TPC Member, *IEEE QCNC*, Kanazawa, Japan, July 1-3, 2024
- TPC Member, *IEEE ICCCN*, Big Island, Hawaii, USA, July 29-31, 2024
- TPC Member, *IEEE ICNC*, Big Island, Hawaii, USA, Feb. 19-22, 2024
- TPC Member, *IEEE WCSP*, Hefei, China, Oct. 24-26, 2024

2023

- Session Chair, *IEEE GLOBECOM*, Kuala Lumpur, Malaysia, Dec. 4–8, 2023
- TPC Member, *IEEE ICCCN*, Waikiki Beach, Honolulu, HI, USA, July 24-26, 2023

2021

- Session Chair (Online), *IEEE IWQoS* Tokyo, Japan, June 25-28, 2021

TEACHING AND MENTORING

Teaching

Semester	Course	Title	Level
Fall 2026	210060.02	Computer Networks	UG
Spring 2026	IS3005.01	Network Security Design and Practice	UG
Fall 2025	210060.02	Computer Networks	UG
Fall 2024	210060.02	Computer Networks	UG
Fall 2023	210060.01	Computer Networks	UG
Spring 2023	210031.01	Network Security Protocol	UG

Student Mentoring

Under Supervision

- Qiuqing Long (Ph.D. Candidate, 2023-), co-supervisor
- Haijun Zheng (Master Candidate, 2024-)
- Bin Yang (Master Candidate, 2024-)
- Zite Xia (Master Candidate, 2025-)
- Anbang Shan (Master Candidate, 2025-)
- Zhaoshun Wang (Master Candidate, 2025-)
- Zhongchen Yu (Master Candidate, 2026-)
- Tao Zhang (Master Candidate, 2026-)
- Dongting Fan (Master Candidate, 2026-)

Graduated

- Zhaoshun Wang (Bachelor, 2026)
- Zhongchen Yu (Bachelor, 2026)
- Tao Zhang (Bachelor, 2026)
- Peng Zheng (Bachelor, 2022 & Master, 2025), co-supervisor
- Jianfeng Niu (Bachelor, 2025)
- Zite Xia (Bachelor, 2025)
- Jiawen An (Bachelor, 2024), co-supervisor
- Bin Yang (Bachelor, 2024)
- Yuqi Yang (Bachelor, 2024)
- Mingjun Wang (Master, 2023), co-supervisor
- Lei Ding (Bachelor, 2023), co-supervisor
- Jiaqi Wu (Bachelor, 2023)
- Xuming Gao (Bachelor, 2023)

Last updated: September 2026