Shiming Yu

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Education

The Hong Kong Polytechnic University *Aug 2022 – Now*
Ph.D. Candidate in Computer Science (Advisor: Prof. Yuanqing Zheng)

University of Electronic Science and Technology of China *Aug 2018 – Jul 2022*
B.E. in Communication Engineering (GPA: 3.8/4.0)

Research Interest

My research interests include Low Power Wide Area Networks (LPWANs) and Wireless Networking.

Publications

First-author papers:

[**MobiSys'25**] "Are LoRa Logical Channels Really Orthogonal? Practically Orthogonalizing Massive Logical Channels", Shiming Yu, Ziyue Zhang, Xianjin Xia, Yuanqing Zheng, Jiliang Wang, The 23rd ACM International Conference on Mobile Systems, Applications, and Services, Anaheim, CA, USA, 2025

[**MobiCom'24**] "Revolutionizing LoRa Gateway with XGate: Scalable Concurrent Transmission across Massive Logical Channels", Shiming Yu, Xianjin Xia, Ningning Hou, Yuanqing Zheng, Tao Gu, The 30th Annual International Conference on Mobile Computing and Networking, Washington D.C., USA, 2024

[**SenSys'24**] "FDLoRa: Tackling Downlink-Uplink Asymmetry with Full-duplex LoRa Gateways", Shiming Yu, Xianjin Xia, Ziyue Zhang, Ningning Hou, Yuanqing Zheng, The 22nd ACM Conference on Embedded Networked Sensor Systems, Hangzhou, China, 2024

[**TMC'25**] "Resolving Inter-Logical Channel Interference for Large-scale LoRa Deployments", Shiming Yu, Ziyue Zhang, Xianjin Xia, Yuanqing Zheng, Jiliang Wang, IEEE Transactions on Mobile Computing, 2025

[**TMC'25**] "FDLoRa: Scaling Downlink Concurrent Transmissions with Full-duplex LoRa Gateways", Shiming Yu, Xianjin Xia, Ziyue Zhang, Ningning Hou, Yuanqing Zheng, IEEE Transactions on Mobile Computing, 2025

[**TON'25**] "XGate: Scaling LoRa Communications to Massive Logical Channels", Shiming Yu, Xianjin Xia, Ningning Hou, Yuanqing Zheng, Tao Gu, IEEE Transactions on Networking, 2025

Other papers:

[**ICNP'25**] "SlideLoRa: Reliable Channel Activity Monitoring across Massive Logical Channels in LoRa Networks", Jiamin Jiang, Shiming Yu, Hao Wang, Haiyang Li, Yuanqing Zheng, Lu Wang, The 33rd IEEE International Conference on Network Protocols, Seoul, South Korea, 2025

[**MobiCom'25**] "From Interference Mitigation to Toleration: Pathway to Practical Spatial Reuse in LPWANs", Ruonan Li, Ziyue Zhang, Xianjin Xia, Ningning Hou, Wenchang Chai, Shiming Yu, Yuanqing Zheng, Tao Gu, The 31st Annual International Conference on Mobile Computing and Networking, Hong Kong, China, 2025

[**SenSys'25**] "MoLoRa: Intelligent Mobile Antenna System for Enhanced LoRa Reception in Urban Environments", Ningning Hou, Yifeng Wang, Xianjin Xia, Shiming Yu, Yuanqing Zheng, Tao Gu, The 23rd ACM Conference on Embedded Networked Sensor Systems, Irvine, CA, USA, 2025

Professional Services

Program Committee Member

- ACM MobiCom Demo Program Committee — 2025
- ACM MobiCom Artifact Evaluation Committee — 2024-25
- ACM MobiSys Artifact Evaluation Committee — 2024-25

Invited Reviewer

- IEEE Transactions on Mobile Computing — 2025

- ○ ACM Transactions on Sensor Networks — 2023,2025
- ○ IEEE Transactions on Wireless Communications — 2023
- ○ IEEE Internet of Things Journal — 2024
- ○ Computer Networks — 2023

Awards

- ○ Winner (Rank 1), PolyU FCMS Three Minute Thesis (3MT) Competition — 2025
- ○ Student Travel Grant, ACM MobiCom — 2024
- ○ Best Oral Presentation Award, PolyU COMP Research Student Conference — 2024
- ○ Full Ph.D. Scholarship, PolyU — 2024
- ○ Outstanding Student Scholarship (Top 15%), UESTC — 2022-Now
- ○ National Encouragement Scholarship, UESTC — 2020
- ○ Outstanding Student Scholarship (Top 15%), UESTC — 2019