Chenning Li

Gradaute Student

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Research Interests

Low-power Wireless Networks, Edge/Mobile Computing, ML for Networks/Systems

Education

Aug 2019 - Present Graduate at Michigan State University

Major: Computer Science

Advisor: Dr. Yunhao Liu & Dr. Zhichao Cao

Aug 2014 - July 2018 BEng. from Tsinghua University

Major: Aerospace Engineering & Minor: Computer Science

Conference Publications

 Chenning Li, Xiuzhen Guo, Longfei Shangguan, Zhichao Cao, and Kyle Jamieson. "CurvingLoRa to Boost LoRa Network Capacity via Concurrent Transmission", USENIX NSDI'22.

- Chenning Li, Xiao Zeng, Mi Zhang, and Zhichao Cao. "PyramidFL: Fine-grained Data and System Heterogeneity-aware Client Selection for Efficient Federated Learning", ACM MobiCom'22.
- 3. Chenning Li, Zhichao Cao, and Li Xiao. "CurveALOHA: Non-linear Chirps Enabled High Throughput Random Channel Access for LoRa", IEEE INFOCOM'22.
- 4. Chenning Li, Hanqing Guo, Shuai Tong, Xiao Zeng, Zhichao Cao, Mi Zhang, Qiben Yan, Li Xiao, Jiliang Wang, and Yunhao Liu. "NELoRa: Towards Ultra-low SNR LoRa Communication with Neural-enhanced Demodulation", ACM SenSys'21. Best Paper Award.
- 5. Chenning Li, Zheng Liu, Yuguang Yao, Zhichao Cao, Mi Zhang, and Yunhao Liu. "Wi-Fi See It All: Generative Adversarial Network-augmented Versatile Wi-Fi Imaging", ACM SenSys'20.
- 6. Chenning Li, Manni Liu, Zhichao Cao. "WiHF: Enable User Identified Gesture Recognition with WiFi", IEEE INFOCOM'20.
- 7. Jialuo Du, Chenning Li, Zhichao Cao, and Yunhao Liu. "SRPeek: Super Resolution Enabled Screen Peeking via COTS Smartphone", IEEE ICPADS'21.

Journal Publications

- 1. Chenning Li, and Zhichao Cao. "LoRa Networking Techniques for Large-scale and Long-term IoT: A Down-to-top Survey", ACM Computing Surveys (ACM CSUR), to appear.
- 2. Chenning Li, Zhichao Cao, and Yunhao Liu. "Deep AI Enabled Ubiquitous Wireless Sensing: A Survey", ACM Computing Surveys (ACM CSUR).
- 3. Chenning Li, Manni Liu, and Zhichao Cao. "WiHF: Gesture and User Recognition with Wi-Fi", IEEE Transactions on Mobile Computing (IEEE TMC).

Industrial Experience

- 1. Microsoft: Research Intern Networking Research Group. May-Aug 2022
- 2. TikTok: Data-System-Network Engineering Intern. Feb-Apr 2022
- 3. CodePath: iOS Development Course. Awarded the Excellent Presentation during the CodePath Mobile Development Virtual Demo Day. Aug-Dec 2020.

Awards

- 1. Student Grant, USENIX NSDI, 2022
- 2. Best Paper Award, ACM SenSys, 2021
- 3. Named an Engineering Distinguished Scholar, MSU, 2019
- 4. Outstanding Undergraduates, Beijing & Tsinghua University, 2018
- 5. Awarded the Outstanding Scholarship, Tsinghua University, 2017

Teaching Experience

- 1. Teaching Assistant: CSE220 Programming in C (Spring 2021, MSU)
- 2. Guest Lecturer: CSE891 AIoT: Artificial Intelligence in the Edge (Spring 2020, Fall 2021, MSU)

Professional Service

- 1. Reviewer:
 - (a) **Conference:** ACM MobiCom '20/'21/'22 | IEEE INFOCOM '20/'21/'22 | ACM/IEEE IPSN '22
 - (b) **Journal:** IEEE Transactions on Wireless Communications | IEEE Transactions on Mobile Computing | ACM Transactions on Sensor Networks | IEEE Internet of Things Journal