Qingyu Song

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EDUCATION

Ph.D. Candidate	Computer Science and Engineering, The Chinese University of Hong Kong, Hong Kong. Advisor: Prof. Hong Xu
M.S. 2021	Control Engineering, Tsinghua University, Beijing, China. Advisor: Prof. Jianming Hu
B.S. 2018	Software Engineering, Harbin Institute of Technology, Weihai, China. Advisor: Dr. Xuefeng Piao

WORK EXPERIENCE

11/22 - 05/23	Visiting Student, Huawei Project: Learning-based Precoding for MIMO Interference Reduction. Advisor: Mr. Guochen Liu
03/18 - 08/18	Undergraduate Research Assistant, Tsinghua University Project: Traffic Flow Prediction with Graph Neural Networks. Advisor: Prof. Jianming Hu
10/17 - 01/18	Research and Development Intern, NEBULA-LINK Internet Technology Co., Ltd. Project: ADAS Android App Development and Data Analysis. Advisor: Dr. Yizhi Wang
05/16 - 09/17	Undergraduate Intern, Harbin Institute of Technology Project: Android App Development. Advisor: Dr. Xuefeng Piao

RESEARCH INTEREST

Learning to Optimize: Utilizing machine learning techniques to solve optimization problems.

PUBLICATIONS

Conference Proceedings

C8. **Q. Song**, W. Lin, J. Wang, H. Xu. Towards Robust Learning to Optimize with Theoretical Guarantees. In IEEE/CVF CVPR 2024.

C7. **Q. Song**, J. Wang, J. Li, G. Liu, H. Xu. A Learning-only Method for Multi-Cell Multi-User MIMO Sum Rate Maximization. In IEEE INFOCOM, 2024.

C6. Y. Zhang, W. Lin, S. Chen, **Q. Song**, J. Lu, Y. Shao, B. Yu, H. X. Fed2Com: Towards Efficient Compression in Federated Learning. In IEEE ICNC, 2024.

C5. **Q. Song**, G. Liu, H. Xu. Learning to Optimize Non-Convex Sum-Rate Maximization Problems. In ICML 2023, 1st Workshop on Synergy of Scientific and Machine Learning Modeling.

C4. **Q. Song**, G. Liu, H. Xu. Towards a Learning-Only Approach for Non-Convex Sum Rate Maximization. In ACM SigMetrics 2023, Workshop on Learning-augmented Algorithms: Theory and Applications.

C3. **Q. Song**, R. Ming, J. Hu, H. Niu, M. Gao. Graph Attention Convolutional Network: Spatiotemporal Modeling for Urban Traffic Prediction. In IEEE ITSC, 2020.

C2. J. Chen, **Q. Song**, C. Zhao, Z. Li. Graph Database and Relational Database Performance Comparison on a Transportation Network. In International Conference on Advances in Computing and Data Sciences, 2020.

C1. **Q. Song**, J. Hu, R. Zhang, Y. Zhang. An Urban Topological Map Generation Method for Traffic Flow Prediction Based on Road Segment Clustering with Floating Vehicle Trajectory Dataset. In CICTP, 2019.

TEACHING

Spring 2022	CSCI 4430 / ESTR 4120, Data Communication and Computer Networks
Spring 2021	CSCI 4430, Data Communication and Computer Networks
Fall 2021	ENGG 2760A / ESTR 2018: Probability for Engineers

AWARDS

03/2024	Student Travel Grant, IEEE INFOCOM.
07/2023	Registration Grant, ICML, 1st Workshop on Synergy of Scientific and Machine Learning Modeling
2021 - 2025	Postgraduate Studentship, CUHK
2019 - 2020	Scholarship with First Honor, Second Honor, SIGS, THU
2018	Outstanding Graduate Award at Provincial Level, HIT
2018	Scholarship with First Honor, Second Honor, HIT

Updated March 2024