Professor ZHAO, QINGLIN

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Academic Qualification

Ph.D. in Institute of Computing Technology, Chinese Academy of Sciences, 2005 Master in Huazhong University of Science & Technology, 2001 Bachelor in Hubei University, 1998

Teaching Area

Machine learning Data structure Socket programming Web technologies Selected topics in communications Electronic commerce

Research Area

Machine Learning and Its Applications Blockchain and Decentralization Computing Internet of Things (IoT) Wireless Communications and Networking Cloud/Edge Computing Privacy Computing Quantum Computing and Quantum Machine Learning

Professional Services

Associate Editor, IEEE Transactions on Mobile Computing, since 2021 Associate Editor, IET Communications, since 2021

Working Experience

Jul. 2017 ~ present, Professor, Faculty of Information Technology, MUST Jul. 2012 ~ Jun. 2017, Associate Professor, Faculty of Information Technology, MUST Sep.2009 ~ Jun. 2012, Assistant Professor, Faculty of Information Technology, MUST Oct. 2006 ~ Aug. 2009, Research Associate, Department of Electronic & Computer Engineering, The Hong Kong University of Science & Technology May 2005 ~ Sep. 2006, Research Associate, Department of Information Engineering, The Chinese University of Hong Kong

Academic Publication (selected)

•Laisen Nie, Xiaojie Wang, Qinglin Zhao, Zhigang Shang, Li Feng, and Guojun Li, Digital Twin for Transportation Big Data: A Reinforcement Learning-Based Network Traffic Prediction Approach, IEEE Transactions on Intelligent Transportation Systems, Accepted.



•Peiyun Zhang, Song Ding, and Qinglin Zhao, Exploiting Blockchain to Make AI Trustworthy: A Software Development Lifecycle View, ACM Computing Surveys, Accepted.

•Qinglin Zhao, Guangcheng Li, Jincheng Cai, MengChu Zhou, Li Feng, A Tutorial on Internet of Behaviors: Concept, Architecture, Technology, Applications, and Challenges. IEEE Commun. Surv. Tutorials 25(2): 1227-1260, 2023.

•Peiyun Zhang, YanHao Tao, Qinglin Zhao, MengChu Zhou, A Rate-and-Trust-Based Node Selection Model for Block Transmission in Blockchain Networks. IEEE Internet Things J. 10(2): 1605-1616, 2023.

•Li Feng, Qinglin Zhao, Yu Zeng, Mianxiong Dong, et al., M-T2F: A High-Efficient Contention Protocol for Wireless Networking in Cyber-Physical-Social Systems, IEEE Transactions on Network Science and Engineering, 9(6): 3860-3869, 2022.

• Guangcheng Li, Qinglin Zhao, Dongbo Zhang, Mu-Yen Chen, et al, GT-Chain: A Fair Blockchain for Industrial IoT Applications, IEEE Transactions on Network Science and Engineering, 9(5): 3244-3257, 2022.

• Shumin Yao, Li Feng, Qinglin Zhao, Qiyu Yang, Yong Liang, ERFR-CTC: Exploiting Residual Frequency Resources in Physical-Level Cross-Technology Communication, IEEE Internet of Things Journal, 8(7): 6062-6076, 2021.

• Guangcheng Li, Qinglin Zhao, Yu Wang, et al., A Blockchain-Based Decentralized Framework for Fair Data Processing, IEEE Transactions on Network Science and Engineering, 8(3): 2301-2315, 2021.

•Qinglin Zhao, Li Feng, Lian Zhao, Kan Xie and Yong Liang, Backoff Entropy: Predicting Presaturation Peak for IEEE 802.11 DCF Networks, IEEE Transactions on Vehicular Technology, 71(2): 1901-1912, 2021.

• Molin Li, Xiaobo Zhou, Tie Qiu, Qinglin Zhao, and Keqiu Li, Multi-relay Assisted Computation Offloading for Multi-access Edge Computing Systems with Energy Harvesting, IEEE Transactions on Vehicular Technology, 70(10): 10941-10956, 2021.

• Shumin Yao, Li Feng, Jing Zhao, Qinglin Zhao, Qiyu Yang, and Wenchao Jiang, PatternBee: Enabling ZigBee-to-BLE Direct Communication by Offset Resistant Patterns, IEEE Wireless Communications, 28(3): 130-137, 2021.

• Zhimin Wang, Qinglin Zhao, Li Feng, and Fangxin Xu, How Much Benefit Can Dynamic Frequency Scaling Bring to WiFi?, IEEE Transactions on Mobile Computing, 20(3): 1046-1063, 2021.

• Li Feng, Qinglin Zhao, Zhiguo Shi, Zhenni Li and Yong Liang, Modeling the Impact of the MoreData Parameter for Wireless Power-Saving Protocols, IEEE Transactions on Green Communications and Networking, 4(4): 1061-1071, Dec. 2020.

• Qinglin Zhao, Li Feng, Lian Zhao, Zhenni Li and Yong Liang, SatOpt Partition: Dividing Throughput-Stability Region for IEEE 802.11 DCF Networks, IEEE Transactions on Vehicular Technology, 69(9): 10278-10290, Sep. 2020.

• Yujiong Liu, Shangguang Wang, Qinglin Zhao, Shiyu Du, Ao Zhou, Xiao Ma, Fangchun Yang, Dependency-Aware Task Scheduling in Vehicular Edge Computing, IEEE Internet of Things Journal, 7(6): 4961-4971, 2020.

• Jun Huang, Chao Huang, Congcong Xing, Zheng Chang, Yanxiao Zhao, and Qinglin Zhao, An Energy-Efficient Communication Scheme for Collaborative Mobile Clouds in Content Sharing: Design and Optimization, IEEE Transactions on Industrial Informatics, 15(10): 5700-5707, 2019.

• Qiang Yang, Siyang Sun, Shuiguang Deng, Qinglin Zhao, and Mengchu Zhou, Optimal Sizing of PEV Fast Charging Stations with Markovian Demand Characterization, IEEE Transactions on Smart Grid, 10(4):4457-4466, 2019.

• Qinglin Zhao, Soung C. Liew, Shengli Zhang, and Yao Yu, Distance-based Location Management Utilizing Initial Position for Mobile Communication Networks, IEEE Transactions on Mobile Computing, 5(1):107-120, 2016.

• Fangxin Xu, Qinglin Zhao, and Yu Zeng, How Well Does CSMA/CN Work in WLANs?, IEEE Transactions on Vehicular Technology, 65(9):7662-7669, 2016.

• Zhijie Ma, Qinglin Zhao, and Tom H. Luan, Providing Utility-Optimal Throughput Guarantees in Wireless LANs, IEEE Transactions on Vehicular Technology, 65(9):7559-7567, 2016.

• Qinglin Zhao, Danny H. K. Tsang, and Taka Sakurai, A Scalable and Accurate Nonsaturated IEEE 802.11e EDCA Model for an Arbitrary Buffer Size, IEEE Transactions on Mobile Computing, 12(12):2455-2469, 2013.

• Qinglin Zhao, Danny H. K. Tsang, and Taka Sakurai, A Simple Critical-Load-Based CAC Scheme for IEEE 802.11 DCF Networks, ACM/IEEE Transactions on Networking, 19(5): 1485 - 1498, 2011.

• Qinglin Zhao, Danny H. K. Tsang, and Taka Sakurai, Modeling Nonsaturated IEEE 802.11 DCF Networks under Arbitrary Buffer Size, IEEE Transactions on Mobile Computing, 10(9): 1248-1263, 2011.

• Qinglin Zhao, Danny H. K. Tsang, and Taka Sakurai, A Novel CAC Scheme for Homogeneous 802.11 Networks, IEEE Transactions on Wireless Communications, 9(3): 1168-1174, 2010.

• Qinglin Zhao, Danny H. K. Tsang, and Taka Sakurai, A Simple and Approximate Model for Nonsaturated IEEE 802.11 DCF, IEEE Transactions on Mobile Computing, 8(11): 1539-1553, 2009.

• Qinglin Zhao, Soung C. Liew, and Yao Yu, Location Update Cost of Distance-Based Scheme for PCS Networks with CTRW Model, IEEE Communications Letters, 13 (6): 408-410, 2009.

• Qinglin Zhao, Danny H. K. Tsang, An Equal-spacing-based Design for QoS Guarantee in IEEE 802.11e HCCA Wireless Networks, IEEE Transactions on Mobile Computing, 7(11):134-152, 2008.

• Qinglin Zhao and Danny H. K. Tsang, and Taka Sakurai, A Simple Model for Nonsaturated IEEE 802.11 DCF Networks, IEEE Communications Letters, 12(8): 563–565, 2008.

Patents

U.S. Patent 10,084,661 B2, Method for Evaluating Performance of a Data Communication Network.

U.S. Patent 9,942,150 B2, Method for Optimizing Throughput of a Network. U.S. Patent 9,961,702 B2, Method and System for Contention Queuing Using Queue-

Based MAC Protocol.

U.S. Patent 10,004,090 B2, Queue-Based MAC Protocol with Subcarrier Allocation Optimization.

U.S. Patent 10,004,037 B2, Coding-Aware Scheme to Minimize Energy Consumption and Time Cost.

U.S. Patent 9,307,560 B2, Method for Scheduling a Random-Access Communication System with Absolute and Proportional Throughput Guarantees.

U.S. Patent 9,907,029 B2, Power Allocation Optimization Under Constraints of Throughput Requirements and Interference Limit for Cognitive Radio Networks. U.S. Patent 9,232,351 B1, Location Management Utilizing Initial Position for Mobile Networks.

Professional Society Membership

BOC Excellent Resarch Award in 2011 and 2015.

Professional Society Membership

Senior Member, IEEE Member, Blockchain Expert Committee of CCF