DR. LIN GAO

CONTACT INFORMATION

Department of EIE, Harbin Institute of Technology, Shenzhen

Room 1102, Building L, HIT Campus, Nanshan, Shenzhen, China (518055)

http://faculty.hitsz.edu.cn/gaolin

https://gaolin021.github.io/

Tel: (+86) 187 * * * * 7272

Email: gaol@hit.edu.cn gaolin021@hotmail.com

EDUCATION AND WORKING

• Associate Professor

2015.09 - Now

Electronics and Information Engineering (EIE), Harbin Institute of Technology, Shenzhen, China

- Research Topic: "Mobile Crowd/Edge Computing and Machine Learning"

• Postdoc Fellow

2010.08 - 2015.08

Information Engineering (IE), The Chinese University of Hong Kong, Shatin, Hong Kong

- Research Topic: "Network Optimizations and Economics"

• Doctor of Philosophy (Ph.D.)

2006.09 - 2010.07

Electronic Engineering (EE), Shanghai Jiao Tong University, Shanghai, China

- Thesis: "Dynamic Spectrum Sharing in Cognitive Radio Networks: A Game-Theoretical Approach"

• Master of Engineering (M.E.)

2004.09 - 2007.01

Electronic Engineering (EE), Shanghai Jiao Tong University, Shanghai, China

- Thesis: "Research on Adaptive Resource Allocation for MIMO-OFDM Systems"

• Bachelor of Engineering (B.E.)

1998.09 - 2002.07

Information Engineering (IE), Nanjing University of Posts and Telecommunications, Nangjing, China

RESEARCH INTEREST

• Game Theory and Machine Learning

- Network Game Modelling and Analysis
- Incentive Mechanism Design and Optimization
- Deep Reinforcement Learning and Federated Learning

• Mobile Computing and Networking

- Edge Computing, Caching, and Networking
- Mobile Crowdsensing and Crowd Computing
- Cognitive Networking and Network Intelligence

Research Awards

- IEEE ComSoc Asia-Pacific Outstanding Young Researcher Award, IEEE ComSoc, 2016
- Best Paper Award, IEEE WCNC, 2019
- Best Paper Award, IEEE WiOPT, 2014
- $\bullet \ \mathbf{Best} \ \mathbf{Paper} \ \mathbf{Award}, \mathit{IEEE} \ \mathit{WiOPT}, \, 2013$
- Best Paper Award Finalist, IEEE INFOCOM, 2016
- Best Student Paper Award, IEEE WiOPT, 2015

TEACHING EXPERIENCES

- "Stochastic Network Optimization," 32 hours (in English), Graduate Course in the School of Electronics and Information Engineering, Harbin Institute of Technology, Shenzhen 2016 Now
- "Communication Circuit Design", 80 hours, *Undergraduate Course* in the School of Electronics and Information Engineering, Harbin Institute of Technology, Shenzhen 2018 Now
- "Experiments for Communication Principles", 48 hours, *Undergraduate Course* in the School of Electronics and Information Engineering, Harbin Institute of Technology, Shenzhen

 2018 Nov
- "Networks: Technology, Economics, and Social Interactions (IERG 3280)", Guest Lecture in the Department of Information Engineering, The Chinese University of Hong Kong 2013
- "Network Economics (IERG 6280)", Guest Lecture in the Department of Information Engineering, The Chinese University of Hong Kong 2011

Dr. Lin Gao – 1 – Curriculum Vitae

RESEARCH GRANTS

- PI, "Intelligent and Collaborative Optimizations for Mobile Edge Networks," Shenzhen Science and Technology Program, 2020.06.01–2023.05.31, RMB 300k
- PI, "Multi-Dimensional Resource Optimization and Management for Edge Networks," National Natural Science Foundation of China (NSFC), 2020.01.01–2023.12.31, RMB 600k
- PI, "Multi-Dimensional Spectrum Resource Sharing Principle and Incentive," National Natural Science Foundation of China (NSFC), 2018.01.01–2018.12.31, RMB 160k
- PI, "Dynamic Spectrum Sharing and Spectrum Big Data," Research Foundation for Advanced Talents, Shenzhen, China, 2017.01.01–2019.12.31, RMB 3000k
- PI, "TV White Space Ecosystem," Scientific Research Innovation Fund, Harbin Institute of Technology, Harbin, China, 2017.01.01–2019.12.31, RMB 100k
- PI, "TV White Space Network Optimizations and Economics," Startup Research Fund, Harbin Institute of Technology, Shenzhen, China, 2015.09.06–2017.12.31, RMB 200k

Professional Activities

• Membership

- Senior Member, IEEE & IEEE Communications Society

• Editorship

- Associate Editor, IEEE Transactions on Network Science and Engineering, 2021-Now
- Associate Editor, China Communications, 2016–Now
- Associate Editor, Journal of Communications and Information Networks, 2017–2020
- Guest Editor, IEEE Journal on Selected Areas in Communications, 2019
- Guest Editor, Journal of Mobile Information Systems, 2015

• Chairing

- Vice Chair of IEEE Technical Committee on Cognitive Networks (TCCN), 2020-2022
- Symposium Chair (Mobile and Wireless Networks) of IEEE ICC 2020, Virtual Conference, May 2020
- TPC Vice Chair of WiOpt 2018, Shanghai, China, May 2018
- Publicity & Social Media Chair of GameNets 2017, Tennessee, USA, May 2017
- Publicity Chair of GSNC 2016, San Francisco, USA, April 2016
- Publicity Chair of SDP 2015, Hong Kong, April 2015
- Symposium Chair (Pricing and Network Optimization) of GameNets 2014, Beijing, China, Nov 2014

• Technical Program Committee (TPC) Members

- IEEE International Conference on Computer Communications (INFOCOM), 2017-Now
- IEEE International Conference on Communications (ICC), 2012–Now
- IEEE Global Communications Conference (GLOBECOM), 2013-Now
- Asia-Pacific Conference on Communications (APCC), 2013-Now
- International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt), 2013–Now

• Technical Reviewers

- IEEE Journal on Selected Areas in Communications (JSAC)
- IEEE Transactions on Mobile Computing (TMC)
- IEEE/ACM Transactions on Networking (TON)
- IEEE Transactions on Wireless Communications (TWC)
- IEEE Transactions on Communications (TCOM)
- IEEE Transactions on Vehicular Technology (TVT)
- IEEE Communications Magazine
- Conferences: ACM MobiHoc, IEEE INFOCOM, ICC, GLOBECOM, DySPAN, WCNC, WiOpt

Google Scholar Citations (Dec 2020)

- Total Citations: **3345** (H-index: **26**, i10-index: **58**)
- Citations of the Most Cited Paper: 349
- url: https://scholar.google.com/citations?user=41wcJi4AAAAJ&hl=en

Book

- [1] G. Iosifidis, <u>Lin Gao</u>, J. Huang, and L. Tassiuals, "Incentive Schemes for User-Provided Fog Infrastructure," chapter in *Fog and Fogonomics: Challenges and Practices of Fog Computing, Communication, Networking, Strategy, and Economics* (Editor-in-Chief: Yang Yang), Wiley, 2020.
- [2] <u>Lin Gao</u>, L. Duan, S. Gong, and Q. Zhang, "Matching for Cooperative Spectrum Sharing", chapter in *Encyclopedia of Wireless Networks* (Editor-in-Chief: Sherman Shen), Springer, 2018
- [3] <u>Lin Gao</u>, X. Wang, Y. Xu, and Q. Zhang, "Contract-Based Secondary Spectrum Trading", chapter in *Handbook of Cognitive Radio: Cognitive Radio Resource Management* (Editor-in-Chief: Wei Zhang, Section Editors: Jianwei Huang and Xu Chen), Springer, 2017
- [4] Y. Luo, <u>Lin Gao</u>, and J. Huang, *Economics of Database-Assisted Spectrum Sharing*, Springer Briefs (Series Editor: Sherman Shen), Springer, 2016 (ISBN: 9783319432304, Page Number: 100)
- [5] J. Huang and <u>Lin Gao</u>, Wireless Network Pricing, Synthesis Lectures on Communication Networks (Series Editor: Jean Walrand), Morgan & Claypool Publishers, July 2013 (ISBN: 9781608459759, Page Number: 176)
- [6] Y. Xu, D. Li, W. Zhong, and <u>Lin Gao</u>, Resource Management of Cognitive Radio Networks: Game Theoretic Modeling and Performance Analysis (in Chinese), Publishing House of Electronics Industry, Beijing, China, October 2013 (ISBN: 9787121212420, Page Number: 256)

Journal (name* denotes corresponding author, and name† denotes student that I supervise/co-supervise.)

Summary: 27 of 49 journal papers are published in CCF A journals, and 47 of 49 journal papers are published in JCR Q1 journals.

- J. Luo, J. Song, F. Zheng, <u>Lin Gao</u>, and T. Wang, "User-Centric UAV Deployment and Content Placement in Cache-Enabled Multi-UAV Networks," *IEEE Transactions on Vehicular Technology* (*TVT*), 2022, forthcoming (IF:5.978, JCR Q1)
- [2] Z. Wang[†], <u>Lin Gao</u>*, T. Wang, and J. Luo, "Monetizing Edge Service in Mobile Internet Ecosystem," *IEEE Transactions on Mobile Computing (TMC)*, 2020, forthcoming (IF:5.577, JCR Q1, **CCF A**)
- [3] T. Wang, Y. Shen, <u>Lin Gao</u>*, Y. Jiang, X. Zhu, and F. Zheng, "Long-Term Energy Consumption and Transmission Delay Tradeoff in Wireless-Powered Body Area Networks," *IEEE Internet of Things Journal* (*IOT*), vol.9, no.6, pp.4051-4064, August 2021 (IF:9.471, JCR Q1)
- [4] T. Wang, Y. Shen, <u>Lin Gao</u>*, Y. Jiang*, T. Ma, and X. Zhu, "Energy Consumption Minimization with Throughput Heterogeneity in Wireless-Powered Body Area Networks," *IEEE Internet of Things Journal (IOT)*, vol.8, no.5, pp.3369-3383, March 2021 (IF:9.471, JCR Q1)
- [5] C. Liu, Y. Zhang, T. Zhang, X. Wu, <u>Lin Gao</u>, and Q. Zhang, "High Throughput Vehicle Coordination Strategies at Road Intersections," *IEEE Transactions on Vehicular Technology* (*TVT*), vol.69, no.12, pp.14341-14354, December 2020 (IF:5.978, JCR Q1)
- [6] T. Wang, Z. Yan, <u>Lin Gao</u>*, Y. Jiang*, T. Ma, and Z. Yang, "A Novel Graphics-Based Multi-Epoch Power Adjustment Strategy for WPCNs," *IEEE Transactions on Vehicular Technology (TVT)*, vol.69, no.11, pp.14093- 14098, November 2020 (IF:5.978, JCR Q1)
- [7] C. Jiang, <u>Lin Gao</u>*, T. Wang, Y. Jiang, and J. Li, "Crowd-MECS: A Novel Crowdsourcing Framework for Mobile Edge Caching and Sharing," *IEEE Internet of Things Journal (IOT)*, vol.7, no.10, pp.9426-9440, October 2020 (IF:9.471, JCR Q1)
- [8] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Location-Flexible Mobile Data Service in Overseas Market," *IEEE Transactions on Mobile Computing (TMC)*, vol.21, no.2, pp.629-643, August 2020 (IF:5.577, JCR Q1, CCF A)
- [9] M. Tang[†], <u>Lin Gao</u>, and J. Huang, "Communication, Computation, and Caching Resource Sharing for Internet-of-Things," *IEEE Communications Magazine*, vol.58, no.4, pp.75-80, April 2020 (IF:9.619, JCR Q1)

- [10] T. Wang, X. Yang, F. Deng, <u>Lin Gao</u>, Y. Jiang, and Z. Yang, "Joint Power and Duty-Cycle Design Using Alternating Optimization Algorithm under Energy Harvesting Architectures," *China Communications*, vol.17, no.12, pp.139-155, December 2020 (IF:2.688, JCR Q3)
- [11] Z. Wang[†], <u>Lin Gao</u>, J. Huang, and B. Shou, "Towards Flexible Wireless Data Services," *IEEE Communications Magazine*, vol.57, no.12, pp.25-30, December 2019 (IF:9.619, JCR Q1)
- [12] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Multi-Cap Optimization for Wireless Data Plans with Time Flexibility," *IEEE Transactions on Mobile Computing* (*TMC*), vol.19, no.9, pp.2145-2159, June 2019 (IF:5.577, JCR Q1, CCF A)
- [13] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Duopoly Competition for Mobile Data Plans with Time Flexibility," IEEE Transactions on Mobile Computing (TMC), vol.19, no.6, pp.1286-1298, April 2019 (IF:5.577, JCR Q1, CCF A)
- [14] M. Zhang[†], <u>Lin Gao</u>, J. Huang, and M. Honig, "Hybrid Pricing for Mobile Collaborative Internet," IEEE/ACM Transactions on Networking (TON), vol.27, no.3, pp.986-999, April 2019 (IF:3.56, JCR Q1, CCF A)
- [15] S. Gong, <u>Lin Gao</u>, J. Xu, Y. Guo, D.T. Hoang, and D. Niyato, "Exploiting Backscatter-Aided Relay Communications With Hybrid Access Model in Device-to-Device Networks," *IEEE Transactions on Cognitive Communications and Networks* (*TCCN*), vol.5, no.4, pp.835-848, June 2019 (IF:4.341, JCR Q1)
- [16] F. Long[†], T. Wang, T. Ma, <u>Lin Gao</u>*, Y. Jiang, and L. Chang, "Low-complexity Matrix-based Conjugate Gradient Channel Estimation for Cooperative Wireless Sensor Networks," *IEEE Transactions on Vehicular Technology (TVT)*, vol.68, no.4, pp.4078-4083, February 2019 (IF:5.978, JCR Q1)
- [17] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Exploring Time Flexibility in Wireless Data Plans," *IEEE Transactions on Mobile Computing (TMC)*, vol.18, no.9, pp.2048-2061, September 2018 (IF:5.577, JCR Q1, **CCF A**)
- [18] Y. Wei[†], J. Yu[†], T. M. Lok, and <u>Lin Gao</u>*, "A Novel Mobile Data Contract Design with Time Flexibility," IEEE Transactions on Mobile Computing (TMC), vol.18, no.5, pp.986-999, July 2018 (IF:5.577, JCR Q1, CCF A)
- [19] M. Tang[†], <u>Lin Gao</u>*, and J. Huang, "Enabling Edge Cooperation in Tactile Internet via 3C Resource Sharing," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol.36, no.11, pp.2444-2454, October 2018 (IF:9.144, JCR Q1, CCF A)
- [20] J. Xu, Y. Zou, S. Gong, <u>Lin Gao</u>, D. Niyato, and W. Cheng, "Robust Transmissions in Wireless Powered Multi-Relay Networks with Channel Interference Constraints," *IEEE Transactions on Communications* (*TCOM*), vol.67, no.2, pp.973-987, October 2018 (IF:5.083, JCR Q1, CCF B)
- [21] M. Tang[†], H. Pang[†], S. Wang[†], <u>Lin Gao</u>, J. Huang, and L. Sun, "Multi-Dimensional Auction Mechanisms for Crowdsourced Mobile Video Streaming," *IEEE/ACM Transactions on Networking (TON)*, vol.26, no.5, pp.2062-2075, August 2018 (IF:3.56, JCR Q1, CCF A)
- [22] <u>Lin Gao</u>, M. Tang, H. Pang, J. Huang, and L. Sun, "Multi-User Cooperative Mobile Video Streaming: Performance Analysis and Online Mechanism Design," *IEEE Transactions on Mobile Computing (TMC)*, vol.18, no.2, pp.376-389, May 2018 (IF:5.577, JCR Q1, CCF A)
- [23] L. Sun, H. Pang[†], and <u>Lin Gao</u>, "Joint Sponsor Scheduling in Cellular and Edge Caching Networks for Mobile Video Delivery," *IEEE Transactions on Multimedia (TMM)*, vol.20, no.12, pp.3414-3427, May 2018 (IF:6.513, JCR Q1, CCF B)
- [24] Q. Ma[†], <u>Lin Gao</u>*, Y.F. Liu, and J. Huang, "Incentivizing Wi-Fi Network Crowdsourcing: A Contract Theoretic Approach," *IEEE/ACM Transactions on Networking (TON)*, vol.26, no.3, pp.1035-1048, April 2018 (IF:3.56, JCR Q1, **CCF A**)
- [25] C. Jiang[†], <u>Lin Gao</u>, L. Duan, and J. Huang, "Data-Centric Mobile Crowdsensing," *IEEE Transactions on Mobile Computing* (*TMC*), vol.17, no.6, pp.1275-1288, October 2017 (IF:5.577, JCR Q1, **CCF A**)
- [26] C. Jiang[†], Lin Gao, L. Duan, and J. Huang, "Scalable Mobile Crowdsensing via Peer-to-Peer Data Sharing," IEEE Transactions on Mobile Computing (TMC), vol.17, no.4, pp.898-912, August 2017 (IF:5.577, JCR Q1, CCF A)
- [27] M. Tang[†], Lin Gao, H. Pang, J. Huang, and L. Sun, "Optimizations and Economics of Crowdsourced Mobile Streaming," *IEEE Communications Magazine*, vol.55, no.4, pp.21-27, April 2017 (IF:9.619, JCR Q1)
- [28] X. Chen, L. Pu, <u>Lin Gao</u>*, W. Wu, and D. Wu, "Exploiting Massive D2D Collaboration for Energy-Efficient Mobile Edge Computing," *IEEE Wireless Communications*, vol.24, no.4, pp.64-71, August 2017 (IF:11.979, JCR Q1; Google Scholar Citations: **54**, **ESI Highly Cited Paper**)

Dr. Lin Gao – 4 – Curriculum Vitae

- [29] H. Yu[†], M.H. Cheung, G. Iosifidis, <u>Lin Gao</u>, L. Tassiulas, and J. Huang, "Mobile Data Offloading for Green Wireless Networks," *IEEE Wireless Communications*, vol.24, no.4, pp.31-37, August 2017 (IF:11.979, JCR Q1)
- [30] H. Yu[†], M.H. Cheung, <u>Lin Gao</u>, and J. Huang, "Public Wi-Fi Monetization via Advertising," *IEEE/ACM Transactions on Networking (TON)*, vol.25, no.4, pp.2110-2121, March 2017 (IF:3.56, JCR Q1, CCF A)
- [31] G. Iosifidis, <u>Lin Gao</u>, J. Huang, and L. Tassiulas, "Efficient and Fair Collaborative Mobile Internet Access," IEEE/ACM Transactions on Networking (TON), vol.25, no.3, pp.1386-1400, January 2017 (IF:3.56, JCR Q1, CCF A)
- [32] <u>Lin Gao</u>, L. Duan, and J. Huang, "Two-Sided Matching Based Cooperative Spectrum Sharing," *IEEE Transactions on Mobile Computing (TMC)*, vol.16, no.2, pp.538-551, February 2017 (IF:5.577, JCR Q1, CCF A; Google Scholar Citations: 30, ESI Highly Cited Paper)
- [33] <u>Lin Gao</u>, B. Shou, Y. Chen, and J. Huang, "Combining Spot and Futures Markets: A Hybrid Market Approach to Dynamic Spectrum Access," *Operations Research (OR)*, vol.64, no.4, pp.794–821, July 2016 (IF:3.31, JCR Q2, A⁺ Journal in the area of Management Science & Operations Research)
- [34] Q. Ma[†], <u>Lin Gao</u>*, Y.F. Liu, and J. Huang, "Economic Analysis of Crowdsourced Wireless Community Networks," *IEEE Transactions on Mobile Computing* (*TMC*), vol.16, no.7, pp.1856-1869, September 2016 (IF:5.577, JCR Q1, **CCF A**)
- [35] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "An Integrated Spectrum and Information Market for Green Cognitive Communications," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol.34, no.12, pp.3326-3338, December 2016 (IF:9.144, JCR Q1, CCF A)
- [36] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "MINE GOLD to Deliver Green Cognitive Communications," *IEEE Journal on Selected Areas in Communications* (*JSAC*), vol.33, no.12, pp.2749-2760, December 2015 (IF:9.144, JCR Q1, **CCF A**)
- [37] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "Spectrum Reservation Contract Design in TV White Space Networks," IEEE Transactions on Cognitive Communications and Networks (TCCN) (Invited Paper), vol.1, no.2, pp.147-160, November 2015 (IF:4.341, JCR Q1)
- [38] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "Business Modeling for TV White Space Networks," *IEEE Communications Magazine*, vol.53, no.5, pp.82-88, May 2015 (IF:9.619, JCR Q1)
- [39] <u>Lin Gao</u>, G. Iosifidis, J. Huang, L. Tassiulas, and D. Li, "Bargaining-based Mobile Data Offloading," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol.32, no.6, pp.1114-1125, June 2014 (IF:9.144, JCR Q1, CCF A; Google Scholar Citations: 105)
- [40] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "Price and Inventory Competition in Oligopoly TV White Space Markets," IEEE Journal on Selected Areas in Communications (JSAC), vol.33, no.5, pp.1002-1013, Oct 2014 (IF:9.144, JCR Q1, CCF A; Google Scholar Citations: 34)
- [41] G. Iosifidis, <u>Lin Gao</u>, J. Huang, and L. Tassiulas, "A Double Auction Mechanism for Mobile Data Offloading Markets," *IEEE/ACM Transactions on Networking (TON)*, vol.23, no.5, pp.1634-1647, Sept 2014 (IF:3.56, JCR Q1, CCF A; Google Scholar Citations: 122)
- [42] G. Iosifidis, <u>Lin Gao</u>, J. Huang, and L. Tassiulas, "Incentive Mechanisms for User-Provided Networks," *IEEE Communications Magazine*, vol.52, no.9, pp.20-27, September 2014 (IF:9.619, JCR Q1; Google Scholar Citations: 49)
- [43] L. Duan, <u>Lin Gao</u>, and J. Huang, "Cooperative Spectrum Sharing: A Contract-Based Approach," *IEEE Transactions on Mobile Computing (TMC)*, vol.13, no.1, pp.174-187, January 2014 (IF:5.577, JCR Q1, CCF A; Google Scholar Citations: 173, ESI Highly Cited Paper)
- [44] <u>Lin Gao</u>, J. Huang, Y. Chen, and B. Shou, "An Integrated Contract and Auction Design for Secondary Spectrum Trading," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol.31, no.3, pp.581-592, March 2013 (IF:9.144, JCR Q1, CCF A; Google Scholar Citations: 71)
- [45] <u>Lin Gao</u>, X. Wang, Y. Xu, and Q. Zhang, "Spectrum Trading in Cognitive Radio Networks: A Contract-Theoretic Modeling Approach," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol.29, no.4, pp.843-855, April 2011 (IF:9.144, JCR Q1, CCF A; Google Scholar Citations: 295)
- [46] <u>Lin Gao</u>, Y. Xu, and X. Wang, "MAP: Multi-Auctioneer Progressive Auction for Dynamic Spectrum Access," IEEE Transactions on Mobile Computing (TMC), vol.10, no.8, pp.1144-1161, November 2011 (IF:5.577, JCR Q1, CCF A; Google Scholar Citations: 211)

Dr. Lin Gao – 5 – Curriculum Vitae

- [47] L. Qian, F. Ye, <u>Lin Gao</u>, X. Gan, T. Chu, X. Tian, X. Wang, and M. Guizani, "Spectrum Trading in Cognitive Radio Networks: An Agent-Based Model under Demand Uncertainty," *IEEE Transactions on Communications (TCOM)*, vol.59, no.11, pp.3192-3203, October 2011 (IF:5.083, JCR Q1, CCF B; Google Scholar Citations: 43)
- [48] H. Yu, <u>Lin Gao</u>, Z. Li, X. Wang, and E. Hossain, "Pricing for Uplink Power Control in Cognitive Radio Networks," *IEEE Transactions on Vehicular Technology (TVT)*, vol.59, no.4, pp.1769-1778, Jan 2010 (IF:5.978, JCR Q1; Google Scholar Citations: 119)
- [49] <u>Lin Gao</u>, X. Wang, and Y. Xu, "Multiradio Channel Allocation in Multihop Wireless Networks," *IEEE Transactions on Mobile Computing (TMC)*, vol.8, no.11, pp.1454-1468, May 2009 (IF:5.577, JCR Q1, CCF A; Google Scholar Citations: 39)

Conference (name[†] denotes student that I supervise/co-supervise.)

Summary: 46 of 74 conference papers are published in CCF A/B/C conference proceedings.

- [50] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Socially-Optimal Mechanism Design for Incentivized Online Learning," IEEE International Conference on Computer Communications (INFOCOM), Online, May 2022 (CCF A, Acceptance Rate: 20%)
- [51] N. Ding[†], <u>Lin Gao</u>, J. Huang, X. Li, and X. Chen, "Optimal Pricing Under Vertical and Horizontal Interaction Structures for IoT Networks," *IEEE International Conference on Computer Communications* (INFOCOM), Online, May 2022 (CCF A, Acceptance Rate: 20%)
- [52] J. Wu[†], H. Lin, H. Liu, and <u>Lin Gao</u>*, "A Deep Reinforcement Learning Approach for Collaborative Mobile Edge Computing," *IEEE International Conference on Communications (ICC)*, Seoul, South Korea, May 2022 (CCF C)
- [53] M. Li[†], C. Jiang, <u>Lin Gao</u>*, T. Wang, and Y. Jiang, "Incentivizing Mobile Edge Caching and Sharing: An Evolutionary Game Approach," *IEEE Global Communications Conference (GLOBECOM)*, Madrid, Spain, December 2021 (CCF C)
- [54] Z. Chen[†], Q. Ma, <u>Lin Gao</u>, and X. Chen, "Edgeconomics: Price Competition and Selfish Computation Offloading in Multi-Server Edge Computing Networks," *International Symposium on Modeling and Optimization in Mobile*, Ad Hoc and Wireless Networks (WiOpt), Online, October 2021
- [55] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Taming Time-Varying Information Asymmetry in Fresh Status Acquisition," *IEEE International Conference on Computer Communications (INFOCOM)*, Online, May 2021 (CCF A, Acceptance Rate: 20%)
- [56] W. He[†], <u>Lin Gao</u>*, and J. Luo, "A Multi-Layer Offloading Framework for Dependency-Aware Tasks in MEC," *IEEE International Conference on Communications (ICC)*, Montreal, Canada, June 2021 (CCF C)
- [57] T. Nie[†], J. Luo, <u>Lin Gao</u>, F.-C. Zheng, and L. Yu, "Joint Service Scheduling and Content Caching Over Unreliable Channels," *IEEE Global Communications Conference (GLOBECOM)*, Taipei, Taiwan, December 2020 (CCF C)
- [58] G. Zhang[†], F. Hou, <u>Lin Gao</u>, G. Yang, and L.X. Cai, "Nondeterministic Mobility based Incentive Mechanism for Efficient Data Collection in Crowdsensing," *IEEE Vehicular Technology Conference (VTC-Fall)*, Victoria, Canada, December 2020
- [59] Y. Qi[†], J. Luo, <u>Lin Gao</u>, F.-C. Zheng, and L. Yu, "User Preference and Activity Aware Content Sharing in Wireless D2D Caching Networks," *IEEE/CIC International Conference on Communications in China (ICCC)*, Chongqing, China, August 2020
- [60] T. Nie[†], J. Luo, <u>Lin Gao</u>, F.-C. Zheng, and L. Yu, "Cooperative Edge Caching in Small Cell Networks with Heterogeneous Channel Qualities," *IEEE Vehicular Technology Conference (VTC-Spring)*, Antwerp, Belgium, May 2020
- [61] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Travel with Your Mobile Data Plan: A Location-Flexible Data Service," IEEE International Conference on Computer Communications (INFOCOM), Toronto, Canada, July 2020 (CCF A, Acceptance Rate: 20%)
- [62] Y. Pan[†], <u>Lin Gao</u>*, J. Luo, T. Wang, and J. Luo, "A Multi-Dimensional Resource Crowdsourcing Framework for Mobile Edge Computing," *IEEE International Conference on Communications (ICC)*, Dublin, Ireland, June 2020 (CCF C)
- [63] C. Jiang, <u>Lin Gao</u>*, T. Wang, J. Luo and F. Hou, "On Economic Viability of Mobile Edge Caching," *IEEE International Conference on Communications (ICC)*, Dublin, Ireland, June 2020 (CCF C)

Dr. Lin Gao – 6 – Curriculum Vitae

- [64] L. Zhang[†], J. Luo, <u>Lin Gao</u>, and F.-C. Zheng, "Learning-Based Computation Offloading for Edge Networks with Heterogeneous Resources," *IEEE International Conference on Communications (ICC)*, Dublin, Ireland, June 2020 (CCF C)
- [65] Z. Wang[†], <u>Lin Gao</u>, J. Huang, and B. Shou, "Economic Viability of Data Trading with Rollover," *IEEE International Conference on Computer Communications (INFOCOM)*, Paris, France, May 2019 (CCF A, Acceptance Rate: 20%)
- [66] C. Jiang[†], <u>Lin Gao</u>*, J. Luo, and S. Gong, "Crowdsourcing for Mobile Edge Caching: A Game-Theoretic Analysis," *IEEE International Conference on Communications (ICC)*, Shanghai, China, May 2019 (CCF C)
- [67] X. Luo[†], J. Xu, Y. Zou, S. Gong, <u>Lin Gao</u>*, and D. Niyato, "Collaborative Relay Beamforming with Direct Links in Wireless Powered Communications," *IEEE Wireless Communications and Networking Conference* (WCNC), Marrakech, Morocco, April 2019 (CCF C)
- [68] W. Chen[†], W. Liu, <u>Lin Gao</u>*, S. Gong, C. Li, and K. Zhu, "Backscatter-Aided Relay Communications in Wireless Powered Hybrid Radio Networks," *IEEE Wireless Communications and Networking Conference* (WCNC), Marrakech, Morocco, April 2019 (CCF C) (Best Paper Award)
- [69] H. Lin[†], X. Zhu, Y. Jiang, Y. Liu, Y. Zhuang, and <u>Lin Gao</u>, "PA-Efficiency-Aware Hybrid PAPR Reduction for F-OFDM Systems with ICA Based Blind Equalization," *IEEE Wireless Communications and Networking Conference (WCNC)*, Marrakech, Morocco, April 2019 (CCF C)
- [70] H. Duan[†], Y. Jiang, X. Zhu, Z. Wei, Y. Liu, and <u>Lin Gao</u>, "Treating Self-Interference as Source: An ICA Assisted Full-Duplex Relay System," *IEEE Wireless Communications and Networking Conference (WCNC)*, Marrakech, Morocco, April 2019 (CCF C)
- [71] W. Chen[†], C. Li, S. Gong, <u>Lin Gao</u>, and J. Xu, "Joint Transmission Scheduling and Power Allocation in Wirelessly Powered Hybrid Radio Networks," *International Conference on Computing, Networking and Communications (ICNC)*, Honolulu, Hawaii, USA, February 2019
- [72] Y. Zhong[†], <u>Lin Gao</u>*, T. Wang, S. Gong, B. Zou, and D. Yu, "Achieving Stable and Optimal Passenger-Driver Matching in Ride-Sharing System," *IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)*, Chengdu, China, October 2018 (CCF C)
- [73] F. Long[†], T. Wang, T. Ma, <u>Lin Gao</u>, Y. Jiang, and L. Chang, "Set-Membership Conjugate Gradient Channel Estimation for Wireless Sensor Networks," *International Conference on Wireless Communications and Signal Processing (WCSP)*, Hangzhou, China, October 2018
- [74] M. Wang[†], T. Zhang, <u>Lin Gao</u>, Q. Zhang, "High Throughput Dynamic Vehicle Coordination for Intersection Ground Traffic," *IEEE Vehicular Technology Conference (VTC-Fall)*, Chicago, USA, August 2018
- [75] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Multi-Dimensional Contract Design for Mobile Data Plan with Time Flexibility," ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc), Los Angeles, USA, June 2018 (CCF B, Acceptance Rate: 16.9%)
- [76] H. Pang[†], Lin Gao, Q. Ding, J. Liu, and L. Sun,, "Competitive Analysis of Data Sponsoring and Edge Caching for Mobile Video Streaming," ACM SIGMM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV) (co-located with ACM MMSys), Amsterdam, Netherlands, June 2018 (CCF B)
- [77] X. Zeng[†], <u>Lin Gao</u>*, C. Jiang, T. Wang, J. Liu, and B. Zou, "A Hybrid Pricing Mechanism for Data Sharing in P2P-based Mobile Crowdsensing," *International Symposium on Modeling and Optimization in Mobile*, Ad Hoc and Wireless Networks (WiOpt), Shanghai, China, May 2018
- [78] J. Liu[†], <u>Lin Gao</u>*, T. Wang, X. Zeng, W. Lu, Y. Zhong, "Crowsourcing: A Novel Approach to Organizing WiFi Community Networks," *International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, Shanghai, China, May 2018
- [79] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Pricing Competition of Rollover Data Plan," *International Symposium on Modeling and Optimization in Mobile*, Ad Hoc and Wireless Networks (WiOpt), Shanghai, China, May 2018
- [80] S. Gong, J. Xu, <u>Lin Gao</u>, X. Huang, and W. Liu, "Passive Relaying Scheme via Backscatter Communications in Cooperative Wireless Networks," *IEEE Wireless Communications and Networking Conference (WCNC)*, Barcelona, Spain, April 2018 (CCF C)
- [81] <u>Lin Gao</u> and J. Huang, "Achieving an Efficient and Fair Equilibrium Through Taxation," Asia-Pacific Conference on Communications (APCC) (Invited Paper), Perth, Australia, December 2017
- [82] M. Tang[†], <u>Lin Gao</u>, and J. Huang, "A General Framework for Crowdsourcing Mobile Communication, Computation, and Caching," *IEEE Global Communications Conference (GLOBECOM)*, Singapore, December 2017 (CCF C)

Dr. Lin Gao – 7 – Curriculum Vitae

- [83] H. Pang[†], <u>Lin Gao</u>, Q. Ding, and L. Sun, "When Data Sponsoring Meets Edge Caching: A Game-Theoretic Analysis," *IEEE Global Communications Conference (GLOBECOM)*, Singapore, December 2017 (CCF C)
- [84] X. Mo[†], Z. Li[†], <u>Lin Gao</u>*, B. Cao, T. Zhang, and T. Wang, "User-Centric Participatory Sensing: A Game Theoretic Analysis," *IEEE Global Communications Conference (GLOBECOM)*, Singapore, December 2017 (CCF C)
- [85] X. Zhang[†], <u>Lin Gao</u>*, B. Cao, Z. Li, and M. Wang, "A Double Auction Mechanism for Mobile Crowd Sensing with Data Reuse," *IEEE Global Communications Conference (GLOBECOM)*, Singapore, December 2017 (CCF C)
- [86] C. Lou[†], B. Cao, <u>Lin Gao</u>, L. Sun, and Q. Zhang, "MOSTPC: Performance of A Massive Oblique Space-TimePolarization Precoding System over Ricean-K Fading Channel," *IEEE Vehicular Technology Conference (VTC-Fall)*, Toronto, Canada, September 2017
- [87] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "A Contract-Theoretic Design of Mobile Data Plan with Time Flexibility," ACM Workshop on the Economics of Networks, Systems and Computation (NetEcon) (in conjunction with ACM EC), MIT, Cambridge, MA, USA, June 2017
- [88] M. Zhang[†], <u>Lin Gao</u>, J. Huang, and M. Honig, "Cooperative and Competitive Operator Pricing for Mobile Crowdsourced Internet Access," *IEEE International Conference on Computer Communications (INFOCOM)*, Atlanta, GA, USA, May 2017 (CCF A, Acceptance Rate: 21%)
- [89] M. Tang[†], S. Wang, <u>Lin Gao</u>, J. Huang, and L. Sun, "MOMD: A Multi-Object Multi-Dimensional Auction for Crowdsourced Mobile Video Streaming," *IEEE International Conference on Computer Communications* (*INFOCOM*), Atlanta, GA, USA, May 2017 (CCF A, Acceptance Rate: 21%)
- [90] Z. Wang[†], <u>Lin Gao</u>, and J. Huang, "Pricing Optimization of Rollover Data Plan," *International Symposium on Modeling and Optimization in Mobile*, Ad Hoc and Wireless Networks (WiOpt), Paris, France, May 2017
- [91] Y. Gao[†], X. Zhang[†], X. Mo[†], and <u>Lin Gao</u>*, "An Evolutionary Game Theoretic Analysis for Crowdsourced WiFi Networks," *IEEE International Conference on Communications (ICC)*, Paris, France, May 2017 (CCF C)
- [92] C. Jiang[†], <u>Lin Gao</u>, L. Duan, and J. Huang, "Exploiting Data Reuse in Mobile Crowdsensing," *IEEE Global Communications Conference (GLOBECOM)*, Washington, DC, USA, December 2016 (CCF C)
- [93] H. Pang[†], <u>Lin Gao</u>, and L. Sun, "Joint Optimization of Data Sponsoring and Edge Caching for Mobile Video Delivery," *IEEE Global Communications Conference (GLOBECOM)*, Washington, DC, USA, December 2016 (CCF C)
- [94] Y. Wei[†], J. Yu[†], T.M. Lok, and <u>Lin Gao</u>*, "A Novel Mobile Data Plan Design from the Perspective of Data Period," *IEEE International Conference on Communication Systems (ICCS)*, Shenzhen, China, December 2016
- [95] S. Zuo[†], <u>Lin Gao</u>, H. Xu, and T. Zhang, "Power Allocation Game for Wireless Network Localization," *IEEE International Conference on Ubiquitous Wireless Broadband (ICUWB) (Invited Paper)*, Nanjing, China, October 2016
- [96] Q. Ma[†], <u>Lin Gao</u>, Y.F. Liu, and J. Huang, "A Contract-Based Incentive Mechanism for Crowdsourced Wireless Community Networks," *International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, Arizona, USA, May 2016
- [97] M. Tang[†], <u>Lin Gao</u>, H. Pang, J. Huang, and L. Sun, "A Multi-Dimensional Auction Mechanism for Mobile Crowdsourced Video Streaming," *International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, Arizona, USA, May 2016
- [98] <u>Lin Gao</u>, M. Tang[†], H. Pang[†], J. Huang, and L. Sun, "Performance Bound Analysis for Crowdsourced Mobile Video Streaming," *Conference on Information Sciences and Systems (CISS) (Invited Paper)*, Princeton, NJ, USA, March 2016
- [99] H. Pang[†], P. Wang, <u>Lin Gao</u>, M. Tang, J. Huang, and L. Sun, "Crowdsourced Mobility Prediction Based on Spatio-Temporal Contexts," *IEEE International Conference on Communications (ICC)*, Malaysia, May 2016 (CCF C)
- [100] H. Yu[†], M. Cheung, <u>Lin Gao</u>, and J. Huang, "Economics of Public Wi-Fi Monetization and Advertising," IEEE International Conference on Computer Communications (INFOCOM), San Francisco, USA, April 2016 (CCF A, Acceptance Rate: 18%; <u>Best Paper Award Finalist</u>, Ranking top 5 among all 300 accepted papers in INFOCOM 2016)
- [101] Z. Zheng[†], <u>Lin Gao</u>, L. Song, and J. Huang, "Topology-Aware Incentive Mechanism for Cooperative Relay Networks," *IEEE Global Communications Conference (GLOBECOM)*, San Diego, USA, December 2015 (CCF C)

Dr. Lin Gao – 8 – Curriculum Vitae

- [102] C. Jiang[†], <u>Lin Gao</u>, L. Duan, and J. Huang, "Economics of Peer-to-Peer Mobile Crowdsensing," *IEEE Global Communications Conference (GLOBECOM)*, San Diego, USA, December 2015 (CCF C)
- [103] <u>Lin Gao</u>, F. Hou, and J. Huang, "Providing Long-Term Participation Incentive in Participatory Sensing," IEEE International Conference on Computer Communications (INFOCOM), Hong Kong, May 2015 (CCF A, Acceptance Rate: 19%; Google Scholar Citations: 125)
- [104] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "HySIM: A Hybrid Spectrum and Information Market for TV White Space Networks," *IEEE International Conference on Computer Communications (INFOCOM)*, Hong Kong, May 2015 (CCF A, Acceptance Rate: 19%)
- [105] Q. Ma[†], Lin Gao, Y.F. Liu, and J. Huang, "A Game-Theoretic Analysis of User Behaviors in Crowdsourced Wireless Community Networks," International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), Indian, May 2015 (Best Student Paper Award)
- [106] M.M. Khalili[†], <u>Lin Gao</u>, J. Huang, and B. H. Khalaj, "Incentive Design and Market Evolution of Mobile User-Provided Networks," *IEEE Workshop on Smart Data Pricing (SDP)* (*Invited Paper*), Hong Kong, May 2015
- [107] <u>Lin Gao</u>, G. Iosifidis, J. Huang, and L. Tassiulas, "Hybrid Data Pricing for Network-Assisted User-Provided Connectivity," *IEEE International Conference on Computer Communications (INFOCOM)*, Toronto, Canada, April 2014 (CCF A, Acceptance Rate: 19%; Google Scholar Citations: 47)
- [108] G. Iosifidis, <u>Lin Gao</u>, J. Huang, and L. Tassiulas, "Enabling Crowd-Sourced Mobile Internet Access," *IEEE International Conference on Computer Communications (INFOCOM)*, Toronto, Canada, April 2014 (CCF A, Acceptance Rate: 19%; Google Scholar Citations: 58)
- [109] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "Trade Information, Not Spectrum: A Novel TV White Space Information Market Model," *International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt)*, Hammamet, Tunisia, May 2014 (Best Paper Award)
- [110] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "Information Market for TV White Space," *IEEE Workshop on Smart Data Pricing (SDP) (Invited Paper)*, Toronto, Canada, May 2014
- [111] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "White Space Ecosystem: A Secondary Network Operator's Perspective," *IEEE Global Communications Conference (GLOBECOM)*, Atlanta, USA, December 2013 (CCF C)
- [112] G. Iosifidis, <u>Lin Gao</u>, J. Huang, and L. Tassiulas, "An Iterative Double Auction for Mobile Data Offloading," International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt), Tsukuba Science City, Japan, May 2013 (Best Paper Award; Google Scholar Citations: 103)
- [113] <u>Lin Gao</u>, G. Iosifidis, J. Huang, and L. Tassiulas, "Economics of Mobile Data Offloading," *IEEE Workshop on Smart Data Pricing (SDP) (Invited Paper)* (co-located with IEEE INFOCOM), Turin, Italy, April 2013 (Google Scholar Citations: 115)
- [114] Y. Luo[†], <u>Lin Gao</u>, and J. Huang, "Spectrum Broker by Geo-location Database," *IEEE Global Communications Conference (GLOBECOM)*, Anaheim, USA, December 2012 (CCF C)
- [115] <u>Lin Gao</u>, J. Huang, Y. Chen, and B. Shou, "ContrAuction: An Integrated Contract and Auction Design for Dynamic Spectrum Sharing," *Conference on Information Sciences and Systems (CISS) (Invited Paper)*, Princeton, NJ, USA, March 2012
- [116] <u>Lin Gao</u>, X. Wang, G. Sun and Y. Xu, "A Game Approach for Cell Selection and Resource Allocation in Heterogeneous Wireless Networks," *IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON)*, Utah, USA, June 2011 (CCF B; Google Scholar Citations: 58)
- [117] L. Duan, <u>Lin Gao</u>, and J. Huang, "Contract-Based Cooperative Spectrum Sharing," *IEEE Symposium on New Frontiers in Dynamic Spectrum Access Networks (DySPAN)*, Aachen, Germany, May 2011 (Google Scholar Citations: 111)
- [118] H. Wang[†], <u>Lin Gao</u>, X. Gan, X. Wang, and E. Hossain, "Cooperative Spectrum Sharing in Cognitive Radio Networks: A Game-Theoretic Approach," *IEEE International Conference on Communications (ICC)*, South Africa, May 2010 (CCF C; Google Scholar Citations: **75**)
- [119] T. Chu[†], P. Cheng[†], <u>Lin Gao</u>, X. Wang, et al., "Spectrum Trading in Cognitive Radio Network: An Agent-based Model under Demand Uncertainty," *IEEE Global Communications Conference (GLOBECOM)*, Miami, USA, December 2010 (CCF C)
- [120] P. Xu[†], S. Gu[†], <u>Lin Gao</u>, H. Yu, et al., "Myopic Sensing for Multiple SUs in Multichannel Opportunistic Access," *International Wireless Communications and Mobile Computing Conference (IWCMC)*, Caen, France, June 2010

Dr. Lin Gao – 9 – Curriculum Vitae

- [121] H. Yu, <u>Lin Gao</u>, Y. Li, X. Gan, et al., "Information Sharing in Spectrum Auction for Dynamic Spectrum Access," *IEEE Global Communications Conference (GLOBECOM)*, Hawaii, USA, December 2009 (CCF C)
- [122] <u>Lin Gao</u> and X. Wang, "A Game Approach for Multi-Channel Allocation in Multi-Hop Wireless Networks," ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc), Hong Kong, May 2008 (CCF B, Acceptance Rate: 15%; Google Scholar Citations: 97)
- [123] <u>Lin Gao</u>, X. Wang, Y. Xu, and W. Chen, "Distributed Multi-radio Channel Allocation in Multi-Hop Ad Hoc Networks," *IEEE International Conference on Communications (ICC)*, Beijing, China, May 2008 (CCF C)

Dr. Lin Gao – 10 – Curriculum Vitae