Liang (Larry) He

Contact Information

Address: 1380 Lawrence Street, Room 816, Denver, CO, 80204
E-mail: liang.he@ucdenver.edu
Website: http://cse.ucdenver.edu/∼helia/

Academic Appointments

University of Colorado Denver, CO, USA

Assistant Professor, Aug. 2017 to present

University of Michigan at Ann Arbor, MI, USA

Research Fellow, Jan. 2015 to Aug. 2017

Singapore University of Technology and Design, Singapore

Research Scientist, Dec. 2013 to Nov. 2014

Postdoc Research Fellow, Dec. 2011 to Dec. 2013

University of Victoria, Victoria, BC, Canada

Research Assistant, Oct. 2009 to Oct. 2011

Research Interests

Cyber-physical systems; cognitive battery management; mobile computing and systems; internet-of-things; industrial big data analysis, networking and communications

Research Grants

- **Co-PI**, CPS:Small: Imposing Recovery Period for Battery Health Monitoring, Prognosis, and Optimization, **National Science Foundation**, **US$450,000**, 2017–2020.
- **PI**, Audible Battery Management System for Electric Vehicles, **Comcast Media and Technology Center**, **US$5,000**, 2018–2019.
- **Senior Personnel**, Adaptive Management of Large Energy Storage Systems for Vehicle Electrification, **National Science Foundation**, **US$994,000**, 2015–2018.
- **Senior Personnel**, Thermal-Aware Management of Cyber-Physical Systems, **National Science Foundation**, **US$540,000**, 2013–2016.

Honors and Awards

- Citation: 1,250; H-index: 20; i-10 index: 26 (Google Scholar, Oct. 2018)
- Best Poster Award, ACM MobiSys'17, 2017
- SIGCOMM grant for ACM e-Energy'16
- Best Paper Award Candidate, IEEE GLOBECOM'14, 2014 (50 out of 2171 submissions)
- Best Paper Award, EAI QShine'14, 2014
- Global Young Scientist, Singapore, 2013
- Best Paper Award, IEEE GLOBECOM'11, 2011 (14 out of 2934 submissions)
- Best Paper Award, IEEE WCSP'11, 2011 (10 out of 692 submissions)

Education

Nankai University, Tianjin, P.R. China

Ph.D. in Computer Science

Tianjin University, Tianjin, P.R. China

B.Eng. in Computer Engineering

Journal Publications

Highlights: 5 TMC, 1 TC, 2 TSG, 1 TWC, 1 TECS, 1 TCPS, 1 TITS, 2 TVT, 1 TEC, 1 TOSN.

1. **Liang He**, Linghe Kong, Yu Gu, Cong Liu, Tian He, and Kang G. Shin, **Extending Battery System Operation via Adaptive Reconfiguration.**, *ACM Transactions on Sensor Networks (TOSN)*, in press.
2. Heng Li, Jun Peng, Yanhui Zhou, Jianping He, Zhiwu Huang, **Liang He**, and Jianping Pan, **SoH-Aware Charging of Supercapacitors with Energy Efficiency Maximization**, *IEEE Transactions on Energy Conversion (TEC)*, in press.
3. **Liang He**, Linghe Kong, Jun Tao, Jianping Pan, and Jingdong Xu, **On-Demand Mobile Data Collection in Cyber Physical Systems**, *Wireless Communications and Mobile Computing (WCMC)*, in press.
4. **Liang He**, Zhe Yang, Yu Gu, Cong Liu, Tian He, and Kang G. Shin, **SoH-Aware Reconfiguration in Battery Packs**, *IEEE Transactions on Smart Grids (TSG)*, Vol. 9, No. 4, pp. 3727-3735, 2018.
5. Junghyun Jun, **Liang He**, Yu Gu, et al., **Low-Overhead WiFi Fingerprinting**, *IEEE Transactions on Mobile Computing (TMC)*, Vol. 17, No. 3, pp. 590-603, 2018.
6. **Liang He**, Guozhu Meng, Yu Gu, Jun Sun, Cong Liu, Yang Liu, and Kang G. Shin, **Battery-Aware Mobile Data Service**, *IEEE Transactions on Mobile Computing (TMC)*, Vol. 6, No. 16, pp. 1544-1558, 2017.
7. Peng Sun, Kang G. Shin, Hailin Zhang, and **Liang He**, **Transmit Power Control for D2D Underlaid Cellular Networks Based on Statistical Features**, *IEEE Transactions on Vehicular Technology (TVT)*, Vol. 66, No. 5, pp. 4110-4119, 2017.
8. **Liang He**, Sunmin Kim, and Kang G. Shin, **A Case Study on Improving Capacity Delivery of Battery Packs via Reconfiguration**, *ACM Transactions on Cyber-Physical Systems (TCPS)*, Vol. 1, No. 2, 2017.
9. Lingkun Fu, **Liang He**, Peng Cheng, Yu Gu, Jianping Pan, and Jiming Chen, **ESync: Energy Synchronized Mobile Charging in Rechargeable Wireless Sensor Networks**, *IEEE Transactions on Vehicular Technology (TVT)*, vol. 65, no. 9, pp. 7415-7431, 2016.
10. **Liang He**, Linghe Kong, Siyu Lin, Shaodong Ying, Yu Gu, Tian He, and Cong Liu, **RAC: Reconfiguration-Assisted Charging in Large-Scale Lithium-ion Battery Systems**, *IEEE Transactions on Smart Grids (TSG)*, vol. 7, no. 3, pp. 1420-1429, 2016.
11. **Liang He**, Linghe Kong, Yu Gu, Jianping Pan, and Ting Zhu, **Evaluating the On-Demand Mobile Charging in Wireless Sensor Networks**, *IEEE Transactions on Mobile Computing (TMC)*, vol.14, no. 9, pp. 1861–1875, 2015.
12. Yuelong Tian, Peng Cheng, **Liang He**, Yu Gu, and Jiming Chen, **Achieving Collision-Free Communication by Time of Charge in WRSN**, *Mobile Networks and Applications*, pp. 1–11, 2015.
13. Siyu Lin, Linghe Kong, **Liang He**, Ke Guan, Bo Ai, Zhangdui Zhong, and Cesar Briso-Rodriguez. **Finite-State Markov Modeling for High-Speed Railway Fading Channels**, *IEEE Antennas and Wireless Propagation Letters (AWPL)*, vol. 14, pp. 954–957, 2015.

14. Shuo Guo, **Liang He**, Yu Gu, Bo Jiang, and Tian He, **Opportunistic Flooding in Low-Duty-Cycle Wireless Sensor Networks with Unreliable Links**, *IEEE Transactions on Computers (TC)*, vol. 63, no. 11, pp. 2787–2802, 2014.
15. **Liang He**, Zhe Yang, Jianping Pan, Lin Cai, Jingdong Xu, and Yu Gu, **Evaluating Service Disciplines for On-Demand Mobile Data Collection in Sensor Networks**, *IEEE Transactions on Mobile Computing (TMC)*, vol. 13, no. 4, pp. 797–810, 2014.
16. Zhe Yang, **Liang He**, Lin Cai, and Jianping Pan, **Temperature-Assisted Clock Synchronization and Self-Calibration for Sensor Networks**, *IEEE Transactions on Wireless Communications (TWC)*, vol. 13, no. 6, pp: 3419–3429, 2014.
17. Yu Gu, **Liang He**, Ting Zhu, and Tian He, **Achieving Energy Synchronized Communication in Energy-Harvesting Wireless Sensor Networks**, *ACM Transactions on Embedded Computing Systems (TECS)*, vol. 13, no. 68, 2014.
18. Shisheng Huang, **Liang He**, Yu Gu, Kristin Wood, and Saif Benjaafar, **Design of a Mobile Charging Service for Electric Vehicles in an Urban Environment**, *IEEE Transactions on Intelligent Transportation Systems (TITS)*, no. 99, pp: 1–12, 2014.
19. **Liang He**, Jianping Pan, and Jingdong Xu, **A Progressive Approach to Reducing Data Collection Latency in Wireless Sensor Networks with Mobile Elements**, *IEEE Transactions on Mobile Computing (TMC)*, vol. 12, no. 7, pp: 1308–1320, 2013.
20. **Liang He**, Jianping Pan, and Jingdong Xu, **Reducing Data Collection Latency in Wireless Sensor Networks with Multiple Mobile Elements**, *Journal of Ad Hoc Wireless Sensor Networks (AHSWN)*, vol. 18, no. 1–2, pp: 109–129, 2013.
21. **Liang He**, Zhi Chen, and Jingdong Xu, **Optimizing Data Collection Path in Sensor Networks with Mobile Elements**, *International Journal of Automation and Computing*, vol. 8, no. 1, 2011.
22. Jingdong Xu, **Liang He**, Boyang Yu, Yuntao Yu, and Song Li, **Improved Topology Control Method in WSN**, *Computer Engineering*, vol. 36, no. 16, pp: 85–87, 2010.
23. Jingdong Xu, **Liang He**, Xuefei Wang, Boxing Liu, and Xing Jin, **Improved Residual Energy Scan Monitoring Mechanism of for Sensors Nodes in WSN**, *Computer Engineering*, vol. 36, no. 14, pp: 74–77, 2010.
24. Jingdong Xu, Wenyao Zhao, Miao Li, and **Liang He**, **Design of Wireless Sensor Network Based on ZigBee**, *Computer Engineering*, vol. 36, no. 10, pp: 110–112, 2010.

Conference Publications

Highlights: 1 MobiCom, 1 MobiSys, 1 MobiHoc, 4 ICCPS, 2 RTSS, 3 INFOCOM, 2 ICNP, 2 ICDCS, 2 ECRTS, 1 e-Energy.

1. **Liang He**, Linghe Kong, Ziyang Liu, Yuanchao Shu, and Cong Liu, **Diagnosing Vehicles with Automotive Batteries**, In *The 25th ACM Annual international Conference on Mobile Computing and Networking (MobiCom'19)*, 2019.
2. Zhe Wang, Linghe Kong, Guihai Chen, and **Liang He**, **PPM: Preamble and Postamble Based Multi-Packet Reception for Green ZigBee Communication**, In *The 2018 IEEE Global Communications Conference (GLOBECOM'18)*, Abu Dhabi, UAE, 2018.
3. Bowen Wang, Linghe Kong, **Liang He**, and Jiadi Yu, **Faulty Location Data Detection in Crowdsourcing: A Compressive Sensing Approach**, In *The 38th IEEE International Conference on Distributed Computing (ICDCS'18)*, Vienna, Austria, 2018.
4. Yifeng Cao, Linghe Kong, **Liang He**, Guihai Chen, Min-You Wu, and Tian He, **Mrs.Z: Improving ZigBee Throughput via Multi-Rate Transmission**, In *The 25th IEEE International Conference on Network Protocols (ICNP'17)*, Toronto, Canada, 2017.

5. **Liang He**, Yu-Chih Tung, and Kang G. Shin, **iCharge: User-Interactive Charging of Mobile Devices**, In *The 15th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys'17)*, Niagara Falls, NY, USA, 2017.
6. **Liang He**, Eugene Kim, Kang G. Shin, Guozhu Meng, and Tian He, **Battery State-of-Health Estimation for Mobile Devices**, In *The ACM/IEEE 8th International Conference on Cyber-Physical Systems (ICCPS'17)*, Pittsburgh, PA, USA, 2017.
7. Eugene Kim, Jinkyu Lee, **Liang He**, Youngmoon Lee, and Kang G. Shin, **Offline Guarantee and Online Management of Power Demand and Supply in Cyber-Physical Systems**, In *The 37nd IEEE Real-Time Systems Symposium (RTSS'16)*, Porto, Portugal, 2016.
8. **Liang He**, Eugene Kim, and Kang G. Shin, **Resting Weak Cells to Improve Battery Pack's Capacity Delivery via Reconfiguration**, In *The Seventh ACM International Conference on Future Energy Systems (e-Energy'16)*, Waterloo, ON, Canada, 2016.
9. **Liang He**, Eugene Kim, and Kang G. Shin, **$*$-Aware Charging of Lithium-ion Battery Cells**, In *The ACM/IEEE 7th International Conference on Cyber-Physical Systems (ICCPS'16)*, Vienna, Austria, 2016.
10. Zheng Dong, Cong Liu, Lingkun Fu, Peng Cheng, **Liang He**, Yu Gu, Wei Gao, Chau Yuen, and Tian He, **Energy Synchronized Task Assignment in Rechargeable Sensor Networks**, In *The IEEE International Conference on Sensing, Communication and Networking (SECON'16)*, London, UK, 2016.
11. **Liang He**, Yu Gu, Cong Liu, Ting Zhu, and Kang G. Shin, **SHARE: SoH-Aware Reconfiguration to Enhance Deliverable Capacity of Large-Scale Battery Packs**, In *The ACM/IEEE 6th International Conference on Cyber-Physical Systems (ICCPS'15)*, Seattle, USA, 2015.
12. Linghe Kong, **Liang He**, Xiaoyang Liu, Yu Gu, Min-You Wu, and Xue Liu, **Privacy-Preserving Compressive Sensing for Crowdsensing based Trajectory Recovery**, In *The 35th IEEE International Conference on Distributed Computing Systems (ICDCS'15)*, Columbus, Ohio, USA, 2015.
13. Yuchuan Liu, Cong Liu, Xia Zhang, Wei Gao, **Liang He**, Yu Gu, **A Computation Offloading Framework for Soft Real-Time Embedded Systems**, In *The 27th Euromicro Conference on Real-Time Systems (ECRTS'15)*, Lund, Sweden, 2015.
14. **Liang He**, Lingkun Fu, Likun Zheng, Yu Gu, Peng Cheng, Jiming Chen, and Jianping Pan, **ESync: An Energy Synchronized Charging Protocol for Rechargeable Wireless Sensor Networks**, In *The 15th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc'14)*, Philadelphia, PA. USA, 2014.
15. **Liang He**, Linghe Kong, Siyu Lin, Shaodong Ying, Yu Gu, Tian He, and Cong Liu, **Reconfiguration Assisted Charging in Large-Scale Lithium-ion Battery Systems**, In *The 5th ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS'14)*, Berlin, Germany, 2014.
16. **Liang He**, Peng Cheng, Yu Gu, Jianping Pan, Ting Zhu, and Cong Liu, **Mobile-to-Mobile Energy Replenishment in Mission-Critical Robotic Sensor Networks**, In *The 33rd IEEE International Conference on Computer Communications (INFOCOM'14)*, Toronto, ON, Canada, 2014.
17. Linghe Kong, **Liang He**, Yu Gu, Min-you Wu, and Tian He, **A Parallel Identification Protocol for RFID Systems**, In *The 33rd IEEE International Conference on Computer Communications (INFOCOM'14)*, Toronto, ON, Canada, 2014.
18. Junghyun Jun, Long Cheng, **Liang He**, Yu Gu, and Ting Zhu, **Exploiting Sender-based Link Correlation in Wireless Sensor Networks**, In *The 22nd IEEE International Conference on Network Protocols (ICNP'14)*, The Research Triangle, NC, October, 2014.

19. Cong Liu, Jian-jia Chen, **Liang He**, and Yu Gu, **Analysis Techniques for Supporting Harmonic Real-Time Tasks with Suspensions**, in *The 26th Euromicro Conference on Real-Time Systems (ECRTS'14)*, 2014.
20. Yuelong Tian, Peng Cheng, **Liang He**, Yu Gu, and Jiming Chen, **Exploiting Time of Charge to Achieve Collision-Free Communications in WRSN**, In *The 10th International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QShine'14)*, Rhodes, Greece, August, 2014. (**Best Paper Award**)
21. Yuelong Tian, Peng Cheng, **Liang He**, Yu Gu, and Jiming Chen, **Optimal Reader Location for Collision-Free Communication in WRSN**, In *GLOBECOM'14*, Austin, TX, USA, 2014. (**Best Paper Award Candidate**)
22. Zheng Dong, Linghe Kong, Peng Cheng, **Liang He**, Yu Gu, Lu Fang, Ting Zhu, and Cong Liu, **REPC: Reliable and Efficient Participatory Computing for Mobile Devices**, In *The 11th IEEE International Conference on Sensing, Communication and Networking (SECON'14)*, Singapore, 2014.
23. **Liang He**, Lipeng Gu, Linghe Kong, Yu Gu, Cong Liu, and Tian He, **Exploring Adaptive Reconfiguration to Optimize Energy Efficiency in Large-Scale Battery Systems**, In *The 34nd IEEE Real-Time Systems Symposium (RTSS'13)*, Vancouver, BS, Canada, 2013.
24. **Liang He**, Yu Gu, Jianping Pan and Ting Zhu, **On-Demand Charging in Wireless Sensor Networks: Theories and Applications**, In *The 10th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS'13)*, Hangzhou, Zhejiang, China, 2013.
25. **Liang He**, Zhe Yang, Jianping Pan, Lin Cai, and Jingdong Xu, **Evaluating Service Disciplines for Mobile Elements in Wireless Ad Hoc Sensor Networks**, In *The 31st Annual IEEE International Conference on Computer Communications (INFOCOM'12)*, Orlando, US, 2012.
26. Jun Tao, **Liang He**, Yanyan Zhuang, Jianping Pan, and Maryam Ahmadi, **Sweeping and Active Skipping in Wireless Sensor Networks with Mobile Elements**, In IEEE Global Communications Conference (GLOBECOM'12), California, USA, 2012.
27. Maryam Ahmadi, **Liang He**, Jianping Pan, and Jingdong Xu, **A Partition-Based Data Collection Scheme in Wireless Sensor Networks with a Mobile Sink**, In *The 47th IEEE International Conference on Communications (ICC'12)*, Ottawa, Canada, 2012.
28. **Liang He**, Jianping Pan, and Jingdong Xu, **Analysis on Data Collection with Multiple Mobile Elements in Wireless Sensor Networks**, In *IEEE Global Communications Conference (GLOBECOM'11)*, Houston, US, 2011. (**Best Paper Award**)
29. **Liang He**, Jun Tao, Jianping Pan, and Jingdong Xu, **Adaptive Mobility-Assisted Data Collection in Wireless Sensor Networks**, in *2011 International Conference on Wireless Communications and Signal Processing (WCSP'11)*, Nanjing, China, 2011. (**Best Paper Award**)
30. **Liang He**, Jianping Pan, and Jingdong Xu, **Reducing Data Collection Latency in Wireless Sensor Networks with Mobile Elements**, In *The 3rd International Workshop on Wireless sensor, Actuator and Robot networks (WiSARN'11)*, in conjunction with IEEE INFOCOM'11, Shanghai, China, 2011.
31. **Liang He**, Jianping Pan, and Jingdong Xu, **An On-Demand Data Collection Scheme for Wireless Sensor Networks with Mobile Elements**, In *The 46th IEEE International Conference on Communications (ICC'11)*, Kyoto, Japan, 2011.
32. **Liang He**, Yanyan Zhuang, Jianping Pan, and Jingdong Xu, **Evaluating On-Demand Data Collection with Mobile Elements in Wireless Sensor Networks**, In *The 72nd IEEE Vehicular Technology Conference (VTC2010-FALL)*, Ottawa, Canada, 2010.

33. **Liang He**, Guowei Huang, Yu Hua, Jing Yu, and Jingdong Xu, **Optimize the Data Collection Path in WSNs Based on the Neighbor Count of Path Points**, In *CMC'10*, 2010.
34. **Liang He**, Boyang Yu, and Jingdong Xu, **LQATC: Link Quality Assured Topology Control Algorithm in Sensor Networks**, In *WiCOM'10*, 2010.
35. **Liang He**, Jingdong Xu, Yuntao Yu, **Optimize Multiple Mobile Elements Touring in Wireless Sensor Networks**, In *ISPA'09*, Chengdu, Sichuan, China, 2009.
36. **Liang He**, Jingdong Xu, Yuntao Yu, Miao Li, and Wenyao Zhao, **Genetic Algorithm based Length Reduction of a Mobile BS Path in WSNs**, In *ICIS'09*, 2009.
37. **Liang He**, Jingdong Xu, Yuntao Yu, and Boxing Liu, **Optimizing the Path-Points Identification for Data Mules in Mobile WSNs**, In *FCST'09*, 2009.
38. Jingdong Xu, **Liang He**, Zhi Chen, Guowei Huang, and Tiantian Yuan, **Reducing the Path Length of a Mobile BS in WSNs**, In *FBIE'08*, 2008.
39. Dafan Dong, Ying Wu, **Liang He**, Guowei Huang, and Gongyi Wu, **Deep Analysis of Intending Peer-to-Peer Botnet**, In *GCC'08*, 2008.

Demos, Posters, and other Short Papers

1. Linsheng Ye, Linghe Kong, Guihai Chen, and **Liang He**, **Accelerated RFID Classification and Counting**, In *The 2nd International Workshop on Mobile Communications and Networking (IWMCN'17)*, Waterloo, ON, Canada, 2017.
2. **Liang He**, Yu-Chih Tung, and Kang G. Shin, **Poster: Charge My Phone As I Instruct**, In *The 15th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys'17)*, Niagara Falls, NY, USA, 2017.
3. Junghyun Jun, Suryadip Chakraborty, **Liang He**, Yu Gu, and Dharma P. Agrawal, **Robust and undemanding wifi-fingerprint based indoor localization with independent access points**, In *Proceedings of the Microsoft Indoor Localization Competition (IPSN)*, Seattle, WA, USA, 2015.
4. Lingkun Fu, Hao Liu, **Liang He**, Yu Gu, Peng Cheng, and Jiming Chen, **Demo: An Energy Synchronized Charging Protocol for Rechargeable Wireless Sensor Networks**, In *The 15th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc'14)*, Philadelphia, PA, USA, August, 2014
5. **Liang He**, Shaodong Ying, Yu Gu, **Reconfiguration-based Energy Optimization in Battery Systems: a Testbed Prototype**, In *The 34nd IEEE Real-Time Systems Symposium (RTSS'13)*, Vancouver, BC, Canada, 2013.
6. Zheng Dong, Banghui Lu, **Liang He**, Peng Cheng, Yu Gu, and Lu Fang, **Demo Abstract: Exploring Smartphone-based Participatory Computing to Improve Pervasive Surveillance**, In *ACM Conference on Embedded Networked Sensor Systems (SenSys'13)*, Rome, Italy, 2013.
7. **Liang He**, Yu Gu, and Tian He, **Poster Abstract: Energy Synchronized Charging in Sensor Networks**, In *ACM Conference on Embedded Networked Sensor Systems (SenSys'12)*, Toronto, Canada, 2012.

Patents

1. Kang G. Shin and **Liang He**, **User Aware Charging Algorithm That Reduces Battery Fading**, U.S. Provisional Patent, No.: 62/515,751, filed June, 2017.
2. Kang G. Shin and **Liang He**, **Method To Estimate Battery Health For Mobile Devices Based On Relaxing Voltages**, U.S. Provisional Patent, No.: 62/486,144, filed April, 2017.
3. Kang G. Shin and **Liang He**, **Method to Charge Lithium-Ion Batteries with User, Cell, and Temperature Awareness**, International PCT Patent, No.: PCT/US17/21062, filed March, 2017.

4. Kang G. Shin and **Liang He**, **Method to Charge Lithium-Ion Batteries with User, Cell, and Temperature Awareness**, U.S. Utility Patent, No.: 15/335,556, filed Oct, 2016.
5. **Liang He**, Yu Gu, and Patrick Mazzariol, **Battery Pack Discharge Management Based on State-of-Health (SoH)**, U.S. Provisional Patent, No.: 62076568, filed Nov. 2014.

Professional Services

Editorship:

- Guest Editor, Concurrency and Computation: Practice and Experience

Chair Positions:

- Regional Program Chair, The 8th Annual IEEE International Conference on CYBER Technology in Automation, Control, and Intelligent Systems (IEEE-CYBER 2018)
- Publicity Co-Chair, The 7th International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN 2013-Spring)
- Publicity Co-Chair, The 6th International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN 2012-Fall)

Technical Program Committee Membership:

- **2019:** WCNC, ICNC, ICC, ICCCN, EWSN-Poster;
- **2018:** ICCPS, GLOBECOM, ICC, VTC2018-Spring, VTC2018-Fall, ICNC, MiSeNet, SNTA, WASA, CYBER;
- **2017:** GLOBECOM, RTAS-Demo, ICC, NAS, ICNC, MiSeNet, GLOBECOM-CQRM, NaNA, ICCC Workshops'17;
- **2016:** GLOBECOM, ICNC, NaNA, ICCVE;
- **2015:** ICNC, ICCVE, ICCC, IoT, E2IoT;
- **2014:** VTC2014-Fall, WCSP, ICNC, QShine, ICCC, IoT, ICCVE;
- **2013:** GLOBECOM, WCSP, ICNC, ICCC, ICCVE;
- **2012:** WiSARN 2012-Spring;

Journal Reviewer: IEEE/ACM Transactions on Networks, ACM Transactions on Sensor Networks, ACM Transactions on Embedded Computing Systems, ACM Transactions on Design Automation of Electronic Systems, IEEE Transactions on Mobile Computing, IEEE Transactions on Wireless Communications, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Smart Grid, IEEE Transactions on Vehicular Technology, IEEE Transactions on Industrial Informatics, IEEE Transactions on Industrial Electronics, IEEE Transactions on Dependable and Secure Computing, IEEE Transactions on on Circuits and Systems for Video Technology, IEEE Transactions on Green Communications and Networking, IEEE Communication Letters, IEEE Wireless Communication Letters, IEEE Wireless Communications Magazine, IEEE Internet of Things Journal, IEEE Signal Processing Letters, IEEE System Journal, IEEE Access, IEEE Network Magazine, Ad Hoc Networks, Wireless Communications and Mobile Computing, Computer Communications (Elsevier), Wireless Networks (Springer), Neural Computing and Applications (Springer), International Journal of Sensor Networks, International Journal of Distributed Sensor Networks, Journal of Communications and Networks, Ad Hoc & Sensor Wireless Networks, International Journal of Communication Systems, Journal of Computer Science and Technology, EURASIP Journal on Wireless Communications and Networking, EURASIP Journal on Audio, Speech, and Music Processing, Peer-to-Peer Networking and Applications, Energies, Sensors, Future Generation Computer Systems.

Conference Reviewer: ACM/IEEE ICCPS 2017, 2016; IEEE INFOCOM 2017, 2016, 2015, 2014, 2013, 2012, 2011; SMARTCOMP 2017; IEEE ICDCS 2014; IEEE ICPADS 2014; ICMU 2015; IEEE ICC 2013; EUC 2013; MOBIQUITOUS 2014, 2012; OPODIS 2012; INSS 2012; ICSNC 2012; IEEE ICCC 2012; IEEE NAS 2012; INSS 2012; IEEE IPCCC 2011; IEEE GlOBECOM 2012, 2011, 2010;

IEEE VTC2011-Spring; WiSARN 2012-SPRING, 2011-FALL, 2011; IEEE WCSP 2010; IEEE/ACM MASCOTS 2010; IEEE WCNIS 2010; IEEE ICME 2010; IEEE WCNC 2010.

External Grant Proposal Reviewer: National Science Center, Poland, 2014, 2016.

Professional Presentations

1. Cognitive Battery Management, University of Colorado Boulder, CO, USA, 2017.
2. Cognitive Battery Management with Cyber-Physical Approaches, Southeast University, Jiangsu, China, 2017.
3. Cognitive Battery Management, Zhejiang University, Zhejiang, China, 2017.
4. iCharge: User-Interactive Charging of Mobile Devices, MobiSys'17, Niagara Falls, NY, USA, 2017.
5. Battery State-of-Health Estimation for Mobile Devices, ICCPS'17, Pittsburgh, PA, USA, 2017.
6. Cognitive Battery Management, Clemson University, Clemson, SC, 2017.
7. Cognitive Battery Management with a Cyber-Physical Approach, University of Colorado, Denver, Colorado, 2017.
8. Battery Management via System Reconfiguration, University of Waterloo, Waterloo, ON, Canada, 2016.
9. Resting Weak Cells to Improve Battery Pack's Capacity Delivery via Reconfiguration, e-Energy'16, Waterloo, ON, Canada, 2016.
10. $*$-Aware Charging of Lithium-ion Battery Cells, ICCPS'16, Vienna, Austria, 2016.
11. SoH-Aware Reconfiguration in Reconfigurable Battery Packs, Beijing Jiaotong University, Beijing, China, 2016.
12. Smart Battery Management in a CPS Perspective, Northwestern Polytechnical University, Xi'an, Shannxi, China, 2015.
13. Exploring Battery Management via a CPS Approach, Southeast University, Nanjing, Jiangsu, China, 2015.
14. SoH-Aware Reconfiguration to Enhance Deliverable Capacity of Large Battery Packs, University of Victoria, Victoria, BC, Canada, 2015.
15. SHARE: SoH-Aware Reconfiguration to Enhance Deliverable Capacity of Large-Scale Battery Packs, ICCPS'15, Seattle, USA, 2015.
16. Battery-Aware Energy Management in Cyber-Physical Systems, University of Michigan, Ann Arbor, MI, USA, 2014.
17. ESync: An Energy Synchronized Charging Protocol for Rechargeable Wireless Sensor Networks, MohiHoc'14, Philadelphia, PA, USA, 2014.
18. Battery-in-the-Loop: Battery-Aware Energy Management in Cyber-Physical Systems, University of Victoria, Victoria, BC, Canada, 2014.
19. Mobile-to-Mobile Energy Replenishment in Mission-Critical Robotic Sensor Networks, INFOCOM'14, Toronto, ON, Canada, 2014.
20. A Parallel Identification Protocol for RFID Systems, INFOCOM'14, Toronto, ON, Canada, 2014.
21. Reconfiguration-Assisted Charging in Large-Scale Lithium-ion Battery Systems, ICCPS'14, Berlin, Germany, 2014.
22. On-Demand Charging in Wireless Sensor Networks: Theories and Applications, MASS'13, Hangzhou, Zhejiang, China, 2013.
23. Evaluating Service Disciplines for Mobile Elements in Wireless Ad Hoc Sensor Networks, INFOCOM'12, Orlando, Florida, USA, 2012.

24. Adaptive Mobility-Assisted Data Collection in Wireless Sensor Networks, WCSP'11, Nanjing, Jiangsu, China, 2011.
25. An On-Demand Data Collection Scheme for Wireless Sensor Networks with Mobile Elements, ICC'11, Kyoto, Japan, 2011.
26. Evaluating On-Demand Data Collection with Mobile Elements in Wireless Sensor Networks, VTC2010-FALL, Ottawa, Canada, 2010.
27. Optimize Multiple Mobile Elements Touring in Wireless Sensor Networks, ISPA'09, Chengdu, Sichuan, China, 2009.
28. Genetic Algorithm based Length Reduction of a Mobile BS Path in WSNs, ICIS'09, Shanghai, China, 2009.

Professional Affiliations

Senior member of IEEE, member of ACM.