FENG LI

Associate Professor
School of Computer Science and Technology
Shandong University (Qingdao), China

+86-(0532)58630620
fli@sdu.edu.cn
72 Binhai Road, Qingdao, Shandong, China 266237

Education

- Aug 2010 - Feb 2015   Ph.D., Nanyang Technological University, Singapore.

- Sep 2007 - Jul 2010   M.S. in Computer Science, Shandong University, China.

- Sep 2003 - Jul 2007   B.S. in Computer Science, Shandong Normal University, China.

Research Interests

Distributed Algorithms and Systems, Wireless Networking, Mobile Computing, Internet of Things.

Employments

- Sep 2018 - Present   Associate Professor, School of Computer Science and Technology, Shandong University, China.

- Nov 2015 - Aug 2018   Assistant Professor, School of Computer Science and Technology, Shandong University, China.

- Nov 2014 - Nov 2015   Postdoctoral Research Fellow, School of Computing, National University of Singapore (working with Prof Seth Gilbert and Prof Mun Choon Chan).

- Oct 2014 - Nov 2014   Research Intern in Institute for Infocomm Research, A*STAR, Singapore (working with Dr Derek Leong).

Publications

Journal Publications

1. Shuzhen Chen, Youming Tao, Dongxiao Yu, **Feng Li**, Bei Gong, Xiuzhen Cheng, Privacy-Preserving Collaborative Learning for Multi-Armed Bandits in IoT, IEEE Internet of Things Journal, 2020. (To appear)

2. Yuan Yuan, **Feng Li**, Dongxiao Yu, Jichao Zhao, Jiguo Yu, Xiuzhen Cheng, Distributed Social Learning with Imperfect Information, IEEE Transactions on Network Science and Engineering, 2020. (To appear)

3. Xiao Zhang, Wenzhong Li, Haochao Ying, **Feng Li**, Siyi Tang, Sanglu Lu, Emotion Detection in Online Social Networks: A Multi-Label Learning Approach, IEEE Internet of Things Journal, 2020. (To appear)

4. Dongxiao Yu, Yifei Zou, Jiguo Yu, Yong Zhang, **Feng Li**, Xiuzhen Cheng, Falko Dressler, and Francis C.M. Lau, Implementing Abstract MAC Layer in Dynamic Networks, IEEE Transactions on Mobile Computing, 2020. (To appear)

5. **Feng Li**, Dongxiao Yu, Huan Yang, Jiguo Yu, Karl Holger, and Xiuzhen Cheng, Multi-Armed Bandit Based Spectrum Scheduling Algorithms in Wireless Networks: A Survey, IEEE Wireless Communications Magazine, vol. 27, no. 1, pp. 24-30, 2020.

6. Huan Yang, **Feng Li**, Dongxiao Yu, Yifei Zou, and Xiuzhen Cheng, Reliable Data Storage in Heterogeneous Wireless Sensor Networks by Jointly Optimizing Routing and Storage Node Deployment, Tsinghua Science and Technology, 2020. (To appear)

7. Xiaowu Liu, Jiguo Yu, **Feng Li**, Weifeng Lv, Yinglong Wang, and Xiuzhen Cheng, Data Aggregation in Wireless Sensor Networks: From the Perspective of Security, IEEE Internet of Things Journal, vol. 7, no. 7, pp. 6495-6513, 2020.

8. **Feng Li**, Jie Hao, Jin Wang, Jun Luo, Ying He, Dongxiao Yu, and Xiuzhen Cheng, VisioMap: Lightweight 3D Scene Reconstruction towards Natural Indoor Localization, IEEE Internet of Things Journal, vol. 6, no. 5, pp. 8870-8882, 2019.

9. **Feng Li**, Shibo He, Jun Luo, Mohan Gurusamy, and Junshan Zhang. Editorial: Green Computing in Wireless Sensor Networks, Computer Networks, vol. 150, pp. 266-268, 2018.

10. **Feng Li**, Yanbing Yang, Zicheng Chi, Liya Zhao, Yaowen Yang, and Jun Luo. Trinity: Enabling Self-Sustaining WSNs Indoors with Energy-Free Sensing and Networking, ACM Transactions on Embedded Computing Systems, vol. 17, no. 2, pp. 57:1-57:27, 2018.

11. Yiran Shen, Tao Han, Qing Yang, Yong Wang, **Feng Li**, and Hongkai Wen. CS-CNN: Enabling Robust and Efficient Conventional Neural Networks Inference for Internet-of-Things Applications, IEEE ACCESS, vol. 6, pp. 13439 - 13448, 2018.

12. **Feng Li**, Jun Luo, Gaotao Shi and Ying He. ART: Adaptive fRequency-Temporal co-existing of ZigBee and WiFi, IEEE Transactions on Mobile Computing, vol. 16, no. 3, pp. 662-674, 2017.

13. Xiao Pan, Yuanfeng Zhou, **Feng Li**, and Caiming Zhang. Superpixels of RGB-D Images for Indoor Scenes Based on Weighted Geodesic Driven Metric, IEEE Transactions on Visualization and Computer Graphics, vol. 23, no. 10, pp. 2342-2356, 2017.

14. Yong Wang, Zhuoshi Yang, Jianpei Zhang, **Feng Li**, Hongkai Wen, and Yiran Shen. CS^2-collector: A New Approach for Data Collection in Wireless Sensor Networks based on Two Dimensional Compress Sensing, Sensors, vol. 16, no. 8, 1318, 2016.

15. **Feng Li**, Jun Luo, Shiqing Xin and Ying He. Autonomous Deployment of Wireless Sensor Networks for Optimal Coverage with Directional Sensing Model, Computer Networks, vol. 108, no. 24, pp. 120-132, 2016.

16. **Feng Li**, Jun Luo, Wenping Wang, and Ying He. Autonomous Deployment for Load Balancing k-Surface Coverage in Sensor Networks, IEEE Transactions on Wireless Communications, vol. 14, no. 1, pp. 279-293, 2015.

17. Minqi Zhang, **Feng Li**, Ying He, Juncong Lin, Xianfeng David Gu, and Jun Luo. GRIP: Greedy Routing through dIstributed Parametrization for Guaranteed Delievery in 2D/3D Sensor Networks, Wireless Networks, vol. 21, no. 1, pp. 67-80, 2015.

18. **Feng Li**, Chi Zhang, Jun Luo, Shiqing Xin, and Ying He, LBDP: Localized Boundary Detection and Parametrization for 3D Sensor Networks, IEEE/ACM Transactions on Networking, vol. 22, no. 2, pp. 567-579, 2014.

19. **Feng Li**, Caiming Zhang, Xingqiang Yang, Peipei Li, Constructing C^1 triangular patch of degree six by the Boolean sum of an approximation operator and an interpolation operator, Applied Mathematical Modelling, vol. 35, no. 8, pp. 4058-4070, 2011.

Conference Publications

1. Zhengyang Liu, **Feng Li**, Dongxiao Yu, Holger Karl and Hao Sheng, On-Line Learning-Based Allocation of Base Stations and Channels in Cognitive Radio Networks, in Proceedings of the 15th International Conference on Wireless Algorithms, Systems and Applications (WASA'20), Qingdao, China, September 13-15, 2020. (To appear)

2. Xinpeng Duan, **Feng Li**, Dongxiao Yu, Huan Yang and Hao Sheng, Learning-Aided Mobile Charging for Rechargeable Sensor Networks, in Proceedings of the 15th International Conference on Wireless Algorithms, Systems and Applications (WASA'20), Qingdao, China, September 13-15, 2020. (To appear)

3. Qiang Xu, Yifei Zou, Dongxiao Yu, Minghui Xu, Shikun Shen, and **Feng Li**, Consensus in Wireless Blockchain System, in Proceedings of the 15th International Conference on Wireless Algorithms, Systems and Applications (WASA'20), Qingdao, China, September 13-15, 2020. (To appear)

4. Qi Luo, Dongxiao Yu, **Feng Li**, Zhenhao Dou, Zhipeng Cai, Jiguo Yu, and Xiuzhen Cheng, Distributed Core Decomposition in Probabilistic Graphs, in Proceedings of the 8th International Conference on Computational Data and Social Networks (CSoNet'19), pp. 16-32, Ho Chi Minh City, Vietnam, November 18 - 20, 2019. **[Best Paper Award]**

5. Dongxiao Yu, Yifei Zou, Yong Zhang, **Feng Li**, Shikun Shen, and Falko Dressler, Optimal Distributed Leader Election without Decoding, in Proceedings of the International Conference on Identification, Information & Knowledge in the Internet of Things (IIKI'19), Jinan, China, October 25-27, 2019. **[Best Paper Award]**

6. **Feng Li**, Huan Yang, Yifei Zou, Dongxiao Yu, and Jiguo Yu, Joint Optimization of Routing and Storage Node Deployment in Heterogeneous Wireless Sensor Networks towards Reliable Data Storage. In Proceedings of the 14th International Conference on Wireless Algorithms, Systems and Applications (WASA'19), pp. 162-174, Hawaii, USA, June 24 - 26, 2019. **[Best Paper Nominee]**

7. Yuan Yuan, **Feng Li**, Dongxiao Yu, Jiguo Yu, Weifeng Lv, and Xiuzhen Cheng, Fault Tolerant Sampling via Random Walk in Dynamic Networks. In Proceedings of the 39th IEEE International Conference on Distributed Computing Systems (ICDCS'19), pp. 536-544, Dallas Texas, USA, July 7 - 10, 2019.

8. Dongxiao Yu, Yifei Zou, Yong Zhang, **Feng Li**, Jiguo Yu, Yu Wu, Xiuzhen Cheng, Francis C.M. Lau, Distributed Dominating Set and Connected Dominating Set Construction in the Dynamic SINR Model. In Proceedings of the 33rd IEEE Parallel and Distributed Processing Symposium (IPDPS'19), pp. 835-844, Rio de Janeiro, Brazil, May 20 - 24, 2019.

9. Chi Zhang, **Feng Li**, Jun Luo, Ying He. iLocScan: Harnessing Multipath for Simultaneous Indoor Source Localization and Space Scanning. In Proceedings of the 12th ACM Conference on Embedded Networked Sensor Systems (SenSys'14), pp. 91-104, Memphis, TN, November 3 - 6, 2014. [Acceptance Ratio = 21/117 (18%)]

10. Tianyu Xiang, Zicheng Chi, **Feng Li**, Jun Luo, Lihua Tang, Liya Zhao, Yaowen Yang. Powering Indoor Sensing with Airflows: A Trinity of Energy Harvesting, Synchronous Duty-Cycling, and Sensing. In Proceedings of the 11th ACM Conference on Embedded Networked Sensor Systems (SenSys'13), pp. 16:1-16:14, Rome, Italy, November 11 - 14, 2013. [Acceptance Ratio = 21/123 (17%)]

11. **Feng Li**, Tianyu Xiang, Zicheng Chi, Jun Luo, Lihua Tang, Liya Zhao, Yaowen Yang. Demo Abstract: Powering Indoor Sensing with Airflows - A Trinity of Energy Harvesting, Synchronous Duty-Cycling, and Sensing. In Proceedings of the 11th ACM Conference on Embedded Networked Sensor Systems (SenSys'13), pp. 73:1–73:2, Rome, Italy, November 11 - 14, 2013.

12. **Feng Li**, Jun Luo, Gaotao Shi, Ying He. FAVOR: Frequency Allocation for Versatile Occupancy of spectRum in Wireless Sensor Networks. In Proceedings of the 14th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc'13), pp. 39-48, Bangalore, India, July 19 - August 1, 2013. [Acceptance Ratio = 24/234 (10%)]

13. Chi Zhang, Jun Luo, Liu Xiang, **Feng Li**, Juncong Lin, Ying He. Harmonic Quorum Systems: Data Management in 2D/3D Wireless Sensor Networks with Holes. In Proceedings of the 9th IEEE Communications Society Conference on Sensor and Ad Hoc Communications and Networks (SECON'12), pp. 1-9, Seoul, Korea, June 18 - 21, 2012. [Acceptance Ratio = 68/350 (19%)]

14. **Feng Li**, Jun Luo, Shiqing Xin, Wenping Wang, Ying He. LAACAD: Load bAlancing k-Area Coverage through Autonomous Deployment in Wireless Sensor Networks. In Proceedings of the 32nd IEEE International Conference on Distributed Computing Systems (ICDCS'12), pp. 566-575, Macau, China, June 18 - 21, 2012. [Acceptance Ratio = 71/515 (13%)]

15. **Feng Li**, Jun Luo, Chi Zhang, Shiqing Xin, Ying He. UNFOLD: UNiform Fast On-Line Boundary Detection for Dynamic 3D Wireless Sensor Networks. In Proceedings of the 12th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc'11), pp. 14:1–14:11, Paris, France, May 16 - 19, 2011. [Acceptance Ratio = 25/127 (19%)]

16. Jun Luo, **Feng Li**, and Ying He. 3DQS: Distributed Data Access in 3D Wireless Sensor Networks. In Proceedings of IEEE International Conference on Communications (ICC'11), pp. 1-5, Kyoto, Japan, June 5 - 9, 2011.

17. Caiming Zhang, **Feng Li**, Dongmei Niu, Xingqiang Yang. Interpolation to C^1 boundary conditions by polynomial of degree six. In Proceedings of IEEE International Conference on Shape Modeling and Applications (SMI'09), pp. 126-131, Beijing, China, June 26 - 28, 2009.

Projects

- *Research and Development on the Key Technologies of Highly Confident Cyber-Physical Fusion Systems for Smart City*
  supported by National Key R&D Program of China
  Dec 2019 - Nov 2022, Co-PI (Jointly working with Prof Xiuzhen Cheng)

- *Research on the Models and Methods for Data Intelligence of Industrial Internet*
  supported by Industrial Internet Innovation and Development Project in 2019 of China
  Feb 2019 - Dec 2022, Co-PI (Jointly working with Prof Zhaohui Peng)

- *Self-Evolving and Unified Security Mechanism for Smart IoT Systems*
  supported by National Natural Science Foundation of China (The Key Project)
  Jan 2019 - Dec 2023, Co-PI (Jointly working with Prof Xiuzhen Cheng)

- *Research on Sustainable Computing in Heterogeneous Sensor Networks: Sensing, Storage and Charging*
  supported by National Natural Science Foundation of China
  Jan 2018 - Dec 2020, PI

- *Reliable Data Storage in Large-Scale Heterogeneous Wireless Sensor Networks*
  supported by Shandong Natural Science Foundation
  Aug 2017 - Dec 2019, PI

- *AI-based Computation Modeling and Applications for Nano-Biological Systems*
  supported by The Fundamental Research Funds of Shandong University
  Jan 2018 - Dec 2020, Co-PI (Jointly working with Prof Weifeng Li)

- *Research on Block Chain Systems for Internet of Things*
  supported by Huawei Innovation Research Projects
  Dec 2017 - Sep 2018, Co-PI (Jointly working with Prof Zhiguo Wan)

- *Multi-Body Modeling in Complex Scenes Based on Distributed RGB-D Wireless Sensor Networks*
  supported by The Key Research & Development Plan of Shandong Province
  Aug 2017 - Aug 2019, Co-PI (Jointly working with Prof Yuanfeng Zhou)

- *Research on Co-existence of ZigBee and WiFi*
  supported by The Fundamental Research Funds of Shandong University
  Jan 2016 - Dec 2018, PI

Teaching

- Machine Learning: Fall 2017-2020.

- Advanced Computer Networks (for graduate students): Spring 2020

- Computer Systems and Architecture: Spring 2016-2020.

- Computer Organization and Design: Fall 2016

Professional Services

- Committee member of ACM SIGCOMM China Chapter

- Committee member of CCF Network and Data Communications

- Committee member of CCF Internet of Things

- Guest Editor of Elsevier Computer Networks Journal

- Guest Editor of Elsevier Computer Communications Journal

- TPC member of IEEE International Conference on Communications (IEEE ICC), Montreal, Canada, June 14-18, 2021

- Local Chair of The 15th International Conference on Wireless Algorithms, Systems, and Applications (WASA), Qingdao, China, June 14-16, 2020

- TPC member of IEEE Global Communications Conference (IEEE GLOBECOM), Taipei, Taiwan, China, December 7-11, 2020

- TPC member of The 39th IEEE International Performance Computing and Communications Conference (IEEE IPCCC) , Austin, Texas, USA, November 6th-8th, 2020

- TPC member of The 15th International Conference on Wireless Algorithms, Systems, and Applications (WASA), Qingdao, China, June 14-16, 2020

- TPC member of The 1st Workshop on Machine Learning for Softwarized Networks (NetLearn) , Gent, Belgium, June 29, 2020

- TPC member of IEEE International Conference on Communications (IEEE ICC), Dublin, Irland, June 7-11, 2020

- Local Chair of International Conference on Identification, Information and Knowledge in The Internet of Things (IIKI), Jinan, China, October 25-27, 2019

- TPC member of IEEE Global Communications Conference (IEEE GLOBECOM), Waikoloa, HI, USA, December 9-13, 2019

- TPC member of The 38th IEEE International Performance Computing and Communications Conference (IEEE IPCCC) , London, England, UK, October 29-31, 2019

- TPC member of The 16th IEEE International Conference on Ubiquitous Intelligence and Computing (IEEE UIC), Leicester, UK, August 19-23, 2019

- TPC member of The 15th IEEE International Conference on Ubiquitous Intelligence and Computing (IEEE UIC), Guangzhou, China, October 8-12, 2018

- TPC member of The 37th IEEE International Performance Computing and Communications Conference (IEEE IPCCC), Orlando, Florida, USA, November 17-19, 2018

Awards

- 2020 ACM China SIGAPP Rising Star Award

- CSoNet 2019 Best Paper Award

- IIKI 2019 Best Paper Award

- WASA 2019 Best Paper Nominee

- 2019-2024, Future Plan for Young Scholars of Shandong University

Last updated: August 18, 2020