Fengjun Li

PERSONAL and CONTACT INFORMATION

Associate Professor
Department of Electrical Engineering and Computer Science, The University of Kansas
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RESEARCH INTERESTS

My research interests lie in a broad area of security and privacy for distributed information systems, database systems, and communication networks, including but not limited to:
◇ Security of IoT and CPS systems
◇ Network security and Internet anonymity
◇ Security and privacy of social networks

EDUCATION

The Pennsylvania State University
Ph.D. in Information Sciences and Technology, December 2010

The Chinese University of Hong Kong
M.Phil. in Information Engineering, December 2004

University of Science and Technology of China
B.E. in Automation, July 2001

EMPLOYMENT

◇ Associate Professor, The University of Kansas	2017 - present
◇ Assistant Professor, The University of Kansas	2011 - 2017
◇ Research Assistant, The Pennsylvania State University	2005 - 2010
◇ Research Assistant, The Chinese University of Hong Kong	2002 - 2004

AWARDS AND HONORS

◇ Bellows Scholar Award, School of Engineering, The University of Kansas, 2019
◇ Excellent Service Recognition, 31st Annual IFIP WG 11.3 Conference on Data and Application Security and Privacy (DBSec), 2017
◇ Miller Scholar Award, School of Engineering, The University of Kansas, 2016
◇ Best Paper Award, 11th EAI International Conference on Security and Privacy in Communication Networks (SecureComm'15), October 2015
◇ Kansas NSF EPSCoR First Award, 2014
◇ Best Poster Award, 4th Central Area Networking and Security Workshop (CANSec'13), November 2013
◇ Outstanding Bachelor Thesis Award, University of Science and Technology of China, 2001.

PUBLICATIONS

1. Dawei Chu, Kaijie Zhu, Quanwei Cai, Jingqiang Lin, Fengjun Li, Le Guan and Lingchen Zhang, "Secure Cryptography Infrastructures in the Cloud," to appear in 2019 IEEE GLOBE-COM.

2. Bingyu Li, Jingqiang Lin, Fengjun Li, Qiongxiao Wang, Qi Li, Jiwu Jin and Congli Wang, "Certificate Transparency in the Wild: Exploring the Reliability of Monitor," in *ACM CCS*, London, UK, Nov 11-15, 2019.

3. Dawei Chu, Jingqiang Lin, Fengjun Li, Xiaokun Zhang, Qiongxiao Wang and Guangqi Liu, "Ticket Transparency: Accountable Single Sign-On with Privacy-Preserving Public Logs," in *SecureComm*, Orlando, October 23-25, 2019.

4. Qiaozhi Wang, Hao Xue, Fengjun Li, Dongwon Lee, and Bo Luo, "#DontTweetThis: Scoring Private Information in Social Networks," in *the 19th Privacy Enhancing Technologies Symposium (PETS)*, vol 4, Stockholm, Sweden, July 15-16, 2019. (Acceptance rate: 16/91)

5. Hao Xue, Qiaozhi Wang, Bo Luo, Hyunjin Seo, and Fengjun Li, "Content-Aware Trust Propagation Towards Online Review Spam Detection," in *ACM Journal of Data and Information Quality - Special Issue on Combating Digital Misinformation and Disinformation*, Volume 11 Issue 3, July 2019.

6. Anirudh Narasimman, Qiaozhi Wang, Fengjun Li, Dongwon Lee and Bo Luo, "Arcana: Enabling Private Posts on Public Microblog Platforms," in the *34rd International Information Security and Privacy Conference (IFIP SEC)*, Lisbon, Portugal, June 25-27, 2019.

7. Shengxia Zhang, Chengliang Tian, Hanlin Zhang, Jia Yu and Fengjun Li, "Practical and Secure Outsourcing Algorithms of Matrix Operations Based on a Novel Matrix Encryption Method," in *IEEE Access*, vol. 7, pp. 53823-53838, 2019.

8. Lei Yang, Chris Seasholtz, Fengjun Li, and Bo Luo, "Hide Your Hackable Smart Home from Remote Attacks: The Multipath Onion IoT Gateways, in *European Symposium on Research in Computer Security (ESORICS)*, Barcelona, Spain, 2018.

9. Lei Yang and Fengjun Li, "Cloud-Assisted Privacy-Preserving Classification for IoT Applications," in *IEEE Conference on Communications and Network Security*, Beijing, China, 2018.

10. Pegah Nokhiz and Fengjun Li. "Understanding Rating Behavior based on Moral Foundations: The case of Yelp Reviews." In *2017 IEEE BigData Workshop on Big Data Technology and Ethics Considerations in Customer Behavior and Customer Feedback Mining*, Boston, MA, December 2017.

11. Hao Xue and Fengjun Li, "Online Review Spam Detection through Content-Aware Trust Propagation," in *31st Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy*, Philadelphia, PA, 2017.

12. Chung Kit Wu, Hongxu Zhu, Loi Lei Lai, Anna S. F. Chang, Fengjun Li, Kim Fung Tsang, and Roy Kalawsky, "A Time-synchronized ZigBee Building Network for Smart Water Management," in *the 15th IEEE International Conference on Industrial Informatics (INDIN)*, Emden, July 2017.

13. Abdulmalik Humayed, Jingqiang Lin, Fengjun Li and Bo Luo. "Cyber-Physical Systems Security – A Survey." In *The IEEE Internet of Things Journal*, Volume: 4 Issue: 6, 2017.

14. Lei Yang and Fengjun Li. "Securing Smart Grid In-Network Aggregation through False Data Detection." In *Transactions on Industrial Networks and Intelligent Systems*, 17(10):e5, February 2017.

15. Hyunjin Seo, James Sterbenz, Fengjun Li and Shiva Velma, "Multilevel Analysis of Networked Movements in Digital Age," in *International Communication Association Conference*, 2017.

16. Lei Yang, Abdulmalik Humayed, and Fengjun Li. "A Multi-Cloud based Privacy-Preserving Data Publishing Scheme for the Internet of Things." In *Proceedings of the 32nd Annual Computer Security Applications Conference (ACSAC)*, Los Angeles, CA, December 2016.

17. H. Seo, F. Li, R. Pluretti, H. Xue, and S. Velma. "Perceptions of Online Reviews: Motivation, Sidedness, and Reviewer Information." In *Association for Education in Journalism and Mass Communication Annual Conference*, Minneapolis, MN, August 2016.

18. Lei Yang and Fengjun Li. "Enhancing Traffic Analysis Resistance for Tor Hidden Services with Multipath Routing." In *Proceedings of the 11th EAI International Conference on Security and Privacy in Communication Networks (SecureComm)*, Dallas, TX, October 2015. **(Best Paper Award)**

19. Fengjun Li, Xin Fu, and Bo Luo. "A Hardware Fingerprint Using GPU Core Frequency Variations." In *Proc. of the 22nd ACM Conference on Computer and Communications Security (CCS)*, Denver, CO, October 2015. (Poster paper)

20. Lei Yang and Fengjun Li. "mTor: A Multipath Tor Routing beyond Bandwidth Throttling." In *Proc. of the IEEE Conference on Communications and Network Security (CNS)*, Florence, Italy, September 2015.

21. Lei Yang and Fengjun Li. "Tor Multipath Routing: Enhancing Traffic Analysis Resistance for Tor Hidden Services." In *Proc. of the IEEE Conference on Communications and Network Security (CNS)*, Florence, Italy, September 2015. (Poster paper)

22. H. Seo, F. Li, J. Lim, R. Pluretti, H. Xue, and S. Vekapu. "User Ratings of Yelp Reviews: A Big Data Analysis Approach." In *Association for Education in Journalism and Mass Communication Annual Conference*, San Francisco, CA, August 2015.

23. H. Xue, F. Li, H. Seo, and R. Pluretti. "Trust-Aware Review Spam Detection." In *Proc. of the 14th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom)*, Helsinki, Finland, August 2015.

24. H. Seo, F. Li, R. Pluretti, H. Xue, and S. Vekapu. "Perceived Usefulness of Online Reviews: Effects of Review Characteristics and Reviewer Attributes." In *the 65th International Communication Association Annual Conference*, San Juan, Puerto Rico, May 2015.

25. Quanwei Cai, Jingqiang Lin, Fengjun Li, and Qiongxiao Wang. "SEDB: Building Secure Database Services for Sensitive Data." In *Proc. of the 16th International Conference on Information and Communications Security (ICICS)*, Hong Kong, December 2014.

26. Lei Yang, Hao Xue, and Fengjun Li. "Privacy-preserving Data Management in Smart Grid Systems." In *Proc. of the 5th IEEE International Conference on Smart Grid Communications (SmartGridComm)*, Venice, Italy, November 2014.

27. Quanwei Cai, Jingqiang Lin, Fengjun Li, Qiongxiao Wang, and Daren Zha. "EFS: Efficient and Fault-Scalable Byzantine Fault Tolerant Systems against Faulty Clients." In *Proc. of the 10th International Conference on Security and Privacy in Communication Networks (SecureComm)*, Beijing, China, September 2014.

28. Le Guan, Fengjun Li, Jiwu Jing, Jing Wang, and Ziqiang Ma. "virtio-ct: A Secure Cryptographic Token Service in Hypervisors." In *International Workshop on Data Protection in Mobile and Pervasive Computing (DAPRO)*, Beijing, China. September 2014.

29. Lei Yang and Fengjun Li. "Detecting False Data Injection in Smart Grid In-Network Aggregation." In *Proc. of the 4th IEEE International Conference on Smart Grid Communications (SmartGridComm)*, Vancouver, Canada, October 2013.

30. Fengjun Li, Bo Luo, Dongwon Lee, Peng Liu, and Chao-Hsien Chu. "Enforcing Secure and Privacy-Preserving Information Brokering in Distributed Information Sharing," *IEEE Transactions on Information Forensics & Security*, 8(6):888-900, June 2013.

31. Yingying Ma and Fengjun Li. "Detecting Review Spam: Challenges and Opportunities." In *Collaborative Communities for Social Computing (CCSocialComp) Workshop*, Pittsburgh, PA, October 2012.

32. Fengjun Li and Bo Luo. "Preserving Data Integrity for Smart Grid Data Aggregation." In *Proc. of the 3rd IEEE International Conference on Smart Grid Communications (SmartGrid-Comm)*, Tainan, Taiwan, November 2012.

33. Yuhao Yang, Jonathan Lutes, Fengjun Li, Bo Luo, and Peng Liu. "Stalking Online: on User Privacy in Social Networks." In *Proc. of the ACM Conference on Data and Application Security and Privacy (CODASPY)*, San Antonio, TX, February 2012.

34. Fengjun Li, Xukai Zhou, Peng Liu, and Jake Y. Chen. "New Threats to Health Data Privacy," *BMC Bioinformatics*, 12(Suppl. 12):S7, 2011.

35. Fengjun Li, Bo Luo, and Peng Liu, "Secure and Privacy-Preserving Information Aggregation for Smart Grids," *International Journal on Security and Networks, Special Issue on Security and Privacy in Smart Grid*, 6(1): 28-39, 2011.

36. Fengjun Li, Yuxin Chen, Bo Luo, Dongwon Lee, and Peng Liu. "Privacy Preserving Group Linkage." In *Proc. of the 23rd Scientific and Statistical Database Management Conference* (SSDBM), Portland, OR, July 2011.

37. Fengjun Li, Bo Luo, and Peng Liu. "Secure Information Aggregation for Smart Grids Using Homomorphic Encryption." In *Proc. of the 1st IEEE Conference on Smart Grid Communications* (SmartGridComm), Gaithersburg, MD, October 2010.

38. Fengjun Li, Jake Y. Chen, Xukai Zou, and Peng Liu. "New Privacy Threats in Healthcare Informatics: When Medical Records Join the Web." In the *9th International Workshop on Data Mining in Bioinformatics (BIOKDD)*, Washington D.C., July 2010.

39. Fengjun Li, Bo Luo, Peng Liu, Chao-Hsien Chu. "A Node-failure-resilient Anonymous Communication Protocol through Commutative Path Hopping." In *Proc. of the IEEE Conference on Computer Communications (INFOCOM)*, San Diego, CA, March 2010.

40. Fengjun Li, Bo Luo, Peng Liu, Anna Squicciarini, Dongwon Lee, and Chao-Hsien Chu. "Defending against Attribute-Correlation Attacks in Privacy-Aware Information Brokering." In *Proc. of the 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom)*, Orlando, FL, 2008. (Invited paper)

41. Fengjun Li, Bo Luo, Peng Liu, Dongwon Lee, and Chao-Hsien Chu. "Automaton Segmentation: A New Approach to Preserve Privacy in XML Information Brokering." In *Proc. of the 14th ACM Conference on Computer and Communication Security (CCS)*, Alexandria, VA, October 2007.

42. Fengjun Li, Bo Luo, Dongwon Lee, Prasenjit Mitra, Wang-Chien Lee, Chao-Hsien Chu, and Peng Liu. "In-broker Access Control for Information Brokerage Systems," *International Journal on Intelligent Control and Systems, Special Issue on Information Assurance*, 12(4): 283-292, 2007.

43. Wing S. Wong and Fengjun Li. "Fairness Indices and Distributed Control in Communication Networks," *Communication in Information and Systems*, 6(2): 83-114, 2006.

44. Fengjun Li, Bo Luo, Dongwon Lee, Prasenjit Mitra, Wang-Chien Lee, Chao-Hsien Chu, and Peng Liu. "In-broker Access Control: Towards Efficient End-to-End Performance of Information Brokerage Systems." In *Proc. of the IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing (SUTC)*, Taiwan, June 2006.

45. Wing S. Wong and Fengjun Li. "A Fairness Index for Communication Networks." In *Springer Lecture Notes in Control and Information Sciences*, vol. 321, pp. 389-400, September 2005.

PRESENTATIONS AND INVITED TALKS

1. "Protecting Vulnerable IoT Devices via Multipath Onion IoT Gateways" in *International Workshop on Cyber Security and Data Privacy*, Hangzhou, China, July 6, 2019.

2. "Cloud-Assisted Privacy-Preserving Classification for IoT Applications," in the 2019 NSA SoS Lablet Quarterly Meeting, Berkeley, CA, January 10, 2019.

3. "Privacy-Preserving Classification for IoT Applications," in the *Hot Topics in Privacy Day*, IEEE PAC 2018 Conference, Washington D.C., September 26, 2018.

4. "Hide Your Hackable Smart Home from Remote Attacks: The Multipath Onion IoT Gateways," in ESORICS, Barcelona, Spain, September 4, 2018.

5. "Enhancing Data Privacy in Cloud-Assisted IoT Applications," in UNC-Charlotte, Charllotte, NC, July 26, 2018.

6. "Data Privacy in Cloud-assisted IoT Applications," in University of Science and Technology of China, Hefei, China, June 19, 2018.

7. "Cloud-Assisted Privacy-Preserving Classification for IoT Applications," in IEEE CNS Conference, Beijing, China, May 2018.

8. "Securing IoT Data Exchange," in 2017 NAE German-America Frontiers of Engineering Symposium, Evendale, Ohio, 2017.

9. "Securing Internet-of-Things: Towards a Smarter Community." Invited talk in AUTM Asia 2017 Conference, Hong Kong, April 25, 2017.

10. "Securing Web Communications: Multipath Tor beyond Traffic Throttling." Invited talk in the Information Engineering Department Seminar Series, CUHK, Hong Kong, April 24, 2017.

11. "Cyber Security for IoT." Invited talk, Hong Kong IT Fest 2017, Smart City Forum, Virtual Reality and Augmented Reality, Hong Kong, April 24, 2017.

12. "A Multi-Cloud based Privacy-Preserving Data Publishing Scheme for the Internet of Things." In the 32nd Annual Computer Security Applications Conference, Los Angeles, CA, December 2016.

13. "Secure and Privacy-Preserving Data Collection and Publishing for the Internet-of-Things." Invited talk in MasterCard STLCyberCon 2016, St. Louis, MO, November 2016.

14. "Securing Web Communications." Invited talk, Zhejiang Gongshang University, Hangzhou, China, October, 2016.

15. "Tor Anonymous Network and Hidden Services." Invited talk in the 2016 KU EECS Advisory Board Meeting, Lawrence, KS, April 29, 2016.

16. "Security in Internet of Things: Issues, Challenges, and Opportunities." Guest Lecture in EECS700: Special Topics on Internet of Things, Lawrence, KS, April 22, 2016.

17. "Enhancing Traffic Analysis Resistance for Tor Hidden Services with Multipath Routing." In the 11th EAI International Conference on Security and Privacy in Communication Networks (SecureComm), Dallas, TX, October 28, 2015.

18. "From Seeding to Cultivation - Regional and National Cyber Security Workforce Development." Panel in the 8th Central Area Networking and Security Workshop, Little Rock, AR, October 24, 2015.

19. "A Hardware Fingerprint Using GPU Core Frequency Variations." In the 22nd ACM Conference on Computer and Communications Security (CCS), Denver, CO, October 13, 2015.

20. "mTor: A Multipath Tor Routing beyond Bandwidth Throttling." In the IEEE Conference on Communications and Network Security (CNS), Florence, Italy, September 29, 2015.

21. "Enhancing Traffic Analysis Resistance for Tor Hidden Services with Multipath Routing." In the IEEE Conference on Communications and Network Security (CNS), Florence, Italy, September 28, 2015.

22. "Social Collaborative Systems: Data Analysis and Visualization." In KU Red Hot Research Seminar Series, Lawrence, KS, September 18, 2015.

23. "Trust-Aware Review Spam Detection." In the 14th IEEE TrustCom, Symposium on Recent Advances of Trust, Security and Privacy in Computing and Communications, Helsinki, Finland, August 21, 2015.

24. "New Security and Privacy Challenges in the Networked Age." In KU Red Hot Research Seminar Series, Lawrence, KS, March 6, 2015.

25. "Privacy-preserving Data Management in Smart Grid Systems." In the 5th IEEE International Conference on Smart Grid Communications, Venice, Italy, November 2014.

26. "Secure and Privacy-Preserving Smart Metering." Invited talk in the Computer Science Department Seminar Series, Wayne State University, Detroit, MI, October 14, 2014.

27. "Secure and Privacy-Preserving In-Network Data Aggregation in Smart Grid." Invited talk in the Chemical & Petroleum Engineering Department Seminar Series, University of Kansas, Lawrence, KS, September 30, 2014.

28. "Detecting Spam Reviews in Online Shopping Communities." Invited talk, Data Assurance and Communication Security Research Center, Chinese Academy of Sciences, Beijing, China, June 2014.

29. "Detecting False Data Injection in Smart Grid In-Network Aggregation." In the 4th IEEE SmartGridComm, Vancouver, Canada, October 2013.

30. "Privacy Preserving Smart Metering with Data Authentication and False Data Injection Protection." Invited talk, State Key Laboratory of Information Security, Chinese Academy of Sciences, Beijing, China, June 2013.

31. "Preserving Data Integrity for Smart Grid Data Aggregation." In the 3rd IEEE Conference on Smart Grid Communications, Tainan, Taiwan, November 2012.

32. "Detecting Review Spam: Challenges and Opportunities." In the Collaborative Communities for Social Computing Workshop, Pittsburgh, PA, October 2012.

33. "Secure and Efficient Data Aggregation in Smart Grids." Invited talk, State Key Laboratory of Information Security, Chinese Academy of Sciences, Beijing, China, July 2012.

34. "A Node-failure-resilient Anonymous Communication Protocol through Commutative Path Hopping." In the 29th IEEE Conference on Computer Communications (INFOCOM), San Diego, CA, March 2010.

35. "CAT: Commutative Anonymous Tunnel." In the LIONS Center Seminar Series, Pennsylvania State University, State College, PA, March, 2010.

36. "Anonymous Communications." In the iSymposium, Pennsylvania State University, State College, PA, February 2010.

37. "Automaton Segmentation: A New Approach to Preserve Privacy in XML Information Brokering." In the 14th ACM Conference on Computer and Communication Security (CCS), Alexandria, VA, November 2007.

38. "Secure and Privacy-Preserving Information Sharing." Invited talk in the Integrative Theories and Methods Seminar, Pennsylvania State University, State College, PA, October 2007.

39. "Security and Privacy in Information Brokerage Systems." In the 2nd Network and Computer Security Workshop, Lehigh, PA, August 2005.

PROFESSIONAL ACTIVITIES

Journal Editorial Board Member

⬦ International Journal on Security (IJS). (2012 - present)
⬦ JSM Computer Science & Engineering. (2013 - present)

Steering Committee Member

⬦ Central Area Networking and Security Workshop. (2014 - present)

Technical Program Committee Member

⬦ 2019 Annual Computer Security Applications Conference
⬦ IEEE International Conference on Mobile Ad-hoc and Sensor Systems (2019)
⬦ IEEE International Conference on Trust, Security and Privacy in Computing and Communications (2019)
⬦ IEEE International Conference on Networking, Architecture, and Storage (2018)
⬦ IEEE International Conference on Mobile Ad-hoc and Sensor Systems (2018)
⬦ IFIP Networking Conference (2018)
⬦ Fifth International Symposium on Intelligent Informatics (2017)
⬦ 4th International Symposium on Intelligent Informatics. (Sept. 2016)
⬦ 4th International Symposium on Security in Computing and Communications. (Sept. 2016)
⬦ 6th International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies. (June 2016)
⬦ SmartGrid Resilience Workshop. (December 2015)
⬦ International Conference on Advances in Computing, Communications and Informatics. (August 2015)
⬦ Workshop on Scalable Data Analytics: Theory and Applications. (2014-2015)
⬦ Workshop on Scalable Machine Learning: Theory and Applications. (October 27, 2014)
⬦ International Workshop on Data Protection in Mobile and Pervasive Computing. (Sept. 2014)
⬦ Workshop on Scalable Data Analytics: Theory and Applications. (May 2014)
⬦ 9th IEEE International Conference on Intelligent Sensors, Sensor Networks and Information Processing. (April 2014)
⬦ 5th Central Area Networking and Security Workshop. (April 2014)
⬦ 4th IEEE International Conference on Smart Grid Communications. (October 2013)
⬦ Big Data in Bioinformatics and Health Informatics Workshop. (October 2013)
⬦ Greater Kansas Area Security Workshop. (2012-2013)
⬦ ACM Conference on Information and Knowledge Management. (October 2012)
⬦ 1st IEEE International Conference on Healthcare Informatics, Imaging and Systems Biology. (July 2011)

Other Professional Activities

⬦ Finance Chair, IEEE International Conference on Intelligence and Security Informatics (2018)
⬦ Faculty mentor and poster judge, IEEE ICC Workshop (2018)
⬦ Publicity Chair, 31st Annual Conference on Data and Applications Security and Privacy. (July 2017)
⬦ Organizing Co-Chair, Misinformation in Social Media Age Workshop (2017)
⬦ Award Committee Chair, WiCyS (2017)
⬦ Poster Co-Chair, IEEE BIBM (2015)

⋄ Session Chair, IEEE CNS (2018), DBSec (2017), IEEE TrustCom. (2015), IEEE SmartGrid-Comm (2014) Organizing Chair, Central Area Networking and Security Workshop (2014)

⋄ Judge, MINK WIC conference (2013, 2015, 2017)

⋄ Journal & Conference Reviewer, IEEE Transactions on Information Forensics & Security, IEEE Transactions on Smart Grid, IEEE Transactions on Dependable and Secure Computing , IEEE Transactions on Knowledge and Data Engineering, IEEE Journal on Selected Area in Communications, IEEE Transaction on Wireless Communications, IEEE Transactions on Industrial Informatics, ACM Computing Surveys, Elsevier Computer & Security, Future Generation Computer Systems, Security and Communication Networks, Entropy, ACM CCS, ESORICS, CODASPY, ASIACCS, IEEE SmartGridComm, CIKM, INFOCOM , ICDCS, ICDE, GLOBECOM, ICC, PASSAT, WCNC, ACSAC, ICICS etc.