

# JIANQING LIU

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## EDUCATION

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| <b>University of Florida</b><br>Ph.D. in Electrical and Computer Engineering<br>• Advisor: Dr. Yuguang “Michael” Fang | June 2018 |
| <b>University of Electronic Science and Technology of China</b><br>B.Eng. in Electrical Engineering                   | June 2013 |

## RESEARCH EXPERIENCE

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| <b>Research Assistant</b><br><i>Wireless Networks Laboratory, Department of ECE, University of Florida</i>   | September 2014 - Now   |
| <ul style="list-style-type: none"><li>◇ Brought together techniques from <i>convex optimization</i>, <i>probability theory</i>, <i>applied cryptography</i>, and <i>differential privacy</i> to design energy-efficient networking protocols and secure &amp; privacy-preserving mechanisms in support of applications in cyber-physical systems and advanced wireless networks.</li><li>◇ Worked on 3 NSF projects and published 13 technical papers.</li><li>◇ Collaborated with my advisor to develop 3 NSF funding proposals and mentored 4 junior Ph.D. students to conduct research.</li></ul> |                        |
| <b>Research Intern</b><br><i>Teledyne LeCroy, Chestnut Ridge, NY, USA</i>  | May 2014 - August 2014 |
| <ul style="list-style-type: none"><li>◇ Developed radio-frequency (RF) front-end power amplifiers with state-of-the-art SiGe BiCMOS and InP technology for its applications on high performance radio signal measurement.</li></ul>  |                        |

## TEACHING EXPERIENCE

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| <b>Guest Lecturer and Teaching Assistant</b><br><i>EEL6591: Wireless Networks, Department of ECE, University of Florida</i>   | Spring 2017 |
| <ul style="list-style-type: none"><li>◇ Designed lecture slides and gave lectures on topics of wireless cellular system review (e.g., 2G/3G/4G), radio resource management (e.g., power control, channel allocation) and mobility management.</li><li>◇ Mentored students to complete their course projects (e.g., paper survey, ns-2/ns-3 simulation) and held regular office hours to answer students’ questions.</li></ul> |             |
| <b>Guest Lecturer and Teaching Assistant</b><br><i>EEL4598/5718: Computer Communications, Department of ECE, University of Florida</i>  | Fall 2016   |
| <ul style="list-style-type: none"><li>◇ Delivered lectures on topics of switching and multiplexing, automatic repeat request (ARQ) protocols and medium access control (MAC) protocols.</li><li>◇ Supervised the course projects (e.g., socket programming and file encryption/transmission/decryption suite design) and provided one-on-one instructions during the office hours.</li></ul>                                  |             |
| <b>Recitation Lecturer and Teaching Assistant</b><br><i>14:332:382: Electromagnetic Fields, Department of ECE, Rutgers University</i>   | Spring 2014 |
| <ul style="list-style-type: none"><li>◇ Designed lectures for recitation and shared the teaching workload with the professor.</li></ul>   |             |

**Laboratory Instructor**

Fall 2013

14:332:363:Electronic Devices Laboratory, Department of ECE, Rutgers University

- ◇ Instructed students in circuits implementation & measurement and trained them in using PSPICE schematic and analog design environment.

**PUBLICATIONS AND PRESENTATIONS**

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**Referred Journal Articles**

- [1] **Jianqing Liu**, Chi Zhang, and Yuguang Fang, “*EPIC: A Differential Privacy Framework to Defend Smart Homes Against Internet Traffic Analysis*,” IEEE Internet of Things Journal (**IoT Journal**), Accepted.
- [2] **Jianqing Liu**, Chi Zhang, Beatriz Lorenzo, and Yuguang Fang, “*DPavatar: A Real-time Location Protection Framework for Incumbent Users in Cognitive Radio Networks*,” IEEE Transactions on Mobile Computing (**TMC**), under review (1<sup>st</sup> round).
- [3] **Jianqing Liu**, Haichuan Ding, Ying Cai, Hao Yue, Yuguang Fang and Shigang Chen, “*An Energy-Efficient Strategy for Secondary Users in Cooperative Cognitive Radio Networks for Green Communications*,” IEEE Journal on Selected Areas in Communications (**JSAC**), Vol. 34, no. 12, pp. 3195-3207, December 2016.
- [4] **Jianqing Liu**, Kaijun Song, and Yong Fan, “*UWB BPF with Triple Notched bands Using Novel Dual-mode SIR and Asymmetrical Coupling Structure*,” Journal of ElectroMagnetic Waves and Applications (**JEMWA**), Vol.26, No.16, 2112-2120, November 2012.
- [5] **Jianqing Liu**, Yawei Pang, Haichuan Ding, Lan Zhang, and Yuguang Fang, “*Towards Energy Efficiency in IoT: A Cross Layer Design in Cognitive Cellular Networks*,” IEEE Transactions on Mobile Computing (**TMC**), to be submitted.
- [6] **Jianqing Liu**, Kaichen Yang, Yaodan Hu, and Yuguang Fang, “*Secure and Privacy-Preserving Spatial Epidemiology Analysis Exploiting Two Clouds*,” to be submitted.
- [7] Beatriz Lorenzo, Alireza Shafigh, **Jianqing Liu**, Francisco Gonzalez-Castano, and Yuguang Fang, “*Data and Spectrum Trading Policies in a Trusted Cognitive Radio Dynamic Network Architecture*,” IEEE/ACM Transactions on Networking (**TON**), under review (2<sup>nd</sup> round).
- [8] Haichuan Ding, Chi Zhang, Xuanheng Li, **Jianqing Liu**, Miao Pan, Yuguang Fang and Shigang Chen, “*Session-Based Cooperation in Cognitive Radio Networks: A Network-Level Approach*,” IEEE/ACM Transactions on Networking (**TON**), Accepted.
- [9] Bing Feng, Chi Zhang, **Jianqing Liu** and Yuguang Fang, “*Turning Waste into Wealth: Free Control Message Transmissions in Indoor WiFi Networks*,” IEEE Transactions on Mobile Computing (**TMC**), under review (1<sup>st</sup> round).
- [10] Shunrong Jiang, Xiaoyan Zhu, Linke Guo, and **Jianqing Liu**, “*Publicly Verifiable Boolean Query Over Outsourced Encrypted Data*,” IEEE Transactions on Cloud Computing (**TCC**), Early Access 2017.

**Referred Conference Articles**

- [1] **Jianqing Liu**, Chi Zhang, Haichuan Ding, Hao Yue, and Yuguang Fang, “*Policy-based Privacy-Preserving Scheme for Primary Users in Database-driven Cognitive Radio Networks*,” IEEE Global Communications Conference (**GLOBECOM**), Washington D.C., USA, 2016.
- [2] **Jianqing Liu**, Hao Yue, Haichuan Ding, Pengbo Si, and Yuguang Fang, “*An Energy Efficient Cooperative Strategy for Secondary Users in Cognitive Radio Networks*,” IEEE Global Communications Conference (**GLOBECOM**), San Diego, USA, 2015.

- [3] **Jianqing Liu**, Kaijun Song, Tao Pan, Jiahong Zha, Yong Fan, and Cuilin Zhong “*Ultra-Wideband (UWB) Bandpass Filter with Inductance-Loaded Y-Shaped Multiple-Mode Resonator*,” IEEE International Workshop on Microwave & Millimeter Wave Circuits & System Technology (**MMWCST**), Chengdu, China, 2012 (**Best Paper Award**).
- [4] Bing Feng, **Jianqing Liu**, Chi Zhang, and Yuguang Fang, “*Communication through Symbol Silence: Towards Free Control Messages in Indoor WLANs*,” IEEE International Conference on Distributed Computing Systems (**ICDCS**), Atlanta, USA, 2017 (*acceptance ratio: 16.9%*).
- [5] Yaodan Hu, Xuanheng Li, **Jianqing Liu**, Haichuan Ding, Yanmin Gong, and Yuguang Fang, “*Mitigating Traffic Analysis Attack in Smartphones with Edge Network Assistance*,” IEEE International Conference on Communications (**ICC**), Kansas City, Missouri, 2018.
- [6] Yukun Niu, Lingbo Wei, Chi Zhang, **Jianqing Liu**, and Yuguang Fang, “*An Anonymous and Accountable Authentication Scheme for Wi-Fi Hotspot Access with the Bitcoin Blockchain*,” IEEE/CIC International Conference on Communications in China (**ICCC**), Qingdao, China, 2017.
- [7] Haichuan Ding, Hao Yue, **Jianqing Liu**, Pengbo Si, and Yuguang Fang, “*Energy-Efficient Secondary Traffic Scheduling with MIMO Beamforming*,” IEEE Global Communications Conference (**GLOBECOM**), San Diego, USA, 2015.
- [8] Shunrong Jiang, Xiaoyan Zhu, Linke Guo, and **Jianqing Liu**, “*Publicly Verifiable Boolean Query Over Outsourced Encrypted Data*,” IEEE Global Communications Conference (**GLOBECOM**), San Diego, USA, 2015.

### Scholarly Presentations

- [1] “*Communication through Symbol Silence: Towards Free Control Messages in Indoor WLANs*,” IEEE ICDCS, Atlanta, USA, 2017.
- [2] “*Policy-based Privacy-Preserving Scheme for Primary Users in Database-driven Cognitive Radio Networks*,” IEEE GLOBECOM, Washington D.C., USA, 2016.
- [3] “*Ultra-Wideband (UWB) Bandpass Filter with Inductance-Loaded Y-Shaped Multiple-Mode Resonator*,” IEEE MMWCST, Chengdu, China, 2012.

## PROFESSIONAL SERVICES

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### Member of the Technical Program Committee for

- IEEE International Conference on Communications (**ICC**), Kansas City, USA, 2018
- IEEE/CIC International Conference on Communications in China (**ICCC**), Qingdao, China, 2017

### Reviewers for Journal Manuscript Submissions

- IEEE Transactions on Vehicular Technology (**TVT**)
- IEEE Transactions on Mobile Computing (**TMC**)
- IEEE Transactions on Big Data (**TBD**)
- IEEE Transactions on Industrial Informatics (**TII**)
- IEEE Wireless Communications Letters
- IEEE Network Magazine
- Journal of Communications and Information Networks (**JCIN**)
- International Journal of Distributed Sensor Networks (**IJDSN**)
- Ad Hoc & Sensor Wireless Networks

### Reviewers for Conference Manuscript Submissions

- IEEE ICC 2018

- IEEE ICDCS 2017
- IEEE IWCMC 2017
- IEEE WCNC 2014

#### Others

- System Administrator, IEEE Transactions on Vehicular Technology 2014-2017
- Reviewer, University of Florida Student Travel Grant 2017-Now

#### HONORS AND AWARDS

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Student Travel Grant for IEEE ICDCS, IEEE Computer Society	May 2017
Graduate Student Travel Grant, University of Florida	March 2017
Student Travel Grant for IEEE GLOBECOM, National Science Foundation (NSF)	November 2016
Graduate Student Fellowship, University of Florida	2014 - 2018
Outstanding Graduate of Sichuan Province, Sichuan, China	March 2013
Best Paper Award, IEEE International Workshop on MMWCST	April 2012

#### REFERENCES

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- **Dr. Yuguang “Michael” Fang**  
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- **Dr. Sartaj K. Sahni**  
Professor, IEEE, ACM and AAAS Fellow  
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- **Dr. John M. Shea**  
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