Xiaonan Zhang

CONTACT INFORMATION

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RESEARCH INTERESTS

- Internet of Things (IoTs)
- Physical-Layer Security
- Wireless Networks

EDUCATION

- 9/2017 – Present   *Binghamton University*   Binghamton, New York
  - Ph.D Candidate in Electrical and Computer Engineering
  - Advisor: Professor **Linke Guo**

- 9/2015 – 5/2017   *Binghamton University*   Binghamton, New York
  - M.S. in Electrical and Computer Engineering
  - Advisor: Professor **Linke Guo**

- 9/2012 – 8/2015   *Beijing University of Posts and Telecommunications*   Beijing, China
  - Researcher in Key Laboratory of Universal Wireless Communications, Ministry of Education
  - Advisor: Professor **Zhiqiang He**

- 9/2008 – 6/2012   *Beijing University of Chemical Technology*   Beijing, China
  - B.E. in Communication Engineering

WORKING EXPERIENCE

- 9/2015 – Present   **Graduate Research Assistant**
  Department of Electrical and Computer Engineering
  Binghamton University, Binghamton, NY, USA

GRANT EXPERIENCE

1. "EAGER: Malicious Behavior Detection in Hybrid Dynamic Spectrum Access", **National Science Foundation** (CNS-1744261), $150,000, 09/01/2017-08/31/2019.

TEACHING EXPERIENCE

- EECE507: Mathematical Methods in CoE   **Teaching Assistant**
  Fall, 2017 - 2018
  Department of Electrical and Computer Engineering, Binghamton University

- EECE377: Communication Systems   **Teaching Assistant**
  Spring, 2018
  Department of Electrical and Computer Engineering, Binghamton University

- EECE352-90: Computer Architecture **Teaching Assistant**
  Spring, 2016-2017
  Department of Electrical and Computer Engineering, Binghamton University

- EECE553: Computer Network Architecture **Teaching Assistant**
  Fall, 2015-2016
  Department of Electrical and Computer Engineering, Binghamton University

PUBLICATIONS

- **Refereed Journal Papers**
  1. **Xiaonan Zhang**, Linke Guo, Ming Li and Yuguang Fang, "Motivating Human-enabled Mobile Participation for Data Offloading," *The IEEE Transactions on Mobile Computing (**TMC**)*, vol. 17, no. 7, pp. 1624-1637, Jul. 2018. *(IF = 4.098)*

  2. Zhiqiang He, **Xiaonan Zhang**, Yunqiang Bi, Weipeng Jiang and Yue Rong, "Optimal Source and Relay Design for Multiuser MIMO AF Relay Communication Systems With Direct Links and Imperfect Channel Information," *The IEEE Transactions on Wireless Communications (**TWC**)*, vol. 15, no. 3, pp. 2025-2038, Mar. 2016. *(IF = 5.888)*

  3. **Xiaonan Zhang**, Pei Huang, Linke Guo and Yuguang Fang, "Social-aware Energy-efficient Data Offloading with Strong Stability", Minor Revision in *The IEEE/ACM Transactions on Networking (**ToN**). (IF = 3.11)*

- **Refereed Conference Papers**
  1. **Xiaonan Zhang**, Pei Huang, Linke Guo and Yuguang Fang, 'Hide and Seek: Waveform Emulation Attack and Defense in Cross-Technology Communication", *The 39th IEEE International Conference on Distributed Computing Systems (**IEEE ICDCS 2019**)*, Dallas, Texas, Jul. 7-10th , 2019. (Accept Ratio: 19.6%).

  2. **Xiaonan Zhang**, Pei Huang, Linke Guo and Mo Sha, "Incentivizing Relay Participation for Securing IoT Communication", *The 38th IEEE International Conference on Computer Communication (**IEEE INFOCOM 2019**)*, Paris, France, Apr. 29-May. 2, 2019. (Accept Ratio: 19%)

  3. **Xiaonan Zhang**, Pei Huang, Qi Jia and Linke Guo, "CREAM: Unauthorized Secondary User Detection in Fading Environments", *The 15th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (**IEEE MASS 2018**)*, Chengdu, China, Oct. 9-12, 2018.

  4. Jian Zheng, Yifan Wang, **Xiaonan Zhang** and Xiaohua Li, "Classification of Severely Occluded Image Sequences via Convolutional Recurrent Neural Networks", *The 6th IEEE Global Conference on Signal and Information Processing (**IEEE GlobalSIP 2018**)*, Anaheim, California, USA, Nov. 26-29, 2018.

  5. **Xiaonan Zhang**, Qi Jia and Linke Guo, "Secure and Optimized Unauthorized Secondary User Detection in Dynamic Spectrum Access", *The IEEE Conference on Communications and Network Security (**IEEE CNS 2017**)*, Las Vegas, NV, USA, Oct. 9-11, 2017.

  6. **Xiaonan Zhang**, Linke Guo, Ming Li, and Yuguang Fang, "Social-enabled Data Offloading via Mobile Participation – A Game-Theoretical Approach", *The IEEE Global Communications Conference (**IEEE Globecom 2016**)*, Washington, D.C., Dec. 4-8, 2016.

  7. Wenbo Xu, **Xiaonan Zhang**, Jing Zhai and Jiaru Lin, "On the Achievable Rate of MIMO Cognitive Radio Network with Multiple Secondary Users," *The IEEE Vehicular Technology Conference (**IEEE VTC 2014**)*, Seoul, Korea, pp. 1-5.

- **Manuscripts Submitted for Journal/Conference Review**
  1. Pei Huang, **Xiaonan Zhang**, Linke Guo and Ming Li, "Differentially-private Location Protection in Mobile Crowd Sensing for Noise Monitoring", Major Revision in *The IEEE Transactions on Mobile Computing (**TMC**).*

AWARDS

- 2017   *Student Travel Grant*   IEEE CNS 2017
- 2017   *Student Travel Grant*   Binghamton University
- 2017   *Student Travel Grant*   ACM SIGCOMM 2017
- 2017   *Student Travel Grant*   National Science Foundation, N2Women Workshop
- 2016   *Annual ECE Student Teaching Assistant Award*   Binghamton University
- 2016   *Student Travel Grant*   IEEE GLOBECOM 2016

PROFESSIONAL ACTIVITIES

- **Reviewer** for Journal Manuscript Submissions
  - IEEE Transactions on Wireless Communications
  - IEEE Transactions on Mobile Computing
  - IEEE Transactions on Vehicular Technology
  - IEEE Network Magazine
  - ACM Transactions on Multimedia Computing, Communications, and Applications

- **Reviewer** for Conference Manuscript Submissions
  - IEEE INFOCOM 2018, 2019
  - IEEE ICC 2017, 2018, 2019
  - IEEE GLOBECOM 2017
  - IEEE CCNC 2017

- **Student Member** of the *Institute of Electrical and Electronic Engineers* (IEEE)
  - Communication Society, Computer Society

PRESENTATIONS

- **Presentations**
  - "Incentivizing Relay Participation for Securing IoT Communication", *The IEEE International Conference on Computer Communications (**IEEE INFOCOM 2019**)*, Paris, France, Apr. 29-May. 2, 2019.

  - "CREAM: Unauthorized Secondary User Detection in Fading Environments", *The IEEE International Conference on Mobile Ad-hoc and Sensor Systems (**IEEE MASS 2018**)*, Chengdu, China, Oct., 2018.

  - "Secure and Optimized Unauthorized Secondary User Detection in Dynamic Spectrum Access", *The IEEE Conference on Communications and Network Security (**IEEE CNS 2017**)*, Las Vegas, Nevada, Oct., 2017.

  - "Social-enabled data offloading via mobile participation-a game-theoretical approach", *The IEEE Global Communications Conference (**IEEE GLOBECOM 2016**)*, Washington, D.C., Dec., 2016.