NING WANG

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EDUCATION

◇ **Ph.D.**, Computer and Information Sciences *09/2013 - 07/2018*
Temple University, Philadelphia, USA **Advisor**: Jie Wu
Thesis: Efficient Routing and Offloading Schemes Design for Internet-of-Things Systems

◇ **B.E.**, Electrical Engineering *09/2009 - 06/2013*
University of Electronic Science and Technology of China (UESTC), Chengdu, China

EMPLOYMENT

◇ **Assistant Professor**, Dept. of Computer Science *09/2018 - now*
Rowan University, Glassboro, USA

RESEARCH

◇ Research Interest

My research interests belong to the broad category of Internet-of-Things systems with a focus on routing and performance optimization problems. Specific topics include: Opportunistic Mobile Networks, Mobile Edge Computing, Smart Cities, etc.

◇ Published Conference Papers

C1. **N. Wang** and J. Wu, "Cost-Efficient Worker Trajectory Planning Optimization in Spatial Crowdsourcing Platform," *Proc. of the 16th IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS'19).*

C2. Y. Duan, **N. Wang**, and J. Wu, "Optimizing Order Dispatch for Ride-sharing Systems," *Proc. of the 28th International Conference on Computer Communications and Networks (ICCCN'19).*

C3. **N. Wang**, J. Wu, and H. Dai, "Bundle Charging: Mobile Charging Trajectory Optimization in Dense Wireless Sensor Networks.", *Proc. of the 39th IEEE International Conference on Distributed Computing Systems* **(ICDCS'19)**.

C4. H. Zheng, **N. Wang**, and J. Wu, "Non-Submodularity and Approximability: Influence Maximization in Online Social Networks," *Proc. of the 20th IEEE International Conference on a World of Wireless, Mobile and Multimedia Networks (WoWMoM'19).*

C5. S. Lu, J. Wu, Y. Duan, **N. Wang**, and Z. Fang, "Cost-Efficient Resource Provisioning in Delay-Sensitive Cooperative Fog Computing," *Proc. of the 24th IEEE International Conference on Parallel and Distributed Systems (ICPADS'18).*

C6. **N. Wang** and J. Wu, "Optimal Cloud Instance Acquisition via IaaS Cloud Brokerage with Volume Discount," *Proc. of IEEE/ACM 26th International Symposium on Quality of Service (***IWQoS'18***).*

C7. **N. Wang** and J. Wu, "Latency Minimization Through Optimal Player Matchmaking in Multi-Party Online Gaming," *Proc. of the 19th IEEE International Conference on a World of Wireless, Mobile and Multimedia Networks (WoWMoM'18).*

C8. **N. Wang** and J. Wu, "Optimal Data Partitioning and Forwarding in Opportunistic Mobile Networks," *Proc. of the IEEE International Conference on Wireless Communications and Networking Conference (WCNC'18).*

C9. **N. Wang** and J. Wu, "Optimal Cellular Traffic Offloading Through Opportunistic Mobile Networks by Data Partitioning," *Proc. of the IEEE International Conference on International Conference on Communications (ICC'18).*

C10. **N. Wang**, J. Wu, and P. Ostovari, "Coverage and Min-Max Workload Cost in Spatial Crowdsourcing," *Proc. of the 14th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC'17).*

C11. **N. Wang** and J. Wu, "Maximizing the User's Benefit in the Mobile Cloud Computing," *Proc. of the MobiCom 8th ACM Wireless of the Students, by the Students, and for the Students Workshop (MobiCom S3'16).*

C12. **N. Wang** and J. Wu, "Mutually Exclusive Data Dissemination in the Mobile Publish/Subscribe System," *Proc. of the 13th IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS'16).*

C13. **N. Wang** and J. Wu, "Minimizing the Subscription Aggregation Cost in the Content-based Pub/Sub System," *Proc. of the 25th IEEE International Conference on Computer Communications and Networks (ICCCN'16).*

C14. **N. Wang** and J. Wu. "Opportunistic WiFi Offloading in a Vehicular Environment: Waiting or Downloading Now?," *Proc. of the 35th IEEE International Conference on Computer Communications (***INFOCOM'16***).*

C15. **N. Wang** and J. Wu. "Trajectory Scheduling for Timely Data Report in Underwater Wireless Sensor Networks," *Proc. of the IEEE Global Communications Conference (GlOBECOM'15).*

C16. **N. Wang** and J. Wu. "A General Data and Acknowledgement Dissemination Scheme in Mobile Social Networks," *Proc. of the 11th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS'14).*

C17. **N. Wang** and J. Wu. "InterestSpread: An Efficient Method for Content Transmission in Mobile Social Networks," *Proc. of the 1st International Workshop on Mobile Sensing, Computing and Communication (MobiHoc MSCC'14).*

◇ **Published Journal Papers**

J1. J. Wu and **N. Wang**, "Approximating Special Social Influence Maximization Problems," accepted to appear in *Tsinghua Science and Technology.*

J2. **N. Wang** and J. Wu, "Cost-efficient Heterogeneous Worker Recruitment under Coverage Requirement in Spatial Crowdsourcing," accepted to appear in **IEEE Transactions on Big Data**.

J3. **N. Wang** and J. Wu, "Rethink Data Dissemination in Opportunistic Mobile Networks with Mutually Exclusive Requirement," *Journal of Parallel and Distributed Computing, Vol. 119, 2018.*

J4. **N. Wang**, J. Wu and L. Sheng, "Rethink Data Forwarding in Mobile Social Networks using Movement History Information," accepted to appear in *Ad Hoc & Sensor Wireless Networks.*

J5. H. Zheng, **N. Wang**, and J. Wu, "Minimizing Deep Sea Data Collection Delay with Autonomous Underwater Vehicles," *Journal of Parallel and Distributed Computing, Vol. 104, 2017.*

J6. **N. Wang** and J. Wu, "Data Dissemination in Mobile Social Networks with the Acknowledgment Feedback," *Journal of Sensor and Actuator Networks*, Vol. 5, No. 2, 2016.

◇ **Published Book Chapters**

B1. **N. Wang** and J. Wu, "Latency Minimization Through Optimal Data Placement in Fog Computing" accepted to appear in *Fog Computing: Theory and Practice*, Wiely.

◇ **Papers in Submission/Revision**

N1. S. Lu, J. Wu, Y. Duan, **N. Wang**, and Z. Fang,"Cost-Efficient Resource Provision for Multiple Mobile Users in Fog Computing", submitted to *the 48th International Conference on Parallel Processing (ICPP'19)*.

N2. Y. Duan, **N. Wang**, and J. Wu, "Towards Training Time Minimization Through Graph Partition for Distributed Machine Learning", submitted to *the International Conference on Computer Communications (INFOCOM'20)*

N3. H. Zhou, H. Wang, **N. Wang**, D. Li, Y. Cao, and J. Wu, "Exploiting Mobile Social Networks from Temporal Perspective: A Survey," submitted to *IEEE Internet of Things Journal*.

◇ **Invited Talks**

- Efficient Routing and Offloading Design in Internet-of-Things Systems, Rowan University, Feb. 20th, 2018
- Opportunistic Routing and Scheduling Design in Internet-of-Things Systems, University of Hartford, Feb. 4th, 2018.

◇ **Research Students**

- Jeffrey Wang (Fall 2018 - present)
- Cameron Samuel Thatcher (Summer 2019 - present)

PROFESSIONAL ACTIVITIES

◇ **Conference/Workshop Chair**:

- 2019 IEEE International Workshop on Advances in Vehicular Networks (IWAIVN'19)

◇ **Program Committee Member**:

- 2020 IEEE International Conference on Computer Communications and Networks (ICCCN'20)
- 2020 IEEE Wireless Communications and Networking Conference (WCNC'20)
- 2019 IEEE International Conference of Distributed Computer Systems (ICDCS'19)
- 2019 IEEE International Conference on Parallel and Distributed Systems (ICPADS'19)

◇ **Conference Reviewer**:

- 2018 IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS'18)
- 2018 International Conference on Big Data Computing and Communications (BIGCOM'18)
- 2018 IEEE Global Communications Conference (GlOBECOM'18)
- 2018 IEEE International Conference on Computer Communications and Networks (ICCCN'18)
- 2016 IEEE International Conference on Distributed Computing Systems (ICDCS'16)
- 2015 IEEE International Conference on Computer Communication (INFOCOM'15)
- 2015 IEEE International Conference on Sensing, Communication, and Conference (SECON'15)
- 2015 IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS'15)
- 2015 IEEE Global Communications Conference (GlOBECOM'15)
- 2014 IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS'14)

◇ **Journal Reviewer**:

- IEEE Transactions on Parallel and Distributed Systems (TPDS)

- IEEE Transactions on Mobile Computing (TMC)
- IEEE Transaction on Cloud Computing (TCC)
- IEEE Transactions on Intelligent Transportation Systems (TITS)
- IEEE Transactions on Wireless Communications (TWC)
- IEEE Transaction on Service Computing (TSC)
- IEEE Access
- IEEE Wireless Communications Letters
- IEEE Network Magazine
- Journal of Parallel and Distributed Computing (JPDC)
- Journal of Computer Science and Technology (JCST)
- International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC)
- Peer-to-Peer Networking and Applications
- SCIENCE CHINA Information Sciences

TEACHING EXPERIENCE

◇ **Instructor**:

- CS 06410: Data Communication/Networking (2019 spring, 1 section)
- CS 04225: Principles of Data Structures (2019 spring and 2018 fall, 2 sections)
- CS 06510: Computer Networks (2018 fall, 1 section)

◇ **Teaching Assistant**:

- CIS 2107: Computer Systems & Low-Level Programming (2018 spring, 1 section)
- CIS 2168: Data Structures (2017 fall and 2017 spring, 3 sections)
- CIS 3329: Network Architectures (2014 spring, 2014 fall, 2015 spring, and 2016 fall, 4 sections)
- CIS 1068: Program Design and Abstraction (2015 fall, 3 sections)
- CIS 3319: Wireless Networks and Security (2016 spring, 1 section)

UNIVERSITY AND DEPARTMENT SERVICES

- Computer Science Department Research Activity Committee Member *2018 - now*
- Computer Science Department Industry Outreach Committee Member *2018 - now*

AWARDS

- CIS Outstanding Graduate Teaching Assistant Award *2018*
- Student travel grant award of the IEEE SmartWorld 2017 *2017*
- Student travel grant award of the IEEE MobiCom 2016 *2016*
- Student travel grant award of the IEEE INFOCOM 2016 *2016*
- Student travel grant award of the IEEE MASS 2014 *2014*