

NING WANG

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Department of Computer Science, Rowan University

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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. 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 International Conference on Parallel and Distributed Systems (ICPADS 2018)*.
- C2. **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)*.
- C3. **N. Wang** and J. Wu, "Lag 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)*.
- C4. **N. Wang** and J. Wu, "Optimal Data Partitioning and Forwarding in Opportunistic Mobile Networks," *Proc. of the IEEE International Conference on International Conference on Communications (ICC'18)*.
- C5. **N. Wang** and J. Wu, "Optimal Cellular Traffic Offloading Through Opportunistic Mobile Networks by Data Partitioning," *Proc. of the IEEE International Conference on Wireless Communications and Networking Conference (WCNC'18)*.
- C6. **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)*.

- C7. **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)*.
- C8. **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)*.
- C9. **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)*.
- C10. **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)*.
- C11. **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)*.
- C12. **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)*.
- C13. **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. **N. Wang** and J. Wu, "Cost-efficient Heterogeneous Coverage Requirement in Spatial Crowdsourcing," accepted to appear in **IEEE Transactions on Big Data**.
- J2. **N. Wang** and J. Wu, "Cost-Efficient Subscription Aggregation in the Content-Based Pub/Sub System," accepted to appear in *Journal of Parallel and Distributed Computing*.
- J3. **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*.
- 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.

◇ Papers in Submission/Revision

- N1. H. Zheng, **N. Wang**, and J. Wu, "Non-Submodularity and Approximability: Influence Maximization in Online Social Networks," submitted to *the 20th IEEE International Conference on a World of Wireless, Mobile and Multimedia Networks (WoWMoM'19)*.
- N2. **N. Wang** and J. Wu, "Cost-Efficient Worker Trajectory Planning Optimization in Spatial Crowdsourcing Platform," submitted to *the 20th International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc 2019)*.
- N3. **N. Wang** and J. Wu, "Bundle Charging: Mobile Charging Trajectory Optimization," submitted to *the 39th IEEE International Conference on Distributed Computing Systems (ICDCS'19)*.
- N4. **N. Wang** and J. Wu, "Optimal Cellular Data Offloading with Coexistence of Opportunistic WiFi Connection in VANETs," submitted to *the IEEE Transactions on Systems, Man, and Cybernetics: Systems*.

◇ Invited Talks

- Efficient Routing and Offloading Design in Internet-of-Things Systems, Rowan University, Oct. 3rd, 2018
- Opportunistic Routing and Scheduling Design in Internet-of-Things Systems, University of Hartford, Feb. 4th, 2018.

◇ **Students**

- Jeffrey Wang (undergraduate)

PROFESSIONAL ACTIVITIES

◇ **Program Committee Member:**

- 2019 International Conference of Distributed Computer Systems (ICDSCS'19)

◇ **Conference Reviewer:**

- 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 Network Magazine
- IEEE Transactions on Mobile Computing
- IEEE Transaction on Cloud Computing
- IEEE Transactions on Intelligent Transportation Systems
- IEEE Transactions on Wireless Communications
- IEEE Transaction on Service Computing (TSC)
- IEEE Access
- 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

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| • Computer Science Department Research Activity Committee Member | <i>2018 - now</i> |
| • Computer Science Department Industry Outreach Committee Member | <i>2018 - now</i> |

AWARDS

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|---|-------------|
| • CIS Outstanding Graduate Teaching Assistant Award | <i>2018</i> |
| • Student travel grant award of the IEEE SmartWorld 2017 | <i>2017</i> |
| • Student travel grant award of the IEEE MobiCom 2016 | <i>2016</i> |
| • Student travel grant award of the IEEE INFOCOM 2016 | <i>2016</i> |
| • Student travel grant award of the IEEE MASS 2014 | <i>2014</i> |
| • The excellent graduate of Sichuan Province, China | <i>2013</i> |
| • The Tang Lixin Scholarship, the most competitive scholarship in UESTC | <i>2012</i> |
| • The National Scholarship, China | <i>2011</i> |
| • The National Scholarship, China | <i>2010</i> |