

# JINGRONG WANG

Department of Electrical & Computer Engineering ◊ University of Toronto, Canada

Email: jr.wang@mail.utoronto.ca ◊ Web: www.comm.utoronto.ca/~jrwang

## EDUCATION

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### University of Toronto

September 2019 - Present

*Ph.D. (GPA: 3.94/4)*

*Toronto, CA*

- Supervisor: Dr. Ben Liang, Department of Electrical and Computer Engineering.
- Research interests: mobile edge computing, distributed machine learning.

### University of Victoria

September 2017 - August 2019

*MSc. (GPA: 9/9)*

*Victoria, CA*

- Supervisor: Dr. Jianping Pan, Department of Computer Science.
- Thesis: “Mobility management and mobile server dispatching in fixed-to-mobile and mobile-to-mobile edge computing”

### Beijing Jiaotong University

September 2013 - June 2017

*BEng. (Grade: 89.1/100)*

*Beijing, CN*

- Supervisor: Dr. Siyu Lin, School of Electronic and Information Engineering.
- School of Electronic and Information Engineering, September 2015 - June 2017.
- School of Science with “Siyuan” Honor Program, September 2013 - June 2015.

## ACADEMIC & RESEARCH EXPERIENCE

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### University of Toronto

September 2019 - Present

*Research assistant and teaching assistant*

- Research assistant, Wireless Computing Lab (WCL).
- Marker, ECE421 Introduction to Machine Learning, Winter’20, Fall’20, Winter’21, Fall’21, Fall’22.
- Marker, ECE466 Computer Networks II, Winter’20.

### University of Victoria

September 2017 - August 2019

*Research assistant and teaching assistant*

- Research assistant, Protocols for Advanced Networking Laboratory (PANLab).
- Lab instructor/Marker, CSC 361 Computer Communication and Networks, Fall’18, Spring’19.
- Tutorial instructor/Marker, CSC 360 Operating Systems, Spring’18.

### Ericsson Global AI Accelerator

March 2021 - Present

*MITACS Accelerate Internship*

*Montreal, Canada*

- With Zhongwen Zhu, Emmanuel Thepie Fapi, Hardik Dalal.
- Distributed Machine Learning for Large-Scale IoT Systems with Mobile Edge Computing.

### Innovation Training Program for College Students

March 2016 - March 2017

*Group leader*

*Beijing, CN*

- With Dr. Siyu Lin, Dr. Minming Ni and Dr. Chao Shen.
- Design a 5G ultra dense network (UDN) simulation platform for rail transportation scenarios.
- Evaluated as a national program for college students.

### Samsung Telecom China R&D Center

April - July 2017

*Internship*

*Beijing, CN*

- With Ran Gao and Jie Hao.
- Product development in Samsung Browser, data analysis and customer support.

- With Dr. Jin Shi and Xin Wang.
- Participate in equipment installation and on-site investigation on Line 8 of the Beijing Subway.

## JOURNAL PUBLICATION

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- **J. Wang**, B. Liang, Z. Zhu, E. Thepie Fapi, and H. Dalal, "Communication-Efficient Network Topology in Decentralized Learning: A Joint Design of Consensus Matrix and Resource Allocation," *IEEE/ACM Transactions on Networking*, under review.
- **J. Wang**, K. Liu, and J. Pan, "Online UAV-mounted Edge Server Dispatching for Mobile-to-Mobile Edge Computing," *IEEE Internet of Things Journal*, vol. 7, no. 2, pp. 1375–1386, 2020.
- **J. Wang**, K. Liu, G. Tzanetakis, and J. Pan, "Cooperative Abnormal Sound Event Detection in End-Edge-Cloud Orchestrated Systems," *CCF Transactions on Networking*, 2020.
- K. Liu, J. Peng, **J. Wang**, Z. Huang and J. Pan, "Adaptive and Scalable Caching with Erasure Codes in Distributed Cloud-Edge Storage Systems," in *IEEE Transactions on Cloud Computing*, 2022.
- K. Liu, J. Peng, **J. Wang**, and J. Pan, "Optimal Caching for Low Latency in Distributed Coded Storage Systems," *IEEE/ACM Transactions on Networking*, 2021.
- K. Liu, J. Peng, **J. Wang**, W. Liu, Z. Huang, and J. Pan, "Scalable and Adaptive Data Replica Placement for Geo-distributed Cloud Storages," in *IEEE Transactions on Parallel and Distributed Systems*, vol. 31, no. 7, pp. 1575–1587, 2020.
- K. Liu, J. Peng, **J. Wang**, B. Yu, Z. Liao, and J. Pan, "A Learning-based Data Placement Framework for Low Latency in Data Center Networks," in *IEEE Transactions on Cloud Computing*, vol. 10, no. 1, pp. 146-157, 2022.
- Q. Liu, G. Chuai, **J. Wang**, and J. Pan, "Proactive Mobility Management with Trajectory Prediction based on Virtual Cells in Ultra-dense Networks," *IEEE Transactions on Vehicular Technology*, vol. 69, no. 8, pp. 8832–8842, 2020.

## CONFERENCE PUBLICATION

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- **J. Wang** and B. Liang, "Distributed Online Min-Max Load Balancing with Risk-averse Assistance," to appear in *Proc. IEEE ICDCS*, 2023.
- **J. Wang**, B. Liang, Z. Zhu, E. Thepie Fapi, and H. Dalal, "Joint Consensus Matrix Design and Resource Allocation for Decentralized Learning," in *Proc. IFIP Networking*, 2022.
- **J. Wang** and B. Liang, "Gradient and Projection Free Distributed Online Min-Max Resource Optimization," in *Proc. PMLR L4DC*, 2022.
- **J. Wang**, K. Liu, M. Ni, and J. Pan, "Learning Based Mobility Management under Uncertainties for Mobile Edge Computing," in *Proc. IEEE GLOBECOM*, 2018, pp. 1–6.
- **J. Wang**, K. Liu, G. Tzanetakis, and J. Pan, "Learning-based Cooperative Sound Event Detection with Edge Computing," in *Proc. IEEE IPCCC*, 2018, pp. 1–8.
- **J. Wang**, X. Yang, S. Zhao, L. Zhang, M. Ni, and S. Lin, "Handover Performance Improvement for Ultra Dense Network of High-Speed Railway," in *Proc. IEEE VTC Spring*, 2017, pp. 1–5.
- K. Liu, **J. Wang**, Z. Liao, B. Yu, and J. Pan, "Learning-based Adaptive Data Placement for Low Latency in Data Center Networks," in *Proc. IEEE LCN*, 2018, pp. 142–149. (**Best paper finalist**)
- Q. Liu, G. Chuai, **J. Wang**, J. Pan, W. Gao, and X. Liu, "Proactive Mobility Management based on Virtual Cells in SDN-enabled Ultra-dense Networks," in *Proc. IEEE ICC Workshop*, 2019, pp. 1–6.

## AWARDS

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- 2019 Lieutenant Governors Silver Medal for outstanding thesis (UVic), April 2020.
- UofT Edward S. Rogers Sr. Graduate Scholarships for PhD Program in ECE, September 2019.

- ACM SIGCOMM  $N^2$ Women Chris Edmondson-Yurkanan Travel Grant, July 2019.
- UVic Graduate Award (Research & TA), June 2019.
- UVic PANLab Network Leadership Award, February 2019.
- IEEE GLOBECOM Student Travel Grant, November 2018.
- IEEE Pacific Rim Wu-Sheng Lu Graduate Scholarship, November 2018.
- The Martlet Chapter IODE Graduate Scholarship for Women, November 2018.
- UVic Faculty of Graduate Studies (FGS) Graduate Student Travel Grant, October 2018.
- $N^2$ Women Young Researcher Fellowship at IEEE LCN, August 2018.
- UVic CUPE4163 Conference Award, July 2018.
- UVic Graduate Award (Research & TA), June 2018.
- UVic Fellowship Award for Graduate Program in CS, September 2017.
- BJTU Academic Scholarship, September 2016.
- 2nd Prize of the National English Competition for College Students, May 2016.
- 1st Prize of BJTU School of Science Speech Context, December 2014.
- BJTU Social Work Scholarship, December 2014.

## ACADEMIC SERVICES & VOLUNTEER WORK

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### Services & Activities

- Student Member: IEEE, IEEE ComSoc and IEEE Young Professionals, April 2018 – Present.
- Reviewer: IEEE VTC-Fall 2017/2020 (TPC), IEEE Internet of Things Journal.
- UofT Engineering Graduate Education Committee (EGEC), Grad rep, November 2020 – Present.
- UofT Graduate Students' Union (UTGSU), Grad rep, September 2020 – Present.
- UofT ECE Graduate Students' Society (ECEGSS), Communications Officer, September 2020 – Present.
- $N^2$ Women Meeting at IEEE LCN 2018 and ACM SIGCOMM 2019, Organizer/Panel moderator.
- UVic CSC Chair Search Committee, Grad representative, 2019.
- UVic Global Community Holiday Dinner Program, Attendee, December 2017.
- CUHK (SZ) Broad Area of Computer and Information Engineering, Workshop invitee, February 2017.
- BJTU 23rd Student Congress, Undergrad rep, 2016.
- BJTU Live Show, Rhinoceros in Love, Heroine Mingming, December 2015.
- BJTU Young Volunteers Association, Member in Publicity Department, 2014–2015.
- BJTU School of Science Debate Team, Member, 2014.

### Volunteer

- IEEE INFOCOM 2021 (Virtual), Online/Zoom Volunteer, May 2021.
- IEEE INFOCOM 2020 (Virtual), Online/Zoom Volunteer, July 2020.
- UofT Graduate Research Days, Luncheon volunteer, February 2020.
- UVic Orientation & Student Recruitment Leadership Program, Orientation leader, 2018.
- CIPS BC “The Disruptive Power of Blockchain”, Luncheon volunteer, March 2018.
- BJTU Workshop on Fog and Mobile Edge Computing, Volunteer, July 2017.
- Bali Kemenuh Volunteer & Learning Center (BKVLC), Volunteer as TA, July 2015.

## SKILLS & HOBBIES

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Python, Matlab,  $\text{\LaTeX}$ , and sketching.