WANG, Xu

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Updated: March 24th, 2025

Education Experience

- Ph.D., School of Computing, Queen's University 2021 – present
- M.Sc., Department of Information Engineering, Inner Mongolia University of Technology 2015 – 2018
- B.Sc., School of Information and Control, Shenyang Institute of Technology 2011 – 2015

Awards and Recognition

- Student Travel Award, School of Computing, Queen's University, 2025
- Student Travel Award, School of Computing, Queen's University, 2024
- Student Travel Award, Canadian Artificial Intelligence Association, 2023
- Mitacs Accelerate Fellowship, Mitacs, 2023
- Queen's Graduate Award, Queen's University, 2023
- Queen's Graduate Award, Queen's University, 2022
- Queen's Graduate Award, Queen's University, 2021
- Outstanding Graduate, Inner Mongolia University of Technology, 2018
- Merit Student, Inner Mongolia University of Technology, 2017

Teaching Experience

I have served as the instructor for 2 Computer Science course, listed as below.

1. CISC-102 Discrete Structures: Fall 2024, Queen's University
2. CISC-102 Discrete Math: Fall 2022, Queen's University

Teaching Assistant Experience

I have served as the teaching assistant for 5 Computer Science courses, listed as below.

1. CISC-335 Computer Networks: Winter 2024, Queen's University
2. CISC-452 Neural and Genetic Computing: Fall 2023, Queen's University
3. CISC-335 Computer Networks: Winter 2023, Queen's University
4. CISC-335 Computer Networks: Winter 2022, Queen's University
5. COMP-2002 Data Structure: Winter 2021, Memorial University

External Academic Service

- Professional service
  - Session Chair, Beamforming Design, IEEE International Conference on Communications (ICC), 2024
  - TPC Members, IoV, IoT, M2M, Sensor Networks, and Ad-Hoc Networking, 2024 IEEE 100th Vehicular Technology Conference (VTC2024-Fall), 2024
  - Faculty Mentor, Google Research exploreCSR, 2022

- Article reviews: ACM Computing Surveys, IEEE Transactions on Evolutionary Computation, Journal of Selected Topics in Signal Processing, IEEE Internet of Things Journal, IEEE Transactions on Transactions on Network Science and Engineering, IEEE Open Journal of the Communications Society, China Communications, IEEE/CAA Journal of Automatica Sinica, IEEE Global Communications Conference (Globecom), IEEE International Conference on Communications (ICC), IEEE Vehicular Technology Conference (VTC), Military Communications Conference (MILCOM), IEEE Latin-American Conference on Communications (LATINCOM)
- Conference participation
  - International School and Conference on Network Science, Quebec City, Canada, June 2024
  - IEEE International Conference on Communications (ICC), Denver, USA, June 2024
  - IEEE International Conference on Computer Communications (INFOCOM), Vacnouver, Canada, May 2024
  - IEEE Wireless Communications and Networking Conference (WCNC), Dubai, United Arab Emirates, April 2024
  - The 36th Canadian Conference on Artificial Intelligence (CANAI), Montreal, Canada, June 2023
  - IEEE International Conference on Computer Communications (INFOCOM), New York, USA, May 2023
  - IEEE Future Networks World Forum, Montreal, Canada, October 2022
  - IEEE International Conference on Communications (ICC), Seoul, South Korea, May 2022
  - IEEE International Conference on Communications (ICC), Shanghai, China, May 2019
- Conference presentations
  - Designing Robust 6G Networks with Bimodal Distribution for Decentralized Federated Learning, INFOCOM, 2024
  - Robust Federated Learning for Energy Storage Systems, WCNC, 2024
  - A Communication-Efficient Protocol for Federated Learning in Energy Storage Systems, Canadian AI, 2023
  - Federated Learning for Anomaly Detection: A Case of Real-World Energy Storage Deployment, ICC, 2022
  - Fast Data-Driven Sensitivity Measurement for Wireless Receivers, ICC, 2019.

Publications

- Journal Articles

1. C. Shen, H. Xiong, X. Wang, F. Mei and T. T. Ye, A Fast Self-Jamming Cancellation Architecture and Algorithm for Passive RFID Sensor System, *IEEE Communications Letters*, vol. 25, no. 6, pp. 2009-2013, June 2021. DOI: 10.1109/LCOMM.2021.3066177
2. Y. Ma, X. Wang, Z. Quan and H. V. Poor, Data-Driven Measurement of Receiver Sensitivity in Wireless Communication Systems, *IEEE Transactions on Communications*, vol. 67, no. 5, pp. 3665-3676, May 2019. DOI: 10.1109/TCOMM.2019.2891708
3. X.Wang, Q. Mengke, Z. Zhang, L. Song, D. Jia and W. Song. Power Quality Measurement of Wind Turbines based on Matlab, *Acta Energiae Solaris Sinica*, vol. 40, no. 5, pp.1387-1393, May 2019.
4. X.Wang, Q. Mengke, Z. Zhang, L. Song, D. Jia and W. Song. Voltage Flicker Measurement of Wind Turbines using Kaiser Window Correction based on FFT and HHT, *Journal of Electronic Measurement and Instrumentation*, vol. 31, no. 5, pp.802-808, May 2017. DOI:10.13382/j.jemi.2017.05.021

- Conference Articles

5. X. Wang, Y. Chen, Q. Ye, and O. A. Dobre, Connectivity Enrichment for Decentralized Federated Learning Networks with Teleportation, in *IEEE International Conference on Computer Communications (INFOCOM)*, London, United Kingdon, May 2025.
6. X. Wang, Y. Chen, and O. A. Dobre, Designing Robust 6G Networks with Bimodal Distribution for Decentralized Federated Learning, in *IEEE International Conference on Computer Communications (INFOCOM)*, Vancouver, Canada, May 2024. DOI: 10.1109/INFOCOMWKSHPS61880.2024.10620706

7. X. Wang, Y. Chen, and O. A. Dobre, Robust Federated Learning for Energy Storage Systems, in *Proc. IEEE Wireless Communications and Networking Conference (WCNC)*, Dubai, United Arab Emirates, Apr. 2024. DOI: 10.1109/WCNC57260.2024.10570823
8. X. Wang, Y. Qi, "A Communication-Efficient Protocol for Federated Learning in Energy Storage Systems," in *Proc. The 36th Canadian Conference on Artificial Intelligence (CANAI)*, Montreal, CA, Jul, 2023. DOI: 10.21428/594757db.622f126e
9. X. Wang, Y. Chen, and O. A. Dobre, Malicious Model Detection for Federated Learning Empowered Energy Storage Systems, in *Proc. IEEE International Conference on Computing, Networking and Communications (ICNC)*, Honolulu, HI, USA, Jan. 2023. DOI: 10.1109/ICNC57223.2023.10074032
10. X. Wang, Y. Chen, and O. A. Dobre, Federated Learning for Anomaly Detection: A Case of Real-World Energy Storage Deployment, in *Proc. IEEE International Conference on Communications (ICC)*, Seoul, South Korea, May 2022. DOI: 10.1109/ICC45855.2022.9838875
11. X. Wang, Y. Ma, W. Tang, Z. Quan, and H. V. Poor, Fast Data-Driven Sensitivity Measurement for Wireless Receivers, in *Proc. IEEE International Conference on Communications (ICC)*, Shanghai, China, May 2019. DOI: 10.1109/ICC.2019.8761438

- Book Chapters

12. X. Wang, Y. Chen, and O. A. Dobre, "Federated Learning in Mesh Networks," in *Artificial Intelligence for Future Networks*, M. A. Matin, S. K. Goudos, and G. K. Karagiannidis (Eds.), IEEE Press & Wiley, Dec. 2024, pp. 151–184. DOI: 10.1002/9781394227952.ch6