WANG, Xu

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Queen's University

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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

- Graduate Research Award (Second Place), IEEE Kingston Section (CAD 200), 2025
- Student Travel Award, School of Computing, Queen's University (CAD 700), 2024, 2025
- Student Travel Award, Canadian Artificial Intelligence Association (CAD 700), 2023
- Mitacs Accelerate Fellowship, Mitacs (CAD 45,000), 2023
- Queen's Graduate Award, Queen's University (CAD 3,000), 2021–2024
- National Scholarship for Postgraduates, Ministry of Education of China (RMB 20,000), 2018
- 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 3 Computer Science course, listed as below.

1. CISC-102 Discrete Structures: Winter 2026, Queen's University
2. CISC-102 Discrete Structures: Fall 2024, Queen's University
3. CISC-102 Discrete Math: Fall 2022, Queen's University

Teaching Assistant Experience

I have served as the teaching assistant for 8 Computer Science courses, listed as below.

1. CISC 204 Logic for Computing Science: Fall 2025, Queen's University
2. CISC-335 Computer Networks: Winter 2022,Winter 2023, Winter 2024, Winter 2025, winter 2026 Queen's University
3. CISC-452 Neural and Genetic Computing: Fall 2023, Queen's University
4. COMP-2002 Data Structure: Winter 2021, Memorial University

Departmental Service

- Appointments Officer, School of Computing, Queen's University (2023–present): attended Renewal, Tenure and Promotion Committee meetings and contributed to faculty hiring processes

External Academic Service

- Professional service
  - TPC Member, Mobile & Wireless Networks, IEEE International Conference on Communications (ICC), 2026
  - Session Chair, Selected Areas in Communications Symposium – Big Data 1, IEEE International Conference on Communications (ICC), 2025
  - TPC Member, IoV, IoT, M2M, Sensor Networks, and Ad-Hoc Networking, IEEE 100th Vehicular Technology Conference (VTC2024-Fall), 2024
  - Session Chair, Beamforming Design, IEEE International Conference on Communications (ICC), 2024
  - Faculty Mentor, Google Research exploreCSR, 2022
- Article reviews: IEEE Wireless Communications Letters, IEEE Journal on Selected Areas in Communications, 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), IEEE Wireless Communications and Networking Conference (WCNC), IEEE Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), FCN: AI-Enabled Communications and Networks Symposium
- Conference volunteering
  - IEEE International Conference on Communications, 2025
- Conference participation
  - IEEE International Conference on Communications (ICC), Montreal, Canada, June 2025
  - IEEE International Conference on Computer Communications (INFOCOM), London, United Kingdom, May 2025
  - 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
  - Connectivity Enrichment for Decentralized Federated Learning Networks with Teleportation, INFOCOM,2025
  - 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. X. Wang, Y. Chen, Q. Ye and O. A. Dobre, "Teleportation Links: Mitigating Catastrophic Forgetting in Decentralized Federated Learning," *IEEE Transactions on Network Science and Engineering*, September, 2025. DOI: 10.1109/TNSE.2025.3611109
2. 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
3. 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
4. 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.
5. 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

6. X. Wang, Y. Chen, Q. Ye, and O. A. Dobre, Connectivity Enrichment for Decentralized Federated Learning Networks with Teleportation, in *IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)*, London, United Kingdon, May 2025. DOI: 10.1109/INFOCOMWKSHPS65812.2025.11152750
7. X. Wang, Y. Chen, and O. A. Dobre, Designing Robust 6G Networks with Bimodal Distribution for Decentralized Federated Learning, in *IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)*, Vancouver, Canada, May 2024. DOI: 10.1109/INFOCOMWKSHPS61880.2024.10620706
8. X. Wang, Y. Liang, 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
9. 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
10. 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
11. 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
12. 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

13. 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