JINDI WU

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RESEARCH INTEREST

Her research focuses on quantum computing systems and algorithms, with the goal of making quantum algorithms reliable and deployable on real quantum hardware. Her work spans algorithm–system co-design, including quantum circuit compilation, quantum error mitigation and correction, distributed quantum computing and quantum networks, as well as security and privacy challenges in quantum cloud computing.

WORK EXPERIENCE

DePaul University, IL, USA Sep. 2025 - Present
Assistant Professor, School of Computing

EDUCATION

William & Mary, VA, USA Aug. 2020 - Aug. 2025
Ph.D. in Computer Science
Advisor: Prof. Qun Li

Syracuse University, NY, USA Sep. 2018 - May 2020
M.S. in Computer Science

Nanjing University of Aeronautics and Astronautics, China Sep. 2013 - Jun. 2017
B.E. in Information Security

PUBLICATIONS

Peer-reviewed Conference Papers

1. A Fine-Grained and Efficient Reliability Analysis Framework for Noisy Quantum Circuits
Jindi Wu, Tianjie Hu, and Qun Li
2026 ACM SIGMETRICS / International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS'26)

2. Disparity Surface Code: Optimizing Error Correction in Quantum Networks
Tianjie Hu, **Jindi Wu**, and Qun Li
2025 IEEE International Conference on Quantum Computing and Engineering (QCE'25)

3. Detecting Fraudulent Services on Quantum Cloud Platforms via Dynamic Fingerprinting
Jindi Wu, Tianjie Hu, and Qun Li
43rd IEEE/ACM International Conference on Computer-Aided Design (ICCAD'24)

4. Quantum Network Routing Based on Surface Code Error Correction
Tianjie Hu, **Jindi Wu**, and Qun Li
44th IEEE International Conference on Distributed Computing Systems (ICDCS'24), pp. 1236-1247

5. MORE: Measurement and Correlation-Based Variational Quantum Circuit for Multi-Classification
Jindi Wu, Tianjie Hu, and Qun Li
4th IEEE International Conference on Quantum Computing and Engineering (QCE'23), pp. 208-218

6. LAWS: Look Around and Warm-Start Natural Gradient Descent for Quantum Neural Networks
   Zeyi Tao, **Jindi Wu**, and Qun Li
   2rd IEEE International Conference on Quantum Software (QSW'23), pp. 76-82

7. Scalable Quantum Neural Networks for Classification
   Jindi Wu, Zeyi Tao, and Qun Li
   3rd IEEE International Conference on Quantum Computing and Engineering (QCE'22), pp. 38-48

8. Efficient Privacy-Preserving Federated Learning for Resource-Constrained Edge Devices
   Jindi Wu, Qi Xia, and Qun Li
   17th International Conference on Mobility, Sensing and Networking (MSN'21), pp. 191-198

9. SAFE: Similarity-Aware Multi-Modal Fake News Detection
   Xinyi Zhou[†], **Jindi Wu**[†], and Reza Zafarani
   24th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'20), pp. 354-367
   [†]Co-first authors

Journal & Magazine Articles

1. QuanGuard: Error Evolution-based Fingerprinting for Fraud Detection in Quantum Cloud Services
   Jindi Wu, Tianjie Hu, and Qun Li
   IEEE Transactions on Computers, to appear.

2. Q-ID: Lightweight Quantum Network Server Identification through Fingerprinting
   Jindi Wu, Tianjie Hu, and Qun Li
   IEEE Network 38(5): 146-152, 2024

3. Distributed Quantum Machine Learning: Federated and Model-Parallel Approaches
   Jindi Wu, Tianjie Hu, and Qun Li
   IEEE Internet Computing 28(2): 65-72, 2024

4. SurfaceNet: Fault-Tolerant Quantum Networks with Surface Codes
   Tianjie Hu, **Jindi Wu**, and Qun Li
   IEEE Network 38(1): 155-162, 2024

5. A Survey of Federated Learning for Edge Computing: Research Problems and Solutions
   Qi Xia, Winson Ye, Zeyi Tao, **Jindi Wu**, and Qun Li
   High-Confidence Computing 1(1): 100008, 2021. (HCC'21)

Posters

1. Scalable Quantum Convolutional Neural Networks for Edge Computing
   Jindi Wu and Qun Li
   7th IEEE/ACM Symposium on Edge Computing (SEC'22), pp. 307-309

2. Fingerprinting Cloud-Based Quantum Computers Using Quantum Noise
   Jindi Wu, Tianjie Hu, and Qun Li
   3rd Commonwealth Cyber Initiative Symposium (CCI Symposium'24)

TEACHING

Instructor
DePaul University

- CSC 403 Data Structures II — Winter 2026
- CSC 402 Data Structures I — Fall 2025

Teaching Assistant
William & Mary

- CSCI 303 Algorithms — Spring 2022
- CSCI 416 Introduction to Machine Learning — Fall 2021
- CSCI 304 Computer Organization — Spring 2021
- CSCI 301 Software Development — Fall 2020

TALKS

- Detecting Fraudulent Services on Quantum Cloud Platforms via Dynamic Fingerprinting
  ICCAD'24, Newark, New Jersey
- MORE: Measurement and Correlation-Based Variational Quantum Circuit for Multi-Classification
  QCE'23, Bellevue, Washington
- Quantum Machine Learning
  W&M Graduate & Honors Research Symposium'23, Williamsburg, Virginia
- Scalable Quantum Neural Networks for Classification
  QCE'22, Broomfield, Colorado
- Efficient Privacy-Preserving Federated Learning for Resource-Constrained Edge Devices
  MSN'21, Virtual

HONORS & AWARDS

- W&M Graduate Research Seed Grants — 2024
- W&M International Student Opportunity Scholarship — 2022
- SEC'22 Travel Grant — 2022
- High-Confidence Computing (HCC) 2021 Best Paper Award — 2021
- W&M CS Conference Fund — 2021

SERVICE

Conference Organization and Leadership

- Track Chair, The 35th International Conference on Computer Communications and Networks (ICCCN 2026) — 2026
- Session Chair, ACM/IEEE Symposium on Edge Computing (SEC'22) Ph.D. Forum — 2022

Technical Program Committee (TPC)

- IEEE International Conference on Distributed Computing Systems (ICDCS'26) — 2026
- IEEE International Conference on Quantum Artificial Intelligence (QAI'25) — 2025
- MICRO CAMS Workshop (CAMS'25) — 2025
- IEEE Consumer Communications and Networking Conference (CCNC 2026) — 2026
- QCE'23 StableQ Workshop — 2023

Broader Community Engagement

- Grace Hopper Celebration 23 (GHC'23), Graduate Chaperone — 2023

Reviewer

- IEEE Transactions on Computers 2021, 2022, 2023, 2025
- IEEE Internet Computing 2023, 2024, 2025
- IEEE Transactions on Parallel and Distributed Systems 2024, 2025
- IEEE Transactions on Cloud Computing 2025
- Quantum Machine Intelligence 2024, 2025
- Quantum Information Processing 2024, 2025
- IEEE Journal on Selected Areas in Communications 2025
- IEEE Transactions on Cognitive Communications and Networking 2025
- Discover Quantum Science 2025
- EPJ Quantum Technology 2025
- Computing 2025
- The Journal of Supercomputing 2025
- Journal of Cloud Computing 2025
- Optical and Quantum Electronics 2025
- Annals of Biomedical Engineering 2025
- Cluster Computing 2025
- Expert Systems With Applications (ESWA) 2023, 2024
- IEEE Network Magazine 2024
- ICCAD'23 Quantum Contest 2023
- IEEE Internet of Things Journal 2023
- Applied Intelligence (APIN) 2023
- 4th IEEE International Conference on Quantum Computing and Engineering (QCE'23) 2023
- 10th IEEE Conference on Communications and Network Security (IEEE CNS) 2022
- Journal of Reliable Intelligent Environments (JRIE) 2022