

Victor (Yanfei) Wei

CONTACT INFORMATION

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GitHub: <https://victor11235.github.io>

EDUCATION

Stanford University, Stanford

June 2024 – Present

Ph.D. in Applied Physics

Advisor: Prof. David Schuster

Focus: *Superconducting circuit, quantum error correction*

McGill University, Montreal

Sept. 2020 – May 2023

B. Sc in Joint Honors Physics and Computer Science

CGPA 3.92/4.00

RESEARCH EXPERIENCE

Institute for Quantum Computing, University of Waterloo

May 2023 – Dec. 2023

Undergraduate Research Assistant / Group Project Manager

- Supervised by Prof. Christine Muschik, collaborated with Quantum Optics and Spectroscopy group at University of Innsbruck. Worked on experimentally feasible state reconstruction with randomized measurements.

Department of Physics, McGill University

Sep. 2022 – Apr. 2023

Undergraduate Thesis Project

- Supervised by Prof. Christine Muschik (Waterloo), Prof. Pooya Ronagh (Waterloo), and Prof. Bill Coish (McGill). Worked on neural network quantum state tomography with classical shadows.

Institute for Quantum Computing, University of Waterloo

May 2022 – Aug. 2022

Undergraduate Research Assistant

- Supervised by Prof. Christine Muschik, collaborated with IBM Quantum. Worked on experimental simulation of fundamental interactions with a quantum computer.

Department of Physics, McGill University

May 2021 – Apr. 2022

Undergraduate Research Assistant

- Supervised by Prof. Bill Coish. Worked on excited states and linear response dynamics with neural network quantum states.

PUBLICATIONS

[1] **Victor Wei**, Bill Coish, Pooya Ronagh, and Christine Muschik, “Neural-Shadow Quantum State Tomography”, Phys. Rev. Research 6, 023250 (2024).

[2] **Victor Wei**, Alev Orfi, Felix Fehse, and William A. Coish, “Finding the Dynamics of an Integrable Quantum Many-Body System via Machine Learning”, Advanced Physics Research, 2300078 (2023). (Editor’s Choice)

[3] Yasar Y. Atas, Jan F. Haase, Jinglei Zhang, **Victor Wei**, Sieglinde M.-L. Pfaendler, Randy Lewis, and Christine A. Muschik, “Simulating One-dimensional Quantum Chromodynamics on a Quantum Computer: Realtime Evolutions of Tetra- and Pentaquarks”, Phys. Rev. Research 5, 033184 (2023).

SKILLS

Programming Languages

- Python, C++, Julia, Java, Mathematica, Matlab, LATEX.

Languages

- Proficient or native: English, Mandarin Chinese.