

Victor (Yanfei) Wei

CONTACT INFORMATION

Phone: +1 (613) 809-9528

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EDUCATION

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 – Present

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.
- Group project manager.

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.
- Manuscript submitted.

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.
- Manuscript accepted by Physical Review Research.

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.
- Manuscript accepted by Wiley's Advanced Physics Research as Editor's Choice.

PUBLICATIONS

- [1] Y. Y. Atas, J. F. Haase, J. Zhang, **V. Wei**, S. M.-L. Pfaendler, R. Lewis, and C. A. Muschik, “Real-time Evolution of SU(3) Hadrons on a Quantum Computer”, arXiv preprint arXiv:2207.03473 (2022). (Accepted by Physical Review Research)
- [2] **Victor Wei**, Bill Coish, Pooya Ronagh, and Christine Muschik, “Neural-Shadow Quantum State Tomography”, arXiv preprint arXiv:2305.01078 (2023). (Submitted and under review)
- [3] **Victor Wei**, Alev Orfi, Felix Fehse, and Bill Coish, “Machine Learning the Dynamics of an Integrable Quantum Many Body System”, arXiv preprint arXiv:2307.03310 (2023). (Accepted by Wiley’s Advanced Physics Research as Editor’s Choice)

AWARDS AND HONORS

E. R. Pounder Prize in Physics – McGill University, Montreal

- Awarded in 2021, valued at \$395 CAD.

Dean’s Honor List – McGill University, Montreal

- Awarded in 2021.

Excellence Bursary for Computer Science – McGill University, Montreal

- Awarded in 2021, valued at \$1000 CAD.

NSERC Undergraduate Research Award – McGill University, Montreal

- Awarded in 2021, valued at \$6000 CAD.

J. W. McConnell Scholarship – McGill University, Montreal

- Awarded in 2020, 2021, and 2022, valued at \$5000 CAD per year.

SKILLS

Programming Languages

- Python, C++, Julia, Java, Mathematica, Matlab, L^AT_EX.

Languages

- Proficient or native: English, Mandarin Chinese.