

Danesh Morales Hashemi

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Research Positions

- 2025 – Present** **Graduate Research Assistant**, Institute for Quantum Computing
Advisor: Graeme Smith
- 2024 – 2025** **Undergraduate Research Assistant**, Institute for Quantum Computing
Advisor: Joseph Emerson
- Fall 2023** **Undergraduate Research Assistant**, University of Waterloo
Advisor: Roberto Guglielmi

Education

- 2025 – Present** **MMath in Applied Mathematics**, University of Waterloo
Advisor: Graeme Smith
- 2020 – 2025** **BMath in Mathematical Physics**, University of Waterloo
Co-op Program · Pure Mathematics Minor · Graduated with **Dean's Honours**


Conferences and Talks

- March 2025** **“Demonstrating Circuit Benchmarking for Scalable and Efficient Fidelity Estimation”**
APS March Meeting 2025, Session on Scalable Verification and Validation (QCVV), Anaheim Convention Center

Teaching Experience

- Spring 2025** **Teaching Assistant**, AMATH 250 – Introduction to Differential Equations
- Fall 2023** **Instructional Support Assistant**, MATH 115 – Linear Algebra for Engineering
- Winter 2022** **Instructional Support Assistant**, CS 115 – Introduction to Computer Science

Projects

- December 2025** **“Introduction to Cycle Benchmarking for Quantum Error Diagnostics”**
QIC 820 Final Project, Institute for Quantum Computing
- December 2025** **“Predicting MLB Playoffs Using Quantum Machine Learning”**
QIC 890 Final Project, Institute for Quantum Computing.  [Link](#)

- April 2025** **“Demonstrating Circuit Benchmarking for Efficient and Scalable Fidelity Estimation”**
Undergraduate Thesis, University of Waterloo
- August 2024** **“Introduction to Superoperator Representations and Characterization of Completely Positive Maps”**
AMATH 900 Final Project, University of Waterloo

Awards and Scholarships

Institute for Quantum Computing Undergraduate Research Award 2024	16,000 CAD
University of Waterloo President’s Scholarship 2020	2,500 CAD
Full Undergraduate Educational Excellence Scholarship 2019, SENACYT, Panama	250,000 USD

Relevant Coursework (with links to syllabus)

Quantum Physics	Quantum Theory 1/2/3	Representation Theory
Quantum Information Processing	Quantum Machine Learning	Groups and Ring Theory
Quantum Devices	Theory of Quantum Information	Galois and Field Theory