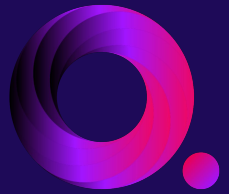
Welcome to Qubes



Tell us about yourselves in the chat:

Preferred name & Pronouns

* Joanna/Jo (she/her)
* Alex (he/him)

School, City, & Timezone

* University of Toronto (EST)
* University of Illinois (CST)

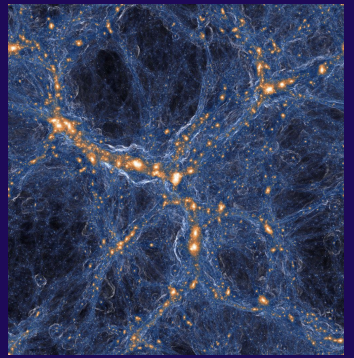
Dream Job OR What is the most important thing for you in your career?

* I want to be helping people
* Professor at a Research University

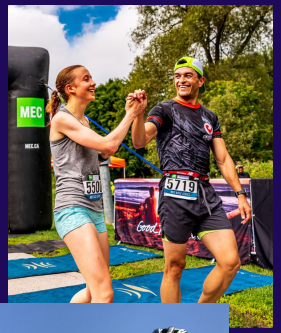
What activity brings you the most joy?

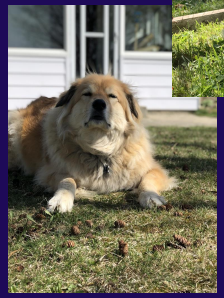
* Making people laugh + running :)
* Spending time with my loved ones

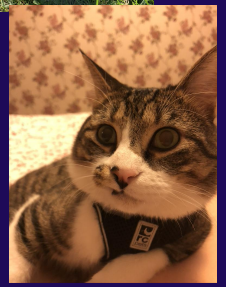
Our Schooling Backgrounds



A bit more about us :D







Why we like quantum computing:

[Multidisciplinary]

[Many, many applications (see next slide!)]

[A new field - there is a lot to learn]

[Good teachers]

[We just do (?)]

Applications of Quantum Computing:

[Machine Learning and AI]

[Cybersecurity and Cryptography]

[Optimization Problems]

[Astrophysics Simulations of the Universe!!!]

[Many, many more]

Course Structure

Module 1: Intro to QM

Module 2: Intro to Classical Computing

Module 3: Complex Numbers

Module 4: Linear Algebra

Module 5: Qubits and Single-Qubit Quantum Gates

* note these don't necessarily correspond to weeks

Course Structure

Module 6: Writing quantum programs

Module 7: Multi-qubit States and Multi-Qubit Quantum Gates

Module 8: Deutch's algorithm

Module 9: Quantum Teleportation

Module 10: Quantum Algorithms Survey

* note these don't necessarily correspond to weeks

Logistics

Lectures: Sundays, 2pm EST/11am PST

Office Hours:

- Mondays 5pm EST/2pm PST (Joanna)
- Fridays 6pm EST/3pm PST (Alex)

* all on different zoom links!

Take a read through the **syllabus**

Break time !!