

Kaleb Ruscitti

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EDUCATION

BSc. IN MATHEMATICAL PHYSICS
Expected Aug. 2021 | University of Waterloo
Term Dean's List (All Terms)
Cum. Average: 83%

LINKS

Github:// [kalebruscitti](#)
LinkedIn:// [kaleb-ruscitti-b4a2659b](#)
Personal: [kaleb.ruscitti.ca](#)

COURSEWORK

UNDERGRADUATE:

Ordinary Differential Equations
Linear Algebra
Optics
Group Theory
Real Analysis

SKILLS

TECHNICAL

Programming:

Python • C++ • \LaTeX • HTML/CSS

Industry:

Analog Circuits • Optics • Machine Shop
• CAD/3D Print

Certifications:

WHMIS • Compressed Gas and Cryogenics

SOFT

Languages:

English (Native) • French (CEFL B2)

• Mandarin (HSK 4)

Workplace:

Conflict-Resolution • Team-Leadership
• Graphic and Presentation Design

WORK EXPERIENCE

INSTITUTE FOR QUANTUM COMPUTING | RESEARCH ASSISTANT

Jan. 2017 - April 2017, Jan 2018-April 2018 (8 mo.) | Waterloo, ON

- Undergraduate Research Assistant working on the Quantum Information with Trapped Ions team under Dr. Rajibul Islam.
- Worked on the Adaptive Optics for Ion Trap Addressing and pySLM projects below.
- Built various types of lab apparatus, e.g. optics, machined parts, for the team to use.

PROJECTS

ADAPTIVE OPTICS FOR ION TRAP ADDRESSING |

UNDERGRADUATE RESEARCH PROJECT

Institute for Quantum Computing, Jan-Apr 2018

- Implemented a previous adaptive optics technique in the lab to use for addressing ions in a Yb⁺ ion trap.
- Explored novel methods to increase the power efficiency of the technique.
- Presented my results at field conferences and group talks.

PYSLM | PYTHON SPATIAL LIGHT MODULATORS

Institute for Quantum Computing, Jan-Apr 2018

- Wrote a complete python package for our lab and other labs to control spatial light modulators.
- Allows for simple creation of accurate simulations, and easy control of DMD or other SLM devices.
- Collaborated with co-workers to create clean and professional codebase.

CLASSICAL GRAVITATION SIMULATION | PYTHON SIMULATION

Personal, July 2015

- Over a week, wrote code in Python that simulates the motion of bodies in a solar system due to Newtonian gravitation. The program also displays a graphical visualization of the motion that updates in real time.
- Uses Python 2.7 with the Pygame package for visualization and Tkinter for the GUI.

AWARDS

2017	department	Confucius Institute Scholarship
2016	top in school	Euclid Mathematics Contest
2016	international finalist	DECA International, in Apparel and Accessories Marketing
2016	regional	Rotary Club Scholarship to an Outstanding Student
2016	regional	Kiwanis Club Barrie Scholarship to a Student Leader
2016	high-school	Silver Award for Academic and Extracurricular Excellence
2015	4th overall	DECA Ontario, in Public Relations Project