

# W. Callum Wareham

warehamw@uoguelph.ca | 519-221-4530 | warehamw.github.io  
6639 Wellington Rd. 34, Cambridge, ON, N3C 2V4

---

## Career Objective

---

I am a fourth-year physics student, seeking a graduate project with a real-world problem at its core. I am seeking graduate opportunities in a dynamic research group in computational or experimental physics and am willing to consider a broad variety of projects.

## Skills

---

- Critical thinking and problem-solving, developed through both research and homework problems in physics, mathematics, and programming.
- Extensive experience working with data in Python, including both numerical modelling and processing large quantities of experimental data into a database.
- Focused in both collaborative and independent situations.
- Exceptional written and oral communication skills as recognized by supervisors and instructors.
- Scientific documentation for both simulations and in the lab.

## Education

---

**Bachelor of Science, Honours Physics** – University of Guelph *2018-Present*

- 93 GPA (A+ letter grade)

## Research Experience

---

**Departmental Summer Research Award** – 2021

**Senior Undergraduate Research Project** – 2021-2022 (*current*)

Kilonova Modelling with Python – Prof. Daniel Siegel University of Guelph

- Implemented numerical model in Python with the goal of predicting multi-component kilonova emission based on output from binary neutron star merger simulations.
- Investigating effect of magnetar remnant-based microphysics on kilonova lightcurves.

**NSERC Undergraduate Summer Research Assistantship** – 2020

**Part-Time Student Research Assistant** – 2020-2021

Infrared Spectroscopy of PEX-a Pipes – Prof. John Dutcher University of Guelph

- Independently planned, built, documented and maintained a Python script for processing over 14,000 infrared spectra on PEX pipes alongside categorical information on the scans. Group is using database to streamline new analyses and visualizations, and it has been used to produce some interesting results.
- Communicated with group effectively, including through group meeting presentations, to determine project requirements and develop effective solutions. Recognized by supervisor & other group members for excellent clarity and attention to detail when presenting.

# W. Callum Wareham

warehamw@uoguelph.ca | 519-221-4530 | warehamw.github.io  
6639 Wellington Rd. 34, Cambridge, ON, N3C 2V4

---

## Awards and Scholarships

---

- **James L. Hunt Scholarship in Physics – 2020**
  - Awarded to a third-year physics major who has completed a minimum of 10 credits and who has the highest cumulative average over 80%
- **Copernicus Scholarship in Physics – 2020**
  - Awarded to the three students achieving the highest combined average in PHYS\*2330 (Electricity and Magnetism I) and PHYS\*2240 (Thermal Physics) in the previous academic semester.
- **College of Biological Sciences Dean's Scholarship – 2020**
  - Awarded to those students demonstrating a high level of academic achievement. At the time that I was considered for this award, I was enrolled in the College of Biological Sciences.
- **University of Guelph Retiree's Association Scholarship – 2020**
  - Awarded to a student with the highest average registered in a degree program who is a child, grand child, or great grand child of a retiree of the University of Guelph.
- **Puslinch Optimist's Club Scholarship – 2018-2019**
  - Awarded to a citizen of Puslinch township entering university in the preceding year, who has shown academic success and involvement in the community.
- **University of Guelph Entrance Scholarship – 2018**
  - Awarded for joining the University with an average greater than 90%.

## Volunteer Experience

---

**VP External** – U of Guelph Physics and Astronomy Club *2020-Present*

- Attending CEPS Student Council Executive Committee meetings and assisting with event planning for undergraduate students and outreach. Guest Host on club podcast Gryphons and Gluons.

**Student Representative** - Undergraduate Physics Curriculum Committee *2019 - 2021*

- Gathering, interpreting and communicating student feedback on courses and program structure in order to improve future curriculum.