

Jack Hollis Farrell

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80309

EDUCATION

Honours B.Sc. Physics, *University of Toronto* (2017–2021)

- Major in Physics, Minors in Mathematics and English.
- GPA 3.96/4.00

Ph.D. Physics, *University of Colorado Boulder* (2021–Present)

- Advisor: Prof. Andrew Lucas
- GPA 4.00/4.00

WORK

Research Assistant, *University of Colorado Boulder* (2021–Present)

- Advisor: Andy Lucas

Research Student (NSERC USRA), *University of Toronto* (2020)

- Project: *Computational Electron Hydrodynamics*
- Supervisors: Prof. Thomas Scaffidi & Prof. Nicolas Grisouard

Research Student (NSERC USRA), *University of Toronto* (2019)

- Project: *Balloon-Borne Spectrometer Mission*
- Supervisor: Prof. Kaley A. Walker

Director, *Indefensible: The Troubling Legacy of Edward Cornwallis* (2017)

- Directors: Jack Farrell and Tom Fraser
- Funded by: The *Northrop Frye Centre at Victoria College*
- <https://filmfreeway.com/indefensibleTheTroublingLegacyofEdwardCornwallis>

TEACHING

Teaching Assistant, *University of Colorado Boulder* (2021–Present)

- PHYS 1110, Fall 2021
- PHYS 1110, Spring 2022
- PHYS 1110, Fall 2022
- PHYS 1125, Spring 2023
- PHYS 1110, Fall 2023

Teaching Assistant, *University of Toronto* (2020–2021)

Extra help for programming in Python for physics majors

Physics Tutor, *Victoria College Physics Tutors* (2019–2020)

Extra help for first and second year physics classes

HONOURS

- University of Toronto BMO National Scholarship, *University of Toronto*** (2017–2021)
Full scholarship to U of T, covering tuition and living fees for four years
- NSERC Canada Graduate Scholarship (CGS-M), *NSERC*** (2021)
Declined: offered at U of T, UBC, University of Waterloo / Perimeter Institute
Research grant for first-year Ph.D. students
- Hymie and Roslyn Mida Award in Theoretical Physics, *University of Toronto*** (2020)
- NSERC Undergraduate Summer Research Award, *NSERC*** (2020)
Research grant for undergraduates
- Luste Prize in Experimental Physics, *University of Toronto*** (2020)
Top physics major in U of T’s laboratory classes
- NSERC Undergraduate Summer Research Award, *NSERC*** (2019)
Research grant for undergraduates
- University of Toronto Scholar, *University of Toronto*** (2018–2019)
The University of Toronto Scholars Program recognizes exceptional students in first, second, or third year

PUBLICATIONS

1. **Jack H. Farrell**, Xiaoyang Huang, Aaron J. Friedman, Isabella Zane, Paolo Glorioso, and Andrew Lucas. “Generalized time-reversal symmetry and effective theories for nonequilibrium matter,” (2023), arXiv: [2310.12233](#)
2. **Jack H. Farrell**, Xiaoyang Huang, and Andrew Lucas. “Hydrodynamics with Helical Symmetry,” (2022), arXiv: [2208.12269](#)
3. **Jack H. Farrell**, Nicolas Grisouard, and Thomas Scaffidi. “Terahertz Radiation from the Dyakonov-Shur Instability of Hydrodynamic Electrons in a Corbino Geometry,” (2022), arXiv: [2112.07683](#)