

Education

- 2024 – Now **Doctor of Philosophy, Physics**
McGill University, Montréal, QC Canada
- **McGill Graduate Association of Physics Students (MGAPS)** representative of The Association of Graduate Students Employed at McGill (AGSEM).
 - **Space Explorers:** Teaching Québec elementary school students about physics and space science.
 - **McGill Physics Hackathon** volunteer.
- 2022 – 2024 **Master's of Science, Physics and Astronomy**
Bishop's University, Sherbrooke, QC Canada
- **Astronomy, Mathematics & Physics Society (AMPS)** graduate representative.
- 2015 – 2020 **Bachelor of Science, Major Physics and Major Computer Science**
McGill University, Montréal, QC Canada
- Honours thesis: Analytic & numerical solutions to the inverse problem of exoplanet albedo maps.
 - **McGill Space Group (MSG)** payload subteam leader, and website developer.
- 2011 – 2015 **High School Diploma**
Catalina Foothills High School, Tucson, AZ USA
Falmouth Academy, Falmouth, MA USA
- AP Scholar, Blue Scholar, National Honor Society Member, and Varsity Athlete.

Work Experience

- May – June 2021 – 2022 **Tangam Systems Data Analyst / Software Developer**
Remote, Dalkeith, ON Canada
- Gaining professional experience in a highly specialized and technical industry by analyzing table game data and using full-stack tools such as *C# Angular, Git, JS/TS* and the *Scrum* workflow.
- Aug – May 2020 – 2021 **Independent Full Stack Developer**
Home, Dalkeith, ON Canada
- Working on a full stack intelligent automated [schedule manager](#).
 - Includes a Python/Django/SQL backend and a React.js/Bootstrap/Webpack/Redux frontend.
- May – Aug 2020 **iREx Summer Internship & MSI Summer Student Program**
Remote, Dalkeith, ON Canada
(16 weeks)
- Continued honours thesis research with Prof. Nicolas Cowan on exoplanet analytic lightcurves.
 - Optimized *Python* program *QEARL*; compared *QEARL* to programs *starry* & *exocartographer*.
- May – Aug 2019 **Summer Undergraduate Research Position**
Canadian Institute for Theoretical Astrophysics, Toronto, ON Canada
(16 weeks)
- Coded in *Python* a software that automatically generates gravitational microlensing amplification curves and mass distributions, and developed a black hole discovery methodology.
 - Researched under the supervision of Dr. Wei Zhu, with a lot of independence.
- May – Jul 2018 **Independent Web Development**
Home, Rennes, France
(3 months)
- Gained experience with *ReactJS, CSS, Git, textitSASS, GitHub Pages*, and *Webpack*.
 - Experimented with animations, OO web development, and from-scratch website creation.
- May – Aug 2017 **Dishwasher & Food Preparation**
Pizzeria No. 900 Napolitaine, Montréal, QC Canada
(4 months)
- Mastered an efficient and rigorous work ethic.

May – Aug 2016
(4 months) **Functionality Quality Assurance Tester**
Babel Media a Keywords Studio, Montréal, QC Canada

- Conducted quality assurance testing for games in development.
- Collaborated with numerous FQA Testers to assure detailed inspection of all projects.
- Adapted to project changes, flexible scheduling, and changing environments.

Publications / Awards

Publications *Detecting isolated stellar-mass black holes in the absence of microlensing parallax effect.*
Numa Karolinski, Dr. Wei Zhu. MNRAS: Letters, Volume 498, Issue 1, Oct. 2020.
Einstein gravity as the thermal equilibrium state of a nonminimally coupled scalar field geometry, in preparation. Numa Karolinski, Dr. Valerio Faraoni.

Awards 2024 FRQNT Doctoral Research Scholarship.
2023 Graduate Entrance Scholarship Award.
2020 TEPS CREATE Program Funding, Rubin Gruber SURF Recipient.
2019 CITA NSERC Undergraduate Summer Research Award (rejected).

Computer / Software Skills

Languages *Python, (Postgre)SQL, C, C++, C#, Bash, Java, JavaScript, TypeScript, HTML, CSS, SASS, JQuery, MATLAB, OCaml, Stan*

Libs./Other *SciKitLearn, TensorFlow Keras, React.js, Django, Git(hub), UML, Docker, Webpack, Redux, Bootstrap, L^AT_EX, MS Office*

Languages / Background

Language English (Native), French (TEF Niveau B)
Countries of Residence: United States, France, and Canada [present, PR]

Volunteer Bishop's University Open House Usher, Introductory Python Lecturer,
ED&I Undergraduate Committee Climate Survey Taskforce Team

Interests Running, Rock climbing (Bouldering), Piano, Violin, DJing, Astrophysics, Cosmology,
History, Economics, Foreign Affairs, Competitive and Casual Video Games

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