Arthur Lei Qiu

arthur.qiu@mail.utoronto.ca · uoft.me/alq

Education

University of Toronto, Canada — 2016 – present
Honours B.Sc., mathematics and physics, expected graduation May 2020

Swiss Federal Institute of Technology (ETH) Zürich, Switzerland
Exchange student, one year duration — 2018 – 2019

Research Experience

Experimental Particle Physics Group, University of Toronto
Supervisor: Prof. Pekka Sinervo — May – Aug 2018

- Improved machine learning algorithms applicable to studies of top quark production for the ATLAS Experiment at CERN.
- Certified by the Compute Ontario Summer School for courses in high-performance computing, machine learning, and neural networks.
- Funded by an NSERC Undergraduate Student Research Award (USRA) with Chair's Scholar distinction.

Department of Astronomy and Astrophysics, University of Toronto
Supervisor: Prof. John Percy — 2017 – 2018

- Conducted time series analysis (Fourier and wavelet) on long-term stellar measurements using open-source software package VStar.
- Developed and tested reliable methods of determining variations in mean magnitude (brightness) of pulsating red giants.
- Funded by the University of Toronto Work-Study program.

Refereed Publications

Percy, J. R. and Qiu, A. L. *Long-Term Changes in the Variability of Pulsating Red Giants (and One R CrB Star)*, J. Amer. Assoc. Var. Star Obs., **47** (2019), 1-7.

Teaching Experience

First-Year Learning Communities, University of Toronto
MAT157 (Analysis I) Peer Mentor — Sep 2019 – present

- Led workshops on communication in mathematics and LaTeX.
- Did some other stuff.

MAT135: Calculus 1(A), University of Toronto — Sep 2019 – present
Teaching assistant

- Led two weekly tutorial sections, facilitating Applied Communication Tasks to improve students' mathematical communication skills.

MAT136: Calculus 1(B), University of Toronto — Jan – Apr 2018
Teaching assistant

- Led two weekly tutorial sections, facilitating Peer-Assisted Reflection problem discussion to improve students' mathematical communication skills.
- Marked term test and final exam; held pre-exam office hours.

Selected Honours and Awards

Ivan Szak Scholarship in Mathematics and Physics; *University of Toronto.* 2019

Class of 3T0 and Associates Scholarship in Mathematics and Physics; *University of Toronto.* 2018

Reuben Wells Leonard Scholarship in the Physical Sciences; *University College, University of Toronto.* 2017 and 2018

Dean's List Scholar; *University of Toronto.* 2017 and 2018

Mobilitätsstipendium (Mobility Scholarship), *ETH Zürich.* 2018

Heyning-Roelli Scholarship; *Heyning-Roelli Foundation.* 2018

Undergraduate Student Research Award, Chair's Scholar distinction; 2018
Natural Sciences and Engineering Research Council of Canada;
Department of Physics, University of Toronto.

International Experience Award; *Centre for International Experience,* 2018
University of Toronto.

Donald MacRae Scholarship in Astronomy and Astrophysics; 2017
Department of Astronomy and Astrophysics, University of Toronto.

University of Toronto Scholar; *University of Toronto.* 2017

Governor General's Academic Medal, Bronze level; 2017
Office of the Secretary to the Governor General of Canada.

J.S. McLean Scholarship; *University College.* 2016

President's Scholar of Excellence; *University of Toronto.* 2016

National Book Award; *University of Toronto.* 2016

Service Activities

phimale, ETH Zürich Apr – May 2019
Coffee Lecture volunteer
- Worked with event organizers to set up lectures on gender equality in mathematics and physics, attracting over 80 attendees.

Vereinsanzeiger der Mathematik- und Physikstudierenden (Journal of the Association of Mathematics and Physics Students), ETH Zürich
Journal editor Apr – May 2019
- Proofread student-submitted articles and collaborated with journal editorial board to design layout in Adobe InDesign for 2019 volume.

Accessibility Services, University of Toronto Jan – Dec 2017
Volunteer note-taker
- Transcribed lecture notes into Microsoft Word/LaTeX for students with disability accomodations in computer science and ethics courses.

Miscellaneous

Computer Skills
- Languages: LaTeX, Python
- Software: Adobe Photoshop, Adobe InDesign, Microsoft Office suite, Git
- Operating systems: Windows 7/8/10, Ubuntu 16.04

Languages
- Native: English
- Conversational fluency: Mandarin Chinese
- Elementary proficiency: French, Standard German