

Mattias Lazda

✉ mattias.lazda@mail.utoronto.ca | 🏠 www.mattiaslazda.ca | 📷 [lazdam](#)

Current Position

University of Toronto

PhD, Astronomy & Astrophysics
Supervisor: Juan Mena-Parra

[Toronto, ON, Canada](#)

Sept. 2023 -

Education

McGill University

B.Sc., Honours Physics (GPA: 3.98/4.00)
Undergraduate Thesis: *Forming Pulsar Tracking Beams for the CHIME/FRB Outriggers*
Supervisor: Victoria Kaspi

[Montreal, QC, Canada](#)

Aug. 2019 - Dec 2023

John Abbott College

Diplôme D'Études Collégiales (R-score: 36.5)

[Montreal, QC, Canada](#)

Sept. 2017 - May 2019

Awards, Honours & Fellowships

2023	Ontario Graduate Scholarship , \$15,000	University of Toronto
2023	PhD Entrance Scholarship , \$5,000	University of Toronto
2022	James F. Mathison Scholarship , \$3,000	McGill University
2022	McGill Science Honour Roll , honor	McGill University
2021	R. Gruber Science Undergraduate Research Award , \$7,000	McGill University
2021	West Virginia University (WVU) Symposium, 2nd place , \$250	WVU
2021	Faculty of Science Scholarship , \$250	McGill University
2020	R. Gruber Science Undergraduate Research Award , \$7,000	McGill University
2020	McGill Science Honour Roll , honor	McGill University
2019	John Mahon Scholarship , \$9,000	McGill University

Publications

Submitted for Peer Review

[5] The CHIME/FRB Collaboration + 61 co-authors including **Lazda, M.** (2023). *Updating the first CHIME/FRB catalog of fast radio bursts with baseband data.* Submitted to *The Astrophysical Journal*.

[4] Cassanelli, T., Leung, C., Sanghavi, P. + 49 co-authors including **Lazda, M.** (2023). *A fast radio burst localized at detection to a galactic disk using very long baseline interferometry.* Submitted to *Nature Astronomy*.

[3] Sanghavi, P. Leung, C. + 14 co-authors including **Lazda, M.** (2023). *TONE: A CHIME/FRB Outrigger Pathfinder for localizations of Fast Radio Bursts using Very Long Baseline Interferometry.* Submitted to *Journal of Astrophysical Instrumentation*.

Accepted for Publication

[2] CHIME/FRB Collaboration + 58 co-authors including **Lazda, M.** (2023). *CHIME/FRB Discovery of 25 Repeating Fast Radio Burst Sources*, *ApJ*, 947, 83C

[1] Cook, A. + 27 co-authors including **Lazda, M.** (2023). *An FRB Sent Me a DM: Constraining the Electron Column of the Milky Way Halo with Fast Radio Burst Dispersion Measures from CHIME/FRB*, *ApJ*, 946, 58C

Talks and Presentations

Lazda, M. (Oct., 2023). *Localising Fast Radio Bursts with the CHIME/FRB Outriggers.* Presented at the Department of Astronomy & Astrophysics, University of Toronto, Canada.

Lazda, M. (Sept., 2023). *Localising Fast Radio Bursts with the CHIME/FRB Outriggers.* Presented at the 52nd Young European Radio Astronomers Conference (YERAC), University of Manchester, United-Kingdom.

Lazda, M. (August, 2022). *Localizing Fast Radio Bursts using Steady Source Calibrators*. Presented at the Dominion Radio Astrophysical Observatory, Penticton, Canada.

Lazda, M. (August, 2021). *Improving FRB Localization Using Measured Geometric Delay Rates*. Presented at West Virginia University Symposium, Morgantown, USA.

🏆 *Second Top Student Presentation*

Lazda, M. (August, 2021). *Improving FRB Localization Using Measured Geometric Delay Rates*. Science talk presented at the McGill University Space Institute Research Showcase, Montreal, Canada.

Research Experience

Data integrity lead, research assistant

Montreal, Canada

Canadian Hydrogen Intensity Mapping Experiment Fast Radio Burst (CHIME/FRB)

Sept. 2023 – present

I work on the CHIME/FRB Outrigger project, commissioning new radio telescopes alongside a group of 20 graduate students, postdocs and faculty. Supervised by Kiyoshi Masui (MIT), Victoria Kaspi (McGill) and Juan Mena-Parra (UofT). Notable contributions:

- Developed calibration pipeline of the first outrigger telescope.
- Developed very-long-baseline-interferometry (VLBI) localisation pipeline of the first outrigger telescope.
- Implemented offline beamforming pipeline for the outrigger telescopes.

Research intern

Penticton, Canada

Dominion Radio Astrophysical Observatory (DRAO)

May. 2022 – August 2022

I was employed at the Dominion Radio Astrophysical Observatory to investigate the feasibility of using traditional continuum sources to localize FRBs, while also working on-site to assist with the analog and digital deployment of the Outrigger telescope in Allenby, BC. Supervised by Jane Kaczmarek (CSIRO).

Teaching Experience

University of Toronto

Toronto, ON

Teaching Assistant

Sept. 2023 -

Assistant for Michael Reid and Adam Hinks in *AST 101 The Sun and its Neighbors*, 1500 students.

PAPERS Tutoring Inc.

Montreal, Canada

Online Tutor

June 2018 - July 2021

Tutored high school level calculus, physics, and linear algebra.

Relevant Skills

Programming Python, Docker, Unix OS, Bash

Languages English, French

Program Committees

2023 – **Mediator**, Mediation Committee

Toronto

2023 – **Organizer & Co-director**, Social Committee

Toronto