

Nasser Mohammed

Department of Astronomy and Astrophysics
University of Toronto

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Research Interests: Stellar Streams, Dark Matter, Galactic Archeology, Astrostatistics, AI
Skills: Python, SQL, Java, MATLAB, L^AT_EX, Data Visualization, Machine Learning

Education

- Sep. 2024 – Present **PhD in Astronomy & Astrophysics | University of Toronto**
 Thesis topic: *Indirect Dark Matter Detection via Stellar Streams*
 Supervisor: Professor Ting S. Li
- Sep. 2019 – Dec. 2023 **BSc Honours in Physics, Minor in Data Science | University of British Columbia, Okanagan**
 Thesis Title: *Polarimetric Study of ‘Tadpole’ Feature G137+7 with CHIME Radio Data*
 Supervisor: Professor Alex S. Hill

Publications

- Nasser Mohammed, et al. 2026, in preparation: *DESI Chemodynamical Modelling of Stellar Streams I: The Metal-Poor C-19*
- Nasser Mohammed, et al. 2024, ApJ, 971, 100: *Faraday Tomography with CHIME: The ‘Tadpole’ Feature G137+7*

Awards & Honours

- 2025 NSERC Canadian Graduate Masters Scholarship
- 2025 LSST Discovery Alliance Data Science Fellowship
- 2025 UofT Recognition of Excellence Award
- 2024 Mary Louise & Ronald Laidlaw Martin Graduate Scholarship in A&A
- 2024 David A. Dunlap Department of Astronomy & Astrophysics Entrance Fellowship
- 2024 NSERC Canadian Graduate Masters Scholarship (declined)
- 2024 NSERC Undergraduate Student Research Award
- 2023 Irving K. Barber Faculty of Science Undergraduate Research Award (2023)
- 2023 NSERC Undergraduate Student Research Award

Supervising & Mentoring Experience

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| Sep. 2025 – Present | Alex Brisebois | Graduate Mentorship Program University of Toronto |
| Sep. 2025 – Present | Maia Wertheim | Undergraduate Mentorship Program University of Toronto |
| May 2025 – Sept. 2025 | Alejandra Calderon | Research Project Co-Supervisor Mitacs |
| Jan. 2025 – Oct. 2025 | Isabelle Liang | Undergraduate Mentorship Program University of Toronto |
| Apr. 2023 – Sept. 2023 | 5 Mentees | Globalink Mentorship Program Mitacs |
- Mentored five international students travelling to UBC Okanagan for summer research projects.*

Leadership & Service

- Upcoming, Jul. 2026 Local Organizing Committee Member: “Near Field Cosmology in the Era of Big Data: Local Group and Beyond” Workshop | The Fields Institute, University of Toronto
- Oct. 2025 – Current Union Steward | CUPE 3902 Unit 1
 Union Steward for Unit 1 & Graduate Student Astronomy Association Union Representative.

Oct 2024 – Current	Colloquium Speaker Dinner Organizer David. A Dunlap Dept. of Astro. & Astrophysics Co-ordinates post-doc and graduate student attendees, place reservations, accomodate speaker and attendee dietary restrictions.
Oct. 2024 – Oct. 2025	Mediation Committee Graduate Astronomy Student Association Authored report on graduate student population financial wellbeing and work-life balance. Successfully advocated for increase in astronomy graduate student stipends.
May 2023 – May 2024	Co-Founder & President of the UBC Okanagan Astronomy Club Hosted seminars, coordinated stargazing nights, organized youth STEM outreach initiatives.

Further Education

Feb. 2025 – Present	LSST Discovery Alliance Data Science Fellowship Program
May 2023	Canadian Astroparticle Physics Summer School, Queen's University & SNOLAB

Observing Experience

26 Sep. 2025 – 26 Sep. 2025	Co-Investigator, Las Campanas Observatory Región de Coquimbo, Chile 2 nights on Magellan/MIKE; Observations of the C-19 stellar stream
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List of Talks

Oct. 2025	IAU Symposium 403: Hidden Beauty of the Galactic Outskirts Córdoba, Spain Oral presentation
Oct. 2025	University of Toronto, St. George Toronto, ON, Canada Guest lecture: AST101
Aug. 2025	York University EXPLORE Summer School North York, ON, Canada Lecturer
Jun. 2025	Clusters in Halifax Workshop Halifax, NS, Canada 15-minute talk
Jun. 2025	CASCA Annual General Meeting 2025 Halifax, NS, Canada Poster presentation
Mar. 2024	Okanagan College Kelowna, BC, Canada Guest lecture: Introduction to the Interstellar Medium (ASTR 121)
Feb. 2024	University of Calgary PHAS Symposium Calgary, AB, Canada 15-minute talk
Sep. 2023	UBC Okanagan Faculty of Science URA Symposium Kelowna, BC, Canada Poster presentation
Jun. 2023	CASCA Annual General Meeting 2023 Penticton, BC, Canada Poster presentation
Jun. 2023	TomFest: Frontiers in Radio Science and Engineering Kaleden, BC, Canada 15-minute talk