

Nasser Mohammed | PhD Student

Department of Astronomy & Astrophysics

University of Toronto

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📍 Toronto, ON, Canada

Research Interests: Stellar Streams, Dark Matter, Galactic Archeology, Astrostatistics, AI

Skills: Python, SQL, Java, Git, MATLAB, \LaTeX , Data Visualization

Education

PhD Student | Department of Astronomy & Astrophysics

University of Toronto, St. George Campus

📅 September 2024 – ongoing

📍 Toronto, ON

- Supervisor: Dr. Ting S. Li

Awards and Honours

- 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)

BSc. Honours in Physics | Minor in Data Science

University of British Columbia, Okanagan Campus

📅 September 2019 – December 2023

📍 Kelowna, BC

- Supervisor: Dr. Alex S. Hill
- Thesis Title: Polarimetric Study of ‘Tadpole’ Feature G137+7 with CHIME all-sky Radio Data.

Awards and Honours

- NSERC Canadian Graduate Masters Scholarship (2024, declined)
- 2x NSERC Undergraduate Student Research Award (2022, ‘24)
- Irving K. Barber Faculty of Science Undergraduate Research Award (2023)

Publications

- Nasser Mohammed et al. 2024. "Faraday Tomography with CHIME: The ‘Tadpole’ Feature G137+7." ApJ 971 100

Research Experience

Graduate Research Assistant | AST 1501

David A. Dunlap Department of Astronomy & Astrophysics

📅 September 2024 - ongoing

📍 Toronto, ON

- Research assistant supervised by Dr. Ting S. Li
- Working on DESI Year 3 Key Project by characterization stellar streams in DESI data.
- Modelling $\mathcal{O}(100)$ stellar streams with Bayesian truncated Gaussian mixture modelling techniques.

Honours Thesis | Undergraduate Research Assistant

UBC Irving K. Barber Faculty of Science | Dominion Radio Astrophysical Observatory

📅 September 2022 - April 2024

📍 Kelowna, BC | Kaleden, BC

Canadian Stratospheric Balloon Experiment Design Challenge VI

Physics Lead

📅 August 2023 - May 2024

Teaching and Mentorship

UofT Grad-Undergrad Mentorship Program

Graduate Astronomy Student Association

📅 February 2025 - ongoing

Graduate Teaching Assistant | AST 101, AST 201

David A. Dunlap Department of Astronomy & Astrophysics

📅 September 2024 – ongoing

Undergraduate Teaching Assistant | PHYS 111, PHYS 200

Irving K. Barber Faculty of Science

📅 September 2022 - December 2023

Globalink International Student Research Mentor

Mitacs

📅 April 2023 - September 2023

Conferences and Presentations

Defining New Simulation Frontiers for Dark Matter Discovery

Workshop Participant

📅 September 2024

📍 Toronto, ON

Okanagan College | ASTR 121

Guest Lecturer; Introduction to the Interstellar Medium

📅 March 2024

📍 Kelowna, BC

University of Calgary 9th Annual PHAS Symposium

15-minute Talk

📅 February 2024

📍 Calgary, AB

UBC Okanagan 18th Annual Faculty of Science URA Symposium

Poster Presentation

📅 September 2023

📍 Kelowna, BC

Canadian Astronomical Society Annual General Meeting

Poster Presentation

📅 June 2023

📍 Penticton, BC

TomFest: Frontiers in Radio Science and Engineering with Tom Landecker

15-minute Talk

📅 June 2023

📍 Kaleden, BC

Canadian Astroparticle Physics Summer School

Participant

📅 May 2023

📍 Queen's University, SNOLAB

Volunteer & Community Activities

Co-Founder & VP Astronomy

Space Exploration Student Association

📅 May 2023 - May 2024

📍 Kelowna, BC

Co-Founder & President

UBC Okanagan Astronomy Club

📅 December 2019 - May 2023

📍 Kelowna, BC

External Relations Coordinator

Zenith Canada Pathways Foundation

📅 June 2021 - September 2021

📍 Remote