

# 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,  $\text{\LaTeX}$ , Data Visualization

## Education

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**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

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**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**

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### **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**

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### **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**

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### **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