US Citizen
647.384.9574
paradise.astro@gmail.com

Adiv Paradise, Ph.D.

Astrophysicist | Programmer | Speaker

Toronto, ON
Canadian Open Work Permit

Who am I?

Astrophysics PhD *with experience building and using* ***climate models*** *to both* ***ask and answer*** *new* ***questions*** *about Earth-like planets and their climates. Looking for new* ***challenging questions*** *to tackle.*

Technical Skills

- High-performance **parallel computing**
- **Python**, Fortran, Bash, IDL, and more
- **Data visualization**, Image editing
- Sharing results with **LaTeX** and **Powerpoint**

Speaking

For The Public

"A Brief Update on the Search for Earth 2.0"
David Dunlap Observatory; 45 mins

"Cold Out There, Eh? The Climates of Alien Worlds"
AstroTours; 45 mins

"Telescope Earth: Using Climate Here to Understand Worlds Out There"
UofT Grad Room Series; 15 mins

"We don't need a backup Earth (yet)"
UofT Libraries Science Literacy Week "Space Mythbusters"; 15 mins

"The Squid-People of Proxima b"
Astronomy on Tap; 10 mins
Dunlap Teachers' Workshop; 12 mins
York U Teachers' Workshop; 20 mins

For Other Scientists

"The Habitability of Frozen Worlds"
ERES III, Yale

"Generalizing the Habitable Zone"
CCTP-3, Lunar & Planetary Institute

"Blue Skies: The Role of pN2 in the Habitable Zone"
ERES V, Cornell University

Experience

PhD Research, University of Toronto (*2015-2021)*

- Improvements to an existing model enabled **>10,000 simulations** of previously-unstudied planets
- Created streamlined **Python API** to simplify climate model installation and configuration f**rom 2 month** learning curve to **20 minutes**
- Created HPC job management code that **reduced overhead** and led to **10x more** simulations/week
- Built a simulation post-processing **pipeline** to produce synthetic observables for **thousands of planets**
- **Trained and supervised** an undergraduate research assistant

University of Minnesota, Developer &
Los Alamos National Lab, Postbac Researcher
(June 2014-August 2015)

- New algorithms for faster simulations

University of Minnesota, Research Assistant
(June 2011-May 2014)

- **Analysis & classification** of data from spacecraft observing the solar wind
- Created **GUI analysis tool** for easy analysis of data from spacecraft

Teaching Assistant, UofT *(2015- 2021)*

- **Led classroom tutorials** for 90-120 students per semester
- Created **term projects** with randomized data, **reducing cheating**

Personal Interests

Ultimate Frisbee – 9 years of organized play
5 years with UofT SGS Division 1

Orchestra – 14 years in various ensembles
French horn

Fish-keeping and aquascaping
8 tanks with freshwater fish and invertebrates

Education

B.S., Physics & Astronomy - *University of Minnesota, 2014*
Ph.D., Astronomy & Astrophysics - *University of Toronto, June 2021 (Degree conferral Nov 2021)*

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Service and Leadership Experience

- 1 year as **Co-President** of UofT Graduate Astronomy Student Association (GASA)
- 2 years on UofT Graduate Student Union **Board of Directors**
- 2 years on GASA **Mediation Committee**
- UofT Department of Astronomy & Astrophysics **Values Statement** Committee
- **Independent School District 197** Strategic Redesign Committee

Miscellaneous Public Engagement

*Languages: **English** (native), **Hebrew** (native), **French** (intermediate fluency)*

- AAAS "Book Smart" **Book Club**: Expert Facilitator
- UofT Libraries '**Science Literacy Week**': "Human Book: What is an Astronomer?"
- UofT **Ask an Astronomer** email service: 2016-2020
- UofT **AstroTours**: Volunteer **Telescope Operator**; 2015-2020
- "Is Anybody Out There?"**:** *ASX **Panel Discussion** – Panelist*
- "Earth as an Exoplanet"**:** *AstroTours **Panel Discussion** – Panelist*
- 4 radio, TV, and print **interviews** for the 2017 solar eclipse, and 2 research **press releases**

Selected Merit-Based Awards

- **Ontario Graduate Scholarship (2x winner)**
  $15,000 CAD; 2019, 2020
- **2x winner** Department of Astronomy & Astrophysics International Graduate Student Fellowship
  $6000 CAD total; 2018-2019
- Lachlan Gilchrist Fellowship
  $4500 CAD; 2017
- Centre for Planetary Sciences Graduate Fellowship
  $10,000 CAD; 2015
- Hagstrum Award for **Physics Research**
  $1000 USD; 2014
- Los Alamos National Laboratory "**Outstanding Technical Presentation**" Award
  "Development and Optimization of a Fast Poisson Solver using a Red-Black Multigrid Approach in 2-D"; 2014
- Los Alamos National Laboratory "Spot Award" for **Service to the Lab**
  For identifying and reporting a security vulnerability; 2014
- Harriet B. & Esther Snyder Merrill Scholarship
  $3000 USD; 2011-2014
- University of Minnesota Gold Scholar Award
  $30,000 USD; 2010-2014
- Bentson Family Scholarship
  $20,000 USD; 2010-2014
- National Merit Scholarship
  $2500 USD; 2010