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Dang Pham (Phạm Cao Đăng)

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Academic Appointments

McCray Postdoctoral Fellow, University of Colorado Boulder — 10/2025 - Present
Research Associate, Department of Astronomy, Cornell University — 2020

Education

University of Toronto — 8/2020 - 8/2025
PhD in Astronomy & Astrophysics
Advisor: Professor Hanno Rein
Thesis: *Small Bodies, Small Stars: The Fate of Comets*

Cornell University, College of Arts and Sciences — 2016 - 2020
Bachelor of Arts in Physics, Mathematics

Selected Awards & Honors

Richard McCray Prized Postdoctoral Fellowship — 2025 - Present
Ontario Graduate Scholarship — 2024 - 2025
University of St. Michael's College Junior Fellowship — 2023 - 2025
International Graduate Student Fellowship for Excellence in Doctoral Studies — 2022
David A. Dunlap Department of Astronomy & Astrophysics Entrance Awards — 2020, 2021
Summer Research Fellowship, Max-Planck-Institut für Astronomie — 2019

Student Supervision

Skyler McCabe and Blake Carver-Adames — 2025 - Present
- *Project*: Implementing gravitational structures in REBOUND.
- Awarded the APS Undergraduate Research Fellowships ($3000).

Thomas Alexander — 2025 - Present
- *Project*: Oort clouds after white dwarf natal kick.

Mac Turner (Computer Science undergraduate → Amazon) — 2024 - 2025
- *Project*: Machine learning loss scaling laws for simulated astrophysics data.

Teaching Experience

As Instructor

- ASTR 5835: Seminar in Planetary Science — Interstellar Objects — 2026

As Teaching Assistance

- AST 424: Introduction to Astrophysical Research — 2025
- AST 320: Introduction to Astrophysics — 2022, 2025
- AST 325, AST C02: Practical Astronomy — 2022, 2023, 2024
- AST 221: Stars & Planets — 2024
- AST 251: Life on Other Worlds (non-major course) — 2022, 2023, 2024
- AST 101 & 201: Introduction to Astronomy (non-major courses) — 2021, 2022

Physics Directed Reading Program

- Supervised two undergraduate students (second and fourth year) on reading projects on cosmology and general relativity at the University of Toronto in 2022-2023.

Talks & Presentations

Talks at Institutions

17. University of Colorado, Boulder 2025
16. University of California, Los Angeles 2024
15. Harvey Mudd College 2024
14. California Institute of Technology 2024
13. Institute of Advanced Study (Astro Coffee) 2024
12. Princeton University 2024
11. Harvard-Smithsonian Institute for Theory and Computation (Luncheon Talk) 2024
10. Massachusetts Institute of Technology 2024
9. University of Toronto 2024
8. Institute of Science and Technology Austria 2024
7. University of Toronto (Statistics and Machine Learning) 2022

Conferences

6. REBOUND Conference (Contributed talk) 2024
5. Division of Dynamical Astronomy, Meeting #55 (Contributed talk) 2024
4. 23rd European White Dwarf Conference (Contributed talk) 2024
3. Protostar & Planets VII (poster) 2023
2. Emerging Researchers in Exoplanet Science VII (Contributed talk) 2022
1. Great Lakes Exoplanet Area Meeting, Ohio State University (Contributed talk) 2022

Leadership & Service

Juror/Juror Chair, Canadian Young Physicists' Tournament (CaYPT) 2022 - 2024
- Evaluated and provided feedback for physics projects by high school students.

Climate of the Department Committee 2022 - 2024
- Advocated for the department's summer undergraduate research program (SURP) to admit students more equitably, for better international students' participation and representation, and for better physical working space.

AstroTours Co-Director 2022 - 2023
- Organized monthly public outreach talks.

Graduate Astronomy Students Association 2020 - 2025
- Worked with graduate chair on qualifying exams and course interests. Interviewed faculty candidates.

Astronomy Summer Undergraduate Research Program (SURP) 2023 - 2025
- Organized weekly events, talks and seminars.
- Speaker: Grad school admissions and grad school life
- Speaker: Overview of exoplanetary science

Local Organizing Committee: SDSS V, CITA Planet Day 2022

Cornell Society of Physics Students. President 2016 - 2020
- Participated in outreach events, such as Sagan Walk and Expand Your Horizons. As president, managed a budget of $5000, increased funding by $1000; initiated events to increase first-year students participation in Physics.

Outreach

Solar eclipse workshops for the Toronto Public Library system 2024

Volunteer for the Toronto Astro On Tap 2022 - 2023
Volunteer for AstroTours 2021-2023
Cornell Astronomical Society 2016 - 2020

- Weekly Friday nights open house; gave tours of the Fuertes Observatory for visitors and operated telescopes including a 100 years old, 12-inches Brashear refractor.

Outreach Talks

4. Toronto Public Library, Solar Eclipse workshops 2024
3. Toronto Public Library, The Fate of Comets 2024
2. AstroTours, The Fate of Comets (YouTube) 2024
1. University of Toronto, Family Day Outreach Event 2023

Publications

View on the NASA Astrophysics Data System or Google Scholar.
12 total, 8 as first to third author.

First to third author

12. M. Poon, H. Rein, **D. Pham**, 2024, OJAp, 7, 109.
A potential exomoon from the predicted planet obliquity of β Pictoris b.
11. **D. Pham**, M. Hopkins, et al., 2024, ApJ, 977, 232.
Fast Radio Bursts and Interstellar Objects.
10. **D. Pham**, H. Rein, 2024, MNRAS, 530, 2526.
Polluting White Dwarfs with Oort Cloud Comets.
9. **D. Pham**, H. Rein, D.S. Spiegel, 2024, OJAp, 7, 1.
A new timestep criterion for N-body simulations.
8. J. Li, L. Kaltenegger, **D. Pham**, D. Ruppert, 2024, MNRAS Letters, 527, L137.
Characterization of extrasolar giant planets with machine learning.
7. **D. Pham**, L. Kaltenegger, 2022, MNRAS Letters, 513, L72.
Follow the water: finding water, snow, and clouds on terrestrial exoplanets with photometry and machine learning.
6. **D. Pham**, L. Kaltenegger, 2021, MNRAS, 504, 6106.
Color Classification of Earth-like Planets with Machine Learning.
5. M. Schlecker, **D. Pham**, R. Burn, et al., 2021, A&A, 656, A73.
The Determinism of Global Planet Formation Models.

Contributing author

4. M. Poon et al. (including **D. Pham**), 2025, ApJ Letters, 994, L48.
Early Evidence for Isotropic Planetary Obliquities in Young Super-Jupiter Systems .
3. S. Yang et al. (including **D. Pham**), 2025, submitted to ApJ, arXiv e-prints.
TIME Commissioning Observations: I. Mapping Dust and Molecular Gas in the Sgr A Molecular Cloud Complex at the Galactic Center .
2. V. Butler et al. (including **D. Pham**), 2024, SPIE Proceedings, 13102, 156.
TIME, the Tomographic Ionized-carbon Mapping Experiment: an update on design, characterization, and data from the 2022 commissioning observations.
1. A. Harding et al. (including **D. Pham**), 2018, MNRAS, 475, 79.
Predicting Gravitational Lensing by Stellar Remnants.