Cristobal Petrovich | Curriculum Vitae

Astronomy Department, Indiana University Bloomington
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Education

Princeton University — **Princeton, USA**
Ph.D. in Astrophysical Sciences (advisor: Prof. Scott Tremaine) — *09/2010 - 08/2015*

Pontificia Universidad Católica de Chile — **Santiago, Chile**
B. Sc. in Astronomy — *03/2004 - 12/2008*

Pontificia Universidad Católica de Chile — **Santiago, Chile**
Mathematical Engineering (*6-year professional degree*) — *03/2002 - 12/2009*

Appointments

Indiana University — **Bloomington, USA**
Associate Professor, Astronomy Department — *1/2024 - present*

Pontificia Universidad Católica de Chile — **Santiago, Chile**
Assistant Professor, Institute of Astrophysics — *11/2020 - 12/2023*

University of Arizona — **Tucson, USA**
Bart J. Bok Postdoctoral Fellow — *09/2019 - 10/2020*

Canadian Institute for Theoretical Astrophysics (CITA) — **Toronto, Canada**
CITA Postdoctoral Fellow and Gruber Foundation Fellow — *09/2015 -08/2019*

Awards and Fellowships

Bart J. Bok Fellowship, *Steward Observatory, University of Arizona* — *2019 - 2020*

51 Pegasi b Fellowship in planetary science — *2019*
Three-year fellowship awarded by the Heising-Simons Foundation (*declined*)

Jeffrey L. Bishop Fellowship — *2016 - 2018*
Awarded every two years for research excellence in dynamics at CITA

ProQuest Distinguished Dissertation award nomination — *2016*
One PhD thesis selected in physical sciences and engineering from Princeton in 2015

The Gruber Foundation Fellowship — *2015 - 2019*
Prize of $50k to support research at CITA, selected by the International Astronomical Union and awarded at the opening ceremony of the IAU General Assembly in Honolulu (link)

CITA Fellowship, *Canadian Institute for Theoretical Astrophysics* — *2015 - 2019*

Grants as PI

NASA Exoplanets Research Program (XRP) grant 80NSSC26K1389 ($464,765) *2026-2029*
"The Role of Cold Neptunes in Shaping Planetary Systems"
NSF collaborative project AST-2511257 ($610,898 total, $300,202 at IU) *2025-2028*
"Explaining the Curious Orbits of Eccentric Warm Jupiters"
FONDECYT Regular project 1210425 ($\approx$ 100 million CLP, $\approx \$130,000$) *2021-2025*
"The inclination history of planetary systems: connecting disk morphologies to exoplanet orbital architectures"
Subvención Instalación Academia PAI77200076 ($\approx$ 200 million CLP, $\approx \$260,000$) *2020-2023*
CASSACA joint resarch project ($\approx$ $130,000) *2022-2024*

Research Interests

- Orbital migration and dynamical stability
- Exoplanet demographics
- Disk-planet interactions
- Planets in binary systems
- Gravitational wave sources
- Binaries in galactic center and triple systems
- Planetary systems around white dwarfs
- Thermal evolution of neutron stars

Publications

70 papers (44 as first to third author) | ADS citation count: **+3,000**, H-index= 28 (+3,740 and 32 in Scholar)
16 first-author papers; **34** group-led papers | ADS citation count: **+1,600**, H-index= 19
3 single-author papers with +480 citations in total / 6 (10) first-author papers with +100 (+50) citations
† = student-led paper under my supervision

First-author and Group-led

34. Espinoza-Retamal, J. I., Winn, J. N., Brahm, R., **Petrovich, C.** et al. 2026 *"POSEIDON I: The Dynamical Origins of Transiting Neptunes"*, The Astronomical Journal, 172, 57 (# of citations: 8) [link]
33. †Liu, Y., Gautham Bhaskar, H., Wang, X.-Y., & **Petrovich, C.** 2026 *"High-Eccentricity Tidal Migration Driven by Secular Chaos in Wide-Binary Systems"*, arXiv e-prints (# of citations: 1) [link]
32. **Petrovich, C.**, & Gautham Bhaskar, H. 2026 *"Thermally Regulated Viscoelastic Tidal Migration of Eccentric Planets"*, arXiv e-prints, [link]
31. †LoRusso, R. I., **Petrovich, C.**, & Gautham Bhaskar, H. 2026 *"Planetesimal-Driven Instabilities in Resonant Chains of Cold Neptunes and Their Dynamical Outcomes"*, arXiv e-prints, [link]
30. Espinoza-Retamal, J. I., Brahm, R., **Petrovich, C.** et al. 2026 *"A Cold and Superpuffy Planet on a Prograde Orbit"*, The Astrophysical Journal Letters, 996, L13 (# of citations: 3) [link]
29. †Best, M., Sefilian, A., Charalambous, C., Silsbee, K. & **Petrovich, C.** 2025 *"Influence of cold Jupiters in the formation of close-in planets II. Collisional Growth of Planetesimals"* (submitted) [link]
28. †Heron, A., **Petrovich, C.** et al. 2026 *"Origin of the Asymmetric Gas Distribution near the Co-orbital Lagrange Points of an Embedded Planet"*, The Astrophysical Journal, 998, 169 [link]

27. †Espinoza-Retamal, J. I., Jordan, A., Brahm, R., **Petrovich, C.** et al. 2025 *"The Spin-Orbit Alignment of 8 Warm Gas Giant Systems"*, The Astronomical Journal, 170, 70 (29 pp, # of citations: 19) [link]
26. †Espinoza-Retamal, J. I., Stefánsson, G., **Petrovich, C.** et al. 2024 *"HATS-38 b and WASP-139 b Join a Growing Group of Hot Neptunes on Polar Orbits"*, The Astronomical Journal, 168, 185 (14 pp., # of citations: 27)[link]
25. †Winter-Granić, M., **Petrovich, C.**, †Peña-Donaire, V. & Hamilton, C. 2024 *"Binary mergers in the centers of galaxies: synergy between stellar flybys and tidal fields"*, The Astrophysical Journal, 973, 53 (13pp, # of citations: 17)[link]
24. **Petrovich, C.** 2024 *"Long-term evolution of exoplanet systems"*, Proceedings of the International Astronomical Union, 382, 30 [link]
23. †Best, M., Sefilian, A. & **Petrovich, C.** 2023 *"Influence of cold Jupiters in the formation of close-in planets I: planetesimal transport"*, 2024, The Astrophysical Journal, 960, 89 (16 pp., # of citations: 21)[link]
22. †Espinoza-Retamal, J. I., Brahm, R., **Petrovich, C.** et al. 2023 *"The Aligned Orbit of the Eccentric Proto Hot Jupiter TOI-3362b"*, The Astrophysical Journal Letters, 958, L20 (9 pp, # of citations: 33)[link]
21. †Espinoza-Retamal, J. I., Zhu, W. & **Petrovich, C.** 2023 *"Prospects from TESS and Gaia to Constrain the Flatness of Planetary Systems"*, The Astronomical Journal, 166, 231 (10 pp., # of citations: 17)[link]
20. †Garrido-Deutelmoser, J., **Petrovich, C.** et al. *"A gap-sharing planet pair shaping the crescent in HD 163296: a disk sculpted by a resonant chain"*, 2023, The Astrophysical Journal Letters, 945, L37 (9 pp, # of citations: 18)[link] [Sonified animation]
19. †Garrido-Deutelmoser, J., **Petrovich, C.** et al. *"Substructures in protoplanetary disks imprinted by compact planetary systems"*, 2022, The Astrophysical Journal, 932, 41 (12 pp, # of citations: 6) [link]
18. †Best, S. & **Petrovich, C.** *"The chaotic history of the retrograde multi-planet system in K2-290A driven by distant stars"*, 2022, The Astrophysical Journal Letters, 925, L5 (8 pp, # of citations: 19) [link] [AASNova Highlight]
17. †Nasim, I. T., **Petrovich, C.**, Nasim, A., Dosopoulou, F., and Antonini, F. *"Formation of counter-rotating and highly eccentric massive black hole binaries in galaxy mergers"*, 2021, Monthly Notices of the Royal Astronomical Society, 503, 1 (12 pp, # of citations: 4) [link]
16. **Petrovich, C.**, Muñoz, D., Kratter, K. M., & Malhotra, R., *"A disk-driven resonance as the origin of high inclinations of close-in planets"*, 2020, The Astrophysical Journal Letters, 902, L5 (10 pp, # of citations: 76) [link]
15. †Bub, M. W., & **Petrovich, C.**, *"Compact-Object Mergers in the Galactic Center: Evolution in Triaxial Clusters"*, 2020, The Astrophysical Journal, 894, 15 (17 pp, # of citations: 27) [link]
14. **Petrovich, C.**, Wu, Y., & Ali-Dib, M., *"Secular transport during disk dispersal: the case of Kepler-419"*, 2019, The Astronomical Journal, 157, 5 (13 pp, # of citations: 22) [link]

13. **Petrovich, C.**, †Deibert, E. & Wu, Y., *"Ultra-short-period planets from secular chaos"*, 2019, The Astronomical Journal, 157, 180, (16 pp, # of citations: 92) [link]
12. †He, M. Y., & **Petrovich, C.**, *"On the stability and collisions in triple stellar systems"*, 2018, Monthly Notices of the Royal Astronomical Society, 474, 1 (12 pp, # of citations: 34) [link]
11. **Petrovich, C.** & Antonini, F., *"Greatly enhanced merger rates of compact-object binaries in non-spherical nuclear star clusters"*, 2017, The Astrophysical Journal, 846, 146 (23 pp, # of citations: **176**) [link]
10. **Petrovich, C.** & Muñoz, D., *"Planetary engulfment as a trigger for white dwarf pollution"*, 2017, The Astrophysical Journal, 834, 116 (13 pp, # of citations: **87**) [link]
9. **Petrovich, C.** & Tremaine, S., *"Warm jupiters from secular planet-planet interactions"*, 2016, The Astrophysical Journal, 829, 132 (22 pp, # of citations: **136**) [link]
8. **Petrovich, C.** *"Stability and fates of hierarchical two-planet systems"*, 2015, The Astrophysical Journal, 808, 120 (15 pp, # of citations: **89**) [link]
7. **Petrovich, C.** *"Hot jupiters from coplanar high-eccentricity migration"*, 2015, The Astrophysical Journal, 805, 75, (16 pp, # of citations: **187**) [link]
6. **Petrovich, C.** *"Steady-state planet migration by the Kozai-Lidov mechanism in stellar binaries"*, 2015, The Astrophysical Journal, 799, 27 (27 pp, # of citations: **207**) [link]
5. **Petrovich, C.**, Tremaine, S., and Rafikov, R. *"Scattering outcomes of close-in planets: constraints on planet migration"*, 2014, The Astrophysical Journal, 786, 101, (10 pp, # of citations: **106**) [link]
4. **Petrovich, C.**, Malhotra, R., and Tremaine, S. *"Planets near mean-motion resonances"*, 2013, The Astrophysical Journal, 770, 24 (16 pp, # of citations: **114**) [link]
3. **Petrovich, C.** and Rafikov, R. *"Disk-satellite interaction in disks with density gaps"*, 2012, The Astrophysical Journal, 758, 33, (15 pp, # of citations: 29) [link]
2. **Petrovich, C.** and Reisenegger, A. *"Long-period thermal oscillations in superfluid millisecond pulsars"*, 2011, Astronomy and Astrophysics, 528, A66, (8 pp, # of citations: 10) [link]
1. **Petrovich, C.** and Reisenegger, A. *"Rotochemical heating in millisecond pulsars: modified Urca reactions with uniform Cooper pairing gaps"*, 2010, Astronomy and Astrophysics, 521, A77, (12 pp, # of citations: 42) [link]

Second and third-author

16. Gautham Bhaskar, H., **Petrovich, C.**, & Muñoz, D. J. *"Planet-Planet Secular Migration Predicts a Stellar Obliquity-Period Anti-Correlation"*, 2026, arXiv e-prints [link]
15. Charalambous, C., Cuello, N. & **Petrovich, C.**, *"Breaking long-period resonance chains with stellar flybys"*, 2025, Astronomy & Astrophysics, 696, A175 [link]
14. Muñoz, D., Stone, N., **Petrovich, C.**, & Rasio, F. *"Eccentric Mergers of Intermediate-Mass Black Holes from Evection Resonances in AGN Disks"*, 2022 (submitted to PDR)[link]
13. Chen, C., Li, G, & **Petrovich, C.** *'Mutual Inclination of Ultra-Short-Period Planets with Time Varying Stellar J2-moment'*, 2022, The Astrophysical Journal, 930, 58, [link]

12. Stefansson, G., Mahadevan, S., **Petrovich, C.**, et al. *"The Warm Neptune GJ 3470b has a Polar Orbit"*, 2022, The Astrophysical Journal Letters, 931, 15, [link]
11. Muñoz, D., & **Petrovich, C.**, *"Kozai Migration Naturally Explains the White Dwarf Planet WD1856b"*, 2020, The Astrophysical Journal Letters, 904, 1, (8 pp) [link]
10. Ali-Dib, M. & **Petrovich, C.**, *"Constraining protoplanetary disks with exoplanetary dynamics: Kepler-419 as an example"*, 2020, Monthly Notices of the Royal Astronomical Society, 499, 1 (9 pp) [link]
9. Yalinewich, A., & **Petrovich, C.**, *"Nekhoroshev Estimates for the Survival Time of Tightly Packed Planetary Systems"*, 2020, The Astrophysical Journal Letters, 892, L11 (9 pp) [link]
8. Zhu, W., **Petrovich, C.**, Wu, Y., et al. *"About 30% of Sun-like Stars Have* Kepler*-like Planetary Systems: A Study of their Intrinsic Architecture"*, 2018, The Astrophysical Journal, 860, 101 (15 pp) [link]
7. Antonini, F., Rodriguez, C. L., **Petrovich, C.**, & Fischer, C. *"Precessional dynamics of black hole triples: binary mergers with near-zero effective spin"*, 2018, Monthly Notices of the Royal Astronomical Society, 480, L58 [link]
6. Hamers, A. S., Bar-Or, B, **Petrovich, C.**, & Antonini, F., *"The impact of vector resonant relaxation on the evolution of binaries near a massive black hole: implications for gravitational wave sources"*, 2018, The Astrophysical Journal, 865, 2 (22 pp) [link]
5. Huang, C. X., **Petrovich, C.**, & Deibert, E. *"Dynamically hot Super-Earths from outer giant planet scattering"*, 2017, The Astronomical Journal, 153, 210 (12 pp) [link]
4. Tamayo, D., Rein, H., **Petrovich, C.**, & Murray, N. *"Convergent Migration Renders TRAPPIST-1 Long-lived"*, 2017, The Astrophysical Journal Letters, 840, L19 (6 pp) [link]
3. Simbulan, C., Tamayo, D., **Petrovich, C.**, Rein, H., & Murray, N. *"Connecting HL Tau to the Observed Exoplanet Sample"*, 2017, Monthly Notices of the Royal Astronomical Society, 469, 3 [link]
2. Rafikov, R. and **Petrovich, C.** *"The origin of the negative torque density in disk-satellite interaction"*, 2012, The Astrophysical Journal, 747, 24, (15 pp) [link]
1. González-Jiménez, N., **Petrovich, C.**, and Reisenegger, A. *"Rotochemical heating of millisecond and classical pulsars with anisotropic and density-dependent superfluid gap models"*, 2015, Monthly Notices of the Royal Astronomical Society, 447, 3, (14 pp) [link]

Significant contribution

6. Sefilian, A. A., Kratter, K. M., Wyatt, M. C., **Petrovich, C.**, *"The vertical structure of debris discs and the role of disc gravity'*, submitted to MNRAS, [link]
5. Rubenzahl, R.A., Howard, A. W., Halverson, S., **Petrovich, C.**, *"Obliquity Constraints for the Extremely Eccentric Sub-Saturn Kepler-1656 b'*, The Astrophysical Journal Letters, 971, 40 [link]
4. Sedaghati, E. et al. (including **Petrovich, C.**) *"Orbital alignment of the eccentric warm Jupiter TOI-677 b"*, 2023, The Astronomical Journal, 166, 130 [link]

3. Jackson, J. M., Dawson, R. I., Shannon, A. and **Petrovich, C.**, *"Observable Predictions from Perturber-coupled High-eccentricity Tidal Migration of Warm Jupiters*, 2021, The Astronomical Journal, 161, 4 [link]
2. Frelikh, R., Jang, H., Murray-Clay, R. A. and **Petrovich, C.** *" Signatures of a planet-planet impacts phase in exoplanetary systems hosting giant planets"*, 2019, The Astrophysical Journal Letters, 884, L47 [link]
1. Dong, R., Stone, J., Rafikov, R. and **Petrovich, C.** *"Density waves excited by low-mass planets in protoplanetary disks. I. Linear regime"*, 2012, The Astrophysical Journal, 747, 24, (17 pp) [link]

Nth-Author

6. Radzom, B., et al. (including **Petrovich, C.**) *"Evidence for Primordial Alignment: Insights from Stellar Obliquity Measurements for Compact Sub-Saturn Systems"*, 2024, Astronomical Journal, 168, 116 [link]
5. Frazier, R., et al. (including **Petrovich, C.**) *"NEID Reveals that The Young Warm Neptune TOI-2076 b Has a Low Obliquity"*, 2023, Astrophysical Journal Letters, 944, 41 [link]
4. Jenkins, J., et al. (including **Petrovich, C.**) *" TESS Discovery of an Ultra-Hot Neptune"*, 2020, Nature Astronomy, 4, 1148 [link]
3. Brahm, R., et al. (including **Petrovich, C.**) *"HD 1397b: a transiting warm giant planet orbiting a $V = 7.8$ mag sub-giant star discovered by TESS"*, 2019, The Astronomical Journal, 158, 45 [link]
2. Tamayo, D., et al. (including **Petrovich, C.**) *"A Machine Learns to Predict the Stability of Tightly Packed Planetary Systems"*, 2016, The Astrophysical Journal, 832L, L22 [link]
1. Damasso, et al. (including **Petrovich, C.**) *"The GAPS programme with HARPS-N at TNG. IX. The multi-planet system KELT-6: Detection of the planet KELT-6 c and measurement of the Rossiter-McLaughlin effect for KELT-6 b"*, 2015, Astronomy and Astrophysics, 581, L6 [link]

Mentoring

Summary: **18** students supervised, leading to **12** student-led papers

PhD Dissertation students

- *Ryan LoRusso*, PhD student at IU, *2024 -*
- *Agustin Heron*, PhD student at IU, *2024 -*
- *Marcy Best*, PhD Student at PUC, *2021 - 2025* (→ Postdoc at YEMS, awarded the 2023 Raynor L. Duncombe Student Research Prize by the DDA)
- *Juan Espinoza-Retamal*, PhD Student at PUC, *2021 - 2025* (→ Postdoc at Princeton University, 51 Pegasi b Fellow)

Graduate students

- *Juan Garrido-Deutelmoser*, Masters student at PUC, *2021 - 2022* (→ PhD program at U. of Arizona)
- *Imran Nasim*, PhD student at Surrey University (advising one project), *2020* (→ Postdoctoral Fellow in Biomedical Informatics, Harvard Medical School)

- *Emily Deibert*, PhD student at UofT (advising 2 projects, → Gemini Science Fellow), *2016 - 2018*

Undergraduate

- *Yurou Liu*, Yale University, visiting IU *2025* (→ PhD program at Princeton University)
- *Nick Michaels*, honor senior thesis at IU *2024 - 2025* (→ Industry job)
- *Matthew Doty*, University of Notre Dame, *2024 - 2025* (→ PhD program at Rice University)
- *Mila Winter*, bachelor thesis at PUC, *2023* (→ PhD program at Princeton University)
- *Agustin Heron*, bachelor thesis at PUC, *2023* (→ PhD program at Indiana University)
- *Ignacio Narea*, bachelor thesis at PUC, *2022* (→ Physics Masters at PUC)
- *Valentín Peña-Donaire*, bachelor thesis at PUC, *2022* (→ Masters Astrophysics at PUC)
- *Juan Sutil*, bachelor thesis at PUC, *2021* (→ Teaching program at PUC)
- *Fabian Soto*, bachelor thesis at PUC, *2021* (→ Industry job)
- *Fernanda Correa*, bachelor thesis at PUC, *2021* (→ PhD program at University of Chicago)
- *Mathew Bub*, undergraduate at UofT, *2019* (→ PhD program at Caltech)
- *Kai Wu*, Nanking University, visiting UofT *2018*
- *Matthias He*, undergraduate at UofT *2016 - 2017* (→ PhD program at Penn State)

Postdocs

- *Hareesh Bhaskar*, postdoctoral associate at IU, *2025 -*
- *Carolina Charalambous*, MAS and FONDECYT postdoctoral fellow, *2023 - 2024*
- *Marco Muñoz*, CATA postdoctoral fellow, *2023* (→ assistant professor at Universidad de Atacama)

Teaching

- *Solar System*, general education course at IU, *2026*
- *Exoplanets*, newly-developed undergraduate-level course at IU, *2025*
- *Astronomy Seminar*, graduate-level course at IU, *2024*
- *Planets across the Universe*, lecturer (undergraduate-level course, $\sim$ 70 students), *2022,2023*
- *Planetary and stellar dynamics*, newly-developed graduate-level course at PUC, *2021, 2022, 2023*
- Teaching certificate at PUC (100 hrs, 5/5 modules completed), 2021-2023
- *Star and Planets*, Guest Lecturer at UofT (AST221, Prof. Wu, $\sim$60 science majors), *2018*
- *Summer lectures on exoplanets*, undergraduate students UofT (blackboard and slides sessions)
- *Blackboard talks*, pedagogical blackboard talks at CITA (x5), *2015 - 2019*
- *Topics in Modern Astronomy*, Teaching Assistant at Princeton University, *2015*

- Teaching Assistant at Catolica for: *General Relativity* (*2008*), *Quantum Physics II* (*2007*), *Quantum Physics I* (*2006*), *Physical Mathematical methods II* (*2006*), *Statistical Mechanics* (*2005*), *Mechanics I* (*2005*), *Electromagnestism* (*2004*)

Outreach

- Astronomy Evening in Spanish, National Latine Heritage Month at Indiana University (talk and event organization), October, 2024 and 2025 [link]
- Sonification project of the harmonic exoplanet system (planets and protoplanetary disk) in HD 163296 in collaboration with SYSTEM Sounds (link). Research results widely-spread in Chilean media (Newspapers, 4 personal appearances on TV and Radio shows) (e.g., [link], [link])
- Columnist for newspaper EMOL (link)
- Acrux Festival of Poetry and Science at the Straight of Magellan, 2022 (link)
- Observando el universo desde tu Casa: "Solar System and Exoplanets" (3 modules), 2021, (link)
- IA-PUC te explica: Oumuamua, the first interstellar visitor (+18k views), 2021 (link)
- Pannelist for Golden Webinars at PUC (X 2), 2021 (link)
- *'Sistemas planetarios: una historia forjada por el caos'*, Astro-Conferencias, Astro-Uami, Mexico virtual), 2020
- *'Extreme Solar Systems'*, public talk at San Jose State University (invited by the Division of Planetary Science, AAS), San Jose, CA, 2018 (link)

Leadership & Service

- Elected committee member, Division on Dynamical Astronomy (DDA), *2026-2028*
- Chair, Local Organizing Committee for DDA58, Bloomington, IN
- Research grant review panels:
  - NASA Exoplanets Research Program (XRP), US
  - NASA TESS, US
  - National Science Foundation (NSF), US
  - FONDECYT, Chile
  - Science and Technology Facilities Council (STFC), UK
  - NASA Earth and Space Science Fellowships, US
  - CONICET, Argentina
- Referee for more than 40 manuscripts since 2014, typically ~ 5 per year, for journals including: '*The Astrophysical Journal*' (ApJ); '*The Astrophysical Journal Letters*' (ApJL); '*The Astronomical Journal*' (AJ) ; '*Planetary Science Journal* ' (PSJ); '*The Monthly Notices of the Royal Astronomical Society*' (MNRAS); '*The Monthly Notices of the Royal Astronomical Society Letters*' (MNRAS Letters); '*Astronomy and Astrophysics*' (A&A); '*Nature Astronomy*' (Nat. Astron); '*Nature*

Communications Physics (Nat. Comm. Phys)'; '*Physical Review D*' (Phys. Rev. D); '*Research in Astronomy and Astrophysics*' (RAA); '*Planetary and Space Science*' (PSS); '*Celestial Mechanics and Dynamical Astronomy*' (Celest. Mech. Dyn. Astron)

- Conference organizer, *Open Problems in the Astrophysics of Gas Giant Planets*, Chilean Patagonia, December 2023 (link)
- Member, American Astronomical Society (AAS) and Division on Dynamical Astronomy (DDA)
- Selection committee member and chair (2022), Raynor L. Duncombe Student Research Prizes, Division on Dynamical Astronomy of the AAS, 2020-2022
- Head of Research and Postdocs at PUC, overseeing grant and postdoctoral applications and coordinating with the Office of Research, 2022- (link)
- Postdoctoral coordinator at PUC, overseeing activities and issues for more than 20 postdocs at the Institute of Astrophysics, 2022- (link)
- Colloquium organizer at IU, 2025-
- Colloquium organizer at PUC, more than 20 talks, mostly in person, 2022
- Graduate student selection committee at PUC, more than 100 applications and more than 10 interviews, 2021
- Selection committee member for CITA postdoctoral fellowships, 2017-2018
- CITA visitor committee member: co-organizer of seminars and visitor program, 2017-2019
- Co-organizer of the bi-weekly Stars and Planets discussion at CITA, 2017
- Co-organizer of the weekly dynamics discussion at CITA, 2016
- Princeton Astrophysics 'Wunch' (Wednesday Lunch) seminar organizer, 2012

Presentations

Summary: +30 invited ($\star$), +30 contributed

Conferences and meetings (talks)

32. CITA @40, Toronto, Canada, May 2026
31. (*review talk*) *Detection and Dynamics of Exoplanets (DDE), Coimbra, Portugal, July 2025
30. (*review talk*) *56th Meeting of the Division on Dynamical Astronomy, Atlanta, GA, May 2025
29. *Theories of the three-body system, Prato, Italy, September 2024
28. (*review talk*) *55th Meeting of the Division on Dynamical Astronomy, Toronto, Canada, May 2024
27. Extreme Solar Systems V, Christchurch, New Zealand, March 2024
26. Open problems in the astrophysics of Gas Giant planets, Puerto Natales, Chile, December 2023
25. Great Lakes Exoplanet Area Meeting, Bloomington, IN, October 2023

24. *Three is not a crowd: Multiple companions as the cause or cure for binary star problems, Santiago, Chile, August 2023
23. (*review talk*) *Complex Planetary Systems II – Kavli-IAU Symposium 382, Namur, Belgium, July 2023
22. 54th Meeting of the Division on Dynamical Astronomy, East Lansing, MI, May 2023
21. XX Brazilian Colloquium of Orbital Dynamics, Brazil, December 2021 (virtual)
20. Distorted Astrophysical Discs, KICC, Cambridge, UK, May 2021 (virtual)
19. 51st Meeting of the Division on Dynamical Astronomy, Virtual Meeting August 2020 (virtual)
18. Extreme Solar Systems IV, Reykjavík, Iceland, August 2019
17. *Astrophysics Workshop at T.D. Lee Institute, Shangai, China, January 2019
16. Theoretical and Computational Challenges in Planet Formation, CCA, NY, May 2019
15. New Horizons in Planetary Systems, Victoria, Canada, May 2019
14. Triple Evolution and Dynamics Trendy-2, Leiden, The Netherlands, September 2018
13. *49th Annual Meeting of the Division of Dynamical Astronomy (science and public talk), San Jose, CA, April 2018 (link)
12. Numerical Integration Methods in Planetary Science, Toronto, Canada, July 2017
11. Formation and Dynamical Evolution of Exoplanets, Aspen, CO, March 2017
10. *ICTP-SAIFR 5th Anniversary Symposium, Sao Paulo, Brazil, November 2016 (link talk)
9. *Fellows at the Frontiers, Evanston, IL, August 2016
8. Exoplanets I, Davos, Switzerland, July 2016
7. *SOCHIAS XIII Annual Meeting, Antofagasta, Chile, March 2016
6. Triple Evolution and Dynamics, Haifa, Israel, November 2014
5. 46th Annual Meeting of the Division for Planetary Sciences, Tucson, AZ, November 2014
4. IAU-Symposium: 'Complex Planetary Systems', Namur, Belgium, July 2014
3. 45th Meeting of the Division on Dynamical Astronomy, Philadelphia, PA, April 2014
2. Exoplanets in Multi-body systems in the Kepler era, Aspen, CO, February 2014
1. The origin of stars and their planetary systems, McMaster University, Canada June 2012

Seminars and colloquia

31. *Carnegie Mellon University physics colloquium, Pittsburgh, PA, November 2025
30. *IAS Seminar, IAS, Princeton, NJ, October 2025
29. *University of Illinois Astronomy Colloquium, Urbana-Champaign, IL, September 2025
28. *Astronomy Seminar, Universidad Diego Portales, Chile, May 2023
27. *Astronomy Colloquium, Indiana University, IN, April 2023
26. *Astronomy Seminar, Universidad Andres Bello, Chile, May 2022

25. *Astronomy Colloquium, Universidad de Concepcion, Chile, March 2021 (virtual)
24. *Astronomy Colloquium, Pontificia Universidad de Chile, Chile, March 2020
23. *Physics and Astronomy forum, UNVL, NV, November 2019
22. *Astronomy colloquium, Steward Observatory, Tucson, AZ, August 2019
21. *Center for Exoplanets and Habitable Worlds seminar, Penn State University, PA, April 2019
20. *Astronomy Colloquium, Universidad de Chile, Chile, March 2019
19. *Astronomy Colloquium, Universidad de Valparaiso, Chile, March 2019
18. *Niels Bohr International Academy, Copenhagen, Denmark, January 2019
17. *Astrophysical and Planetary Sciences Colloquium, UC Boulder, CO, April 2018
16. Astronomy Seminar, UCLA, CA, January 2018
15. *TAPIR seminar, Caltech, CA, January 2018
14. *Astronomy Colloquium, PUC, Chile, October 2017
13. CfA High Energy Phenomena Seminar, CfA, Cambridge, MA, October 2017
12. Princeton Planet Lunch, Princeton University, Princeton, NJ, June 2017
11. *IAS Seminar, IAS, Princeton, NJ, September 2017
10. CPS Seminar, Toronto, Canada, September 2017
9. *Astronomy Colloquium, Diego Portales, Chile, August 2016
8. *Cornell Theoretical Astrophysics/Planetary Science Seminar, Ithaca, NY, June 2016
7. *Astronomy Colloquium, Pontificia Universidad de Chile, Chile, March 2016
6. *CITA Seminar, Toronto, Canada, July 2015
5. *Division of Geological and Planetary Sciences Seminar, Caltech, Pasadena, CA, April 2015
4. ITC Seminar, Harvard University, Cambridge, MA, November 2014
3. Princeton Astrophysics “Wunch", Princeton University, Princeton, NJ, April 2014
2. *CIPS Seminar, UC-Berkeley, Berkeley, CA, February 2013
1. *Carnegies’s DTM Astronomy Group Seminar, Washington, DC, April 2013