

# Ronan Kerr | Curriculum Vitae

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## Education

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### University of Texas at Austin

*Ph.D. Astronomy*

*August 2024*

*M.A. Astronomy*

*December 2021*

### University of British Columbia

*B.Sc. Combined Honours in Physics and Astronomy*

*May 2019*

## Awards

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### Michael H. Granof Outstanding Dissertation Award

*UT Austin, awarded with \$10,000 prize for best thesis across all STEM fields* 2025

### David Alan Benfield Memorial Fellowship in Astronomy

*UT Austin Astronomy, awarded for outstanding research by a senior grad student* 2023

### University Graduate Continuing Fellowship

*UT Austin Department of Astronomy* 2022

### Frank N. Edmonds, Jr. Memorial Fellowship

*UT Austin Department of Astronomy, awarded for strong promise in research* 2021

### Paul Sykes Scholarship in Astronomy

*UBC Department of Physics and Astronomy* 2019

## Publications (h-index=12)

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### First (9), Second (3), and Third (3) Author Publications.....

15. Rector, T. ; Prato, L.; **Kerr, R.**, et al. including **Abhilash, S.**, “The Star-Formation History and Outflow Content of the Serpens-Aquila Rift”, to submit to AJ Feb 2026
14. **Kerr, Ronan** ; Kraus, Adam L.; Tan, Jonathan C., et al., 2026, “SPYGLASS. VII-B. Tracing the Fragments of Massive Star Formation Using Low-Mass Associations”, submitted to ApJ
13. **Kerr, Ronan** ; Pérez Paolino, Facundo ; Tan, Jonathan C., et al., 2025, “SPYGLASS. VII-A. The Demographics and Ages of Small Nearby Young Associations”, ApJ, 995, 217
12. Farias, Juan P. ; Offner, Stella S. R. ; **Kerr, R.**, et al., 2025, “Stellar populations in STARFORGE II: comparison with observations”, MNRAS, 541, 101
11. Rector, T. A. ; Prato, L. ; **Kerr, R.**, et al., 2025, “The Herbig–Haro Outflow Content and Star-forming Environment of Circinus West and East”, AJ, 169, 313
10. **Kerr, Ronan** ; Farias, Juan P. ; Prato, Lisa, et al., 2025, “SPYGLASS. VI. Feedback-

- driven Star Formation in the Circinus Complex*", ApJ, 985, 111
9. **Kerr, Ronan** ; Kraus, Adam L. ; Krolikowski, Daniel, et al., 2024, "*SPYGLASS. V. Spatially and Temporally Structured Star-Forming Environments in the Cepheus-Hercules Complex*", ApJ, 975, 99
  8. **Kerr, Ronan** ; Kraus, Adam L. ; Rizzuto, Aaron C., et al., 2023, "*SPYGLASS. IV. New Stellar Survey of Recent Star Formation within 1 kpc*", ApJ, 954, 134
  7. **Kerr, Ronan** ; Kraus, Adam L. ; Murphy, Simon J., et al., 2022, "*SPYGLASS. III. The Fornax-Horologium Association and its Traceback History within the Austral Complex*", ApJ, 941, 143
  6. **Kerr, Ronan** ; Kraus, Adam L. ; Murphy, Simon J., et al., 2022, "*SPYGLASS. II. The Multigenerational and Multiorigin Star Formation History of Cepheus Far North*", ApJ, 917, 23
  5. Bouma, L. G. ; **Kerr, R.** ; Curtis, J. L., et al., 2022, "*Kepler and the Behemoth: Three Mini-Neptunes in a 40 Million Year Old Association*", AJ, 164, 215
  4. **Kerr, Ronan M. P.** ; Rizzuto, Aaron C. ; Kraus, Adam L. ; Offner, Stella S. R., 2021 "*Stars with Photometrically Young Gaia Luminosities Around the Solar System (SPYGLASS). I. Mapping Young Stellar Structures and Their Star Formation Histories*", ApJ, 917, 23
  3. Richer, Harvey B. ; **Kerr, Ronan** ; Heyl, Jeremy ; Caiazzo, Ilaria ; Cummings, Jeffrey ; Bergeron, Pierre ; Dufour, Patrick, 2019, "*A Massive Magnetic Helium Atmosphere White Dwarf Binary in a Young Star Cluster*" ApJ, 880, 75.
  2. **Kerr, Ronan** ; Kirk, Helen ; Di Francesco, James et al., 2019, "*The Green Bank Ammonia Survey: A Virial Analysis of Gould Belt Clouds in Data Release 1*", ApJ, 874, 147.
  1. Wilson, P. A. ; **Kerr, R.** ; Lecavelier des Etangs, A. ; Bourrier, V. ; Vidal-Madjar, A. ; Kiefer, F. ; Snellen, I. A. G., 2019, "*Detection of Nitrogen Gas in the  $\beta$  Pictoris circumstellar disk*", A&A, 621, A121.

### Co-Authored Publications.....

10. Dattilo, Anne ; Vanderburg, Andrew M. et al. including **Kerr, Ronan**, 2025, "*THYME. XIII. Two Young Neptunes Orbiting a 75 Myr Star in the Alpha Persei Cluster*", AJ, 170, 318.
9. Pattle, Kate ; Di Francesco, James et al. including **Kerr, Ronan**, 2025, "*The JCMT Gould Belt Survey Complete Core Catalogue: core mass function variations between nearby molecular clouds*", MNRAS, 543, 3547.
8. Liu, Pengyu ; Biller, Beth A. et al. including **Kerr, Ronan**, 2025, "*A benchmark companion at the hydrogen-burning limit imaged in the core cluster of the Fornax-Horologium association*", A&A, 696, 10.
7. Distler, Adam ; Soares-Furtado, Melinda et al. including **Kerr, Ronan**, 2025, "*TESS Hunt for Young and Maturing Exoplanets (THYME). XII. A Young Mini-Neptune on the Upper Edge of the Radius Valley in the Hyades Cluster*", AJ, 169, 166.
6. Murphy, Simon J. ; Bedding, Timothy R. et al. including **Kerr, Ronan**, 2024, "*The  $\delta$  Scuti stars of the Cep-Her Complex. I: Pulsator fraction, rotation, asteroseismic large spacings, and the  $\nu_{max}$  relation*", MNRAS, 534, 3022.
5. Heitzmann, A. ; Zhou, G. et al. including **Kerr, Ronan**, 2023, "*TOI-4562 b: A highly*

- eccentric temperate Jupiter analog orbiting a young field star*", AJ, 165, 121.
4. Newton, E. R. ; Rampalli, R. et al. including **Kerr, Ronan**, 2022, "*TESS Hunt for Young and Maturing Exoplanets (THYME). VII. Membership, Rotation, and Lithium in the Young Cluster Group-X and a New Young Exoplanet*", AJ, 164, 115.
  3. Mann, Andrew W. ; Wood, Mackenna L. et al. including **Kerr, Ronan**, 2022, "*TESS Hunt for Young and Maturing Exoplanets (THYME) VI: an 11 Myr giant planet transiting a very low-mass star in Lower Centaurus Crux* ", AJ, 163, 156.
  2. Richer, Harvey B. ; Caiazzo, Ilaria ; Du, Helen ; Grondin, Steffani ; Hegarty, James ; Heyl, Jeremy ; **Kerr, Ronan** ; Miller, David R. ; Thiele, Sarah, 2021, "*Massive White Dwarfs in Young Star Clusters*", ApJ, 921, 165.
  1. Caiazzo, Ilaria ; Heyl, Jeremy ; Richer, Harvey ; Cummings, Jeffrey ; Fleury, Leesa ; Hegarty, James ; Kalirai, Jason ; **Kerr, Ronan** et al. 2020, "*Intermediate-mass Stars Become Magnetic White Dwarfs*", ApJL, 901, L14.

## Observing Proposals

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- Atacama Pathfinder Experiment (APEX) - 24 hours** 2025-26  
*"Testing Mechanisms for Sequential Star Formation in Circinus"* – accepted for full time request, ESO-ID: m-0116.f-9525c-2025 (PI J. Pineda, led by R. Kerr)
- Gemini Observatory - 27.7 hours** 2025  
*"New Lithium Depletion Boundary Ages for Small Benchmark Young Associations"* – accepted for full time request, proposal IDs: GN-2025B-Q-138, GS-2025B-Q-137
- McDonald 2.7m (Harlan J. Smith Telescope) - >60 nights** 2020-2024  
*"Characterizing Newly-Discovered Young Associations in the Solar Neighborhood"* (and related proposals) – all accepted for full time request across semesters 20-3, 21-1, 21-3, 22-1, 22-3, 23-1, 23-2, and 24-3
- Las Cumbres Observatory - 112 hours** 2020-2022  
*"Characterizing Newly-Discovered Young Associations in the Solar Neighborhood"* – three accepted proposals, proposal IDs: UTX2020B-001, UTX2021B-002, UTX2022A-002
- NSF OIR Lab AAT - 2 nights** 2021  
*"Exploring the Star Formation History and Dynamics of the Sco-Cen Association"* – one proposal, accepted proposal ID: 2021A-0265
- Gemini Observatory Fast Turnaround - 12 hours** 2018-19  
*"Spectroscopy of Massive White Dwarf Stars in Young Open Clusters"* (and related proposals) – four proposals accepted for full time requested, IDs: GS-2019B-FT-203, GN-2019A-FT-214, GS-2019A-FT-115, GS-2018B-FT-108

## Presentations and Conference Proceedings

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34. Invited Talk – McMaster Astrophysics Journal Club, Hamilton, Ontario, November 6, 2025
33. Talk – Bridging Scales: Star Clusters and their Host Galaxies from the Local to the High-Z Universe, Matera, Italy, September 1, 2025
32. Invited Talk – UdeM IREx Café, Montréal, Québec, July 21, 2025

31. Talk – 2025 European Astronomical Society Meeting, Cork, Ireland, June 23, 2025
30. Poster Presentation – STScl Spring Symposium: Inter+Stellar, Baltimore, Maryland, May 12-16, 2025
29. Talk – UofT TASTY Talk Series, Toronto, Ontario, November 24, 2024
28. Talk – 2024 European Astronomical Society Meeting, Padova, Italy, July 4, 2024
27. Talk – Cool Stars 22, San Diego, California, June 25, 2024
26. Talk – Canadian Astronomical Society (CASCA) 2024 Meeting, Toronto, Ontario, Canada; June 4, 2024
25. Invited Talk – Instituto de Radioastronomía y Astrofísica, Morelia, Michoacán, Mexico; February 29, 2024
24. Dissertation Talk – 243rd Meeting of the AAS, New Orleans, LA, USA; January 10, 2024
23. Talk – Massachusetts Institute of Technology Monday Afternoon Talks, Cambridge, MA, USA; November 27, 2023
22. Talk – California Institute of Technology Tea Talk, Pasadena, CA, USA; October 30, 2023
21. Talk – Surveying the Milky Way: the Universe in Our Own Backyard, Pasadena, CA, USA; October 23, 2023
20. Talk – SPF Seminar at the University of Michigan, Ann Arbor, MI, USA, October 3, 2023
19. Talk – Stars, Planets & ISM Seminar at UT Austin, Austin, TX, USA, September 27, 2023
18. Lightning Talk and Poster – Texas Area Planetary Science Meeting, San Antonio, TX, USA; August 17, 2023
17. Poster – Protostars and Planets VII, Kyoto, Japan; April 10-15, 2023
16. Poster – 241st Meeting of the AAS, Seattle, WA, USA, January 12, 2023
15. Talk – Stars, Planets, & ISM Seminar at UT Austin, Austin, TX, USA, November 16, 2022
14. Plenary Talk and Poster – Cool Stars 21, Toulouse, France, July 8, 2022
13. Talk and Poster – 2022 European Astronomical Society Meeting, Valencia, Spain, June 29, 2022
12. Invited Talk – Istanbul University Observatory Astrophysics Talks, virtual, April 28, 2022
11. Talk – Cosmos Seminar at UT Austin, Austin, TX, USA, March 31, 2022
10. Poster and Short Talk – Star Clusters: the Gaia Revolution, virtual, October 5, 2021
9. 2nd Year Defense Talk – Stars, Planets, and ISM Seminar at UT Austin, Austin, TX, USA, April 28, 2021
8. Poster and Pre-recorded Talk – Cool Stars 20.5, virtual, March 2-4, 2021
7. Poster and Pre-recorded Talk – 237th Meeting of the AAS, virtual, January 11-15, 2021
6. Talk – THYME 2020 conference, virtual, December 8, 2020
5. Talk – Stars, Planets, and ISM Seminar at UT Austin, virtual, April 1, 2020
4. Talk – UBC Honours Thesis Presentation, Vancouver, BC, Canada, March 27, 2019
3. Talk – Leiden/ESA LEAPS Program Presentations, Leiden, Netherlands, August 9, 2018
2. Talk – CITA/UofT SURP Presentations, Toronto, ON, Canada, August 25, 2017
1. Talk – NRC Science Tea, Victoria, BC, Canada, April 27, 2017

## Professional Service

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- Canadian Representative to the Gemini Observatory Users' Committee, 2025-present

- Member of NOIRLab Time Allocation Committee, 2025-present
- Summer Undergraduate Research Program (SURP) 2025 advisor to Mayesha Rahaman and Sharone Abhilash
- University of Toronto AST 425 honors thesis supervisor for Rohan Ashar and Camille Paule
- AST 430 research supervisor for Isabella Rivera, Mayesha Rahaman, and Sharone Abhilash
- Reviewer, Nature Astronomy, Astrophysical Journal, and Astronomy & Astrophysics
- Mentor to Undergraduate Researcher, TAURUS program 2021 at UT Austin

## Other Experience

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### **UBC Department of Physics and Astronomy**

*Research Assistant* 2016, 2018-19

### **Universiteit Leiden**

*Research Assistant* 2018

### **Canadian Institute for Theoretical Astrophysics**

*Research Assistant* 2017

### **NRC - Herzberg Astronomy and Astrophysics Research Centre**

*Research Assistant* 2017

### **Vancouver Telescope Centre**

*Sales Associate and Telescope Instructor* 2010-2016

## Outreach and Volunteer Work

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- Volunteer and Telescope Operator, University of Toronto AstroTours, 2024-present
- Volunteer and Instructor, Wandering Spirits Coding Club, 2025
- Master Outreach Award, presented by the Astronomical League for 160+ hours of service to astronomy outreach, 2021
- Telescope operator, UT Austin PMA Star Parties, 2019-present
- Astronomy Representative, UT Austin Graduate Student Assembly, 2022-23
- Outreach Volunteer, Austin Astronomical Society/Texas Parks and Wildlife, 2021-2023
- Astronomy Representative, UBC Science Undergraduate Society
- President, UBC Astronomy Club, 2015-17
- Vice President of Observations, UBC Astronomy Club, 2015, 2017-18

## Outreach Talks

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- Public Talk – University of Toronto AstroTours, Toronto, Ontario, August 7, 2025
- Public Talk – Zooniverse, virtual, July 16, 2025
- Interview – AAS Speaker Series, virtual, July 14, 2025
- Public Talk – Austin Astronomical Society General Assembly, virtual, February 12, 2021
- Public Talk – UBC Astronomy Grad School 101, Vancouver, BC, Canada, March 21, 2018