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# Leah Jenks

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## Academic Appointments

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**University of Chicago** 2022 - 2025

- KICP Postdoctoral Fellow

## Education

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**Brown University** 2018-2022

- ScM, PhD in Physics
- Advisor: Dr. Stephon Alexander

**University of Edinburgh** 2017-2018

- MSc in Theoretical Physics
- Advisor: Dr. James Lucietti

**Colgate University** 2013-2017

- BA in Astronomy/Physics, *Magna Cum Laude*
- Research Advisors: Dr. Patrick Crotty, Dr. Thomas Balonek

## Publications

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All author lists are alphabetical, per convention in theoretical particle physics, unless denoted by \*

8. S. Alexander, G. Gabadadze, **L. Jenks**, and N. Yunes, "Black Hole Superradiance in Dynamical Chern-Simons Gravity," *Submitted to Physical Review D* (2022)
7. S. Alexander, G. Gabadadze, **L. Jenks**, and N. Yunes, "The Chern-Simons Caps for Rotating Black Holes," *Physical Review D*, 104,6, 064033 (2021)
6. S. Alexander, **L. Jenks**, and E. McDonough, "Higher Spin Dark Matter," *Physics Letters B*, 819, 136436 (2021)
5. **L. Jenks**\*, K. Yagi, and S. Alexander, "Probing Noncommutative Gravity with Gravitational Waves and Binary Pulsar Observations," *Physical Review D*, 102, 084022 (2020)
4. S. Alexander, **L. Jenks**, P. Jirousek, J. Magueijo, and T. Zlosnik, "Gravity Waves in Parity Violating Copernican Universes," *Physical Review D*, 102, 4, 044039 (2020)
3. S. Alexander, S. J. Gates Jr., **L. Jenks**, K. Koutrolikos, and E. McDonough, "Higher Spin Supersymmetry at the Cosmological Collider: Sculpting SUSY Ripples in the CMB," *Journal of High Energy Physics*, 10, 156 (2019)
2. Z. R. Weaver, T. J. Balonek, S. G. Jorstad, et al.\*, "The June 2016 Optical and Gamma-Ray Outburst and Optical Micro-Variability of the Blazar 3C 454.3," *The Astrophysical Journal*, 875, 15 (2019)
1. B. G. Elmegreen, D. M. Elmegreen, B. Tompkins, and **L. G. Jenks**\*, "Thick Disks in the Hubble Space Telescope Frontier Fields," *The Astrophysical Journal*, 847, 14 (2017)

## Invited Talks

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17. UIUC Astrophysics, Cosmology, and Gravitation Seminar: *TBA*, October 5, 2022

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16. ICERM Workshop: *Advances in Chern-Simons Classical and Quantum Gravity: Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, May 7, 2022
  15. University of Hawaii Cosmology Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, April 7, 2022
  14. Perimeter Institute Cosmology Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, December 14, 2021
  13. McGill University HEP Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, November 29, 2021
  12. Imperial College London Theory Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, November 16, 2021
  11. UVA Gravity Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, November 8, 2021
  10. BSM PANDEMIC Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, October 26, 2021
  9. Colgate Physics & Astronomy Colloquium: *Higher Spin Dark Matter*, October 19, 2021
  8. MIT/Tufts Cosmology Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, October 19, 2021
  7. NYU HEP Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, October 8, 2021
  6. Brown Theoretical Physics Center Seminar: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, October 7, 2021
  5. Columbia Theory Group Meeting: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, October 5, 2021
  4. CCA Lunch Seminar: *The Chern-Simons Caps for Rotating Black Holes*, April 22, 2021
  3. UMass Dartmouth Physics Colloquium: *Higher Spin Dark Matter*, December 3, 2020
  2. PACMAN Group Meeting: *Higher Spin Dark Matter*, November 10, 2020
  1. NYU/CCA, Cosmology x Data Science Group Meeting: *Probing Noncommutative Gravity with Gravitational Waves and Binary Pulsar Observations*, October 16, 2020

## Contributed Posters and Presentations

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9. Talk: *Aspects of Rotating Black Holes in Dynamical Chern-Simons Gravity*, Midwest Relativity Meeting, November 2021
8. Talk: *Higher Spin Dark Matter*, American Physical Society April Meeting, April 2021
7. Poster Presentation: *The First Law of Black Hole Mechanics in Higher Dimensions*, Brown University Young Scholars Conference, October 2018
6. Poster Presentation: *Thick Disks and Galaxy Morphology in the Hubble Space Telescope Frontier Fields*, American Astronomical Society Meeting, January 2017
5. Poster Presentation: *The Optical Variability of the Blazar 3C 454.3 over Three Decades from the Colgate University Foggy Bottom Observatory*, American Astronomical Society Meeting, January 2017

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4. Talk: *WIMPzilla Production in the Inflationary Epoch of the Early Universe*, Syracuse University Undergraduate Research Day, November 2016
  3. Talk & Proceedings Paper: *High Redshift Galaxy Morphology in the Hubble Space Telescope Frontier Fields*, Keck Northeast Astronomy Consortium Symposium, October 2016
  2. Poster Presentation: *The 2013-2015 Optical Outburst and Light Curve of the Blazar 3C 454.3*, American Astronomical Society Meeting, January 2016
  1. Talk & Proceedings Paper: *The Historic Light Curve of the Blazar 3C 454.3*, Keck Northeast Astronomy Consortium Symposium, October 2015

## Honors and Awards

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- Anthony Houghton Award for Excellence in Theoretical Physics 2022
- Sigma Xi Scientific Research Honor Society 2020
- Physics and Astronomy Department Founders Award 2017
- Departmental Honors in Astronomy/Physics 2017
- Michael S. '73 and Linda A. Walsh Endowed Scholarship 2016 - 2017
- Dean's Award for Academic Excellence 2014 - 2017

## Teaching

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**Summer@Brown Pre-College Instructor** Summer 2019, 2021, 2022

- Quantum Mechanics and the Nature of Reality

**Graduate Teaching Assistant (Brown University)** 2018 - 2020

- PHYS 220 (Astronomy)
- PHYS 270 (Astronomy & Astrophysics)

**Undergraduate Teaching Assistant & Tutor (Colgate University)** 2015 - 2016

- ASTR 101 (Solar System Astronomy)
- ASTR 102 (Stars, Galaxies & the Universe)
- PHYS 111 (Fundamental Physics I)

## Diversity, Inclusion, and Equity

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- Brown Graduate Women in Physics (Co-Leader) 2019 - 2022
- Brown CUWiP Organizing Committee 2020 - 2022
- Brown Physics Department Diversity and Inclusion Committee 2019 - 2021
- APS IDEA Participant 2020
- Colgate Women in Physics Club (Founder) 2015 - 2017

## Media

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- Theorygirls.com Blog Post: *The Cosmological Constant Problem* May 2020

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## Outreach and Volunteerism

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- ‘Weekly Space Hangout’ Early Career Journalist 2022- Present
- “Skype a Scientist” scientist volunteer 2020 - Present
- Presidential Scholars Graduate Student Mentor 2018 - 2019
- Providence Waterfire Big Bang Science Fair September 2018, 2019
- Ho-Tung Visualization Lab Science Outreach Educator 2014 - 2016

## Skills & Interests

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- **Computing:** Mathematica, Maple (including GRTensorII), Python, VPython, MATLAB, LaTeX, IRAF, Image J, Microsoft Office
- **Interests:** Cosmology, general relativity, particle physics, equity in STEM

## Affiliations

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- American Physical Society (APS)