

Brandon Radzom

PH.D. CANDIDATE · ASTRONOMY

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Education

Indiana University (IU) - Bloomington

PH.D. ASTRONOMY

- Thesis: *Observational and Numerical Constraints on the Dynamical Origins of Hot Jupiters*
- Advisor: Prof. Songhu Wang

Bloomington, IN 47405-7000

Aug. 2020 - May 2026

M.A. ASTRONOMY

- Minor: Scientific Computing

Aug. 2020 - May 2023

University of Wisconsin (UW) - Madison

B.S. ASTRONOMY-PHYSICS, B.S. PHYSICS

- Minor: Computer Science
- Thesis: *Characterizing AGN Activity in the SSA22 Field*
- Advisor: Prof. Amy Barger

Madison, WI 53706-1507

Sept. 2016 - May 2020

Professional Experience

- 2021- **Graduate Research Assistant**, Dept. of Astronomy, IU-Bloomington
2020-2024 **Graduate Associate Instructor**, Dept. of Astronomy, IU-Bloomington
2018-2022 **Undergraduate Research Assistant**, Dept. of Astronomy, UW-Madison
2017-2020 **Undergraduate Research Assistant**, Dept. of Physics, UW-Madison

Awards & Grants

PROPOSALS

2025-2026	Co-PI: Indiana Outreach Project Space Grant , NASA	\$5,550
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Brandon T. Radzom, Samir Salim, et al: "PyIU: Python Workshops to Forge Future Astronomers in Indiana"

FELLOWSHIPS & HONORS

2026	Visiting Graduate Student Fellowship , Caltech/IPAC	\$28,000
2025-2026	College of Arts and Sciences Dissertation Research Fellowship , IU	\$24,000
2025	Carl Sagan Workshop Travel Support Award , NExScl/Caltech	
2025	Joseph & Frances Morgan Swain Graduate Fellowship , IU Astronomy	\$1,000
2024-2025	Sullivan Research Fellowship , IU Astronomy	\$31,000
2024	Frank and Margaret Edmondson Prize for Teaching , IU Astronomy	\$500
2023	Goethe Link Prize for Outreach and Public Education in Astronomy , IU	\$500
2022	College of Arts and Sciences Travel Award , IU	\$200
2020	Thesis of Distinction , UW College of L & S	
2020	Lowell Doherty Award for Excellence in Astronomy , UW Astronomy	\$500
2020	Member of the Dean's List , UW College of L & S	
2019	Member of the Dean's List , UW College of L & S	
2019	Liebenberg Family Undergraduate Research Scholarship , UW College of L & S	\$2,000
2019	David H. Durra Scholarship , UW College of L & S	\$3,000

2018	John Karl Scholz Sophomore General Scholarship , UW College of L & S	\$ 500
2017	Member of the Dean's List , UW College of L & S	
2016	Memorial Scholarship , Anoka High School	\$ 500

Presentations

INVITED TALKS & COLLOQUIA

Hot and (Un)Bothered: Unveiling the Complex Dynamical Histories of Hot Jupiters. Astrophysics Colloquium, NASA/Jet Propulsion Laboratory (JPL), December 4, 2025.

Hot and (Un)Bothered: Unveiling the Complex Dynamical Histories of Hot Jupiters. Astronomy Seminar, Department of Astronomy, California Institute of Technology, December 1, 2025.

Hot and (Un)Bothered: Unveiling the Complex Dynamical Histories of Hot Jupiters. Planetary and Exoplanetary Lunch Seminar, Department of Astronomy, University of Maryland, November 17, 2025.

Hot and (Un)Bothered: Unveiling the Complex Dynamical Histories of Hot Jupiters. Exoplanet and Stars Seminar, Department of Astronomy, Yale University, October 22, 2025.

Hot and (Un)Bothered: Leveraging Compact Multi-planet Systems to Constrain the Origins of Hot Jupiters. Center for Exoplanets and Habitable Worlds Seminar, Pennsylvania State University, Department of Astronomy, September 22, 2025.

Hot and (Un)Bothered: Leveraging Compact Multi-planet Systems to Constrain the Origins of Hot Jupiters. Astronomy Seminar, Earth and Planets Laboratory, Carnegie Institute, September 12, 2025.

Hot and (Un)Bothered: Leveraging Compact Multi-planet Systems to Constrain the Origins of Hot Jupiters. ESPF Seminar, Space Telescope Science Institute, September 9, 2025.

Measuring Stellar Obliquities To Constrain the Origins of Exoplanets. Virtual WIYN Board Meeting, October 2023.

SEMINAR TALKS

Hot and Cold: The Dynamical Origins of Hot Jupiters in the Era of TESS. TESS Science Talk, Kavli Institute for Astrophysics and Space Research, MIT, November 12, 2025.

Hot and (Un)Bothered: Leveraging Compact Multi-planet Systems to Constrain the Origins of Hot Jupiters. SEEC Exoplanet Seminar, NASA Goddard Spaceflight Center, September 10, 2025.

NASA PSSS: A Lightning-Fast Lesson in Mission Design and the THUNDER That Follows. Astronomy Seminar, Astronomy Department, IU, January 2024.

The X-ray Luminosity Function of Optically Narrow and Broad-line AGNs Out To $z \sim 4$. Astronomy Seminar, Astronomy Department, IU, September 2020.

CONTRIBUTED TALKS

Hot or Not: Hot Jupiters' Isolation Is Not Unique to High-Eccentricity Tidal Migration. Great Lakes Exoplanet Area Meeting (GLEAM), UW-Madison, November 6-7, 2025.

Evidence for Primordial Alignment: Insights from Stellar Obliquity Measurements for Compact Giant Systems. Carl Sagan Summer Workshop, Caltech, July 21-25 2025.

Evidence for Primordial Alignment: Insights from Stellar Obliquity Measurements for Compact Giant Systems. ERES IX, Cornell University, July 2024.

Post-formation Dynamics: A Mechanism to Explain the Companionship Properties of Hot and Warm Jupiters. GLEAM, IU, October 27-28, 2023.

Post-disk Dynamical Evolution: A Mechanism to Explain the Companionship Dichotomy Between Hot Jupiters and Warm Jupiters. Division on Dynamical Astronomy Meeting #54, Michigan State University, May 2023.

PUBLIC TALKS

Exoplanets in the Media: Fact or Fantasy? Astronomy on Tap, Bloomington, IN, September 2024.

Astronomy in the News: NASA's DART Mission. Astronomy on Tap, Bloomington, IN, March 2024.

The Night Sky. Indiana Master Naturalist Astronomy Event, Bloomington, IN, October 2021.

CONFERENCE POSTERS

Brandon T. Radzom, et al. (2025) "To High-e or Not to High-e: Hot Jupiters in Compact Multi-Planet Systems Are Aligned", NOIRLab Solar System In Context. September 29-October 2, 2025.

Brandon T. Radzom, et al. (2025) "Evidence for Primordial Alignment: Insights from Stellar Obliquity Measurements for Compact Giant Systems", Carl Sagan Summer Workshop. July 21-25, 2025.

Brandon T. Radzom, et al. (2025) "PyIU Python Workshops: Forging Future Astronomers in Indiana", Spring 2025 Statewide Engagement Institute. March 13, 2025. 10.5281/zenodo.15015534

Brandon T. Radzom, et al. (2024) "Evidence for Primordial Alignment: Insights from Stellar Obliquity Measurements for Compact TESS Systems", TESS Science Conference 3, July 29-August 2, 2024. 10.5281/zenodo.13117605

Cassandra Seltzer, Rudi Lein, **Brandon T. Radzom**, et al. (2024) "THUNDER: A New Frontiers-class Titan orbiter mission concept from the NASA JPL Planetary Science Summer School", 55th Lunar and Planetary Science Conference, March 11-15, 2024.

Brandon T. Radzom, Songhu Wang, and Bonan Pu (2022) "In Situ Origins of Hot Jupiters", Emerging Researchers in Exoplanet Science (ERES) VII, July 31-August 2, 2022. 10.5281/zenodo.6944743

Brandon T. Radzom, Amy J. Barger, and Anthony J. Taylor. (2020) "Characterizing AGN Activity in the SSA22 Field", American Astronomical Society Meeting #236, June 1-3, 2020. id.137.03

Minho Kwon, Christopher Young, Matthew Ebert, Sebastian Malewicz, **Brandon Radzom**, et al. (2018) "Progress toward entanglement of atomic ensemble qubits via Rydberg blockade", International Conference on Atomic Physics, July 22-27, 2018.

Teaching Experience

Instructor of Record

IU Astronomy

- Astronomy 100: The Solar System (Summer 2023 & 2024)

Associate Instructor

IU Astronomy

- Astronomy 451: Stellar Astrophysics (Spring 2024)
- Astronomy 305: Modern Observational Techniques (Fall 2023)
- Astronomy 107: The Art of Astronomy (Spring 2023, Fall 2020)
- Astronomy 100: The Solar System (Spring 2022)
- Astronomy 103: Search For Life In The Universe (Fall 2021)
- Astronomy 222: General Astronomy II (Spring 2021)

Guest Lecturer

IU Astronomy

- Astronomy 222: General Astronomy II (Spring 2025)
- Astronomy 100: The Solar System (Spring 2024)
- Astronomy 103: Search for Life in the Universe (Spring 2024)
- Astronomy 515: Exoplanets and Orbital Dynamics (Fall 2023)
- Astronomy 100: The Solar System (Spring 2023)

Community Involvement & Leadership

SERVICE

2025 **Hands-on Session Helper**, Carl Sagan Summer Workshop

Pasadena, CA

2025 **Reviewer**, Astronomy & Astrophysics Journal

2025	Steering Committee Member , Concerned Scientists at IU	Bloomington, IN
2025	AAS Advocacy Representative , AAS Congressional Visits Day	Washington, D.C.
2024-2025	Pre-Conference Survey Lead , ERES Mission & Vision Committee	Bloomington, IN
2024, 2025	Informal Mentor , Alice-Palma Undergraduate Research Program	Bloomington, IN
2023-2025	Seminar Talk Coordinator , IU Astronomy Graduate Leadership	Bloomington, IN
2022-2025	Founder and Lead Organizer , PyIU: A Workshop Series on Python Essentials	Bloomington, IN
2022-2025	Undergraduate Research Coordinator , IU Astronomy Graduate Leadership	Bloomington, IN
2023	SOC & LOC Member, Session Chair , GLEAM 2023 Conference	Bloomington, IN
2023	Formal Mentor (Arnob Rasul) , Alice-Palma Undergraduate Research Program	Bloomington, IN
2019-2020	Vice President , UW-Madison Astronomy Club	Madison, WI
2018-2019	Volunteer Coordinator , UW-Madison Astronomy Club	Madison, WI

PUBLIC OUTREACH

2025	Kirkwood Observatory Community & School Partnerships Tour , Tour guide	Bloomington, IN
2025	Kirkwood Observatory Media School Staff Tour , Tour guide	Bloomington, IN
2025	Kirkwood Observatory Sustainability Class Tour , Tour guide	Bloomington, IN
2022-2025	PyIU: A Workshop Series on Python Essentials , Instructor, code developer	Bloomington, IN
2021-2025	Kirkwood Observatory Open Nights , Telescope operator & tour guide	Bloomington, IN
2024	Astronomy on Tap , Public speaker: <i>Exoplanets in the Media</i>	Bloomington, IN
2024	Boy Scout Astronomy Night , Observatory tour Guide	Bloomington, IN
2024	Astronomy on Tap , Public speaker: <i>NASA's DART Mission</i>	Bloomington, IN
2024	Eclipse IU , Solar eclipse viewing aid and guide	Bloomington, IN
2021-2024	IU Science Fest , Astro demo leader	Bloomington, IN
2023	Kirkwood Observatory High School Class Tour , Telescope operator & tour guide	Bloomington, IN
2023	STEAM Night at McCormick's Creek Elementary , Astro demo leader	Spencer, IN
2023	International Day of Women and Girls in Science , Astro demo leader	Bloomington, IN
2022, 2023	Indianapolis Children's Museum STEM Exploration Day , Astro demo leader	Indianapolis, IN
2022	Boys and Girls Club: Streets Paved With Gold (Alpha Phi Alpha) , Astro demo leader	Bloomington, IN
2021	Indiana Master Naturalist Event , Guest speaker, telescope operator	Bloomington, IN
2020	Girl Scout Astronomy Night , UW-Madison Astronomy Club volunteer	Madison, WI
2019	Moon Over Monona Terrace , UW-Madison Astronomy Club volunteer	Madison, WI
2019	My UW Days , UW-Madison Astronomy & Physics Dept. representative	Madison, WI
2019	UW Space Place OAO-2 Anniversary Event , Observatory historical guide	Madison, WI
2018	UW STEM Immersion Day , UW Astronomy/ Astronomy Club representative	Madison, WI
2017	UW Space Place Family Science Night , Physics and Astro demo leader	Madison, WI

PROFESSIONAL DEVELOPMENT

Fall 2022-Present: PyIU: A Workshop Series on Python Essentials, *IU Astronomy Dept.* Founder and lead organizer of the PyIU program: a free, graduate student-led Python workshop series intended to equip undergraduate and high school students of various backgrounds to engage in astronomy and physics research. This program is also funded by NASA's Indiana Space Grant (co-PIs: myself and Samir Salim) for the 2025-2026 academic year. All content is posted to a public GitHub repository: github.com/BrandonRadzom/pyiu.

Summer 2025: Carl Sagan Summer Workshop Silver Jubilee: Exoplanet Demographics, *NExSci/Caltech* Participant, POP poster presenter, and helper for the hands-on “Exoplanet Occurrence Rates” and “Distant Giant Planets with Astrometry” sessions. Workshop link: <https://nexsci.caltech.edu/workshop/2025/>.

Summer 2023: JPL Planetary Science Summer School, *JPL*. Received training on mission formulation, and worked with a large, multidisciplinary team and consulted with JPL’s Team-X to design a concept for a New Frontiers-class orbiter at Saturn’s moon, Titan. Assumed the role of Deputy PI, Science Chair, and Science Objective

Lead. Presented the concept to a review panel at JPL (published also in the Planetary Science Journal). Media interview: news.iu.edu/college/live/news/35938-graduate-students-summer-experience-at-nasas-jet

Summer 2023: Code/Astro Software Engineering Workshop, Northwestern University. Trained on git and GitHub, de-bugging tools, releasing code to PyPI and GitHub, documenting code (using docstrings & Sphinx), and software testing. Co-developed a pip-installable package for planning observations at IU's Kirkwood Observatory called `kirkwoodnight`. Workshop link: semaphorep.github.io/codeastro.

Publication List

FIRST-AUTHOR REFEREED

Brandon T. Radzom, Songhu Wang, Bonan Pu, Hareesh Gautham Bhaskar, and Malena Rice 2025. *Hot Jupiters' Isolation Is Not Unique to High-Eccentricity Tidal Migration*, submitted to ApJ, available on GitHub: github.com/BrandonRadzom/manuscripts/blob/main/Radzom2025b_NbodyHJWJcompanions.pdf

Brandon T. Radzom, Jiayin Dong, Malena Rice, Xian-Yu Wang, Kyle Hixenbaugh, George Zhou, Chelsea X. Huang, Songhu Wang 2025. *Evidence for Primordial Alignment II: Insights from Stellar Obliquity Measurements for Hot Jupiters in Compact Multi-planet Systems*, AJ 169 189

Brandon T. Radzom, Jiayin Dong, Malena Rice, Xian-Yu Wang, Samuel W. Yee, Tyler R. Fairnington, Cristobal Petrovich, Songhu Wang 2024. *Evidence for Primordial Alignment: Insights from Stellar Obliquity Measurements for Compact Sub-Saturn Systems*, AJ 168 116

Brandon T. Radzom, Anthony J. Taylor, Amy J. Barger, Lennox L. Cowie 2022. *X-ray Sources in the Chandra Field SSA22*, ApJ 940 114

CONTRIBUTING-AUTHOR REFEREED

Jessica Ranshaw, Jennifer Burt, Xian-Yu Wang, Juan I. Espinoza-Retamal, **Brandon T. Radzom**, et al. 2025. *The Discovery of K2-232c: Divergent Formation Histories for Hot and Warm Jupiters Based on Outer Companion Eccentricity*, submitted to AJ

Samuel Quinn, Joseph Rodriguez, Karen Collins, Allyson Bieryla, W.J. Brennom, Jiayin Dong, Kyle Hixenbaugh, David Latham, **Brandon T. Radzom**, et al. 2025. *TOI-2494 c and TOI-5143 c: a hot Saturn and a hot Jupiter with interior planetary companions*, submitted to ApJ

R. Kent Honeycutt, Jeff Robertson, **Brandon T. Radzom** 2025. *Stunted Outbursts and Z Cam-like Behaviors in the Long-term Light Curves of Novalike Cataclysmic Variables*, ApJS 277 29

Cassandra Seltzer, Rudi Lien, **Brandon T. Radzom**, et al. 2025. *THUNDER: A Titan orbiter mission concept for the New Frontiers program*, PSJ 6 45

Jack Lubin, Xian-Yu Wang, Malena Rice, Jiayin Dong, Songhu Wang, **Brandon T. Radzom**, et al. 2023. *TOI-1670 c, a 40 day Orbital Period Warm Jupiter in a Compact System, Is Well Aligned*, ApJL 959 L5

Xian-Yu Wang, Malena Rice, Songhu Wang, Bonan Pu, Guðmundur Stefánsson, Suvrath Mahadevan, **Brandon T. Radzom**, et al. 2022. *The Aligned Orbit of WASP-148 b, the Only Known Hot Jupiter with a Nearby Warm Jupiter Companion, from NEID and HIRES*, ApJL 926 L8

NON-REFEREED

W. Garrett Levine, **Brandon T. Radzom** et al. 2025. *Emerging Researchers in Exoplanetary Science (ERES) Symposium: Developing Community-Driven Mission & Vision Statements*, to be submitted to BAAS

Brandon T. Radzom 2020. *Characterizing AGN Activity in the SSA22 Field*, UW-Madison Dept. of Astronomy Senior Thesis