

Brandon Radzom

PHD CANDIDATE · ASTRONOMY

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Education

Indiana University (IU) - Bloomington

Ph.D. ASTRONOMY

- Thesis: *Observational and Numerical Constraints on the Origins of Short-period Gaseous Giants*
- 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

2025-2026	College of Arts and Sciences Dissertation Research Fellowship , IU-Bloomington	\$24,000
2025	Carl Sagan Workshop Travel Support Award , NExSci/Caltech	
2025	Joseph & Frances Morgan Swain Graduate Fellowship , IU-Bloomington	\$1,000
2024-2025	Sullivan Research Fellowship , Dept. of Astronomy, IU-Bloomington	\$31,000
2024	Frank and Margaret Edmondson Prize for Teaching , IU-Bloomington	\$500
2023	Goethe Link Prize for Outreach and Public Education in Astronomy , IU-Bloomington	\$500
2022	College of Arts and Sciences Travel Award , IU-Bloomington	\$200
2020	Thesis of Distinction , UW-Madison College of Letters & Science	
	Lowell Doherty Award for Excellence in Astronomy , Dept. of Astronomy, UW-Madison	\$500
	Member of the Dean's List , College of Letters & Science, UW-Madison	
2019	Member of the Dean's List , College of Letters & Science, UW-Madison	
	Liebenberg Family Undergraduate Research Scholarship , UW-Madison	\$2,000
	David H. Durra Scholarship , UW-Madison	\$3,000
2018	John Karl Scholz Sophomore General Scholarship , UW-Madison	\$500
2017	Member of the Dean's List , College of Letters & Science, UW-Madison	
2016	Memorial Scholarship , Anoka High School	\$500

Software Skills

- Programming languages: Python, MATLAB, C++, Java, LabView
- Misc: git & GitHub, Linux shell, VS Code, HTML, L^AT_EX, Maple, Mathematica, Windows Office Suite

Publications

REFEREED

Brandon T. Radzom, Songhu Wang, Bonan Pu, and Malena Rice 2025. *Post-disk Evolution of Short-Period Gas Giants in Compact Multi-planet Systems: A Mechanism to Produce the Observed Companionship Dichotomy*, submitted to ApJ

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

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

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

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

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

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

Presentations

PROFESSIONAL TALKS

Seminar Talk. *Hot and (Un)Bothered: Leveraging Compact Multi-planet Systems to Constrain the Origins of Hot Jupiters*. Astronomy Seminar, Carnegie EPL, September 12, 2025.

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

Seminar Talk. *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.

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

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

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

Contributed Talk. *Post-formation Dynamics: A Mechanism to Explain the Companionship Properties of Hot and Warm Jupiters*. Great Lakes Exoplanet Area Meeting (GLEAM), IU, October 27-28, 2023.

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

Contributed Talk. *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.

Contributed Talk. *In Situ Origins of Hot Jupiter Isolation*. GLEAM 2022, The Ohio State University, November 2022.

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

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) "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 Dept.

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

Associate Instructor

IU Astronomy Dept.

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

Guest Lecturer

IU Astronomy Dept.

- 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/Advocates for Science at IU	Bloomington, IN
2025	AAS Advocacy Representative , AAS Congressional Visits Day	Washington, D.C.
2024-2025	Task Lead , ERES Mission & Vision Committee	
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, Lecturer, 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 , Astronomy 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 , Astronomy demo leader	Spencer, IN
2023	International Day of Women and Girls in Science , Astronomy demo leader	Bloomington, IN
2022, 2023	Indianapolis Children's Museum STEM Exploration Day , Astronomy demo leader	Indianapolis, IN
2022	Boys and Girls Club: Streets Paved With Gold (Alpha Phi Alpha) , Astronomy 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 , Orbital Astronomical Observatory (OAO) guide	Madison, WI
2018	UW STEM Immersion Day , UW Astronomy/ Astronomy Club representative	Madison, WI
2017	UW Space Place Family Science Night , Physics and Astronomy 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 the Indiana Space Grant (co-PIs: Brandon Radzom 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* In-person participant, POP poster presenter, and helper for the hands-on “Exoplanet Occurrence Rates” and “Distant Giant Planets with Astrometry” sessions. Poster: nexsci.caltech.edu/workshop/2025/posters/Poster_BrandonRadzom_90.pdf

Summer 2023: JPL Planetary Science Summer School, *JPL*. Was selected to participate in an 11-week planetary mission design school. Received training on mission formulation from NASA mentors and worked with a multi-disciplinary

cohort of 17 other early-career scientists and engineers to design a New Frontiers-class orbiter at Saturn's moon, Titan. Assumed the role of Deputy PI and Science Objective Lead throughout the program. During the culminating week, also served as Science Chair and worked with NASA's Team-X at JPL to finalize the mission design before presenting it to a NASA review panel. The concept study is published 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. Was selected to participate in the week-long 2023 Code/Astro Workshop which covered best practices for producing and publishing open-source astronomy software. Topics included managing Python environments, git and GitHub, de-bugging tools, releasing code to PyPI and GitHub, documentation of code (using docstrings & Sphinx), and software testing. In parallel, worked with a small group to develop a pip-installable package for planning observations at IU's Kirkwood Observatory called `kirkwoodnight` (GitHub: github.com/ag161920/kirkwoodnight, PyPI: pypi.org/project/kirkwoodnight). Program link: semaphore.github.io/codeastro.

PROFESSIONAL MEMBERSHIPS

American Astronomical Society (2020-2025)