

# Rayna Rampalli

rayna.rampalli.gr@dartmouth.edu | raynarampalli@gmail.com  
ORCID: 0000-0001-7337-5936 | Website: raynarampalli.github.io

## EDUCATION

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2020-Present    **Dartmouth College**  
Ph.D. Physics & Astronomy  
Advisor: Elisabeth Newton  
2014-2018    **Wellesley College**  
B.A. Astrophysics with Honors

## AWARDS & HONORS

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2022    LSST Data Science Fellow  
2022    NSF Graduate Research Fellow  
2022    Finalist - P.D. Soros Fellowship  
2021    E.E. Just Graduate Fellow  
2021    New Hampshire Space Grant Recipient  
2018, 2020    Honorable Mention - NSF Graduate Fellowship  
2019    Voted Best Talk Columbia's annual Bridge to the Ph.D. Program in STEM symposium  
2018    Sigma Xi  
2015, 2016    Massachusetts Space Grant Recipient for Maria Mitchell REU and Wellesley Observing  
2015    Honorable Mention - Ethel L. Hersey Prize in American Studies

## PUBLICATIONS

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10. Heitzman, A.; **including Rampalli, R.**; et al. "TOI-4562b: A highly eccentric cool Jupiter analog orbiting a young star." submitted (2022).
9. Newton, E.; **Rampalli, R.**; et al. "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 (2022).
8. Núñez, A. et al., **including Rampalli, R.** "The Factory and the Beehive. IV. A Comprehensive Study of the Rotation–X-ray Activity Relation in Praesepe and the Hyades" ApJ 931, 45 (2022).
7. Dong, J. et al., **including Rampalli, R.** "NEID Rossiter-McLaughlin Measurement of TOI-1268b: A Young Warm Saturn Aligned with Its Cool Host Star" ApJL 926, L7 (2022).
6. Anthony, F. et al., **including Rampalli, R.** "Activity and Rotation of Nearby Field M Dwarfs in the TESS Southern Continuous Viewing Zone" AJ 163, 257 (2022).
5. **Rampalli, R.**; Agüeros, M.; Curtis, J.; Douglas, S.; Núñez, A.; et al. "Three K2 Campaigns Yield Rotation Periods for 1013 Stars in Praesepe" ApJ 921, 167 (2021).
4. **Rampalli, R.**; Ness, M.; Wylie, S. "The Astrophysical Variance in Gaia-RVS spectra" ApJ, 921, 78 (2021).
3. Watkins, J. et al., **including Rampalli, R.** "The H $\alpha$  Dots Survey. IV. A Fourth List of Faint Emission-line Objects" ApJS, 253, 39 (2021).
2. **Rampalli, R.**; Vanderburg, A.; Bieryla, A.; Latham, D.; Quinn, S.; et al. "A Hot Saturn Near (but Not Associated with) the Open Cluster NGC 1817" AJ, 158, 62 (2019).
1. Newton, E. et al., **including Rampalli, R.** "TESS Hunt for Young and Maturing Exoplanets (THYME): A Planet in the 45 Myr Tucana Horologium Association" ApJL, 880, L17 (2019).

## RESEARCH APPOINTMENTS

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*Present* | **Graduate Student Researcher**, Dartmouth College (Hanover, NH)

- 2018-2020 | **Bridge to the Ph.D. Program in STEM Scholar**, Columbia University (New York, NY)
- 2017-2018 | **Research Intern**, Center for Astrophysics | Harvard & Smithsonian (Cambridge, MA)
- 2016 | **NSF REU Intern**, SETI Institute, NASA Ames (Mountain View, CA)
- 2015 | **NSF REU Intern**, Maria Mitchell Observatory (Nantucket, MA)
- 2012-2013 | **High School Research Intern**, Massachusetts Institute of Technology (Cambridge, MA)

## PRESENTATIONS

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- 2022 **"Wrinkles in Time: Age-dating Young Stars in Kinematic Overdensities Using Gyrochronology."** Poster Presentations: Cool Stars 22 (Toulouse, France); 2022 Sagan Workshop (Pasadena, CA).
- 2019, 2020 **"Examining Rotation and Light Curve Evolution For Low-Mass Stars in the Open Cluster Praesepe."** Oral Presentations: Bridge to the PhD Program in STEM 2019 Symposium; THYME Collaboration Workshop (virtual). Poster Presentations: Kepler & K2 Science Conference V (Glendale, CA); 235th AAS Meeting (Honolulu, HI).
- 2018 **"Planet Candidate Validation in Crowded Fields."** Oral Presentations: 2018 Wellesley College Ruhlman Conference; Wellesley College Physics Department Colloquium. Poster Presentation: 231st AAS Meeting (Washington D.C.).
- 2018 **"Perspectives on the Wellesley College Department: Where We've Been and Where We're Going."** Oral Presentation: Wellesley College Ruhlman Conference.
- 2016, 2017 **"The Occurrence Rate of Hot Jupiters."** Oral Presentations: SETI Institute REU Colloquium; Keck Northeast Astronomy Consortium (KNAC); 2016 Symposium (Wesleyan University). Poster Presentation: 229th AAS Meeting (Grapevine, Texas).
- 2015, 2016 **"Exploring Extragalactic Emission: The H $\alpha$  Dot Survey."** Oral Presentation: Maria Mitchell Observatory Summer Colloquium. Poster Presentations: KNAC 2015 Symposium (Williams College); 227th AAS Meeting (Kissimmee, Florida).

## OUTREACH & SERVICE

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- Present **E.E. Just Graduate Fellow (Dartmouth College)**  
Near-peer mentor for undergraduates and designer and facilitator of programming in Dartmouth's [E.E. Just Program](#), established to support minoritized students pursuing STEM.
- 2020-Present **Physics/Astronomy DEI Working Group member (Dartmouth College)**  
Working to improve equity and inclusion efforts within the department.
- 2014-Present **Observatory Public Night Volunteer (Dartmouth College; Columbia University; Wellesley College; Maria Mitchell Observatory)**  
Used telescopes, provided tours of the observatory, and explained astronomical concepts on public nights.
- 2016-2021 **Retention & Student Success Advocate (Wellesley College)**  
Co-organizer of Wellesley astronomy and physics departments' post-baccalaureate dialogues. Identified and invited speakers. Currently mentoring and organizing graduate school workshops for physics/astronomy students.  
Initiated the project *Perspectives on the Wellesley College Physics Department* to formally document the history of physics at Wellesley College to advocate for curriculum change. Results were presented at the 2018 Wellesley College Ruhlman Conference, curriculum restructured Fall 2018.
- 2009-2016 **STEM Advocate (Sacramento, CA)**  
Conducted forums on STEM education with focus on inclusion of marginalized groups in under-resourced high schools, the Museum of Science & Curiosity, and California State University Sacramento.  
Congressional internships for Rep. Ami Bera and Rep. Doris Matsui including advocacy for STEM education.

## TEACHING

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Fall 2021    **Teaching Assistant:** Astronomy 2/3  
Spring, Summer 2021    **Teaching Assistant:** Astronomy 1  
Winter 2021    **Teaching Assistant:** Physics 4

## OBSERVING

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2018-2019    **Cerro Tololo Inter-American Observatory (Cerro Pachón, Chile remote from Chapel Hill, NC)**  
Conducted remote spectroscopic observations of M-Dwarfs in the TESS Continuous Viewing Zone using SOAR 4.1m in collaboration with Andrew Mann.

2015-2017    **Whitin Observatory (Wellesley, MA)**  
Conducted observations of KELT exoplanet candidates and Koronis family asteroids as paid observer.

2015    **Maria Mitchell Observatory (Nantucket, MA)**  
Conducted observations of variable stars in open clusters for over 30 nights.

2011, 2012    **Kitt Peak National Observatory (Kitt Peak, AZ)**  
Conducted observations of TrEs 4b and Cy Aqr using 20" Visitor's Center telescope and WIYN 0.9m under supervision of Don McCarthy, Vanessa Bailey, and Nathan Stock (Advanced Astronomy Camp).