

# 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  
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    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 **AAS Journal Referee**
- 2021-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)**
- 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-Present **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).