

# ROMY RODRÍGUEZ MARTÍNEZ

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## RESEARCH INTERESTS/GOALS

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I am interested in the detection and characterization of extrasolar planets. My chief research goals are to combine precise measurements of exoplanets's masses and radii with the chemical abundances of their host stars to constrain the structure and composition of small exoplanets.

## EDUCATION

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**PhD, Astronomy** August 2017 - Present  
The Ohio State University

**Master of Science, Physics** August 2015 - June 2017  
University of Puerto Rico, Río Piedras

**Bachelor of Science, Physics** August 2009 - May 2015  
University of Puerto Rico, Río Piedras

## PUBLICATIONS

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**7 total: 5 first author**

7. **Rodríguez Martínez, R.**, Stevens, D.J., Gaudi, B.S., Panero, W., “Analytic Estimates of the Achievable Precision on the Physical Properties of Transiting Planets using Purely Empirical Measurements”, *in preparation*

6. Godoy-Rivera, D., Tayar, J., Pinsonneault, M., **Rodríguez Martínez, R.**, et al., “Testing the Limits of Precise Subgiant Characterization with APOGEE and Gaia: Opening a Window to Unprecedented Astrophysical Studies”, *Submitted to the Astrophysical Journal*

5. **Rodríguez Martínez, R.**, Gaudi, B.S., Rodriguez, Joseph E., “KELT-25b and KELT-26b, a Hot Jupiter and a Substellar Companion Transiting Young A-stars observed by TESS”, 2020, *Astronomical Journal*, 160, 3.

4. Rodriguez, J. E., Eastman, J. D., Zhou, G., et al., “KELT-24b: A  $5M_J$  Planet on a 5.6 day Well-Aligned Orbit around the Young V=8.3 F-star HD 93148”, 2019, *The Astronomical Journal*, 158, 197.

3. **Rodríguez Martínez, R.**, Lopez, L., Shappee, B., Kochanek, C.S., Jayasinghe, T., Schmidt, S., “A Catalog of Flares on M dwarfs with ASAS-SN”, 2020 *The Astrophysical Journal*, 892, 144.

2. **Rodríguez Martínez, R.**, Ballard, S., Mayo, A., Vanderburg, A., Montet, B., Christiansen, J. L., “Characterization of Low Mass K2 Planet Hosts Using Near-Infrared Spectroscopy”, 2019, *The Astronomical Journal*, 158, 155.

1. **Rodríguez Martínez, R.**, Schmidt, S. J., Jayasinghe, T., Stanek, K. Z., Prieto, J. L., Shappee, B., Kochanek, C.S., Thompson, T. A., Holoiu, T. W.-S., Bersier, D., Brimacombe, J., “ASASSN-18di: Discovery of a Powerful Flare on a Mid-M Dwarf”, 2018, *Research Notes of the American Astronomical Society*, 2, 2.

## TALKS PRESENTED

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“Analytic estimates of the achievable precision of the properties of transiting exoplanets”  
National Society of Black Physicists conference November 2020

“Finding Flares with ASAS-SN” (invited talk at Cool Stars conference 2020) Cancelled due to COVID-19

“KELT-25b & KELT-26b: A hot Jupiter and a substellar companion transiting  
young A-stars observed by TESS” (invited “Astronomy Tea” talk - Carnegie Observatories) July 2020

“Searching for Hot Planets Around Hot Stars with the KELT Survey”, Harvard-Smithsonian Center for Astrophysics, Stars & Planets seminar (invited talk)	October 2019
“Strange New Worlds”, Arecibo Observatory (invited seminar talk)	April 2017

## AWARDS AND HONORS

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8 Hours Observing Time awarded at PEPSI Spectrograph on LBT	August 2020
Beth A. Brown Award for Best Graduate Poster Presentation	November 2018
Ann S. Tuttle Scholarship	September 2017

## TEACHING & ADVISING

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### **The SciAccess Zenith Mentorship Program**

*Mentor for a high school student in the Space Science Mentoring Program* September 2020 - December 2020

### **Polaris Mentorship Program**

*Mentor for physics & astronomy undergraduate student* August 2019 - May 2020

### **University of Puerto Rico, Río Piedras, Intermediate Lab II**

Graduate Teaching Assistant (TA) January 2016

### **University of Puerto Rico, Río Piedras, Introduction to Physics Lab I**

Graduate Teaching Assistant (TA) August 2015

### ***A tiempo* Tutoring Center**

Math and Physics Tutor for Middle School students August 2011

## OUTREACH & SERVICE

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Invited Speaker for OSU’s Astronomical Society	November 2020
Speaker for Friends of Ohio State Astronomy and Astrophysics (FOSAA) event “Exoplanets and Life in the Universe”	October 2020
Speaker for Friends of Ohio State Astronomy and Astrophysics (FOSAA) event “The Search for Life in the Universe and the Exoplanet Revolution”	October 2020
Panelist for <i>Women in Space</i> Q&A webinar for elementary school and high school students	September 2020
Panelist for <i>The Martian</i> Monthly Movie Nights - Science Fiction vs Science Fact Q&A webinar, Astronomy Department, OSU	August 2020
Invited speaker for the Planetary Habitability Lab’s “AstroChat” series event University of Puerto Rico Arecibo campus	December 2019
Invited speaker at elementary school Myrna M. Fuentes Caguas, Puerto Rico	December 2019
Creator and co-organizer of symposium: “The Hunt for Alien Habitable Worlds” Speakers: Sarah Ballard, Noemí Pinilla-Alonso, Abel Méndez University of Puerto Rico, Río Piedras	March, 2017

## PRESS COVERAGE

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<b>ASAS-SN-18di</b> (Articles on this paper were published in <a href="http://phys.org">phys.org</a> , <a href="http://medium.com">medium.com</a> , <a href="http://renfrewshireastro.co.uk">renfrewshireastro.co.uk</a> , and others.)	April 2018
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## POSTER PRESENTATIONS

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<b>Rodríguez et al.</b> , “Finding Flares with ASAS-SN”, National Society of Black Physicists Meeting	November 2018
<b>Rodríguez et al.</b> , “Finding Flares with ASAS-SN”, SACNAS - National Diversity in STEM	October 2018
<b>Rodríguez et al.</b> , “Characterization of Low-mass K2 planet hosts using Near-Infrared Spectroscopy”, 229th American Astronomical Society Meeting, #240.14	January 2017
<b>Rodríguez et al.</b> , “Characterization of Low-mass K2 planet hosts using Near-Infrared Spectroscopy”, SACNAS - National Diversity in STEM	October 2016

## CONFERENCES ATTENDED

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ESP 2020: Planetary Interiors and System Architectures, (Virtual)	November-December 2020
National Society of Black Physicists, (Virtual)	November 2020
233rd American Astronomical Society Meeting, (Seattle, WA)	January 2019
National Society of Black Physicists, (Columbus, OH)	November 2018
SACNAS - National Diversity in STEM Conference, (San Antonio, TX)	October 2018
Planets around Hot Stars Meeting, (Nashville, TN)	June 2018
2nd Earth-Like Worlds Workshop, (Manati, PR)	February 2017
229th American Astronomical Society Meeting (Grapevine, TX)	January 2017
SACNAS - National Diversity in STEM Conference (Long Beach, CA)	October 2016
Astrobiology Science Conference (Chicago, Il)	June 2015