Robert C. Frazier

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LinkedIn
Personal Site

EDUCATION

The Pennsylvania State University — University Park, PA
Eberly College of Science, Schreyer Honors College — August 2019 - May 2023
Bachelor of Science in Astronomy and Astrophysics (Graduate Option) — Cumulative GPA: 3.96
Bachelor of Science in Physics (General Option) — Dean's List 6/6 semesters
Minor in Mathematics

PERSONAL EXPERIENCE

The Pennsylvania State University — University Park, PA
Research Assistant/Conducting Schreyer Honors College Thesis Research — March 2022 - Present

- Worked on characterization of exoplanet architecture via analysis of radial velocity data and the Rossiter-McLaughlin effect.
- Working on Honors Thesis: "Exploration of Obliquity Techniques on Warm Neptunes"

The Pennsylvania State University — University Park, PA
Research Assistant — May 2021 - October 2021

- Developing radio interferometry imaging Python package "MPoL." Improved accessibility features through tutorials and optimized the resource usage and run time of the package.

The Pennsylvania State University — University Park, PA
Learning Assistant — August 2020 - May 2021

- Instructed and guided students in intro-level physics-for-majors class's office hours and exam reviews.
- Assisted during lecture and instructed groups during the lab period; improved students' understanding and grades
- Graded weekly assignments and quizzes.

Upper Dublin School District — Fort Washington, PA
Internship with Science Curriculum Director/Planetarium Director — May 2019 - June 2019

- Participated in evaluation and curriculum meetings. Helped with curriculum organization.
- Educated and fostered an interest in science in classes of all ages through planetarium programs and presentations throughout the school district.

PUBLICATIONS, PRESENTATIONS, SOFTWARE

Frazier, R., Stefansson, G., Mahadevan, S. et al. 2022, (to be submitted to ApJL)
NEID Reveals that The Young Warm Neptune TOI 2076b Has a Low Obliquity

Zawadzki, B. (including Frazier) et al. 2022, AAS Journals (in review)
Regularized Maximum Likelihood Techniques for ALMA Observations

Czekala, I. (including Frazier) et al. 2021
MPoL-dev/MPoL: v0.1.1

PhysCon 2022 Finalist Presenter and APS Mid-Atlantic Meeting Poster Presentation
NEID Reveals that The Young Warm Neptune TOI 2076b Has a Low Obliquity

INVOLVEMENT

Society of Physics Students (SPS) August 2019 - present

- President for 22-23 Year (Plan and run meetings, outings, events, and coordinate all officers)
- Vice President for 21-22 Year (Ran outreach events, outings, and general meetings)
    - Directed and wrote “Magic Show” physics outreach play for 200+ visitors
- Buildmaster for 20-21 Year (Planned and prepared physics related builds)

Physics and Astronomy for Women+ (PAW+) August 2022 - present

- Web Chair for 22-23 Year (Maintain and update website)

PSU Conference for Undergraduate Women in Physics Planning Committee June 2022 - present

- Created and update website for event, gathered information and resources to be displayed on it
- Contacted all PA and western VA SPS chapters to invite to event in role as SPS President

APS IDEA Team March 2022 - present

- Work to change the climate in the Physics department and promote diversity, equity, and inclusion.

APS Climate Site Visit Team March 2022 - present

- Gather information and provide feedback and insight from undergrad level.

PHROTH August 2021 - April 2022

- Writer for PHROTH, Penn State satire newspaper and magazine

Students of Shield August 2019 - April 2022

AWARDS AND HONORS

Mercedes T. Richards Memorial Scholarship (PSU-Astronomy) Awarded 2022-2023
John and Elizabeth Holmes Teas Scholarship (PSU-Physics) Awarded 2021-2023
Sigma Pi Sigma Inducted April 2021
The President’s Freshman Award (PSU) Awarded 2020
Braddock Scholarship (PSU-Eberly College of Science) Awarded 2019-2023

RELEVANT COURSEWORK

- Planets and Planetary Systems
- Topics in Planetary Science
- Electronics for Scientists
- Theoretical Mechanics
- Observational Astronomy Lab
- Thermal Physics

TECHNICAL SKILLS AND CERTIFICATE

- Languages: Python (w/ Jupyter and VSCode) , Wolfram Language (w/ Mathematica)
- OS and Software: Linux and Windows. Office/Google Suite, AstroImageJ, LaTeX, Git
- Math through ODEs and PDEs, linear algebra, multivariable/vector calculus, advanced statistics
- Responsible Conduct of Research, Certificate of Completion
    - CITI Program