


# Giannina Guzmán Caloca

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## Education

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### University of Maryland

Degree: **M.S., Astronomy**

Graduation Date: January 2023

Degree: Ph.D., Astronomy

Graduation Date: 2026

### Villanova University

Degree: **Bachelor of Science, *cum laude***

**GPA: 3.55**

Major: Astrophysics and Planetary Science

Graduation Date: May 2019

Minor(s): Communication, Physics

## Professional Work Experience

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- ★ **Software Engineer** **June 2019-August 2019**  
*Lowell Observatory*
- ★ **NASA PDART-funded ‘sbpy’- developer** **August 2018-June 2019**  
*Villanova University*
- ★ **NASA GSFC URAA Intern** **June 2018-August 2018**  
*Goddard Space Flight Center*
- ★ **Public Observatory Supervisor** **August 2015-May 2017**  
*Villanova University*

## Teaching

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- ★ **Teaching Assistant** **August 2020-Present**  
*ASTR 101 - “Introduction to Astronomy”*  
*ASTR 220 - “Collisions in Space – The Threat of Asteroid Impacts”*  
*University of Maryland*
- ★ **Teaching Assistant** **August 2016-May 2018**  
*Villanova University*

## Awards and Honoraries

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- ★ **Jason A. Cardelli Memorial Award for Undergraduate Research** **Spring 2019**  
*“The Jason A. Cardelli Memorial Award for Undergraduate Research is presented to a graduating Astronomy & Astrophysics major whose body of undergraduate research work exhibits particularly high standards of independence, originality, and quality.” (Villanova University Website)*
- ★ **First place in Villanova's 2018 Sigma Xi CRF Poster Symposium** **Spring 2018**

## Publications

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[1] Bell, T., **et al.** (2022). Eureka!: An End-to-End Pipeline for JWST Time-Series Observations. JOSS.

DOI: <https://doi.org/10.48550/arXiv.2207.03585> (2022)

[2] van Belle, G.T., Collins, M., **Guzman, G.**, Mommert, M. (2020). Improved ASCOM Dome Following.

Research Notes of the AAS. DOI: [10.3847/2515-5172/abb29b](https://doi.org/10.3847/2515-5172/abb29b)

[3] **Guzman, G.**, Sion, E., & Godon, P. (2019). FUSE and IUE Spectroscopy of the Prototype Dwarf Nova ERUrsa

Majoris during Quiescence. *Astronomical Journal*. DOI: [10.3847/1538-3881/ab322f](https://doi.org/10.3847/1538-3881/ab322f)

- [4] Ginsburg, A., et al. (2019). astroquery: An Astronomical Web-querying Package in Python. *Astronomical Journal*. DOI:[10.3847/1538-3881/aafc33](https://doi.org/10.3847/1538-3881/aafc33)
- [5] Mommert, M., et al. (2019). sbpy: A Python module for small-body planetary astronomy. *JOSS*. DOI:[10.21105/joss.01426](https://doi.org/10.21105/joss.01426)
- [6] Campbell, H., Sheldon, Z., Gibson, J., **Guzman, G.** (2020). Technological and Mediated Identity in American Multisite Churches. *Ecclesial Practices*. DOI:[10.1163/22144417-bja10002](https://doi.org/10.1163/22144417-bja10002)

## Presentations

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- ★ **AAS Accepted Talk** **January 2025**  
*Looking at Giant Exoplanets around M-dwarfs (GEMS) with JWST: NIRSpec Transmission Spectroscopy of the Warm Saturn HATS-6 b*
- ★ **Early Career Science Forum Talk** **October 2024**  
*@ NASA GSFC - Looking at Giant Exoplanets around M-dwarfs (GEMS) with JWST*
- ★ **Eureka! An End-to-End Pipeline for JWST Time Series Observations** **December 2023**  
*ExoVAST (Virtual Astronomy Talks) seminar talk*
- ★ **Gridtrievals? A Comparative Study of Retrieval Techniques** **June 2023**  
*ExoClimes 2023 Poster*
- ★ **Eureka! An End-to-End Pipeline for JWST Time Series Observations** **February 2023**  
*First EMAC Workshop on Open-Access Exoplanet Modeling & Analysis Tools*
- ★ **Accurate (Exo)planetary Retrievals via High Dimensional Bayesian Samplers** **August 2020**  
*NASA GSFC Planetary Science Division Symposium*
- ★ **The Red Thumbs: Growing Plants on Martian Regolith Simulant** **January 2019**  
*AAS Meeting #233 Poster - Education Category*
- ★ **Designing a Python Module for the Calculation of [..] in Comets** **January 2019**  
*AAS Meeting #233 Poster*
- ★ **Digitizing Villanova University's Eclipsing Binary Card Catalogue** **January 2018**  
*AAS Meeting #231 Poster*

## Community Service

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- ★ **Space Sciences Outreach Cooperative Co-founder and Co-chair** **May 2023-Present**  
*Co-founder and co-chair of the University of Maryland [space sciences outreach coop \(SSOC\)](#) + lead in several outreach activities throughout each year*
- ★ **Class Representative** **January 2021-Present**  
*Graduate Council, University of Maryland Department of Astronomy*
- ★ **NASA JWST x Minecraft Education Collaboration Interviewee** **September 2024**  
*Participant in a [NASA JWST x Minecraft Education collaboration](#)*
- ★ **NASA Funded Taller Futur@ Astronom@** **July 2024**  
*[Taught a 2.5 hour intro to Astrobiology lecture](#) in Spanish + designed homework*
- ★ **Being Stardust Workshop @ Library of Congress** **April 2024**  
*Participant in an [art meets astrobiology collaboration outreach workshop](#)*
- ★ **Prospective Visit Organizer** **Fall 2022-Spring 2024**  
*Organized the graduate prospective visit for the Department of Astronomy*
- ★ **Workshops in Applying to Astronomy Graduate School co-lead** **Fall 2023**  
*Helped establish and lead a workshop series at UMD for astronomy graduate school applications directed at local undergraduates*
- ★ **#MathGals Special Guest** **Fall 2022**  
*Invited special guest for Pasadena ISD school district [#mathgals club](#)*

- ★ **UMD Astronomy [EDI Committee Member](#)** **Fall 2021-Fall 2024**
- ★ **UMD Astronomy Undergraduate Mentorship Program Mentor** **Fall 2021-Fall 2023**  
*Mentor for undergraduate students, helps with professional development*
- ★ **Mental Health Task Force** **Spring 2021**  
*[Co-authored the mental health report](#) for UMD's Astronomy Department; based on a dedicated mental health survey done in 2020*
- ★ **AbGradCon2022 Organizing Committee** **Fall 2021-Fall 2022**  
*[Position of leadership: Public and Media Relations](#)*
- ★ **Executive Secretary** **April 2020**  
*NASA Review Panel*
- ★ **GSMI Cientifico Latino Volunteer** **August 2020-May 2021**  
*[Student Mentor](#)*
- ★ **The Superlative** **January 2016-May 2019**  
*Position of leadership (2016-2019): Public Relations and media representative*
- ★ **Villanova Astronomical Society** **August 2015-May 2019**  
*Position of leadership (2017-2018): Treasurer*
- ★ **All Hands-On Science** **May 2017-May 2018**  
*Volunteering*

### Awarded Proposals

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- ★ **Co-I and Target lead: JWST (Cycle 2 GO #3171; 132.39 hrs)**  
*Red Dwarfs and the Seven Giants: First Insights into the Atmospheres of Giant Exoplanets around M-dwarf Stars*
- ★ **Co-I and Target lead: HST (Cycle 30 #17192; 116 orbits)**  
*The SPACE Program: a Sub-neptune Planetary Atmosphere Characterization Experiment*
- ★ **Co-I: JWST (Cycle 3 GO #6284; 13.68 hrs)**  
*Searching for Signatures of Surface-Atmosphere Interaction on a Small Planet in its Magma Era*
- ★ **Co-I: JWST (Cycle 3 GO #5959; 129.96 hrs)**  
*KRONOS: Keys to Revealing the Origin and Nature Of sub-neptune Systems*