

# M. Katy Rodriguez Wimberly

NSF MPS ASCEND POSTDOCTORAL FELLOW · UNIVERSITY OF CALIFORNIA, RIVERSIDE

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## Current Employment

### Pomona College

#### Lecturer

- Courses Taught: Intro to Galaxies & Cosmology (General Ed)

Claremont, California

Jan 2022 - Present

### University of California, Riverside

#### NSF MPS Ascend Postdoctoral Research Fellow

- Research Advisor: Prof. Laura Sales
- Near Field Cosmology Research and Peer Mentorship Programming for Undergraduate and Graduate Students

Riverside, California

Jan 2021 - Present

## Education

### University of California, Irvine

#### Ph.D. in Physics

- Thesis Advisor: Prof. Michael Cooper
- Thesis: Ultra-Faint Dwarf Galaxies: Investigating the Evolution of Our Universe & Those Who Study It

Irvine, California

Sep 2016 - Dec 2021

### California State University, Long Beach

#### M.S. in Physics

- Transferred to Ph.D. Program

Long Beach, California

Aug 2015 - May 2016

### California State University, Long Beach

#### B.S. in Physics

- Minor: Math

Long Beach, California

Jan 2011 - May 2015

### Mount San Antonio College

#### A.A.

- Majors: Fine Arts, Natural Science & Math, Social & Behavioral Sciences

Walnut, California

Jan 2004 - June 2009

## Publications

### A Model of Mentorship for Students from Historically Underrepresented Groups in STEM

Rodriguez Wimberly, M.K., et al.

- Under Review
- arXiv: 2209.03395

Understanding Interventions

2022

### Sizing from the Smallest Scales: The Mass of the Milky Way

Rodriguez Wimberly, M.K., et al.

MNRAS, 513, 4968

2022

### Characterizing the Infall Times and Quenching Timescales of the Milky Way Satellites with *Gaia* Proper Motions

Fillingham, S.P. et al.

- Under Review
- arXiv: 1906.04180

MNRAS

2019

### Suppressing Star Formation on the Smallest Scales: What Role Does Environment Play?

Rodriguez Wimberly, M.K., et al.

MNRAS, 483, 4031

2019

### SETI Observations of Exoplanets with the Allen Telescope Array

Harp, G.R. et al.

AJ, 152.6 (2016b): 181

2016

## Highlighted Awards

**NSF MPS Ascend Postdoctoral Fellow**, 2021 - Current  
**AAS National Osterbrock Fellow**, 2020 - 2021  
**NSF Graduate Research Fellow**, 2016 - 2021  
**Eugene Cota-Robles Fellow**, 2016 - 2021

## Teaching Experience

### ASTR002: Introduction to Galaxies and Cosmology

Lecturer

Pomona College

Jan 2023 - Present

- Duties include creating and implementing syllabus, homework assignments, and exams and final projects (current course materials can be viewed in [this Google Drive Folder](#)).

### ASTR110L: Introduction to Astronomy Lab

Instructor on Record

CSU Long Beach

Aug 2015 - May 2016

- Duties included creating and implementing syllabi based off the department's experiment schedule, homework assignments, exams and final projects (sample syllabi can be viewed at [https://mkrodriguezvimberly.github.io/outreach\\_teaching\\_service/astro100Lsyllabus.html](https://mkrodriguezvimberly.github.io/outreach_teaching_service/astro100Lsyllabus.html)).

## Highlighted Mentorship

### Cal-Bridge Mentorship Handbook

Revision Team Lead

June 2021

- Led team of 4 other Cal-Bridge Alumni in rewriting the program's mentorship handbook.
- Revisions focus on reciprocal mentor-mentee relationships (especially in that as much as students need to adapt to academia, mentors and academia need to adapt to students), highlighting hurdles specific to many underrepresented groups within STEM, and mental health
- Publicly available at <https://tinyurl.com/CBMentorshipHandbook>

### Cal-Bridge Mentor Map

Author

Aug 2020

- Created a Mentor/Support Network Map designed specifically for undergraduate STEM students.
- Publicly available at <https://tinyurl.com/CBMentorshipMap>

## Observing Experience

2 Nights **Keck Observatory**, Scheduled for May 2023, Mass-Metallicity Relation for UFDs LRIS, Lead Co-I  
1.5 Nights **Keck Observatory**, Chemical Abundances in UFD, Willman 1 DEIMOS, Lead Co-I  
15 Nights **Keck Observatory**, Extragalactic Star Formation Quenching Survey DEIMOS, Co-I  
Oct 2015 **UCO/Lick Observatory**, Robert P. Kraft Observational Astronomy Workshop

## Skills

### Programming

Python (Pandas, SciPy, NumPy, Scikit-learn, AstroPy), IRAF (DEIMOS Mask Design, Wavelength Calibration), MySQL, Fortran95, Mathematica, HTML, Certified LabVIEW Associate Developer

### Tools

Unix, Shell (Bash/Zsh),  $\text{\LaTeX}$  (Overleaf/R Markdown), Pypelt, Aladin, DS9, Gwyddion, Git, Atomic & Magnetic Force Microscopy.

### Soft Skills

Time Management, Teamwork, Problem-solving, Documentation, Engaging Presentation.

## Highlighted Invited Talks

**Astronomy Colloquium**, University of Texas, Austin, Department of Astronomy upcoming Apr'23  
**First Friday Astronomy**, Boise State University, Department of Physics upcoming Mar'23  
**241<sup>st</sup> Meeting of the American Astronomical Society**, NSF AAPF Symposium Mentorship Panelist upcoming Jan'23  
**Astronomy Colloquium**, University of Michigan, Department of Astronomy September 2022  
**Conversations in Equity & Inclusion**, University of Michigan, Department of Astronomy September 2022  
**Astronomy Brown Bag Lunch**, MIT May 2022  
**Cosmology & Astronomy Seminar**, University of California, Davis October 2021  
**Lunchtime Seminar**, The Carnegie Observatories September 2021  
**Barriers to Equity, Inclusion & Diversity in Astronomy**, Plenary Speaker, Presented on Imposter Syndrome, Astronomical Society of the Pacific 130<sup>th</sup> Annual Meeting September 2018

## Highlighted Contributed Presentations

<b>241<sup>st</sup> Meeting of the American Astronomical Society</b> , NSF AAPF Symposium Contributed Oral Presentation and Lightning Talk	upcoming Jan'23
<b>Astronomical Society of the Pacific 2022: A Virtual Conference</b> , Contributed Oral Presentation	December 2022
<b>Keck Science Meeting</b> , Oral Presentation	September 2022
<b>GalFESCA Conference</b> , Oral Presentation	September 2022
<b>240<sup>th</sup> Meeting of the American Astronomical Society</b> , Dissertation Contributed Oral Presentation	June 2022
<b>Science by Diverse Scientists: A Cal-Bridge Physics &amp; Astronomy Seminar</b> , Oral Presentation	April 2022
<b>Galaxy Formation &amp; Evolution in the Era of the Roman Space Telescope</b> , Oral Presentation	October 2020
<b>Space Telescope Science Institute's 2020 Spring Symposium — The Local Group: Assembly &amp; Evolution</b> , Poster Presentation	September 2020

## Highlighted Service Activities

<b>American Astronomical Society Early Career Task Force</b> Invited Early Career Task Force Member	2022 - Present
<b>Cal-Bridge Mentorship Committee Chair</b> Cal-Bridge Program: A bridge program assisting undergraduate STEM students into graduate programs <ul style="list-style-type: none"><li>Led revision of program's mentorship handbook</li></ul>	2020 - Present
<b>Astronomical Society of the Pacific Board of Directors Member</b> Diversity Committee Co-Chair & Jr. Board Fellow Selection Committee Co-Chair	2019 - Present
<b>Cal-Bridge Director of Peer Mentoring Program</b> Creator & Organizer of Peer Mentoring Program for Cal-Bridge Scholars	2019 - Present
<b>UCI Physics &amp; Astronomy Community Excellence</b> <ul style="list-style-type: none"><li>Co-Creator of Peer Mentoring Programs for 1st Year Physics Graduate Students</li><li>Our Website: <a href="https://uci-pace.github.io">uci-pace.github.io</a></li></ul>	2018-2021

## Highlighted Media Pieces

<b>Mercury Magazine Contributor (Research Focus)</b> Astronomical Society of the Pacific	2018 - Present Author: Katy Rodriguez Wimberly
<b>Road to Happiness: Featured Alumni Story</b> California State University STEM Network	August 2022 Author: Monica Alarcon
<b>The Reionization of Katy Rodriguez Wimberly</b> UC Irvine School of Physical Sciences Features	September 2021 Author: Lucas Van Wyk Joel
<b>Ultra-Faint Dwarf Galaxies: Cosmic Fossils?</b> Astronomical Society YouTube SciComm Playlist	2018-2020 Creator: Katy Rodriguez Wimberly
<b>Katy Rodriguez Wimberly: Changing My Life for Science</b> The Story Collider: True, Personal Stories About Science	May 2017 Speaker: Katy Rodriguez Wimberly

## References

<b>Dr. Laura Sales</b> lsales@ucr.edu - 951.827.7037	Professor - UC Riverside
<b>Dr. Michael Cooper</b> cooper@uci.edu - 949.824.6485	Professor - UC Irvine
<b>Dr. Alex Ji</b> alexji@uchicago.edu - 773.702.8203	Professor - University of Chicago
<b>Dr. Alex Rudolph</b> alrudolph@cpp.edu - 909.717.1851	Professor - Cal Poly Pomona