

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

Pomona College

Lecturer

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

CSU Long Beach

Instructor on Record

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).
- CSULB Official Instructor Evaluations were given after each term and I was guided on how to interpret the feedback and implement desired improvements by the CSULB Physics & Astronomy Department Chair.

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 with the guidance of the program's director.
- 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), \LaTeX (Overleaf/R Markdown), Pypelt, Aladin, DS9, Gwyddion, Git, Atomic & Magnetic Force Microscopy.

Soft Skills

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

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
241st 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
Physics & Astronomy Colloquium , Pomona College	April 2022
Cosmology & Astronomy Seminar , University of California, Davis	October 2021
Cosmology & Astronomy Seminar , University of California, Davis	October 2021
CCAPP Little Galaxies Meeting , The Ohio State University	October 2021
Lunchtime Seminar , The Carnegie Observatories	September 2021
Lunchtime Seminar , The Carnegie Observatories	February 2020
Barriers to Equity, Inclusion & Diversity in Astronomy , Plenary Speaker, Presented on Imposter Syndrome, Astronomical Society of the Pacific 130 th Annual Meeting	September 2018

Recent Contributed Presentations

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

Highlighted Service Activities

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

Highlighted Media Pieces

Mercury Magazine Contributor (Research Focus) Astronomical Society of the Pacific	2018 - Present Author: Katy Rodriguez Wimberly
Road to Happiness: Featured Alumni Story California State University STEM Network	August 2022 Author: Monica Alarcon

The Reionization of Katy Rodriguez Wimberly

UC Irvine School of Physical Sciences Features

September 2021

Author: Lucas Van Wyk Joel

Ultra-Faint Dwarf Galaxies: Cosmic Fossils?

AstronoMouse YouTube SciComm Playlist

2018-2020

Creator: Katy Rodriguez Wimberly

Katy Rodriguez Wimberly: Changing My Life for Science

The Story Collider: True, Personal Stories About Science

May 2017

Speaker: Katy Rodriguez Wimberly

References

Dr. Laura Sales

lsales@ucr.edu - 951.827.7037

Professor - UC Riverside

Dr. Michael Cooper

cooper@uci.edu - 949.824.6485

Professor - UC Irvine

Dr. Alex Ji

alexji@uchicago.edu - 773.702.8203

Professor - University of Chicago

Dr. Alex Rudolph

alrudolph@cpp.edu - 909.717.1851

Professor - Cal Poly Pomona