

Stephanie M. Urbano Stawinski

Astrophysics Ph.D. Candidate · University of California, Irvine

🏠 <https://sstawins.github.io/>
✉ sstawins@uci.edu
ORCID: 0000-0001-8169-7249

Research Statement

I am an observational astronomer interested in the evolution of galaxies and their surroundings through emission-line and absorption-line spectroscopy. In the past I have worked significantly in studying the exchange of gas in the circumgalactic medium around distant galaxies. Currently I work on spectroscopic surveys of Ly α emitters at high redshift ($z = 4 - 7$).

Aside from my research goals, I am greatly involved in mentorship programs, astronomy outreach, and astronomy communication. I aspire to inspire and encourage others of all levels and backgrounds to pursue science.

Education

University of California, Irvine

Ph.D. in Physics

Advisor: Dr. Michael Cooper

Thesis: TBD

GPA: 3.817/4.00

Irvine, California

September 2019 – Present

San Diego State University

M.S. in Astrophysics

Advisor: Dr. Kate Rubin

Thesis: Probing the Circumgalactic Medium at $z \sim 2$ using Close Quasar Pairs

GPA: 3.72/4.00

San Diego, California

August 2017 – May 2019

Arizona State University

B.S. in Astrophysics & B.S. in Physics

Minor: Spanish

Advisors: Dr. Sangeeta Malholtra, Dr. Evan Scannapieco, Dr. Rogier Windhorst

Major Thesis: Measuring the Ratio of Dust to Metals in Damped Lyman α Systems

Honors College Thesis: Investigating Spectral Indices of Radio Galaxies at 140 MHz with LOFAR

Overall GPA: 3.55/4.00

Tempe, Arizona

August 2013 – May 2017

Publications

Deeper than DEEP: A Spectroscopic Survey of $z > 3$ Ly α Emitters in the Extended Groth Strip

Stephanie M. Urbano Stawinski, M. C. Cooper, Steven L. Finkelstein, Intae Jung, Pablo G. Pérez-González, Caitlin M. Casey, Olivia R. Cooper, Nimish P. Hathi, Benne W. Holwerda, Anton M. Koekemoer, Vital Fernández, Rebecca L. Larson, Ray A. Lucas, L. Y. Aaron Yung

- Submitted to MNRAS 2023; arXiv:2307.04782

On the Metallicities and Kinematics of the Circumgalactic Media of Damped Ly α Systems at $z \sim 2$

Stephanie M. Urbano Stawinski, Kate H.R. Rubin, J. Xavier Prochaska, Joseph F. Hennawi, Nicolas Tejos, Michele Fumagalli, Marc Rafelski, Evan N. Kirby, Elisabeta Lusso, Zachary Hafen

- 2023, ApJ, 951, 135

Elentári: a massive proto-supercluster at $z \sim 3.3$ in the COSMOS field

Ben Forrest, Brian C. Lemaux, Ekta Shah, Priti Staab, Ian McConachie, Olga Cucciati Roy R. Gal, Denise Hung, Lori M. Lubin, Letizia P. Cassarà, Paolo Cassata, Wenjun Chang, M. C. Cooper, Roberto Decarli, Percy Gomez, Gayathri Gururajan, Nimish Hathi, Daichi Kashino, Danilo Marchesini, Z. Cemile Marsan, Michael McDonald,

Adam Muzzin, Lu Shen, **Stephanie Urbano Stawinski**, Margherita Talia, Daniela Vergani, Gillian Wilson, and Giovanni Zamoran

- 2023, MNRAS, 526, 56

Rotation Curve Measurement of Dark Matter Content of a $z \sim 0.5$ Galaxy

Jake Magee, Caitlin M. Casey, Olivia R. Cooper, Alfonso Melendez, Mia Fong, Jeyhan Kartaltepe, Arianna S. Long, **Stephanie Urbano Stawinski**, Jaclyn B. Champagne, M. C. Cooper, Andreas L. Faisst, Claudia Maraston, and The WERLS Collaboration

- 2023, RNAAS, 7, 5

CEERS Key Paper IV: Galaxies at $4 < z < 9$ are Bluer than They Appear – Characterizing Galaxy Stellar Populations from Rest-Frame ~ 1 micron Imaging

Casey Papovich, Justin W. Cole, Guang Yang, Steven L. Finkelstein, Guillermo Barro, Véronique Buat, Denis Burgarella, Pablo G. Pérez-González, Paola Santini, Lise-Marie Seillé, Lu Shen, Pablo Arrabal Haro, Micaela B. Bagley, Eric F. Bell, Laura Bisigello, Antonello Calabrò, Caitlin M. Casey, Marco Castellano, Katherine Chworowsky, Nikko J. Cleri, M. C. Cooper, Luca Costantin, Mark Dickinson, Henry C. Ferguson, Adriano Fontana, Mauro Giavalisco, Andrea Grazian, Norman A. Grogan, Nimish P. Hathi, Benne W. Holwerda, Taylor A. Hutchison, Jeyhan S. Kartaltepe, Lisa J. Kewley, Allison Kirkpatrick, Dale D. Kocevski, Anton M. Koekemoer, Rebecca L. Larson, Arianna S. Long, Ray A. Lucas, Laura Pentericci, Nor Pirzkal, Swara Ravindranath, Rachel S. Somerville, Jonathan R. Trump, **Stephanie M. Urbano Stawinski**, Benjamin J. Weiner, Stephen M. Wilkins, L. Y. Aaron Yung, and Jorge A. Zavala

- 2023, ApJ, 949, 18

MAGAZ3NE: High Stellar Velocity Dispersions for Ultra-Massive Quiescent Galaxies at $z \gtrsim 3$

Ben Forrest, Gillian Wilson, Adam Muzzin, Danilo Marchesini, M. C. Cooper, Z. Cemile Marsan, Marianna Annunziatella, Ian McConachie, Kumail Zaidi, Percy Gomez, **Stephanie M. Urbano Stawinski**, Wenjun Chang, Gabriella de Lucia, Francesco La Barbera, Lori Lubin, Julie Nantais, Theodore Pena, Paolo Saracco, Jason Surace, and Mauro Stefanon

- 2022, ApJ, 938, 109

Additional Multicolor Photometric Observations of the Latest Eruption of the Recurrent Nova M31N 2008-12a

P. A. Wysocki, Q. Socia, M. A. Engesser, M. Yenawine, **S. M. Stawinski**, A. W. Shafter

- 2018, ATel, 12190, 1

SÍGAME Simulations of the [CII], [OI], and [OIII] Line Emission from Star-forming Galaxies at $z \simeq 6$

Karen Olsen, Thomas R. Greve, Desika Narayanan, Robert Thompson, Romeel Davé, Luis Niebla Rios, and **Stephanie Stawinski**

- 2017, ApJ, 846, 105

Talks

galFRESKA at UCR

MAKING MONSTERS: Spectroscopic Confirmation of a Ultra-Massive Galaxy in a $z \sim 4.9$ Protocluster

September 2023
Riverside, California

COSMOS 2022 Meeting (Invited)

Making Monsters: Unraveling the Formation of Ultra-Massive Galaxies at $z > 4$

July 2022
Paris, France

240th Meeting of the American Astronomical Society

Spectroscopic Survey of Rare Ultra-Massive Galaxies at $z > 4$

July 2022
Pasadena, California

The Local Group Astronomy Club Meeting (Invited)*The Dark Space Between Galaxies*

August 2020

Virtual

SDSU Astronomy Department Colloquium*Probing the Circumgalactic Medium at $z \sim 2$ using Close Quasar Pairs*

April 2018

San Diego, California

2017 NASA Space Grant Symposium*Studying the Spectral Index of Radio Galaxies*

April 2017

Tempe, Arizona

ASU NSF Research Presentation*Cleaning and Imaging a Field Using LOFAR*

April 2017

Tempe, Arizona

Posters**SDSU Student Research Symposium***Probing the Circumgalactic Medium at $z \sim 2$ using Close Quasar Pairs*

March 2018

San Diego, California

Barrett, the Honors College Thesis Symposium*Studying the Spectral Index of Radio Galaxies*

April 2017

Tempe, Arizona

NASA Undergraduate Research Symposium*Studying Galaxy Magnetism with the LOFAR Telescope*

February 2017

Tempe, Arizona

229th Meeting of the American Astronomical Society*Ratio of Dust to Metal Abundance in Quasar Absorption Line Systems from $1.9 < z < 3.3$*

January 2017

Grapevine, Texas

Observing Experience

Keck Observatory/LRIS	<i>11 nights</i>	WERLS Survey	<i>Lead Co-I</i>
Keck Observatory/LRIS	<i>7 nights</i>	Massive Galaxies at $z > 4$	<i>Lead Co-I</i>
Keck Observatory/MOSFIRE	<i>2 nights</i>	WERLS Survey	<i>Co-I</i>
Keck Observatory/MOSFIRE	<i>5 nights</i>	Massive Galaxies at $z > 3$	<i>Co-I</i>
Keck Observatory/DEIMOS	<i>8 nights</i>	Lyman α emitters in the EGS	<i>Lead Co-I</i>
Keck Observatory/KCWI	<i>2 nights</i>	Mapping Gas around Galaxies	<i>Co-I</i>
Mount Laguna Observatory/40 inch	<i>12 nights</i>	Nova and Supernova Observations	<i>Lead Co-I</i>
Mt Wilson Observatory/CHARA	<i>1 night</i>	Binary system in the open cluster	<i>Co-I</i>
Kitt Peak Observatory/Mayall Telescope	<i>2 nights</i>	Search for Lyman α emitters	<i>Co-I</i>

Mentor/Leadership Experience**UCI Physics & Astronomy Community Excellence (PACE)***Serves as program Leadership Chair*

September 2020-Present

- 1-on-1 graduate student peer mentorship program
- Created and ran biweekly workshops for physics graduate student success
- Trained incoming mentors and leadership team members

UCI Physics & Astronomy Physics Graduate Caucus (PGC)*Serves as PACE/Blog Representative*

September 2021-Present

- PGC runs graduate student community initiatives
- Communicates with the department to better the graduate program

UCI Astronomy Journal Club*Co-lead organizer*

Fall 2022-Present

- Plans and runs weekly journal club for the department

SDSU Astronomy Lead Teaching Associate*September 2018-May 2019**Leader of 6 Teaching Associates*

- Designed and Assigned teaching positions amongst TAs
- Lead TA meetings and assisted other TAs in their classes
- Setup labs weekly

ASU SESE Undergraduate Peer Mentorship*August 2014-May 2017**Volunteered as peer mentor for incoming undergraduate class*

- Advised incoming students in the department about research, coursework, and the University
- Worked in group and 1-on-1 settings
- Guided incoming students on how to initiate research with a professor

Awards and Honors

AAS National Osterbrock Fellow*Fall 2021-Present***UCI Physics Diversity and Equity Inclusion Fellow***Fall 2021/ Winter 2022***Ruth and Clifford Smith Astronomy Fellowship***Fall 2018-Spring 2019***Reginald F. Buller Endowment Scholarship***Fall 2018-Spring 2019***William F. Lucas San Diego Astronomy Association Memorial Scholarship***Fall 2018-Spring 2019***Barrett, the Honors College Graduate***May 2017***2016 CLAS (College of Liberal Arts and Sciences) Student Leader Award***Oct 2016***New American University Scholar: President's Award***2013-2017***Teaching Experience**

University of California, Irvine*September 2019-Present**P20E Life in the Universe (TA)**P20A Introduction to Astronomy (TA)**P61C Introduction to Astrophysics (TA)**P20B Cosmology (TA)**P3LC Basic Physics Laboratory - Optics (TA)***San Diego State University***August 2017-May 2019**ASTR 109 Astronomy Lab (Course Instructor)**ASTR 101 Introduction to Astronomy (Guest Lecturer)***Arizona State University***September 2019-Present**AST 113/114 Astronomy Lab (Course Instructor)*

Skills

Programming Languages	Python, Linux/Unix, HTML, SQL, Fortran, C
Tools	PyteIt, Ds9, Git, Linetools, Pyigm, Specdb, \LaTeX , Excel, TOPCAT
Soft Skills	Mentorship, Project Management/Leadership, Teaching at various levels/backgrounds

Outreach and Science Communication

UCI Physics and Astronomy Blog team member Fall 2019-Present
University of California, Irvine, California

- In charge of [graduate student spotlight](#) articles
- helped write JWST research articles (undergraduate+)
- acted in educational astronomy videos (elementary+)

Community Astronomy Lecturer 2017-2020
Lancaster Woodland Preserve, California

- Created interactive presentations about the moon and planets for children of all ages

Astronomy Night at Clay Elementary School Presenter November 2018
San Diego, California

- Gave presentation about meteorites to elementary school students

Planetarium Show Presenter (10+ shows) 2018-2019
San Diego State University, California

- Created and performed planetarium shows for the community
- Trained others to run planetarium shows

Mount Laguna Observatory Summer Visitors Program (8 nights) July 2018/2019
Mount Laguna Observatory, California

- Operated telescopes (21 inch Buller Telescope), performed a night sky tour, and gave lecture to the public

High School Camping Trip Sky Tour Presenter April 2018
Mt Palomar, California

- Conducted a night sky tour/telescope viewing for high school students in San Diego

SDSU Telescope Nights Volunteer Presenter (4 nights) April 2018
San Diego State University, California

- Setup and ran telescopes and answered questions about the night sky for college students

Earth and Space Exploration Day (2 days) Fall 2015, 2016
Arizona State University, Arizona

- Set up event, hosted tables with information about rockets and spectroscopy for the public

SESE/ASU Open House Telescope Operator (7 nights) November 2014, 2015, 2016
Arizona State University, Arizona

- Set up and operated telescopes (8 inch Meades) for public outreach nights

Workshops Attended

PyPeIt Data Reduction Workshop

Updates and usage of PyPeIt data reduction pipeline

August 2020, February 2022

Virtual

JWST Proposal Training Workshop at UCI

Hands-on workshop to run ETC, APT, and other tools needed writing JWST proposals

February 2020

Irvine, California

Farmer-Trimble Observational Astronomy Workshop at UCO/Lick Observatory

Interactive observation planning sessions and hands-on observing experiences

October 2019

Mt. Hamilton, California

Media Highlights

UCI Physics Department Student Org. Series

Author: Hana Schiff

October 2022

Meet the UCI School of Sciences DEI Fellows

Author: Lucas Van Wyk Joel

February 2022

Past Employment

Griffith Observatory Museum Guide

Griffith Observatory, California

July 2015-July 2018

- Gave public astronomy talks and answers questions for the public

References

Dr. Michael Cooper

Professor at University of California, Irvine
cooper [at] uci.edu
1-949-824-6485

Dr. Kate Rubin

Professor at San Diego State University
krubin [at] sdsu.edu
1-619-594-2623