

CONTACT INFORMATION	rjrickar@ucsd.edu		
RESEARCH INTERESTS	Chemical Evolution of Galaxies, Interstellar Medium, and Stellar Feedback		
EDUCATION	University of California, San Diego , San Diego, CA Ph.D in Physics, May 2024 Advisor: Dr. Karin Sandstrom San Diego State University , San Diego, CA M.S in Astronomy, May 2018 Advisor: Dr. Kate Rubin San Francisco State University , San Francisco, CA B.S in Physics with concentration in Astrophysics, May 2016		
AWARDS	<ul style="list-style-type: none"> • Strategic Enhancement of Excellence through Diversity (SEED) Fellowship • Ruth and Clifford Smith Astronomy Fellowship • William F. Lucas San Diego Astronomy Association Memorial Scholarship • Eden Academic Excellence Award • Dean's list • Michael and Greta McKinney Scholarship 	March 2018-2023 October 2017 October 2017 April 2015 Fall 2014 & Spring 2015 October 2014	
AWARDED PROPOSALS	Keck 2023A – ESI: 0.5 nights <i>“The Origin of Doubly Ionized Helium in I Zw 18”</i> Keck 2022A – KCWI: 2 nights <i>“Resolved Maps of Auroral Line Metallicities in Nearby Dwarf Galaxies”</i> Keck 2021B – KCWI: 1 night <i>“Resolved Maps of Auroral Line Metallicities in Nearby Galaxies”</i>	2022 2022 2021	
OBSERVING EXPERIENCE	<ul style="list-style-type: none"> • Keck Observatory, 10-meter, KCWI+KCRM. (10+ nights). • Keck Observatory, 10-meter, ESI (2.5 nights). • Lick Observatory, Shane 3-meter, Kast Spectrograph (1 night). • Mt. Laguna Observatory, 40-inch (10+ nights). 		
SOFTWARE EXPERIENCE	<ul style="list-style-type: none"> • Multi year (> 6) experience scripting in Python, IDL, Matlab. • Proficient in Git management. • Adept in Python scripting custom data reduction and analysis software for both photometric and spectroscopic data. • Experience with archival data system such as MAST and Hubble Legacy Archive. 		
PRESENTATIONS	<ul style="list-style-type: none"> • <i>“HII Region Electron Temperatures and Abundances in Nearby Galaxies Observed with Keck-KCWI and VLT-MUSE”</i> Dissertation Talk, American Astronomical Society, AAS # 243 • <i>“HII Region Electron Temperatures and Abundances in Nearby Galaxies Observed with Keck-KCWI and VLT-MUSE”</i> Contributed Plenary Oral Presentation, Resolving Galaxy Ecosystems Across All Scales • <i>“HII Region Electron Temperatures and Abundances in Nearby Galaxies Observed with Keck-KCWI and VLT-MUSE”</i> Oral Presentation, University of Austin, Texas • <i>“HII Region Electron Temperatures and Abundances in Nearby Galaxies Observed with Keck-KCWI and VLT-MUSE”</i> 	January 2024 December 2023 December 2023 November 2023	

Oral Presentation, University of California Los Angeles, California

- “*HII Region Electron Temperatures and Abundances in Nearby Galaxies Observed with Keck-KCWI and VLT-MUSE*” November 2023
Oral Presentation, Metal Production and Distribution in a Hierarchical Universe – II
- “*HII Region Electron Temperatures and Abundances in Nearby Galaxies Observed with Keck-KCWI and VLT-MUSE*” November 2023
Oral Presentation, Tea Time @ Carnegie Observatories, California
- “*HII Region Electron Temperatures and Abundances in Nearby Galaxies Observed with Keck-KCWI and VLT-MUSE*” November 2023
Oral Presentation, Steward/NOIRLab Galaxy Group, University of Arizona, Arizona
- “*HII Region Electron Temperatures and Abundances in Nearby Galaxies Observed with Keck-KCWI and VLT-MUSE*” November 2023
Oral Presentation, University of California Davis, California
- “*Metallicities and Electron Temperatures from Auroral Lines for 421 HII Regions in Nearby Galaxies*” September 2023
Oral Presentation, Keck Science Meeting 2023
- “*HII Region Electron Temperatures and Abundances from Keck-KCWI and VLT-Muse Observations of Nearby Galaxies*” January 2023
Oral Presentation, American Astronomical Society, AAS Meeting #441
- “*Observations of Extended, Highly Ionized Gas in I Zw 18 from the Keck Cosmic Web Imager*” November 2021
Poster, Summer All Zoom Epoch of Reionization Astronomy
- “*Auroral Line Temperatures in Nearby Galaxies from Keck Cosmic Web Imager Observations*” September 2021
Poster, Keck Science Meeting 2021
- “*Keck Cosmic Web Imager Observations of HeII Emission in I Zw 18*” September 2020
Poster, Keck Science Meeting 2020
- “*VLT/FORS2 Narrowband Imaging Search for MgII Emission Around $z \sim 0.7$ Galaxies*” June 2017
Poster, American Astronomical Society, AAS Meeting #230
- “*A Search for X-ray Emitting Binary Stars in the Globular Cluster Omega Centauri*” June 2016
Poster, American Astronomical Society, AAS Meeting #228

TEACHING EXPERIENCE

- Substitute Lecturer, SDSU – ASTR 101: Principles of Astronomy Spring & Fall 2017
- Teaching Assistant, SDSU – ASTR 101: Principles of Astronomy Spring 2017
- Teaching Associate, SDSU – ASTR 109: Astronomy Laboratory Spring & Fall 2017
- Teaching Assistant, SFSU – SCI 234 Science Concepts, Physics with Calculus II Fall 2016
- Teaching Assistant, SFSU – SCI 220: Science Concepts, Physics with Calculus I Spring 2016

AFFILIATIONS

Secretary, Women in STEM at SDSU Club Spring 2017 to Spring 2018
President, Physics and Astronomy Club Fall 2015 to Spring 2016
Junior Member American Astronomical Society, ID 50807 Fall 2015 to Present

OUTREACH

USCD Transfer Student Workshop Fall 2018-Present
 Led introductory Python workshop for incoming transfer students to UCSD.
Ask a Physicist Spring 2017-Present
 Reoccurring invited speaker to Coronado High School, CA. Lecture introductory and AP Physics

classes on various topics in astronomy and college barriers. Led “Questions & Answer” forum in between lunch recess.

STARS Speaker

Summer 2022-Present

Reoccurring invited speaker to San Diego State University community college and high school summer Astronomy workshop. I communicate my personal path to graduate school and provide information on how to navigate non-traditional pathways towards advanced studies.