

Jesse Robb Feddersen, PhD

CONTACT INFORMATION	1518 E. Kearney St Laramie, WY 82070 USA	<i>Phone:</i> +1-812-272-3386 <i>E-mail:</i> jrobbfed@gmail.com <i>Website:</i> https://jessefeddersen.com
CURRENT TITLE	Assistant Lecturer, Department of Physics and Astronomy, University of Wyoming	
EDUCATION	Yale University , New Haven, Connecticut, USA	
	M.S., M.Phil. Astronomy	December, 2015
	PhD, Astronomy	December, 2019
	Indiana University , Bloomington, Indiana, USA	
TEACHING EXPERIENCE	B.S., Astronomy/Astrophysics	May, 2013
	B.S., Physics	May, 2013
	Department of Physics and Astronomy, University of Wyoming , Laramie, WY, USA	
	<i>Assistant Lecturer</i>	2020 - present
Led the following classes:		
	ASTR 1050 - Survey of Astronomy	Fall, 2020
	PHYS 4410 - Electricity and Magnetism I	Fall, 2020
	PHYS 1220 - Engineering Physics II	Spring, 2021
	PHYS 4840 - Mathematical and Computational Physics II	Spring, 2021
	ASTR 5870 - Classic Papers of Astronomy (graduate seminar)	Spring, 2021
Yale Summer Program in Astrophysics , New Haven, CT USA		
Residential intensive research program for high school students at the Leitner Family Observatory and Planetarium.		
	<i>Teaching Fellow</i>	2016, 2017
	Supervisor: Dr. Michael Faison	
Led programming tutorials and observing labs for 4-week intensive research program for high school students.		
Department of Astronomy, Yale University , New Haven, CT USA		
	<i>Teaching Fellow</i>	2013 - 2015
	Led discussion sections, research labs, tutored, and graded for the following undergraduate astronomy courses:	
	ASTR 220 - Galaxies and Cosmology	Fall, 2013
	Supervisor: Dr. Louise Edwards	
	ASTR 160 - Frontiers and Controversies in Astrophysics	Spring, 2014
	Supervisor: Dr. Louise Edwards	
	ASTR 120 - Galaxies and the Universe	Summer, 2014
	Supervisor: Dr. Robert Zinn	

VOLUNTEER AND OUTREACH EXPERIENCE	ASTR 255 - Research Methods in Astrophysics Supervisor: Dr. Marla Geha	Fall, 2014
	ASTR 170 - Introduction to Cosmology Supervisor: Dr. Louise Edwards	Fall, 2015
	Leitner Family Observatory and Planetarium Presenter Presented live planetarium shows to thousands of members of the public at Yale University's Leitner Family Observatory and Planetarium. https://leitnerobservatory.yale.edu	2014-2019
	Truth & Beauty Podcast Host and Producer Created, produced, and hosted podcast about the intersection of art and science, using audio editing software Garageband and Audacity. http://jessefeddersen.com/podcast.html	2019
	Astrobits Author Wrote summaries of recent astrophysics papers aimed at an audience of undergraduates interested in beginning their research career. Edited other authors' work, and served on admissions committee for new authors. My work for Astrobits can be found at: https://astrobits.org/author/jfeddersen/	2014-2016
	Yuri's Night at Yale Organized outreach event at Yale University's Leitner Family Observatory and Planetarium celebrating the anniversary of human spaceflight. Ran instructional tables, rocket launch demos, planetarium shows, and telescope viewing for several hundred members of the public.	2015-2016
	Adler Planetarium Zooniverse Demonstration As part of two-week school on education and outreach at the Kavli Institute for Cosmological Physics, designed a floor experience for families at the Adler Planetarium in Chicago, Illinois. https://blog.zooniverse.org/2014/07/07/demonstrating-citizen-science-at-adler-planetarium/	2014
	Sidewalk Astronomy Hosted telescope viewing in downtown Bloomington with Indiana University Astronomy Club, targeted towards unsuspecting passersby.	2011-2013
	Physics and Astronomy Open House Assisted with various educational astronomy activities at departmental open house, attended by several thousand members of the public annually.	2011-2012
	Venus Transit Viewing Organized and co-ran event hosted by Indiana Department of Natural Resources; set up telescopes and helped over a hundred members of the public view the transit of Venus safely.	2012
	Child's Elementary Telescope Night Helped organize and run a telescope viewing at a local elementary school with Indiana University Astronomy Club.	2012
	Astronomy with the Stars Assisted Bloomington Department of Parks and Recreation with event designed to orient interested members of the public to the night sky. Operated several telescopes and assisted with public viewing.	2011

RESEARCH
EXPERIENCE

Department of Astronomy, Yale University, New Haven, CT USA

Thesis Research

2015 - 2019

Advisor: Dr. Héctor Arce

Studied the impact of stellar feedback on the structure of molecular gas in the Orion Molecular Cloud using multiwavelength observations as part of the CARMA-NRO Orion collaboration.

Theoretical second year research project

2014

Advisor: Dr. Marla Geha

Studied the effect of the random sampling of stellar initial mass functions on the stellar populations of ultra-faint dwarf galaxies around the Milky Way and investigated the possibility of using pulsar observations to constrain the initial mass function in these systems.

Observational first year research project

2013

Advisor: Dr. Pieter van Dokkum

Studied the evolution of the median mass galaxy from redshift of 2 to present, using galaxy catalogs from the 3D-HST survey.

Space Telescope Science Institute, Baltimore, MD USA

Space Astronomy Summer Program Research Intern

June, 2012 - August, 2012

Advisors: Dr. Janice C. Lee, Dr. Chun Ly

Investigated the relations between stellar mass, gas-phase oxygen abundance, and star-formation rate in galaxies at $z \approx 0.8$. Used IDL extensively for both analysis and plotting tasks.

Department of Astronomy, Indiana University, Bloomington, IN USA

Research Assistant

2009 - 2013

Advisor: Dr. John J. Salzer

Lead a study of nearly unresolved emission-line galaxies in $H\alpha$ images of the local universe and carried out image reduction/photometry and optical spectral reduction/measurement in order to determine their nature. Measured star-formation and metallicity properties to constrain scaling relations.

PUBLICATIONS

Refereed Publications

Feddersen, J. R., Arce, H. G., Kong, S., et al. 2020, *Astrophysical Journal*, Accepted

Tanabe, Y., et al. 2019, *Publications of the Astronomical Society of Japan*, 71, S8

Kong, S., et al. 2019, *Astrophysical Journal*, 882, 45

Feddersen, J. R., Arce, H. G., Kong, S., et al. 2019, *Astrophysical Journal*, 875, 162

Feddersen, J. R., Arce, H. G., Kong, S., et al. 2018, *Astrophysical Journal*, 862, 121

Kong, S., Arce, H. G., **Feddersen, J.R.**, et al. 2018, *Astrophysical Journal Supplement*, 236, 25

de los Reyes, M. A., et al. 2015, *Astronomical Journal*, 149, 79

Popular Writing

<https://massivesci.com/people/jesse-feddersen/>

<https://astrobites.org/author/jfeddersen/>

TECHNICAL SKILLS	• Programming Languages: Python, IDL, Fortran, Supermongo, HTML/CSS, \LaTeX	
	• Astronomical Software: MIRIAD, CASA, IRAF, SAOImage DS9	
	• Other Software: Google Suite, Microsoft Office, iWork, GarageBand, Audacity, iMovie, Adobe Photoshop, GIMP, Starry Night	
	• Operating Systems: OS X, Unix/Linux, Windows.	
OBSERVING EXPERIENCE	CARMA (2 weeks)	2015
	Arecibo (1 night)	2014
	WIYN 0.9m (6 nights)	2012
	WIYN 0.9m (5 nights)	2011
	WIYN 0.9m (4 nights)	2010
HONORS AND AWARDS	Phi Beta Kappa	2013
	Hutton Honors College Travel Grant	2012
	Hollis and Greta Johnson Research Prize	2012 & 2013
	McCreery Travel Award	2012
	Hutton Honors College Research Partnership Grant	2011
	Cox Research Scholarship	2009-2013
	National Merit Scholarship	2009-2013
	Indiana University Dean's List	2009-2013