

# John F. Wu

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## EDUCATION

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<b>Ph.D. in Physics and Astronomy</b> <i>Rutgers, The State University of New Jersey</i>	Piscataway, NJ <i>Sept 2013 – Oct 2019</i>
<b>B.Sc. in Physics/Astrophysics, with MCS Honors</b> <i>Carnegie Mellon University</i>	Pittsburgh, PA <i>Sept 2009 – May 2013</i>

## EXPERIENCE

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<b>Postdoctoral Researcher</b> <i>Space Telescope Science Institute (continued)</i> <i>Johns Hopkins University</i>	Baltimore, MD <i>Aug 2020 – Present</i> <i>Sept 2019 – July 2020</i>
<b>Graduate Research Assistant</b> <i>Rutgers, The State University of New Jersey</i>	Piscataway, NJ <i>July 2013 – Aug 2019</i>
<b>Undergraduate Research Assistant</b> <i>McWilliams Center for Cosmology, Carnegie Mellon University</i>	Pittsburgh, PA <i>July 2012 – May 2013</i>
<b>Research Intern</b> <i>Carnegie Mellon University CyLab</i>	Pittsburgh, PA <i>May 2011 – Aug 2011</i>

## WORKSHOPS AND OTHER EXPERIENCE

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<b>Pascal Institute</b> <i>The Self-Organized Star Formation Process</i>	Paris, France <i>Sept 2019</i>
<b>MIAPP Topical Workshop</b> <i>Nine Billion Years of Gas Evolution</i>	Munich, Germany <i>July 2019</i>
<b>USAID Research &amp; Innovation Fellowship</b> <i>Improving the LADUMA Pipeline Using MeerKAT Early Science Data</i>	Cape Town, South Africa <i>Sept 2016 – Nov 2016</i>
<b>Vatican Observatory Summer School</b> <i>Galaxies, Near and Far, Young and Old</i>	Castel Gandolfo, Italy <i>June 2014</i>
<b>NRAO Synthesis Imaging Workshop</b> <i>14th Synthesis Imaging Workshop</i>	Socorro, NM <i>May 2014</i>

## SEMINARS AND TALKS (†INVITED)

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†Talk, <i>NCSA Accelerated Artificial Intelligence for Big-Data Experiments Conference</i>	2020
Talk, <i>NOIRLab Flash Seminar</i>	
Talk, <i>Wayne State University PAN Seminar</i>	
†Talk, <i>The ISM in the Era of Big Data (AAS 236)</i>	
†Talk, <i>Astronomers Turned Data Scientists Meeting (AAS 235)</i>	
Poster, <i>AAS 235th Meeting</i>	
Talk, <i>STScI Science Coffee Seminar</i>	2019
Talk, <i>JHU CAS Wine &amp; Cheese Seminar</i>	
†Deep learning workshop, <i>MIAPP – Galaxy Evolution in a New Era of HI Surveys</i>	
Talk, <i>ESO — Nine Billion Years of Gas Evolution</i>	
Talk, <i>Rutgers Foundations of Probability Seminar</i>	
Dissertation talk, <i>AAS 233rd Meeting</i>	

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## SEMINARS AND TALKS, CONTINUED.

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Talk, <i>Princeton Galread Seminar</i>	2018
Talk, <i>Princeton Data Science/COMPASS Seminar</i>	
Talk, <i>University of Cape Town Lunch Seminar</i>	
Poster, <i>École Normale Supérieure – Galaxy Evolution Across Time</i>	2017
Talk, <i>Princeton-Rutgers 3rd Extragalactic Science Day</i>	2016
Talk, <i>AAS 227th Meeting</i>	
Talk, <i>Australian Astronomical Observatory Seminar</i>	2015

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## GRANTS AND SELECTED AWARDS

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Google, <i>GCP Research Credits Program</i> , \$5,000	2019
Rutgers, <i>Robert A. Schommer Prize (best graduate student paper)</i>	2018
USAID, <i>Research and Innovation Fellowship</i> , \$11,636	2016
Rutgers, <i>Special Study Award</i> , \$1,350	2014
Rutgers, <i>Claud Lovelace Fellowship &amp; Excellence Fellowship Supplement</i> , \$1,000	2013
CMU, <i>MCS College Honors &amp; Senior Leadership Recognition</i>	2013

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## SERVICE

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### Reviewer for ApJ, MNRAS, and A&A

Co-organizer, <i>Low Density Universe (LDU) Lunch Seminars</i>	2020 – Present
Co-founder/STScI Liason, <i>JHU Physics and Astronomy Postdocs + Research Scientists (PAPRS)</i>	2020 – Present
Session Chair, <i>ISM-BIG meeting-in-meeting at AAS 236</i>	2020
Co-organizer, <i>JHU CAS Astro Coffee</i>	2020
Co-organizer, <i>Rutgers Gaia DR2 Hackathon</i>	2018
Co-organizer, <i>Rutgers SPS/RAS Astro Hack Sessions</i>	2018
Webmaster, <i>Rutgers Physics GSO and SSPAR</i>	2014 – 2017
TAC Member, <i>SALT 2015-2 Rutgers Time Allocation Committee</i>	2015
LOC member, <i>SKA Pathfinders HI Science Coordination Committee (PHISCC)</i>	2015
Organizer, <i>Student Seminars in Physics and Astronomy at Rutgers (SSPAR)</i>	2014 – 2015
Vice President, <i>Rutgers Physics Graduate Student Organization (GSO)</i>	2014 – 2015

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## TEACHING AND OUTREACH

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Certificate, <i>Seminar In Graduate Mentoring in Astronomy and Physics (SIGMA-P)</i>	2018
Plenary Talk, <i>Friends of Rutgers Astronomy</i>	2017
Teaching Assistant, <i>Rutgers 343: Observational Radio Astronomy</i>	2015
Public Talk, <i>Rutgers Astronomical Society</i>	2014
Certificate, <i>Developing Educational Leaders among TAs in Physics (DELTA-P)</i>	2013

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## TELESCOPE OBSERVING(★) AND ACCEPTED PROGRAMS

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Very Large Array (VLA)	
CoI, <i>19A-433 (10 hrs)</i>	2019A
Anglo-Australian Telescope (AAT)	
CoI, <i>N0331 (5 nights)</i> , <i>N0334★ (4 nights)</i>	2015, 2017
Atacama Large Millimeter/submillimeter Array (ALMA)	
CoI, <i>2018.1.00035.L (95.5 hrs)</i> , <i>2013.1.01358.S (6.3 hrs)</i>	Cycles 2, 6
Southern African Large Telescope (SALT)	
CoI, <i>2017-1-MLT-014 (11.3 hrs)</i> , <i>2016-2-SCI-051 (20.4 hrs)</i> ,	2016-2 — 2017-1
PI, <i>2016-1-SCI-040 (3.9 hrs)</i> , <i>2015-2-SCI-052 (3.9 hrs)</i> , <i>Rutgers DDT allocation (1.6 hrs)</i>	2015-1 — 2016-1

# John F. Wu — Publication List

For an up-to-date list of my publications, please see my ADS Library or my ORCID.

## JOURNAL ARTICLES

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6. *ALMA Lensing Cluster Survey: an ALMA galaxy signposting a MUSE galaxy group at  $z=4.3$  behind “El Gordo”*  
Caputi, K. I., Caminha, G. B., Fujimoto, S., Kohno, K., Sun, F., et al., 2020, *ApJ* (sub), arXiv:2009.04838.
5. *Connecting Optical Morphology, Environment, and HI Mass Fraction for Low-Redshift Galaxies Using Deep Learning*  
**Wu, J. F.**, 2020, *ApJ*, 900, 148.
4. *The Star-Forming Interstellar Medium of Lyman Break Galaxy Analogs*  
**Wu, J. F.**, Baker, A. J., Heckman, T.M., Hicks, E. K. S., Lutz, D., Tacconi, L. J., 2019, *ApJ*, 887, 251.
3. *Using convolutional neural networks to predict galaxy metallicity from three-colour images*  
**Wu, J. F.**, Boada, S., 2019, *MNRAS*, 484, 4683.
2. *Herschel and ALMA Observations of Massive SZE-selected Clusters*  
**Wu, J. F.**, Aguirre, P., Baker, A. J., Devlin, M. J., Hilton, M., et al., 2018, *ApJ*, 853, 195.
1. *Galaxy Candidates at  $z \sim 10$  in Archival Data from the Brightest of Reionizing Galaxies (BORG[z8]) Survey*  
Bernard, S. R., Carrasco, D., Trenti, M., Oesch, P. A., **Wu, J. F.**, et al., 2016, *ApJ*, 827, 76.

## CONFERENCE PROCEEDINGS

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10. *Predicting galaxy spectra from images with hybrid convolutional neural networks*  
**Wu, J. F.**, Peek, J. E. G., 2020, *NeurIPS workshop: ML & the Physical Sciences*, arXiv:2009.12318.
9. *The morphological indicators of gas mass fraction for low-redshift galaxies*  
**Wu, J. F.**, Peek, J., *AAS Meeting 235*, 2020, 208.14.
8. *Galaxy Groups at Low and High Redshift with RESOLVE and LADUMA*  
Hutchens, Z. et al., 2020, *AAS Meeting 235*, 207.40.
7. *Gas and galaxy evolution in extreme  $z \sim 1$  clusters and extreme  $z \sim 0.2$  starbursts*  
**Wu, J. F.** 2019, *AAS Meeting 233*, 230.03D.
6. *Probing the Evolution of Galaxies by Stacking Stellar Mass Selected Samples*  
Howard, M., Baker, A. J., **Wu, J. F.**, 2019, *AAS Meeting 233*, *AAS Meeting 233*, 145.08.
5. *Using Convolutional Neural Networks to predict Galaxy Metallicity from Three-Color Images*  
Boada, S. & **Wu, J. F.**, 2019, *AAS Meeting 233*, 144.30.
4. *Herschel And ALMA Observations Of The ISM In Massive High-Redshift Galaxy Clusters*  
**Wu, J. F.** et al. 2017, *Galaxy Evolution Across Time*, 51.
3. *Characterizing and Cataloguing Star-Forming Galaxies in Preparation for the LADUMA Survey*  
Perez, M. J., Baker, A. J., **Wu, J. F.** 2017. *AAS Meeting 229*, 347.30.
2. *LADUMA: Looking at the Distant Universe with the MeerKAT Array*  
Blyth, S. et al. 2016, *Proceedings of MeerKAT Science: On the Pathway to the SKA*, 4.
1. *Investigating star formation properties of galaxies in massive clusters with Herschel and ALMA*  
**Wu, J. F.** et al. 2016, *AAS Meeting 227*, 202.02.