

CV - SARAH PEARSON

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APPOINTMENTS

Center for Computational Astrophysics, Flatiron Institute, NYC Flatiron Postdoctoral Research Fellow	08/2018 - 08/2021
Massachusetts's Institute of Technology, MA, USA Graduate Researcher	Summer 2012
University of California, Santa Cruz, CA, USA Tycho Brahe Undergraduate Researcher	Summer 2011

EDUCATION

Columbia University in the City of New York PhD Candidate, Astronomy, Title: " <i>Stellar streams, dwarf galaxy pairs and the halos they reside in</i> " M.A., M.Phil., Astronomy	2018 (expected) 2015, 2016
University of Copenhagen, Denmark B.S., Physics	2012

HONORS & AWARDS

Danish Women in Physics Prize - remarkable contributions within physics research	11/2017
Rodger Doxsey Prize/honorable mention - Travel Prize for the 231st AAS meeting	11/2017
ASNY Graduate Student Paper Prize - best astronomy research paper	09/2017
AAS Travel Grant - Support for conference in Ecuador	2017
President's Global Innovation Fund - Research exchange to PUC, Chile	2016
AAS Travel Grant - Support for conference in Chile	2015
GSAS Yeh Family Endowment Fellowship - Columbia University	2014-2015
Dean's Fellowship, Columbia University For graduate studies at Columbia University	2013-2018
Nordic Women in Physics Poster Prize For best presentation/layout of scientific poster	2011
Sophia and Tycho Brahe Undergraduate Fellowship To conduct research at UCSC, USA	2011

PUBLICATIONS

Citations: +141, h -index = 6, total refereed journal articles: 8, [Google Scholar](#), [Orcid](#)

First/second author journal articles

10. *Modeling the Baryon Cycle in Dwarf Galaxy Encounters: the Case of NGC4490 & NGC4485*
Pearson, S., Privon, G., Besla, G., Putman, M. E., Martinez-Delgado, D., Johnston, K. V., Gabany, J. R., Patton, D. R., Kallivayalil, N 2018, *submitted to MNRAS*
9. *Gaps and Length Asymmetry in the Stellar Stream Palomar 5 as Effects of Galactic Bar Rotation*
Pearson, S., Price-Whelan, A. M., Johnston, K. V. 2017, *Nature Astronomy*, 1, 9 [arXiv: 1703.04627](#)
8. *Local Volume TiNy Titans: Gaseous Dwarf-Dwarf Interactions in the Local Universe*
Pearson, S., Besla, G., Putman, M. E., Lutz, K., Fernández, X., Stierwalt, S., Patton, D. R. et al. 2016, *MNRAS*, 459, 1827 [arXiv: 1603.09342](#)
7. *Tidal Stream Morphology as an Indicator of Dark Matter Halo Geometry: the Case of Palomar 5*
Pearson, S., Küpper, A. H. W., Johnston, K. V., A. M. Price-Whelan, 2015, *ApJ*, 799, 1, [arXiv: 1410.3477](#)

6. *Unraveling the Origin of Overionized Plasma in the Galactic Supernova Remnant W49B*
Lopez, L. A., **Pearson, S.**, Ramirez-Ruiz, E., Castro, D., Yamaguchi, H., Slane, P., Smith, R. 2013, ApJ, 764, 50, [arXiv: 1309.1464](#)

Other journal articles

5. *The Frequency of Dwarf Galaxy Multiples at Low Redshift in SDSS vs. Cosmological Expectations*
Besla, G., Patton, D., [5 authors], **Pearson, S.**, [2 authors], 2018, *submitted to MNRAS*
4. *A Widespread, Clumpy Starburst in the Ongoing Isolated Dwarf Galaxy Merger DM1647+21*
Privon, G., Stierwalt, S., [2 authors], **Pearson, S.**, [3 authors], 2017, ApJ, 846, 74 [arXiv: 1708.02587](#)
3. *Evidence of Fanning in the Ophiuchus Stream*
Sesar, B., Price-Whelan, [2 authors], **Pearson, S.**, [9 authors], 2016, ApJL, 816, 1, L4 [arXiv: 1512.00469](#)
2. *Chaotic Dispersal of Tidal Debris*
Price-Whelan, A. M., Johnston, K. V., Valluri, M., **Pearson, S.**, Küpper, A. H. W., Hogg, D. W., 2016, MNRAS, 455, 1079 [arXiv: 1507.08662](#)
1. *The Galactic Supernova Remnant W49B Likely Originates from a Jet-Driven Core-Collapse Explosion*
Lopez, L. A., Ramirez-Ruiz, E., Castro, D., **Pearson, S.** 2013, ApJ, [arXiv: 1301.0618](#)

RESEARCH GRANTS/TELESCOPE TIME

As PI VLA/17A-296

“The Baryon Cycle of Dwarf Galaxy Interactions”, 28 hours 2017

As collaborator National Science Foundation

“Physical Manifestations of Chaos and Regularity Around Galaxies” PI: Kathryn V. Johnston 2017

As collaborator - National Science Foundation

“The Hierarchical Evolution of Low Mass Galaxies” PI: Gurtina Besla 2017

As CO-I - Spitzer Cycle 13, Proposal ID 13040

“TRACSSS-2 - Tracing More Cold Stellar Streams with Spitzer” PI: Carl Grillmair, 97.0 hours 2016

As CO-I - Spitzer Cycle 12, Proposal ID 12076

“TRACSSS - Tracing Cold Stellar Streams with Spitzer” PI: Carl Grillmair, 37.9 hours 2015

SCIENTIFIC PRESENTATIONS

33 presentations, 10 colloquia/invited talks

33. **Dissertation talk**, 231st AAS meeting, Washington DC, USA 01/2018
32. **Talk**, Seminar, Dark Cosmology Centre, University of Copenhagen, Denmark 01/2018
31. **Invited Talk**, CITA Theory Seminar, Toronto, Canada 12/2017
30. **Invited Talk**, Network for Women in Physics Annual Meeting, Copenhagen, Denmark 11/2017
29. **Invited Talk**, Astronomical Society of New York Annual Meeting, NY, USA 11/2017
28. **Invited Talk**, Seminar, Center for Cosmology and Particle Physics, NYU, USA 11/2017
27. **Talk**, Seminar, Dark Cosmology Centre, University of Copenhagen, Denmark 06/2017
26. **Invited Talk**, Harvard-Smithsonian CfA Galaxies & Cosmology Seminar, MA, USA 04/2017
25. **Talk**, Seminar, MIT Kavli Institute for Astrophysics and Space Research, MA, USA 04/2017
24. **Conference Talk**, On the Origin of Baryonic Galaxy Halos, Galapagos, Ecuador 03/2017
23. **Talk**, Local Group Meeting, Flatiron Center for Computational Astrophysics, NY, USA 03/2017
22. **Invited Talk**, Seminar, American Museum of Natural History, NY, USA 11/2016
21. **Talk**, TMT Seminar, European Southern Observatory, Santiago, Chile 10/2016
20. **Talk**, Seminar, Pontificia Universidad Catolica de Chile, Santiago, Chile 10/2016
19. **Invited talk**, MODEST-16 conference, NY, USA 09/2016

18. Talk , FLASH, University of Arizona, Arizona, USA	03/2016
17. Talk , Magellanic Clouds Workshop, University of Arizona, Arizona, USA	03/2016
16. Talk , Galaxies Lunch, University of Arizona, Arizona, USA	03/2016
15. Talk , Dark Cosmology Centre, University of Copenhagen, Denmark	01/2016
14. Conference talk , Life-cycle of gas in Galaxies, Dwingeloo, The Netherlands	09/2015
13. Invited talk , Stellar Streams in the Local Universe Conference, Ringberg Castle, Germany	07/2015
12. Conference talk , Satellites & Streams Conference, Santiago, Chile	04/2015
11. Talk , YODA, Yale University, New Haven, USA	03/2015
10. Talk , Dark Cosmology Centre, University of Copenhagen, Denmark	06/2014
9. Poster , Tri-State Meeting, NYC, USA	10/2013
8. Poster , High Energy Astrophysics Division Meeting, Monterey, USA	04/2013
7. Conference talk , Nordic Winter School on Particle Physics and Cosmology, Norway	01/2013
6. Talk , Dark Cosmology Centre, University of Copenhagen, Denmark	10/2012
5. Talk , Massachusetts Institute for Technology, USA	08/2012
4. Invited prize talk , Nordic Women in Physics Conference, Copenhagen, Denmark	09/2011
3. Poster , Nordic Women in Physics Conference, Copenhagen, Denmark	09/2011
2. Talk , Supernova Remnant Seminar Hour, University of California, Santa Cruz, USA	07/2011
1. Poster , University of California, Santa Cruz, USA	07/2011

SELECTED SERVICES

Organizer , Weekly Astro-ph Discussion, Columbia University	2016 - present
Organizer , Scientific Organizing Committee for the MODEST16b meeting	2016
Organizer , Local Organizing Committee for the MODEST16b meeting	2016
Mentor , Columbia astronomy graduate student mentoring program	2015, 2016

SELECTED OUTREACH

YouTube Channel , Space with Sarah (www.youtube.com/spacewithsarah)	2017 - present
- Creator, writer & host, ~3800 subscribers, ~85000 views since launch April 2017	
- Answering the most frequently posed space questions, target: teens/young adults	
Kvant , Danish Astronomy & Physics Magazine - Cover article on the Galactic Bar	04/2018
Blogger for Danish Engineering Magazine , Ingenioeren	2018 - present
- Blogging about the puzzles of our Universe to Danish engineers.	
HLN, National live TV , " Erica Hill's show " - The total solar eclipse , Guest scientist	08/2017
NBC New York Live , " Man on the street " - what's a solar eclipse? , Astrophysicist	08/2017
Zooniverse, Planet Hunters , How old could alien civilizations be? , Guest blogger	05/2017
Fraser Cain's YouTube Channel , Are There Dark Matter Galaxies? , Guest scientist	04/2017
NASA's Space Apps Challenge , Are There Other Earths Out There? , Guest speaker, NYC, SAP	04/2017
Meet the Scientist, Intrepid Museum , Kids Week, on site scientist	02/2017
Expert astronomer , The Intergalactic Travel Bureau, Guerilla Science, Mysterland Festival	06/2016
Lecturer , Graduate School of Arts & Sciences Dean's Dinner, Title: "Colliding Galaxies"	04/2016
Lecturer , Columbia Outreach Talk, Title: "The Explosive Origin of Our Elements"	01/2017
Lecturer , Columbia Science Evening, Title: "The Dark Matter Halo of the Milky Way"	11/2015
Volunteer , Sidewalk Astronomy, Take telescopes out to nearby Harlem, engage passersby	2016

TEACHING EXPERIENCE

Instructor , Stars, Galaxies & Cosmology, Columbia University	2016
Instructor , Earth, Moon & Planets, Columbia University	2015
Teaching assistant , Observational Astronomy Lecture & Lab, Columbia University	2013

Lab Instructor , Classical Mechanics, University of Copenhagen	2012
Guest Lecturer , Course: Galaxies & Cosmology, Columbia University, USA	03/2016
Title: "Minor and major mergers of galaxies"	
Guest Lecturer , Course: Stellar Structure & Evolution, U. Copenhagen, Denmark	01/2014, 01/2015, 11/2015
Title: "Supernova Explosions & the Origin of the Galactic Supernova Remnant W49B"	
Guest Lecturer , Course: Stars, Galaxies and Cosmology, Columbia University, USA	10/2013
Title: "The Evolution of Massive Stars"	

PRESS

[Women in Physics Prize 2017 awarded to up and coming astrophysicist Sarah Pearson](#), CPH, 2017

["Mind the Galactic Bar"](#) - Nature Astronomy News & Views Article, 2017

[The Milky Way's Galactic Bar Punches Holes in Stellar Streams](#), Columbia Astronomy, 2017

[Interacting Dwarf Galaxies Shed Light On Milky Way Neighbors](#), Inside Science, 2016

[Mapping What We Can't See: the Dark Matter Halo of the Milky Way](#), 2014, Columbia Astronomy, 2015

[NASA's Chandra Suggests Rare Explosion Created Our Galaxy's Youngest Black Hole](#), NASA, 2013

[Astronomy Visiting Student Sarah Pearson Wins Nordic Women in Physics Prize](#), UCSC, 2011