

CV - SARAH PEARSON

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APPOINTMENTS

Flatiron Postdoctoral Research Fellow , CCA, Flatiron Institute, USA	2018 - present
Graduate Researcher , Massachusetts Institute of Technology, USA	Summer 2012
Undergraduate Researcher , University of California, Santa Cruz, CA, USA	Summer 2011

EDUCATION

Columbia University in the City of New York	
PhD , Astronomy,	2018
Thesis Title: “ <i>Stellar Streams, Dwarf Galaxy Pairs and the Halos in which they Reside</i> ”	
Thesis Advisors: Kathryn V. Johnston, Mary E. Putman, Gurtina Besla	
M.A., M.Phil. , Astronomy	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

10 refereed publications, Citations: +178, h -index = 6, [Orcid](#), * denotes advised students

First/second author journal articles

5. *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, MNRAS, 480, 3069 [arXiv: 1807.03791](#)
4. *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](#)
3. *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](#)
2. *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](#)
1. *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, MNRAS, 480, 3376, [arXiv: 1807.06673](#)
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 CO-I MUSE/0102.B-0325		
<i>Do All Dwarf-Dwarf Interactions Trigger Extended Starbursts?</i> 8 hours		2018
As PI VLA/17A-296		
<i>“The Baryon Cycle of Dwarf Galaxy Interactions”</i> , 28 hours		2017
As collaborator National Science Foundation		
<i>“Physical Manifestations of Chaos and Regularity Around Galaxies”</i> PI: Kathryn V. Johnston		2017
As collaborator - National Science Foundation		
<i>“The Hierarchical Evolution of Low Mass Galaxies”</i> PI: Gurtina Besla		2017
As CO-I - Spitzer Cycle 13, Proposal ID 13040		
<i>“TRACSSS-2 - Tracing More Cold Stellar Streams with Spitzer”</i> PI: Carl Grillmair, 97.0 hours		2016
As CO-I - Spitzer Cycle 12, Proposal ID 12076		
<i>“TRACSSS - Tracing Cold Stellar Streams with Spitzer”</i> PI: Carl Grillmair, 37.9 hours		2015

SCIENTIFIC PRESENTATIONS

38 presentations total, 12 colloquia/invited talks (see below)

38. Talk , AAS 233rd Meeting, Seattle, WA, USA	01/2019
37. Talk , Seminar, Cosmic DAWN Center, U. Copenhagen, Denmark	12/2018
36. Lunch Talk , Bahcall Lunch, Princeton, USA	11/2018
35. Invited Talk , Astro Seminar, IAS, Princeton, USA	11/2018
34. Colloquium , Astronomy Department, UC Santa Cruz, CA, USA	10/2018
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. Invited Talk , Seminar, American Museum of National History, NY, USA	11/2016
22. Talk , TMT Seminar, European Southern Observatory, Santiago, Chile	10/2016
21. Talk , Seminar, Pontificia Universidad Catolica de Chile, Santiago, Chile	10/2016
20. Invited talk , MODEST-16 conference, NY, USA	09/2016
19. Talk , Columbia Astronomy Department's pizza lunch, NY, USA	04/2016
18. Invited 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 , Columbia Astronomy Department's pizza lunch, USA	10/2013
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

STUDENTS ADVISED

Tomer Yavetz , Columbia University, co-advised graduate research w. Kathryn. V. Johnston	2018 - present
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SELECTED SERVICES

Referee , AAS Journals	2018 - present
Organizer , Weekly Stars Group Meeting, Flatiron Institute	2016 - present
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, ~5000 subscribers, ~100,000 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.	
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

TV EXPERIENCE

TV2 News , Danish national live TV - Discussing the NASA Parker Solar Probe	08/12/2018
TV2 News , Danish national live TV - Discussing the total lunar eclipse	07/27/2018
HLN , US national live TV, "Erica Hill's show" - The total solar eclipse, Guest scientist	08/21/2017
NBC New York Live , "Man on the street" - what's a solar eclipse?, Astrophysicist	08/2017

TEACHING EXPERIENCE

Instructor , Stars, Galaxies & Cosmology, Columbia University	2016
Instructor , Earth, Moon & Planets, Columbia University	2015
Grader , Life in the Universe, Barnard College	2014
Grader , Stars, Galaxies and Cosmology, Barnard College	2014
Teaching assistant , Observational Astronomy Lecture & Lab, Columbia University	2013
Teaching assistant , Stars, Galaxies and Cosmology, Columbia University	2013
Teaching assistant , Thermodynamics, University of Copenhagen	2013
Lab Instructor , Classical Mechanics, University of Copenhagen	2012
Math/physics tutoring , high school/college level	2009-present
Guest Lecturer , Course: Galaxies & Cosmology, Columbia University, USA Title: "Minor and major mergers of galaxies"	03/2016
Guest Lecturer , Course: Stellar Structure & Evolution, U. Copenhagen, Denmark Title: "Supernova Explosions & the Origin of the Galactic Supernova Remnant W49B"	01/2014, 01/2015, 11/2015
Guest Lecturer , Course: Stars, Galaxies and Cosmology, Columbia University, USA Title: "The Evolution of Massive Stars"	10/2013

PRESS

- [Pairs of Small Colliding Galaxies May Seed Future Stars](#), Phys.org, 2018
- [Pairs of Small Colliding Galaxies May Seed Future Stars](#), Columbia Press Release, 2018
- [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