

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

Citations: +164, *h*-index = 6, [Orcid](#), * denotes advised students

First/second author journal articles

11. *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](#)
10. *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](#)
9. *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](#)
8. *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](#)
7. *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

6. *Strong Effects of Weak Chaos: Chaotic Dispersal in the Galactic Potential*
Yavetz, T.*, Johnston, K. V., **Pearson, S.**, Price-Whelan, A. M., 2018, *to be submitted to MNRAS*
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

HIGHLIGHTED SCIENTIFIC PRESENTATIONS

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

- (11/2018) **Invited Talk** Astro Seminar, IAS, Princeton, USA
- (10/2018) **Colloquium**, Astronomy Department, UC Santa Cruz, CA, USA
- (12/2017) **Invited Talk**, CITA Theory Seminar, Toronto, Canada
- (11/2017) **Invited Talk**, Network for Women in Physics Annual Meeting, Copenhagen, Denmark
- (11/2017) **Invited Talk**, Astronomical Society of New York Annual Meeting, NY, USA
- (11/2017) **Invited Talk**, Seminar, Center for Cosmology and Particle Physics, NYU, USA
- (04/2017) **Invited Talk**, Harvard-Smithsonian CfA Galaxies & Cosmology Seminar, MA, USA
- (04/2017) **Talk**, Seminar, MIT Kavli Institute for Astrophysics and Space Research, MA, USA
- (11/2016) **Invited Talk**, Seminar, American Museum of National History, NY, USA
- (09/2016) **Invited talk**, MODEST-16 conference, NY, USA
- (03/2016) **Invited talk**, FLASH, University of Arizona, Arizona, USA
- (07/2015) **Invited talk**, Stellar Streams in the Local Universe Conference, Ringberg Castle, Germany
- (09/2011) **Invited prize talk**, Nordic Women in Physics Conference, Copenhagen, Denmark

STUDENTS ADVISED

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

SELECTED SERVICES

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

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

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

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 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

[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