

CV - SARAH PEARSON

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EDUCATION

- | | |
|---|-------------------|
| Columbia University in the City of New York
PhD Candidate, Department of Astronomy and Astrophysics | 09/2013 - present |
| University of Copenhagen, Denmark
B.S. in Physics & Astrophysics | 09/2009 - 06/2012 |

RESEARCH EXPERIENCE

- | | |
|---|-------------------------------------|
| Columbia University - Second year project
<i>Advisors: Prof. Mary Putman (CU), Dr. Gurtina Besla (UA)</i>
· Gaseous Dwarf-Dwarf Galaxy Interactions in the Local Universe | 10/2014 - present
New York, NY |
| Columbia University - First year project
<i>Advisors: Prof. Kathryn V. Johnston (CU), Dr. Andreas Kuepper (CU)</i>
· Modeling the morphology and evolution of the globular cluster, Palomar 5, in order to constrain the shape of the dark matter halo of our Galaxy | 09/2013 - 10/2014
New York, NY |
| Massachusetts Institute of Technology
<i>Summer Student Research Fellow</i>
· Advisors: Dr. Laura Lopez (MIT), Prof. Enrico Ramirez-Ruiz (UCSC)
· Performed spatially-resolved X-ray spectroscopic analyses of a Chandra observation of W49B, a peculiar supernova remnant thought to be from a bipolar/jet-driven explosion. | 06/2012 - 09/2012
Cambridge, MA |
| University of California, Santa Cruz,
<i>Sophie and Tycho Brahe Undergraduate Research Fellow</i>
· Advisors: Dr. Laura Lopez (MIT), Prof. Enrico Ramirez-Ruiz (UCSC).
· Quantified asymmetries of supernova remnants in the Small Magellanic Cloud observed with Chandra X-ray Telescope. | 06/2011 - 09/2011
Santa Cruz, CA |

PUBLICATIONS (4 TOTAL, 1 FIRST AUTHOR)

4. *Chaotic Dispersal of Tidal Debris*
A. M. Price-Whelan, Johnston, K. V., Valluri, M., **Pearson, S.**, Kuepper, A. H. W., Hogg, D. W., submitted to MNRAS 2015, [arXiv: 1507.08662](#)
3. *Tidal Stream Morphology as an Indicator of Dark Matter Halo Geometry: the Case of Palomar 5*
Pearson, S., Kuepper, A. H. W., Johnston, K. V., A. M. Price-Whelan, 2015, ApJ, 799, 1, [arXiv: 1410.3477](#)
2. *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](#)
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](#)

PRESS RELEASES

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

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

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

SCIENTIFIC PRESENTATIONS

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| 19. Conference talk , Life-cycle of gas in Galaxies, Dwingeloo, The Netherlands | 2015 |
| 18. Invited talk , Stellar Streams in the Local Universe Conference, Ringberg Castle, Germany | 2015 |
| 17. Conference talk , Satellites & Streams Conference, Santiago, Chile | 2015 |
| 16. Talk , YODA, Yale University, New Haven, USA | 2015 |
| 15. Lecture , Course: Stellar Structure and Evolution, University of Copenhagen, Denmark | 2015 |
| 14. Talk , Dark Cosmology Centre, University of Copenhagen, Denmark | 2014 |
| 13. Lunch talk , Galaxies Lunch, Columbia University, Denmark | 2014 |
| 12. Lecture , Course: Stellar Structure and Evolution, University of Copenhagen, Denmark | 2014 |
| 11. Lunch talk , Columbia Astronomy Department's pizza lunch, USA | 2013 |
| 10. Lecture , Course: Stars, Galaxies and Cosmology, USA | 2013 |
| 9. Poster , Tri-State Meeting, NYC, USA | 2013 |
| 8. Poster , High Energy Astrophysics Division Meeting, Monterey, USA | 2013 |
| 7. Conference talk , Nordic Winter School on Particle Physics and Cosmology, Norway | 2013 |
| 6. Talk , Dark Cosmology Centre, University of Copenhagen, Denmark | 2012 |
| 5. Lunch talk , Massachusetts Institute for Technology, USA | 2012 |
| 4. Conference talk , Nordic Women in Physics Conference, Copenhagen, Denmark | 2011 |
| 3. Poster , Nordic Women in Physics Conference, Copenhagen, Denmark | 2011 |
| 2. Talk , Supernova Remnant Seminar Hour, University of California, Santa Cruz | 2011 |
| 1. Poster , University of California, Santa Cruz, USA | 2011 |

TEACHING EXPERIENCE

Astronomy Lab Instructor Columbia University	Fall 2014, Spring 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	2012-2013
Math/physics tutoring , high school/college level	2009-present

HONORS & AWARDS

AAS Travel Grant - Support for conference in Chile	2015
GSAS Yeh Family Endowment Fellowship - Columbia University	2014/15
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	2011

CONFERENCES & PHD-SCHOOLS

Life-cycle of gas in Galaxies: a Local Perspective , Dwingeloo, The Netherlands	08/2015
Stellar Streams in the Local Universe , Ringberg Castle, Germany	07/2015
Satellites & Streams Conference in Santiago , Santiago, Chile	04/2015
ISIMA - Gravitational Dynamics , Toronto, Canada	07/2014
Tri-State Astronomy Meeting , CUNY, NY, USA	10/2013
High Energy Astrophysics Division Meeting Monterey, CA, USA	04/2013
Nordic Winter School on Particle Physics and Cosmology Norway	01/2013
Supernova Remnant Workshop , Copenhagen, Denmark	06/2012
Euclid Mission Meeting Copenhagen, Denmark	05/2012
Nordic Conference on Particle Physics Norway	01/2012
Nordic Women in Physics Conference Copenhagen, Denmark	09/2011
Nordic Winter School on Cosmology and Particle Physics Norway	01/2011

COMPUTATIONAL BACKGROUND

Languages	Python, IDL, Matlab, Fortran77, R
Data reduction/analysis	CIAO, XSPEC, HEA, NBODY6, Miriad, kvis, IRAF