Dr. Jennifer A. Piscionere

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My Story

Results-oriented, quick learning data scientist with a strong statistics and mathematical background capable of working independently and as part of a team, with experience in simulation development, distributed cloud computing, data visualization, algorithm development, and bayesian analysis.

Research Experience

Data Scientist 2017 - Present
Centre for Transformative Innovation, Swinburne University of Technology
- Natural Language Analysis of European Patent Office claims.
- Cloud based translation pipeline for PATSTAT data set.
- Database management for multiple data sets.

Data Science Fellow 2015
Open Science Data Cloud, School of Informatics University of Edinburgh
Supervisor: Malcolm Atkinson
- Cloud computing correlation analysis of variants in Thousand Genome Project.
- Patient gene variant null model development using the Cancer Genome Atlas.

Postdoctoral Researcher 2015 2017
Swinburne Center for Astrophysics and Supercomputing
Supervisor: Darren Croton & Virginia Kilborn
- Developer on the Theoretical Astrophysics Observatory.
- Calculating magnitudes for semi-analytic galaxy catalogues.
- Clustering analysis of Gas Rich Irregular Galaxies.

Research Assistant 2008 2015
Department of Physics and Astronomy; Vanderbilt University
Supervisor: Andreas Berlind
- Predictive analytics of the galaxy distribution in terabyte scale astronomical surveys.
- The physical interpretation of spatial correlations in the Sloan Digital Sky Survey.
- Developed a massively parallel bayesian statistical pipeline to model correlations.

Summer School in Statistics for Astronomers VIII 2012
The Pennsylvania State University

Education

Degree **Ph.D. in Physics** 2008 2015
University **Vanderbilt University**

Degree **Bachelor of Arts in Astrophysics** 2004 2008
University **Columbia University**

Computational Skills

Fluent Languages	C, R, Python, Bash, CSS, HTML
Competency	javascript, d3.js , C++, FORTRAN
Cluster Computing	Stampede (TACC), Lonestar (TACC), Kraken (NICS)
Cloud Computing	Microsoft Azure, Google, AWS S3, VMs, Hadoop
Tools	Vim, Git, MySQL, LaTeX

Papers

The Spatial Distribution of Satellite Galaxies Within Halos: Measuring the Very Small Scale Angular Clustering of SDSS Galaxies
Piscionere, J.,,Berlind A., McBride, C.K., Scoccimarro, R.
2015ApJ...806..125P

The Very Small Scale Clustering of BOSS CMASS Galaxies.
Piscionere, J., Berlind, A.
2015, In Prep.

LasDamas: An Accurate Suite of Simulations and Mock Galaxy Catalogs
McBride, C. K., Berlind, A. A., Busha, M., Gardner, J., Manera, M., **Piscionere, J.**, Scoccimarro, R., van den Bosch, F. C., Wechsler, R.
In Prep.

LOOC UP: locating and observing optical counterparts to gravitational wave bursts
Kanner,J.; Huard,T. L.; Màrka, S.; Murphy, D. C.; **Piscionere, J.**; Reed, M; Shawhan, P
Class. Quantum Grav. 2008

Talks & Posters

"The Changing Spatial Distribution of Satellite Galaxies in Dark Matter Halos"
University of Melbourne December 2015

"The Spatial Distribution of Satellite Galaxies in Dark Matter Halos"
Northern Kentucky University April 2015

"The Very Small Scale Clustering of SDSS-II and SDSS-III Galaxies"
AAS January 2015

"Modeling the Very Small Scale Angular Clustering of SDSS Galaxies."
Galaxies within the Cosmic Web June 2013

Fellowships and Societies

American Astronomical Society, Junior Member	2012 Present
GAANN Fellow	2009 2011
NASA/New York State Space Grant	2006

References

Prof. Virginia Kilborn
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and Supercomputing
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Prof. Darren Croton
Swinburne Center for Astrophysics
and Supercomputing
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