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Daniela Huppenkothen

Curriculum Vitae

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HX	peri	ien	ce
	PCI	CII	CC

Associate Director and DIRAC Fellow 2017-present

DIRAC Institute, University of Washington, USA

Data Science Fellow 2017-present

eScience Institute, University of Washington, USA

James Arthur Postdoctoral Fellow 2016-2017

Center for Cosmology and Particle Physics &

Center for Data Science, New York University, USA

Moore-Sloan Data Science Postdoctoral Fellow 2014-2017

Center for Data Science, New York University, USA

Education

PhD Astronomy & Astrophysics

2010-2014

Anton Pannekoek Institute for Astronomy, University of Amsterdam,

The Netherlands

Thesis: A New Statistical Toolbox for Studying Variability in Fast Transients

Supervisors: Dr Anna Watts and Prof Michiel van der Klis

MSc Astronomy & Astrophysics 2008-2010

Anton Pannekoek Institute for Astronomy, University of Amsterdam,

The Netherlands

BSc Geosciences & Astrophysics 2005-2008

Jacobs University Bremen, Germany

Publications

35 refereed; 10 non-refereed; 1 under review; List attached.

Presentations

16 invited, 28 colloquia and 13 contributed. List attached.

External Grants

Co-PI: Call for 7th and 8th Cambridge Astronomy Kavli Workshops

Astro Hack Week: Data Science for Next-Generation Astronomy

£15,000

PI: NASA Astrophysics Data Analysis Program

Accurate Black Hole Spin Measurements with ABC

\$385,000

Co-PI: Astro Hack Week Funding Proposal to Google Inc.

Astro Hack Week: Enabling Young Astronomers to Develop Data Science Skills

\$20,000

PI; Fermi Guest Investigator Program

Unravelling Solar Flare Variability with Fermi/GBM

\$55,000

2018

2017-present

2017-2018

2016

PI; LSSTC Enabling Science Program Astro Hack Week: Enabling Young Astronomers to Develop Data Science Skills	2015
\$5,000	
PI: Astro Hack Week Funding Proposal to GitHub Inc.	2015
Astro Hack Week: Enabling Young Astronomers to Develop Data Science Skills	
\$5,000	
Fellow of the International Astrostatistics Association	2019
Third prize, SciPy John Hunter Excellence in Plotting Contest	2018
HSP Huygens scholarship covering tuition and a living stipend	2008-2010
Scholarship awarded by "Studienstiftung des Deutschen Volkes" (German National Academic Foundation)	2005-2010
€200 per month for study-related expenses	
Merit-based scholarship awarded by Jacobs University Bremen €7500 per year for tuition costs	2005-2008
Member of "President's List" (students with GPA better than 1.5)	2005-2008
Award of the Deutsche Physikalische Gesellschaft (German Society of Physicists) for be graduating student in physics	-
graduating student in physics	
Stingray Lead developer of open-source Python time series methods library for astronomy: http://github.com/StingraySoftware/stingray	
Entrofy	
Lead developer of open-source Python package for cohort selection: http://github.com/dhuppenkothen/entrofy	
Magnetron	
Bayesian Hierarchical Inference for X-ray light curves: http://ascl.net/1502.014	
BayesPSD	
Bayesian time series methods for detection of periodic signals: https://github.com/dhuppenkothen/BayesPSD	
I	
Advancing Theoretical Astrophysics Summer School Interactive lectures on version control with Git, Bayesian inference, data visualization a	2019 nd
machine learning	
The Carpentries Training in teaching methodology for Software Carpentry and Data Carpentry.	2019
IESC Summer School: Analytics, Inference, and Computation in Cosmology: Advance methods	ed 2018
Three interactive lectures on Bayesian hierarchical inference, probabilistic models and n chine learning	1a-
Astro Hack Week	2014-2018
Lectures on data visualization, exploratory data analysis, statistics to an audience of researchers at all academic ranks	
LSST Data Science Fellowship Program	2017
Two lectures on data visualization and interpretability of machine learning algorithms to audience of graduate students	an

Honours and

Awards

Software

Teaching Lectures

IMPRS Heidelberg Summer School on Astrostatistics and Data Mining Five lectures and three problem classes on Bayesian and frequentist statistics, counting st tics, time series analysis and Fourier methods to an audience of graduate students postdocs	
Deutsche Schülerakademie Ten-day course in astronomy for gifted high-school students	2012
 Accretion Flows (M.Sc. course), University of Amsterdam Astrophysics II (B.Sc. course), University of Amsterdam Introduction to Astronomy and Cosmology (B.Sc. course), University of Amsterdam Fluid Dynamics, (M.Sc. course), University of Amsterdam Geosciences and Astrophysics II (B.Sc. course), Jacobs University Bremen 	2008–2014
Leah Fulmer, graduate student (University of Washington) Project title: "Unsupervised Machine Learning for Irregularly Sampled Astronomical Time Series from the ZTF Survey"	2018-present
Margaret Lazzarini, graduate student (University of Washington) Project title: "Accurate Black Hole Spin Measurements through ABC"	2018-present
Christina Lindberg, post-bacchalaurete student (University of Washington) Project title: "Precise Measurements of Asteroid Periods using Gaussian Processes"	2018-present
Chris Ick, Fermi Guest Investigator Programme student (New York University) Project title: "Unravelling Solar Flare Variability with Fermi/GBM"	2017-present
Himanshu Mishra, Google Summer of Code Project title: "A Library of Time Series methods"	2016
Viviana Meerstra, BSc project (University of Amsterdam) Project title: "Timing analysis of gamma-ray bursts using Bayesian statistics"	2012
Oliver Gurney-Champion, MSc project (University of Amsterdam) Project title: "Modeling of the ionizing effects of black holes on their environment"	2011
Astronomy on Tap How to Teach an AI to Study Black Holes	2018
NYAS Project 1000 Girls, 1000 Futures: mentored a female high school student interested in the natural sciences	2016-2017
Project <i>CyberMentor</i> : mentored two female high school students interested in the natural sciences	2011-2012

Professional Development

Mentoring and Outreach

Teaching Assistant

Research Supervision

Posts

Leadership Academy, German Scholars Organization 2018-2019

Two 5-day intensive workshops on leadership and management practices

Service to Profession

Scientific Advisory Committee, ASTRON, The Netherlands	2018-present
Chair, DIRAC Postdoctoral Fellows Hiring Committee	2017-present
Scientific Organizing Committee, Astro Hack Week (chair in 2015, 2017, and 2018) http://astrohackweek.org/2018/	2014-present
referee for Nature, ApJ, MNRAS, A&A	2013-present
Co-Chair, Advancing Theoretical Astrophysics Summer School	2019
Mini-Symposium Chair, SciPy https://scipy2018.scipy.org/	2018
Scientific Organizing Committee, Python in Astronomy http://openastronomy.org/pyastro/2018/	2017-2018
Program Committee, JupyterCon	2017
Organizer, NYU Center for Data Science Lunch Seminar Series	2016
Organizer, Journal Club at the Astronomical Institute of the University of Amstedam	r- 2013-2015
Local Organizing Committee, LOFT Science Meeting	2011
Local Organizing Committee, 2nd Summer School on Multiwavelength Astronomy sterdam	y, Am- 2010

Daniela Huppenkothen

All Publications

Lead Author

Entrofy Your Cohort: A Data Science Approach to Candidate Selection

Huppenkothen, D., McFee, B., Norén, L.; (submitted to PLOS One)

Stingray: A Modern Python Package for Spectral Timing

Huppenkothen, D. et al.; Astrophys. J. 881, 114 pp. (2019)

Stingray: A Modern Python Package for Spectral Timing

Huppenkothen, D. et al.; Journal of Open Source Software (2019)

Hack Weeks as a Model for Data Science Education and Collaboration

Huppenkothen, D. et al.; Proceedings of the National Academy of Sciences 115, 36 8872-8877 (2018)

On the Statistical Properties of Cospectra

Huppenkothen, D. & Bachetti, M.; Astrophys. J. Sup. 236 p.11pp (2018)

Exploring the Long-Term Evolution of GRS 1915+105

Huppenkothen, D. et al.; Mon. Not. R. Astron. Soc. 466 p.2364-2377. (2017)

Detection of Very Low-Frequency Quasi-Periodic Oscillations in the 2015 Outburst of V404 Cygni

Huppenkothen, D. et al.; Astrophys. J. 834 17 pp. (2017)

Dissecting magnetar variability with Bayesian hierarchical models

Huppenkothen, D. et al.; Astrophys. J. 810 22 pp. (2015)

Quasi-periodic Oscillations in Short Recurring Bursts of Magnetars SGR 1806-20 and SGR 1900+14 Observed with RXTE

Huppenkothen, D. et al.; Astrophys. J. 795 114 pp. (2014)

Intermittency and Lifetime of the 625 Hz Quasi-periodic Oscillation in the 2004 Hyperflare from the Magnetar SGR 1806-20 as Evidence for Magnetic Coupling between the Crust and the Core

Huppenkothen, D. et al..; *Astrophys. J.* 793 129 pp. (2014)

Quasi-Periodic Oscillations in the Short Recurring Bursts of the Soft Gamma Repeater J1550-5418

Huppenkothen, D. et al..; *Astrophys. J.* 787 128 pp. (2014)

Quasi-Periodic Oscillations and Broadband Variability in Short Magnetar Bursts

Huppenkothen, D. et al.; Astrophys. J. 768 87 pp. (2013)

Contributing Author

Discovery and Identification of MAXI J1621-501 as a Type I X-ray Burster with a Super-Orbital Period

Gorgone, N. et al.; including Huppenkothen, D.; Accepted for publication in The Astrophysical Journal (2019).

The Zwicky Transient Facility: Science Objectives

Graham, M. et al.; including Huppenkothen, D.; *Publications of the Astronomical Society of the Pacific* 131 1001 (2019).

Introducing Bayesian analysis with M&Ms: An active-learning exercise for undergraduates Eadie, G.; Huppenkothen, D. et al.; *The Journal of Statistics Education* (2019).

Physics and astrophysics of strong magnetic field systems with eXTP

Santangelo, A. et al; including Huppenkothen, D.; Science China Physics, Mechanics & Astronomy 62 2 (2019).

The first tidal disruption flare in ZTF: from photometric selection to multi-wavelength characterization

van Velzen, S. et al.; incl. Huppenkothen, D. et al.; Astrophys. J. 82 2 (2019).

The Zwicky Transient Facility: System Overview, Performance, and First Results

Bellm, E. et al.; incl. Huppenkothen, D. et al.; *Publications of the Astronomical Society of the Pacific* 131 995 (2019).

NuStar Hard X-Ray View of Low-luminosity Active Galactic Nuclei: High-energy Cutoff and Truncated Thin Disk

Younges, G. et al.; incl. Huppenkothen, D. et al.; Astrophys. J. 870 2 (2019).

Constraining the limiting brightness temperature and Doppler factors for the largest sample of radio bright blazars

Liodakis, I.; Hovatta, T.; Huppenkothen, D. et al.; Astrophys. J. 866 2 (2018).

Detection of non-thermal X-ray emission in the lobes and jets of Cygnus A

de Vries, M.; Wise, M. W.; Huppenkothen, D. et al.; Mon. Not. R. Astron. Soc. 478 p.4010-4029 (2018).

No Time for Dead Time: Use the Fourier Amplitude Differences to Normalize Dead-time-affected Periodograms

Bachetti, M. & Huppenkothen, D.; Astrophys. J. 853 6 pp. (2018)

The rotational phase dependence of magnetar bursts

Elenbaas, C.; Watts. A.L.; Huppenkothen, D.; Mon. Not. R. Astron. Soc. 476 p.1271-1285 (2018)

APO Time-resolved Color Photometry of Highly Elongated Interstellar Object II/'Oumuamua

Bolin, B. et al.; including Huppenkothen, D.; Astrophys. J. 852 10 pp. (2018)

Magnetar giant flare high-energy emission

Elenbaas, C.; Huppenkothen, D. et al.; Mon. Not. R. Astron. Soc. 471 p.1856-1872 (2017)

X-ray and radio observations of the magnetar SGR J1935+2154 during its 2014, 2015, and 2016 outbursts

Younes, G. et al, including Huppenkothen, D.; Astrophys. J. 847 15 pp. (2017)

Burst and Outburst Characteristics of Magnetar 4U 0142+61

Gögüs, E. et al., including Huppenkothen, D.; Astrophys. J. 835 8 pp. (2017)

Magnetar-like X-Ray Bursts from a Rotation-powered Pulsar, PSR J1119-6127

Gögüs, E. et al., including Huppenkothen, D.; Astrophys. J. Letters 829 7 pp. (2016)

False periodicities in quasar time-domain surveys

Vaughan, S. et al., including Huppenkothen, D.; Mon. Not. R. Astron. Soc. 461 3145 pp. (2016)

The wind nebula around magnetar Swift J1834.9-0846

Younes, G. et al., including Huppenkothen, D.; Astrophys. J. 824 12 pp. (2016)

The Five Year Fermi/GBM Magnetar Burst Catalog

Collazzi, A.C. et al., including Huppenkothen, D.; Astrophys. J. Sup. 218 11 pp. (2015)

Time Resolved Spectroscopy of SGR J1550-5418 for the Fermi/GBM Bursts

Younes, G. et al., including Huppenkothen, D.; Astrophys. J. 785 52 pp. (2014)

The Outflow History of Two Herbig-Haro Jets in RCW 36: HH1042 and HH1043

Ellerbroek, A.M. et al., including Huppenkothen, D.; Astron. Astrophys. 551 A5 pp. (2013)

Detection of Spectral Evolution in the Bursts Emitted During the 2008-2009 Active Episode of SGR J1550-5418

von Kienlin, A. et al., including Huppenkothen, D.; Astrophys. J. 755 150 pp. (2012)

Using the X-ray Morphology of Young Supernova Remnants to Constrain Type, Ejecta Distribution and Chemical Mixing

Lopez, L.A. et al., including Huppenkothen, D.; Astrophys. J. 732 114 pp. (2011)

Typing Supernova Remnants Using X-ray Line Emission Morphologies

Lopez, L.A. et al., including Huppenkothen, D.; Astrophys. J. 706 106 pp. (2009)

Non-refereed

Sustaining Community-Driven Software for Astronomy in the 2020s

Tollerud, E. et al.; including Huppenkothen, D.; Astro2020: Decadal Survey on Astronomy and Astrophysics, APC white papers; Bulletin of the American Astronomical Society 51, 7 II (2019)

Training the Future Generation of Computational Researchers

Besla, G., Huppenkothen, D. et al.; Astro2020: Decadal Survey on Astronomy and Astrophysics, APC white papers; Bulletin of the American Astronomical Society 51, 7 II (2019)

The Next Decade of Astroinformatics and Astrostatistics

Siemiginowska. et al.; including Huppenkothen, D.; *Bulletin of the American Astronomical Society* 51, 3 355 (2019)

STROBE-X: X-ray Timing and Spectroscopy on Dynamical Timescales from Microseconds to Vears

Ray, P. et al.; including Huppenkothen, D.; Probe class mission concept study report submitted to NASA for Astro2020 Decadal Survey (2019)

ZTF Bright Transient Survey Classifications

Graham, M.L. et al., including Huppenkothen, D.; Astronomer's Telegram 11745 (2018)

The LOFT mission concept: a status update

Feroci, M et al., including Huppenkothen, D.; Proceedings of the SPIE 9905 20 pp. (2016)

eXTP - enhanced X-ray Timing and Polarimetry Mission

Zhang, S.N. et al., including Huppenkothen, D.; Proceedings of the SPIE 9905 16 pp. (2016)

Python in Astronomy 2016 Unproceedings

Robitaille, T. et al., including Huppenkothen, D.; DOI: 10.5281/zenodo.56793

FERMI/Gamma-ray Burst Monitor upper limits assuming a magnetar origin for the repeating Fast Radio Burst source, FRB 121102

Younes, G. et al., including Huppenkothen, D.; Astronomer's Telegram, 8781

New Methods for Timing Analysis of Transient Events, Applied to Fermi/GBM Magnetar Bursts

Huppenkothen, D. et al.; Proceedings of the 4th International Fermi Symposium, 2013, arXiv: 1303.1370

Daniela Huppenkothen

Presentations

[avited		
Invited	Spectral Timing in the Era of Data Science: Bayesian Statistics and Machine Learning for Variability Studies	2019
	The Future of X-ray Timing, Amsterdam, The Netherlands	
	Data Science Challenges in Time Domain Astronomy: Building Methods, Tools and Communities	2019
	The Annual Conference on Astronomical Data Analysis and Software Systems, Groningen, The Netherlands	
	Astrophysical Inference in the Era of Machine Learning Inference for Multi-Messenger Astronomy, Berkeley, CA, USA	2019
	Astronomy in the Age of Data Science NASA Science Mission Directorate Workshop on Maximizing the Scientific Return of NASA Data, Washington D.C., USA	2018
	Hack Weeks as a Model for Data Science Education and Collaboration Keynote Presentation, Moore-Sloan Data Science Summit, Park City, UT, USA	2018
	Bayesian Inference for X-ray Timing 42nd COSPAR Scientific Assembly, Pasadena, CA, USA	2018
	Data Science: Notes from an Emerging Field Open Questions in Astrophysics, Copenhagen, Denmark	2018
	Machine Learning in the Age of Survey Astronomy XMM-Newton 2018 Science Workshop, Madrid, Spain	2018
	From Asteroids to Black Holes: Data Science in Time Domain Astronomy University of Washington Data Science Summit, Seattle, WA, USA	2018
	Classifying Black Hole States: Lessons Learned in Machine Learning 231st Meeting of the American Astronomical Society	2018
	The Whole is Greater than the Sum of its Parts: Better Inference Through Bayesian Hierarchical Modelling 16th Meeting of the High-Energy Astrophysics Division of the American Astronomical Society	2017
	Time Series Analysis for a Multiwavelength Future HAP Workshop: Monitoring the Non-Thermal Universe, Cochem, Germany	2016
	Timing V404 Cygni during its 2015 outburst 11th INTEGRAL Conference, Amsterdam, The Netherlands	2016
	Ripples in a Stormy Sea: Quasi-Periodic Oscillations in the Fermi Gamma-Ray Burst Mon- itor	2015
	6th International Fermi Symposium, Arlington, VA, USA	
	Probing Neutron Star Physics with Quasi-Periodic Oscillations in Magnetar Bursts Spring Meeting of the American Physical Society, Baltimore, MD, USA	2015
	Magnetars, QPOs and the Neutron Star Crust FUSTIPEN Topical Meeting "Structure of the neutron star crust: experimental and observational signatures", Caen, France	2014

Colloquia & Seminars

Data Science Challenges in Time Domain Astronomy: Building Methods, Tools and Communities	2019
Colloquium, Albert Einstein Institute for Gravitational Physics, Hannover, Germany	
Turning Data Into Knowledge: Data Science in Astronomy and Beyond Colloquium, Anton Pannekoek Institute for Astronomy, University of Amsterdam, The Netherlands	2019
	2010
Data Science Challenges in Time Domain Astronomy: Building Methods, Tools and Communities Joint Steward/NOAO Colloquium, University of Arizona, AZ, USA	2019
* *	2010
Astrophysical Inference with Complex, Stochastic Time Series Colloquium, Center for Statistics and Machine Learning, Princeton University, NJ, USA	2019
From Asteroids to Black Holes: Data Science for Next-Generation Time Domain Astron-	2019
omy Astronomy Seminar, Princeton University, NJ, USA	
From Asteroids to Black Holes: Data Science for Next-Generation Time Domain Astron-	2019
omy	
Colloquium, Physics Department, Carnegie Mellon University, PA, USA	
From Asteroids to Black Holes: Data Science for Next-Generation Time Domain Astron-	2019
omy	
Colloquium, Physics Department, University of Pittsburgh	
From Asteroids to Black Holes: Data Science in Time-Domain Astronomy Astronomy Seminar, University of Tübingen, Germany	2019
From Asteroids to Black Holes: Data Science in Time-Domain Astronomy	2019
Astronomy Colloquium, Pennsylvania State University	
From Asteroids to Black Holes: Data Science in Time-Domain Astronomy	2019
Astronomy Colloquium, University of Illinois at Urbana-Champaign	
From Asteroids to Black Holes: Data Science in Astronomy	2018
Computing PNNL Lecture Series, Pacific Northwest National Laboratory, Richland, WA	
Fun Statistics with Fourier Spectra	2018
Harvard-California Astrostatistics Collaboration Seminar, Center for Astronomy, Harvard University, USA	
X-ray Astronomy in the Era of Data Science	2018
Physics Colloquium, University of Delaware, USA	
Data Science for X-ray Astronomy	2017
Astronomy Colloquium, University of Washington, USA	
Wrong But Useful: Statistics and Machine Learning for High-Energy Astrophysics Physics Colloquium, Rheinisch-Technische Universität Aachen, Germany	2017
How to Time a Black Hole: Time series Analysis for the Multi-Wavelength Future Astronomy Seminar, Technical University Dortmund, Germany	2017
Improving Candidate Selection for Academic Conferences and Beyond	2017
Seminar at the European Space Research and Technology Centre (ESTEC), The	
Netherlands	
Exploring the Long-Term Evolution of Black Holes with Machine Learning Leiden Faculty colloquium	2017
How to Time a Black Hole: Unravelling fundamental physics with X-ray variability	2017
Chodera Lab Seminar, Memorial Sloan-Kettering Cancer Center, USA	,
How to Time a Black Hole: Time Series Analysis for the Multi-Wavelength Future Astronomy Seminar, University of Würzburg, Germany	2017
Why your field needs a hack week	2016
BIDS Data Science Lecture Series, University of California Berkeley, USA	

Exploring the Violent Universe: A Data Science Approach to X-ray Astronomy The 4th Annual DC/VA/MD Summer Astrophysics Meeting, George Washington Unive sity, Washington, DC, USA
Timing Black Holes: Unravelling Fundamental Physics with X-ray Variability Statistics colloquium, University of Auckland, New Zealand
Exploring the Violent Universe: A Data-Driven Approach to X-ray Astronomy Physics colloquium, George Washington University, Washington, DC, USA
Are magnetar short bursts caused by star quakes? Using burst variability to constrain magnetar physics
HEAD lunch seminar, Center for Astrophysics, Harvard University, Cambridge, MA USA
Unravelling Magnetar Variability: A data-driven approach to X-ray timing Chandra X-ray Telescope Grou, MIT, Cambridge, MA, USA
Searching the Haystack of Magnetar Bursts SPIMAX Seminar, University of Oxford, Oxford, UK
A Zoo of Magnetar Bursts: Understanding Magnetar Variability Monash University, Melbourne, Australia
Assessing the Impact of UV/X-ray Emission from Accreting Black Holes on the ISM Colloquium, Dr. Karl Remeis-Sternwarte Bamberg, Germany

Contributed

Hack Weeks as a Model for Data Science Education and Collaboration 2019 Symposium for Data Science and Statistics, Bellevue, WA, USA	2019
Here Be Dragons: Effective (X-ray) Timing with the Cospectrum 231st Meeting of the American Astronomical Society, Washington DC, USA	2018
Entrofy your Cohort	2017
Moore-Sloan Data Science Summit	
Using Python to Study Black Holes	2016
PyGotham 2016, New York, USA	
Detection of Low-Frequency Quasi-Periodic Oscillations in the 2015 Outburst of V404	2016
Cygni with Marting of the High Engage Attentionies Division of the American Attenuaries I So	
15th Meeting of the High Energy Astrophysics Division of the American Astronomical Society, Naples, FL, USA	
Entrofy: Participant Selection Made Easy	2016
Python in Astronomy 2016, University of Washington, Seattle, USA	
Quasi-periodic Oscillations in V404 Cygni	2015
Time Domain Astrophysics with Swift, Clemson, SC, USA	
New Statistical Tools for Studying Variability in Transient Light Curves	2015
Hot-Wiring the Transient Universe IV, Santa Barbara, CA, USA	
New Methods To Understand Variability in Astrophysical Transients	2013
Maximum Entropy and Bayesian Inference, Canberra, Australia	
Timing Transients: New Methods To Understand Transient Variability	2013
Astroinformatics 2013, Sydney, Australia	
Timing Transients: Understanding Magnetar Variability	2013
Explosive Transients, Lighthouses of the Universe, Santorini, Greece	
Understanding Magnetar Variability: A Magnetar Burst Zoology	2013
NS2013: Latest Results from the Neutron-Star Laboratory, Amsterdam, The Netherlands	
New Methods for Timing Analysis of Transient Events	2012
NOVA Network 3 Meeting, Nijmegen, The Netherlands	
New Methods for Timing Analysis of Transient Events	2012
4th International Fermi Symposium, Monterey, CA, USA	

Daniela Huppenkothen

References

Prof Andrew Connolly

Professor of Astronomy

Department of Astronomy University of Washington 3910 15th Ave NE Seattle WA 98195

ajc@astro.washington.edu +1 206 543 9541

Prof David Hogg

Professor of Physics

Center for Cosmology and Particle Physics Department of Physics New York University 726 Broadway, 9th Floor New York, NY 10003, USA

david.hogg@nyu.edu +1 212 992 8781

Dr Iain Murray

Reader in Machine Learning

School of Informatics University of Edinburgh Informatics Forum 10 Crichton Street Edinburgh EH8 9AB

i.murray@ed.ac.uk

Prof Chryssa Kouveliotou

Professor of Physics

George Washington University Physics Department Staughton Hall 707 22nd St NW Room 101 (for front office mailings) Washington, DC 20052, USA

ckouveliotou@email.gwu.edu +1 202 994 5898

Prof Anna Watts

Professor of Astronomy

Anton Pannekoek Institute for Astronomy University of Amsterdam PO Box 94249, 1090 GE Amsterdam, The Netherlands

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