

Dr. Brendan Griffen

Department of Physics and Kavli Institute for Astrophysics & Space Research, MIT
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Employment & Education

Postdoctoral Research Fellow	2013 – present
– Professor Anna Frebel’s Research Group	
Doctorate of Philosophy , University of Queensland, Australia	2008 – 2013
– Advisors: Professor Michael Drinkwater & Professor Peter Thomas	
Undergraduate Instructor , University of Queensland, Australia	2004 – 2013
Bachelor of Science (w/ Masters) , University of Queensland, Australia	2003 – 2007
– Advisors: Professor Michael Drinkwater & Professor Chris Power	

Honors & Awards

Dean’s Commendation For Instructing	2011
GSRTG Travel Scholarship	2010
University of Queensland – UWA Bilateral Research Collaboration Award	2010
University of Queensland Postgraduate Research Scholarship	2008
Annual Astronomy Society of Australia General Meeting, Best Student Poster	2008
UQ Summer Research Scholarship	2008
Swinburne University of Technology Research Scholarship	2007
Australian National University Summer Research Scholarship	2007
King’s College Medal	2006
ATNF Parkes Radio Telescope Research Scholarship	2006

Computing Allocations & Funding

XSEDE Computing Time (as PI or Co-PI)	~10 million CPU hours, 2013 – present
Kavli Institute Research Investment Grant for Upgrading MKI HPC Cluster	\$52,595, 2015
Kavli Institute Research Investment Grant for Upgrading MKI HPC Cluster	\$68,000, 2014
Kavli Institute Research Investment Grant for Upgrading MKI HPC Cluster	\$51,595, 2013

Talks

– *Invited*

GMT Community Meeting	Monterey, California, 2015
Brown University Colloquium	Brown University, 2015
ANITA Meeting	University of Swinburne 2013
Annual Astronomy Society of Australia General Meeting	University of Western Australia 2013
Globular Clusters & The Epoch of Reionization	PhD Thesis Defence Colloquium, 2013
Formation of Ultra-Compact Dwarf Galaxies	Master’s Thesis Defence Colloquium, 2007

– *Contributed*

Stellar Streams In The Local Universe	MPA Ringberg, Germany, 2015
First Stars, Galaxies & Black Holes	Kaptyn Institute, Netherlands, 2015
Local Group Astrostatistics	Michigan State University, 2015
Near Field, Far Field Connection	University of California, Irvine, 2014
Teach At The Beach, OSA Conference	Stradbroke Island, Australia, 2010
ANITA/gSTAR Theoretical Astrophysics Conference	Swinburne, Melbourne, 2010

Stellar Nucleosynthesis Summer School Monash, Melbourne, 2010

– *Seminars*

Weekly institute seminar: *The Caterpillar project* MPA, Garching, 2015
 Large Scale seminar: *The Caterpillar project* Harvard-Smithsonian CfA, 2015
 IAP symposium MIT, 2015
 Weekly institute seminar: *First stars & galaxies of the Milky Way* ITA, Heidelberg, 2015
 Weekly institute seminar: *The Caterpillar project* ARI, Heidelberg, 2015
 IAP Symposium MIT, 2014
 Institute for Theoretical Astrophysics group meeting ITA, Heidelberg, 2014
 Weekly seminar: *The Caterpillar Project* University of Queensland, 2014
 Podcasting to promote science University of Queensland, 2011
 Weekly institute seminar: *Globular clusters & reionization* University of Queensland, 2011
 Self-interacting Dark Matter Harvard University, 2010
 Weekly institute seminar: *Globular clusters within the Aquarius simulation* ARI, Heidelberg, 2010
 Weekly institute seminar: *Globular clusters within the Aquarius simulation* MPIA, Heidelberg, 2010
 Globular star cluster formation & reionization Australian National University, 2010
 Weekly institute seminar: *Dwarf galaxies to detect dark matter* University of Queensland, 2009
 Weekly institute seminar: *Globular clusters & Reionization* Durham University, 2009
 Weekly institute seminar: *Globular cluster formation* PhD Confirmation, 2009
 Weekly institute seminar: *Ultra-compact dwarf galaxies* University of Queensland, 2009
 RSAA Stromlo Xmas S.E.M.I.N.A.R.S Australian National University, 2009
 Weekly institute seminar: *Dark matter detection* University of Queensland, 2008
 Weekly institute seminar: *The Milky Way's black hole* University of Queensland, 2008
 Annual Astronomical Society of Australia General Meeting University of Western Australia, 2008

– *Workshops*

ComputeFest, HPC Computing Harvard University, 2014
 IMPRS: First Stars & Cosmic Reionization University of Heidelberg, 2010
 Unity of the Universe, ICG Portsmouth, U.K., 2009
 5th Stromlo Symposium Australian National University, 2006

Professional Memberships

Member of the Astronomical Society of Australia 2008 – present
 Member of the Virgo Consortium 2008 – present

Community Service & Outreach

– *Organizer*

Postdoctoral Career Luncheon, weekly meetings for postdocs to discuss career related news MIT, 2015
IAP Student Activity Period: ‘open month’ at MIT to expose undergrads to MKI research MIT, 2014
CosmicFlow Conference Lamington National Park, 2012
CosmicComotion Conference Stradbroke Island, 2011

– *Speaker*

Science by the Pint, ‘in-house’ expert discussing open research questions with public Somerville, 2012
Mad Scientist's Tea Party, invited public lecture on astronomy Brisbane State Library, 2012
Claptrap, co-host a late night radio show discussing science related news Brisbane, 2012

Mentoring & Teaching

I have actively mentored the following students on a wide range of research topics. All but one are co-authors on at least one publication.

Sergio Mundo	UROP Student, MIT 2015
Joel Pfeffer	PhD Student, UQ, 2013 – 2015
Alexander Ji	PhD Student, MIT, 2013 – present
Gregory Dooley	PhD Student, MIT, 2013 – present
David Hernandez	PhD Student, MIT, 2013 – present

Instructor, The University of Queensland

2004 – 2013

– Awarded: Commendation For Excellence by the Dean.

2011

– Rated an excellent 4.5/5 by students for performance.

Courses ranged from calculus, linear algebra, computational physics, quantum and bio-physics to the philosophy of modern science. I have also given guest lectures in scientific communication, web development and multimedia to undergraduate and graduate students.

Publications

10. Pfeffer J., Hilker M., Baumgardt H., **Griffen B.**
Constraining ultra-compact dwarf galaxy formation with galaxy clusters in the local universe.
submitted to ApJ, 2015.
9. **Griffen B.**, Ji A., Dooley G., Frebel A., O'Shea B.
Tracing the origin of the most metal-poor stars within the hierarchical assembly history of the Milky Way.
submitted to ApJ, 2015.
8. **Griffen B.**, Ji A., Dooley G., Gomez F., and Vogelsberger M.
The Caterpillar Project: A Large Suite of Milky Way Sized Halos.
arxiv.org/abs/1509.01255v1, ApJ, in press, 2015.
7. Torrey P., Wellons S., Machado F., **Griffen B.**, Nelson D., Rodriguez-Gomez V., McKinnon R., Pillepich A., Ma CP, Vogelsberger M., Springel V., Hernquist L.
An analysis of the evolving comoving number density of galaxies in hydrodynamical simulations.
Monthly Notices of the Royal Astronomical Society, Volume 454, Issue 3, 2015.
6. Nelson D., Pillepich A., Genel S., Vogelsberger M., Springel V., Torrey P., Rodriguez-Gomez V., Sijacki D., Snyder G., **Griffen B.**, Marinacci F.
The Illustris Simulation: Public Data Release.
Astronomy and Computing, Volume 13, 2015.
5. Dooley G., **Griffen B.**, Zukin P., Ji A., Vogelsberger M., Hernquist L., Frebel A.
The Effects of Varying Cosmological Parameters on Halo Substructure.
The Astrophysical Journal, Volume 786, Issue 1, 2014.
4. Pfeffer J., **Griffen B.**, Baumgardt H., Hilker M.
Contribution of stripped nuclear clusters to globular cluster and ultracompact dwarf galaxy populations.
Monthly Notices of the Royal Astronomical Society, Volume 444, Issue 4, 2014.
3. **Griffen B.**, Drinkwater M., Thomas P., Iliev I., and Mellema G.
The Inhomogenous Reionisation Of the Inter-Galactic Medium By Metal-Poor Globular Clusters.
Monthly Notices of the Royal Astronomical Society, Volume 431, Issue 4, p. 3087-3102, 2013.
2. **Griffen, B.**, Drinkwater M., Thomas P., Helly J., and Pimblett K.
Globular cluster formation within the Aquarius simulation.
Monthly Notices of the Royal Astronomical Society, Volume 405, Issue 1, 2013.
1. Davis, T., and **Griffen B.**. Cosmological Constant
Scholarpedia, 5(9):4473, 2009, 2012.