

Dr. James Wurster

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Employment

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| 2016 – present | Research Fellow
Astrophysics Group, School of Physics and Astronomy
University of Exeter, Exeter, England |
| 2013 – 2016 | Research Fellow
Monash Centre for Astrophysics (MoCA), School of Physics and Astronomy
Monash University, Melbourne, Australia |

Education

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| 2013 | Ph. D. Astronomy
Department of Astronomy and Physics
Saint Mary's University, Halifax, Canada
Advisor: Dr. Robert J. Thacker |
| 2008 | M. Sc. Astronomy
Department of Physics, Engineering Physics and Astronomy
Queen's University, Kingston, Canada
Advisor: Dr. Kayll Lake |
| 2006 | B. Sc. (Honours) Mathematics and Physics
The University of Western Ontario
London, Canada
Honours Thesis Advisor: Dr. Shantanu Basu |

Fellowships, scholarships and awards

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| 2015 | Awarded 600,000CPU hours from the Australian National Computational Merit Allocation Scheme (NCMAS) |
| 2009 – 2011 | National Science and Engineering Research Council of Canada (NSERC) Canada Graduate Scholarship – Ph. D. Level |
| 2006 – 2008 | NSERC Canada Graduate Scholarship – M. Sc. Level |

Supervision summary

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| Nov. 2015 – | Ms. Madeline Marshall |
| Jan. 2016 | Third year summer student at Monash University, Australia |
| Nov. 2015 – | Mr. Bernard Field |
| Jan. 2016 | First year summer student at Monash University, Australia |
| 2015 | Mr. David Liptai
Honours student at Monash University, Australia |

Teaching summary

Autumn 2015	Lecturer: Stars and Galaxies (galaxy interactions and galaxy clusters) Monash University, Australia
Spring 2013	Instructor: University Physics laboratory Saint Mary's University, Canada
2012	Instructor: Physics for Life Science laboratory Saint Mary's University, Canada
2008-2012	Teaching Assistant: Physics for Life Science & University Physics laboratories Saint Mary's University, Canada

Organisation of scientific meetings

2019	Local Organising Committee member: 14th International SPHERIC Workshop. Hosted at the University of Exeter, England, June 2019. Estimating 120-150 participants.
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Institutional responsibilities

2015 – 2016	Co-coordinator: MoCA Public Talk Series, Monash University, Australia
2014	Coordinator: MoCA Seminar Series, Monash University, Australia

Memberships of scientific societies

2013–2016	Member: Astronomical Society of Australia
2013–2016	Member: Australian National Institute for Theoretical Astrophysics
2008–2013	Student Member: Canadian Astronomical Society

Conference talks: Invited

Feb. 2018	<i>1st Phantom Users Workshop</i> , Melbourne, Australia “Physical and Artificial Resistivity (in smoothed particle magnetohydrodynamics)”
Dec. 2017	<i>Computational MHD Workshop 2017</i> , Leeds, England “Smoothed Particle Magnetohydrodynamics”

Conference talks: Contributed

2019	Great Barriers in Planet Formation, 14th International SPHERIC workshop
2018	The Wonders of Star Formation, 1st European Phantom Users Workshop, The Olympian Symposium 2018, Cosmic rays: Salt of the star formation recipe, 1st Phantom Users Workshop, Magnetic Fields or Turbulence?
2017	12th International SPHERIC workshop
2016	Sixth Annual Dirac Science Day, ANITA 2016 meeting
2015	Protoplanetary Disk Dynamics & Planet Formation, ANITA 2015 meeting

Public talks

Sept. 2017	<i>North Bay Astronomy Club</i> , North Bay, Canada “My career in astronomy: From watching sci-fi to studying the stars.”
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Seminars

2019	Chalmers University of Technology, University College London
2018	University of Hertfordshire, University of Cambridge (DAMTP), Cardiff University, University of Southampton, Academia Sinica Institute of Astronomy and Astrophysics
2017	University of Leicester, University of Toronto (CITA), University of Western Ontario, Monash University (MoCA)
2016	University of Exeter, Swinburne University, Monash University (MoCA)
2015	Monash University (Math), University of Exeter, University of Melbourne
2014	University of Central Lancashire, Monash University (MoCA)

Published papers in refereed journals

Total 21 + 1 submitted
First author 12 + 1 submitted

Journal articles I refereed

2019 Astrophysical Journal (1)
2018 Monthly Notices of the Royal Astronomical Society (2),
 Astronomy & Astrophysics (1), Astrophysical Journal (2),
 Astronomy and Computing (1)
2017 Monthly Notices of the Royal Astronomical Society (1)
2016 Monthly Notices of the Royal Astronomical Society (1),
 Publications of the Astronomical Society of Australia (1)
2015 Publications of the Astronomical Society of Australia (1)

Scientific research summary and primary astrophysical codes used

Keywords stars: low-mass – stars: formation – stars: winds, outflows –
 protostellar discs: formation – magnetic fields – magnetohydrodynamics (MHD) –
 methods: numerical

PHANTOM Smoothed particle magnetohydrodynamics astrophysical code; public code.
 Roles: Major contributions to development; user.
 Reference: Price, Wurster, et al., 2018, PASA, 35:e031.

SPHNG Smoothed particle magnetohydrodynamics astrophysical code; private code.
 Roles: Minor contributions to development; user.

NICIL Library to calculate the non-ideal MHD coefficients; public library.
 Role: Sole developer and maintainer; user.
 Reference: Wurster, 2016, PASA, 33, e041.

July 28, 2019