

Dr. Deanne B Fisher

Senior Lecturer – Swinburne University of Technology

Contact e-mail: dfisher@swin.edu.au
Web: <http://astronomy.swin.edu.au/~dfisher/>

I previously went by the name David Fisher.

Current ARC Future Fellow (September 2017 - present)
Senior Lecturer
Swinburne University of Technology

Previous Director's Research Fellow (2014-2017)
Lecturer
Swinburne University of Technology

Postdoctoral Scientist (2013- 2014)
Swinburne University of Technology

CARMA Postdoctoral Fellow (2010-2013)
University of Maryland
Joint Space Science Institute Scientist

Education

University of Texas at Austin
PhD (2010)
Thesis Advisor: John Kormendy
Thesis Topic: *Star Formation and Structure of Bulges in Nearby Disk Galaxies*

University of Texas at Austin, B.S. Physics (2004)

Würzburg Universität in Würzburg, Germany (2002)

Research Funding

Grants: I played a significant role in acquisition of \$1.6 Million USD for research.
2017 PI / ARC Future Fellow / total award: \$680,000 AUD (\$530,000 USD)
2016 Co-I / ARC Discovery Project / total award: \$560,000 AUD (\$420,000 USD)
Australian Research Council grant for research into angular momentum of galaxies
2011 PI / Herschel OT2_dfisher_1/ total award: \$22,500 USD
Grant associated with HST observations
2007 PI / HST-GO-11128.01-A / total award: \$139,000 USD
Grant associated with HST observations

2006 / PI / Spitzer Grant 30496 / total award \$60,000 USD

Grant associated with Spitzer observations

2006 / NSF0607490 /total award \$469,000 USD

As a graduate student I was not allowed to serve as co-I of an NSF grant, though I was very involved in this grant proposal, and my thesis research was its main subject.

Fellowships: I have successfully obtained \$470,000 USD for research fellow positions.

CARMA Research Fellowship: (2010-2013) *The CARMA fellows program was awarded by CARMA observatory universities to carry out an independent research program aligned with the interest of CARMA, while taking leading roles in telescope operations.*

The total salary plus research funds was \$190,000 USD.

Directors Research Fellowship: (2014 – present) *As the Director's Fellow I manage the research group for the centre director (Karl Glazebrook), and lead my own research program that is designed to align with the interests of the centre director.*

Total awarded salary is \$375,000 AUD (equivalent \$280,000 USD).

Highlights of PI Experience for Major International Observatories

ALMA 2017-2018 (Cycle 5) program: 2017.1.00239 (20 hours)

Measurement of high-J CO lines in turbulent disks.

2016-2017 (Cycle 4) program: 2016.1.00852.S (10 hours)

Mapping CO(1-0) in a turbulent, clumpy disk at the Jeans length

2016-2017 (Cycle 4) program: 2016.1.00935.S (12.5 hours)

Measurement of dense gas in turbulent disk galaxies.

Hubble 2017 program: GO15069 (12 orbits)

Ages of clumps in turbulent disks

2007 program: GO11128 (25 orbits)

Time Scales of Bulge Formation in Nearby Galaxies

Keck 2013-2016 multiple semesters of programs (5 nights)

Multiple programs for DYNAMO project using NIRC2 and OSIRIS

NOEMA/PdBI 2013-2016 multiple semesters of programs (45 hours)

Multiple programs for measuring gas mass in DYNAMO galaxies.

Herschel Space Observatory 2011 (OT2) program: OT2_dfisher_1 (4 hours)

The Dust Mass of the Extremely Metal Poor Galaxy I Zw 18

Spitzer Space Telescope 2006 program: 30496 (15 hours)

Star Formation in The Centers of Galaxies Due to Secular Evolution

Advising & Mentoring

Postdocs:

Dr. P. Oliva-Altamarano (Swinburne 2015 – 2017). *I was involved in hiring her and co-managed Oliva-Altamarano's research project.*

Dr. Giulia Savorgnan (Swinburne 2016) *After completing her PhD Savorgnan worked temporarily (3 months) in our group on a project that I supervised.*

Dr. Sarah Sweet (Swinburne 2017 – present) *I will be co-managing our new postdoc.*

Graduate Students:

H. White (U of Toronto, 2015-present) *Two of White's thesis chapters will be projects which I developed and co-managed.*

T. Nanayakkara (Swinburne graduate student, 2013-present) *I served as Associate Supervisor. Nanayakkara received his PhD in 2017.*

Dr. R. Bassett (Swinburne graduate student, 2013-2016) *I served as Associate Supervisor. Bassett received his PhD in 2016.*

R. Herrera-Camus (Maryland graduate student 2010-2013) *I helped to mentor Herrera-Camus while I was at Maryland and helped significantly in him writing his first paper.*

Vacation Students: *While at Swinburne I have mentored 3 vacation students (C. Jacobs, S. Webb, I. Lamperti). These are 10 week projects for visiting students who range in experience from senior undergraduate to recent masters.*

In my role as Director's Research Fellow I serve as stand-in advisor for 3 more students (C. Jacobs, G. Bekiaris and R. Allen) when the Director is traveling or busy with administrative duties.

Service

Australia & Swinburne Keck Access

2016 – Swinburne Keck Renewal Document –

I wrote the document outlining the case for renewal of the 5 year agreement, to purchase Keck time, a \$10 million investment. This document was read by University Vice Chancellor and Deputy Vice Chancellor.

2016 –Australian Keck TAC Review –

I served on the national panel that reviewed the process by which Australian universities pool and allocate Keck time.

2015 –Australian Rules for Time Allocation –

I authored the guidelines determining how the Australian Keck TAC allocates time to Australian universities, and served as technical secretary for the first Australia wide Keck TAC.

2014 – Technical Secretary for Swinburne Keck TAC

2014 to present – Management of Keck remote observing facility at Swinburne.

Diversity and Gender Equity in STEM

2013 to present – Centre for Astrophysics Equity & Diversity Committee

I am a founding member of our department Diversity Committee. On this committee I have actively been involved in developing and implementing hiring guidelines for postdocs, authoring conference guidelines to promote diversity, developing hiring guidelines for academic staff, initiating and carrying out a yearly survey of Centre health, and giving presentations to the Centre on diversity issues.

2015 to present – School of Science Equity & Diversity Committee

I am also a founding member of the Diversity Committee for the School of Science. Through this committee I have begun to work on an initiative to make University policies more inclusive to transgender people. I am working with the Dean of the School of Science, and the university Diversity officer. This includes allow non-binary

and transgender people access to mentoring programs aimed at increasing gender diversity in STEM, and helping the University to alter language in documents and hiring ads to be more friendly to transgender people.

Funding Review

2016-2017 Reviewer of Australian Research Council Grant Applications
2013 US National Science Foundation Review Panel

Vacation Scholars Program

2016 *I managed the vacation scholars program by which visiting students are recruited and selected for 10 week research projects with staff.*

CARMA

2010 to 2013 CARMA Telescope Pointing
Daily monitoring of telescope pointing, reported on pointing at weekly CARMA telecons and generating new pointing models when necessary.
2010 & 2013 SOC member for CARMA Conference (twice)
2011 CARMA Open House Tour Guide
Described CARMA telescope operations and observing experience to general public.
2010 – CARMA Time Allocation committee member (twice)

Journal Referee

I have refereed papers for *Nature*, *ApJ*, *ApJ Letters*, *MNRAS* and *A&A*

Outreach

2010 – Member of ‘Science Advisory Council’ for daily podcast with 100,000 listeners
‘Too Beautiful To Live’ When relevant I contributed descriptions of popular scientific topics (e.g. LHC, comets impacting Jupiter).

Teaching

2017 – Modern Optics – 2nd year Physics course at Swinburne
2016 – *Exploring the Solar System* – Swinburne Online Course
2005 – *Introduction to Astronomy* – Teaching Assistant
2004 – Astronomy In the News – Teaching Assistant

Press, Recognized Papers and Awards

2017 *Nature Write-Up On DYNAMO Project*: There will be a description of the DYNAMO survey in *Nature* magazine in February 2017.

2014 *New Galaxies Gather No Dust*: My 2014 *Nature* paper on the extremely low dust mass of I Zw 18 received a significant amount of press. This included coordinated press releases between Swinburne, *Nature*, and several universities around the globe. I was featured in a 10 minute interview by the *Australian Broadcasting Corporation* for the program *Starstuff*. The article was covered in a large number of web and printed press outlets around the world.

2009 *Elliptical Galaxies Tell Tale of their Past*: My paper (Kormendy, Fisher et al. 2009 ApJS) was highlighted in *Nature* as an important work on elliptical galaxies.

2008 *National Public Radio spotlight on the changing view of bulges*: The NPR program *Stardate* airs on over 300 radio stations around the US. In 2008 my research on pseudobulges and classical bulges was featured on 4 connected programs. I participated in script writing.

2008 *Daily Texan Article*: As a graduate student I was profiled in the University of Texas newspaper about my research.

2007 *Pseudobulges new probes of galaxy evolution*: My 2007 article connecting bulge properties to the bimodality of galaxies was highlighted in *Science Magazine*, receiving the Editor's Choice for interesting astronomy article on 18 September 2008. Also, I was asked by the AAS (American Astronomy Society) to generate a press release on this work.

2006 *Best 2nd Year Project and Defense* U. Texas Astronomy Dept.