ADRIANO POCI

PERSONAL INFORMATION

email	adriano.poci@durham.ac.uk
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address	OCW201, Centre for Extragalactic Astronomy, Durham University

GOAL

To use my skills and knowledge acquired through university to continue to study the Universe as a full-time career.

PUBLICATIONS

Metrics — *h*−index: 12 · All Publications (NASA/ADS)

Lead: 6

Poci, A., McDermid, R. M., Lyubenova, M., Martín-Navarro, I., et al. (2022). "The Fornax3D Project: Intrinsic Correlations between Orbital Properties and the Stellar Initial Mass Function". *Monthly Notices of the Royal Astronomical Society* 514(3), pages 3660–3669. ISSN: 0035-8711. DOI: 10.1093/mnras/stac1514

Poci, A. and Smith, R. J. (2022). "Comparing Lensing and Stellar Orbital Models of a Nearby Massive Strong-Lens Galaxy". *Monthly Notices of the Royal Astronomical Society* 512(4), pages 5298–5310. ISSN: 0035-8711. DOI: 10.1093/mnras/stac776

Poci, A., McDermid, R. M., Lyubenova, M., Zhu, L., et al. (2021). "The Fornax3D Project: Assembly Histories of Lenticular Galaxies from a Combined Dynamical and Population Orbital Analysis". *Astronomy & Astrophysics* 647, A145. ISSN: 0004-6361, 1432-0746. DOI: 10.1051/0004-6361/202039644

Poci, A., McDermid, R. M., Zhu, L., and van de Ven, G. (2019). "Combining Stellar Populations with Orbit-Superposition Dynamical Modelling: The Formation History of the Lenticular Galaxy NGC 3115". *Monthly Notices of the Royal Astronomical Society* 487(3), pages 3776–3796. ISSN: 0035-8711. DOI: 10.1093/mnras/stz1154

Poci, A., Cappellari, M., and McDermid, R. M. (2017). "Systematic Trends in Total Mass Profiles from Dynamical Models of Early-Type Galaxies". *Monthly Notices of the Royal Astronomical Society* 467(2), pages 1397–1413. ISSN: 0035-8711. DOI: 10.1093/mnras/stx101

Poci, A., Kuehn, K., Abbott, T., Abdalla, F. B., et al. (2016). "DESAlert: Enabling Real-Time Transient Follow-Up with Dark Energy Survey Data". *Publications of the Astronomical Society of Australia* 33, e049. ISSN: 1323-3580, 1448-6083. DOI: 10.1017/pasa.2016.42

Contributor: 16 — Co-Author Subset

ACADEMIC POSTS

2021-present — Durham University, Durham, United Kingdom

Post-Doctoral Research Associate

A primarily-research position studying the stellar Initial Mass Function in external galaxies, using a broad variety of techniques. These include direct modelling of the stellar light via their spectra, the modelling of the galaxy mass via strong gravitational lensing, and the combined modelling of the stellar content via sophisticated dynamical models. The position also includes teaching duties of undergraduate students, organising group meetings, and assistance in the supervision of research students.

EDUCATION

2016-2021 — Macquarie University, Sydney, Australia

Doctorate of Philosophy

School: Astronomy and Astrophysics
Description: The Doctorate of Philosophy program, which is a full-time research position, where I developed sophisticated modelling techniques combining stellar population and stellar dynamical measurements in a robust way for the first time. Other duties included applying for telescope time, organising group meetings, supervising undergraduate laboratories, and presenting my work at conferences. The outcome of the degree was a series of papers, collated into a thesis.

2015 Macquarie University, Sydney, Australia

Master of Research

Grade: 82% · School: Astronomy and Astrophysics
Description: The second year of the Master of Research program is devoted entirely to research. I constructed dynamical models of galaxies to constraint the Initial Mass Function. This year involved international collaborations, conference attendance, and writing journal articles, in addition to the research and Thesis writing. The outcome of the degree was a paper, and formal thesis.

2014 Macquarie University, Sydney, Australia

Bachelor of Philosophy

GPA: 3.750 (4-pt. scale) · School: Astronomy and Astrophysics
Description: As the first year of the Master of Research program, this course extended on the content of the Bachelor of Science, with emphasis on real-world physics and applications to real research. In addition, it dealt with more advanced content, including magnetohydrodynamics, Bell's Inequality, and thermodynamics.

2011–2013 Macquarie University, Sydney, Australia

Bachelor of Science

GPA: 3.545 (4-pt. scale) · School: Astronomy and Astrophysics
Description: Extensively covered advanced topics in quantum physics, solid-state and particle physics, astronomy instrumentations, and astrophysical theories. I took additional non-compulsory mathematics courses.

2009-2010 Bossley Park High School, Sydney, Australia

Higher School Certificate

ATAR: 89.35 (99.95-pt. scale)

ACADEMIC EXPERIENCE AND AWARDS

Collaborations

GECKOS
Coordinator of the Dynamical Models Science Working Group for the survey

MaNGA Strong-Lens Follow-Up
Lead dynamical modelling effort with Schwarzschild models of targetted strong-lens galaxies

MAGPI
Targetted dynamical modelling project of high-quality sub-sample
Support general dynamical modelling of full sample
3D modelling of the observational point-spread function

DYNAMITE
Code development, feature implementation, and bug fixing
Giving instructional talks at dedicated workshops on use of the package

Fornax3D
Leading dynamical model of high-quality sub-sample for developing new Schwarzschild methods
Providing model products for use by the team on subsequent analyses
Support dynamical modelling of full sample

SAMI
Support dynamical modelling effort with Schwarzschild models for the full sample
Scientific input on stellar dynamics works

Awards

2018 · European Southern Observatory (ESO) Studentship Programme

2014 · Australian Institute of Physics Prize for the Masters of Research Program in Physics

2014 · Invitation to join, and acceptance into, the Golden Key International Honour Society

2014 · Macquarie University Summer Vacation Scholarship

2013 · Macquarie University Summer Vacation Scholarship

Research/External Experience

2019 · Scientific Assistant on the Observing Programmes Committee (OPC) at ESO

2019 · 12 months full-time research at ESO (Garching)

2018 · Working visit to ESO (Garching)

2018 · Working visit to MPIA (Heidelberg)

2017 · Participation in ASA IDEA Diversity in Astronomy Workshop

2017 · Working visit to MPIA (Heidelberg) and ESO (Garching)

2015 · Working visit to Oxford University

Observing Time

ESO VLT P110 · 317 h MUSE (∼ €2.5M / CoI)

ALMA Cycle 9 · 4.7 h (∼ €116k / CoI)

ESO VLT P109 · 6 h MUSE (∼ €50k / PI)

Journal Referee

Web of Science Profile

2022 onwards · PASA

2017 onwards · MNRAS

Invited Talks

2022 · Swinbourne University Colloquium
2022 · Bridging Gaps Between Dynamical Probes of Galaxies Lorentz Centre Workshop
2021 · MPIA Heidelberg Galaxy Coffee Seminar
2020 · Dynamical Reconstruction of Galaxies Lorentz Centre Workshop
2017 · MPIA Heidelberg Galaxy Coffee Seminar
2016 · The Universal Problem of the Non-Universal IMF Lorentz Centre Workshop

Contributed Talks

2022 · Linking the Galactic and Extragalactic
2022 · 4th Philip Wetton Workshop
2021 · NAM2021 - Beyond 1D
2021 · NAM2021 - DM Lensing
2021 · GalSpec2021
2020 · Linking the Galactic and Extragalactic virtual meeting
2019 · Fornax3D Collaboration Meeting Heidelberg
2019 · ESO Wine and Cheese Seminar
2019 · Universitäts-Sternwarte München Computational Astrophysics Group Meeting
2019 · The Life and Death of Star-Forming Galaxies
2018 · Fornax3D Collaboration Meeting Padova
2018 · Astronomical Society of Australia's (ASA) Annual Scientific Meeting

Contributed Posters

2017 · Astronomical Society of Australia's (ASA) Annual Scientific Meeting

COMPUTER SKILLS

Advanced

- Physical Hardware builds
- bash
- Microsoft Windows and Office
- python
- Exelis idl
- Wolfram Mathematica
- Mathworks Matlab
- sql
- Ventana Systems UK Vensim
- qsub and slurm queue software

Intermediate

- LaTeX
- xml
- fortran
- html

OTHER INFORMATION

Languages

English · Mothertongue
Italian · Good
German · A.1.1

Interests

Drums · Music · Running · Football · Backyard Astronomy · Reading · Programming

August 19, 2023