

Daniel Lyon — Curriculum Vitae

Personal Information

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Website: <https://daniel-lyon.github.io/>
H-Index: 1 (Oct 2024; 2 published papers; 1 citation)

Research Interests

High-redshift galaxies, galaxy evolution, infrared galaxies, AGN co-evolution, cosmic-dawn, interstellar medium, evolution of gas and dust

Education

Feb 2023 — **Master of Philosophy (MPhil) — Astrophysics**
Present Queensland University of Technology
Thesis: The Evolution of the Bolometric AGN Luminosity Function via ZFOURGE

Feb 2020 — **Bachelor of Science (B.Sc) — Physics**
Nov 2022 Queensland University of Technology
Grade Point Average (GPA): 6.3 / 7

Research Experience

Nov 2023 — **Summer Research Student**
Feb 2024 The Centre for Astrophysics and Supercomputing — Swinburne University
Project: Understanding Ultra Diffuse Galaxy Formation with the Keck Telescopes

Nov 2022 — **Summer Research Student**
Feb 2023 The International Centre for Radio Astronomy Research — Curtin University
Project: Monster Black Holes at the Dawn of Time

Nov 2021 — **Summer Research Student**
Feb 2022 Queensland University of Technology
Project: Investigating Obscured Active Galactic Nuclei Detection Techniques with Infrared Light

Teaching Experience

July 2023 — **Sessional Academic**
Present Queensland University of Technology
Undergraduate Classes: Stellar Astrophysics, Cosmology, Grand Challenges in Science

Apr 2022 — **STEM Ambassador**
Mar 2024 Queensland University of Technology
Volunteer Undergrad Tutor: Various maths, science, physics, & programming classes.
Advanced High School Tutorials: Code a Solar System, Python Cars of the Future, Rockets 101, Understanding Space Time & relativity

Honours & Awards

Total:	AU\$91,200
Oct 2024	QUT HDR allowance top-up AU\$2,500
Nov 2023	CAS-Swinburne Summer Scholarship AU\$6,000
Oct 2023	Experiential Development Fund AU\$2,000 travel grant
Sep 2023	School of Chemistry & Physics AU\$1,500 travel grant
Mar 2023	QUT RTP Scholarship AU\$33,500/yr (total AU\$67,000)
Nov 2022	ICRAR-Curtin Summer Scholarship AU\$10,200
Nov 2021	QUT Vacation Research Scholarship AU\$2,000
2020 — 2022	Dean's Commendation for Excellent Academic Performance $\times 3$

Publications

5. **Future work:** collaboration with Vera Delfavero ([NASA Goddard Space-Flight Center](#))
4. Seymour, N., **Lyon, D. J.***, Broderick, J. W. **In Prep.** *zFinder: a new tool for ALMA redshift determination*. Astronomy and Computing.
* published Python package to PyPI as [zfinder](#)
3. Hedge, A., Seymour, N., **Lyon, D. J.**, Broderick, J. W., et al. **In Prep.** *Evidence of a NIR-dark $z \sim 3.9$ protocluster pinpointed by powerful radio galaxy: A radio-loud analogue of JWST Little Red Dots?*. The Astrophysical Journal.
2. **Lyon, D. J.**, Cowley, M. J., Pye, O., & Hopkins, A. M. 2024, Decomposing Infrared Luminosity Functions into Star-Forming and AGN Components Using CIGALE, PASA, doi: [arXiv.2410.08541](#)
1. Forbes, D. A., **Lyon, D.***, Gannon, J., Romanowsky, A. J., & Brodie, J. P. 2024, Publications of the Astronomical Society of Australia, 41, e044, doi: [10.1017/pasa.2024.41](#)
* all data reduction, analysis, and figures.

Invited Talks/Conferences

2024	Submitted , ESO-SKA — Perth, Australia
Dec 2024	Poster , Evolution of Dust and Gas throughout Cosmic Time — Hiroshima, Japan
Oct 2024	Talk: <i>Infrared Luminosity Functions of High Redshift Galaxies & AGN</i> — Queensland University of Technology
Sep 2024	Talk: <i>Infrared Luminosity Functions of High Redshift Galaxies & AGN</i> — Australian National University
Jul 2024	Poster & Sparkler , ASA Annual Science Meeting — Online, Australia
Jun 2024	Organising Member , Harley Wood School of Astronomy — Sydney, Australia
Sep 2023	Attending , ATNF Radio Telescope School — ATCA, Narrabri, Australia
Aug 2023	Attending , ASA ECR Python Workshop — Online, Australia

Leadership & Service

2024	Organising Committee Member for the QUT Science Fair (Undergraduate & Post-graduate Conference)
2024	Scientific Organising Committee Member for the Harley Wood School of Astronomy (Astronomical Society of Australia)
Nov 2023 — Present	Secretary of the Science HDR Society: organising social & personal development events for research students (Queensland University of Technology)
Nov 2022 — Nov 2023	College of Excellence Fellow: organising social & personal development events for high achieving undergraduates (Queensland University of Technology)

Observing Experience

Nov 2023	Keck Telescopes — 1x Full night of science observations (remote; Swinburne)
Sep 2023	Australian Telescope Compact Array — Tutorial (onsite; Narrabri)

Memberships

2023 — Present Astronomical Society of Australia
2022 — Present Australian Institute of Physics

References

Michael Cowley — Senior Lecturer
michael.cowley@qut.edu.au (US: Assoc. Prof.)
Astrophysics Research Group
Queensland University of Technology
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Jonnah Gannon — Research Fellow
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