

JORDAN D'SILVA

Astrophysicist • Galaxy Formation

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JordanDSilva

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RESEARCH SUMMARY

I have been involved in 35 publications in accredited journals, 4 of which are first authored. I have in total 867 total citations, 59 of which are from first authored publications. Retrieved from NASA Astrophysics Data System (ADS), November 6, 2025. Full publications list below. My main scientific interest is the coevolution of star formation and the growth of super massive black holes in galaxies across cosmic time, as unveiled through the study of multiwavelength observations of ground- and spaced-based astronomical observations.

Unified Astronomy Thesaurus keywords: Active galactic nuclei (16); Star formation (1569); James Webb Space Telescope (2291); Galaxy formation (595); Galaxy evolution (594)

EDUCATION

Doctor of Philosophy in Astrophysics

University of Western Australia

Mar. 2022 – Early 2026

Perth, Australia

Thesis: *Cosmic Odyssey of Star Formation and Super Massive Black Hole Growth*

Advisors: Prof. Simon P. Driver, A/Prof. Claudia Del P. Lagos, Prof. Aaron S. G. Robotham

Master of Physics

University of Western Australia

Mar. 2020 – Oct. 2021.

Perth, Australia

Thesis: *Predicting the Usefulness of JWST to Unveil the Distant Universe*

Advisors: A/Prof. Claudia Del P. Lagos, A/Prof. Luke L. J. Davies.

Bachelor of Science

University of Western Australia

Mar. 2017 – Oct. 2019

Perth, Australia

Majors: Physics and mathematics

Graduated with distinction

AWARDS AND GRANTS

Australian government research training program (RTP) scholarship	100 500 AUD	Mar. 2022–Sept. 2025
Astronomical Society of Australia Student Travel Award	1500 AUD	Sept. 2023
International Space Centre Space Engagement Support Scheme	1500 AUD	Sept. 2024
UWA Graduate Research School Travel Award	1500 AUD	Sept. 2024
UWA Postgraduate Society Travel Award	900 AUD	Sept. 2024
Cosmic DAWN Centre Travel Assistance Grant	10 500 DKK	Nov. 2024

COLLABORATIONS

SKYSURF-IR

2024–

Arizona State University

Project description: James Webb Space Telescope Archival program. I am involved in data processing and have builder status.

Principal Investigator: Rogier Windhorst

PEARLS

⌚ 2022–

📍 Arizona State University

Project description: James Webb Space Telescope Guaranteed Time Observing program. I was involved in data processing and had builder status.

Principal Investigator: Rogier Windhorst

FLARES

⌚ 2020-2021

📍 United Kingdom

Description: Hydrodynamical simulation suite based in the United Kingdom. I was involved in science projects for my Master's research.

SHARK

⌚ 2020–

📍 ICRAR

Description: Semi-analytic simulation suite based at ICRAR. I was involved in science projects for both my Master's and Ph.D research.

CONFERENCES

ASTRO3D Annual Science Meeting

⌚ Apr. 2023

📍 Perth, Australia

Contributed talk: *Cosmic star formation and AGN activity over 13 billion years*

Astronomical Society of Australia Annual Science Meeting

⌚ Jul. 2023

📍 Sydney, Australia

Contributed Talk: *Cosmic star formation and AGN activity over 13 billion years*

Galaxy Transformation Across Space and Time, 3rd Australia-ESO Conference

⌚ Sept. 2023

📍 Canberra, Australia

Contributed talk: *Interface of cosmic star formation and AGN activity over 13 billion years*

Astronomical Society of Australia Annual Science Meeting

⌚ Jul. 2024

📍 Online

Contributed talk: *Cosmic Origins of AGN and Star Formation Unveiled by the James Webb Space Telescope*

Deep 24: Beyond the Edge of the Universe

⌚ Oct. 2024

📍 Sintra, Portugal

Contributed talk: *Cosmic Odyssey of Star Formation and AGN*

DTU Space Cake Talk Series

⌚ Nov. 2024

📍 Copenhagen, Denmark

Contributed talk: *Cosmic Odyssey of Star Formation and AGN*

EXTRACURRICULAR ACTIVITIES

ASTRO3D student representative for the University of Western Australia

⌚ 2023-2024

ASTROFEST outreach volunteer

⌚ Nov. 2023

International Centre for Radio Astronomy Research summer school lab demonstrator

⌚ Nov. 2023

Nov. 2024

PRESS

- Aug. 2023. NASA press release. Webb Spotlights Gravitational Arcs in 'El Gordo' Galaxy Cluster - NASA <https://www.nasa.gov/universe/webb-spotlights-gravitational-arcs-in-el-gordo-galaxy-cluster/>
- Nov. 2023. NASA press release. NASA's Webb, Hubble Combine to Create Most Colorful View of Universe - NASA <https://www.nasa.gov/missions/webb/nasas-webb-hubble-combine-to-create-most-colorful-view-of-universe/>

SKILLS

- **Astronomy/astrophysics codes:** JUMPROPE, JWST Calibration Pipeline, ProFound, EAZY, ProSpect
- **Scripting/programming/data analysis and visualisation:** Python, numpy, scipy, pandas, matplotlib, astropy, R, ProTools, DS9, CARTA
- **Administrative and productivity software:** MacOS, Linux, HPC, Slurm, L^AT_EX, Vim, Bash

REFERENCES

- Prof. Simon P. Driver
International Centre for Radio Astronomy Research and the International Space Centre, Ken & Julie Michael Building, 7 Fairway, Crawley, 6009, WA, Australia
[@simon.driver@uwa.edu.au](mailto:simon.driver@uwa.edu.au)
- A/Prof. Claudia Del P. Lagos
International Centre for Radio Astronomy Research and the International Space Centre, Ken & Julie Michael Building, 7 Fairway, Crawley, 6009, WA, Australia
[@claudia.lagos@uwa.edu.au](mailto:claudia.lagos@uwa.edu.au)
- Prof. Rogier A. Windhorst
School of Earth and Space Exploration, Arizona State University, Tempe, AZ 85287-1404, USA
[@ Marisol.J.Diaz@asu.edu](mailto:Marisol.J.Diaz@asu.edu)

SELECT PUBLICATIONS

- D'Silva, Jordan C. J., Simon P. Driver, Claudia D. P. Lagos, Aaron S. G. Robotham, Nathan J. Adams, et al. (Sept. 2025). "Self-consistent JWST Census of Star Formation and AGN Activity at $z = 5.5\text{--}13.5$ ". In: *Astrophysical Journal* 990.1, 44, p. 44. DOI: 10.3847/1538-4357/adf19e. arXiv: 2503.03431 [astro-ph.GA].
- D'Silva, Jordan C. J., Simon P. Driver, Claudia D. P. Lagos, Aaron S. G. Robotham, Sabine Bellstedt, et al. (Sept. 2023). "GAMA/DEVILS: cosmic star formation and AGN activity over 12.5 billion years". In: *Monthly Notices of the Royal Astronomical Society* 524.1, pp. 1448–1463. DOI: 10.1093/mnras/stad1974. arXiv: 2306.16040 [astro-ph.GA].
- D'Silva, Jordan C. J., Simon P. Driver, Claudia D. P. Lagos, Aaron S. G. Robotham, Jake Summers, et al. (Dec. 2023). "Star Formation and AGN Activity 500 Myr after the Big Bang: Insights from JWST". In: *Astrophysical Journal Letters* 959.2, L18, p. L18. DOI: 10.3847/2041-8213/ad103e. arXiv: 2310.03081 [astro-ph.GA].
- D'Silva, Jordan C. J., Claudia D. P. Lagos, et al. (Jan. 2023). "Unveiling the main sequence of galaxies at $z \geq 5$ with the JWST: predictions from simulations". In: *Monthly Notices of the Royal Astronomical Society* 518.1, pp. 456–476. DOI: 10.1093/mnras/stac2878. arXiv: 2208.06180 [astro-ph.GA].