

Curriculum Vitae of Ryan White

Current as of September 11, 2025

PERSONAL & CONTACT INFORMATION ✉ E-mail: ryan.white.astro@gmail.com
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EDUCATION	Master of Research	Jan 2025 – Nov 2025 (expected)
	MACQUARIE UNIVERSITY	
	Topic: Radiative and Hydrodynamical Modelling of Colliding Wind Binaries	
	Supervisors: A/Prof Benjamin Pope and Prof Orsola De Marco	

Bachelor of Science (Hons) Jan 2024 – Nov 2024
 THE UNIVERSITY OF QUEENSLAND
 Graduated with Class I Honours in Physics
 Thesis Title: *Geometric Modelling of Wolf-Rayet Binary Colliding Wind Nebulae*
 Supervisors: Dr Benjamin Pope (UQ) and Prof Peter Tuthill (USyd)

Bachelor of Science and Bachelor of Mathematics Jul 2017 – Dec 2023
 THE UNIVERSITY OF QUEENSLAND
Science: Extended Major in Physics
Mathematics: Major in Applied Mathematics

TEACHING	SCHOOL OF MATHEMATICAL AND PHYSICAL SCIENCES, MACQUARIE UNIVERSITY	
EXPERIENCE	COMP2200 – Data Science	2025–Present
	<i>Ran group activity tutorials for computer science students.</i>	

PHYS1210 – Physics for Life Sciences	2025–Present
<i>Ran laboratory sessions for first-year students.</i>	

SCHOOL OF MATHEMATICS AND PHYSICS, THE UNIVERSITY OF QUEENSLAND
Teaching evaluations are available on request.
PHYS3080 – Extragalactic Astrophysics & Cosmology 2023–4
Developed a [simulated universe](#) for use in the course, and taught weekly workshops.

PHYS3071 – Computational Physics 2024
Developed an interactive Python self-study tool, and tutored the course.

PHYS2082 – Space Science & Stellar Astrophysics 2022–4
Teaching workshops of ~ 60 students and moderated course delivery.

SCIE1000 – Theory & Practice in Science 2021–4
“Super tutored” the course for multiple offerings, and routinely taught classes of ~ 60 students.

PUBLICATIONS FIRST AUTHOR PUBLICATIONS:
Ryan White, Benjamin Pope, Peter Tuthill et al., “*The Serpent Eating Its Own Tail: Dust Destruction in the Apep Colliding-Wind Nebula*” [arXiv:2507.14610](https://arxiv.org/abs/2507.14610) (2025) — [accessible summary](#)

Ryan White, Tamara Davis, Geraint Lewis et al., “*The Dark Energy Survey Supernova Program: Slow supernovae show cosmological time dilation out to $z \sim 1$.*” [arXiv:2406.05050](#) (2024) — [accessible summary](#)

SELECT OTHER PUBLICATIONS:
Yinuo Han, **Ryan White** et al., “*The formation and evolution of dust in the colliding-wind binary Apep revealed by JWST*” [arXiv:2507.14498](https://arxiv.org/abs/2507.14498) (2025)

Noel Richardson et al. (including **Ryan White**), “Carbon-rich dust injected into the interstellar medium by Galactic WC binaries survives for hundreds of years” [arXiv:2505.11616](https://arxiv.org/abs/2505.11616) (2025)

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- Using high cadence time-series data from the TESS Space Telescope, I inferred analytic surface maps of the surfaces of stars. I found that one star in the DI Herculis system is a long-period variable, and our results are awaiting publication.

OBSERVING
AND
PROPOSALS

Primary Investigator:

- VLTI observing of the colliding wind binary *Apep*, ESO Period 114 2024/5

Co-Investigator:

- ATCA Observing of Long Period Radio Transients, ATNF Semester 2025APRS 2025

Observing:

- Australian Telescope Compact Array (ATCA), 24hr 2025

TECHNICAL
SKILLS

- *Programming Languages*: Python/JAX, C/C++, Git/Bash, R, Matlab, WSL
- *High-Performance Computing*: I have frequently run code on the HPC systems *OzStar* (Swinburne) and *getafix + Bunya* (University of Queensland), using the Slurm scheduling language
- *Misc. Skills*: Proficient in L^AT_EX, VSCode/Spyder, Jupyter Notebooks, among other applications/environments
 - I was a self-taught, professional artist for 3 years (2017-2020, [view here](#)), specialising in photo-realistic small scale landscapes in oil and acrylic media for which I won several statewide and local awards. I was represented in 19Karen Gallery for 2 years, and sold numerous artwork for thousands of AUD to collectors and via commissions. This experience is something I continue to bring into my work, e.g. my annotated paper summaries.