

Ryan Bagge

Ph: +61 401 307 475 | Email: r.bagge@unsw.edu.au | Sydney, New South Wales, Australia

Education

DOCTOR OF PHILOSOPHY | 2022- | UNIVERSITY OF NEW SOUTH WALES (UNSW)

- Thesis Title – Dynamical Evolution in Galaxies over Cosmic Time
- Supervisors – Dr. Caroline Foster & Prof. Sarah Brough
- Expected Submission End of 2026
- Paper published: *The MAGPI Survey: Drivers of kinematic asymmetry in the ionized gas of $z \sim 0.3$ galaxies*
- Paper published: *The MAGPI Survey: Using kinematic asymmetries in the stars & ionized gas to dissect drivers of dynamical evolution*

MASTERS OF PHYSICS | 2020 | UNIVERSITY OF WESTERN AUSTRALIA (UWA)

- Thesis Title: Can retired spheroidals regrow their spiral arms?
- Supervisors – Dr. O. Ivy Wong & A/Prof. Gerhard Meurer
- Coauthor paper published: *The HI in Ring Galaxies Survey (HI-RINGS) – Effects of the bar on the HI gas in ring galaxies.*

BACHELOR OF SCIENCE | 2019 | UNIVERSITY OF WESTERN AUSTRALIA (UWA)

- Major - Physics

Experience

- 1st Year Undergraduate Physics Tutor (UNSW; 2022-)
- 1st Year Undergraduate Astronomy & Astrophysics Tutor (UNSW; 2022-)
- 3rd Year Undergraduate Astrophysics & Cosmology Tutor (UNSW; 2023-)

Broader Impact

- Outreach Assistant for School of Physics (UNSW; 2022-)
- Chair of ASTRO3D Student Committee (ASTRO3D; 2024)
- Mentoring of junior PhD and undergraduate students (UNSW; 2022-)
- Outreach Assistant for International Centre of Radio Astronomy Research (ICRAR-UWA; 2020-21)

Research Interests

- The evolution of the galaxies from the high-redshift to the low-redshift Universe.
- The baryon cycle in galaxies – the interplay between cold, warm, and hot phases of gas and stars using multi-wavelength observations.
- Tracing the gas and stellar dynamics in galaxies using spectroscopic and interferometric observations

Publications

- C. Murugesan, R. Džudžar, **R. Bagge**, T. O’Beirne, O. I. Wong, V. A. Kilborn M. E. Cluver K. A. Lutz, and A. Elagali, *The HI in Ring Galaxies Survey (HI-RINGS) – Effects of the bar on the HI gas in ring galaxies.*, 2023, PASA, 40, 18
- **R. Bagge**, C. Foster, A. Battisti, S. Bellstedt, M. Mun, K. Harborne, S. Barsanti, T. Mendel, S. Brough, S.M. Croom, C.D.P. Lagos, T. Mukherjee, Y. Peng, R-S. Remus, G. Santucci, P. Sharda, S. Thater, J. van de Sande, L. M. Valenzuela, E. Wisnioski, T. Zafar, and B. Ziegler, *The MAGPI Survey: Drivers of kinematic asymmetry in the ionized gas of $z \sim 0.3$ galaxies.*, 2023, PASA, 10, 1017

Conferences

- Star@Lyon – The Physics of Star Formation, Lyon, France (June 2023):
Poster - The MAGPI Survey The chicken or the egg; star formation causing velocity disturbances or velocity disturbances causing star formation.
- A Journey through Galactic Environments, Porto Ercole, Italy (Sept. 2023):
Contributed Talk - The MAGPI Survey: The role of environment in morphological transformation, kinematic and visual disturbances at intermediate redshift.

Seminars

- Kavli Inst. Of Cosmology, Cambridge, England – Kinematic Asymmetries in MAGPI galaxies (June 2023)
- ICRAR-UWA, Australia – Kinematic Asymmetries in MAGPI galaxies (July 2023)

Observing Experience

- Observed at: Australian Astronomical Telescope (AAT/AAOmega, SAMI, Hector)
- Used data from: MUSE/VLT, AAT/AAOmega, Australian Telescope Compact Array (ATCA)

References

DR CAROLINE FOSTER-GUANZON | SCIENTIA SENIOR LECTURER | UNSW

- c.foster@unsw.edu.au
- +61 2 9348 0982

DR O. IVY WONG | SCIENCE LEADER | CSIRO (SPACE AND ASTRONOMY)

- ivy.wong@csiro.au
- +61 8 6436 8602

A/PROF LUCA CORTESE | ARC FUTURE FELLOW | ICRAR (UWA)

- luca.cortese@uwa.edu.au
- +61 8 6488 3663