

## Postgraduate Research Opportunity in Astrophysics at UNSW

Expression of interest due 14th March 2025 (23:59, AEDT)

The University of New South Wales (UNSW) in Sydney offers a fully funded PhD research stipend for students interested in extragalactic astronomy. The successful candidate will join the GECKOS team under the supervision of Dr. Jesse van de Sande, working to understand the formation of the Milky Way through stellar kinematics and stellar population analysis using VLT/MUSE Integral Field Spectroscopic data.

### PhD Scholarship details

- Starting Date: Term 1 2026
- Scholarship amount: AU\$38,438 per annum (2025 rate)
- Scholarship duration: 3 ½ years

### Who's eligible?

Open to domestic and international students with a first-class Honours or Master's degree (completed or expected by the end of 2025) in Astronomy or Physics. Desirable skills include data analytics, spectroscopy, and astrophysical research.

### Application Procedure

Please send an expression of interest to Jesse van de Sande before the 14th of March 2025 (23:59 AEDT) using the following email address: [j.van\\_de\\_sande@unsw.edu.au](mailto:j.van_de_sande@unsw.edu.au). In your application, please include the following information combined into a single PDF.

- CV (max 2 pages)
- Past research experience (~1/2 page)
- Research interest aligned with the proposed PhD project (~ 1/2 page)
- Academic Transcripts
- Research reports (e.g. Honours, Masters, or relevant undergraduate projects; in-progress work and drafts welcome).

## Background

The Postgraduate Research Scholarship in astronomy has been made available to support an enthusiastic postgraduate research student at the School of Physics within the University of New South Wales to undertake research in Astronomy.

The GECKOS survey (<https://geckos-survey.org/>) is a large extragalactic observing program that combines the wealth of existing Milky Way data with a high-quality sample of 36 edge-on galaxies that are close analogues of the Milky Way. This survey will provide a detailed cross-section of nearby disk galaxies and allow us to disentangle stars created inside and outside of each galaxy, thereby creating a complete picture of their evolutionary history.

With these detailed measurements, the GECKOS team hopes to answer key questions about galaxy evolution that cannot be solved by looking at our Milky Way alone – how important are external events, like mergers with satellite galaxies, compared with the internal processes that already happen inside the galaxy?

This project would involve analysing the GECKOS data and working within the research group of Dr. Jesse van de Sande, the principal investigator and team lead of GECKOS. By measuring the stellar kinematic and stellar population parameters, the key goal is to understand how disk galaxies like the Milky Way form.