



Space Tie Satellites for Millimetre Precision Geodesy

PhD Scholarship
University of Tasmania, Australia

Funding

This project includes an AUD\$27,082pa (2018 rate) living allowance scholarship for three years, with a possible six month extension, funded by DECRA/ARC funds and the School of Natural Sciences.

The Research Project

Under contract with Geoscience Australia, the University of Tasmania (UTAS) operates a continent-wide network of geodetic Very Long Baseline Interferometry (VLBI) telescopes. Our antennas in Katherine (NT), Yarragadee (WA) and Hobart (TAS) contribute to measuring global reference frames and Earth orientation.

VLBI observations to satellites have the aim of improved space ties, meaning to better connect VLBI and GPS in establishing the most precise coordinate system of the Earth. UTAS is leading efforts towards realising this exciting new observing technique, supported by the Australian Research Council with project funds and a PhD scholarship.

This project includes work on VLBI observations to satellites, perform the observations, process the data and analyse results. The candidate should resolve current issues with signal strengths and receiver characteristics and develop new processing chains, in order to exceed current accuracies.

The successful candidate should be prepared to work in developing existing programs and software, as well as responsibly use the University's radio telescopes. She/he is expected to perform independent research, assisted by the supervisory team. The project further offers the opportunity to take an active role in supporting daily operations as part of a global telescope network.

Eligibility

The following eligibility criteria apply to this project:

- The scholarship is open to domestic (Australian and New Zealand) and international candidates
- The degree must be undertaken on a full-time basis
- Applicants must already have been awarded a First Class Honours degree or hold equivalent qualifications or relevant and substantial research experience in an appropriate sector
- Applicants must be able to demonstrate strong research and analytical skills
- Candidates from a variety of disciplinary backgrounds are encouraged to apply. Knowledge and skills that will be ranked highly include:
 - Education in geodesy and spatial sciences
 - Familiarity with space geodetic techniques is welcome
 - Education in Physics or Astronomy
 - Knowledge of Linux, programming and software development is also welcome

More Information

Please contact Dr Lucia McCallum (Lucia.McCallum@utas.edu.au) for more information.

[Online Application](#)