

Postdoctoral Research Fellow in Remote Sensing

College/Division	College of Sciences and Engineering
School/Section	School of Technology, Environments & Design
Location	Hobart
Classification	Level A/B
Reporting line	Reports to Professor in Remote Sensing

Position Summary

The University of Tasmania is building a vision of a place-based University with a mission to enhance the intellectual, economic, social and culture future of Tasmania, and from Tasmania, contribute to the world in areas of distinctive advantage. The University recognises that achieving this vision is dependent on the people we employ as well as creating a people-centred University that is values-based, relational, diverse, and development-focused.

We are seeking to appoint a Postdoctoral Research Fellow in Remote Sensing in the [TerraLuma research group](#), [Discipline of Geography and Spatial Sciences](#) in the [School of Technology, Environments & Design](#), which is part of the [College of Sciences and Engineering](#).

This position is a critical part of the Australian Research Council (ARC) Discovery project “Ultrahigh-resolution remote sensing for assessing biodiversity hotspots”.

The project aims to develop advanced techniques for interpreting data from ultrahigh-resolution remote sensing of essential biodiversity variables in Australian forested ecosystems. A key objective is to bridge the ‘scale gap’ between low-resolution global satellite data and detailed but localised on-ground assessment of biodiversity. Since its establishment in 2009, the TerraLuma research group has made substantial progress in the development and application of unmanned aircraft systems (UAS, also known as UAVs or drones). Specifically, this Postdoctoral Research position will focus on the analysis of hyperspectral UAS data for mapping of functional plant traits. The project will use data from a range of forest types across Australia. The Postdoctoral Research Fellow will collaborate with PhD students and academics within the Surveying and Spatial Science group at the University of Tasmania and key project partners at the University of Queensland, and UBC in Canada.

In addition, the Postdoctoral Research Fellow will have a unique opportunity to contribute to an ARC Linkage project “Advancing remote sensing with a world-first High Altitude Pseudo Satellite (HAPS)”. This project aims to develop and test a high-performance hyperspectral imaging instrument for a solar-powered, long-endurance, stratospheric UAS platform. This platform is intended to be used for multi-week missions. Hyperspectral imaging capabilities on such a platform would fill a gap in current airborne and spaceborne earth observation capabilities.

We are looking for applicants who have demonstrated experience and a good research track record in hyperspectral remote sensing of vegetation.

We are an inclusive workplace committed to ‘working from the strength that diversity brings’ reflected in our Statement of Values. We are dedicated to attracting, retaining and developing our people and are committed to inclusive principles. We celebrate the range of diverse assets that gender identity, ethnicity, sexual orientation, disability, age and life course bring. Applications are encouraged from all sectors of the community. Tell us how we can make this job work for you.



What You'll Do

- Make an effective and sustained contribution to the University in achieving its strategic objectives and fulfilling its operational responsibilities.
- Undertake high-quality research of national and increasingly of international standing, secure external competitive and other funding, publish research findings and contribute to the successful supervision of research higher degree students, in order to meet and regularly exceed the University's research performance expectations for Level A or B.
- Contribute to the development and maintenance of productive and effective links inside the University and locally and nationally with the discipline, relevant interdisciplinary domains, profession, industry and/or wider community
- Undertake other duties as assigned by the supervisor.

What We're Looking For (success criteria)

1. A PhD or equivalent in remote sensing.
2. A good record of, and continuing commitment to, research that has achieved national recognition and made worthwhile contributions to the field of **hyperspectral remote sensing of vegetation**, demonstrated by a record of quality publications, presentations at conferences and preferably success in securing external competitive and other funding.
3. Demonstrated experience with remote sensing software, data analytics, and advanced image analysis techniques. Experience with programming in Python, R, MATLAB, or similar languages, and experience with machine learning techniques.
4. A record of contributing to building and maintaining effective and productive links locally and nationally with the discipline, profession, industry (where relevant) and wider community.
5. Desirable:
 - a) Experience with imaging spectroscopy, field spectroscopy, and lab spectroscopy applied to remote sensing of vegetation
 - b) Experience with plant pigment analysis
 - c) Experience in field data collection
 - d) Experience in radiative transfer modelling
 - e) Experience in University-level teaching and learning.
 - f) Experience in supervising higher degree research candidates.

Other position requirements

- Current 'C' class driver's licence or manual vehicle licence
- Visiting and working in the field in remote locations
- Laboratory and workshop activities

University of Tasmania

The University of Tasmania is an institution with an enduring commitment to our state and community, and a strong global outlook. We are committed to enhancing the intellectual, economic, social and cultural future of Tasmania. Our [Strategic Direction](#) strongly reflects the University community's voice that our University must be place based but globally connected as well as regionally networked and designed to deliver quality access to higher education for the whole State.



We believe that from our unique position here in Tasmania we can impact the world through the contributions of our staff, students and graduates. We recognise that achieving this vision is dependent on the people we employ, as well as creating a university that is values-based, relational, diverse, and development-focused.

Check out more here:

<https://www.utas.edu.au/jobs>

<https://www.utas.edu.au/careers/our-people-values-and-behaviours>

The intention of this position description is to highlight the most important aspects, rather than to limit the scope or accountabilities of this role. Duties above may be altered in accordance with the changing requirements of the position.

