

Postdoctoral Research Associate - Ocean-ice Biogeochemistry

College/Division	College of Sciences and Engineering
School/Section	Institute for Marine and Antarctic Studies – Oceans and Cryosphere
Location	Hobart – Salamanca
Classification	Academic Level A/B
Reporting line	Reports to Associate Professor

Position Summary

The University of Tasmania (UTAS) is building a vision of a place-based University with a mission to enhance the intellectual, economic, social and cultural 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.

The Postdoctoral fellow will focus on the role of trace metals of cryospheric origin in driving marine productivity in ice-influenced Antarctic waters. This position is part of the ARC Australian Centre for Excellence in Antarctic Science (ACEAS), a national-scale, University-led, international centre focused on helping the world community prepare for climate risks emerging from East Antarctica and the Southern Ocean by integrating knowledge of the ocean, atmosphere, cryosphere and ecosystems, and their interplay. ACEAS will grow to support the activities of around 150 researchers, administrative staff, and students, with exciting opportunities to collaborate across disciplinary and institutional boundaries. Further information on ACEAS is available at <http://antarctic.org.au/>.

The successful candidate will contribute primarily to ACEAS Programs 2 and 3, more specifically to topics in Program 2.6. "Assess the impact of changes in oceanic circulation, sea-ice and iron inputs on ecosystems and the carbon cycle in the marginal ice zone (MIZ) using Earth system models", Program 2.7. "Perform contemporary measurements in the MIZ on under ice and open water food webs, coupled biogeochemistry, downward carbon export, water column and sea ice chemistry, and isotopes of oxygen, carbon and neodymium to calibrate paleo proxy records.", Program 3.4a. "Quantify contribution from iron supply sources including meltwater, subglacial hydrology, ocean mixing and entrainment". A first aim of the postdoctoral project is to quantify the sources, pathways and sinks of trace metals such as iron, manganese and cobalt in water masses influenced by sea-ice and glacial melt. A second aim is to evaluate the bioavailability of these trace metals in ice-influenced waters, via e.g., size fractionation (soluble, colloidal and particulate concentration), metal complexation (analysis of ligands) and/or phytoplankton uptake (incubation experiments). The successful candidate will participate in ACEAS planned marine science voyages to the East Antarctic MIZ (Sept/Oct 2023) and the Denman Glacier (Feb/Mar 2025).

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

- Preparation for, and participation in MIZ and Denman marine science voyages for sampling of trace metals in the water column.
- Analysis of iron (and other metals) concentrations across different size pools using state-of-the-art methods such as ICP-MS or synchrotron analysis.
- Evaluate the links between trace metals, and oceanographic (physical and biological) features of the areas of interest.
- Maintain a strong focus on communicating research findings by publishing in highly ranked journals and presenting to peers at local, national and global conferences.
- Work collaboratively in an interdisciplinary research team to achieve collective as well as individual outcomes.
- Take on leadership opportunities that arise and contribute to the collegiate life of ACEAS/IMAS such as contributing to PhD supervision, committee membership, leading workshops, etc.
- Undertake other duties as assigned by the supervisor.

What We're Looking For (success criteria)

- A PhD and equivalent postdoctoral experience, in a relevant area (e.g. ocean biogeochemistry, marine chemistry, or similar) as demonstrated by a record of quality publications.
- A good record of, and continuing commitment to, research that attracts international recognition in the fields of marine trace-metal chemistry and biological oceanography.
- Experience in Southern Ocean research with particular emphasis on cryosphere-ocean interactions (e.g., sea ice, ice shelves, icebergs).
- Experience in trace metal chemistry including sampling at sea, filtrations and analytical techniques for measuring concentrations of bio-essential metals.
- Demonstrated ability to work efficiently with minimal supervision, with a capacity to set and prioritize strategic research directions, and to design and complete collaborative research programs to achieve scientific goals.
- Demonstrated ability to work collaboratively in a research team covering multiple disciplines and achieve collective as well as individual outcomes.

Other desirable criteria

- Experience with evaluating the links between trace metals and Southern Ocean phytoplankton
- Ability to effectively communicate results to a variety of audiences and stakeholders

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>

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.

