

Research Associate in Ocean Modelling

College/Division	CoSE
School/Section	Institute for Marine and Antarctic Studies / Oceans and Cryosphere Centre
Location	Hobart
Classification	Level B
Reporting line	Associate Professor of Physical Oceanography

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 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.

We are seeking to appoint a **Research Associate (Level B) in Ocean Modelling** in the [Institute for Marine and Antarctic Studies](#), which is part of [College of Sciences and Engineering](#) at the University of Tasmania.

The position is fully funded by the Australian Research Council Centre of Excellence for the Weather of the 21st Century (hereafter, 'the Centre'), and the incumbent will contribute to and benefit from being a part of the Centre community. The Centre is a major seven-year initiative funded by the Australian Research Council. The Centre is a consortium of 24 partners led by Monash University in strong collaboration with The University of Melbourne, The University of New South Wales, The Australian National University, and the University of Tasmania.

The Centre's research is focused on how Australia's weather is being reshaped by climate change. The Centre conducts blue-sky research with real-world applications for industry, government, and communities. The research program encompasses three major interconnected research themes focused on Weather Systems – Variability and Change, Weather Resources and Risks, and Modelling. These themes collectively comprise five research projects: Weather Systems and Climate Variability, Weather Systems in a Warmer World, Weather Resources, High Impact Events, and Modelling and its application to fine-scale coupling and upscale effects.

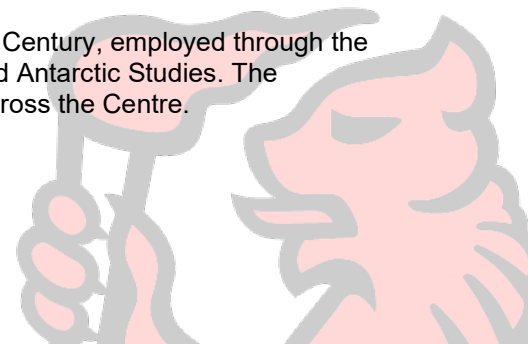
This position will provide ocean modelling and analysis capacity to all of the Centre's Projects as required. In close collaboration with all Centre Project, the Research Associate will develop and apply eddy-rich ocean and very high resolution coupled models and use them to better understand fine-scale air sea interactions and their role in weather and climate variability.

The initial contract will initially be for at least three years with funding available for an extension up to the seven year life of the Centre.

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

- Work within the ARC Centre of Excellence for the Weather of the 21st Century, employed through the partner node University of Tasmania within the Institute for Marine and Antarctic Studies. The researcher will help coordinate research activities with researchers across the Centre.



- Develop eddy-rich ocean models and couple them to very high resolution atmospheric models to gain quantitative insight into the complex coupling between the ocean and atmosphere. Use these fine scale models to understand mesoscale and sub-mesoscale ocean dynamics and their impacts on air–sea interactions and their role in weather and climate variability.
- Questions include: How sensitive is the representation of ocean stratification, instabilities, and turbulence at fronts to model resolution? How do fine-scale air–sea interactions impact ocean upwelling, mixing, biogeochemical transfers and the marine atmospheric boundary layer? How important are wave–current and wave–wind interactions to wind stress, heat flux, and marine atmospheric boundary layer variations?
- Undertake other duties as assigned by the supervisor.

What We're Looking For (success criteria)

- A PhD or equivalent in fluid dynamics, physical oceanography, atmospheric science, applied mathematics or an equivalent field.
- Demonstrable knowledge of ocean processes and/or air-sea coupling.
- Demonstrable knowledge of developing/configuring/running ocean and/or coupled climate models.
- Experience in analysing atmosphere or ocean weather systems in model simulations.
- Programming experience in python, MATLAB, or other high-level language.
- Evidence of research that has produced high-quality publications and presentations at conferences.
- Capacity to work effectively both independently and in a team, as well as with colleagues at other Centre nodes and partner organisations.
- Commitment to equity and diversity principles and to contributing to an inclusive culture in the workplace.

Other position requirements (delete those not applicable)

- Willingness to engage with stakeholders outside academia (e.g. government agencies, private businesses, NGOs, schools).
- Preparedness to regularly undertake interstate travel.
- Willingness for international travel.

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.

More information:

<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.

