

Postdoctoral Research Associate – Physical Oceanography

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 Helen Phillips

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 position of Postdoctoral Research Associate (PDRA) in Physical Oceanography is funded by a grant from the Australian Research Council Discovery Project “Unravelling ocean mixing and air-sea forcing along the Indo-Pacific exchange”, a collaborative project with investigators from the University of Tasmania, CSIRO Oceans and Atmosphere and Woods Hole Oceanographic Institution. The aim of the project is to collect unprecedented observations using novel profiling floats and to develop high resolution model simulations to examine changes in the Indonesian Throughflow (ITF) north of Australia. The main objectives of the project are to quantify internal wave characteristics and mixing that accomplish the cooling and freshening of the ITF, changes in the ITF vertical structure within the seas, and interactions with the atmosphere. This project expects to develop new knowledge of ocean-atmosphere interactions along the path of the ITF from the Pacific to the Indian Ocean, which are the powerhouse that drives changes in winds and rainfall around Australia and the entire Indo-Pacific region. This ARC project enables a significant Australian contribution to a major international field experiment, Measurements and Modeling of the Indonesian Throughflow (MINTIE), which is a collaboration between USA, Indonesia, China and Australia.

The work will be conducted at the Waterfront campus of the Institute for Marine and Antarctic Studies (IMAS). IMAS is an internationally-recognised centre of excellence for marine and Antarctic research and education. Our vision is to develop environmental understanding and facilitate sustainable development for the benefit of industry, governments and communities in Tasmania, Australia and the world. IMAS has three core areas of research focus, in fisheries and aquaculture, ecology and biodiversity, and oceans and cryosphere; and collaborates across the major themes of climate change, ocean-Earth systems, and oceans and Antarctic governance.

The PDRA will examine new observations and realistic model simulations to investigate hot spots of internal waves and mixing in the Indonesian seas. With the project investigators, the PDRA will explore the interplay between wind, ocean-atmosphere coupling and ocean mixing that occurs along the pathway through the Indonesian Seas. There is also scope for the PDRA to develop model simulations to support these investigations. The position demands a productive and innovative researcher capable of initiating and driving independent research ideas as well as supporting the work of others. The position has a significant team focus and will involve close collaboration with researchers, postgraduate students at IMAS and CSIRO and with our international MINTIE partners. There may be the opportunity to participate in research voyages.



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.

What You’ll Do

- Make an effective and sustained contribution to the University in achieving its strategic objectives and fulfilling its operational responsibilities.
- Undertake innovative research using observations and high-resolution simulations to investigate ocean mixing and air-sea forcing along the Indo-Pacific exchange.
- Contribute to the development of innovative concepts and ideas for further research.
- Maintain a strong focus on communicating research findings by publishing in highly ranked journals and presenting to peers at local, national and global conferences and seminars.
- Contribute to the communication of research findings to research users and the broader community.
- 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 IMAS such as contributing to Honours and PhD supervision, leading workshops, etc.
- Undertake other duties as assigned by the supervisor.

What We’re Looking For (success criteria)

- A PhD in Physical Oceanography or an equivalent field.
- Knowledge of atmosphere/ocean dynamics and climate processes and postdoctoral experience commensurate with the level of appointment, as demonstrated by a record of quality publications.
- High level quantitative skills, as demonstrated through analysis and interpretation of complex ocean/atmosphere datasets or numerical simulations.
- Experience in research related to the Indo-Pacific exchange and/or the dynamics of internal waves and mixing.
- A good record of, and continuing commitment to, research that attracts international recognition in the fields of oceanography and climate science.
- 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 and funding milestones.
- Demonstrated ability to work collaboratively in a research team covering multiple disciplines to achieve collective as well as individual outcomes.

Other desirable criteria

- Seagoing experience in physical oceanographic data collection on research voyages.
- Interest in communicating results to a variety of audiences and stakeholders beyond research institutions.

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.

