



**Australian  
National  
University**

## Position Description

<b>College/Division:</b>	<b>ANU College of Science</b>
<b>Faculty/School/Centre:</b>	<b>Research School of Earth Sciences</b>
<b>Department/Unit:</b>	<b>Climate Ocean Geoscience</b>
<b>Position Title:</b>	<b>Postdoctoral Fellow</b>
<b>Classification:</b>	<b>Level A</b>
<b>Position No:</b>	<b>TBC</b>
<b>Responsible to:</b>	<b>Callum Shakespeare</b>
<b>Number of positions that report to this role:</b>	<b>0</b>
<b>Delegation(s) Assigned:</b>	<b>TBC</b>

### PURPOSE STATEMENT:

The Research School of Earth Sciences is the leading centre of Earth and Marine research in Australia. Researchers have a tradition of excellence in addressing the world's challenges in the Earth sciences, such as contributing to a sustainable future by modelling ocean currents and climate change to inform societal debate and actions, researching the formation of economic deposits of critical minerals, developing innovative and sustainable technologies by which critical metals can be extracted from ore, and using sophisticated seismic studies to understand the nature of the deep earth and to manage geohazards.

The Postdoctoral Fellow is expected to undertake work in all three areas of academic activity –research, education and service (including outreach). The allocation of time to each area will be discussed with the position supervisor annually and be reflective of the external funding conditions that support the appointment, the appointees research agenda, school and interdisciplinary teaching requirements and leadership opportunities within the School environment.

The Postdoctoral Fellow may also be required to supervise or assist in the supervision of students, and contribute cooperatively to the overall intellectual life of the School, College and University.

This position is supported in part by the Australian Research Council's Centre of Excellence for Climate Extremes (CLEX). CLEX is a major seven-year initiative and the successful candidate will contribute to and benefit from being a part of the CLEX community. The Centre is led by UNSW Sydney and partners with Monash, The University of Melbourne, The Australian National University and The University of Tasmania alongside a suite of national and international partner organisations. The Centre's research agenda encompasses interconnected research programs focused on Weather and Climate Interactions, Attribution and Risk, Drought, Ocean Extremes and Coupled Modelling. Climate extremes are the confluence of high impact weather, climate variability and climate change. The Centre works to improve our understanding of the processes that trigger or enhance extremes and build this understanding into our modelling systems. The improved predictions of climate extremes will help Australia cope with extremes now and in the future.

The Postdoctoral Fellow will work as part of two major ocean modelling projects. The first project, funded by the ARC Discovery Project "Connecting ocean tides to the large-scale circulation", will involve the development and evaluation of internal wave parameterisations for next-generation global ocean models, with an emphasis on the Southern Ocean region. In the second project, supported by the ARC Centre of Excellence for Climate Extremes (CLEX), the Postdoctoral Fellow will utilise the next-generation model to investigate key questions around the Southern Ocean response to climate change, such as the impact of tidal mixing on ocean carbon uptake, changes to the thermohaline circulation, and marine heatwaves. In this role, the Postdoctoral Fellow will work directly with a diverse international team of researchers and software engineers with expertise in internal waves, high-resolution global modelling, and Southern Ocean dynamics.

**KEY ACCOUNTABILITY AREAS:****Position Dimension and Relationships:**

The Postdoctoral Fellow will be a member of Research School of Earth Sciences, accountable to the supervisor and Director of the School. The Postdoctoral Fellow will be expected to work collegially, leading by example to develop and maintain effective, productive and beneficial workplace relationships within the all-academic and professional School and College staff, students and honorary appointees, as well as with industry stakeholders. This position will also have a mentoring role for students and will engage in collegial and productive collaborations with local, national and where possible, international colleagues.

**Role Statement:**

In their role as an Academic Level A the Postdoctoral Fellow is expected to:

- Undertake independent research in the area of physical oceanography with a view to publishing original and innovative results in refereed journals, present research at academic seminars and at national and international conferences, and collaborate with other researchers at a national level.
- Collaborate with senior staff to actively seek and secure external funding, assist to prepare and submit research proposals to external funding bodies as appropriate.
- Contribute to the teaching activities of the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations, and with students or acting as subject coordinators.
- Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.
- Assist to supervise research support staff in your research area.
- Actively contribute to all aspects of the operation of the School.
- Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
- Maintain high academic standards in all education, research and administration endeavours.
- Take responsibility for their own workplace health and safety and not willfully place at risk the health and safety of another person in the workplace.
- A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.
- Other duties as required that are consistent with the classification of the position.
- Comply with all ANU policies and procedures, and in particular those relating to work health and safety and equal opportunity.

**Skill Base:**

A Level A academic will work with the support and guidance from more senior academic staff and is expected to develop their expertise in teaching and research with an increasing degree of autonomy. A Level A academic will normally have completed four years of tertiary study or equivalent qualifications and experience and may be required to hold a relevant higher degree.

A Level A academic will normally contribute to teaching at the institution, at a level appropriate to the skills and experience of the staff member, engage in scholarly, research and/or professional activities appropriate to their profession or discipline, and undertake administration primarily relating to their activities at the institution. The contribution to teaching of Level A academics will be primarily at undergraduate and graduate diploma level.

**SELECTION CRITERIA:**

- A PhD (or awarding of a PhD within six months of appointment commencement) in oceanography, physics, mathematics, computer sciences or a related discipline, or equivalent qualifications and experience in a related area, with a track record of independent research in the field of physical oceanography as evidenced by publications in peer-reviewed journals and conferences.
- Evidence of the ability to articulate and prosecute innovative research in the field of ocean dynamics.
- Relevant experience in numerical modelling, model development, high performance computing and/or big data analysis.
- An ability and commitment to contribute to bids for competitive external funding to support individual and collaborative research activities.
- The ability to assist in the supervision of students working on research projects.
- The ability to work as part of a team and to meet deadlines.
- Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.

- A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

*The ANU conducts background checks on potential employees, and employment in this position is conditional on satisfactory results in accordance with the Background Checking Procedure which sets out the types of checks required by each type of position.*

<b>Supervisor/Delegate:</b>		<b>Date:</b>	
-----------------------------	--	--------------	--

<b>References:</b>
<a href="#">Academic Minimum Standards</a>



Australian  
National  
University

# Pre-Employment Work Environment Report

## Position Details

College/Div/Centre	College of Science	Dept/School/Section	RSES
Position Title	Postdoctoral Fellow	Classification	Academic Level A
Position No.	TBC	Reference No.	

In accordance with the Work Health and Safety Act 2011 (Cth) the University has a primary duty of care, so far as reasonably practicable, to ensure the health and safety of all staff while they are at work in the University.

- This form must be completed by the supervisor of the advertised position and appended to the back of the Position Description.
- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- Once an applicant has been selected for the position they must familiarise themselves with the University WHS Management System via Handbook guidance <https://services.anu.edu.au/human-resources/health-safety/whs-management-system-handbook>
- The hazards identified below are of generic nature in relation to the position. It is not correlated directly to training required for the specific staff to be engaged. Identification of individual WHS training needs must be in accordance with WHS Local Training Plan and through the WHS induction programs and Performance Development Review Process.
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see 'Employment Medical Procedures' at [http://info.anu.edu.au/Policies/\\_DHR/Procedures/Employment\\_Medical\\_Procedures.asp](http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp)

## Potential Hazards

<ul style="list-style-type: none"> <li>• Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a <b>regular</b> or <b>occasional</b> part of the duties.</li> </ul>			
<b>TASK</b>	<b>regular</b>	<b>occasional</b>	
key boarding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
lifting, manual handling	<input type="checkbox"/>	<input type="checkbox"/>	
repetitive manual tasks	<input type="checkbox"/>	<input type="checkbox"/>	
Organizing events	<input type="checkbox"/>	<input type="checkbox"/>	
fieldwork & travel	<input type="checkbox"/>	<input type="checkbox"/>	
driving a vehicle	<input type="checkbox"/>	<input type="checkbox"/>	
<b>NON-IONIZING RADIATION</b>			
solar	<input type="checkbox"/>	<input type="checkbox"/>	
ultraviolet	<input type="checkbox"/>	<input type="checkbox"/>	
infra red	<input type="checkbox"/>	<input type="checkbox"/>	
laser	<input type="checkbox"/>	<input type="checkbox"/>	
radio frequency	<input type="checkbox"/>	<input type="checkbox"/>	
<b>CHEMICALS</b>			
hazardous substances	<input type="checkbox"/>	<input type="checkbox"/>	
allergens	<input type="checkbox"/>	<input type="checkbox"/>	
cytotoxics	<input type="checkbox"/>	<input type="checkbox"/>	
mutagens/teratogens/	<input type="checkbox"/>	<input type="checkbox"/>	
carcinogens	<input type="checkbox"/>	<input type="checkbox"/>	
pesticides / herbicides	<input type="checkbox"/>	<input type="checkbox"/>	
<b>TASK</b>	<b>regular</b>	<b>occasional</b>	
laboratory work	<input type="checkbox"/>	<input type="checkbox"/>	
work at heights	<input type="checkbox"/>	<input type="checkbox"/>	
work in confined spaces	<input type="checkbox"/>	<input type="checkbox"/>	
noise / vibration	<input type="checkbox"/>	<input type="checkbox"/>	
electricity	<input type="checkbox"/>	<input type="checkbox"/>	
<b>IONIZING RADIATION</b>			
gamma, x-rays	<input type="checkbox"/>	<input type="checkbox"/>	
beta particles	<input type="checkbox"/>	<input type="checkbox"/>	
nuclear particles	<input type="checkbox"/>	<input type="checkbox"/>	
<b>BIOLOGICAL MATERIALS</b>			
microbiological materials	<input type="checkbox"/>	<input type="checkbox"/>	
potential biological allergens	<input type="checkbox"/>	<input type="checkbox"/>	
laboratory animals or insects	<input type="checkbox"/>	<input type="checkbox"/>	
clinical specimens, including blood	<input type="checkbox"/>	<input type="checkbox"/>	
genetically-manipulated specimens	<input type="checkbox"/>	<input type="checkbox"/>	
immunisations	<input type="checkbox"/>	<input type="checkbox"/>	
<b>OTHER POTENTIAL HAZARDS (please specify):</b>			
<b>Supervisor/Delegate Name:</b>		<b>Date:</b>	



**Australian  
National  
University**

## Position Description

<b>College/Division:</b>	<b>College of Science</b>
<b>Faculty/School/Centre:</b>	<b>Research School of Earth Sciences</b>
<b>Department/Unit:</b>	<b>Climate Ocean Geoscience</b>
<b>Position Title:</b>	<b>Research Fellow</b>
<b>Classification:</b>	<b>Academic Level B</b>
<b>Position No:</b>	<b>TBC</b>
<b>Responsible to:</b>	<b>Callum Shakespeare</b>
<b>Number of positions that report to this role:</b>	<b>0</b>
<b>Delegation(s) Assigned:</b>	<b>TBC</b>

### PURPOSE STATEMENT:

The Research School of Earth Sciences is the leading centre of Earth and Marine research in Australia. Researchers have a tradition of excellence in addressing the world's challenges in the Earth sciences, such as contributing to a sustainable future by modelling ocean currents and climate change to inform societal debate and actions, researching the formation of economic deposits of critical minerals, developing innovative and sustainable technologies by which critical metals can be extracted from ore, and using sophisticated seismic studies to understand the nature of the deep earth and to manage geohazards.

The Research Fellow is expected to undertake work in all three areas of academic activity – research, education and service (including outreach). The allocation of time to each area will be discussed with the position supervisor annually and be reflective of the conditions of the external funding, the appointees research agenda, school and interdisciplinary teaching requirements and leadership opportunities within the School environment. The Research Fellow may also be required to supervise or mentor less senior staff, and undertake leadership roles as applicable. The staff member will contribute cooperatively to the overall intellectual life of the School, College and University.

This position is supported in part by the Australian Research Council's Centre of Excellence for Climate Extremes (CLEX). CLEX is a major seven-year initiative and the successful candidate will contribute to and benefit from being a part of the CLEX community. The Centre is led by UNSW Sydney and partners with Monash, The University of Melbourne, The Australian National University and The University of Tasmania alongside a suite of national and international partner organisations. The Centre's research agenda encompasses interconnected research programs focused on Weather and Climate Interactions, Attribution and Risk, Drought, Ocean Extremes and Coupled Modelling. Climate extremes are the confluence of high impact weather, climate variability and climate change. The Centre works to improve our understanding of the processes that trigger or enhance extremes and build this understanding into our modelling systems. The improved predictions of climate extremes will help Australia cope with extremes now and in the future.

The Research Fellow will work as part of two major ocean modelling projects. The first project, funded by the ARC Discovery Project "Connecting ocean tides to the large-scale circulation", will involve the development and evaluation of internal wave parameterisations for next-generation global ocean models, with an emphasis on the Southern Ocean region. In the second project, supported by the ARC Centre of Excellence for Climate Extremes (CLEX), the Research Fellow will utilise the next-generation model to investigate key questions around the Southern Ocean response to climate change, such as the impact of tidal mixing on ocean carbon uptake, changes to the thermohaline circulation, and marine heatwaves. The Research Fellow will work directly with a diverse international team of researchers and software engineers with expertise in internal waves, high-resolution global modelling, and Southern Ocean dynamics.

**KEY ACCOUNTABILITY AREAS:****Position Dimension & Relationships:**

The Research Fellow will be a member of Research School of Earth Sciences, accountable to the supervisor and Director of the School. The Research Fellow will be expected to work collegially, leading by example to develop and maintain effective, productive and beneficial workplace relationships within the all-academic and professional School and College staff, students and honorary appointees, as well as with industry stakeholders. This position will also have a mentoring role for students and will engage in collegial and productive collaborations with local, national and where possible, international colleagues.

**Role Statement:**

In their role as an Academic Level B the Research Fellow is expected to:

- Undertake independent research in the area of physical oceanography with a view to publishing original and innovative results in refereed journals, present research at academic seminars and at national and international conferences, and collaborate with other researchers at a national and/or international level. This includes working as part of a team on an externally funded project subject to deadlines and being primarily responsible for project delivery in some areas.
- Actively seek and secure external funding including the preparation and submission of research proposals to external funding bodies.
- Subject to the requirements of the funding source and where an opportunity exists, the occupant may be required to contribute to the teaching activities of the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations with students, acting as subject coordinators and the initiation and development of course/subject material.
- Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Supervision of research students.
- Supervise Postdoctoral Fellow's and research support staff in your research area.
- Actively contribute to all aspects of the operation of the School. This may include representation through committee memberships.
- Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
- Maintain high academic standards in all education, research and administration endeavours.
- Take responsibility for their own workplace health and safety and not willfully place at risk the health and safety of another person in the workplace.
- A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

**Skill Base:**

A Level B academic will undertake independent teaching and research in their discipline or related area. In research and/or scholarship and/or teaching a Level B academic will make an independent contribution through professional practice and expertise and coordinate and/or lead the activities of other staff, as appropriate to the discipline.

A Level B academic will normally contribute to teaching at undergraduate, honours and postgraduate level, engage in independent scholarship and/or research and/or professional activities appropriate to their profession or discipline. The academic will normally undertake administration primarily relating to their activities at the institution and may be required to perform the full academic responsibilities of and related administration for the coordination of an award program of the institution.

**SELECTION CRITERIA:**

- A PhD in oceanography, physics, mathematics, computer sciences or a related area, with a track record of independent research in the field of physical oceanography as evidenced by publications in peer-reviewed journals and conferences, a record of developing and maintaining collaborations and by other measures such as awards, and invitations to present at conferences.
- Evidence of experience that is relevant to ocean dynamics research in some or all of the following areas: numerical modelling, model development, high performance computing, big data analysis, with the ability to articulate and prosecute innovative research in this field. Specific research experience in the field of internal waves and tides theory and/or modelling would be an advantage but is not essential.

- A demonstrated ability and commitment to apply for competitive external funding to support individual and collaborative research activities.
- An ability to supervise high quality PhD/Masters research students.
- The demonstrated ability to work as part of a team, contributing to team management and meeting deadlines for project elements.
- Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
- A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

*The ANU conducts background checks on potential employees, and employment in this position is conditional on satisfactory results in accordance with the Background Checking Procedure which sets out the types of checks required by each type of position.*

Printed Name:

Uni ID:

## References:

[Academic Minimum Standards](#)



Australian  
National  
University

# Pre-Employment Work Environment Report

## Position Details

College/Div/Centre	College of Science	Dept/School/Section	RSES
Position Title	Research Fellow	Classification	Academic Level B
Position No.		Reference No.	

In accordance with the Work Health and Safety Act 2011 (Cth) the University has a primary duty of care, so far as reasonably practicable, to ensure the health and safety of all staff while they are at work in the University.

- This form must be completed by the supervisor of the advertised position and appended to the back of the Position Description.
- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- Once an applicant has been selected for the position they must familiarise themselves with the University WHS Management System via Handbook guidance <https://services.anu.edu.au/human-resources/health-safety/whs-management-system-handbook>
- The hazards identified below are of generic nature in relation to the position. It is not correlated directly to training required for the specific staff to be engaged. Identification of individual WHS training needs must be in accordance with WHS Local Training Plan and through the WHS induction programs and Performance Development Review Process.
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see 'Employment Medical Procedures' at [http://info.anu.edu.au/Policies/\\_DHR/Procedures/Employment\\_Medical\\_Procedures.asp](http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp)

## Potential Hazards

<ul style="list-style-type: none"> <li>Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a <b>regular</b> or <b>occasional</b> part of the duties.</li> </ul>			
<b>TASK</b>	<b>regular</b>	<b>occasional</b>	
key boarding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
lifting, manual handling	<input type="checkbox"/>	<input type="checkbox"/>	
repetitive manual tasks	<input type="checkbox"/>	<input type="checkbox"/>	
Organizing events	<input type="checkbox"/>	<input type="checkbox"/>	
fieldwork & travel	<input type="checkbox"/>	<input type="checkbox"/>	
driving a vehicle	<input type="checkbox"/>	<input type="checkbox"/>	
<b>NON-IONIZING RADIATION</b>			
solar	<input type="checkbox"/>	<input type="checkbox"/>	
ultraviolet	<input type="checkbox"/>	<input type="checkbox"/>	
infra red	<input type="checkbox"/>	<input type="checkbox"/>	
laser	<input type="checkbox"/>	<input type="checkbox"/>	
radio frequency	<input type="checkbox"/>	<input type="checkbox"/>	
<b>CHEMICALS</b>			
hazardous substances	<input type="checkbox"/>	<input type="checkbox"/>	
allergens	<input type="checkbox"/>	<input type="checkbox"/>	
cytotoxics	<input type="checkbox"/>	<input type="checkbox"/>	
mutagens/teratogens/	<input type="checkbox"/>	<input type="checkbox"/>	
carcinogens	<input type="checkbox"/>	<input type="checkbox"/>	
pesticides / herbicides	<input type="checkbox"/>	<input type="checkbox"/>	
<b>TASK</b>	<b>regular</b>	<b>occasional</b>	
laboratory work	<input type="checkbox"/>	<input type="checkbox"/>	
work at heights	<input type="checkbox"/>	<input type="checkbox"/>	
work in confined spaces	<input type="checkbox"/>	<input type="checkbox"/>	
noise / vibration	<input type="checkbox"/>	<input type="checkbox"/>	
electricity	<input type="checkbox"/>	<input type="checkbox"/>	
<b>IONIZING RADIATION</b>			
gamma, x-rays	<input type="checkbox"/>	<input type="checkbox"/>	
beta particles	<input type="checkbox"/>	<input type="checkbox"/>	
nuclear particles	<input type="checkbox"/>	<input type="checkbox"/>	
<b>BIOLOGICAL MATERIALS</b>			
microbiological materials	<input type="checkbox"/>	<input type="checkbox"/>	
potential biological allergens	<input type="checkbox"/>	<input type="checkbox"/>	
laboratory animals or insects	<input type="checkbox"/>	<input type="checkbox"/>	
clinical specimens, including blood	<input type="checkbox"/>	<input type="checkbox"/>	
genetically-manipulated specimens	<input type="checkbox"/>	<input type="checkbox"/>	
immunisations	<input type="checkbox"/>	<input type="checkbox"/>	
<b>OTHER POTENTIAL HAZARDS (please specify):</b>			
<b>Supervisor/Delegate Name:</b>		<b>Date:</b>	