



### RESEARCH SCIENTIST – COASTAL OCEANOGRAPHY

OCEANOGRAPHY AND SHELF PROCESSES TEAM

# CANDIDATE INFORMATION PACK



















AIMS was awarded <u>Athena Swan Bronze status</u> in 2020 by the <u>Science in Australia Gender</u> <u>Equity (SAGE)</u> program. This award recognises AIMS' commitment to improving gender equity, diversity and inclusion in STEMM disciplines.

The Australian Institute of Marine Science acknowledges the Traditional Owners of the land and sea on which we work. We recognise the unique relationships and enduring cultural and spiritual connection that Aboriginal and Torres Strait Islander people have to land and sea, and pay our respects to Elders past, present and future.

Photographic credit: Shaun Hahn, Joe Gioffre, Christian Miller, Steve Clarke, Christian Miller, Chris Brunner, Nick Thake, David Deeley

### ABOUT AIMS

The Australian Institute of Marine Science is a corporate Commonwealth entity established under the <u>Australian</u> <u>Institute of Marine Science Act 1972</u> (AIMS Act). As Australia's tropical marine research agency, it is <u>our mission</u> to provide the research and knowledge of Australia's tropical marine estate required to support growth in its sustainable use, effective environmental management and protection of its unique ecosystems.

To accomplish <u>our mission</u>, AIMS delivers independent science to help realise three key long-term impacts for the nation:

- Improve the health and resilience of marine and coastal ecosystems across northern Australia.
- Create economic, social and environmental net benefits for marine industries and coastal communities.
- Protect coral reefs and other tropical marine environments from the effects of climate change.

Our research is focused on the priorities of our stakeholders, including Commonwealth, state and territory governments, industry and Traditional Owners. Our research continues to:

- Underpin Australia's environmental management of the Great Barrier Reef (GBR) to ensure that this World Heritage Area remains healthy and resilient.
- Support the sustainable development of coastal industries and ports across northern Australia.
- Provide the environmental baselines and condition and risk assessments required for current and future resource and industrial developments in Northern Australia.

At AIMS, <u>the way we work</u> guides our team members' on their collective journey towards the successful delivery of our <u>AIMS Strategy 2030</u> targets.



# ABOUT SUSTAINABLE COASTAL ECOSYSTEMS & INDUSTRIES PROGRAM'S OCEANOGRAPHY AND SHELF PROCESS TEAM

The **Oceanography and Shelf Processes team** provide essential environmental data and hydrodynamic modelling to understand the role of the oceans in the health and function of our coastal ecosystems and to assist industry to make informed decisions. The team comprises two integrated sub-programs: one observational and the other hydrodynamic modelling. Our observing program includes an <u>extensive current meter mooring array</u>, Weather <u>Stations</u> and <u>Sea Temperatures</u> programs. These programs deliver long term physical, chemical and biological data across northern Australia from Ningaloo to the southern Great Barrier Reef. AIMS is a key collaborator with Australia's Integrated Marine Observing System (IMOS). Through this collaboration, AIMS maintains a large-scale monitoring program across northern Australia comprising <u>oceanographic moorings</u> along the North West Shelf and the Great Barrier Reef, including two of Australia's National Reference Stations. AIMS also contributes underway vessel data to the Ships of Opportunity Program and leads the IMOS Event-Based Sampling sub-facility which coordinates the deployment of ocean gliders to capture marine heatwave events around the Australian coastline.

Our numerical modelling is solutions-focussed with developed expertise in nearshore modelling, understand the impacts of agricultural, urban, and industrial development on coastal ecosystems at wide range of temporal and spatial scales, with specific case studies associated with understanding the environmental risk of industrial operations, port infrastructure as well as oil and gas industry operations to marine ecosystems. Our team maintains strong and ongoing internal and external collaborations, providing understanding of physical oceanographic processes as well as providing relevant physical and chemical context to inform other research teams within and across AIMS' Programs that analyse the health of the marine ecosystem.



### ABOUT OUR RESEARCH SCIENTIST – COASTAL OCEANOGRAPHY POSITION

### About this opportunity

You'll be joining a group that delivers science relating to the critical issue of cumulative stressors in a broad range of tropical marine habitats arising from coastal and catchment development, in the context of shelf-scale processes and ecosystem drivers. An expert in physical oceanography and coastal ocean modelling, you will apply your knowledge across the collection, analysis and interpretation of observational data and model results, and to the development and implementation of numerical models in the aim to resolve strategic and client-defined problems within coastal and shelf-scale oceanography. You can expect in this role to be:

- Initiating hydrodynamic, water quality and sediment transport modelling research for industry and government stakeholders, which will have results in environmental and economic benefits for northern Australia,
- Define and undertake research into shelf-ocean interactions and coastal and shelf processes in tropical oceans and seas, this research will be important to reduce uncertainty in advice provided to stakeholders,
- Developing and implementing hydrodynamic and process models that predict patterns of water circulation, flushing rates and residence times, and transport and fate of dissolved and particulate loads,
- Engaging with key stakeholders within the research community, industry and government, and giving oral presentations, producing technical reports and scientific papers from your research findings, and
- A science leader, supporting staff and students with research and ensuring resources are procured and allocated to deliver research activities.

#### About you

Underpinning your suitability for this position will be your PhD in physical oceanography, ocean modelling, coastal engineering or related field, and your extensive professional experience in oceanographic modelling specific to coastal and shelf processes and complex domains. As a high performer with a demonstrated track record of scientific output and reputation for research excellence you can demonstrate your:

- Experience in using observational instrumentation and the collection, analysis and interpretation of oceanographic data,
- Extensive computing expertise in Window and UNIX environments, and programming skills using FORTRAN or C, Python, R, MATLAB, NetCDF and Geographical Information Systems such as ARCGIS,
- Highly developed conceptual, analytical and problem-solving skills that demonstrate experience in applying physical oceanography and ocean modelling techniques to find solutions to identified problems, and
- Well-developed written and verbal communication skills and a collaborative style of working to effectively communicate with various key stakeholders.
- Experience in the application of nested models to complex domains would be advantageous, as would experience with operational numerical models and data assimilation techniques applicable for shelf and coastal models.

If, after reviewing the position description (refer pages 8 - 11), you believe that your qualifications, experience and professional capabilities will enable you to successfully deliver the position responsibilities, we would be very interested in hearing from you.

**Apply now** and join a world leading organisation with attractive working conditions which are detailed in our <u>Enterprise Agreement</u>. The successful candidate for this exciting opportunity will be rewarded with:

- AIMS AOF Level 4 to 5 salary (\$90,321 to \$124,181 per annum) plus 15.4% superannuation. (Candidates may be considered for appointment at AOF level 5 depending on qualifications and experience)
- Full-time, Permanent opportunity
- Located in Darwin (NT). Relocation assistance package is available.
- 9-day fortnight
- Flexible Work Arrangements considered (including tele-working where possible)
- Generous leave provisions



Your application submission for this opportunity should include the following documentation:

- Current Resume (including the contact details for two current referees);
- Document addressing the Key Selection Criteria (refer to page 7) within the scope of the position description (refer to page 8-11); and
- A short cover letter.

**N.B.** Non-Australian Citizens must hold an appropriate Visa with working entitlements that allows paid employment with AIMS for the term of the appointment, depending on the relevant <u>Department of Home Affairs</u> current policies. AIMS may be able to consider sponsorship for international applicants for this role, however, please note that visa processing times can impact the ability for AIMS to consider sponsorship for vacancies. AIMS must meet the requirements of the Department of Home Affairs immigration policies and processes, including the necessity to test the local labour market for suitable applicants. This includes international talent pool members who are Australian visa holders who have relevant working rights.

**Shortlisted applicants** may be asked to complete a Personal Outlook Analysis Questionnaire using the Birkman Method.

How to apply: Please submit your application via our website (aims.gov.au).

Further information on the application process and tips for addressing Selection Criteria is available in our <u>Recruitment Application Guide</u>.

**Recruitment contact:** Position enquiries can be directed to Hemerson Tonin, Physical Oceanographer at <u>h.tonin@aims.gov.au</u>. *Applications must be made through our website per above*.

Closing date: MONDAY, 16 OCTOBER 2023 (midnight, AEST).

**NB:** Applicant survey: All applicants will be invited to complete a voluntary survey after the vacancy closing date. Your responses to this survey do not form part of your application for this position. Further information about the purpose of this survey will be provided to you in the invitation.



### **KEY SELECTION CRITERIA**

Your application submission should address the following Selection Criteria. Please address each Selection Criteria in a separate paragraph (maximum 250 words per criteria) and in a single document. The selection criteria and your CV are the documents against which we assess your suitability for the position.

Your responses to the following Key Selection Criteria must evidence your suitability for this exciting opportunity within the scope of the position description (pages 8-11).

### Essential

- A post-graduate qualification and demonstrated experience in physical oceanography, ocean modelling, coastal engineering, or a related field.
- Demonstrated knowledge and capacity for oceanographic modelling with an emphasis on coastal and shelf processes and complex domains. Experience in the application of nested models to complex domains is an advantage.
- Demonstrated experience with the use of observational instrumentation relevant for coastal oceanography, and the collection, analysis and interpretation of oceanographic data.
- An established or emerging reputation for research excellence as evidenced by publication history in physical oceanography and ocean modelling.
- Extensive computing experience with Window and UNIX environments, and programming skills encompassing but not limited to FORTRAN or C; Python, R, MATLAB; NetCDF; and Geographical Information Systems such as ArcGIS.
- Ability to collaborate, work, inform and actively engage with internal and external partners and stakeholders about physical oceanography and associated models, including scientists, professionals and technical staff.

### Desirable

- Experience with operational numerical models and familiarity with data assimilation techniques appropriate for shelf and coastal models.
- Demonstrated experience in planning and undertaking oceanographic field studies in coastal and shelf environments.
- Project management skills with the ability to deliver to external stakeholders in a timely and professional manner.
- Understanding multi-disciplinary models (for example, biogeochemical, transport of sediment, water quality and their impacts to the function and health of marine ecosystems).



# POSITION DESCRIPTION: RESEARCH SCIENTIST – COASTAL OCEANOGRAPHY

Position Title:	Research Scientist – Coastal Oceanography			
Position Number:	21322		1	
Organisational Unit Name and Number:	Oceanography and Shelf Processes (7203)	Program:	Sustainable Coastal Ecosystems and Industries in	
Salary cost centre:	7203 cost centre		Tropical Australia – Program 2	
Primary Location:	Darwin			
Agreement:	AIMS Enterprise Agreement 2020 – 2023 (and any subsequent agreement)			
Position Classification:	AOF Level 4-5 (Candidates may be considered for appointment at AOF level 5 depending on qualifications and experience)	FTE Status:	Full-time (1.0 FTE)	
First Level Supervisor:	Physical Oceanographer (21122)			
Positions under Direct Supervision:	Nil			
Functional Area:	Research Scientist			
Alivis Strategy 2030 Our Mission To provide the research and knowledge of Australia's tropical marine estate required to support growth in its sustainable use, effective environmental management, and protection of its unique ecosystems. The Way We Work				
Position Summary:	tion Summary: The Coastal Oceanographer will apply well developed skills in physical oceanography and coastal ocean modelling encompassing the collection, analysis and interpretation of observational data and model results, the development, customisation and implementation of numerical models (not restricted only to hydrodynamics but also multi-disciplinary models) for the solution of strategic and client-defined problems in coastal and shelf-scale			
Position Responsibilities:	<ul> <li>Assist AIMS to achieve strategic impacts targets through the initiation of hydrodynamic, water quality and sediment transport modelling research for stakeholders (industry and government) which will result in environmental and economic benefits to northern Australia.</li> </ul>			

## **POSITION DESCRIPTION - CONTINUED**

	• Define and initiate research into shelf – ocean interactions and coastal and shelf
	understanding of water circulation and the transport and fate of waterborne material, and reducing uncertainties in advice and information provided to stakeholder and clients.
	• Develop and implement appropriate hydrodynamic and process models to predict patterns of water circulation, flushing rates and residence times, transport and fate of dissolved and particulate loads.
	<ul> <li>Collaborate with members of other Research Programs and Teams and contribute to the identification and definition of specific research questions and the development of new approaches to address these.</li> </ul>
	• Engage with key stakeholders within the research community, industry, and government at multiple levels to build and foster partnerships and maintain credibility in AIMS as a leading, high-quality science provider.
	• Procure and manage resources (internal and external) to deliver research activities consistent with the AIMS Strategy.
	<ul> <li>Deliver timely technical reports, oral presentations, and scientific papers of the highest standard.</li> <li>Liaica with and ensure timely and effective communication of deliverables to institute.</li> </ul>
	stakeholders.
	<ul> <li>Provide scientific leadership to colleagues, support staff and students and ensure that resources such as facilities, equipment and associated are coordinated and allocated effectively.</li> </ul>
	Promote teamwork in the completion of scientific projects and assume the role of montor to losser experienced staff
	AIMS Core:
	• Comply with AIMS' Code of Conduct ensuring the standards of conduct required of an AIMS staff member are upheld.
	• Be an active and contributing employee dedicated to upholding and promoting AIMS' Strategy 2025 and acting accordance with our Values.
Key Responsibilities and Performance Sta	ndards
	Milestones: Ensure the successful completion of specific experiments and research tasks as
Science Outputs:	outlined within the research team plan.
	<b>Publications:</b> Author or co-author, contribute to scientific papers for international refereed
	scientific journals.
	<b>Presentations:</b> Present work progress and new relevant techniques at research team
	meetings.
	Intellectual Assets: Identify emerging intellectual property resulting from AIMS research and
	initiate appropriate actions to protect AIMS IP Assets
	<b>Reports:</b> Assist in the writing of reports to meet contractual deadlines.
	<i>Clients:</i> Ensure client satisfaction with reports and results of research.
	Comply with AIMS' WHS policies and procedures to ensure a safe workplace.
Work Health and Safety (For All Staff)	• Identify workplace hazards and take corrective action with your supervisor's guidance.
	<ul> <li>Take reasonable care to ensure your own safety and health at work.</li> </ul>
	<ul> <li>Avoid adversely affecting the safety and physical or psychological health of any other person</li> </ul>
	<ul> <li>Identify and report health and safety hazards, incidents, injuries or property damage at the workplace</li> </ul>
	<ul> <li>Comply with health and safety instructions as indicated.</li> </ul>
	• Ensure correct Personal Protective Equipment (PPE) is used for the task or activity as
	applicable. Take care to follow signage and direction as indicated.
	<ul> <li>Complete WHS Inductions as directed.</li> <li>Strong commitment to and sound knowledge of principles and practices of Work Health</li> </ul>
	and Safety and Workplace Diversity and Inclusion.

# **POSITION DESCRIPTION - CONTINUED**

	<ul> <li>Ensure early reporting of physical or psychological factors that may completion of your daily position responsibilities so that reasonable adj considered.</li> <li>Comply with Visitor Registration procedures and ensure visitors the complete the relevant WHS inductions prior to attendance at the application.</li> </ul>	y impact on the ustments may be hat you sponsor	
	Complete the relevant WHS inductions prior to attendance at the appli		
More Haalth & Cafaty Minimum	Participate in Manual Task (Functional) Assessments and Fit for Work med	lical assessments	
Functional Requirements	as required.		
Functional Requirements	Minimum functional requirements*:		
	Maximum lift expected (5kg, 10kg, 25 kg)	10 kg	
	% role mobilising	5%	
	% role sitting	90%	
	% role standing/static positions	5%	
	% role diving	0%	
	More diving	070	
	work in offshore or remote locations for extended periods of time	NO	
	AIMS is an inclusive employer and will assess if modifications to the above w	ork requirements	
	can be made if provided with Reasonable Adjustment criteria from your Tr	reating Doctor or	
	other suitably qualified medical professional. Please consider the ir	nherent physical	
	requirements of the Position when making your request for Reasonable Adju	ustment.	
	AIMS strongly encourages all employees to be fully vaccinated against (	COVID-19. Whilst	
	it is not currently a mandatory requirement for this role, AIMS rese	rves the right to	
	review its position and policy on mandatory vaccinations. It may the	refore become a	
	mandatory requirement for this role in the future.		
	Ensure compliance with AIMS' Intellectual Property policies, procedure	es and guidelines	
Intellectual Assets:	to ensure AIMS' intellectual assets are appropriately protected and ma	naged.	
Financial responsibilities and accountabilities and delegations:	<ul> <li>Delegations are in line with Financial and Contract Delegation Policy, which includes authorisation levels for Financial, Enterprise Agreement (supervisory), HS&amp;E and Constrained Administrative activities</li> </ul>		
	General Automistrative activities.		
	<ul> <li>Contribute to positional budget requirements.</li> <li>Manage AIMS funds and resources in a responsible manner and within</li> </ul>	delegation	
	<ul> <li>Initialize Alivis futures and resources in a responsible manner and within delegation.</li> <li>Comply with AIMS' Fraud Provention Plan answing the standards of conduct and othical</li> </ul>		
	<ul> <li>Comply with Alivis Fraud Prevention Plan ensuring the standards of conduct and ethical helpsviour required of an AIMS staff member are unheld and that suggested froudulant</li> </ul>		
	activity is prevented and/or reported		
Working as a team:	<ul> <li>To work constructively as a member of a multi-disciplinary team that while ensuring the achievement of AIMS' goals and objectives.</li> </ul>	t values diversity	
	Well-developed interpersonal and communication skills including th	e capabilities to	
	effectively consult, collaborate and liaise with other team members on s	science/technical	
	and non-science/technical issues for the purpose of achieving tean	n objectives and	
	maintaining a positive team environment.		
	Regular interaction with all members of the Program for the purpletered of the purpl	pose of creative	
	discussion and coordination of tasks and activities.		
	Maintain close working relationships with staff from other Research	Teams/Programs	
	and relevant support functions.		
External Customer. Partner.	Nurture existing relationships and initiate new ones in consultation w	vith the CEO and	
Collaborator and Stakeholder	other ALT members.		
Requirements:	To contribute to the successful completion of external contracts as req	uired.	
Innovation, problem solving and	Assist in the improvement of the day-to-day operations, systems	s and processes	
continuous improvement	associated with AIMS.		
responsibilities:	Support team members to review and analyse processes to identify im	provements and	
	celebrate efforts towards continuous improvement.		
	• Approach all tasks and activities from a risk management prospective.		
	Initiate and progress research characterised by innovation, creativity, q	uality, and timely	
	delivery of research goals.		

# POSITION DESCRIPTION - CONTINUED

	• Define and solve complex scientific problems through appropriate observational procedures, modelling and analysis.
Performance management and planning responsibilities:	<ul> <li>Plan work activities to ensure the achievement of timelines.</li> <li>Ensure timely and accurate completion of required tasks.</li> <li>Actively participate in own personal performance planning and evaluation.</li> <li>Successfully participate in the AIMS annual Performance and Development program.</li> </ul>
Communication responsibilities:	<ul> <li>Comply with AIMS' Social Media policy.</li> <li>Ensure use of private Social Media accounts and other e-communication platforms are in compliance with AIMS policies and procedures, as amended from time to time.</li> <li>Refer to Corporate Style Guide for the production of documents, procedures, presentations and other communication material.</li> <li>Apply excellent verbal communication skills to influence, interpret, liaise, advise, report and counsel.</li> <li>Interact with other team members to facilitate the achievement of group goals.</li> </ul>
Technology and Equipment:	<ul> <li>Utilise AIMS Technology and Equipment as required and directed such as:</li> <li>Networked personal computer and general office equipment.</li> <li>EDMS – TechOne ECM, Procurement, P&amp;C, Finance modules</li> <li>Microsoft Project, Microsoft 365 applications</li> <li>Personal and UNIX –based computing.</li> <li>Programming in FORTRAN or C, and in higher level languages such as MATLAB, python and R.</li> <li>Data storage formats and protocols (e.g. NetCDF, OpenDAP).</li> <li>Geographical Information Systems such as ArcGIS.</li> </ul>
Selection Criteria	
Essential Qualifications and Experience:	<ul> <li>A post-graduate qualification and demonstrated experience in physical oceanography, ocean modelling, coastal engineering, or a related field.</li> <li>Demonstrated knowledge and capacity for oceanographic modelling with an emphasis on coastal and shelf processes and complex domains. Experience in the application of nested models to complex domains is an advantage.</li> <li>Demonstrated experience with the use of observational instrumentation relevant for coastal oceanography, and the collection, analysis and interpretation of oceanographic data.</li> <li>An established or emerging reputation for research excellence as evidenced by publication history in physical oceanography and ocean modelling.</li> <li>Extensive computing experience with Window and UNIX environments, and programming skills encompassing but not limited to FORTRAN or C; Python, R, MATLAB; NetCDF; and Geographical Information Systems such as ArcGIS.</li> <li>Ability to collaborate, work, inform and actively engage with internal and external partners and stakeholders about physical oceanography and associated models, including scientists, professionals and technical staff.</li> </ul>
Desirable Qualifications and Experience:	<ul> <li>Experience with operational numerical models and familiarity with data assimilation techniques appropriate for shelf and coastal models.</li> <li>Demonstrated experience in planning and undertaking oceanographic field studies in coastal and shelf environments.</li> <li>Project management skills with the ability to deliver to external stakeholders in a timely and professional manner.</li> <li>Understanding multi-disciplinary models (for example, biogeochemical, transport of sediment, water quality and their impacts to the function and health of marine ecosystems).</li> </ul>

### ABOUT OUR LOCATION



### Darwin (NT) Facility

Our research in Darwin takes place at the Arafura Timor Research Facility (ATRF), only 15 minutes' drive from the city centre, within the boundaries of the North Australia campus of the Australian National University and adjacent to the Charles Darwin University.

The Arafura–Timor region, in which Darwin is a scientific and commercial hub, is linguistically, culturally and biologically diverse, which provides valuable links between the biophysical and social sciences.

#### Finding us (view more on our website):

From the Darwin CBD, follow the Stuart Highway for several kilometres, then turn left onto Bagot Road and head towards Casuarina. Stay on Bagot Road until it becomes Trower Road, turn left onto Dripstone Road, and then right into Ellengowan Road at the roundabout in front of Charles Darwin University.

The sign at the front of the complex reads: 'North Australia Research Unit and Arafura Timor Research Facility'. There is reserved car parking within. There is no direct public transport to the office.

#### **Darwin Traditional Owner Group**

Darwin is treasured country to its traditional owners, the <u>Larrakia</u> people, who are prominent and active members of the local community.

The traditional owners of Darwin are the Larrakia (saltwater) people. Larrakia country runs far beyond the municipal boundaries of Darwin, covering the area from the Cox Peninsula in the west to Adelaide River in the east. The Larrakia people established the first trade routes in the region, trading with the Tiwi, Wagait and Wulna people as well as with Indonesian fishermen. Their stories, songs and ceremonies echo the strong connection and understanding they have with the saltwater country.

#### Living in Darwin

Darwin is a modern capital city highly valued by its diverse and highly multicultural population, with a strong position in business and industry. Darwin has evolved from its days as a laid-back frontier town and while it still retains its relaxed charm, it has become a sophisticated city. Many visitors are surprised to find that it has accommodation, eateries, clubs, pubs, museums and other amenities that are equal to what you'll find in the southern cities.

Our city is both modern and multicultural, boasting a population made up of people from more than 60 nationalities and 70 different ethnic backgrounds. The city is characterised by its many exciting cultural festivals and weekly food and craft markets.

For further information visit City of Darwin Website.

