# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Biogeochemical Modeller |
| Job Reference | 87109 |
| Tenure | IndefiniteFull-time |
| Salary Range | AU$102,724 – AU$111,165 per annum plus up to 15.4% superannuation |
| Location(s) | Hobart, TAS |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Team Leader – Ocean Carbon Observations, Group Leader – Oceans |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Richard Matear via email at Richard.Matear@csiro.au or phone +61 3 6232 5243; orContact Elizabeth Shadwick via email at Elizabeth.Shadwick@csiro.au or phone +61 3 6232 5571 |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply via **Jobs Central**If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### Role Overview

The role of Research Scientist/Engineer staff is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. The Research Scientist/Engineer may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. The Research Scientist/Engineer will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

The Biogeochemical Modeller will be responsible for biogeochemical model development at CSIRO for use in a range of climate, carbon and ecosystem projects. They will be expected to exploit the unique and novel observations collected by CSIRO to deliver new insights into marine biogeochemical processes and work collaboratively with a team of scientists to collectively advance the research. The position’s research portfolio will range from projecting how biogeochemical tracers will change in the future (i.e. ocean acidification and deoxygenation) and how these changes will impact marine processes (e.g. marine ecosystems) to quantifying the past and future oceanic carbon uptake and how it may be enhanced to reduced future atmospheric greenhouse gases concentrations.

CSIRO has a number of existing national collaborations (i.e. COSIMA-2, ACCESS-NRI) and the Biogeochemical Modeller will be expected to help lead the future development and applications of marine biogeochemical models.

### Duties and Key Result Areas

* Utilise the knowledge and understanding of ocean chemistry, biology and physics to develop and apply biogeochemical models.
* Undertake high-quality research of international standing and communicate and publish the research.
* Contribute to CSIRO engagement in collaborative ventures such as the Australian Antarctic Program Partnership (<https://aappartnership.org.au>), the Integrated Marine Observing System ([www.imos.org.au](http://www.imos.org.au)), and the OceanSITES global network of time series observations ([www.oceanSITES.org](http://www.oceanSITES.org)).
* As a mission direct research organisation, ensure project milestones are met on time and within budgets.
* Under the supervision of more senior researchers, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* Participate in identification of further opportunities which arise from research and initiate new lines of research.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
* Provide supervision and coaching to students and technical staff.
* Communicate effectively and respectfully in the interests of good business practice, collaboration, and enhancement of CSIRO’s reputation.
* Work effectively with multi-disciplinary, often regionally dispersed, research teams, to undertake independent scientific investigations and carry out/delegate associated tasks under broad guidance from more senior Research Scientists/Engineers.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. A PhD, or an equivalent combination of qualifications and research experience, in a relevant field, such as marine biogeochemistry or ocean modelling.
2. Demonstrated ability to configure and apply marine biogeochemical models in 3D ocean circulation models.
3. Experience in the development and/or interpretation of numerical models of the ocean and the analysis of large and complex models and observation data sets.
4. Experience effectively using High-Performance Computing (HPC) facilities and technologies.
5. Demonstrated success in publishing innovative and high impact results that advance our understanding of marine biogeochemical processes.
6. Experience working in a multi-disciplinary team to collaboratively tackle challenging research problems.

## **Desirable**

1. Sufficient Fortran computer programming skills to incorporate biogeochemical processes into 3D ocean circulation models.
2. Experience in working with large datasets and efficiently analysing them with software such as python.

## **Required Competencies**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others’ reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate responses by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of change.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Clearance or equivalent. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* The successful candidate may be required to undertake necessary medical examinations/health security checks in future, as required to perform the duties of the role and/or to meet regulations.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test) – <https://ielts.com.au/>

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We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* 1. People First
	2. Further Together
	3. Making it Real
	4. Trusted

Find out more about CSIRO [Oceans and Atmosphere](https://www.csiro.au/en/Research/OandA)