# Postdoctoral Fellowship – CSOF4

Role summary for potential applicants

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| Advertised Job Title**:** | CSIRO Postdoctoral Fellowship in ocean-atmosphere carbon fluxes |
| Reference Number**:** | 49441 |
| Classification**:** | CSOF4 |
| Salary Range: | AU $83K to AU $91K plus up to 15.4% superannuation |
| Location**:** | Hobart, Tasmania, Australia |
| Tenure: | Specified Term of 3 years |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | All Candidates |
| Functional Area**:** | Research Scientist / Engineer - Postdoc |
| % Client Focus - Internal: | 100% |
| % Client Focus - External: | 0% |
| Reports to the: | Lead supervisor (Principal Scientist) |
| Number of Direct Reports: | 0 |

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| **Role Overview:** |
| **Postdoctoral Fellowships** at CSIRO provide opportunities to scientists and engineers, who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships will help launch their careers, provide experience that will enhance their career prospects, and facilitate the recruitment and development of potential leaders for CSIRO.  Postdoctoral Fellows **are appointed for up to three years** and will work closely with leading Research Scientists or Engineers in their respective field. They carry out innovative, impactful research of strategic importance to CSIRO with the possibility of novel and important scientific outcomes. They present the findings in appropriate publications and at conferences.  CSIRO Oceans and Atmosphere is seeking to appoint a highly motivated postdoctoral fellow, with a background in oceanography and/or marine biogeochemistry to improve understanding and representation of air-sea CO2 fluxes at from diel to seasonal and longer timescales. The focus is on ocean processes, in particular observations of interactions between surface and subsurface waters and their influence on biogeochemistry, ocean productivity, and air-sea gas exchange. The successful applicant will join a multi-disciplinary supervisory team with internationally-recognised expertise in satellite remote sensing, carbon cycle modelling, marine bio-optics and ocean biogeochemistry.  While the geographic focus of the project is global, it will draw heavily on in situ datasets from the Southern and Indian Oceans where CSIRO scientists are engaged in biogeochemical float deployment. This includes participation in collaborative float deployment programs with Indian (Australia-India Strategic Research Program), French (Southern Ocean Climate Project), and US (Southern Ocean Carbon and Climate Observations and Modelling) research teams, and time series observations from the Australian Integrated Marine Observing System ([www.imos.org.au](http://www.imos.org.au)) Southern Ocean Time Series (SOTS).  The project is at the interface of oceanography, Earth observation, and carbon cycle science, providing excellent opportunities to develop a strong scientific network with exposure to the global scientific community by participating in international working groups/conferences. This is a career-launching project that will provide the successful candidate with the opportunity to produce science that has global impact. |

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| **Duties and Key Result Areas:** |
| * Under the direction of senior research scientists, carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes. * Apply your expertise in numerical data analysis, modelling, oceanography, and ocean biogeochemistry to explore the mechanisms and variability of air-sea CO2 fluxes * Improve understanding of air-sea CO2 fluxes and its interaction with other biogeochemical variables and observations to provide additional constraints on CO2 fluxes * Contribute to improving the mechanisms driving variability in air-sea fluxes in numerical simulations on decadal to longer time scales. * Undertake regular reviews of relevant literature. * Produce high quality scientific papers suitable for publication in quality journals. * Prepare appropriate conference papers and present those at conferences as agreed with your supervisor. * Contribute to the development of innovative concepts and ideas for further research. * Make a contribution to the effective functioning of the research team and help deliver CSIRO’s organisational objectives and plans. * Work collaboratively with colleagues within your team, the Oceans & Atmosphere business unit and across CSIRO. * Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation. * Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals. * Undertake an appropriate training and development program developed by CSIRO. * Other duties as directed.   ***CSIRO’s postdoctoral training program***is developed between the Postdoctoral Fellow and a CSIRO scientist. The program will focus on enhancing the Fellows’ capabilities to the level expected of an independent researcher and will include on-the-job and course-based development encompassing:   * Discipline-specific techniques and protocols * Professional growth * Project management * Communication and influencing skills * Working and collaborating with others   <http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postdoctoral-fellowships> |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***   * **Education/Qualifications:** A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as oceanography, marine biogeochemistry or ocean remote sensing.   ***Please note:*** *To be eligible for this role you must have* ***no more than 3 years*** *of relevant postdoctoral experience.*   * **Communication: High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including at national and international conferences.** * **Publications: A record of publications in quality, peer reviewed journals.** * **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment. * Ability to pass stringent medical criteria to enable participation in oceanographic voyages.   ***Essential Criteria:***   * Demonstrated understanding of the physical, chemical and biological oceanographic processes that influence production, carbon cycling, and air-sea gas exchange * Knowledge and experience in working with numerical modelling codes and/or data visualization and statistical evaluation of oceanographic and marine biogeochemical observations (in situ or satellite). * Ability to handle and manipulate large data sets using software such as Matlab, R, Python, etc. * **The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, plus the motivation and discipline to carry out autonomous research and to adapt to changing circumstances in order to prioritise and address problems and to deliver projects effectively and on time.** * A record of science innovation and creativity, plus the ability & willingness to incorporate novel ideas and approaches into scientific investigations.   **Desirable Criteria:**   * Quantitative experience in one or more of the fields of oceanography, marine biogeochemistry, satellite remote sensing, and ocean carbon cycle modelling. * Experience with developing or running numerical models e.g. Fortran, Matlab etc * Demonstrated experience integrating multiple data streams from observations with models.   **As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to**:   * Excellent science * Inclusion, trust & respect * Health, safety & environment * Delivery on commitments.   **In your application and at interview you will need to demonstrate alignment with these behaviours.**  To be appointed as a Postdoctoral Fellow within CSIRO, candidates are required to have **submitted** their PhD at the time of commencement, as a minimum requirement, if PhD conferment has not been obtained. If a candidate has submitted, but their PhD has not yet been formally attained, the starting salary will be CSOF4.1 ($80,833).Upon CSIRO receiving written confirmation that the PhD has been awarded (within a six month period from commencement date), the salary will be increased to the negotiated level and the difference will be back-paid to the Officer’s start date.  ***Other special requirements:***  Appointment to this role may be subject to conditions including security/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents may be required to undergo additional security clearance processes; which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- <http://www.ielts.org/default.aspx> |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at [www.csiro.au/careers](http://www.csiro.au/careers). Be sure to provide specific responses stating how your experience and skills relate to the selection criteria.  Please do not email your application. Applications received via this method will not be considered.  If you experience difficulties applying online call 1300 984 220 and someone will be able to assist you. Outside business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees:** Please provide the names and contact details of two previous supervisors or academic/ professional referees included in your resume/CV. We will ask your permission before contacting them  **Contact:** If after reading the selection documentation you require further information please contact:  Dr Tom Trull via email: [Tom.Trull@csiro.au](mailto:Tom.Trull@csiro.au) or phone: +61 3 6232 5069, and/or  Dr Andrew Lenton via email: [Andrew.Lenton@csiro.au](mailto:Andrew.Lenton@csiro.au) or phone: ***+61 3 6232 5472***  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  **We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you.**  **Find out more!** <https://www.csiro.au/en/Careers/A-great-place-to-work/Work-life-balance>  **CSIRO Oceans and Atmosphere**  CSIRO’s Ocean and Atmosphere research is uniquely placed to deliver significant economic, social and environmental benefits for Australia and the region. We seek to secure Australia’s future through our seas and skies.  Find out more: <https://www.csiro.au/en/Research/OandA/About>  **What CSIRO offers you**  This fellowship offers an outstanding career opportunity to work with a supervisory team that has an exceptional international profile and is well represented on international working groups and space agency science teams: Dr Nick Hardman-Mountford (CSIRO), Prof. Tom Trull (CSIRO), Dr Andrew Lenton (CSIRO), Prof. David Antoine (Curtin University).  The position is based in Hobart, Tasmania. Hobart is a vibrant capital city with and outdoor lifestyle, world-class beaches, mountains, vineyards, museums, and family-friendly nature and cosmopolitan culture. It is one of the top small cities in the world to live in. |