# Position Details

## Research Scientist/Engineer – CSOF5/CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Land Surface Modeller/Science Lead (ACCESS-ESM) |
| Job Reference | 97306 |
| Tenure | Indefinite  Full-time (preferred) |
| Salary Range | Applications would be assessed across two capability levels, and the successful candidate will be appointed at the level commensurate with their skills and experience, as assessed by the Selection Panel.  **CSOF5:** AU$ $110,038 – AU$119,080 per annum (pro-rata for part-time) plus up to 15.4% superannuation  **CSOF6:** AU$ $126,313 – AU$148,014 per annum (pro-rata for part-time) plus up to 15.4% superannuation |
| Location(s) | Melbourne (VIC) or Canberra (ACT) |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Team leader, Land Surface and Ocean Biogeochemistry |
| Client Focus – Internal | 60% |
| Client Focus – External | 40% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Terry O’Kane via email at [Terence.okane@csiro.au](mailto:Terence.okane@csiro.au) or phone +61 428 567 229 |
| 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](mailto: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).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### Role Overview

The role of Research Scientist/Engineer staff, in general, is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. They may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. They 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.

This position contributes to the strategic partnership between CSIRO and the Australian Earth-System Simulator National Research Infrastructure (ACCESS-NRI <https://www.access-nri.org.au/>). Ongoing development of an Australian Earth System Model (ACCESS-ESM) is fundamental for addressing national climate mitigation and adaptation challenges. Over the past decade, CSIRO has led the development of a land surface modelling suite, CABLE, specifically designed for Australia’s unique landscapes. Climate and Earth system modelling simulation capability is required in order to assess the viability of national and international net zero mitigation policies and emission pathways. In collaboration with the ACCESS-NRI, ACCESS-ESM development is undergoing a rapid transition to upgrade the various domain specific model components to deliver to the Coupled Model Intercomparison (CMIP7) and beyond. At this mission critical stage, as the ACCESS-NRI consortium matures to encompass the required technical capability to deliver a truly ‘state-of-the-art’ ACCESS-ESM, CSIRO’s role is focussing on science leadership.

This position fills an existing capability gap to lead the further development of the land surface component, CABLE, in ACCESS-ESM in order to address key science and policy questions.

### Duties and Key Result Areas

* Use professional expertise, research experience and achievement to formulate, develop and lead an approved research program focussed on the application of ACCESS-ESM to land-surface, climate and carbon science questions.
* Develop challenging but realistic research plans and negotiate resource requirements with research managers or clients, in order to implement additional high-priority capabilities into CABLE in ACCESS-ESM, such as dynamic vegetation, disturbance and fire.
* Demonstrate a considerable degree of originality, creativity and innovation in solving problems and introduce new directions and approaches.
* Communicate research results to clients and the scientific community through journal publications, oral and written reports and prepare documentation.
* Work collaboratively as part of collaborative and multi-disciplinary teams to successfully deliver science and impact.
* Advise policy makers and inform and transfer knowledge to non-scientific audiences as required.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary research team to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy and diversity initiatives.
* Other duties as directed.

*In addition to the duties listed above, if the successful candidate is appointed at the higher CSOF6 level, they will also be expected to:*

* Lead a cross-institutional project team to ensure model development and experiments are established in accordance with the research design and are completed within the agreed timeframes and budget.
* Act as a trusted advisor, utilising knowledge of the clients’ business and understanding of their underlying needs.
* Engage and communicate with key clients and organizations to identify challenges, prioritise science and deliver impact for a range of stakeholders.
* Maintain active national and international research collaborations in order to access/share leading edge concepts and technology to advance projects, achieve scalability, new opportunities, and impact.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Applications would be assessed according to the Selection Criteria listed below, and the successful candidate will be appointed at the capability level commensurate with their skills and experience, as assessed by the Selection Panel.*

*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 meteorology and the geosciences, applied mathematics, physics.
2. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
3. Demonstrated project (or project component) leadership involving a diverse team.
4. Demonstrated expertise in land surface modelling and their integration with general circulation climate and earth system models.
5. Demonstrated superior level of scientific programming and shell scripting, preferably python, fortran, bash in a supercomputing environment.
6. A strong scientific publication record, networks and collaborations in the field, and an ability to communicate effectively with a range of stakeholders.

## **Desirable**

1. Demonstrated experience in code development for UK MetOffice Unified Model including JULES, CABLE and/or ACCESS.

## **Required Competencies**

**CSOF5**

* **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.

**CSOF6**

* **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:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

* The successful candidate will undertake a pre-employment background check. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* 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/>

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [Environment Business Unit - CSIRO](https://www.csiro.au/en/about/people/business-units/Environment) for more information.

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

* People First
* Further Together
* Making it Real
* Trusted