# Position Description

## Research Scientist/Engineer – CSOF5

The following information is for applicants

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| Advertised Job Title**:** | Research scientist – ACCESS Earth System Modeller |
| Job Reference: | 60483 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | * All Candidates |
| Percentage of Client Focus - Internal: | 50% |
| Percentage of Client Focus - External: | 50% |
| Reports to the: | Land surface modelling team leader |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries | Dr Ying-Ping Wang, [yingping.wang@csiro.au](mailto:yingping.wang@csiro.au), 03 9239 4577 |
| Contact Details For Applying | Call 1300 984 220 or email [careers.online@csiro.au](mailto:careers.online@csiro.au). |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon |

## Role Overview:

The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You 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 Climate Science Centre is a key developer of the Australian Community Climate and Earth System Simulator (ACCESS). ACCESS-ESM is the model version that includes carbon cycle components for the land, ocean and atmosphere, including simulation of the feedbacks between climate and land. The role would be an important part of the small team that develops and uses ACCESS-ESM to address science questions relevant to climate policy. These research needs are driven by the Paris agreement and the commitments of the Australian government to limit global warming.

The Research scientist will undertake 'hands-on' modelling work including contributing to ACCESS-ESM development, and developing strong external collaborations. You will also be raising the team's profile through high-impact publications designing experiments, running the model, analysing simulations and presenting results.

## Duties and Key Result Areas:

* Identify key science questions around climate-carbon feedbacks and land-based climate mitigation policies and use the ACCESS-ESM model to address these questions; develop strong expertise in those areas in earth system modelling.
* Further develop the land surface model (CABLE) in ACCESS-ESM including implementing new model components as required.
* Publish key results in peer-reviewed literature.
* Develop strong internal and external collaborations and represent the team with stakeholders.
* 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, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## Competencies:

1. **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.**
2. **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.**
3. **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.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **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.**
6. **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 changes.

## Selection Criteria:

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

1. PhD in physical sciences or related areas.
2. Work experience in global land surface modelling, within the environment of coupled climate or earth system modelling, including demonstrated ability to show initiative and meet deadlines.
3. A strong publication record in the area of global land modelling.
4. Excellent computing skills including experience with High Performance Computing; Unix/Linux operating systems; Fortran; Python or similar scripting languages; data analysis and visualisation tools; handling large datasets in formats such as netCDF.
5. Evidence of ability to work flexibly and independently as well as part of a team and to form and maintain effective working relationships with a range of colleagues and collaborators. Excellent written and verbal communication skills.

## Desirable Criteria:

1. Good understanding of the land carbon and biogeochemical cycles, and the impact of land use change on carbon and nutrient cycles.
2. Experience working in code development for a global land surface or climate model.

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