# Position Details

## Remote sensing – CSOF5

|  |  |
| --- | --- |
| The following information is for applicants | |
| Advertised Job Title | Remote Sensing Specialist |
| Job Reference | 80882 |
| Salary | AU$102k - AU$111k per annum (pro-rata for part-time), plus up to 15.4% superannuation |
| Tenure | Specified Term of up to 4 years  Full time or part time may be considered |
| Location(s) | Melbourne, Brisbane, Canberra preferred |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Team Leader, Bushfire Adaptation |
| Number of Direct Reports | 0 |
| Enquire about this job | Nerida Horner (nerida.horner@csiro.au)  phone +61 7 4753 8547 |
| How to apply | 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. |

### Role Overview

CSIRO is the national science agency that undertakes research to make life better for Australia and Australians. CSIRO have partnered with the Bureau of Meteorology, Geoscience Australia, and the Australian Bureau of Statistics in creating the newly established Australian Climate Service.

The Australian Climate Service (ACS) was established to address a series of recommendations from the Royal Commission into National Natural Hazard Arrangements, and will be the Commonwealth’s trusted provider of data, information and knowledge-based services to support improved preparation for, response to and recovery from natural disasters in Australia. It brings together Australia’s leading climate and natural disaster information and expertise in a customer-led and mission-focussed national capability.

The ACS has commenced a major 4-year program of work, in which CSIRO will lead a series of customer-oriented projects. The projects will build national capabilities to:

* Provide Australian national bushfire intelligence, to inform relief, recovery and longer-term disaster risk reduction activities;
* Improve the capture, standardisation and use of disaster impact and consequence data across all elements of the disaster cycle;
* Catalyse and scale-up investment in disaster risk reduction, adaptation and resilience.

We are seeking a remote sensing specialist to join this dynamic scientific team to support delivery of the national bushfire intelligence platform. The role includes remotely sensed data processing, and integration of a range of spatial data, programming and modelling capabilities. The role involves the design and implementation of processing methods, algorithms and workflows that help inform bushfire fuel state, fire behaviour and hazards.

The Bushfire Adaptation and Spatial sciences teams are primarily based in Canberra, Melbourne and Brisbane however this role will work collaboratively with colleagues who are geographically dispersed throughout Australia. You will have the opportunity to build and maintain networks, provide scientific leadership and pursue new ideas and approaches that create new concepts. The role is based within CSIRO Land and Water (L&W) Business Unit. The primary focus of L&W is to develop information and technologies required by government, industry and the Australian and international communities to protect, restore, and manage natural and built environments. More broadly, 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. Opportunities may emerge to work with and support other projects in CSIRO’s Land and Water Business Unit portfolio of projects.

Internal and external engagement partners for this role includes: internal CSIRO, ACS partners, ACS customers, collaborators and end users.

**Duties and Key Result Areas:**

Remote sensing specialists work with project leads and more senior researchers to:

* Contribute to and/or lead aspects of scientific projects, including the written and oral communication of results and their implications.
* Development of data processing methods and workflows for remotely sensed data from satellite, airborne and terrestrial sensors, including their integration with large spatial and temporal environmental datasets.
* An ability to use and customise common spatial modelling tools such as ArcGIS or QGIS.
* Implementing statistical, physical and process models that report on environmental processes.
* Developing data processing workflows using programming skills in a high level language such as R or Python.
* Ensuring data integrity and quality, including maintaining and managing metadata
* Collaborative software development using version control systems such as Azure DevOps, BitBucket and GitHub.
* Address problems promptly and in a constructive manner, selecting the most profitable lines of attack upon a problem, preparing detailed design proposals and experimental protocols.
* 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.

*The role will also require:*

* Significant contributions to the interpretation and communication of scientific research and technological results. This may include collaborating on presentations and written reports for, clients and the scientific and/or technology community,representing CSIRO externally, including in public forums, with industry or the research sector or with government.
* Under general direction, participation in planning projects and accepting responsibility for the scheduling and completion of major project activities, including allocating and directing tasks where appropriate.
* Accountability for the quality of the results delivered, the alignment of project activities with the business, research and/or technology directions.
* Adherence to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
* Other duties as directed.

## **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 response 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 changes.

## **Selection Criteria**

#### Essential

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

* A PhD (or an equivalent combination of qualifications and research experience) in a quantitative discipline such as science, engineering, IT or a related field
* Experience in the use of a range of remote sensing data and their application in multi-disciplinary projects that support decision making for environmental management, investment, and policy.
* Proficiency in computer programming or scripting languages for automating workflows and the processing of large data sets.
* Demonstrated experience with a range of computing platforms (e.g., high-performance and cloud computing) and programming languages (e.g., Python, R).
* Experience in the implementation and use of modelling approaches that report on environmental processes.
* Sound written and oral communication skills, including the production of scientific reports.

**Desirable**

* An ability to develop customised tools and libraries for common geographic information systems (GIS) such as ArcGIS and/or QGIS.
* Established knowledge and understanding of bushfire processes, risk analysis and mitigation.
* A capacity to develop and implement algorithms and tools for modelling environmental processes in a relevant discipline such as natural hazards, ecology, climate and hydrology.
* Ability to articulate complex scientific concepts, as demonstrated by experience in the generation of technical reports or peer-reviewed journals articles.
* Experience in collaborative project teams and use of project management tools.

Special Requirements

* The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.

## **About CSIRO:**

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

Find out more about CSIRO

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 [Land and Water](https://www.csiro.au/en/Research/LWF)

Find out more about CSIRO’s research on Climate and Disaster Resilience <https://research.csiro.au/dsp/climate-and-disaster-resilience/> and <https://research.csiro.au/enabling-resilience-investment/>

Find out more about the Australian Climate Service <https://www.acs.gov.au/>