



**Australian
National
University**

Position Description

College/Division:	Research and Innovation
Department/Unit:	ACCESS National Research Infrastructure (NRI)
Position Title:	Research Software Engineer
Classification:	ANU Officer 6/7 (Specialist)
Position No:	TBC
Responsible to:	Team Leader
Number of positions that report to this role:	
Delegation(s) Assigned:	

PURPOSE STATEMENT:

ACCESS – The Australian Community Climate and Earth System Simulator – is a collaborative venture between Government and the Australian research community to support development, maintenance and access to climate and weather models and data. ACCESS is being transformed into a national research infrastructure capability accessible by a broader community of users, enabled by Australian Government investment through the National Collaborative Research Infrastructure Strategy (NCRIS). Hosted at ANU, ACCESS-NRI (ACCESS National Research Infrastructure) is established as a multi-party collaborative venture responding to the current and future needs of Australia's scientific, Government and stakeholder community.

The Research Software Engineer will provide technical expertise to support ACCESS-NRI's computational and scientific software development within a team of software developers. The successful candidate will contribute and/or lead development, optimisation, and deployment of software and workflows that enable climate and Earth system modelling, utilising high-performance computing, visualisation and big-data approaches for the benefit of the Australian research community.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

ACCESS-NRI is led by a Director, who will play a national and international role in promotion of the ACCESS modelling capability, contribute to the wider development of climate, Earth system and weather modelling in Australia and provide technical and strategic leadership. There are two Associate Directors within the ACCESS-NRI facility (Associate Director, Model Development and Associate Director, Release Management) and 9 Team Leaders in Atmosphere, Ocean, Ice Sheet, Coastal, Land, Model Evaluation and Diagnostics, User Training, Software Transformation and Release Management.

The Research Software Engineer will operate in one of these ACCESS-NRI teams, reporting to their team lead. The Research Software Engineer will be expected to work collegially, leading by example to develop and maintain effective, productive and beneficial workplace relationships with colleagues, as well as with ACCESS-NRI partners and the wider research community.

Role Statement:

Under broad direction of their Team Leader, the Research Software Engineer will:

- Contribute to the development and assessment of climate and Earth system modelling software, including system requirements, interfaces and specifications.
- Contribute to the management of code repositories hosted by ACCESS-NRI.
- Contribute to the performance optimisation and evaluation of ACCESS-NRI software.
- Provide advice and technical support through the investigation, resolution and tracking of software issues.
- Apply software engineering knowledge in contributing to new project proposals.

- Train and mentor other members of the team, research students and staff across the ACCESS community in numerical and computational techniques.
- Maintain a working knowledge of best-practice procedures in the context of software development, and an awareness of relevant state-of-the-art technologies that might be applied to climate and Earth system modelling.
- Contribute to the preparation of technical documentation of software developed by ACCESS-NRI, as well as presentations and preparation of articles for publication.
- Comply with, maintain an awareness of and help promote all ANU policies and procedures and in particular those relating to work health and safety and equal opportunity, including a demonstrated high level of understanding of equal opportunity best practice and a commitment to their application in a university context.
- Perform other duties as requested, consistent with the classification level of the position.

SELECTION CRITERIA:

1. A degree in Computer Science, Climate Science or related disciplines, or an equivalent combination of experience and education/training in scientific software.
2. Experience working with scientific programming languages, scripting languages and knowledge of common data formats.
3. Knowledge of weather, climate or Earth system modelling, or other relevant scientific modelling, including high performance/parallel computing and code management.
4. Experience in gathering requirements and building software to meet user needs.
5. Experience in working independently with minimal supervision, with an ability to understand code written by others quickly and self-sufficiently.
6. Demonstrated ability to work effectively and harmoniously as part of a team as well as excellent interpersonal and communication skills to relate effectively and provide guidance to a wide range of people.
7. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Employment in this position is conditional on satisfactory results in accordance with the Background Checking Procedure which sets out the types of checks required by each type of position. All appointments are required to make relevant declarations to comply with the National Higher Education Code to Prevent and Respond to Gender-Based Violence.

Supervisor/Delegate Name:	Andy Hogg	Date:	April 2024
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References:[General Staff Classification Descriptors](#)[Academic Minimum Standards](#)



Position Details

College/Div/Centre	Research and Innovation	Dept/School/Section	RIE
Position Title	Research Software Engineer	Classification	
Position No.		Reference No.	

In accordance with the Work Health and Safety Act 2011 (Cth) the University has a primary duty of care, so far as reasonably practicable, to ensure the health and safety of all staff while they are at work in the University.

- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- This form must be completed by the supervisor of the position. Without this form jobs cannot be advertised.
- Once an applicant has been selected for the position they must familiarise themselves with the University [WHS Management System Handbook](#).
- The hazards identified below are of generic nature in relation to the position. It is not correlated directly to training required for the specific staff to be engaged. Identification of individual WHS training needs must be in accordance with WHS Local Training Plan and through the WHS induction programs and Performance Development Review Process.
- Information regarding reasonable workplace adjustments that may be required to enable an individual to fulfil the inherent requirements of their position is available at [2024_ANU Inherent Requirements Reference Table.pdf](#)

Potential Hazards

Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a **regular** or **occasional** part of the duties.

TASK	regular	occasional	TASK	regular	occasional
key boarding	☒	☐	laboratory work	☐	☐
lifting, manual handling	☐	☐	work at heights	☐	☐
repetitive manual tasks	☐	☐	work in confined spaces	☐	☐
organizing events	☐	☐	noise / vibration	☐	☐
fieldwork & travel	☐	☐	electricity	☐	☐
driving a vehicle	☐	☐			
NON-IONIZING RADIATION			IONIZING RADIATION		
solar	☐	☐	gamma, x-rays	☐	☐
ultraviolet	☐	☐	beta particles	☐	☐
infra red	☐	☐	nuclear particles	☐	☐
laser	☐	☐			
radio frequency	☐	☐			
CHEMICALS			BIOLOGICAL MATERIALS		
hazardous substances	☐	☐	microbiological materials	☐	☐
allergens	☐	☐	potential biological	☐	☐
cytotoxics	☐	☐	allergens		
mutagens/teratogens/ carcinogens	☐	☐	laboratory animals or insects	☐	☐
pesticides / herbicides	☐	☐	clinical specimens, including blood	☐	☐
			genetically-manipulated specimens	☐	☐
			immunisations	☐	☐

[PSYCHOSOCIAL HAZARDS](#) (please specify):

OTHER POTENTIAL HAZARDS (please specify):