



Australian  
National  
University

## Position Description

<b>College/Division:</b>	Deputy Vice-Chancellor (Research and Innovation)
<b>Faculty/School/Centre:</b>	National Computational Infrastructure (NCI)
<b>Department/Unit:</b>	
<b>Position Title:</b>	Staff Scientist
<b>Classification:</b>	ANU Officer Grade 8 (IT)
<b>Position No:</b>	TBA
<b>Responsible to:</b>	Manager, User Services
<b>Number of positions that report to this role:</b>	0
<b>Delegation(s) Assigned:</b>	TBA

### PURPOSE STATEMENT:

National Computational Infrastructure (NCI) is Australia's leading national provider of high-end computational and data-intensive services, with a well-respected reputation for its services, expertise and innovation. NCI is an operating unit of the Australian National University and is built on and sustained by a formal collaboration of national research organisations, ANU, CSIRO, Bureau of Meteorology, Geoscience Australia, other research-intensive universities and eResearch support organisations nationally.

NCI's high performance computing systems include a 57,500 CPU core Fujitsu Primergy system, Raijin; a high performance OpenStack data-intensive compute cloud; high speed storage including large parallel Lustre filesystems and deep storage systems.

NCI is seeking an experienced bioinformatician to support growing requirements in the area of user services and training at the forefront of biological science using high performance computing, including contributions to the development, implementation and support of highly-scaling codes for use on NCI HPC systems.

### KEY ACCOUNTABILITY AREAS:

#### Position Dimension & Relationships:

The Staff Scientist reports to the Manager, User Services and works closely with other members of the NCI team, particularly the HPC Systems Team, and the Cloud and Storage and Infrastructure Teams. Interaction and cooperation with bioinformatics researchers at the ANU John Curtin School of Medical Research, including the ANU Bioinformatics Consultancy, ANU Biomolecular Resource Facility, ANU Centre for Biomolecular Screening, the ANU-CSIRO Centre for Genomics, Metabolomics and Bioinformatics, and the Kinghorn Centre for Clinical Genomics at the Garvan Institute of Medical Research shall also be important relationships for this position, as will be interaction with a network of bioinformatics colleagues nationally.

### Role Statement:

Under broad direction, the Staff Scientist will:

1. Manage support, from the basic through to the advanced, for users of NCI services and facilities, so as to provide a state-of-the-art, quality service to the NCI user community, with a focus on biological science users. The incumbent will also proactively participate in additional core areas, with approved short-term work plans, to strengthen NCI operational support. This may include the provision of assistance in implementing, enhancing and adopting parallel algorithms, or other performance-enhancing improvements, into existing projects, and scientific community project support in areas prioritised by NCI.
2. Liaise with user communities and other NCI staff to modify and manage specialist user community software and systems, to be hosted on NCI facilities and services.
3. Develop courses, specialised training, documentation and online materials for the NCI user community.
4. Liaise with and assist other staff of NCI on the support of integrated services and workflows that span the facility and other interoperable resources.
5. Keep abreast of developments in bioinformatics software and practices, and high performance computing

generally.

6. Comply with all ANU Policies and procedures, and in particular those relating to work health and safety and equal opportunity.
7. Perform other duties as required, consistent with the classification of the position and in line with the principle of multi-skilling.

## SELECTION CRITERIA:

1. Progress towards Postgraduate qualifications and extensive relevant experience, or an equivalent combination of education, training and experience which evidence a capacity to undertake the role.
2. Substantial experience with high performance computing in scientific research and/or a scientific application area and a good working knowledge of HPC programming. Experience in one or more of the following areas is essential: MPI parallel programming, performance measurement and profiling of applications, debugging scientific applications and algorithms for high-performance numeric computation.
3. Demonstrated expertise in bioinformatics as applied to analysis of high-throughput biological data in an HPC environment, including design and implementation of bioinformatics processing pipelines, workflow management, and management of source data and products.
4. Experience in Linux systems administration, including basic networking, user account administration and software installation is highly desirable.
5. Demonstrated expert-level experience with high level programming languages such as C, C++ and Fortran, as well as scripting languages such as Python. Familiarity with the Linux operating system and Linux/GNU pre-packaged environments is essential.
6. Demonstrated high-level oral and written communication skills, including a proven ability to plan and write high quality reports and presentation materials and present workshops and seminars.
7. Demonstrated ability to work within a team and to adapt to changes as infrastructure and service requirements evolve, including a demonstrated capacity to undertake a significant role in application software development.
8. A high level of understanding of equal opportunity principles and a commitment to the application of EO policies in a university context.

**Supervisor/Delegate Signature:**

**Date:**

29/05/2018

Printed Name:

Prof Sean Smith

**Uni ID:**

u1056946

## References:

[General Staff Classification Descriptors](#)

[Academic Minimum Standards](#)



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# Pre-Employment Work Environment Report

## Position Details

<b>College/Div/Centre</b>	Deputy Vice-Chancellor (Research and Innovation)	<b>Dept/ School/Section</b>	National Computational Infrastructure (NCI)
<b>Position Title</b>	Staff Scientist	<b>Classification</b>	ANU Officer Grade 8 (IT)
<b>Position No.</b>	TBA	<b>Reference No.</b>	

In accordance with the Occupational Health and Safety Act 1991 the University has a duty of care to provide a safe workplace for all staff.

- This form must be completed by the supervisor of the advertised position and forwarded with the job requisition to Appointments and Promotions Branch, Human Resources Division. Without this form jobs cannot be advertised.
- This form is used to advise potential applicants of work environment issues prior to application.
- Once an applicant has been selected for the position consideration should be given to their inclusion on the University's Health Surveillance Program where appropriate – see . [http://info.anu.edu.au/hr/OHS/\\_\\_\\_Health\\_Surveillance\\_Program/index.asp](http://info.anu.edu.au/hr/OHS/___Health_Surveillance_Program/index.asp)  
Enrolment on relevant OHS training courses should also be arranged – see [http://info.anu.edu.au/hr/Training\\_and\\_Development/OHS\\_Training/index.asp](http://info.anu.edu.au/hr/Training_and_Development/OHS_Training/index.asp)
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see 'Employment Medical Procedures' at [http://info.anu.edu.au/Policies/\\_DHR/Procedures/Employment\\_Medical\\_Procedures.asp](http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp)

## 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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	laboratory work	<input type="checkbox"/>	<input type="checkbox"/>
lifting, manual handling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	work at heights	<input type="checkbox"/>	<input type="checkbox"/>
repetitive manual tasks	<input type="checkbox"/>	<input type="checkbox"/>	work in confined spaces	<input type="checkbox"/>	<input checked="" type="checkbox"/>
catering / food preparation	<input type="checkbox"/>	<input type="checkbox"/>	noise / vibration	<input type="checkbox"/>	<input checked="" type="checkbox"/>
fieldwork & travel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	electricity	<input type="checkbox"/>	<input type="checkbox"/>
driving a vehicle	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
<b>NON-IONIZING RADIATION</b>			<b>IONIZING RADIATION</b>		
solar	<input type="checkbox"/>	<input type="checkbox"/>	gamma, x-rays	<input type="checkbox"/>	<input type="checkbox"/>
ultraviolet	<input type="checkbox"/>	<input type="checkbox"/>	beta particles	<input type="checkbox"/>	<input type="checkbox"/>
infra red	<input type="checkbox"/>	<input type="checkbox"/>	nuclear particles	<input type="checkbox"/>	<input type="checkbox"/>
laser	<input type="checkbox"/>	<input type="checkbox"/>			
radio frequency	<input type="checkbox"/>	<input type="checkbox"/>			
<b>CHEMICALS</b>			<b>BIOLOGICAL MATERIALS</b>		
hazardous substances	<input type="checkbox"/>	<input type="checkbox"/>	microbiological materials	<input type="checkbox"/>	<input type="checkbox"/>
allergens	<input type="checkbox"/>	<input type="checkbox"/>	potential biological allergens	<input type="checkbox"/>	<input type="checkbox"/>
cytotoxics	<input type="checkbox"/>	<input type="checkbox"/>	laboratory animals or insects	<input type="checkbox"/>	<input type="checkbox"/>
mutagens/teratogens/ carcinogens	<input type="checkbox"/>	<input type="checkbox"/>	clinical specimens, including blood	<input type="checkbox"/>	<input type="checkbox"/>
pesticides / herbicides	<input type="checkbox"/>	<input type="checkbox"/>	genetically-manipulated specimens	<input type="checkbox"/>	<input type="checkbox"/>
			immunisations	<input type="checkbox"/>	<input type="checkbox"/>
<b>OTHER POTENTIAL HAZARDS (please specify):</b>					

<b>Supervisor's Signature:</b>		<b>Print Name:</b>	<b>Dr Roger Edberg</b>	<b>Date:</b>	
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