NCI AUSTRALIA

DIRECTOR

National Computational Infrastructure

Closing date: Sunday 6 November 2016

Host organisation

Australian National University

Major Collaborators

Australian Government
Bureau of Meteorology

CSIRO

Australian Government
Geoscience Australia

Supported by the Australian Government

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LETTER FROM THE CHAIR, BOARD OF NATIONAL COMPUTATIONAL INFRASTRUCTURE (NCI)

On behalf of the Board of NCI and the hosting institution the ANU, I have great pleasure in inviting applications for appointment as the Director, NCI.

NCI is Australia's preeminent and most highly integrated high-performance computing and data facility. The facility provides world-class, high-end services for Australia's research and innovation communities.

The successful appointee will take on the leadership of NCI at an exciting time in the history of high performance computing services in Australia. He or she will have the opportunity to lead the next phase of NCI's development.

The successful appointee will be expected to play a significant national and international role to promote NCI and contribute to the wider development of eResearch in Australia.

I encourage your interest in the position.

Emeritus Professor Michael Barber FAA, FTSE, FAICD

Chair, NCI Board

ABOUT NATIONAL COMPUTATIONAL INFRASTRUCTURE

Overview

National Computational Infrastructure (NCI) has a mission to raise the ambition, impact and outcomes of Australian research through access to advanced, computational, data-intensive models and to position Australia at the forefront of international e-research services. NCI is Australia's preeminent and most highly integrated high-performance computing and data facility. The facility provides world-class, high-end services for Australia's research and innovation communities.

The Board is seeking an outstanding applicant to lead NCI through the next phase of its evolution. The successful applicant will be aware of technologies underpinning high-performance e-infrastructures, have management acumen suited to supporting research communities, and be capable of meeting strategic objectives set by the Board.

The NCI Facility:

The Facility has a tightly integrated high-performance data and computational infrastructure including:

> A petaflop supercomputer;

> A supercomputer-class private cloud configured for scalable data services; and

> A high-performance 20 petabyte filesystem.

The supercomputer (Raijin) is nearing the end of its competitive life and is expected to be retired in the next phase of NCI's development.

The data repository is based on the highest performing filesystems in the southern hemisphere. Currently, its main use is for open-access research collections of environmental, astronomy and medical research data.

The Facility has an establishment of approximately 60 staff, acknowledged nationally and internationally for their expertise. NCI fosters and maintains critical expertise for Australia's contributions to the international high-performance community. Its education program ensures research communities are able benefit from advanced technologies.

The NCI collaboration

NCI traces its lineage back nearly 30 years, from its roots as The Australian National University's (ANU) supercomputing service—Australia's first university supercomputer, from 1987–99, through the Australian Partnership for Advanced Computing (APAC), which hosted Australia's first national HPC services (2000–07), and from 2007 onwards under the banner of NCI.

NCI is now established through a Collaboration Agreement and supported by the Australian Government's National Collaborative Research Infrastructure Strategy. Funding through grants, awards and fees are components of the overall NCI resource base.

Since 2012, NCI has been sustained by a Collaboration of national research organisations, which in 2016 contribute some two-thirds of the annual recurrent budget of $18 million —with the other third provided by the Australian Government through NCRIS. The Collaboration includes ANU, the national science agency, CSIRO, the national meteorological agency, the Australian Bureau of Meteorology (BoM), the national geoscience agency (Geoscience Australia), the majority of Australia's research-intensive universities with support from the Australian Research Council (ARC), and a broad range of other organisations including university e-Research support consortia from around Australia, cooperative research centres, and medical research institutes.

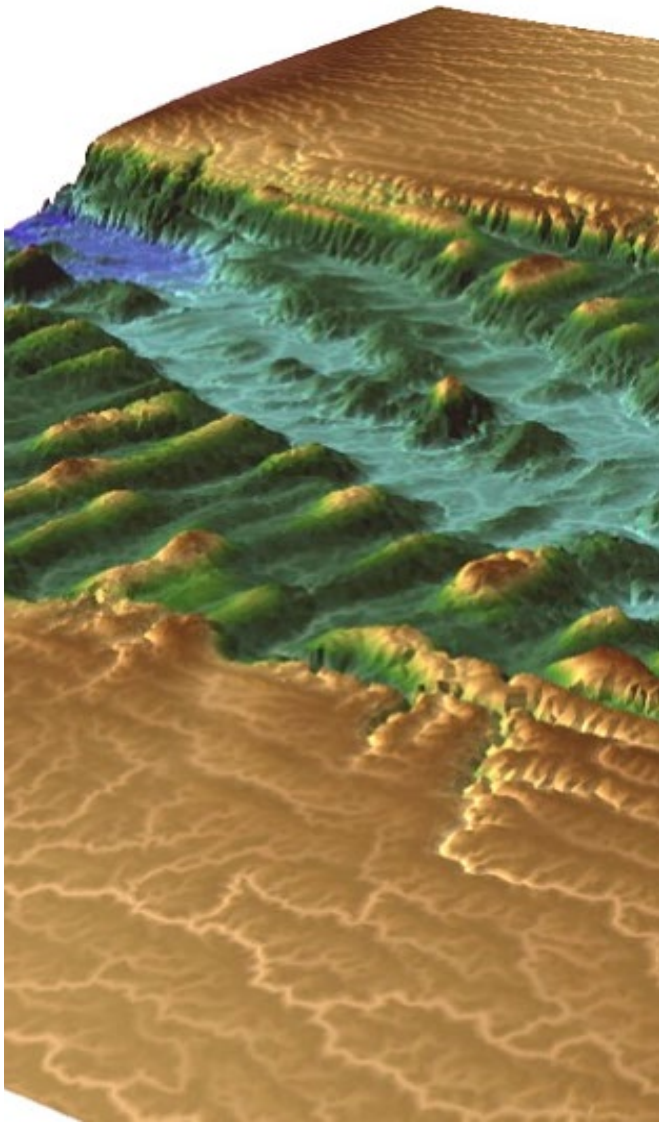
NCI's current advanced computing environment was established with an investment of $50 million by the Australian Government through the National Collaborative Research Infrastructure Strategy (NCRIS), and is housed in a purpose-built data centre ($26 million) that opened in late-2012.

Access and impact

Access to NCI resources and services occurs via a range of mechanisms: merit-based access, complementing the granting schemes of Australia's national research councils; separate merit allocation for flagship projects (including ARC Centres of Excellence); share allocations for co-investing partner organisations and, commercial service contracts for industry.

Underpinned by the Collaboration, NCI is strongly outcomes driven, focused on advancing research of excellence aligned with national priorities, and on delivering national benefits, particularly through Australia's national science agencies.

NCI supports research and development in 31 of Australia's universities, five of its national science agencies, and three medical research institutes. Within the university sector, NCI underpins the work of more than 200 research council-funded centres, projects, and fellowships, the annual value of which is $60 million. More than 500 journal articles annually, many in high-impact publications, acknowledge access to NCI.



In the field of climate and weather science, NCI provides the simulation and data analysis capability for an ARC Centre of Excellence, underpins the climate prediction/ impact/ adaptation programs of CSIRO, and directly supports the next-generation weather and seasonal prediction models by BoM being developed in an open, collaborative environment. The NCI team works on both the atmosphere and ocean models of the national climate suite, improving scalability and performance by 30-40%, with these enhancements being fed back to the international community.

NCI hosts one of only seven nodes of the Earth System Grid Federation (the global repository of the international CMIP climate collection) outside the USA, and plays a crucial role in earth observation research data services through GA, hosting (a) the Australian Geoscience Data Cube, a highly-processed, one-petabyte database derived from 35 years of the Landsat imagery and providing a unique tool for environmental research and policy, and future industry services, and (b) now the South-East Asian regional hub for the data from the EU Sentinel series of satellites.

The extent of the co-investment, the ever-growing number of organisations in the Collaboration, and invitations to play critical, integral roles in major national initiatives and research programs, demonstrate the extent to which NCI services are both essential and valued.

In 2016, approximately 55% of the resource allocations support university-centred research, with 44% servicing program-scale research and development in the national science agencies, and slightly more than 1% supporting industry innovation—an area which is growing rapidly.

In summary

The present trajectory is one that is dynamic, impactful and valued. It is into this environment that the Board of NCI, and ANU, seeks to appoint a successor to the foundation Director—one who will preserve the research-focused ethos of NCI today, and its dual hallmarks of quality and innovation, and advance it to the next stage of its development as a critical component of Australia's national research infrastructure.

Further information:

NCI website: nci.org.au/

NCI Annual Reports: nci.org.au/about-nci/annual-reports

NCI GOVERNANCE AND MANAGEMENT

NCI is an unincorporated organisation hosted by the ANU and governed by a Board acting within the Statutes and Policies of the University. The NCI Director reports to the Board on all NCI matters and to the DVC (Research) on compliance with ANU Policies.

The Director, NCI is employed by the ANU and may, at the University's discretion, hold academic status in the ANU.

Current Board members are:

Emeritus Professor Michael Barber
Chair, NCI Board, Independent

Professor Lindsay Botten
Director, NCI

Professor Margaret Harding
Deputy Vice-Chancellor (Research)
The Australian National University

Graham Hawke
Deputy Director (Environment & Research)
Bureau of Meteorology

Dr David Williams
Executive Director, National Facilities & Collections
CSIRO

Dr Chris Pigram
Chief Executive Officer
Geoscience Australia

Emeritus Professor Robin Stanton
Deputy Chair, NCI Board, Independent

Dr Thomas Barlow
Strategist
Barlow Advisories, Independent

The Board was established by the NCI Collaboration Agreement. The Board sets strategic directions, supports the Director in reaching objectives and is responsible for NCI related contracts.

Management

The management structure headed by the Director is based on two technical portfolios, Services and Technologies, and Research Initiative and Engagement, each led by an Associate Director and an administrative team led by a Business Manager.

Services and Technologies provide the integrated, high-performance computing and storage platform and the expert operations underpinning computational and data-intensive workloads. Services and Technologies are also responsible for user support functions.

Research Initiatives and Engagement delivers researcher-facing services for innovation in high-performance computing, advanced data services, collections management, virtual environments and visualization. The portfolio also builds collaborative platforms for enhancing research competiveness.

NCI staff are ANU employees.

THE ROLE

The role of the Director, National Computational Infrastructure

Purpose statement

NCI is Australia's preeminent and most highly integrated high-performance computing and data facility delivering high performance computational services to raise the ambition, impact, and outcomes of Australian research and innovations. The position provides leadership and management for NCI.

Position dimension and relationships

NCI is an Unincorporated Collaboration Venture formed by a number of organisations, including ANU, CSIRO, Bureau of Meteorology and Geoscience Australia, for funding and managing the national high performance facility. NCI is organisationally embedded in the ANU and governed by a Board which operates within the broader University governance structure. The Director is accountable to the NCI Board for management of NCI resources and to the ANU, through the ANU Deputy Vice-Chancellor (Research) for compliance with ANU Statutes and Policies and NCI contracts.

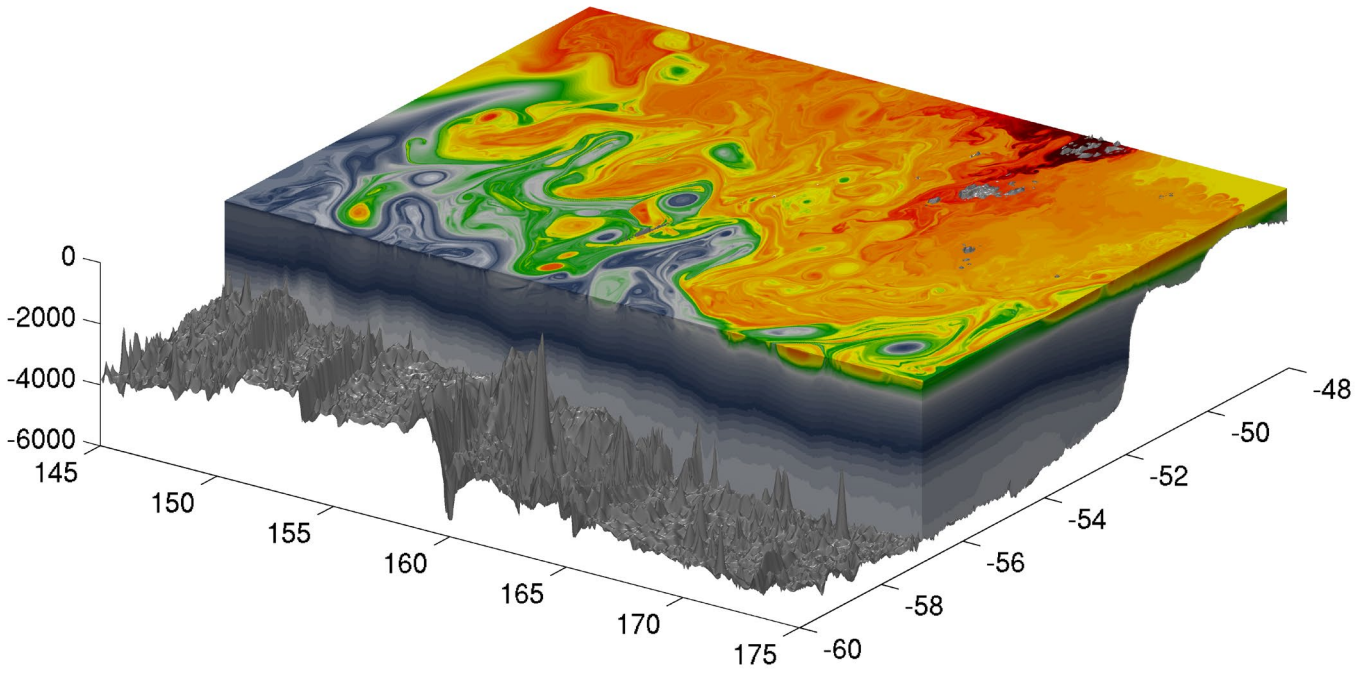
Role statement

- Provide national leadership on the development of high performance computational services, and foster an environment for developing national expertise in high performance e-infrastructures
- Build and maintain collaborative operational interfaces between NCI and its partners, supporting associated needs as they develop
- Direct the development of high-quality, reliable high-performance services through their value to national research priorities and industry innovations
- Identify opportunities for engagement with both the research sector and industry which would benefit from NCI's distinctive capabilities and expertise
- Develop, and facilitate long-term strategies for NCI to meet its objectives in a cost-effective manner
- Lead NCI by developing a culture of cooperation, innovation and high-quality service
- Provide leadership, management and direction of NCI for the achievement of its plans and performance objectives;
- Position NCI internationally with through collaborative engagement with similar facilities, and ensure NCI is developed through knowledge of technologies for high performance e-infrastructure and their application in research applications of national significance
- Other duties as required.

THE ROLE

Selection criteria

1. PhD or equivalent professional standing in a relevant field or profession and an internationally recognised record of research or innovation in e-research.
2. A demonstrated ability to advocate for high performance e-infrastructures in the national interest and to ensure NCI contributes to Australia's e-research policy.
3. A demonstrated track record of leadership in the strategic, developmental and managerial dimensions of a complex and collaborative partnership based organisation, including developing, leading and managing collaborative projects.
4. A demonstrated understanding of the workings of Federal Government, the higher education sector and research institutions, especially those related to publicly funded infrastructure.
5. A cogent track record of entrepreneurial, management and team building skills and a demonstrated ability to lead and manage a service-oriented organisation based on highly qualified professional staff and governed by a Board of Directors.
6. Strong interpersonal, persuasion and negotiation skills; including demonstrated high level oral and written communication skills.
7. Interest in and a demonstrated ability to foster industry access to NCI.
8. Demonstrated achievement in relation to incorporation of EO principles into strategic planning and the capacity to accept devolved responsibility for achievement of equity and diversity.



HOW TO APPLY

For applications to be accepted they must contain:

- A full Curriculum Vitae;
- A response to the Selection Criteria;
- Referee details;
- Availability with respect to the time frame for interview, anticipated to be 29 November 2016.

Curriculum Vitae

- Details of education, professional training and qualifications
- Positions held, including relevant dates, titles, reporting lines, responsibilities and key achievements
- Any other relevant information such as contributions to professional associations and community activities; and current salary package and component parts.

Response to Selection Criteria

Candidates are required to respond the Selection Criteria, taking into account experience, past roles and expertise. It should be no more than four to five pages in length, in total.

Statement of Claim

In addition to the Selection Criteria, in no more than two pages outline your views on current trends driving high performance computational services, your vision for this role, the processes you would use for implementing that vision and how the Committee would assess whether you have been successful.

Referees

Applicants must provide full contact details for three referees who have agreed to supply confidential references if requested. Candidates should:

- state their relationship to the referees and why they have been nominated to speak on the candidate's behalf
- referees will only be contacted after consultation with the candidate.
- it is the candidate's responsibility to ensure that referees are willing to provide reports when contacted.

NCI reserves the right to seek reports on the suitability of candidates from experts in the field, other than those nominated by the candidate.

Should a candidate not wish a specific person or persons to be contacted, please advise at the time of application.

Availability

Candidates are asked to:

- provide an indication of the earliest date on which they would be available to commence duties
- provide a confidential email address and suitable daytime and evening telephone contact details (including mobile) as well as details of availability during this period.

NCI reserves the right to invite applications and/or to not make an appointment.

Applications close on 6 November 2016.
Interviews to be held on 29 November 2016

Enquiries

For further information about the position and for a confidential discussion please contact:

Clare Schnelle, Research Associate

Clare.schnelle@perrettlaver.com or on +61 2 8354 4000.

Selection Committee

Emeritus Professor Michael Barber (Chair)

Chair, NCI Board

Professor Margaret Harding

Deputy Vice-Chancellor (Research)

Dr Chris Pigram

Chief Executive Officer, Geoscience Australia

Professor Dieter Kranzlmüller

Director, Leibniz SC Centre

Professor Elanor Huntington

Dean, ANU College of Engineering and Computer Science

Dr Susan Pond

Director, AusBiotech Ltd

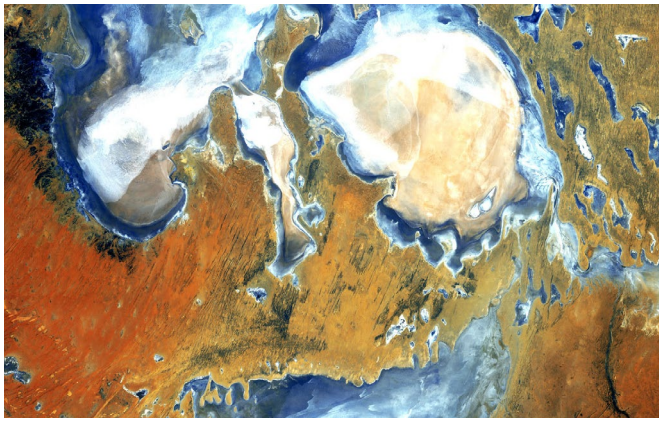
ANU, HOST OF THE NATIONAL COMPUTATIONAL INFRASTRUCTURE

Overview

The Australian National University (ANU) is one of the world's foremost research universities. Distinguished by its relentless pursuit of excellence, ANU attracts leading academics and outstanding students from Australia and around the world.

History

ANU was established by the Commonwealth Parliament in 1946 specifically to lead the development of the intellectual capacity of the nation through research and research training in line with the best international standards. It is the only Australian university established by a Commonwealth Act of Parliament. In 1960, ANU accepted responsibility for undergraduate education along with an expectation that the highest standards of education would be achieved.



Partnerships

ANU has strong links with leading research institutions in Australia and overseas. It is a founding member of the International Alliance of Research Universities, a co-operative network of 10 eminent international research-intensive universities which includes:

- University of Cambridge;
- University of Oxford;
- University of California, Berkeley;
- Yale University;
- Peking University;
- National University of Singapore;
- University of Tokyo;
- University of Copenhagen; and
- ETH Zurich.

Research-intensive education

As the specially-chartered national university, ANU conducts research at the highest levels in all of its colleges, and offers a unique research-led education to undergraduate and postgraduate students as well as postdoctoral fellows.

ANU advances the national intellectual and creative capacity in three key ways:

1. Through broad-based research and research-intensive education in the disciplines fundamental to all knowledge: the humanities, the sciences and the social sciences;
2. By supporting research and research-intensive education in a spectrum of professional disciplines; and
3. By studying Australia in its various contexts.

It is the aim of the University to achieve its objectives by creating an inspirational working environment for all its staff, students and visitors.

In each of its endeavours, ANU strives to achieve at the levels of the world's great universities.

Scale

ANU has 4,300 staff, 10,286 undergraduates and 6,925 postgraduate students. Its annual revenue exceeds $1.0 billion and consolidated assets are worth $2.5 billion.

Location

The University campus has over 200 buildings and occupies 145 hectares adjacent to the city centre of Canberra.

The University also has a number of smaller campuses:

- Mt Stromlo Observatory (west of Canberra);
- Siding Spring Observatory (near Coonabarabran, western New South Wales);
- North Australia Research Unit (Darwin, Northern Territory);
- Kioloa (coastal campus near Bawley Point, on the New South Wales South Coast);
- ANU Medical School - The Canberra Hospital campus;
- ANU Medical School - Calvary Hospital campus; and
- Health Facilities in South East New South Wales.

Further information about ANU can be found at **anu.edu.au/about**

WHY CHOOSE CANBERRA, AUSTRALIA

Canberra, the place to be

Canberra has the power to surprise, with its abundance of food, wine, art, culture, ideas and innovation. As an evolving city, this element of surprise continues even once you've made Canberra your home, with new developments, events and opportunities constantly emerging to keep life interesting.

Canberra is also a planned city – designed to maximise opportunities for work and play. As our Nation's Capital, big ideas emerge, circulate and grow here, thanks to unique links between leading thinkers in business, government, education and research. Our dynamic economy, highly educated workforce and an innovative business culture provide career and business opportunities unique to Canberra.

Our healthy appetite for outdoor pursuits is enhanced by the natural resources available: from sailing on Lake Burley Griffin, mountain biking at the world class Mount Stromlo facility or heading up to the Snowy Mountains for a day on the slopes. We are also home to most of Australia's major national cultural institutions, with whom the University has a close relationship, and a cultural calendar overflowing with international exhibitions, arts festivals and entertainment.

Where to live

Canberra is designed to maximise the quality of life, built on a blueprint that connects people with community and nature, Canberra provides you the opportunity to create a unique work/life balance, wherever you choose to live.

The architects who designed Canberra, Walter and Marion Burley Griffin, had a master plan to create a series of 'satellite cities' separated by nature reserves and connected with major roads. Today their vision lives on, with Canberra divided into seven distinct regions of residential suburbs, each serviced by a central business district.

The resulting benefits are that commuting times are short. Employment hubs are virtually on your doorstep and recreational facilities are within walking distance, regardless of where you live.

Find information on each district and the suburbs contained within them through the 'Explore Canberra' map.

Information on this page taken from:
http://www.canberrayourfuture.com.au

Education and childcare

Canberra nurtures the pursuit of dreams from the ground up. Here families are provided with the supportive services, facilities and environments to raise happy, inspired and resilient children. Community is crucial for the support of families and Canberra has a number of ways to connect families with each other through playgroups, family events and activities.

Find out more about Canberra's excellent childcare, preschool and school system here

CONTACT US

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