INFORMATION FOR CANDIDATES
FOR THE POSITION OF

PROFESSOR / DIRECTOR

CENTRE FOR GRAVITATIONAL
ASTrophysics
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Above: LIGO team members installing in-vacuum equipment as part of the squeezed-light upgrade.

Front page: Artist’s depiction of a black hole about to swallow a neutron star. Credit: Carl Knox, OzGrav ARC Centre of Excellence.
MESSAGE FROM THE DIRECTOR

The Centre for Gravitational Astrophysics (CGA) at The Australian National University is jointly supported by the Research School of Astronomy and Astrophysics (RSAA) and the Research School of Physics (RSPhys).

The Centre for Gravitational Astrophysics aims to take a leading national role in the astrophysical follow-up of sources detected by Advanced LIGO/Virgo/KAGRA and in the development of future gravitational wave observatories. This will pave the way for Australia to host one of the nodes of a global third-generation gravitational wave observatory. The Centre features pre-eminent astrophysicist Nobel Laureate Prof. Brian Schmidt, Australia’s leading Relativist Dist. Prof. Susan Scott and fellow Prime Minister Prize recipient and leader of Australia’s gravitational wave instrumentation program Dist. Prof. David McClelland.

If you are an outstanding gravitational wave astrophysicist or optical instrument specialist looking for an exciting position where you have the opportunity to contribute to an internationally collaborative centre, we would welcome your application for this Professor / Director position.

Distinguished Professor David McClelland
Director, Centre for Gravitational Astrophysics
The Australian National University

This booklet tells you about the position, CGA and the University, and about Canberra, which is a lovely and livable city.

ARTIST’S IMPRESSION OF A BLACK-HOLE COLLISION. IMAGE CREDIT: SXS
The Australian National University (ANU) is one of the world’s foremost research universities.

Distinguished by its relentless pursuit of excellence, the University attracts leading academics and outstanding students from Australia and around the world.

Further information about ANU can be found at: http://www.anu.edu.au/about.

**History**

The University 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, the University accepted responsibility for undergraduate education along with an expectation that the highest standards of education would be achieved.

**Scale**

The University 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.

**Partnerships**

The University 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

**Research-intensive education**

As the specially-chartered national university, the University 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.

The University 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, the University strives to achieve at the levels of the world’s great universities.

**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:

> Mount 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
> Health Facilities in South East New South Wales
The Centre for Gravitational Astrophysics (CGA) is founded to build a world-leading role for Australia in the science and technology of gravitational wave sources.

The centre strategically unifies the ongoing research at ANU Research School of Physics and ANU Research School of Astronomy and Astrophysics.

CGA currently has eight faculty and thirteen postdoctoral fellows. We will make four new faculty appointments in the near future, in addition to this Professor position.

The centre operates world-class facilities and collaborates with observatories and gravitational wave detectors that have a long history of research and technical activity at the forefront of astronomy and astrophysics.

CGA researchers have contributed to detection of gravitational waves, and continuous improvement of sensitivity of the LIGO detectors.

Active fields of research at CGA span instrumentation, theory, data analysis, source follow-up and multi-messenger astronomy.

Centre staff have access to the Australian National University Computational Infrastructure on the main ANU campus, OzSTAR Supercomputing Facility at Swinburne University of Technology, and the RSAA operating Siding Spring Observatory featuring the SkyMapper telescope.

Incorporating two Australian Research Council Centres of Excellence, OzGrav and EQUS, the centre facilitates close collaborations with other national and international research teams.

AN ARTIST’S IMPRESSION OF THE TWO NEUTRON STARS COLLIDING. IMAGE CREDIT: LSC/SONOMA STATE UNIVERSITY/AURORE SIMONNET
ABOUT THE ROLE

Purpose Statement

Jointly established by the Research School of Physics and Research School of Astronomy and Astrophysics, the Centre for Gravitational Astrophysics (CGA) is a leading centre for gravitational wave research in Australia; from developing measurement techniques that push the boundaries of precision laser interferometric measurement for fundamental and industrial activities to electromagnetic follow-up and gravitational astrophysics. CGA will build on the ANU’s strong partnerships with global gravitational wave observatories and will have access to a comprehensive array of optical and radio telescopes for studying the electromagnetic counterparts of the gravitational wave sources. The Centre features pre-eminent astrophysicist Nobel Laureate Brian Schmidt, Australia’s leading Relativist Susan Scott and fellow Prime Minister Prize recipient and leader of Australia’s gravitational wave instrumentation program David McClelland.

The Professor / Director is responsible for providing strategic leadership enabling academic staff in the Centre to achieve excellence in research, education, community engagement, professional activities and policy development, in line with the strategic goals of the Centre, College of Science and the wider ANU. The position undertakes strategic planning and effective management of the academic, educational, financial, physical and staff resources of the Centre.

Position Dimension & Relationships

The Professor / Director works under the broad direction of the Chair of the Governance Board (rotating between, Directors of the Research School of Astronomy and Astrophysics, and Research School of Physics) and works collegially with the staff of the Centre, academic and professional staff across ANU and with external partners. The broad role of the Professor is to foster excellence in research, education community engagement, professional activities and policy development.

Skill Base

A Professor is expected to possess advanced academic qualifications, broad expertise and deep knowledge in the relevant discipline area.

Level E academic positions are expected to possess leadership skills in order to foster excellence in that field of research within the university, the discipline and/or the profession and within the scholarly and/or general community. Experience in directing significant research groups, either in academia or industry, is also expected.

SKYMAPPER, THE STATE-OF-THE-ART, WIDE-FIELD SURVEY TELESCOPE, REPRESENTS A NEW VEHICLE FOR ASTRONOMICAL DISCOVERY IN AUSTRALIA.
Role Statement

The Professor / Director is responsible to the Chair of the Governance Board, for research and education leadership in the Centre, and for effective management of the Centre. The position will have primary responsibility for the following activities:

- Undertake and foster high impact independent research in the area of gravitational wave astrophysics, data analysis and/or instrumentation with a view to publishing original and innovative results in international refereed journals, present research at academic seminars and at prestigious national and international conferences, and collaborate with other researchers at a high international level.
- Maintaining and promoting a strong culture of research within the Centre through developing and encouraging innovative high-quality research, the acquisition of grants and engagement with industry and government.
- Maintaining and enhancing a range of innovative, research-led educational programs (undergraduate, graduate and Higher Degree Research) and ensuring the quality of the curriculum and the quality of delivery of these programs.
- Lead, supervise and develop less senior academic and research support staff in the Centre and College.
- Implementing appropriate outreach strategies and taking actions to enhance the national and international profile of the Centre and the University.
- Supporting the Dean of the College in implementing the College’s education and research planning.
- Developing a Strategic plan for the Centre and ensuring its integration in the overall College and University plans.
- Developing and managing budgets in consultation with the College Dean, and allocating resources within the Centre in a transparent manner.
- Aligning staffing resources and expertise to ensure achievement of the strategic and operational goals of the College.
- Providing advice to the College Dean and contributing to College/University strategic matters as requested.
- Developing a collegial and consultative environment in the Centre.
- Comply with all ANU policies and procedures and in particular those relating to work health and safety and equal opportunity.
- Other duties as consistent with the classification if the position and in-line with the principles of multi-skilling.

Selection Criteria

- An internationally recognised outstanding academic and/or professional career in Physics or Astrophysics and demonstrated ability to provide strategic academic leadership.
- An outstanding track record of articulating and prosecuting innovative research in the field and a compelling vision for the activities they will undertake and lead at the ANU.
- Experience and expertise in the provision of strategic planning, management and leadership within an academic environment, including management of large-scale university research and educational programs.
- An ability to enhance and develop the Centre and University’s national and International reputation and performance in education and research.
- A capacity to ensure a collegial and consultative environment within the Centre, to communicate effectively, and to engage with a broad range of internal and external stakeholders in order to secure positive outcomes for the University.
- Proven success in academic leadership, including mentoring and developing academic colleagues to achieve goals. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
- 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 strategies.

Background Checking

The ANU conducts background checks on potential employees, and 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.
WHY CHOOSE CANBERRA?

About Canberra
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 the Canberra lifestyle please visit Canberra Your Future at: http://www.canberrayourfuture.com.au/.
How to apply

Please submit your application online via the University’s online recruitment portal.

For applications to be accepted they must contain:

> a full curriculum vitae
> a response to the selection criteria
> referee details
> availability

Curriculum Vitae

> details of education, professional training and qualifications
> full list of publications
> positions held, including relevant dates, titles
> reporting lines, responsibilities and key achievements
> details of teaching and research experience (as appropriate)
> any other relevant information such as contributions to professional associations and learned societies, and community activities

Response to selection criteria

Applicants are required to respond to each of the criteria, taking into account experience, past roles and expertise.

Referees

> Applicants must provide full contact details for at least three referees who have agreed to supply confidential references if requested by the University.
> Applicants 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 applicant’s responsibility to ensure referees are willing to provide reports when contacted.
> The University 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

> Applicants are asked to provide an indication of the earliest date on which they would be available to commence duties at the University.
> The University reserves the right to invite applications and/or to not make an appointment.

Contact

For a confidential discussion, please contact:

Distinguished Professor David McClelland
Director, Centre for Gravitational Astrophysics

david.mcclelland@anu.edu.au

Telephone: +61 02 6125 9888
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 must be completed by the supervisor of the advertised position and appended to the back of the Position Description.
- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- Once an applicant has been selected for the position they must familiarise themselves with the University WHS Management System via Handbook guidance [https://services.anu.edu.au/human-resources/health-safety/whs-management-system-handbook](https://services.anu.edu.au/human-resources/health-safety/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.

### 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.

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<th>occasional</th>
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<td>laboratory work</td>
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<td>work at heights</td>
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<td>Organizing events</td>
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<td>laboratory animals or insects</td>
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<td>clinical specimens, including blood</td>
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OTHER POTENTIAL HAZARDS (please specify):

**Supervisor/Delegate Name:** Dist. Prof. David McClelland  **Date:** June 2023