



## Position Description

<b>College/Division:</b>	ANU College of Engineering and Computer Science
<b>Faculty/School/Centre:</b>	School of Computing
<b>Department/Unit:</b>	
<b>Position Title:</b>	Senior Research Fellow (Computational Science)
<b>Classification:</b>	Level C
<b>Position No:</b>	
<b>Responsible to:</b>	Director and Cluster Lead - Computational Science

### PURPOSE STATEMENT:

The ANU College of Engineering and Computer Science (CECS) has embarked on a major initiative to reimagine the role of engineering and computing in the 21st century. As outlined in the [CECS Strategic Intent](#) the College has a unique set of national responsibilities and an obligation to have a degree of impact befitting Australia's only national university.

To achieve such impact our College embodies principles and values to guide the pursuit of excellence in education; research, engagement and impact; and collegiality. These principles include collaborative teamwork, common strategic intent, nurturing peer and junior staff members, and acting with purpose and professionalism. These attributes are articulated in the CECS [Academic Performance Standards](#), which also indicate that each individual may pursue a unique path on the basis of their impact—which may cover a range of outputs and impact indicators. Our community contribute to making our environment the very best possible venue for all staff, stakeholder and student bodies.

### KEY ACCOUNTABILITY AREAS

The ANU College of Engineering and Computer Science is an interdisciplinary venture, with the aim of housing the very best and brightest from around the world to find and solve problems—not just engineers or computer scientists, but also the brightest minds both from industry and other academic disciplines, with varied backgrounds and areas of expertise. We will reimagine the traditional engineering and computing disciplines. We believe the responsibility of engineering and computing in the 21st century is to bring together expertise on people, technological systems, and science to put technology at the service of creating a more sustainable, responsible and safe world.

The ANU School of Computing has foundations in the computing and information sciences at the ANU. It is a leading centre for research in artificial intelligence and machine learning, computer systems and software, and theoretical foundations of computing. It encompasses traditional computer science but also data science and computational science, addressing the critical need to design, drive and sustain a fundamental program of strategic activities that will launch the new school. This is an opportunity to establish an innovative and forward-looking intellectual agenda, built on a diverse, inclusive culture.

The School of Computing has four broad focus areas, or activity Clusters: Intelligent Systems, Data Science/Analytics, Computing Foundations, and Computational Science. Each Cluster has an Academic Lead who is responsible for shaping the education, research and engagement activities in their Cluster. This structure allows for the concentration of resources and activities to increase potential for meaningful impact. The School also incorporates the Software Innovation Institute, with an Academic Translation Lead responsible for shaping the translation activities of the Software Innovation Institute across education, research, and engagement.

The purpose of this appointment in Computational Science is to:

1. Strengthen the School of Computing across all areas of computational science and high-performance computing and contribute to the strategic priorities of the School and the enduring mission of ANU.
2. Support the development of partnerships with other scientific and engineering disciplines (within and outside ANU) and industry and engage with the wider research community to embed progressive engineering and computing research and education capabilities.
3. Contribute to development of state-of-the-art, unique programs that are globally relevant to equip our students with diverse and multidisciplinary skills.
4. Support the establishment of innovative, interdisciplinary, outwardly focused computational science programs blending education, research and engagement.

## Position Dimension & Relationships:

The research fellow will be a member of the School of Computing within the Computational Science Cluster, accountable to the Activity Cluster Lead and to the School Director, and (as relevant) will be responsible for relationships with industry, government and other academic and professional staff across the University.

The Cluster Lead will set the strategic agenda for education, research, and engagement within their Cluster, working in collaboration with the School Director, Deputy Director, Associate Directors, and other Cluster Leads to achieve the strategic goals of the School. They will foster new collaborations that strengthen the School as a whole, generating new cross-cutting research, education and engagement programs that are on par with the best in the world.

While the role is research focussed, it does involve educational activities, outward-facing engagement and outreach, and commitment to organizational culture. The staff member is expected to contribute cooperatively to the overall intellectual life of the School, College and University.

The appointee will also work in partnership with both professional and academic staff to support and contribute cooperatively to the strategic priorities of the School of Computing, College and University.

## Role Statement:

Specific duties required of the **Level C Academic** may include:

- Undertake high impact collaborative and cross-disciplinary research that generates creative works and a body of unique intellectual knowledge in the areas of high-performance computing, domain-driven computational science, and/or data science as relevant to the Activity Cluster, School, and College, and aligned to the strategic directions of the School and College.
- Take an active role in seeking and generating resources to support the development of deep and transformational expertise in fields relevant to the Activity Cluster, School and College. Achieve impact through engagement with a range of stakeholders and / or funding bodies and also through the preparation of a combination of state-level, national and international research proposals, industry funds and approved consultancy arrangements. Where appropriate, oversee the management of grants received for research projects.
- Make a strong contribution to the engagement and impact activities of the School, with the aim to engage and activate a stakeholder community in academia / industry / start-ups / government / broader community, including communicating original, innovative and multi-disciplinary results in international refereed journals, academic seminars, national and international conferences, or appropriate fora for the field, and collaborate with other researchers at an international level. Also, leading outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
- Supervise, mentor and develop careers of less-senior academic and research staff in alignment with the professional development process at the ANU.
- Make a contribution to the educational activities of the Activity Cluster and School. This includes, but is not limited to, the preparation and delivery of lectures, tutorials, short courses and workshops; the preparation and delivery of professional and executive education courses; the preparation of online material; marking and assessment; and consultations with students. This also includes, but is not limited to, supervision of research students and coursework students working on individual or group projects at undergraduate, honours, and graduate levels.
- Maintain and actively promote high academic standards and collegiality in all education, research, impact, engagement and administration endeavours of the School, College, and University.
- Proactively contribute more broadly to the operation of the School, College and University. This may include representation through committee membership.
- Take responsibility for workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
- Other duties as required consistent with the classification level of the position.

## SELECTION CRITERIA

The breadth and depth of this role are illustrated in the following selection criteria. While candidates should ideally meet all selection criteria, the School of Computing will consider all applications that demonstrate alignment with its mission.

1. A PhD or equivalent in computational science, or a related area as relevant to the School, and excellent track record of research as evidenced by appropriate outputs and measures of esteem in industry, government or academic environments.
2. Strong evidence of the development of enabling technologies for computational research in a specific discipline, such as scientific software or code available on a repository, and the adoption of these technologies by the research community.
3. Evidence of effective engagement and impact activities involving government, industry, the wider research community and the general public, helping to establish collaborations and partnerships with a range of internal and external stakeholders.
4. A strong orientation to collaboration, team-based projects and interdisciplinary activities and interests. In particular, evidence of ability and experience in effectively establishing on-going support for industry-academia engagement, collaboration and partnerships.
5. A record of winning bids for competitive external funding to support individual and collaborative research, education and engagement activities, and the ability to identify similar opportunities for others to pursue and to provide mentoring in the process.
6. Evidence of effective teaching, training, facilitation, mentoring or other relevant knowledge transmission activities and of the ability to shape and contribute significantly to delivery of the educational agenda in the Activity Cluster and School.
7. A strong orientation to the School's culture and work environment including a commitment to enhancing diversity and inclusion, characterised by an orientation to collaborative research; team-based projects; interdisciplinary activities and interests; strategic decision making; commitment to the success of peers and the team; and an ability to contribute to the strategic priorities and activities of the School and College.
8. Outstanding communication skills with the ability to inspire a wide range of audiences, including in cross-disciplinary areas and to foster respectful and productive working relationships with staff, students and colleagues at all levels. Skills in other forms of communication (such as visual communication, podcasting, video, etc.) or a willingness to innovate in these areas will be well regarded.
9. Ability to provide leadership to early-career staff and to mentor and develop colleagues to achieve goals in alignment with the College's strategic priorities, particularly in relation to building a diverse and inclusive community life.
10. A demonstrated high-level understanding of equal opportunity principles and a commitment to the application of these policies in a University context.

*Consistent with their relative to opportunity to do so, a **Level C Academic** will have a relevant doctoral qualification or equivalent accreditation and standing together with subsequent research (or R&D) experience. This may not apply to candidates coming from different fields such as industry or government. Once in the role, there will be an expectation of academic excellence, making an outstanding contribution to research and, in this particular position, the ability to collaborate with internal and external stakeholders outside of your domain. A position at this level will require a demonstrated strong record of research output in academia, industry or government.*

***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.***

Printed Name:		Date:	
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## References:

[ANU Minimum Standards for Academic Levels](#)

[CECS Strategic Intent](#)

[CECS Academic Performance Standards](#)