



## Position Description

<b>College/Division:</b>	College of College of Engineering, Computing and Cybernetics (CECC)
<b>Faculty/School/Centre:</b>	School of Computing
<b>Position Title:</b>	Research Fellow
<b>Responsible to:</b>	Hanna Suominen and Patrik Haslum
<b>Number of positions that report to this role:</b>	TBC

### PURPOSE STATEMENT:

The ANU College of Engineering, Computing and Cybernetics (CECC) has embarked on a major initiative to reimagine the role of engineering and computing in the 21st century. As outlined in the its 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 CECC 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 School of Computing is a new organisation, springing from 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 Data Science and Analytics activity cluster within the School seeks to utilise Artificial Intelligence, Machine Learning, and Statistics data to become the basis for modelling of and reasoning about the world and society. The research focus on the design and construction of robust processes and models will lead to new algorithms, prototypes, and deployed systems across multiple domains to derive new meaningful insights while being sensitive to bias.

The purpose of this appointment is to:

- Contribute to externally funded research projects as directed, including on the 3D fitting optimisation project (<https://cecc.anu.edu.au/research/research-projects/3d-fitting-optimisation>). Within this project, the specific role is to design, implement, and evaluate data-driven solutions for specified key decision and optimisation problems.
- Contribute to supervising and examining research projects and Higher Degree Research (HDR) candidates, with the nature and scope of these activities to be negotiated between the appointee, their Supervisor, and the School;
- Support the development of partnerships with industry and engage with the wider research community to embed progressive engineering and computing research and education capabilities.

### POSITION DIMENSION & RELATIONSHIPS:

The appointee will be a member of the School of Computing within the Data Science and Analytics activity cluster, accountable to their Supervisor and to the School Director. The role involves innovative and distinctive research, educational activities, and a commitment to organizational culture. The staff

member is expected to contribute cooperatively to the overall intellectual life of the School, College and University.

The successful candidates must have rights to live and work in Australia and be able to commence within a reasonable timeframe. Due to this timeframe, constrained by the project milestones, interviews will take place, online, using videoconferencing technology, on 8 and 9 March 2023. Additional project funding may become available, and if it does, suitable candidates will be considered for these potential positions as well.

Applications should consist of 1) a CV and 2) a cover letter (max 2 pages) that addresses the selection criteria below

#### **ROLE STATEMENT:**

Specific duties required of a Research Fellow may include:

1. Undertake high impact collaborative and cross-disciplinary research that generates intellectual knowledge and solutions relevant to the project, project partners, School, and College.
2. Contribute to the successful implementation and delivery of research projects, partnerships, and collaborations. Achieve impact through engagement with project stakeholders and/or funding bodies.
3. Provide support to the outreach, engagement and impact activities of the School, and collaborate with other researchers.
4. Supervise less-senior academic and research staff, as appropriate.
5. Contribute to the educational activities of the School. This may include, but is not limited to, preparation and delivery of lectures, tutorials, short courses and workshops; the preparation of learning materials; marking and assessment; and consultations with students. This may also include, but is not limited to, supervision of research students and coursework students working on individual or group projects.
6. Maintain high academic standards and collegiality in all education, research, impact, engagement and administration endeavours of the School, College, and University.
7. Contribute broadly to all aspects of the operation of the School, College, and University.
8. Take responsibility for workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
9. 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 the field of Computer Science, or a related area as relevant to the research to be undertaken, with a competitive track record of research and impact as evidenced by appropriate outputs and measures of esteem in industry, government or academic environments.
2. Demonstrated experience developing, applying, analysing, and evaluating the effectiveness of data-driven decision and optimisation methods in the context of applied research, explaining and justifying design decisions to project stakeholders, and implementing solutions as part of an integrated system in collaboration with a wider project team. Knowledge of and experience with a wide range of machine learning methods (ranging from decision trees, nearest neighbours, and support vector machines to more recent deep learning architectures) optimisation methods, and computational geometry are all desirable.
3. Evidence of effective 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.
4. An ability to contribute to impact and engagement activities involving government, industry, the wider research community and the general public, including involvement in collaborations and partnerships with a range of internal and external stakeholders.
5. Excellent 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.
6. Evidence of effective teaching, training, facilitation, mentoring or other relevant knowledge

transmission activities and of the ability to contribute significantly to delivery of the educational agenda in the Activity Cluster and School.

7. A demonstrated alignment with 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. An ability and commitment to win bids for competitive external funding to support individual and collaborative research, education and engagement activities with the Activity Cluster and School.
9. A demonstrated high-level understanding of equal opportunity principles and a commitment to the application of these policies in a University context.

*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.*

Supervisor/Delegate Signature:		Date:	02/02/2023
Printed Name:	Hanna SUOMINEN	Position:	

**References:**

[Professional Staff Classification Descriptors](#)

[Academic Minimum Standards](#)