

Australian National University

Position Description

College/Division:	College of Engineering and Computer Science	
Faculty/School/Centre:	School of Engineering	
Position Title:	Research Fellow	
Classification:	Academic Level B	
Position No:		
Responsible to:	Professor Junichiro Kawaguchi	

PURPOSE STATEMENT:

The ANU College of Engineering and Computer Science (CECS) is dedicated to contributing to The Australian National University's reputation for excellence in research and research-led education, bringing together expertise across a range of areas to reimagine the role of engineering and computing for future generations.

CECS is a diverse and exceptional community of students, educators, scholars and researchers who embrace the breadth of the computing and engineering professions. We want our people to engage in ground-breaking, cutting-edge research to solve "wicked problems" of the 21st century in collaboration with the best minds in the world from across a broad range of disciplines.

Through modern unique programs, we encourage our students to build a diverse, multidisciplinary skill set that will prepare our graduates to successfully make their future mark in the world. At its core, we will equip our people to ask the right kind of questions from a people-centric, technological and scientific perspective.

Our focus on excellence is more than an aspiration; it is embedded in our performance expectations for Academic staff within the College, through our Academic Performance Standards. These standards are an integral component of our vision to reimagine Engineering and Computer Science research and education, and to continue to propel us on our trajectory of becoming a world-class institution in this space.

School of Engineering

The School of Engineering is a creative mix of staff and students that embrace the breadth of engineering professions from materials and manufacturing, to robotics, telecommunications and systems, and control of massively complex networks.

All Academic staff within the College are expected to undertake work in all three areas of academic activity; Research, Education and Service (including Outreach). The allocation of time to each area will be discussed with the position supervisor annually and be reflective of the conditions of the funding, the appointees research agenda, school and interdisciplinary teaching requirements and leadership opportunities within the school environment. The Research Fellow may also be required to supervise or mentor junior staff, and undertake leadership roles as applicable. The school staff member will contribute cooperatively to the overall intellectual life of the School, College and University.

The purpose here aims at attracting those who share the minds and the requirements to apply for the opportunities.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

The Research Fellow will be a member of School of Engineering, accountable to Professor Junichiro Kawaguchi and School Director. The occupant of this position will be expected to work collegially, leading to develop and maintain effective, productive and beneficial workplace relationships among the academic and professional school and college staffs, students and honorary appointees, as well as industry stakeholders. The occupant of this position will also have a mentoring role for students, and will engage in collegial and productive collaborations with local, national and, where possible, international colleagues.

2/07/2021 Role Statement Academic Level B

Specific duties required of a Level B Academic may include:

- Undertake high impact collaborative and cross-disciplinary research that generates creative works and a body of unique intellectual knowledge as relevant to the Activity Cluster, School, and College.
- Contribute 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.
- 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 research proposals.
- Provide support 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 or publishing 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, assisting in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
- Supervise less-senior academic and research staff, as appropriate.
- Maintain high academic standards and collegiality in all education, research, impact, engagement and administration endeavours of the School, College, and University.
- Contribute broadly to all aspects of the operation of the School, College and University.
- Take responsibility for workplace health and safety and not willfully 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 Engineering will consider all applications that demonstrate alignment with its mission.

Academic Level B

- 1. A PhD or equivalent in aerospace engineering, electrical engineering, mechanical engineering, or the what is called astrodynamics including guidance, navigation and control, or equivalent qualifications and experience in a related area, with a track record of independent research in the field of the astrodynamics as evidenced by publications in peer-reviewed journals and conferences.
- 2. Evidence of experience that is relevant to the astrodynamics research in the following areas: the optimisation, guidance, navigation and control. The analysis capability using numerical simulations or analytical/theoretical study capability with adequate mathematical skills. In-depth knowledge on both the orbital and/or attitude dynamics and the control theories.
- Adequate knowledge on the spacecraft systems and the experience on electro-mechanical design, assembly and testing of the spacecraft sub/systems may substitute in part the qualification requirements on analytical skills. Individual capability in building breadboard model of nano-satellites and flying robots may substitute them more.
- 4. An ability and commitment to contribute to bids for competitive external funding to support individual and collaborative research activities
- 5. 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.
- 6. 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.

- 7. 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.
- 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. Excellent communication skills with the ability to inspire a wide range of audiences, including in crossdisciplinary 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.
- 10. Ability 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.
- 11. 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 opportunity to do so, a Level B 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 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 <u>Background Checking Procedure</u> which sets out the types of checks required by each type of position.

The ANU does not specify when the employment commences but discusses about it with who is appointed.





J. Kawaguchi Bio

Research Themes

Printed Name:	Date:	

References:

ANU Minimum Standards for Academic Levels CECS Strategic Intent CECS Academic Performance Standards