



Position Description – Research Fellow

Position Details

Position Title:	Research Fellow – Development of a high-altitude unmanned aerial system for persistent fire detection and monitoring.
Position Number:	New
College/Portfolio:	Science, Engineering and Health
School/Group:	School of Engineering
Campus Location:	Based at the Bundoora East campus, but may be required to work and/or be based at other campuses of the University.
Classification:	Academic Level B
Employment Type:	Fixed Term (Research) <i>Note: See Reasons for fixed term appointments guideline for explanation of fixed term categories</i>
Time Fraction:	1.0 FTE

RMIT University

RMIT is a leading multi-sector university of technology, design and enterprise with more than 91,000 students and 11,000 staff globally. We offer postgraduate, undergraduate, vocational education and online programs to provide students with a variety of work-relevant pathways.

Our purpose is to offer life-changing experiences for our students, and to help shape the world with research, innovation, teaching and industry engagement. With strong industry connections forged over 130 years, collaboration with industry remains integral to RMIT's leadership in education, applied and innovative research, and to the development of highly skilled, globally-focused graduates.

With three campuses in Melbourne (Central Business District, Brunswick and Bundoora), two in Vietnam (Hanoi and Ho Chi Minh City) and a centre in Barcelona, Spain, RMIT is a truly global university. RMIT also offers programs through partners in Singapore, Hong Kong, mainland China, Indonesia, Sri Lanka, Belgium, Germany, Austria and The Netherlands, and enjoys research and industry partnerships on every continent.

We are also committed to redefining our relationship in working with and supporting Aboriginal self-determination. Our goal is to achieve lasting transformation by maturing our values, culture, policy and structures in a way that embeds reconciliation in everything we do. We are changing our ways of knowing, working and being to support sustainable reconciliation and activate a relationship between Indigenous and non-Indigenous staff, students and community. Our three campuses in Melbourne (City, Brunswick and Bundoora campuses) are located on the unceded lands of the people of the Woi Wurrung and Boon Wurrung language groups of the eastern Kulin Nation

We're proud to share with you:

- The launch of our second [Reconciliation Plan for Dhumbah Goorowa– a “commitment to share” - an important step in our reconciliation journey.](#)
- RMIT University is an **Athena SWAN** member with Bronze Award accreditation and the College of Science, Engineering and Health is central to driving improvements in gender equality, diversity and

inclusion, particularly in the Science, Technology, Engineering, Mathematics and Medicine (STEMM) disciplines.

- RMIT was placed **10th in the 2019 Randstad Employer Brand Research Awards**, up five spots from 2018.
- We were named as an **Employer of Choice for Gender Equality** by the Workplace Gender Equality Agency in 2019.
- We achieved **Gold Employer status for LGBTIQ** inclusion in the Australian Workplace Equality Index (AWEI) in 2018 and now in 2019.
- We were recognised as a **top five employer in 2018 for workplace accessibility** with the Australian Network on Disability.

RMIT Standings in university rankings

RMIT has a deep commitment to innovation, research and teaching, we are a 5-Star university under the QS Stars international evaluation system and are **238th globally in QS World University Rankings 2020** (moved up 12 places compared to 250th last year), being also 32nd in the world among universities less than 50 years old (2014 QS Top 50 Under 50 index). Additionally:

- In the 2019 QS World University Rankings by Subject, RMIT was positioned 12th in the world (highest ranked in Australia) in Art and Design, 22nd in the world (fourth highest in Australia) in Architecture and the Built Environment, and 37th in Media and Communications. We are also among the world's top 100 universities in Engineering (Civil and Structural; Electrical and Electronic; and Mechanical, Mechanical, Aeronautical and Manufacturing); Accounting and Finance; and Business and Management Studies).
- In the 2018 QS Rankings by Subject, RMIT was ranked 11th in the world and number one in the Asia Pacific for Art and Design, and 26th in Architecture and the Built Environment. RMIT is also among the world's top 100 universities in Engineering (Civil and Structural; Electrical and Electronic; and Computer Science and Information Systems); Accounting and Finance; Business and Management Studies; and Communication and Media Studies. The 2018 Shanghai Ranking's Global Ranking of Academic Subjects highlighted RMIT's strength in Engineering and Technology in particular.
- In the specialised rankings, RMIT is ranked 77th in the QS Graduate Employability Rankings 2020 and 82nd in the inaugural Times Higher Education University Impact Rankings 2019.
- RMIT also ranks in the world's **top 400** in the 2019 Academic Ranking of World Universities and in the world's **top 400** in 2020 Times Higher Education World University Rankings.

For more information, visit rmit.edu.au/about

College/Portfolio/Group

The College comprises three Schools delivering a broad range of programs in science, engineering, health and technology at higher education certificate, bachelor, masters and PhD levels. There is a vibrant research community attracting funding from a range of government and industry sources. The College has an annual income of approximately \$500 million (with over \$50 million in external research income p/a) and employs around 1,400 staff providing on and offshore programs to approximately 30,000 students (including 1,200 PhD students).

School of Engineering

The School of Engineering comprises a diverse range of disciplines: Aerospace Engineering & Aviation; Chemical & Environmental Engineering; Civil & Infrastructure Engineering; Electrical & Biomedical Engineering; Electronic & Telecommunication Engineering; Manufacturing, Materials & Mechatronic Engineering; Mechanical & Automotive Engineering.

As a top 100 university in the world for engineering (2015 QS Rankings by Faculty; Engineering and Technology), RMIT Engineering provides students with work-relevant education programs, access to excellent research facilities and opportunities to engage in creative real-world project work through robust relations with local and international industry leaders.

RMIT Engineering's education is based on innovation and creativity. Key discipline areas in the School of Engineering provide programs with flexible pathways to global careers or postgraduate research.

Details relating to the School/College Office may be found on at: www.rmit.edu.au/seh

Position Summary

The Research Fellow will work with research teams and partnerships in the School and Research Institutes. The Research Fellow is required to undertake research activities in line with the University's research strategy. The position will carry out independent and/or team research which has a significant impact in the area of their specialisation and be acknowledged at a national level as being influential in expanding the knowledge of their relevant discipline.

The Research Fellow's role is primarily to plan, develop and engage in high quality research projects that are aligned with the University's research focus areas. The Research Fellow will embed their research expertise into the life of the School through the development of high-quality, productivity-driven research networks across RMIT and with local and national, internal and external partners. Research Fellows will be expected to engage in high quality research projects, to achieve success in attracting research funding and to produce high quality outputs.

Reporting Line

Reports to: Nic Connelly, Discipline Leader Aviation Engineering

Direct reports: Matthew Marino

Organisational Accountabilities

RMIT University is committed to the health, safety and wellbeing of its staff. RMIT and its staff must comply with a range of statutory requirements, including equal opportunity, occupational health and safety, privacy and trade practice. RMIT also expects staff to comply with its policy and procedures, which relate to statutory requirements and our ways of working.

Appointees are accountable for completing training on these matters and ensuring their knowledge and the knowledge of their staff is up to date.

Key Accountabilities

1. Undertake research and development activities in the development of a high-altitude unmanned aerial system using Balloons to provide persistent and high-bandwidth sensor monitoring of spot fires for early detection and immediate response.
2. Prepare research grant applications, particularly targeting Category 1 outcomes
3. Prepare high profile research publications as lead or co-author
4. Develop collaborations with national and international researchers, particularly focussing on linkages between defence, civil commercial industry and academia.
5. Co-supervision of postgraduate by research students.
6. Contribute to the successful project management of the research by completing assigned work at the required level and within agreed timeframes.
7. Communicate research outcomes through high quality papers/journal articles, delivery of seminars and conference attendance.
8. Undertake 10% teaching and learning program appropriate to areas of expertise.
9. Participate in annual work planning and performance management processes.
10. Perform other duties that may be required for the efficient operation of the research team.

Key Selection Criteria

1. Demonstrated research track record in aircraft flight modelling, software development (in either MATLAB, PYTHON, C or C++ codes), wireless communication, robotics.
2. Demonstrated ability to experimentally realize and characterize systems in an unmanned platform for high-altitude flight.
3. Proven ability to undertake scientific research and development in research programs.
4. Demonstrate ability to clearly communicate research results, concepts and knowledge.
5. Demonstrated initiative in research and problem solving.
6. Demonstrated ability to work effectively both as a member of a research team and independently when required, to meet project outcomes and milestones.
7. Ability to co-supervise postgraduate by research students.
8. Ability to contribute to the teaching and learning program in a relevant field.

Qualifications

Mandatory: PhD or equivalent in relevant field

Appointment to this position is subject to passing a Working with Children check

Endorsed:	Signature: Name: Nic Connely Title: Acting Associate Dean, Aerospace and Aviation Engineering Date:	Approved:	Signature: Name: Adrian Mouritz Title: Executive Dean, Engineering Date: 02/09/2020
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