



Position Description – Research Fellow

Position Details

Position Title:	Research Fellow
Position Number:	New
College/Portfolio:	Science, Engineering and Health
School/Group:	School of Engineering
Campus Location:	Based at the city 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 (2 years, industry research project)
Time Fraction:	1.0

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 four Schools delivering a broad range of programs in science, engineering, health and technology at apprenticeship, certificate, bachelor, masters and PhD levels. Many programs articulate between vocational and higher education, creating pathways for further study. There is a vibrant research community attracting funding from a range of government and industry sources. The College has an annual income of approximately \$425 million and employs over 1,000 staff providing on and offshore programs to approximately 20,000 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 as a member of the Integrated Photonics and Applications Centre (InPAC), focussing on establishment of high quality, low optical loss waveguides formed from sputtered silicon nitride

films. Film properties such as stress, optical loss, surface roughness, thickness, uniformity will need to be analysed and optimised to support a reliable fabrication of low loss integrated photonic devices. These capabilities will be established by simulating and designing the integrated optical circuit optical interfaces and fabricating them by using the facilities of the [Micro Nano Research Facility](#), [Melbourne Centre of Nanofabrication](#) and the [RMIT Microscopy and Microanalysis Facility](#). The platform realised will be harnessed for future movements sensors in collaboration with A/Prof Jong Chow at Australian National University. Further the Research Fellows will be expected to write reports, meet milestones, engage in high quality research projects, to achieve success in attracting research funding and to produce high quality research outputs.

Reporting Line

Reports to: Associate Dean, Electronic and Telecommunications Engineering.
For Leave Approval Associate Dean, Electronic and Telecommunications Engineering.
For workplan sign-off and Day to day reporting is to the Project Leader.

Direct reports: Nil

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. Establish techniques to deposit high quality dielectric thin-films that can be used for the reliable fabrication of low loss optical waveguides
2. Characterise film properties (stress, optical loss, surface roughness, thickness, uniformity) and optimise the deposition parameters
3. Fabricate and characterise optical waveguides and photonic chips using deposited dielectric materials
4. Collaborate with the InPAC team at RMIT, partners at The Australian National University and Advanced Navigation to realise photonic chip components for precision movement sensors
5. Rigorously document progress, participate in monthly meetings with the project partners, present the project progress and prepare quarterly project reports
6. Prepare research grant applications, particularly targeting Category 1 outcomes .
7. Prepare high profile research publications as lead or co-author.
8. Co-supervision of postgraduate by research students.
9. Contribute to the successful project management of the research by completing assigned work at the required level and within agreed timeframes.
10. Communicate research outcomes to other team members, internal and external to RMIT University, through high quality project reports, papers/journal articles.
11. Undertake 10% teaching and learning program appropriate to areas of expertise.
12. Participate in annual work planning and performance management processes.
13. Perform other duties that may be required for the efficient operation of the research team.

Key Selection Criteria

1. Demonstrated research track record in design, fabrication and characterization of integrated photonic circuits and have a deep knowledge of optical materials and fabrication of optical waveguides.
2. Demonstrated ability to clearly communicate research results, concepts and knowledge.
3. Demonstrated ability to conduct research including assessment of the current research context, generation of new concepts, problem solving, documentation and effective conclusion of the research project producing tangible outcomes, especially research publications.
4. Proven ability to undertake systematic scientific research and technology development in collaboration with microelectronics fabricators including in-house or external foundries
5. Demonstrated ability to work effectively both as a member of a research team and independently when required, to meet project outcomes and milestones.
6. Demonstrated initiative in research and problem solving.
7. Ability to learn new skills in multiple disciplines
8. Ability to work in multi-disciplinary environments

- 9. Ability and willingness to co-supervise postgraduate by research students.
- 10. Ability to contribute to the teaching and learning program at both undergraduate and postgraduate levels.

Qualifications

Mandatory: PhD or equivalent in relevant field

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

Endorsed:	Signature: Name: Arnan Mitchell Title: Project Lead Date: 23/07/2020	Approved:	Signature: Name: Adrian Mouritz Title: Executive Dean, Engineering Date: 25 th September 2020
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