



## POSITION DESCRIPTION

School of Electrical, Mechanical and Infrastructure Engineering  
Faculty of Engineering and Information Technology

### Research Fellow for ARC THRIVE

<b>POSITION NO</b>	0062796
<b>CLASSIFICATION</b>	Research Fellow Grade 1 (Level A)
<b>SALARY</b>	Academic A – \$105,518 – \$113,262 p.a.
<b>SUPERANNUATION</b>	Employer contribution of 17%
<b>WORKING HOURS</b>	Full-time (1.0 FTE)
<b>BASIS OF EMPLOYMENT</b>	24-month fixed term  Applications for part-time or other flexible working arrangements will be welcomed and will be fully considered subject to meeting the inherent requirements of the position
<b>OTHER BENEFITS</b>	<a href="https://about.unimelb.edu.au/careers/staff-benefits">https://about.unimelb.edu.au/careers/staff-benefits</a>
<b>HOW TO APPLY</b>	Online applications are preferred. Go to <a href="http://about.unimelb.edu.au/careers">http://about.unimelb.edu.au/careers</a> , select the relevant option ('Current Opportunities' or 'Jobs available to current staff'), then find the position by title or number.
<b>CONTACT FOR ENQUIRIES ONLY</b>	Prof Jason Monty Tel +61 3 8344 3040 Email <a href="mailto:montyjp@unimelb.edu.au">montyjp@unimelb.edu.au</a>  <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our website:  
[about.unimelb.edu.au/careers](http://about.unimelb.edu.au/careers)

## ***Acknowledgement of Country***

The University of Melbourne acknowledges the Traditional Owners of country throughout Australia. The University recognises the unique place held by Aboriginal and Torres Strait Islander peoples as the original custodians of country and their continued connection to the land, waterways, songlines and culture. The University respects all Aboriginal and Torres Strait Islander People and warmly embrace those students, staff, Elders and collaborators who identify as First Nations.

## ***Commitment to Diversity and Inclusion***

The Faculty of Engineering and Information Technology (FEIT) is committed to creating a diverse and inclusive environment that welcomes and values all people. We recognise that diversity is essential in contributing to the success of FEIT. Women, Aboriginal and Torres Strait Islanders, the LGBTIQ+ community, people living with disability and those from a culturally and linguistically diverse background, are strongly encouraged to apply.

## ***Position Summary***

ARC Training Centre for Advanced Building Systems Against Airborne Infection Transmission (THRIVE) is dedicated to enhancing indoor air quality and reducing airborne infection transmission through innovative building system design and engineering. The aim is to optimise indoor environments for both health and comfort while ensuring energy efficiency. THRIVE aims to clean indoor air as the standard, with the industry-leading the way in this transformative process. The expected outcomes include the development of new intelligent building systems, advancements in building technologies, the implementation of quantitative methods for building control, and evidence for policymaking and recommendations for operational guidelines.

This position provides an exciting opportunity as a key member of dynamic research and engineering teams to contribute to the measurement of air quality and building energy, as well as novel experiments and retrofits of building ventilation for improved indoor air quality. Laboratory experiments and fieldwork will be conducted with optional numerical experiments depending on the applicant's capability. The successful applicant will have a doctorate in building ventilation and engineering, aerodynamics, or environmental science related to Indoor Air Quality. A strong research background in Indoor Air Quality would be preferable.

This position reports to THRIVE Associate Director of Research Programs and Transformation.

### ***1. Key Responsibilities***

#### **1.1 RESEARCH WORK**

- ▶ Develop a project plan and experimental approach to Indoor Air Quality (IAQ) together with supervisors and other THRIVE collaborators and stakeholders.
- ▶ Carry out research on IAQ and work towards completion of the milestones and deliverables of the project.
- ▶ Proactively work in close collaboration with project partners.
- ▶ Design and carry out experiments for measuring indoor air quality metrics such as CO<sub>2</sub>, PM, occupancy, temperature distributions and flow fields.
- ▶ Conduct field site observations of ventilation and energy usage
- ▶ Test new and existing technologies for indoor air quality
- ▶ Collaborate with experts from Medicine, Science and Architecture to design and evaluate new airborne infection transmission mitigation strategies
- ▶ Conduct fluid flow measurements in a laboratory setting
- ▶ Conduct or collaborate to produce numerical simulations of airflow and particle transport in indoor spaces
- ▶ Publish the results in relevant peer-reviewed articles.
- ▶ Attend meetings of relevant THRIVE working groups and committees.
- ▶ Present the work at local and international conferences.
- ▶ Report regularly to the supervisors and program managers on the progress of the project.

## 1.2 LEADERSHIP AND SERVICE

- ▶ Liaise with technicians and suppliers, such as on the purchase of equipment or external services.
- ▶ Undertake effective supervision of research support staff (if required).
- ▶ Effective liaison with external networks to foster collaborative partnerships;
- ▶ Involvement in professional activities, including consultations and referrals;
- ▶ Attend and actively participate in departmental seminars, meetings and/or committee memberships.

## 2. Selection Criteria

### 2.1 ESSENTIAL

- ▶ A PhD in building ventilation and engineering, aerodynamics, or other engineering field related to IAQ.
- ▶ Demonstrated research experience related to building ventilation, fluid mechanics or IAQ.
- ▶ Excellent interpersonal skills, including an ability to interact courteously and effectively with internal and external stakeholders.
- ▶ Ability to perform independent research and a commitment to interdisciplinary research.
- ▶ Demonstrated capacity to communicate research concepts to technical and non-technical audiences.
- ▶ A record of quality research as evidenced by publications in leading journals and at conferences commensurate with opportunity.
- ▶ Excellent ability in analysing data, problem-solving solving, and maintaining accurate research records.
- ▶ Capability for innovative research, as evidenced by scholarly publication.
- ▶ Experience using initiative, working with minimal supervision, and prioritising tasks to achieve project objectives within timelines.

### 2.2 DESIRABLE

- ▶ Practical knowledge of operating building ventilation systems across a range of settings.
- ▶ Experience in both laboratory and field measurements.
- ▶ Familiarity with arrays of instrumentations used to measure IAQ.

### 2.3 OTHER JOB-RELATED INFORMATION

- ▶ This position requires the incumbent to hold a current and valid Working with Children Check.

## 3. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion, and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the Advancing Melbourne strategy that addresses diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Advancing Melbourne.

## **4. Occupational Health and Safety (OHS)**

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

<https://safety.unimelb.edu.au/people/community/responsibilities-of-personnel>

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

## **5. Other Information**

### **5.1 SCHOOL OF ELECTRICAL, MECHANICAL AND INFRASTRUCTURE ENGINEERING**

The School of Electrical, Mechanical and Infrastructure Engineering undertakes teaching and research across a range of disciplines that are internationally recognised for their contribution to fundamental research. It has a number of well-established industry linkages and international partnerships. It is building a vibrant profile of interdisciplinary research, working with industry with an aim to contribute to society. It offers a comprehensive range of accredited Masters of Engineering and Master of Information Technology programs taught through the Electrical, Mechanical and Infrastructure departments as well as professional Masters programs. It has a substantial cohort of research higher degree students. A major focus of the school is to attract and retain outstanding and internationally recognised academic staff. The School is committed through strategy, culture and mentorship to increasing the number of female engineers and scientists on its staff.

### **DEPARTMENT OF MECHANICAL ENGINEERING**

The Department of Mechanical Engineering is one of the largest in Australia. It provides teaching into subjects in the three-year undergraduate degrees of Science and Commerce, which can be followed by a two-year professional Master of Engineering.

The Departmental philosophy is to attract and retain the highest quality staff available in order to maintain a vigorous research effort. Our strategic plan is to address the most urgent contemporary problems of our rapidly developing industrial society, with investigations into biomechanical engineering, fluid mechanics and thermal sciences.

[www.mech.unimelb.edu.au](http://www.mech.unimelb.edu.au)

## 5.2 FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

The Faculty of Engineering and Information Technology (FEIT) has been the leading Australian provider of engineering and IT education and research for over 150 years. We are a multidisciplinary School organised into three key areas; Computing and Information Systems (CIS), Chemical and Biomedical Engineering (CBE) and Electrical, Mechanical and Infrastructure Engineering (EMI). FEIT continues to attract top staff and students with a global reputation and has a commitment to knowledge for the betterment of society.

FEIT has never been better positioned as a global leader, anchored in the dynamic Asia Pacific region, creating and curating knowledge to address some of the world's biggest challenges. Through our students and our relationships with communities, we can not only respond to society's needs but anticipate and create engineering and IT solutions for the future.

<https://eng.unimelb.edu.au/>

<https://eng.unimelb.edu.au/about/join-feit>

Our ten-year strategy, FEIT 2025, is our School's commitment to bring to life the University-wide strategy Advancing Melbourne and reinforce the University of Melbourne's position as one of the best in the world.

To achieve our ambitions, we will continue to build new infrastructure to enable our teaching, research and engagement; we continue to recruit outstanding people from around the world; and we continue to attract high-quality students from across the globe who are at the heart of our enterprise.

<https://eng.unimelb.edu.au/about/feit-2025>

## 5.3 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at <http://about.unimelb.edu.au/careers>

## 5.4 ADVANCING MELBOURNE

The University's strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University's commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.

We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.

We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.

We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne's academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes; place, community, education, discovery and global.

## 5.5 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at <https://about.unimelb.edu.au/strategy/governance>