

# Position Description

## Associate Research Fellow



### Details

Area	Faculty of Science, Engineering, and Built Environment
Team	School of Engineering
Location	Flexible, Melbourne Burwood or Geelong Waurn Ponds Campus
Classification	Level A
Reports to	Associate Professor Mechanical Engineering

### Deakin

Deakin is a Victorian university with a global impact. We are agile and innovative, and committed to making a positive impact through our excellence in education and research and the contributions we make to the wider community.

Our reputation has been built on the dedication and expertise of our staff. We offer a dynamic, diverse and inclusive working environment with opportunities to grow and develop careers. We believe that a progressive, thriving culture will ensure people choose to come, and stay at Deakin and contribute to our ongoing success.

As one of Australia's largest universities, Deakin has strong global linkages, world-class research and an education portfolio that blends the best of campus and digital delivery into a highly supportive and personalised student experience.

We offer outstanding education founded on the experience we create for our learners and guided by graduate outcomes for successful lives and careers. We undertake globally significant discovery research that benefits our communities through the innovative translation of our ideas into new services, products, policies and capabilities.

Deakin campuses sit on Wadawurrung, Wurundjeri, and Eastern Maar Countries, and the University acknowledges, values and deeply respects its connection with the Traditional Custodians and Elders past and present of these lands and waterways. Deakin is the most popular university destination in Victoria for Aboriginal and Torres Strait Islander students and has a rich history of supporting the ambitions of First Nations students, including through the NIKERI Institute (formerly the Institute of Koorie Education).

Deakin aspires to be Australia's most progressive university, with the principles of diversity, equity and inclusion underpinning our approach to education, research, employability, digital delivery, innovation, and partnerships for impact. Our vision is for an inclusive environment where we value and celebrate diversity, embrace difference and nurture a connected, safe and respectful community. We want Deakin to be a place where all staff and students feel included and respected for their unique perspectives and talents.

[Strategic Plans – Deakin 2030: Ideas to Impact](#)

[Benefits of working at Deakin](#)

### Overview

The Faculty of Science, Engineering, and Built Environment is dedicated to being at the forefront of teaching, learning, creating and social development and fostering cutting-edge research and discovery. The School of Engineering places high emphasis on research that makes a difference and is solution-led. We work closely with industry partners and the government to put findings into practice.

The Associate Research Fellow will engage collaboratively to conduct high-quality research, scholarship and creative activities generating high impact outputs, with mentorship from leaders within the research team. This position is suited to an emerging researcher keen to explore and build on new areas and foster research and researcher development to have real-world impact and contribute to a dynamic and enthusiastic research team.

The Associate Research Fellow position is for a Cooperative Research Centre – Project (CRC-P) between Speedpanel and Deakin University. Speedpanel is Australia's only supplier of a world -first fire rated, modular wall system. With Deakin University, the company combined a new wall panel design with advanced manufacturing technology to enhance panel performance and production speeds.

This has established the technology platform for the development of a new wall product that combines light weight with optimised fire and structural performance at lower cost. This CRC-P will develop computer platforms and test facilities to enable a holistic product design. The new wall panel system will be established and tested to meet Australia's growing demand for sustainable modular construction and fire rated building solutions.

The CRC-P will develop advanced material behaviour and panel performance models that will enable a holistic optimisation of fire rating while considering structural and acoustic panel performance and manufacturability. The model library will include thermomechanical models for fire testing and full-scale structural models that account for seam failure and concrete cracking. This will be complimented with a mesotrophic material model of the concrete core for acoustic and strength optimisation and process models of the steel shell manufacturing and concrete pouring processes. The computer platform will enable Speedpanel in collaboration with Deakin to accelerate R&D activities and bring new products to market more rapidly. It represents a vehicle for a long-term research collaboration that will provide mutual benefits to both parties.

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The Associate Research Fellow position will be required to develop material and process models to develop a fundamental understanding of panel stiffness, manufacturability, and fire resistance. The Associate Research Fellow position will also be required to develop response surface models to implement optimisation algorithms.

### Accountabilities

#### *Research and Innovation*

- Conduct high-quality research, scholarship and creative activities generating high impact outputs, with mentorship
- Engage collaboratively to participate in novel and high-quality research or creative activities
- Communicate outputs, including as part of team
- Ensure impact of academic activity on the field and the community
- Support and may lead applications for funding for research and creative activities
- Begin building a body of work and reputation and recognition for quality, excellence and impact.
- Participate in intra- and inter-disciplinary research collaborations
- Build awareness of industry partners and participates in opportunities for research partnerships
- Support and may lead in applications for external competitive and other funding
- Begin to build track record of timely delivery of outcomes for industry partners
- Co-supervise honours to timely outcomes with productive high-quality outcomes
- Develop working relationship with mentors and supervisors
- Develop early career research plan with guidance from mentors and supervisors
- Adopt culture of research excellence, innovation and impact
- Build awareness of relevant industry partners and opportunities for HDRs/ECRs placements

#### *University Citizenship and Engagement*

- Contribute to Deakin community and its effectiveness via local engagement and citizenship activities
- Understand the objectives and outcomes to be delivered by the University's strategic agenda
- Contribute to community beyond Deakin via engagement activities
- Support Deakin community engagement plan

### Selection

#### *Qualifications and experience*

- PhD in a relevant discipline and/or other relevant qualifications and experience – Materials Science or Mechanical Engineering
- Emerging research and scholarship through publications, and/or exhibitions as appropriate to the discipline
- Ability to contribute to communities through research
- Capacity to contribute to teaching, research and administration
- Excellent interpersonal skills and a proven ability to establish good working relationships with colleagues
- Ability to contribute to community engagement for research
- Demonstrated ability in the CAD and FEA assisted process design, analysis and optimisation of forming processes.
- Experienced user of any of the following software packages: Abaqus, MSC Marc, LS Dyna, Python, Fortran and MATLAB.

### Capabilities

- **Emotional Intelligence** manages emotions to positively influence behaviour.
- **Growth Mindset** open to learning and new experiences, invests in development.
- **Communicates** engages others through persuasive and influential communication.
- **Engages Other** establishes effective relationships to achieve shared goals.
- **Plans work** plans the delivery of work while balancing priorities and resources.
- **Navigates Complexity** makes sense of complex issues and responds insightfully.

### Special Requirements

- This position may require the incumbent to travel domestically (including between University campuses and/or internationally to attend conferences, events and to represent the university and may require working on-site at SpeedPanel for periods of time.
- This position requires the incumbent to hold a current Working with Children Check

**Note** The intention of the position description is to provide an outline of scope and responsibilities, at a point in time. Please note, responsibilities may evolve in accordance with organisational needs.