Position Description

Research Fellow

Details

Area	Faculty of Science, Engineering and Built Environment
Team	School of Engineering
Location	Flexible, all campuses
Classification	Level B
Reports to	A/Professor Shannon Ryan

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 Research Fellow will initiate, design and conduct productive, high-quality research, scholarship and creative activities generating high impact outputs in their discipline area; including:

- Utilising numerical tools (specifically explicit finite element software) to analyse the performance of protective structures under extreme dynamic loading
- Contributing to the development of a human-machine collaborative framework for experimental design, and
- Developing and applying machine learning-based analysis tools for predicting the performance of complex engineering systems
- Prepare or contribute to the preparation of external publications in high-quality venues for physical sciences, engineering, or applied machine learning·

The Research Fellow may lead research activities and is expected to engage collaboratively to develop novel research outcomes. This position is suited to a researcher keen to explore the application of machine learning (ML) and artificial intelligence (AI) on real-world engineering problems.

Accountabilities

Research and Innovation

- Support, and may lead, applications for research and creative activities, including applications for external competitive funding, external funding for commercialization and translation activities and other funding demonstrating sustained efforts.
- Build a national reputation, based on a growing, focused body of work recognised for quality, excellence and impact and a growing track record of timely delivery of outcomes for industry partners.
- Initiate, design, conduct and may lead intra- and inter-disciplinary research collaborations, to enable major breakthroughs in knowledge and understanding and solutions to complex problems.
- Initiate, design, conduct and may lead in development of industry partnerships and collaboration to enable major breakthroughs, innovative solutions for future translation into real world impact.
- Initiate, design, conduct and may lead innovation and translation into policies, frameworks, strategy, generation of products, services, new ways of operating, priority setting and or other innovations with positive impact and national recognition. Demonstrate timely and sustained delivery of commercialisation and translation outcomes.
- Supervise honours and/or HDR students with timely completions and productive, high-quality outcomes and provide effective mentoring to HDR students to support professional and career development and employability.
- Adopt and promote a culture of research excellence, innovation and impact and support industry partnerships that provide HDRs with industry experience and establish/expand industry networks to create opportunities for placements.
- Communicates outputs to discipline(s) and the community and ensure impact of academic activity in the field and the community ·

University Citizenship and Engagement

- Assist the implementation of local citizenship activities and contribute to effectiveness as influencer.
- Contribute to the implementation of specific aspects of University's strategic agenda.
- Contribute to the implementation of University's community engagement agenda.

Selection

Qualifications and experience

- PhD in physics, engineering (mechanical, aerospace, electrical, mechatronics), computer science or a relevant discipline and/or other relevant qualifications and experience
- Demonstrated expertise in computational modelling, for example finite element (preferred), computational fluid dynamics, computational materials, or related
- Demonstrated experience in programming, languages including python (preferred), MATLAB, Julia, R, or related
- Emerging reputation in research and scholarship through publications
- Success in obtaining external research funding.
- Ability to contribute to communities through research.
- Capacity to contribute to leadership of research and administration.
- Excellent interpersonal skills and a proven ability to establish good working relationships with colleagues.

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.
- **Collaborates** cultivates collaboration across Deakin, strives for shared outcomes, builds partnerships.
- **Delivers Outcomes** creates clarity through governance, makes decisions that result in quality outcomes.
- **Plans work** plans the delivery of work while balancing priorities and resources.

Special Requirements

- This position may require the incumbent to travel domestically and/or internationally to attend conferences, events and to represent the university.
- 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.