
# Senior Wind Turbine Blade Dynamics Engineer/Researcher – Level C

## Position Details

**Position Title:** Senior Research Fellow

**College/Portfolio:** STEM College

**School/Group:** School of Engineering

**Campus Location:** City campus but may be required to work and/or be based at other campuses of the University.

**Classification:** Academic Level C

**Employment Type:** Fixed Term (Research)

**Time Fraction:** 1.0

## RMIT University

RMIT is a multi-sector university of technology, design and enterprise with more than 96,000 students and close to 10,000 staff globally. The University's mission is to help shape the world through research, innovation and engagement, and to create transformative experiences for students to prepare them for life and work.

https://www.rmit.edu.au/about
https://www.universitiesaustralia.edu.au/university/rmit-university/

Our three main campuses in Melbourne are located in the heart of the City, Brunswick and Bundoora. Other locations include Point Cook, Hamilton and Bendigo, two campuses in Vietnam (Hanoi and Ho Chi Minh City) and a centre in Barcelona, Spain. RMIT is a truly global university.

https://www.rmit.edu.au/about/our-locations-and-facilities

We are also committed to redefining our relationship in working with, and supporting, Indigenous 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.

## Why work at RMIT University

Our people make everything at the University possible. We encourage new approaches to work and learning, stimulating change to drive positive impact. Find out more about working at RMIT University, what we stand for and why we are an Employer of Choice.

https://www.rmit.edu.au/careers

We want to attract those who will make a difference. View RMIT's impressive standings in university rankings.

https://www.rmit.edu.au/about/facts-figures/reputation-and-rankings

## STEM College

The STEM College holds a leading position and expertise in the science, technology, engineering, mathematics and health (STEM) fields. We are uniquely positioned to influence and partner with industry, as never before.

STEM College is a community of exceptional STEM researchers, teachers, inventors, designers and game-changers, supported by talented professional staff. We offer higher education programs across all STEM disciplines at the Bachelor, Master and PhD levels, and ensure our students experience an education that is work-aligned and life-changing.

The College is renowned for its exemplary research in many STEM areas including advanced manufacturing and design; computing technologies; health innovation and translational medicine; nano materials and devices; and sustainable systems. Our brilliant researchers attract funding from government and industry sources.

Industry is at the heart of what we do. It ensures our research has real world impact, and our students are truly work-ready. Under the leadership of DVC STEM College & Vice President, Digital Innovation, we have established new hubs of industry-connected digital innovation and endeavour and are engaging with global STEM organisations at scale.

Our diversity and shared values empower our work, and we are proud of the College's inclusive, caring culture. We offer a safe, dynamic work environment, and support every member of our community to achieve their potential. The College appointed Victoria's first ever Dean of STEM, Diversity & Inclusion in 2020, and this role drives gender equity, diversity and inclusion strategies across the College.

STEM College employs 1,000 staff who deliver onshore and offshore programs to approximately 20,000 students.

**We are here to positively impact the world and create the next generation of STEM leaders.**

www.rmit.edu.au/seh

## Position Summary

The Senior Research Fellow will lead research activities in line with the University's research strategy. It is expected that the Senior Research Fellow will have an established skillset and expertise in experimental and/or numerical wind turbine blade (or related mechanical system) design and optimization.

Under the Australian Economic Accelerator Innovate Smart Wind Turbine Blades project, the Senior Research Fellow will be a member of a larger team focusing on the design, analysis, optimization, control, and full-scale testing of advanced wind turbine blades. The successful candidate may be responsible for leading the design effort in evaluating aerodynamic performance, structural dynamics, aeroelastic behaviour and loads, and fatigue performance under variable operating conditions. Key duties include deploying and validating computational models, analysing test data, and collaborating across aerodynamic, structures/materials, and controls teams to ensure reliable and efficient blade performance. A strong background in structural dynamics, finite element modelling, and wind energy systems is essential, with experience in tools such as FAST/OpenFAST, ANSYS, or similar. This role offers a unique opportunity to contribute to the next generation of renewable energy technologies. The Senior Research Fellow will support the Chief Investigator in the preparation of reports, journal papers, conference papers or presentations based on the findings of these investigations.

## Reporting Line

Reports to the Chief Investigator and Project Manager of the AEA Innovate Smart Blades project.

## 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. **Lead Research Activities**: Lead and manage advanced research aligned with the University's research strategy and the *Smart Wind Turbine Blades* project objectives.
2. **Blade Design and Optimization:** Drive the design, analysis, and optimization of wind turbine blades, focusing on aerodynamic performance, structural dynamics, aeroelastic behaviour, and fatigue life.
3. **Computational Modelling and Validation**; Develop and validate high-fidelity computational models using tools such as FAST/OpenFAST, ANSYS, 3DExperience, to simulate blade performance under various conditions.
4. **Multidisciplinary Collaboration**: Collaborate with experts across aerodynamics, materials, structures, and controls to ensure integrated and effective blade system design.
5. **Data Analysis and Interpretation**: Analyse simulation and experimental data to inform design improvements and validate model accuracy.
6. **Research Dissemination**: Prepare high-quality journal articles, conference papers, technical reports, and presentations based on research outcomes.
7. **Project Reporting and Support**: Support the Chief Investigator in preparing project reports, funding deliverables, and documentation for stakeholders.
8. **Mentorship and Supervision**: Provide guidance and supervision to junior researchers, PhD students, and research assistants involved in the project.

## Key Selection Criteria

It is highly desirable that the candidate can satisfy several of the following criteria:

1. **Expertise in Wind Turbine Blade Design**: Demonstrated expertise in the design, analysis, and optimization of wind turbine blades or related mechanical systems, particularly in areas such as aerodynamics, structural dynamics, fatigue, and aeroelasticity.
2. **Advanced Computational Modelling Skills**: Proven expertise in developing and validating computational models using tools such as FAST/OpenFAST, ANSYS, or equivalent for simulating mechanical system behaviour. Proficiency in Python and/or MATLAB.

3. **Strong Research Track Record**: A sustained record of high-quality research outputs (e.g., peer-reviewed journal publications, conference presentations, technical reports) in relevant fields.
4. **Data Analysis and Interpretation**: High-level ability to analyse and interpret experimental or simulation data to inform design decisions and validate performance models.
5. **Collaboration and Teamwork**: Demonstrated experience working effectively in interdisciplinary research teams, with the ability to collaborate across domains such as aerodynamics, structures, controls, and materials.
6. **Supervision and Mentoring**: Demonstrated experience in supervising or mentoring junior researchers, PhD candidates, or research assistants in a research or academic setting.
7. **Communication and Reporting Skills**: Excellent written and verbal communication skills, with the ability to prepare research publications, technical documentation, and project reports for academic and industry stakeholders.
8. **Project and Time Management**: Strong organisational skills with the ability to manage multiple tasks, meet deadlines, and contribute to project goals under minimal supervision.

## Qualifications

**Mandatory:**

- PhD or equivalent in relevant field
- Appointment to this position is subject to passing a Working with Children Check, National Police Check, and mandatory compliance training.

Note: Maintaining a valid Working with Children Check is a condition of employment at RMIT.