



POSITION DESCRIPTION

Department of Mechanical Engineering
School of Electrical, Mechanical and Infrastructure Engineering
Melbourne School of Engineering

Research Assistant or Research Fellow in Maritime Power and Energy System Modelling

In line with the special measure H103/2014 provided for under section 12 of the Equal Opportunity Act 2010 (VIC), the Melbourne School of Engineering strongly encourages applications from suitably qualified female candidates.

POSITION NO	0043289
CLASSIFICATION	Research Assistant (Level A) or Research Fellow (Level A) <i>Level of appointment is subject to qualifications and experience</i>
SALARY	\$69,148* - \$93,830 p.a. Level A (*PhD entry Level A.6 \$ 87,415 p.a.)
SUPERANNUATION	Employer contribution of 9.5%
EMPLOYMENT TYPE	Full-time (fixed-term) position available for 2 years Fixed term contract type: External funding
OTHER BENEFITS	http://about.unimelb.edu.au/careers/working/benefits
CURRENT OCCUPANT	New
HOW TO APPLY	Online applications are preferred. Go to http://about.unimelb.edu.au/careers , under 'Job Search and Job Alerts', select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Professor Michael Brear Tel +61 3 8344 6722 Email mjbrear@unimelb.edu.au <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our websites:
about.unimelb.edu.au/careers
joining.unimelb.edu.au

Position Summary

The energy available on board a maritime vehicle is limited by the size of the fuel tanks and other forms of on-board energy storage. Using the available energy more efficiently reduces fuel use, increases range and reduces emissions. University researchers are therefore developing a modelling tool for the assessment of energy use on board maritime vehicles with an industry partner. This tool will assist the partner in assessing the effectiveness of different maritime vehicle designs.

Whilst you will be located primarily at the partner's site, working closely with their team in undertaking this project, you will also maintain a strong working relationship with University colleagues. You will be expected to be an active member of the School, collaborating with other researchers and undertaking small amounts of teaching and/or research supervision directly related to your area of research, as required.

The Melbourne School of Engineering is strongly committed to supporting diversity and flexibility in the workplace. 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.

The University plan seeks to increase the diversity of the workforce and the representation of women in areas they have been traditionally under-represented. Consistent with this, the School is seeking to increase the representation of women in the academic workforce across engineering disciplines. Under a Special Measure, under Section 12 (1) of the Equal Opportunity Act 2010 (Vic) the School is seeking to lift the representation of women from 20% in 2014 to at least 25% over the next 5 years, and strongly encourages applications from suitably qualified female candidates.

1. Selection Criteria

1.1 ESSENTIAL

- ▶ Degree in Mechanical Engineering, Electrical Engineering or a closely related discipline;
- ▶ Excellent ability in analysing data, problem solving and maintaining accurate research records, with the capacity to develop expertise in research to undertake tasks with increased autonomy;
- ▶ Strong oral communication skills, with the capacity to relate to industrial collaborators, onsite operating personnel, as well as academic colleagues;
- ▶ Experience in using initiative, working with minimal supervision and ability to prioritise tasks to achieve project objectives within timelines;
- ▶ Demonstrated project management skills, including high level organisational and time management skills, ability to manage competing priorities and excellent record keeping skills.
- ▶ Excellent interpersonal skills, including an ability to interact with internal and external stakeholders (academic, administrative and support staff) in a courteous and effective manner.

ADDITIONAL ESSENTIAL CRITERIA FOR APPOINTMENT AS RESEARCH FELLOW

- ▶ A PhD in Mechanical Engineering, Electrical Engineering or closely related discipline

- ▶ A record of quality research as evidenced by research publications in leading journals and at conferences commensurate with opportunity;
- ▶ Ability to perform independent research and a commitment to interdisciplinary research;
- ▶ Excellent written and verbal communication skills, demonstrated by presentation of research results at conferences, internal forums and through manuscript submissions.

1.2 DESIRABLE

- ▶ Experience in propulsion system, power system and/or energy system modelling.
- ▶ Experience in supervision of students.

2. Key Responsibilities for Research Assistants

2.1 RESEARCH – ADVANCEMENT OF THE DISCIPLINE

- ▶ As part of a team, assist in carrying out research on the nominated research project and work towards completion of the aims of the project;
- ▶ Produce reports, conference and seminar papers and publications associated with the research project;
- ▶ Participate in preparation of manuscripts for publication in peer-reviewed journals;
- ▶ Liaise effectively with collaborators with a variety of internal and external stakeholders, including the preparation of reports and technical presentations on progress toward project milestones;
- ▶ Assist other researchers in carrying out experiments in order to work as a team and further the department's research output;
- ▶ Maintain accurate and detailed records of all experiments conducted;
- ▶ Contribute to the development of the Department's and the School's strong research program in programming languages and security.

2.2 TEACHING AND LEARNING

- ▶ Supervision of research support staff or students involved in the research.

2.3 ENGAGEMENT

- ▶ Attend and contribute actively to lab meetings;
- ▶ Present research results at regular review meetings;
- ▶ Involve in professional activities including, subject to funding, attendance at conference, review meetings and seminars in the field of expertise; and
- ▶ Attend meetings associated with research both within the department and relevant collaborating institutions.

2.4 SERVICE AND LEADERSHIP

- ▶ Assist with administrative duties and general laboratory duties including maintenance of the laboratory and equipment and ordering of supplies;
- ▶ Assist in the preparation and submission of competitive grant applications relating to the appointee's research program.

2.5 OTHER

- ▶ Perform other tasks as requested by the supervisor or the Head of the Department;
- ▶ Undertake Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in Section 4.

ADDITIONAL KEY RESPONSIBILITIES FOR APPOINTMENT AS RESEARCH FELLOW

- ▶ Independently plan and carry out research on the nominated research project, with the goal of timely completion of the milestones of the project;
- ▶ Publish research outcomes on a regular basis in journals and at leading conferences;
- ▶ Perform administrative functions primarily connected with the research project, including generating written summaries of discussions, and developing detailed research plans with the project investigators and writing these into a project plan;
- ▶ Work towards building an independent research project;
- ▶ Active participation in some outreach activities relating to research and scholarship;
- ▶ Effective liaison with external networks to foster collaborative partnerships;
- ▶ Present results at local, national forums;
- ▶ Contribute to teaching, training, scientific mentoring and supervision of students;
- ▶ Identify sources of funding to support individual or collaborative projects, relating to teaching, research and engagement practice in the discipline.

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 University's People Strategy 2015-2020 and policies that address 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 service for excellence and reach the targets of Growing Esteem.

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:

<http://safety.unimelb.edu.au/topics/responsibilities/>

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

5. Other Information

5.1 DEPARTMENT OF MECHANICAL ENGINEERING

www.mech.unimelb.edu.au

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, Design 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 strategy addresses the most urgent contemporary problems of our rapidly developing industrial society, with investigations into biomechanical engineering, fluids, thermal sciences, manufacturing, materials and design.

5.2 MELBOURNE SCHOOL OF ENGINEERING

www.eng.unimelb.edu.au/

The Melbourne School of Engineering is one of Australia's leading Engineering Schools and aims to be the school of choice for the highest performing students and research staff in Australia and within the Time Higher Education Supplement top twenty Schools of Engineering internationally by 2020.

5.3 THE UNIVERSITY OF MELBOURNE

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The University offers staff many benefits and prospective staff are encouraged to view the following web links:

www.unimelb.edu.au

www.growingesteem.unimelb.edu.au

www.unimelb.edu.au/careers

5.4 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 www.unimelb.edu.au/unisec/governance.html.