POSITION DESCRIPTION

THE UNIVERSITY OF MELBOURNE

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

Research Fellow in Energy and Transport Systems

POSITION NO	0048881
CLASSIFICATION	Research Fellow (Level A)
SALARY	$72,083 - $97,812 p.a.
SUPERANNUATION	Employer contribution of 9.5%
WORKING HOURS	Full-time (1.0 FTE)
BASIS OF EMPLOYMENT	Fixed-term for two years
OTHER BENEFITS	http://www.eng.unimelb.edu.au/about/join-mse/why-join-mse
LOCATION	Parkville campus
CONTACT FOR ENQUIRIES ONLY	Professor Michael Brear Email mjbrear@unimelb.edu.au

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

The University of Melbourne

Established in 1853, the University of Melbourne is a public-spirited institution that makes distinctive contributions to society in research, learning and teaching and engagement. It's consistently ranked among the leading universities in the world, with international rankings of world universities placing it as number 1 in Australia and number 32 in the world (Times Higher Education World University Rankings 2017-2018).

https://about.unimelb.edu.au/strategy/growing-esteem

Melbourne School of Engineering

Melbourne School of Engineering (MSE) 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). MSE continues to attract top staff and students with a global reputation and has a commitment to knowledge for the betterment of society.

Our ten-year strategy, MSE 2025, is our School's commitment to bring to life the University-wide strategy *Growing Esteem* and reinforce the University of Melbourne's position as one of the best in the world. Investment in new infrastructure, strengthening industry engagement and growing the size and diversity of our staff and student base to drive innovation and develop the transformative technologies of the future are all fundamental principles underpinning MSE 2025.
http://www.eng.unimelb.edu.au/about/join-mse/why-join-mse

The Melbourne Energy Institute

The Melbourne Energy Institute (MEI) of an institute of the University and undertakes inter-disciplinary research on the challenges of transitioning towards a low carbon energy system. We work with the community, industry and government on some of the world's most pressing energy challenges.

MEI's research involves close engagement with industry and government. We currently have strong partnerships with leading companies such as AusNet Services, AEMO, Ford and Mitsubishi, to name a few. We also work closely with Commonwealth and State Governments and the energy market agencies. In all cases, MEI strives to undertake high quality research that tangibly benefits our industry and government partners.

Position Summary

This two-year position is for a Post-Doctoral Research Fellow to undertake modelling of different energy and transport systems. Potential projects will include:

- aspects of the planning and operations of wholesale electricity markets, including studies of renewable integration and flexible loads;
- the deployment of different distributed energy resources into distribution networks;
- the operational and lifecycle performance of different vehicles.

The ideal candidate will be a recent PhD graduate with strength in modelling energy or transport systems. A deep physical understanding of system dynamics is required, as is the ability to explain system performance using technical, economic and environmental metrics.

1. Selection Criteria

1.1 ESSENTIAL

- Experience in the numerical modelling of energy and/or transport systems.
- A PhD degree in Economics, Econometrics, Engineering, Finance or Science.
- Very strong written and oral communication skills.
- A record of quality research as evidenced by publications in leading journals and at conferences commensurate with opportunity.
- Ability to perform independent research and a commitment to interdisciplinary research;
- Demonstrated capacity to communicate research concepts to technical and non-technical audiences.
- Excellent interpersonal skills.

1.2 DESIRABLE

- Experience in numerical optimization.
- Experience in in coordinating code-development within a team.
- Experience in supervision of students and/or research assistants.

2. Key Responsibilities

2.1 RESEARCH – ADVANCEMENT OF DISCIPLINE

- Undertake high quality modelling of different energy and transport systems, as requested by the MEI Director.
- Publish and present high quality, peer reviewed articles.

2.2 TEACHING AND LEARNING

- Co-supervise graduate students with the MEI Director.

2.3 ENGAGEMENT

- Active participation in outreach activities relating to research and scholarship.
- Effective liaison with external networks to foster collaborative partnerships.
- Involvement in professional activities, including consulting.

2.4 SERVICE AND LEADERSHIP

- Write and submit high quality research proposals and public reports.

2.5 OTHER

- Undertake other activities as requested by the MEI Director.
- Undertake Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in Section 5.

3. 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 strive 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/people/community/responsibilities-of-personnel

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