

Position Title: Associate Professor – Quantum Measurement and Control
Position Classification: Level D
Position Number: NEW
Faculty/Office: Engineering and Mathematical Sciences
School: Physics, Mathematics and Computing
Department: Physics
Supervisor Title: Head of Department
Supervisor Position Number: 316904

Your work area

‘Empowering people to change the world’

The Faculty of Engineering and Mathematical Sciences encompasses three Schools – the School of Physics, Mathematics and Computing, the School of Engineering, and the Oceans Graduate School. Past graduates include Rhodes Scholars, Fulbright Scholars, Eureka Prize winners, Scientists of The Year, CEOs, and award-winning inventors. The Faculty prides itself on its track-record for producing graduates who not only perform well in their chosen profession, but are equipped with the skills and social capital they need to be the very best.

The Faculty has an international reputation for excellence in research and its research teams benefit from global partnerships with industry, attracting research income of more than \$27 million a year – well above the national average. With cross-disciplinary research groups, the Faculty offers a creative and innovative research environment and is poised to respond to a rapidly changing world and develop technologies that fulfil the demands of the 21st century.

Equally important is educating the next generation of graduates for current and emerging industries. The Faculty seeks to promote teaching excellence and to embrace the latest forms of effective educational delivery, and produce graduates with skill sets that promote flexibility and recognise the need for life-long learning.

The department of Physics has an established international research reputation in the fields of quantum measurement and control. It hosts the nodes of two Centres of Excellence (1) Quantum Engineered Systems and (2) Gravitational Wave Discovery, both funded by the Australian Research Council. In the most recent ERA (Excellence in Research for Australia) ranking exercise, the department scored 5/5 in the areas of Quantum Physics, Optical Physics and Classical Physics. It also has close links and ties with local industry, hospitals, observatories and government research organisations including CSIRO (The Commonwealth Scientific and Industrial Research Organisation) & DST (The Defence Science and Technology Group).

Reporting Structure

Reports to: Head of Department

Direct Reports: Nil

Your role

The appointee will conduct high impact research and high quality teaching in Quantum Measurement and Control, contributing to the School's initiatives to promote teaching and research in this area, and contributing to the University's research priorities.

The successful candidate will have a strong research record enthusiasm for scholarship, capacity for academic leadership, willingness to engage with industry, and a strong desire to participate in undergraduate and postgraduate teaching.

Further, the Faculty is supportive of this role being considered for flexible working arrangements.

Key responsibilities

- Identify and develop a wide range of research projects, contributing to the Faculty's reputation in Quantum Measurement and Control.
- Produce high quality research in the area of Quantum Measurement and Control, and actively represent the University and the School domestically and internationally in scholarly events and through publishing in high-quality academic journals.
- Contribute to leadership of an innovative multidisciplinary research team.
- Lead and contribute to the teaching of world class undergraduate and postgraduate courses that delivers a high quality student experience, making a distinguished personal contribution in the area of Quantum Measurement and Control.
- Supervise research students at both the undergraduate and postgraduate levels as well as postdoctoral research fellows. Attract and recruit quality postgraduate students and postdoctoral research fellows, both domestic and international.
- Identify and nurture opportunities for collaboration across the University, including involvement in professional associations, conferences and other external activities.
- Contribute to community engagement by building strong working relationships with a range of stakeholders including government and industry.
- Actively support the University's commitment to health and safety, and equity and diversity.
- Other duties as required.

Your Specific work capabilities (selection criteria)

To be considered for this role, the candidate will have:

- A PhD in a relevant field.
- Demonstrated ability to produce research outcomes which are supportive of the School's activities.
- A track record of publication in peer-reviewed international journals and grant writing success (relative to opportunity).
- Teaching and learning expertise in the disciplines of Quantum Measurement and Control.
- Demonstrated success in course development, engaging active learning techniques, and successful student evaluation (relative to opportunity).
- Proven ability to engage with Industry and to increase School and University business development capacity.

Special Requirements

The position is open to Flexible working arrangements – part time employment can be negotiated.

Compliance

Workplace Health and Safety

All supervising staff are required to undertake effective measures to ensure compliance with the Occupational Safety and Health Act 1984 and related University requirements (including Safety, Health and Wellbeing Objectives and Targets).

All staff must comply with requirements of the Occupational Safety and Health Act and all reasonable directives given in relation to health and safety at work, to ensure compliance with University and Legislative health and safety requirements.

Details of the safety obligations can be accessed at <http://www.safety.uwa.edu.au>

Equity and Diversity

All staff members are required to comply with the University's Code of Ethics and Code of Conduct and Equity and Diversity principles. Details of the University policies on these can be accessed at http://www.hr.uwa.edu.au/publications/code_of_ethics, <http://www.equity.uwa.edu.au>