THE UNIVERSITY OF WESTERN AUSTRALIA

Position Description

Position Title:	Research Associate
Position Classification:	Level A
Position Number:	319372, 319392
School/Division:	School of Physics, Mathematics and Computing
Centre/Section:	Department of Physics
Supervisor Title:	Professor
Supervisor Position Number:	318622

Your work area

The Department of Physics is a research focused department with a strong commitment to quality teaching at both undergraduate and postgraduate levels. While our core business is fundamental research, we have also successfully translated the results of research into the development of new technologies for the benefit of humankind.

The University of Western Australia (UWA) node of the Australian Research Council (ARC) Centre of Excellence in Gravitational Wave Discovers (OzGrav) is currently focusing its research on developing advanced techniques for gravitational wave detectors. Our research programs include quantum measurement techniques for improving the quantum noise limited sensitivity, the control of parametric instability, optimal mode matching for reducing the loss of squeezed state injection, and silicon optics in high power cavities for next generation detectors.

We are looking for a dynamic experimentalist with motivation and drive and relevant experience. The work will involve conducting day to day research, and working closely with PhD students on experiments either with high power suspended optical cavities, or tabletop experiments.

UWA offers a vibrant research environment for gravitational wave astronomy. There is a long history of gravitational wave research at UWA. One of the first cryogenic bar detector Niobe was developed at the UWA during the 1980s. We also operating the 80m high optical power suspended cavities at the Gingin facility.

Reporting structure

Reports to: Professor

Your role

As the appointee you will, under limited directions, conduct research primarily on experiments towards measurement in quantum noise limited sensitivity for improving gravitational wave detectors. You will assist in supervising final year undergraduate, Master and PhD students working on opto-mechanical experiments. You will also be expected to participate in proposing and developing new experiments aiming for improving the sensitivity of gravitational wave detectors.

Your key responsibilities

Provide high-level research at the forefront of gravitational wave physics with emphasis on opto-mechanical system for improving the sensitivity of present and future gravitational wave detectors

Prepare research papers for publication in high impact refereed journals

Present research results at seminars and conferences

Seek additional research funding by grant applications

Contribute to the supervision of Honours, Masters and PhD research projects

Other duties as directed

Your specific work capabilities (selection criteria)

PhD in Experimental Physics

Experience in precision measurements and opto-mechanical systems

Ability to present written publications and deliver presentations and contribute to writing and publishing papers in high impact journals

Well-developed interpersonal and written and verbal communication skills

Excellent organisational skills with demonstrated ability to set priorities and to meet deadlines

Ability to work independently, show initiative, problem solve and work productively as part of a team

Special requirements (selection criteria)

Regular travel within the state may be required (e.g. off campus facility at Gingin and interstate/international collaboration institutes)

Occasional weekend work

Compliance

Workplace Health & 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

Inclusion & Diversity

All staff members are required to comply with the University's Code of Ethics, Code of Conduct and Inclusion and Diversity principles. Details of the University policies on these can be accessed at http://www.hr.uwa.edu.au/policies/policies/conduct/code, http://www.web.uwa.edu.au/inclusion-diversity.