Position Title:	Research Associate
Position Classification:	Level A
Position Number:	318425
Faculty/Office:	Faculty of Engineering and Mathematical Sciences
School/Division:	School of Engineering
Department:	Department of Chemical Engineering
Supervisor Title:	308999

Your work area

The UWA School of Engineering is renowned for its award-winning researchers, teachers and facilities. It is a multidisciplinary school offering education and research in a number of engineering disciplines. This includes civil, environmental, mining, chemical, mechanical, electrical and electronic engineering. Successful applicants will work primarily in the large Fluid Science and Resources Research (FSRR) Group (https://www.fsr.ecm.uwa.edu.au/) which primarily conducts research across the resources industry. The relevant theme to these positions focusses on the use of NMR techniques for the characterisation of porous media.

Reporting Structure

Reports to: Prof. Mike Johns who co-leads the Flids Science and Resources (FSRR) group. This is a collaboration between the FSRR group and RIG Technologies/Wallis Drilling. As such research supervision will also be provided by Dr Tim Hopper, who is the CTO and Managing Director at RIG Technologies.

Your role

Working with both the FSRR group at UWA and RIG Technologies as part of a vibrant team of research engineers and applied physicists, the position will concentrate on the development of Magnetic Resonance 'Logging whilst Drilling' downhole tools for various metrology applications across the mining and minerals processing sectors. This builds directly on a range of Magnetic Resonance (MR) logging tools already in commercial operation across the globe. Key, specific research focus of the position will be motion compensation to allow for quantitative MR, extension from ^{1}H detection to other nuclei and optimisation of downhole energy scavenging strategies to allow for remote operation. Co-supervision of PhD students will be required.

Key responsibilities

Conduct high quality research on the project.

Publication of research papers and presentations at international conferences and workshops.

Work collaboratively with other researchers in both a university and industry context

Assist in the supervision of undergraduate, Masters and PhD students.

Participate in the research group's activities and contribute to/organize group projects, meetings and workshops.

Other duties as directed.

Your specific work capabilities (selection criteria)

A PhD in a relevant field.

Strong track record of research publication relative to opportunity.

Extensive research experience, preferably with a strong interface with industry

Research experience with NMR (or related) hardware development and associated data analysis techniques

Highly developed written and verbal communication skills in the preparation of high-quality reports, presentations and publications.

An ability and willingness to direct and supervise students.

Highly developed organisational skills and demonstrated ability to set priorities, meet deadlines and work collaboratively.

Special Requirements

Occasional weekend work

Potentially participate in field trials at remote West Australian mine locations

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