



POSITION DESCRIPTION

Academic Positions

Position Title: Research Fellow Level: A
Faculty/Division: Australian Institute for Innovative Materials (AIIM)
Department/Location: Intelligent Polymer Research Institute (IPRI)/ARC Centre of Excellence for Electromaterials Science (ACES)

Primary Purpose of the Position:

Cochlear implants create the perception of sound in people with sensorineural deafness by electrically stimulating the nerves within the cochlea. The Cochlear Ltd device has 22 platinum electrodes, each around 0.3 mm², that together curl around the modiolus in the centre of the cochlea where the nerves reside.

This position will be looking at electrode – tissue interactions to understand the interactions of proteins and cells on the electrode surface with and without electrical stimulation, and how these factors affect electrode dissolution, impedance and toxicity levels.

It will involve the preparation of Platinum (Pt) electrodes (and other conducting electrode surfaces) within PDMS, develop surface chemistry modifications of these surfaces, and provide support to the PhD project students as required.

Specifically this would involve:

- Fabrication of electrodes to be used within EQCM and EC Bio AFM as well as more routine electrochemical characterisation.
- Fabrication of electrodes within PDMS for surface chemistry modification work.
- Develop chemistries to selectively chemically modify surfaces to promote fibrous tissue growth on PDMS and to discourage the same on Pt.
- Comparison of data from above experiments integrated to allow comparison against clinically-relevant electrochemical performance.

Position Environment:

This project is a collaboration between the HEARing Cooperative Research Centre (CRC) and the Intelligent Polymer Research Institute (IPRI) at the University of Wollongong (UOW).

IPRI is the lead node of ARC Centre of Excellence in Electromaterials Science (ACES) located within Australian Institute for Innovative Materials (AIIM). IPRI / ACES is a large team focused on multidisciplinary research and is steered by Australian Laureate Fellow Prof Gordon Wallace. The vision is to create the next generation of electrochemical devices via the precision assembly of nano-/micro-dimensional components into macroscopic structures to deliver unprecedented device performance.

The HEARing Cooperative Research Centre (CRC) is focused on the twin challenges of more effective prevention and improved remediation of hearing loss.

Major Accountabilities/Responsibilities:

Responsibilities	Outcome
1. Designing and implementing an experimental research program related to The HEARing CRC objectives under limited supervision either as a member of a team or, where appropriate, independently, in IPRI.	Reproducible, accurate and appropriate experimental data achieving targets or milestone outcomes in a timely manner.
2. Assistance with training undergraduate and graduate students and supervision of student projects working on this project.	Students working in this area on related projects are properly supported.
3. Assistance with project management and administration, including preparation of reports, assisting with workshops and maintenance of publications records.	Proper functioning of the project and HEARing CRC objectives.
4. Contribute towards developing and submitting grant applications for research funding where directly associated with this project.	Grants submitted towards funding further development of the project
5. Assist with management of laboratories used for R&D	Ensure efficient and safe laboratory operations in accordance with OH&S
6. Supervisory roles: Communicate and consult with staff on workplace and staffing matters.	To foster direct relationships with staff and enhance engagement with the organisation.
7. Observe principles and practices of Equal Employment Opportunity	To ensure fair treatment in the workplace
8. Have WH&S responsibilities, accountabilities and authorities as outlined in the http://staff.uow.edu.au/ohs/commitment/responsibilities/ document	To ensure a safe working environment for self & others.

Reporting Relationships:

Position Reports to:	Professor Gordon Wallace
The position supervises the following positions:	Assist with supervision of PhD students on this project
Other Key Contacts:	Dr Carrie Newbold, HEARing CRC

Key Relationships:

Contact/Organisation:

Prof Gordon Wallace
Dr Toni Campbell
Dr Carrie Newbold

Purpose & Frequency of contact

Monthly - progress technical reporting
Administration of the project
Monthly or as required – project reporting

Key Challenges:

1. Development of appropriate material and biomaterial formulations.
2. Ensuring that research outcomes are in line with the expected outcomes.
3. Collaborating within a large team on multidisciplinary research to progress results fast.

SELECTION CRITERIA - Knowledge & Skills:

Essential:

- Ability to work on applied research projects in a timely manner.
- Ability to work both independently and in a team environment.
- Well-developed organisational and problem solving skills.
- Demonstrated knowledge and skills in use of polymeric materials for bio-applications.

- Demonstrate well developed written, oral communication and interpersonal skills.
- Demonstrated knowledge of OH&S regulations and procedures.

Desirable:

- Knowledge in interfacing mammalian cells with biomaterials
- Knowledge of preparation of electrode structures for implantation into small animal

SELECTION CRITERIA - Education & Experience:

Essential:

- Degree in relevant field such as in chemistry, materials science, engineering.
- Demonstrated experience in engineering design and fabrication.
- Experience in multi-disciplinary research.
- Experience in report writing/manuscript preparation.
- Experience in testing and optimising electrochemical properties of both platinum and graphene containing electrodes.

Desirable:

- Experience training students and co-supervising student projects
- Strong publication track record relative to opportunity

Personal Attributes:

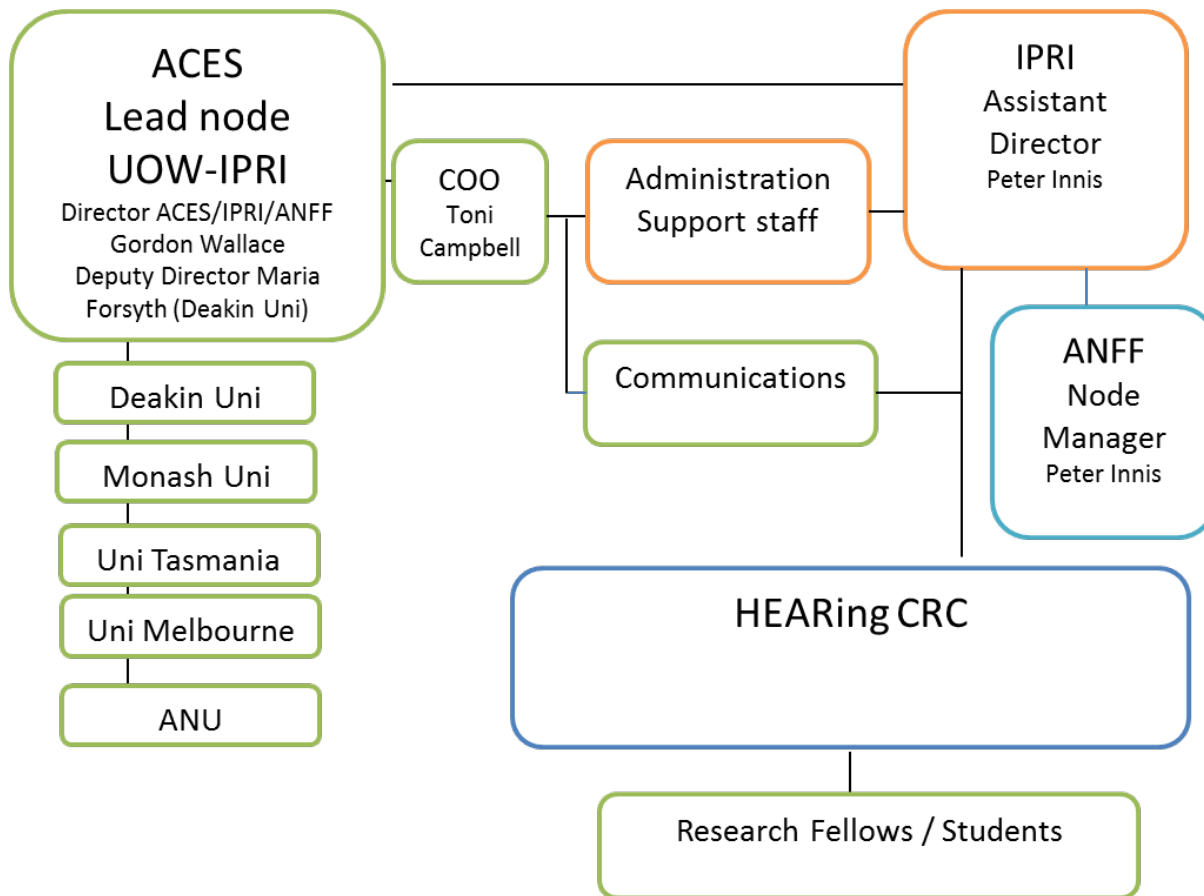
- Ability to work under pressure to meet deadlines.
- Work independently without constant supervision.
- Enthusiasm for research and team work.
- Willingness to receive positive feedback and constructive criticism.
- Look for solutions, rather than merely presenting problems.
- Flexible approach to work assignments.

Special Job Requirements:

OH&S inductions to workplace and laboratory procedures.

This person must adhere to safe laboratory practices of AIIM /IPRI.

Organisational Chart:



Roles and Responsibilities in Relation to Workplace Health and Safety:

The University of Wollongong is committed to providing a safe and healthy workplace for its workers, students and visitors. All members of the University community have a collective and individual responsibility to work safely and be engaged in activities to help prevent injuries and illness.

In addition to the major accountabilities/responsibilities required for your position, you also hold the following roles and responsibilities in relation to Workplace Health and Safety:

All Staff

- Take reasonable care for your health and safety as well as others.
- Comply with any reasonable instruction by the University.
- Cooperate with any reasonable policies and procedures of the University including reporting of hazards or incidents via the University reporting process.
- Certain staff have specific responsibilities for Work Health and Safety (WHS), further information is available in the document [Roles And Responsibilities for WHS](#) and [WHS Management System](#).

Inherent Requirements:

This position description outlines the major accountabilities/responsibilities and the selection criteria against which you will be assessed as suitable for the position. As such there will be specific job requirements that we refer to as Inherent Requirements.

Inherent Requirements refer to your ability to:

- Perform the essential duties and functional requirements of the job;
- Meet the productivity and quality requirements of the position;
- Work effectively in the team or other type of work organisation concerned; and
- Do the job without undue risk to your own or others health, safety and welfare at work.

If you have any injuries, illness, disorder, impairment, condition or incapacity that may affect your ability to perform the inherent requirements of the position, we encourage you to discuss this with the University to assist in the process of identifying reasonable adjustments to enable you to perform the duties of the position. The University wants to place you in the best situation to use your skills effectively in the position you are applying for at the University.

POSITION CLASSIFICATION STANDARD - Research Only

Level: **A**
Title: **Associate Fellow**

Description

A position classification standard describes the broad categories of responsibility attached to research-only academic staff at different levels. The standards are not exhaustive of all tasks in research-only academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. The standards provide an adequate basis to differentiate between the various levels of employment and define the broad relationships between classifications.

Progression through an academic career will normally be based on research, teaching, administrative functions and contribution to the profession. The balance of functions will vary according to level and position over time. It is only in exceptional circumstances that promotion would be solely on the research only position classification standards.

- General Standard
- Specific Duties
- Skill Base

General Standard

A Level A research-only academic is expected to contribute towards the research effort of the institution, and to develop her/his research expertise through the pursuit of defined properties relevant to the particular field of research.

Specific Duties

Specific duties required of a Level A research-only academic may include

- The conduct of research under limited supervision either as a member of a team or, where appropriate, independently, and the production or contribution to the production of conference and seminar papers and publications from that research.
- Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise.
- Limited administrative functions primarily connected with the area of research of the academic.
- Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff.
- Occasional contributions to teaching in relation to his/her research project(s).
- Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures.
- Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental and/pr faculty meetings and/or membership of a limited number of committees.
- Advice within the field of the staff member's research to postgraduate students.
- A Level A research-only academic shall work with support, guidance and/or direction from staff classified at Level B and above and with an increasing degree of autonomy as the research academic gains in skill and experience.

Skill Base

A Level A research-only academic will normally have completed four years of tertiary study in the relevant discipline or have equivalent qualifications or research experience. In many cases a position at this level will require an honours degree or higher qualifications or equivalent research experience. Research experience may have contributed to or resulted in publications, conference papers, reports or professional or technical contributions which give evidence of research potential.