

POSITION DESCRIPTION

Academic Positions

(In addition to the Position Classification Standards)

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

Primary Purpose of the Position:

To develop in-line instrumentation, techniques and capabilities for characterisation of materials and structures during additive manufacturing processes. Characterisation techniques include, but not limited to optical, electrical and mechanical properties. Contactless techniques such as microwave conductivity eddy current and Raman spectroscopy will be initially targeted.

Position Environment:

You will be a member of ARC Centre of Excellence in Electromaterials Science (ACES) located within the lead node the Intelligent Polymer Research Institute at the University of Wollongong (UOW). ACES is composed of 6 Australian nodes: UOW, Deakin University, Monash University, University of Tasmania, Melbourne University and Australian National University and 5 international partner organisations: Dublin City University; University of Warwick; Friedrich Alexander University; Hanyang University and Yokohama National University.

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. In doing so we will create the preeminent world centre for electromaterials science.

ACES is steered by Australian Laureate Fellows Wallace as Centre Director and Forsyth as Associate Director, and with the assistance of a group of inspirational researchers and expert guidance by eminent persons drawn from the science, business, academic and government communities. A Research Strategy Group (comprising the Centre Director, Associate Director and 6 Theme Leaders) will review strategic directions for each of the Theme areas on a quarterly basis.

Major Accountabilities/Responsibilities:

Responsibilities		Outcome	Office Use Only
1.	Designing and implementing an experimental research program related to ACES objectives under limited supervision either as a member of a team or, where appropriate, independently, in the area of in-line characterisation during the assembly of material structures and devices.	Reproducible, accurate and appropriate experimental data achieving targets or milestone outcomes in a timely manner.	
2.	Design, assembly and development of in-line characterisation instrumentation and experimental techniques. Integration of the new techniques with additive fabrication tools / 3-D printing capabilities is important	Establishment of in-line characterisation capabilities within ACES	

3.	Preparation of scientific papers, conference presentations and other reports describing the results of the research program.	Scientific papers published in ISI journals and conference presentations at national and international events.	
4.	Assistance with project management and administration, including preparation of reports, assisting with workshops, preparation of newsletter items and maintenance of publications records.	Proper functioning of the project and ACES objectives.	
5.	Assistance with training students and supervision of student projects.	Students working in the areas of material characterization and additive fabrication for ACES are properly supported.	
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.	Ongoing
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.	

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.

Reporting Relationships:

Position Reports to:	Dr Attila Mozer
The position supervises the following positions:	Nil
Other Key Contacts:	A/Prof Michael Higgins, Prof Gordon Wallace

Key Relationships:

Contact/Organisation:

Dr Attila Mozer CI ACES
A/Prof Michael Higgins CI ACES
Dr Stephen Beirne & Assoc. Prof. Peter Innis/ANFF
Prof Xungai Wang CI ACES

Purpose & Frequency of contact

Monthly -Report on capabilities and results
Monthly -Report on capabilities and results
Monthly- Support additive manufacturing
Monthly -Engage with external ACES partner on development of characterisation capabilities

Key Challenges:

1. Designing and assembling high precision characterization instrumentation enabling real-time, in-line characterisation of electromaterials and electromaterial composites.
2. Ensuring that research outcomes are in line with the expected outcomes. The new capabilities must contribute to improved understanding of structure-property relationships in the key research areas of the ACES.
3. Collaborating within a large team to progress results fast. This role requires deep commitment to work collaboratively both with members of the 3D Electromaterials group as well as application oriented research Themes of Synthetic Biological, Synthetic Energy Systems or Soft Robotics.
4. Liaise with equipment manufacturers as required to develop new characterisation capabilities.

SELECTION CRITERIA - Knowledge & Skills:

Essential:

- Demonstrated skills in developing new characterisation techniques and their integration with materials development / device manufacturing.
- Good knowledge of electromaterials in one of the application areas (Bionics, Energy storage, Conversion, Soft Robotics).
- Strong analytical and problem solving skills.
- Ability to work both independently and in a team environment.
- Highly developed written and verbal communication skills in English, as evidenced by peer-reviewed research publications and presentations at conferences.
- Demonstrated knowledge of OH&S regulations and procedures.

SELECTION CRITERIA - Education & Experience:

Essential:

- PhD in relevant field such as ,Materials Engineering, Electrical Engineering, Mechanical Engineering, Engineering Physics.
- Experience in instrumentation development, electronics, software development, spectroscopic/analytical techniques, experimental design.
- Experience in multi-disciplinary research.
- Experience in report writing/manuscript preparation.

Desirable:

- Strong publication track record relative to opportunity.
- Demonstrated capacity to undertake collaborative research.
- Experience training students and co-supervising student projects

Personal Attributes:

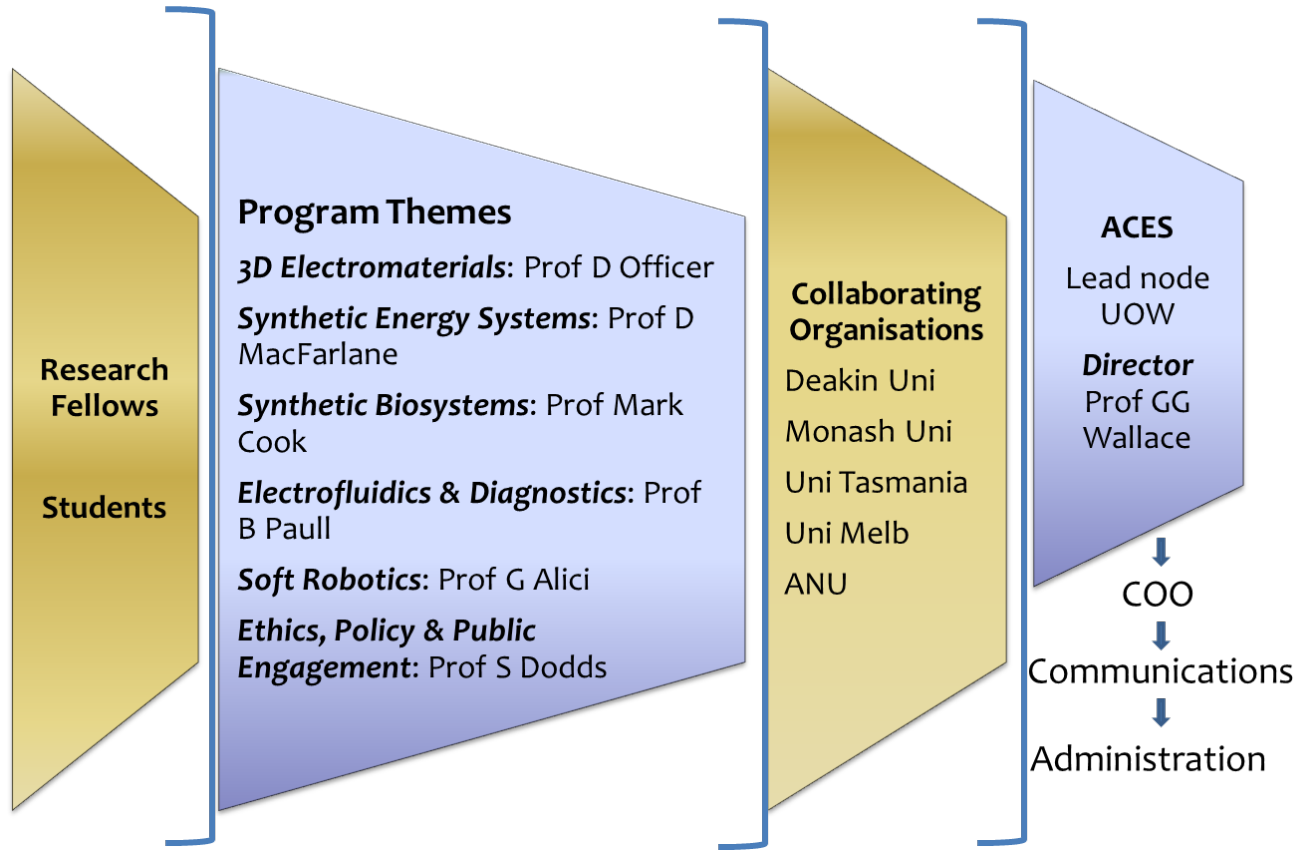
- Work independently without constant supervision
- Enthusiasm for research and team work
- Willingness receive positive feedback and constructive criticism
- Look for solutions, rather than merely presenting problems

- Flexible approach to work assignments
- Responsive to change

Special Job Requirements:

OH&S inductions to workplace and laboratory procedures. This person must adhere to safe laboratory practices of AIIM /IPRI.

Organisational Chart:



Approval:

Approved by Head of Unit: _____

Date: _____

Approved by Human Resources: _____

Date: _____

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.