



**Australian
National
University**

Position Description

College/Division:	College of Engineering & Computer Science
School/Centre:	Research School of Electric, Energy and Materials Engineering
Department/Unit:	Research group of Audio & Acoustic Signal Processing
Position Title:	Research Fellow
Classification:	Academic Level A-B
Responsible to:	Head, Audi and Acoustic Signal Processing Research Group

PURPOSE STATEMENT:

The ANU College of Engineering and Computer Science is dedicated to contributing to The Australian National University's reputation for excellence in research and research-led education. CECS is at the leading edge within numerous fields, including logic, algorithms and data, signal processing, artificial intelligence, computer vision and robotics, computational mechanics, materials, fabrication, big software systems, renewable energy, networked systems and quantum cybernetics.

The Postdoctoral / Research Fellow will:

1. Strengthen the Research School of Electrical, Energy & Materials Engineering as an internationally recognized centre of excellence in Audio and Acoustic Signal Processing; and
2. Contribute to the objectives of an externally funded project on "Advanced audio noise characterisation and filtration for Automated Speech Recognition"

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

The Postdoctoral / Research Fellow will be located within the Research group of Audio & Acoustic Signal Processing, associated with the Research School of Electrical, Energy and Materials Engineering (RSEEME) within the College of Engineering & Computer Science. The Postdoctoral / Research Fellow will report to the Head of the Audio & Acoustic Signal Processing Research Group and the Director of the Research School.

As an academic member of the RSEEME the Postdoctoral / Research Fellow will be required to contribute to research, education and outreach agendas of the School both nationally and internationally in a manner that is appropriate to the level of appointment. Education activities may include the supervision of research, professional and administrative support staff involved in the staff member's research. The appointee may also be asked to supervise or mentor less senior staff.

The staff member is expected to contribute cooperatively to the overall intellectual life of the School, College and University. The Postdoctoral / Research Fellow will be required to do field visits to the Mulligans Flat Woodland Sanctuary.

Role Statement:

Postdoctoral Fellow (ANU Academic Level A)

Under direct supervision the Postdoctoral Fellow will:

1. To carry out independent research on the development of new technologies for undesired noise filtration prior to automatic speech recognition. This task will require a thorough understanding of acoustic propagation, audio signal processing and machine learning techniques.
2. To actively collaborate with the other research personnel involved with the project across ANU and external stakeholders.
3. Regularly disseminate findings by taking the lead in preparing publication materials for refereed journals, presenting results at conferences, or exhibiting work at other appropriate events.
4. Collaborate with senior staff to actively seek and secure external funding, assist to prepare and submit research proposals to external funding bodies as appropriate.

5. Subject to the requirements of the funding source and where an opportunity exists, the occupant may be required to contribute to the teaching activities of the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations, and with students or acting as subject coordinators
6. Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.
7. Actively contribute to all aspects of the operation of the School.
8. Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
9. Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
10. Take responsibility for their own workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
11. Other duties as required consistent with the classification level of the position.

Research Fellow (ANU Academic Level B)

Under broad supervision the Research Fellow will:

1. To carry out independent research on the development of new technologies for undesired noise filtration prior to automatic speech recognition. This task will require a thorough understanding of acoustic propagation, audio signal processing and machine learning techniques.
2. To actively collaborate with the other research personnel involved with the project across ANU and external stakeholders.
3. Regularly disseminate findings by taking the lead in preparing publication materials for refereed journals, presenting results at conferences, or exhibiting work at other appropriate events.
4. Actively seek and secure external funding including the preparation and submission of research proposals to external funding bodies.
5. Subject to the requirements of the funding source and where an opportunity exists, the occupant may be required to contribute to the teaching activities of the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations with students, acting as subject coordinators and the initiation and development of course/subject material.
6. Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.
7. Actively contribute to all aspects of the operation of the School. This may include representation through committee memberships.
8. Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
9. Maintain high academic standards in all education, research and administration endeavours.
10. Take responsibility for their own workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
11. Other duties as required consistent with the classification level of the position.

Appointment to this position will be subject to the applicant passing a security screening check and will require the successful applicant to comply with security arrangements.

SELECTION CRITERIA:**Postdoctoral Fellow (ANU Academic Level A)**

1. A PhD (or awarding of a PhD within six months of appointment commencement) in Engineering, or equivalent qualifications and experience in a related area, with a track record of independent research in the field of signal processing as evidenced by publications in peer-reviewed journals and conferences.
2. Evidence of experience that is relevant to Engineering research in some or all of the following areas: mathematical analysis, data analytics and/or machine learning.
3. An ability and commitment to contribute to bids for competitive external funding to support individual and collaborative research activities.
4. Evidence of an ability and willingness to teach at all levels.
5. The ability to assist in the supervision of students working on research projects.
6. The ability to work as part of a team and to meet deadlines.
7. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
8. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Research Fellow (ANU Academic Level B)

1. A PhD in Engineering or a related area, with a track record of independent research in the field of signal processing as evidenced by publications in peer-reviewed journals and conferences, a record of developing and maintaining collaborations and by other measures such as awards, and invitations to present at conferences.
2. Evidence of experience that is relevant to Engineering research in some or all of the following areas: mathematical analysis, data analytics and/or machine learning, with the ability to articulate and prosecute innovative research in this field.
3. A demonstrated ability and commitment to apply for competitive external funding to support individual and collaborative research activities.
4. Evidence of an ability and willingness to teach at all levels.
5. An ability to supervise and graduate high quality PhD/Masters research students.
6. The demonstrated ability to work as part of a team, contributing to team management and meeting deadlines for project elements.
7. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
8. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Supervisor Signature:		Date:	
Printed Name:		Uni ID:	

References:
[General Staff Classification Descriptors](#)
[Academic Minimum Standards](#)



Pre-Employment Work Environment Report

Position Details

College/Div/Centre	CECS	Dept/School/Section	RSEEME
Position Title	Postdoctoral / Research Fellow	Classification	Academic Level A / B
Position No.	TBC	Reference No.	

In accordance with the Work Health and Safety Act 2011 (Cth) the University has a primary duty of care, so far as reasonably practicable, to ensure the health and safety of all staff while they are at work in the University.

- This form must be completed by the supervisor of the advertised position and forwarded with the job requisition to Appointments and Promotions Branch, Human Resources Division. Without this form jobs cannot be advertised.
- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- Once an applicant has been selected for the position they must familiarise themselves with the University WHS Management System via Handbook guidance <https://services.anu.edu.au/human-resources/health-safety/whs-management-system-handbook>
- The hazards identified below are of generic nature in relation to the position. It is not correlated directly to training required for the specific staff to be engaged. Identification of individual WHS training needs must be in accordance with WHS Local Training Plan and through the WHS induction programs and Performance Development Review Process.
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see 'Employment Medical Procedures' at http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp

Potential Hazards

- Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a **regular** or **occasional** part of the duties.

TASK	regular	occasional	TASK	regular	occasional
key boarding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	laboratory work	<input checked="" type="checkbox"/>	<input type="checkbox"/>
lifting, manual handling	<input type="checkbox"/>	<input checked="" type="checkbox"/>	work at heights	<input type="checkbox"/>	<input checked="" type="checkbox"/>
repetitive manual tasks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	work in confined spaces	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Organizing events	<input type="checkbox"/>	<input checked="" type="checkbox"/>	noise / vibration	<input type="checkbox"/>	<input checked="" type="checkbox"/>
fieldwork & travel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	electricity	<input type="checkbox"/>	<input checked="" type="checkbox"/>
driving a vehicle	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
NON-IONIZING RADIATION			IONIZING RADIATION		
solar	<input type="checkbox"/>	<input type="checkbox"/>	gamma, x-rays	<input type="checkbox"/>	<input type="checkbox"/>
ultraviolet	<input type="checkbox"/>	<input type="checkbox"/>	beta particles	<input type="checkbox"/>	<input type="checkbox"/>
infra red	<input type="checkbox"/>	<input type="checkbox"/>	nuclear particles	<input type="checkbox"/>	<input type="checkbox"/>
laser	<input type="checkbox"/>	<input type="checkbox"/>			
radio frequency	<input type="checkbox"/>	<input type="checkbox"/>			
CHEMICALS			BIOLOGICAL MATERIALS		
hazardous substances	<input type="checkbox"/>	<input type="checkbox"/>	microbiological materials	<input type="checkbox"/>	<input type="checkbox"/>
allergens	<input type="checkbox"/>	<input type="checkbox"/>	potential biological allergens	<input type="checkbox"/>	<input type="checkbox"/>
cytotoxics	<input type="checkbox"/>	<input type="checkbox"/>	laboratory animals or insects	<input type="checkbox"/>	<input type="checkbox"/>
mutagens/teratogens/ carcinogens	<input type="checkbox"/>	<input type="checkbox"/>	clinical specimens, including blood	<input type="checkbox"/>	<input type="checkbox"/>
pesticides / herbicides	<input type="checkbox"/>	<input type="checkbox"/>	genetically-manipulated specimens	<input type="checkbox"/>	<input type="checkbox"/>
			immunisations	<input type="checkbox"/>	<input type="checkbox"/>
OTHER POTENTIAL HAZARDS (please specify):					
Supervisor/Delegate Name:			Date:		