

## POSITION DESCRIPTION

<b>POSITION TITLE</b>	Post Doctoral Research Fellow
<b>CLASSIFICATION</b>	RES 4.1 – RES 4.5 (\$90,675 – \$98,149 base per annum) depending on skills and experience.
<b>ROLE</b>	Full time (36.25 hours per week)
<b>LOCATION</b>	The Aikenhead Centre for Medical Discovery (ACMD) building and St Vincent's Hospital campus, Fitzroy, with flexibility to work from home in accordance with company guidelines

### ABOUT US

The Bionics Institute is an internationally recognised, non-profit medical research institute that solves medical challenges with technology.

Proudly affiliated with Swinburne University of Technology, we lead the world in the research and development of innovative medical devices and therapies to improve human health. Our multidisciplinary team comprises world-class scientists, engineers and researchers, and our laboratories are located at St Vincent's Hospital Melbourne, close to our clinical collaborators.

Together we transform the lives of people with a range of conditions, including Alzheimer's disease, hearing impairment, Crohn's disease, chronic pain, Parkinson's disease and arthritis.

### ABOUT THE ROLE

The Digital Twins Research Program is a newly established initiative within the Bionics Institute. The program focuses on leveraging artificial intelligence to transform the care and management of medical devices and health conditions by developing personalised digital platforms that support monitoring, prediction, and treatment decision-making.

Reporting to the Research Lead of the Digital Twins Research Program, the Post Doctoral Research Fellow will contribute to cutting-edge research focused on AI-enabled personalised hearing device care. This role will develop and apply advanced modelling approaches and multimodal data analysis techniques to create a digital platform that supports individualised optimisation and management of hearing devices. The position plays a key part in advancing the Digital Twins Platform to support personalised patient care and improved clinical outcomes.

The position involves close collaboration with project leads and multidisciplinary teams across the Bionics Institute, including the Engineering, Clinical Research Support, and Development teams, as well as engagement with external collaborators and industry partners.

### Key responsibilities

- Develop, design and implement computational models of hearing systems and other knowledge to achieve project aims specific to project research.
- Undertake data analysis and contribute to the broader research projects in the Digital Twins research program.
- Contribute to clinical research activities, including participant recruitment, data collection and management
- Assist with the preparation, submission, and maintenance of Human Research Ethics Committee (HREC) applications.
- Effectively communicate research to a multidisciplinary audience.
- Make original contributions to:
  - scientific papers
  - submission to funding bodies (lead small (<\$500k) grant applications; contribute to large (>\$500k) grants)
  - progress reports
- Supervise interns and HDR students.
- Maintain best practices in research integrity.
- Contribute to Intellectual Property development.

### Core Competencies for the Role

#### *Task complexity* - Some complexity

Work involves a number of variables which complicate the work tasks, but the position holder can overcome problems by applying own knowledge and experience within the field or position.

#### *Knowledge required* - General

Degree level theoretical knowledge, and knowledge of up-to-date professional standards and precedent.

#### *Judgement and problem solving* - Interpretive

Uses own judgement to solve problems in own work area. Can apply own skills and knowledge to assess best approach to a work task or problem. At this level, position holder is expected to start to show initiative to recommend and apply work process improvements. Has latitude to decide on work scheduling and priorities and can exercise own judgement over when to refer a matter to a higher level.

#### *Level of supervision and independence* - General

Position holder is told what outcomes are expected and when they are expected to be achieved. Position holder can determine own priorities and some work methods and has some scope to be able to choose from established procedures to achieve work goals. Supervision is typically weekly or fortnightly and specific outcomes are reviewed.

#### *Organisational relationships and impact* - Strong

Position holder is able to apply their knowledge of their work area and understand the impact of their actions on other work areas and employees. Can provide advice or assistance to others based on in-depth knowledge within field of expertise. Has started to develop ability to recommend changes to processes and procedures to improve operations.

## ABOUT YOU

You will bring demonstrated expertise in computational modelling or multi-modal data analysis, together with a strong knowledge of biomedical engineering and an emerging track record in research excellence.

A strong communicator with a passion for translational biomedical engineering research and innovation, you thrive at the interface of engineering and medicine. Motivated to develop technologies that improve patient outcomes, you work effectively both independently and within multidisciplinary teams, demonstrating initiative, critical thinking, and a collaborative approach. Your ability to translate complex technical concepts into practical clinical applications enables you to contribute meaningfully to the advancement of biomedical engineering solutions for health care.

You have a strength in communicating complex computational concepts to multidisciplinary audiences which allows you to work closely with diverse teams, present in conferences, to stakeholders and write manuscripts and project proposals. You will build strong relationships across the Bionics Institute and with external collaborators, drawing on your well-developed interpersonal, communication, and organisational skills to collaborate effectively across multiple projects and stakeholder groups.

## SELECTION CRITERIA

### Essential

- PhD in Biomedical Engineering or equivalent experience
- Experience in computational modelling of sensory system or multimodal data analysis

### Desired

- Knowledge of hearing system and hearing loss
- Proven experience in Python programming
- Experience writing first-author journal papers
- Experience in contribution to grant writing

### Additional Requirements:

Prior to any offer being made, and at any point during employment, any of the following may be required to be provided:

- A national police check via Fit2Work or an alternative as identified by Bionics Institute.
- Evidence of holding the legal right to work in Australia with no restrictions.
- Evidence (for sighting) of any vaccinations required by the Bionics Institute under any applicable laws, rules, regulations and government public health orders or directions.

## OUR COMMITMENT TO DIVERSITY, EQUITY, AND INCLUSION

As our research transforms the lives of people across all walks of life, we recognise that a diverse, engaged, and united team makes us stronger, and we hire qualified people from all different backgrounds and experience levels.

We encourage employees to speak with your manager or a member of our HR team about the type of working arrangements that would help you thrive in your role at the Bionics Institute.