POSITION DESCRIPTION

POSITION TITLE	Post Doctoral Research Fellow
CLASSIFCATION	RES 4.1 to 4.8 ($90,675 - $104,157 base per annum, full time), depending on skills and experience
ROLE	Full time (36.25 hours per week)
LOCATION	Eye & Ear Hospital, East Melbourne with flexibility to work from home in accordance with company guidelines

ABOUT THE ROLE

Reporting to Associate Professor David Szmulewicz, Head of NeuroMovement Research, the Post-Doctoral Research Fellow will play a key role in advancing the Human Movement, Balance and Coordination Research Program at the Bionics Institute.

This program investigates the diagnosis, measurement, and treatment of diseases affecting human movement - particularly those leading to imbalance and incoordination, such as ataxia, vestibular disorders, and inherited balance disorders. The team's work bridges clinical and pre-clinical research, integrating medical device innovation with translational studies to develop objective, instrumented measures and evaluate novel therapeutic approaches.

The Post-Doctoral Research Fellow will conduct independent and collaborative research involving human participants, while contributing to device design, validation, and data analysis. Working closely with clinicians, engineers, and researchers across the Institute, the Fellow will help shape the future of diagnostic and therapeutic approaches for patients with debilitating movement disorders.

Key responsibilities

Research and Project Delivery

- Design, conduct, and analyse translational research studies involving human participants, with occasional involvement in pre-clinical or experimental work.
- Develop, validate, and apply novel medical devices and experimental tools to measure and characterise movement, balance, and coordination.
- Collect, manage, and analyse multimodal datasets (e.g., motion capture, EMG, EEG, neuroimaging, vestibular testing, computational modelling).
- Contribute to the development and testing of new diagnostic and treatment approaches for movement disorders.
- Coordinate ethical and regulatory submissions and ensure all research activities comply with institutional and external standards.
- Maintain meticulous research documentation, data integrity, and reproducibility standards.

Collaboration and Engagement

- Liaise closely with the Head of NeuroMovement Research to achieve research milestones within project timelines.

- Build and maintain collaborative relationships with internal engineering, clinical, and governance teams, as well as external research collaborators, other health organisations, academic institutions, and industry partners.
- Contribute to the preparation of scientific manuscripts, grant and fellowship applications, and progress reports.
- Present research findings at national and international conferences, workshops, and seminars.

Supervision and Leadership

- Provide day-to-day guidance and mentoring to junior team members, including the current Research Assistant, and students as the team expands.
- Contribute to a culture of scientific excellence, innovation, and collaboration across the Institute.

General

- Undertake other research or related duties as required to meet project and organisational objectives.

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

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

Judgement and problem solving - Interpretative

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. Weekly or fortnightly supervision – 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

Success in this role will come from a blend of scientific curiosity, initiative, and integrity. The Post-Doctoral Research Fellow will bring exceptional attention to detail and strong analytical skills, paired with the ability to independently manage time, prioritise tasks, and deliver high-quality outcomes in a dynamic research environment. They will apply critical thinking and sound judgement to complex challenges, showing initiative and creativity in developing solutions. Adaptable and quick to learn new systems or methods, they will operate with focus and flexibility as research priorities evolve.

Equally important will be their ability to collaborate and communicate effectively across disciplines. Genuine and passionate about their work, the successful candidate will build strong relationships with clinicians, engineers, researchers, and external stakeholders, engaging confidently across multiple projects and levels of the Institute. They will communicate complex scientific concepts clearly to both specialist and non-specialist audiences, contributing to a culture of transparency and shared learning.

Highly self-motivated and collegial, they will bring a positive, can-do attitude, readily stepping in to support the team and contribute to collective goals. Over time, they will demonstrate emerging leadership by mentoring junior colleagues, contributing to publications and grant applications, and helping shape the future direction of the Human Movement, Balance and Coordination Research Program.

SELECTION CRITERIA

Essential

- PhD in neuroscience, biomedical engineering, physiology, or a closely related discipline, with a focus on human movement or balance disorders.
- Demonstrated experience in human clinical or translational research, including ethical and regulatory compliance.
- Proven expertise in data acquisition and analysis using, computational modelling, eg: machine learning or artificial intelligence
- Track record of peer-reviewed publications in relevant scientific fields.
- Proficiency with statistical or analytical software (e.g., MATLAB, Python, R, SPSS, or similar).
- Demonstrated ability to manage multiple research projects and meet deadlines with minimal supervision.
- Experience preparing research papers, reports, and presentations for diverse audiences.
- Demonstrated commitment to maintaining high ethical standards and research integrity.

Desired

- Experience in medical device design, prototyping, or validation.
- Familiarity with quantitative and qualitative data integration in clinical research.
- Prior experience supervising or mentoring students or research staff.
- Experience in grant or fellowship writing and contribution to successful funding applications, ideally with a proven track record of securing funding independently.

- Evidence of collaborative work within multidisciplinary teams involving clinicians, engineers, and scientists.

Additional Requirements: Prior to any offer being made, all preferred candidates will be required to provide:

- A national police check via Fit2Work.
- Evidence of holding the legal right to work in Australia with no restrictions.

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