

POSITION DESCRIPTION – Alfred Health

DATE:	April 2019
POSITION:	Postdoctoral Research Fellow
AWARD / AGREEMENT:	Victorian Public Health Sector (Medical Scientists, Pharmacists & Psychologists) Enterprise Agreement 2017-2021
CLASSIFICATION TITLE:	Medical Scientist
DEPARTMENT / DIVISION:	Monash Department of Neuroscience
PROGRAM:	Monash Alfred Program
DIVISION:	Finance
ACCOUNTABLE TO:	This position reports to Professor Terence O'Brien and Dr. Pablo Casillas-Espinosa, Department of Neuroscience, Central Clinical School, Monash University and Prof Wei Ni, Cybernetics Group, Data61, CSIRO.

ALFRED HEALTH

Alfred Health is the main provider of health services to people living in the inner southeast suburbs of Melbourne and is also a major provider of specialist services to people across Victoria. The health service operates three outstanding facilities, The Alfred, Caulfield, and Sandringham.

Further information about Alfred Health is available at www.alfredhealth.org.au

OUR PURPOSE

To improve the lives of our patients and their families, our communities and humanity.

OUR BELIEFS

Our staff are expected to demonstrate and uphold the beliefs of Alfred Health:

- Patients are the reason we are here – they are the focus of what we do
- How we do things is as important as what we do.
- Respect, support and compassion go hand in hand with knowledge, skills and wisdom. Safety and care of patients and staff are fundamental
- Excellence is the measure we work to everyday. Through research and education we set new standards for tomorrow.
- We work together. We all play vital roles in a team that achieves extraordinary results.
- We share ideas and demonstrate behaviours that inspire others to follow.

DEPARTMENT

Monash is a university of transformation, progress and optimism. Our people are our most valued asset, with our academics among the best in the world and our professional staff revolutionising the way we operate as an organisation. For more information about our University and our exciting future, please visit www.monash.edu. The Faculty of Medicine, Nursing & Health Sciences (FMNHS) is the University's largest research faculty. World class researchers work across disciplines including laboratory based medical science, applied clinical research, and social and public health research. The faculty is home to a number of leading medical and biomedical research institutes and groups, and has contributed to advances in many crucial areas. Our expertise in life sciences and biomedicine is recognised both nationally and internationally.

From a teaching perspective, our education curriculum covers a range of disciplines, including medicine, nursing, radiography and medical imaging, nutrition and dietetics, paramedic studies, biomedical sciences, physiotherapy, occupational therapy, behavioural neurosciences and social work. We take pride in delivering outstanding education in all courses, in opening students to the possibilities offered by newly discovered knowledge and in providing a nurturing and caring environment.

To learn more about the faculty, please visit our website: www.med.monash.edu.au/.

Central Clinical School encompasses the Departments of Anaesthesia and Perioperative Medicine, Clinical Haematology, Immunology and Pathology, Diabetes, Infectious Diseases, Gastroenterology, Allergy and Respiratory Medicine, Neurology, Medicine, Surgery and Neuroscience. CCS also includes the Melbourne Sexual Health Centre, Monash Alfred Psychiatry research centre and the National Trauma Research Institute. It is located at the Alfred Hospital precinct in Melbourne, known as AMREP (Alfred Medical Research and Education Precinct). The school is involved in teaching students from both the Faculty of Medicine, Nursing and Health Sciences and the Faculty of Science and its teaching and research is conducted at Alfred Health, Cabrini, Epworth Richmond, Peninsula Health and at Clayton

POSITION SUMMARY

The Research Fellow is expected to contribute towards the research effort of the university and to develop her/his research expertise through the pursuit of defined projects relevant to the particular field of research.

The postdoctoral Research Fellow will be a member of Prof Terence O'Brien and Dr Pablo Casillas-Espinosa's research groups at the Department of Neuroscience, Central Clinical School, Monash University at the Alfred Centre, Melbourne and Prof Wei Ni, Cybernetics Group, Data61, CSIRO. The Level A academic will work in a collaborative project between Monash University and CSIRO to develop a Data Management System framework to support Machine Learning and artificial intelligence algorithms to perform pattern recognition, identification and prediction of seizures and other interictal activity in rodent models with acute and chronic brain injuries.

The project consists of developing a quality-assurance and quality-control framework to support machine learning algorithms to perform identification and prediction of seizures in rodent models of brain injury and epilepsy. Sampling high-quality data from a cohort of rodents in the laboratory is essential to ensure data is reliable to support the development of the software tools.

The Early Career Research position, will record high-quality annotated EEGs from those rodents with brain injury and epilepsy, and will support Data 61 CSIRO staff in interpreting EEG patterns associated to seizures and validate results of those algorithms. The Early Career Researcher will also collect and develop new learning and signal processing techniques to extract correlation of EEG signals and increase confidence in EEG analysis or prediction. The newly developed techniques will also contain state-of-the-art practices in data visualization with strong focus on visual analytics, functionally and performance to address real needs of users.

Supervisory Responsibilities: This position will assist with the day-to-day supervision of graduate student(s) recruited to the project

KEY RESPONSIBILITIES

A Research Fellow is expected to contribute towards the research effort of the University and to develop their research expertise through the pursuit of defined projects relevant to the particular field of research.

Specific duties required of Research Fellow may include:

1. The conduct of research either as a member of a team or, where appropriate, independently and help with the production or contribution to the production of journal and conference papers and publications from that research
2. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise
3. Limited administrative functions primarily connected with the area of research of the academic;
4. Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff
5. Occasional contributions to teaching in relation to her/his research project(s)
6. Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures
7. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees
8. Advice within the field of the staff member's research to postgraduate students

QUALITY, SAFETY, RISK and IMPROVEMENT

- Maintain an understanding of individual responsibility for patient safety, quality & risk and contribute to organisational quality and safety initiatives
- Follow organisational safety, quality & risk policies and guidelines
- Maintain a safe working environment for yourself, your colleagues and members of the public.
- Escalate concerns regarding safety, quality & risk to appropriate staff member, if unable to rectify yourself.
- Promote and participate in the evaluation and continuous improvement processes.
- Comply with principles of Patient Centred Care.
- Comply with Alfred Health mandatory continuing professional development requirements.
- Comply with requirement of National Safety & Quality Health Service Standards and other relevant regulatory requirements.
- Maintain responsibility for supporting enterprise security

OTHER REQUIREMENTS FOR ALL ALFRED HEALTH STAFF

- Provide junior staff, graduates, students working in the unit with appropriate supervision, training and instruction in accordance with Alfred Health policies.
- Ensure compliance with relevant Alfred Health clinical and administrative policies and guidelines.
- Comply with relevant privacy legislation.
- Protect confidential information from unauthorised disclosure and not use, disclose or copy confidential information except for the purpose of and to the extent necessary to perform your employment duties at Alfred Health.
- Comply with Alfred Health medication management and medication safety policies and guidelines.
- In this position you must comply with the actions set out in the relevant section(s) of the OHS Roles and Responsibilities Guideline.
- Research activities will be undertaken commensurate with the role

QUALIFICATIONS/EXPERIENCE REQUIRED

Education/Qualifications

1. The appointee should possess:
 - A doctoral qualification in the relevant discipline or a closely related field

Desirable

Knowledge and Skills

2. Knowledge on graph signal processing and learning, and their applications to seizure detection and prediction.
3. A strong track record of research publications
4. Experience in analysing biological data is desirable
5. Experience in information theory and optimisation is desirable.
6. Experience in data management and data visualization with focus on visual analytics are desirable.
7. The ability to work independently in a research environment, and as part of a team
8. Ability to solve complex problems by using discretion, innovation and the exercise of high-level diagnostic skills within areas of functional responsibility or professional expertise
9. Excellent written communication and verbal communication skills
10. Well-developed high level, planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines
11. A demonstrated capacity to work in a collegiate manner with other staff in the workplace
12. Understanding of statistics and data analysis for biomedical research
13. A demonstrated awareness of the principles of confidentiality, privacy and information handling.

Other job-related information

- Travel (e.g. to other campuses of the University, or a collaborating facility) may be required
- There may be a requirement to work additional hours from time to time.
- There may be peak periods of work during which the taking of leave may be restricted. A proof-of-English language proficiency is required for applicants from non-English speaking countries.

Legal compliance

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.

POSITION DESCRIPTION AUTHORISED BY: Dr. Pablo Espinosa, Professor Terence O'Brien

DATE: November 2019