Job Description

Job title	Research Associate (Neurotechnology Trials Manager)
Department/School	Bath Institute for the Augmented Human Department of Computer Science
Job family	Education and Research
Grade	7
Salary	£37,099 to £44,360
Working arrangement	Fixed term (1.5 years) @ 1.0 FTE
Reporting to	Damien Coyle, Professor of Neurotechnology, Director of Bath Institute for the Augmented Human
Responsible for	There may be a requirement for day to day supervision of other staff e.g., technical staff or, co-supervision of doctoral or undergraduate students.
Location	University of Bath campus (Claverton Down or Bath City sites).

Background and context

The neurotechnology research at Bath led by Prof Damien Coyle aims to develop new AI approaches to address challenges associated with translating electrophysiological signals into control signals for brain-computer interface (BCI) based neurotechnology and to trial these developments on a large scale with end-users. This project offers an exciting opportunity for a researcher with experience in organising and managing neurotechnology trials with human participants.

Job purpose

Working alongside Prof Damien Coyle and the team associated with a Turing AI Fellowship held by Prof Coyle at the Bath Institute for the Augmented Human, the Research Associate will be responsible for planning and running EEG-based brain-computer interface research trials involving human participants to trial new paradigms in the lab with able-bodied participants and with patients who have prolonged disorders of conscious and/or physical impairments resulting from injury or disease. Experiment and trials will be conducted at the Bath Institute for the Augmented Human and at multiple partner sites across the UK as part of large national clinical trial.

The post will involve extensive travel to partner hospital sites and to patient's home environments to conduct assessment of awareness in disorder of consciousness using our assessment technology. This research will build evidence for the use of neurotechnology to aid diagnosis and assessment in a clinical setting. The post-holder will contribute to publishing papers in high impact journals and presenting the research to brain injury units

across the UK along with demonstration of the technology for market research and gaging customer sentiment. The post holder will also be involved in conducting client interviews, travelling to brain injury units/hospital to develop a better understanding of the patient and clinical team needs for various clinical conditions, establishing further partnerships, establishing product requirements, and generally developing a better understanding of the market for AI based neurotechnology. The post will involve extensive travel, extended stays away from campus, arranging travel and management of travel expenses and will involve access to own transport.

Main duties and responsibilities

	Responsible to the PI/CI for (as appropriate to discipline):
1	Performing excellent research, in collaboration with other staff, in electroencephalography (EEG)-based brain computer interfaces, of a standard worthy of publication in top-rated international research journals in the field.
2	Reviewing and summarising the literature on patients with prolonged disorders of consciousness and the associated neuroscience, neurophysiology and neuroimaging research.
3	Organising and managing trials involving EEG data collection over multiple sessions, analysis and online neurofeedback with able-bodied user in research labs and with people and patients throughout the UK and Ireland.
4	Managing schedules and interacting with multiple clinical partners, families and carers of patients to arrange trials with patients in hospitals, homes and care institutions.
5	Arranging travel and optimising schedules to ensure optimum use of funding.
6	Applying scalp electrodes which involves placing a cap on the experiment participants head and, in some cases, cleaning the skin, applying electrolyte gels and washing the caps and equipment after use.
7	Assisting in the preparation of grant proposals to secure an income stream to sustain the research area and prototype development.
8	Sharing best practice with other research staff within the IAH and contributing to improving the knowledge and skills base regarding study setup, study management patient and clinician engagement, and participant recruitment.
9	Undertaking regular training in Good Clinical Practice and ensuring that research conduct meets this and other applicable good research governance standards.

10	Undertaking trial-specific training, and training others in activities relevant to the post.
10	Attend, present and exhibit at conferences/workshops and other relevant events as necessary.
You will from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager. You are required to follow all University policies and procedures at all times and take account of University guidance.	

Person Specification

Criteria	Essential	Desirable
Qualifications and Training		
A PhD[i] degree in subject area of direct relevance for the project, or equivalent significant relevant experience and professional qualification.	√	
Knowledge and Experience		
Post doctoral experience.		√
Software skills as evidenced by the ability to use and manipulate software tools for displaying stimuli in timed experiments.	√	
Experience in developing research collaborations with clinical partners.	√	
Experience in software programming and games development for applications such as brain-computer interfacing.		√
Experience in conducting research with human participants, analysing findings, summarising findings and presenting findings in written reports.	√	
Sound knowledge and understanding of Good Clinical Practice, GDPR and the UK Policy Framework for Health and Social Care Research.	√	
A track record of research publications related to research with human participants (either conference or journal publications).		√

Skills		
Experience in designing and planning research experiments.	√	
Experience in data acquisition and recording electrophysiological signals from multiple subjects and handling large datasets.	√	
Experience in conducting literature reviews in neuroscience related research.		√
Experience in obtaining ethical approval for research.		√
Excellent oral, interpersonal and written communication skills.	√	
Demonstrated ability to work unsupervised for long periods and to deliver results at a professional level.	√	
Proficiency in IT skills (as appropriate to discipline).	√	
Attributes		
Commitment to working within professional and ethical codes of conduct.	√	
Innovation and developing creative solutions.	√	
Commitment to excellence in research.	√	
Enthusiasm and self-motivation.	√	
Tenacity – working to achieve own and team objectives and to overcome obstacles.	√	
Ability to be an effective team worker.	√	
Commitment to safe working practices.	√	

[i] *If you have not yet been awarded your PhD, you will need to have submitted your thesis; passed your viva (with or without minor corrections) and receive confirmation of your PhD award within 6 months of appointment.*