Research Fellow Position or Research Engineer

The Centre for Lifelong Learning and Individualised Cognition (CLIC), funded by the National Research Foundation (NRF) in Singapore and coordinated through the Cambridge Centre for Advanced Research and Education in Singapore (CARES), is a collaboration between Nanyang Technological University (NTU) and the University of Cambridge. CLIC is a flagship programme in the Science of Learning to harness advancements in neuroscience to develop cognitive training programmes for the improvement of lifelong flexible learning, focusing initially on adolescents and young adults, but also envisaging work with infants and older adults. This is a strategic global initiative for the Universities of Cambridge and NTU that brings together multidisciplinary expertise from over 30 investigators in the areas of Neuroscience, Psychology, Linguistics and Education across the two universities.

Nanyang Technological University is a research intensive university currently ranked 13th globally and placed 1st amongst the world’s best young universities. The University has Colleges of Engineering, Business, Science, Humanities, Arts, & Social Sciences, and an Interdisciplinary Graduate School. Further, the new Lee Kong Chian School of Medicine benefits from a dual campus located at Novena, in close proximity to the Singapore city centre. The Cognitive Neuroimaging Centre (CoNiC) houses state-of-the-art neuroimaging facilities including a newly installed 3T MRI scanner and MEG, as well as new EEG, NIRS, TMS and tDCS equipment.

The first phase of the CLIC program will initially be housed at Nanyang Technological University, Singapore. As the programme progresses, other sites will be developed to meet the needs of the experimental programme. The new CLIC research centre will provide a vibrant, fast-paced, international and interdisciplinary environment with excellent opportunities for skills development and knowledge exchange between partner Principal Investigator labs in Singapore and Cambridge.

The Principal Investigators involved in the first phase of the research programme include:

From Cambridge: Director Professor Zoe Kourtzi (Psychology), Senior Scientific Advisor Professor Trevor Robbins (Psychology), Deputy Directors Professor Henriette Hendriks (Linguistics), Professor Anna Vignoles (Education), and Imaging Lead - Professor John Suckling (Psychiatry); supported by co-Investigators Prof Barbara Sahakian (Psychiatry) and Dr Michelle Ellefson (Education).

From NTU: Director Professor Annabel Chen (Psychology), Deputy Director Asst Prof Victoria Leong (Psychology), Imaging Lead - Professor Balázs Gulyas (LKCMedicine), and Principal Investigators Professor David Hung (NIE), Asst Prof Bobby Cheon (Psychology) and Assoc Prof Georgios Christopoulos (Nanyang Business School); supported by co-Investigator Dr Teo Chew Lee (NIE).

The CLIC program is seeking one full-time Research Fellow to support research activities on neuroimaging, and training-related brain changes in adults. Given the highly inter-disciplinary nature of the project, the research fellow will be expected to take on opportunities for involvement in research activities related to human neuroimaging, language, infant cognition/learning and pedagogy. We anticipate the successful candidate to perform within a dynamic interdisciplinary research environment working collaboratively with project team members. This position will be focused on neuroimaging data collection and processing, and co-supervised by Professor John Suckling and Professor Balazs Gulyas with input from Professor Annabel Chen.
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The responsibilities of the position include:

- Preparation and implementation of MRI pulse sequences
- Development of MRI and EEG data acquisition protocols
- Collection of multimodal neuroimaging data (MRI+EEG)
- Computational modelling and analysis of neuroimaging data and behavioural data from cognitive and related tasks
- Supporting and training of research assistants, graduate and undergraduate students
- Conduct analysis of data and integrate research findings
- Conduct literature reviews for publications and research briefings
- Author and co-author academic publications (e.g., journal, conference, book)
- Contribute to the production of research reports
- Contribute to the dissemination of research findings
- Perform other tasks related to the research as required by the Principal Investigators

Essential requirements:

- Post graduate qualification, PhD, or relevant experience in experimental psychology, biopsychology, cognitive psychology, neuropsychology, neurology, psychiatry, cognitive neuroscience, electrical engineering, medical engineering, computer science, and related fields
- Experience in working with and implementing MRI pulse sequences, especially MRS sequences
- Experience in collection and analysis of multimodal neuroimaging data
- Familiarity with image data analysis tools such as SPM, FSL, AFNI, DSIStudio, and programming skills (Matlab, Python etc.)
- Experience in preparing academic reports and presentations
- Good statistical knowledge and IT skills (common office software e.g. Microsoft Office)
- Strong ability to work within a multidisciplinary team
- Strong interpersonal, written and verbal communication skills
- Excellent organizational skills and able to work within given deadlines

Preferred Skills and Experience:

- Familiarity with neuroimaging techniques (MRI, MRS, EEG) applied to computational neuroscience methods
- Experience with statistical packages, especially R and/or SPSS
- Experience of data Management with databases (e.g. REDCap, MySQL)
- Prior experience working with Singaporean organizations / business
- Prior experience with academic publication processes and reports
- Self-directed learner who effectively picks up relevant skills as needed

To apply, please send your Curriculum Vitae, a letter of application with research interests, and three letters of recommendation to CLIC@ntu.edu.sg. Please indicate the reference number for this position: CLIC_RF6 in all application documents and correspondences.

Contact information: Centre for Research and Development in Learning, Nanyang Technological University, Academic Building North, 61 Nanyang Drive, ABN-01b-10, Singapore 637335, Phone +65 6908 1458