
School of Computing

Research Assistant/Associate (Identifying Optimal Neurostimulation for Epilepsy using Computational Approaches)

Grade: F

Vacancy Ref: D100713R

To work on the Wellcome Trust funded project: Identifying Optimal Neurostimulation for Epilepsy using Computational Approaches (IONECA). The goal of the project is to understand how current neuromodulation techniques impact brain networks in patients with epilepsy, and how we can use this understanding to improve neuromodulation as a potential treatment for epilepsy.

Main Duties and Responsibilities

1. Undertake high quality research in collaboration with academic colleagues, clinical and experimental laboratories.
2. Analysis and interpretation of existing neuromodulation research datasets
3. Develop computational simulations and models to enable mechanistic understanding of neuromodulation in epilepsy
4. Using a combination of data analysis and modelling, make predictions about optimal neuromodulation strategies, which can then be tested by our clinical and experimental collaborators
5. Develop the ability to undertake, lead and disseminate research as part of a team.
6. Publishing research in high quality journals

Research Role Profile

As part of our commitment to career development for research staff, the University has developed 3 levels of research role profiles. These profiles set out firstly the generic competences and responsibilities expected of role holders at each level and secondly the general qualifications and experiences needed for entry at a particular level. It is unlikely that any single member of staff will be applying all these competences at any one time but he or she would be expected to display most of them over a period of time.

Please follow this link to our [Research Role Profiles](#)

Person Specification

Knowledge (inc. qualifications)

Essential

- PhD awarded or nearing submission/completion in relevant subject area
- BSc in at least one area:
Neuroscience/Engineering/Mathematics/Physics/Computer Science

Desirable

- Clinical EEG interpretation
- Signal processing
- Machine learning
- Computational modelling, especially in the context of epilepsy

Skills (professional, technical, managerial, practical)

Essential

- Solid programming experience is required
- Strong communication skills
- Strong organisational skills

Desirable

- Programming skills in MATLAB or Python

Experience and Achievements (paid or unpaid)

Essential

- Have experience in analysis of neurophysiology data

Desirable

- Extensive experience in multivariate signal processing and machine learning
- Extensive experience in working with clinical EEG data

Other

Essential

- Innovative, enthusiastic, able to work independently, and as part of a team.

For additional details about this vacancy and essential information on how to apply, visit our Job Vacancies web page at <http://www.ncl.ac.uk/vacancies/>