

Faculty of Science and Health Studentship – for start date of January 2019

Machine Learning Methods for Cognitive Neuroscience (Ref CSEE/PSYCH/JAN19/01)

The Schools of Computer Science and Electronic Engineering and Psychology in the Faculty of Science and Health at the University of Essex is pleased to announce a PhD studentship available for the multidisciplinary project “Online interpretable real-time EEG analytics for the rapid interpretation of brain processes, clinical diagnosis and disease management”.

This studentship will start from 14 January 2019 and the successful applicant will receive a scholarship for three years (subject to satisfactory progression).

The studentship includes:

- a fee waiver equal to the Home/EU fee (for 2018/19, £ £4,410). International students will need to pay the balance of their fees.
- a stipend equivalent to the Research Councils UK National Minimum Doctoral Stipend (£14,777 in 2018-19)

This project will involve the development of computational intelligence methods and data visualisation for Cognitive Neuroscience studies involving electroencephalography (EEG). The student will design and develop machine learning models that objectively deal with uncertainty, partial truth and ambivalence inherent in brain responses that reflect recognition of specific sensory stimuli or current observer state, while putting emphasis on expressiveness and interpretability of the learned models. This novel computational framework will be intelligible by psychologists, health practitioners and mental health professionals, and will help make neuroscientific data accessible to untrained observers (e.g., students, media, general public).

The applicant will also get the opportunity to perform experimental research in cognitive neuroscience specifically in multisensory processes involving somatosensation (embodiment). The University's [centre for Brain Science](#) houses state-of-the-art equipment to measure physiological responses.

Additional questions and queries should be addressed to Dr Andreu (javier.andreu@essex.ac.uk), Dr Gillmeister (helge@essex.ac.uk) or Dr Hagraas (hani@essex.ac.uk)

Entry Requirements

The successful candidate would be expected to speak fluent English and meet our English Language requirements, if applicable, and will have a good honours BSc or BEng degree (1st class or high 2:1, or equivalent) in Computer Science, Computational Neuroscience, Cognitive Neuroscience, Statistics, Biostatistics, Bioengineering, Mathematics, Physics or related subjects.

An MSc with Merit or Distinction is desirable (but not essential for students with a first class degree). Strong analytical and mathematical skills are required, as well as good programming skills, preferably in general-purpose languages (Python, JavaScript, C# or similar). Knowledge of EEG signal processing, machine learning and data visualisation is desirable but not essential.

How to Apply

- To be considered for this Scholarship applicants are required to apply for their PHD course in the usual way via the University of Essex online admissions application process here: [website](#), (including uploading all supporting documents required) by the deadline of **Friday 24 August**. Only complete PhD applications will be considered along with the departmental scholarship application form.
- Please note on your PG Admissions application form in the 'Proposed research topic or area of research' field that you wish to apply for this scholarship, quoting Ref (CSEE/PSYCH/JAN19/01).
- In addition to your main online PHD application, you are also required to submit a separate application form, which can be accessed here <https://www.essex.ac.uk/pgapply/enter.aspx> and submit separately to: csee-schooloffice@essex.ac.uk by the deadline of **Friday 24 August 2018**, quoting Ref (CSEE/PSYCH/JAN19/01).
- Successful shortlisted candidates will be invited to attend interviews during w/c 10 September 2018.
- Successful applicants will be informed of the outcome of their application for their PhD course and the scholarship award by the end of September 2018.

For further information on our current areas of research please refer to our [research interests](#) and staff profiles in Computer Science <https://www.essex.ac.uk/departments/computer-science-and-electronic-engineering/people/academic> and also at the Centre of Brain Science: <http://www.research-facilities.essex.ac.uk/psychology/>

If you have a disability and would like information in a different format telephone (01206) 873521/874588.