# RECRUITMENT PACK

This document includes the following information:

- Job Description
- Person Specification
- Additional information

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**Making an application:**

**Please complete the short on-line application form and attach the following 4 documents:**

a) A covering letter setting out how you meet the requirements of the role as set out in the person specification.

b) A full curriculum vitae (CV) including any publications. You should specify your 4 most significant papers published within the past 5 years (or an equivalent number appropriate to being an early career researcher). Applicants from within the UK should indicate which publications have been submitted to the REF 2014 and any assessment of the rating for each piece of work; For more information about the REF visit www.ref.ac.uk

c) For posts at salary grade 9-11, a research statement of no more than two sides of A4 providing details of your research plans for the next three years. This should include details of books, chapters or papers in progress together with planned publication dates. For journal articles please provide details of target journals and planned submission dates. If you have papers that are currently under review please detail the stage these have reached and the timescale you expect those papers to be accepted for publication. If you have papers that have been accepted for publication but not yet published please provide the date the paper was accepted for publication.

d) For posts at salary grade 9-11, please include a document of no more than two sides of A4 setting out your three year plan for generating external funding to support your research.

Shortlisting is undertaken by a panel after the closing date on the basis of information provided and failure to upload the requested documents will result in an application being rejected.

The University of Essex is proud to be part of the Disability Confident scheme and is committed to supporting diversity and equality, representative of our inclusive community. As part of our commitment to this scheme any candidate who has a disability and meets all the essential criteria for the role will be offered an interview. We also work in partnership with national disability organisation DisabledGo who provide detailed online access guides to many of our campus buildings and facilities which you may find useful.

Please note: We are only accepting on-line applications for this post. However, if you have a disability that makes it difficult for you to provide us with information in this way, please contact the Resourcing Team (01206-874588/873521/873461) for help.

**Closing Date: 16 January 2019**

**Interviews are planned for: a date to be confirmed**

# UNIVERSITY OF ESSEX
# JOB DESCRIPTION

| | |
|---|---|
| **Job Title and Grade:** | Senior Research Officer (ASR); Grade 8 |
| **Contract:** | Fixed-term, full-time.  This post is fixed-term to 30 June 2021 due to a temporary funding source.  There is a possibility that it may be extended for a further 2.5 years. |
| **Hours:** | A notional minimum of 36 hours per week |
| **Salary:** | £33,199 - £35,211 per annum |
| **Department/Section:** | School of Computer Science and Electronic Engineering |
| **Responsible to:** | Head of Department (HoD) |
| **Purpose of role:** | To conduct research, development and dissemination of computational neuroscience models within the POTION H2020 project. |

## CONTEXT

The School of Computer Science and Electronic Engineering and the *Essex Brain-Computer Interfaces and Neural Engineering* Lab are pleased to announce this postdoctoral position in the Horizon 2020 project "POTION: Promoting social interaction through emotional body odours". The project will start in January 2019 and includes partners from the Universities of Pisa (Italy), Padova (Italy), and Essex (UK), the Universitat Politecnica De Valencia (Spain), the Katholieke Universiteit Leuven (Belgium), and the Karolinska Institutet (Sweden), and three companies ISPA CRL (Portougal), SRA Instruments (France) and Feel-Ing s.r.l. (Italy). POTION proposes a novel technological paradigm to delve deeper into understanding meaningful social interaction, combining new knowledge about the chemical composition of human social chemosignals together with a novel olfactory-based technology designed to drive social behaviour.

The Essex team's work on the project focuses on the development of Bayesian (DCM and Active Inference) computational models of multimodal social interaction. This models will be applied to evaluate socially relevant variables, such as trust, presence and inclusion as well as generate optimal stimuli in artificially mediated social interactions. In particular, the models will cover the role of human chemosignals perception in social interactions. The models will be identified using neurophysiological data (e.g. EEG), peripheral physiological activation (i.e., ECG, RESP, EDA) and behavioural changes (i.e., f-EMG) collected using VR scenarios of increasing complexity.

*Applicants are expected to hold a PhD in Computational Neuroscience, Brain-computer Interfaces, Neural Engineering, Psychology, Machine Learning, Statistics, Physics, Mathematics, Computer Science or a closely related discipline or equivalent professional experience or practice or be close to completion of PhD. The ideal candidate will have significant experience in computational modelling of social interaction, signal processing, statistical modelling of neural signals and processes, brain-computer interfaces, and virtual reality interfaces. Applicants are also expected to have a strong publication record (relative to their career stage) as first author, ideally including publications in 1st quartile journals in relevant areas.*

*The successful applicant will join the Essex POTION team — formed by Dr Luca Citi (PI), Dr Dimitri Ognibene, (Co-I) and Dr Tom Foulsham (Co-I)— and will be part of the Essex BCI-NE Lab, today the UK's largest research group in brain-computer interfaces.*

**KEY RESPONSIBILITIES OF THE POST**

- To engage in individual and/or collaborative research activity resulting in internationally excellent publications that is in keeping with REF criteria.

- To contribute to applications for external research funding appropriate in scale to career stage and subject area norms.

- To enhance the scholarly reputation of the Department and the University by contact with the wider academic community and supporting knowledge exchange activity.

- To undertake leadership duties related to education appropriate to career stage and as allocated by the HoD.

- To contribute expertise and knowledge to departmental and/or institutional initiatives as directed by their Head of Department.

**MAIN DUTIES OF THE POST**

**Research**
- To develop research objectives and proposals for own or joint research under the direction of or with assistance of a Principal Investigator/Supervisor.

- To undertake or manage practical elements of research such as setting up and conducting experiments, developing questionnaires and conducting fieldwork, recording data and identifying trends or patterns.

- To produce research outputs for publication at acceptable levels of volume and academic excellence and disseminate the result of research and scholarship through appropriate Knowledge Exchange activities (such as at relevant national and international conferences and scholarly publications not intended for the REF).

- To contribute to knowledge exchange activities within the wider academic community and other activities designed to ensure that appropriate impact of the research (outside academia) is achieved.

- To contribute to the development and maintenance or research resources (examples of which include household surveys, databases, specialist equipment and infrastructure, software packages and computer models) used within the Department or wider user community external to the Department.

- To, supervise and mentor postgraduate research students into relevant communities of research at Essex as appropriate to the departmental context to generate meaningful connections between research and education at Essex.

- Researching and developing robust algorithms for signal processing, statistical inference and extraction of information from EEG and other physiological signals.

- Researching and developing Bayesian (DCM and Active Inference) computational models of multimodal social interaction and in particular on the role of human chemosignals perception in social interactions.

- Design and implement software for the execution of experiments with VR stimulation.

- Producing high-quality journal and conference papers and presenting at conferences.

- Helping with writing reports and deliverables for the POTION project and updating the project website.

- Liaising with other partners on this project, including travelling to other project sites.

**Leadership and Citizenship**

- To play an active and constructive role in the Department and engage in activities beyond your own research team, (e.g. open days, staff meetings and relevant committees), as may be reasonably required by the Head of Department.

- To proactively participate in and develop internal and external networks and establish links with relevant academic and professional bodies, contacts and employers.

- To support knowledge exchange activities, for example, by contributing to research projects funded by commerce, industry or public sector organisations.

- To engage in continuing professional development in relevant subjects/disciplines, incorporating the outcomes from research and scholarship, ensuring skills are up-to-date and applied in education and research.

*These duties are a guide to the work that the post holder will initially be required to undertake. They may be changed from time to time to meet changing circumstances.*

**TERMS OF APPOINTMENT**
For a full description of the terms of appointment for this post please visit:
http://www.essex.ac.uk/hr/current-staff/terms.aspx

# UNIVERSITY OF ESSEX
# PERSON SPECIFICATION

| JOB TITLE: Senior Research Officer (ASR); Grade 8 | POST REF: REQ02121 |
|---|---|

| QUALIFICATIONS / PROFESSIONAL RECOGNITION | Essential | Desirable |
|---|:---:|:---:|
| ■ Relevant doctoral level degree in Computational Neuroscience, Brain-computer Interfaces, Neural Engineering, Psychology, Machine Learning, Statistics, Physics, Mathematics, Computer Science or a closely related discipline or equivalent professional experience or practice or be close to completion of PhD. | X | |
| ■ Fellowship of the Higher Education Academy or the ability to gain professional recognition at this or a higher level if appropriate. | | X |
| **EXPERIENCE/KNOWLEDGE** | **Essential** | **Desirable** |
| ■ Evidence of a developing research agenda, engagement in high-quality research activity and a developing research profile. | X | |
| ■ A developing record of publications in internationally recognised, reputable journals (and other media of similar standing) appropriate to career stage and discipline norms, or evidence of research outputs such as reports and briefings. | X | |
| ■ Experience of, or the ability to, generate income to support research and/or knowledge exchange appropriate to career stage and discipline norms. | X | |
| ■ Experience of working with developing and/or maintaining research resources used within a Department or wider user community external to the Department (examples include household surveys, databases, specialist equipment and infrastructure, software packages and computer models). | X | |
| ■ Experience of contributing to small research programmes or defined areas of larger projects, and of developing research objectives and proposals. | X | |
| ■ Experience in the development of Bayesian models. | X | |
| ■ Experience with processing and analysing EEG and other physiological signals. | | X |
| ■ Experience with neural modelling and in particular sensory processing and integration. | | X |
| ■ Experience on generation of experiments with VR stimulation. | | X |
| **SKILLS/ABILITIES** | **Essential** | **Desirable** |
| ■ The ability and willingness to engage in knowledge exchange and outreach activities. | X | |
| ■ The ability and willingness to complement and enhance the research project/department/school's education and research strengths and areas of planned development. | X | |

| | Essential | Desirable |
|---|---|---|
| ■ Strong communication skills, both written and verbal. | X | |
| ■ An appreciation of the value of appropriate technologies and an ability and/or willingness to deploy these when relevant. | | X |
| ■ A clear understanding of how students learn both generally and within their subject/disciplinary area(s) and the ability to apply this understanding to their own practice. | | X |
| ■ A commitment to the on-going evaluation of their own teaching and an ability to do this effectively, with the support of others where appropriate. | | X |
| ■ Significant programming ability | X | |
| ■ Programming ability in high-level numerical computing languages | | X |
| ■ Use of version control systems (SVN, Git, Mercurial) | | X |
| ■ Strong publication record in the areas of the project | | X |
| ■ Excellent project management skills | | X |
| ■ Experience with agile project management | | X |
| ■ Experience contributing to reports and deliverables for publicly funded projects | | X |
| ■ Ability to work independently and as part of a team | | X |
| **PROFESSIONAL VALUES** | **Essential** | **Desirable** |
| ■ A commitment to helping develop dynamic communities of research and education at the University. | X | |
| ■ A strong and well-articulated commitment to the University's values and mission to deliver excellence in both education and research (integrated academic practice). | X | |
| ■ A commitment to respect individual learners and diverse learning communities and to promote participation in higher education and equality of opportunity for all learners via student-centred practice. | X | |
| ■ A commitment to using evidence-informed approaches and the outcomes from research, scholarship and continuing professional development in their academic practice. | X | |
| ■ An acknowledgement of the wider context in which higher education operate. | X | |
| ■ A willingness to participate in extra curricula departmental activities (e.g. supporting recruitment, welcome and employability). | X | |

# University of Essex

| ELIGIBILITY | Essential | Desirable |
|---|:---:|:---:|
| ■  The ability to meet UK 'right to work' requirements (1). | X | |

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[1] The University has a responsibility under the Asylum, Immigration and Nationality Act 2006 to ensure that all employees are eligible to work in the UK. Prior to commencing employment, the successful candidate will be asked to provide documentary evidence to this effect. The University may be able to offer Tier 2 Sponsorship for this role. For further information about UK immigration requirements please follow this link https://www.gov.uk/government/organisations/uk-visas-and-immigration

## ADDITIONAL INFORMATION

**School of Computer Science and Electronic Engineering**

You can find more information about the department at the following link:

http://www.essex.ac.uk/csee

**People Supporting Strategy**

Please find a link to the People Supporting Strategy.

https://www1.essex.ac.uk/restricted/staff/documents/strategy/people.pdf

**General information**

Informal enquiries may be made to Dr Luca Citi (telephone: 01206 874233 e-mail: lciti@essex.ac.uk). However, all applications must be made online.

At the University of Essex we use consistent language and terminology that articulates more clearly the responsibilities for education, research and leadership/citizenship associated with each academic role. This will help new colleagues to understand the University values from the moment they engage either as an applicant or new colleague, and help them to understand the future career pathways available to them as they become more established in their role.

We advertise our salaries on a range to indicate the trajectory of progression that can be made. Appointments are usually made at the start of the salary range. The university salary structure includes automatic pay progression within the published grades, subject to service and performance.  In addition to this, there are performance related annual pay review schemes in place.

**Benefits**

As an employer we offer a range of benefits and a commitment to career development and equal opportunities in an environment that both reflects and creates a rich interaction of people, disciplines and ideas.

- Pension scheme
- Generous holiday entitlement
- Competitive salaries
- Training and development Family Friendly policies
- On campus childcare facilities, for more information visit www.wivenhoeparkdaynursery.co.uk
- Childcare vouchers
- Relocation package for qualifying staff
- Interest free season ticket loan
- Range of optional salary exchange tax benefits (pension, childcare and bicycle schemes)

**This document is produced by:**

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