Job Title: Research Associate in Computational Neuroscience

Department/Division/Faculty: Bioengineering/Engineering

Campus location: South Kensington Campus

Job Family/Level: Academic and Research, Level B

Responsible to: Key Working Relationships (internal): Dr Claudia Clopath

Contract type: Full time, fixed term for 12 months

Purpose of the Post

The post is to investigate plasticity in neural networks.

Learning and memory are among the most fascinating topics of neuroscience, yet our understanding of it is only at the beginning. Learning is thought to change the connections between the neurons in the brain, a process called synaptic plasticity. Using mathematical and computational tools, it is possible to model synaptic plasticity across different time scales, which helps understand how different types of memory are formed. The Postdoc candidate will be working to build those models of synaptic plasticity, and study the functional role of synaptic plasticity in artificial neural networks.

To carry out research programmes in computational neuroscience, undertake project management and/or supervise multi-disciplinary teams. In addition, the Research Associate will be expected to submit publications to refereed journals and to attract external research funding.

Key Responsibilities

Research Duties

• To perform research on computational neuroscience
• To take initiatives in the planning of research
• To ensure the validity and reliability of data at all times
• To maintain accurate and complete records of all findings
• To present findings to colleagues and at conferences
• To submit publications to refereed journals
• To provide guidance to staff and students
• To attend relevant workshops and conferences as necessary
• To develop contacts and research collaborations within the College and the wider community
• To promote the reputation of the Group, the Department and the College
• To provide guidance to PhD Students
• To conduct and plan own scientific work with appropriate supervision.
• To maintain highly organised and accurate record of experimental Work.
• To actively participate in the research programme of the Group
• To publish in high quality journals and to present data at national and international meetings.
• To participate in Group research meetings and internal seminars.
• To collaborate with other allied scientists within Imperial College and elsewhere in London and abroad, as appropriate.
• To contribute to the smooth running of the Group’s laboratories and, facilities with other scientists, clinicians, technicians and students within the laboratories.
• Assist in the supervision of undergraduate and postgraduate research students and research assistants as required.
• To comply with the College, Division, and Unit safety practices and to attend courses on safety when
Job Description

Any other duties as may be deemed reasonable by Head of group as well as Head of Division/Department/Section.

Where Imperial or funder conditions necessitate, you will be required to complete timesheets for your work on projects in a timely manner.

Other Duties

- To undertake any necessary training and/or development
- To undertake appropriate administration tasks
- To attend relevant meetings
- To observe and comply with all College policies and regulations, including the key policies and procedures on Confidentiality, Conflict of Interest, Business Continuity, Data Protection, Equal Opportunities, Ethics related, External Interests, Financial Regulations, Health and Safety, Imperial Expectations (for new leaders, managers and supervisors), Information Technology, and Smoking.
- To undertake specific safety responsibilities relevant to individual roles, as set out on the College Health and Safety Structure and Responsibilities web page: [www.imperial.ac.uk/safety/policies/organisationandarrangements](http://www.imperial.ac.uk/safety/policies/organisationandarrangements).
- To undertake Business Continuity responsibilities relevant to individual roles

Job descriptions cannot be exhaustive and the postholder may be required to undertake other duties, which are broadly in line with the above key responsibilities.

Imperial College London is committed to equality and valuing diversity

*Imperial College is committed to equality of opportunity and to eliminating discrimination. All employees are expected to adhere to the principles set out in its Equal Opportunities in Employment Policy, Promoting Race Equality Policy and all other relevant guidance/practice frameworks.*

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Person Specification

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Essential (E)/Desirable (D)</th>
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<tbody>
<tr>
<td><strong>Candidates/post holders will be expected to demonstrate the following</strong></td>
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<tr>
<td><strong>Education</strong></td>
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<tr>
<td>PhD (or equivalent) in computational neuroscience or a closely related discipline, or equivalent research, industrial or commercial experience</td>
<td>E</td>
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<td><strong>Knowledge &amp; Experience</strong></td>
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<tr>
<td>Knowledge in programming</td>
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<td>Knowledge of research methods and statistical procedures</td>
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<tr>
<td>Practical experience within a research environment and / or publication in relevant and refereed journals</td>
<td>E</td>
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<tr>
<td><strong>Skills &amp; Abilities</strong></td>
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<tr>
<td>Ability to conduct a detailed review of recent literature</td>
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<td>Ability to develop and apply new concepts</td>
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<tr>
<td>Creative approach to problem-solving</td>
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<tr>
<td>Excellent verbal communication skills and the ability to deal with a wide range of people</td>
<td>D</td>
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<tr>
<td>Excellent written communication skills and the ability to write clearly and succinctly for publication</td>
<td>E</td>
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</table>
• Ability to direct the work of a small research team and motivate others to produce a high standard of work  E
• Ability to organise own work with minimal supervision  E
• Ability to prioritise own work in response to deadlines  E
• Advanced computer skills, including word-processing, spreadsheets and the Internet  E
• Willingness to work as part of a team and to be open-minded and cooperative  E
• Flexible attitude towards work  E
• Discipline and regard for confidentiality and security at all times  E
• Willingness to undertake any necessary training for the role  E
• Willingness to travel both within the United Kingdom and abroad to conduct research and attend conferences  E
• Willingness to work out of normal working hours (including weekends) if the requirements of the project demand.  D

Imperial College is committed to equality of opportunity and to eliminating discrimination. All employees are expected to follow the 7 Imperial Expectations detailed below:

1) Champion a positive approach to change and opportunity
2) Encourage inclusive participation and eliminate discrimination
3) Communicate regularly and effectively within and across teams
4) Consider the thoughts and expectations of others
5) Deliver positive outcomes
6) Develop and grow skills and expertise
7) Work in a planned and managed way

Employees are also required to comply with all College policies and regulations paying special attention to:
• Confidentiality
• Conflict of Interest
• Data Protection
• Equal Opportunities
• Financial Regulations
• Health and Safety
• Information Technology
• Smoking
• Private Engagements and Register of Interests

They must also undertake specific training and assume responsibility for safety relevant to specific roles, as set out on the College Website Health and Safety Structure and Responsibilities page.

The College is a proud signatory to the San-Francisco Declaration on Research Assessment (DORA), which means that in hiring and promotion decisions, we evaluate applicants on the quality of their work, not the journal impact factor where it is published. For more information, see  https://www.imperial.ac.uk/research-and-innovation/about-imperial-research/research-evaluation/

The College believes that the use of animals in research is vital to improve human and animal health and welfare. Animals may only be used in research programmes where their use is shown to be necessary for developing new treatments and making medical advances. Imperial is committed to ensuring that, in cases where this research is deemed essential, all animals in the College’s care are treated with full respect, and that all staff involved with this work show due consideration at every level.  http://www.imperial.ac.uk/research-and-innovation/about-imperial-research/research-integrity/animal-research/
Committed to equality and valuing diversity, we are an Athena SWAN Silver Award winner, a Stonewall Diversity Champion, a Disability Confident Employer and work in partnership with GIRES to promote respect for trans people.