



Neuromuscular Systems Lab
School of Electrical & Electronic Engineering
University College Dublin

PhD Position : Optimisation of implantable electrodes for neural stimulation.

1. Description

Applications are invited for a full time PhD position with the Neuromuscular Systems Research Lab at University College Dublin. The position is funded by the Science Foundation Ireland CÚRAM Centre for Research in Medical Devices (<http://www.curamdevices.ie/>). The start date for the project is September 2017.

Recent advances in technologies that interface with the nervous system offer the potential for significant therapeutic and rehabilitation benefits across a diverse range of applications including deep brain stimulation, brain machine interfaces and neural control of prostheses. Changes that occur at the interface between the electrode and surrounding tissue during long-term neural recording or stimulation can have a significant effect on electrode performance, yet are not yet fully understood.

This project aims to increase understanding of the biological response of neural tissue to implanted electrodes, and to design electrodes for long-term recording and stimulation of neural tissue in which the mechanical and material properties of the electrode are matched to the tissue in which they are implanted. The problem will be addressed through a combination of experimental methods and computational modelling.

2. Who Should Apply

Applicants should have, or expect to obtain, a first or upper second class honours Bachelors or Masters degree in Electrical, Electronic or Biomedical Engineering (or a related discipline). Suitable candidates will have a strong interest in biomedical/neural engineering and neuroscience. Excellent analytical, computational and communications skills are essential. Suitable candidates should be able to work independently and as a part of team.

3. Funding

The position is funded by the Science Foundation Ireland CÚRAM Centre for Research in Medical Devices. Studentships cover tuition fees for EU applicants and a tax free stipend of €18,000 per year. An annual allowance is provided for research consumables and for conference attendance.

4. How to Apply

Please send a cover letter describing your experience and interest in this project (1 page max), CV, and academic transcripts to

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