**Background**
This PhD position is part of an interdisciplinary FWO project awarded to prof dr. ir Jeroen Van Schependom. In this interdisciplinary project we aim at promoting remyelination by providing transcranial electrical stimulation. Apart from specific demyelinating diseases, demyelination is a hallmark feature of multiple sclerosis that contributes significantly to disability accrual. By promoting remyelination we hope to slow down disease progression and possibly even reverse some of the damage. The project also contains a pre-clinical component in which demyelination will be artificially triggered in mice, but mainly aims at optimizing the administration of transcranial electrical stimulation in humans.

The project will be executed within the interdisciplinary AIMS research group at VUB led by prof Guy Nagels – who is also associate head of Neurology at UZ Brussel - and prof Jeroen Van Schependom ([https://aims.research.vub.be/](https://aims.research.vub.be/)) and within the electronics department at VUB (Johan Stiens, ETRO, [www.etrovub.be](http://www.etrovub.be)). Further, there is a close collaboration with the Faculty of Medicine and Pharmacy (EFAR, Dimitri De Bundel) and the Neurology department.

**Job description**
You will be working on the optimization of transcranial electrical stimulation. You will compare transcranial alternating current stimulation and temporal interference with respect to spatial focus and their ability to entrain neuronal populations. As the field of transcranial electrical stimulation is a rapidly evolving field, you should also keep track of the most recent developments. In order to optimize the current distribution, you will be required to run extensive simulations (using both mice and human head models), apply and develop your own electronics.

**Profile**
- You have recently obtained a master’s degree in (Biomedical) Engineering sciences or equivalent.
- You have obtained excellent grades
- You have a strong interest in interdisciplinary research and are willing to closely collaborate with engineers, neurologists, pharmacologists, ...
- You have a strong background in electronics and programming
- You have an interest in the anatomy and functioning of the brain
- You are able to work independently
- You have excellent communication skills (writing, presenting) in English. Proficiency in Dutch is not required.
- You will be encouraged to publish in peer-reviewed international journals
- You have not performed any works in the execution of a mandate as an assistant, paid from operating resources, over a total (cumulated) period of more than 12 months

**Offer:** You will be appointed as a PhD researcher for one year. After a positive evaluation, your appointment will be extended for a total duration of four years. Your appointment will be at VUB and you will be supported by a wide range of experts.

Ideally, you would start 1st of October 2021, but there is some flexibility.
You will mainly be working at VUBs Etterbeek campus, a green oasis with an excellent student restaurant, many sports facilities and close to the vibrant center of Brussels. Brussels, being the capital of Europe, is an international hub within Europe from where you can explore London, Amsterdam or Paris simply by train.

Next to a competitive salary (around 2100 EUR net per month), you will enjoy various benefits:

- **Full reimbursement for your home-work commute with public transport** according to VUB-policy, or compensation if you come by bike
- Cost-free **hospitalisation insurance**;
- The space to form your job content and **continuously learn** via VUB LRN
- **Excellent facilities for sport and exercise**
- **Ecocheques**;
- Delicious meals at attractive prices in our **campus restaurants**
- An open, family-friendly work environment where attention is paid to work-life balance, and exceptional holiday arrangements with **35 days of leave** (based on a fulltime contract).

**Selection procedure:** You can apply by sending your CV, motivation letter and transcript of academic records to Jeroen.van.schependom@vub.be. After the preselection, an interview will be scheduled.

**More info:** Prof. dr. ir. Jeroen Van Schependom (Jeroen.van.schependom@vub.be).