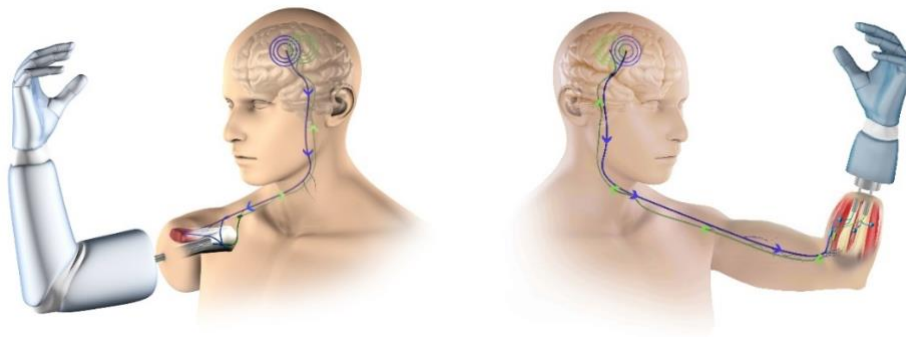


The Biomechatronics and Rehabilitation lab (BNL) at Chalmers is looking for a Master's student to join us in the development of an app to facilitate at-home system monitoring for a prosthesis system.

The e-OPRA system is an osseointegrated implant for attaching prostheses to the skeleton, which has the capability of recording muscular activations from within the body. After amputation, ability to effectively control the lost limb decreases with lack of practice, which later hinders the ability to effectively control a prosthesis. Due to the invasive nature of the electrodes, body morphology plays a role in their efficacy, and changing bioelectrical characteristics should be closely monitored. It is important for our team to understand if there has been a decrease in effectiveness of the prosthesis, which may be observed by fewer movements per day, reduced prosthesis use, or changing stimulation effects.



Your task would include the creation of an app, to make use of mobile computing to stream data from a recording device connected to the user. The main functions of this app would be to initiate an impedance measurement test, and receive log data, both over bluetooth. You would be responsible for designing a back-end structure for the data handling that allows progress and results tracking. A further task may include remote communication with the device from the lab, to be able to stream results.

Requirements

- Interest in prosthetics, Biomedical Engineering and Computer Sciences
- Familiarity with app design
- Experience in GUI design is highly beneficial

If interested contact us at maxo@chalmers.se

You can watch a [video](#) of a possible application of our technology which was published in the Medical Journal *The Lancet*.