



Discovery Program: Augmentation with walking endurance with the Myosuit

Description:

The Myosuit is a wearable robotic device that assists users in training activities of daily life such as sitting transfers, walking, or negotiating stairs. Its design is based on the analysis of human movement data to identify the key muscles that support the body during these activities. This novel approach provides users with an extra layer of wearable muscles to support their training during activities of daily life.

The assistance strategy of the Myosuit mainly focuses on providing the flexion and extension supports to the hip and the knee joints. The continuous modulation of such an assistance can be then personalised for each user specifically. Such activities of daily living as sitting transfers, walking as well as stair ascend and descend can be supported. The aim of this thesis is to analyse the use of the Myosuit for walking endurance from the motor learning point of view.

Your responsibilities will include:

- Work closely with our development team to design and conduct a motor learning Study
- Recruitment of impaired participants for the study
- Data analytics to quantify the effects the Myosuit has on the participants

Requirements:

- Lower limb biomechanics (knowledge of lower-limb impairment compensation strategies is a plus)
- Working with human subjects
- Python

Would be great if the candidate has experience working with Arduino and Raspberry Pi.

Other information:

Duration: 6 months

Starting date: February

Affiliated ETHZ Lab: Sensory-Motor Systems lab

Apply:

Send CV, latest transcripts and a motivation letter to discovery@myoswiss.com. State the name of the position in the subject of the email.