



**RIMS**  
REHABILITATION IN  
MULTIPLE SCLEROSIS  
*European network for  
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**Annual RIMS Conference**  
**Crossing the Interface  
to Explore New Possibilities**  
June 20 - 22, 2019  
Ljubljana, Slovenia  
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IN PARTNERSHIP WITH  
univerzitetni klinični center ljubljana  
University Medical Centre Ljubljana

Centre for multiple sclerosis,  
Department of Neurology and  
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Short description of your PhD project and trajectory (max 200 words):

Locomotion is one of the most important capabilities associated with activities of daily living and directly influences the quality of life. People suffering from Multiple Sclerosis (MS) are often impaired in locomotion and the majority has gait deficits. Many studies have already addressed the MS induced change in gait pattern, but the compensatory cognitive processes during walking are still not widely investigated. This study is one of the first to apply functional-near infrared spectroscopy (fNIRS) to the prefrontal cortex (PFC) while walking in people with MS (pwMS). The aim is to optimize the fNIRS measurement protocol for pwMS and to check whether fatigability can be measured by fNIRS during walking even before there are indications in the kinematics. So far, the first explorative and more methodologically oriented study has been carried out and the data analysis is currently in progress. Based on these results, a study on fatigability will be conducted in summer. The pwMS will be measured applying fNIRS and inertial sensors during dual-task walking before and after a fatigability provoking protocol on an ergometer.

I want to give a (mark with X):

Presentation (8-10 min. presentation + 5-10 min. feedback from expert panel)