



## Thesis Project Form

**Title (tentative):** Evaluating the influence of cognitive and physical demands on wrist proprioception and fatigue

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### Description

#### Motivation and application domain

Rehabilitation Robotics. Ergonomics. NeuroMechanics: Neural control of the hand, Forearm muscle fatigue and performance, Sensorimotor assessment of hand function

#### General objectives and main activities

The aim of the thesis is the development of a cognitive and physical loading paradigm to fatigue the neuromuscular system and to develop sensorimotor evaluations of wrist function

#### Training Objectives (technical/analytical tools, experimental methodologies)

Programming of wrist robotic device for study design. Recruitment, data collection, processing and analysis. Integrating electromyography and other signals with robot.

**Place(s) where the thesis work will be carried out:** Brock University: Department of Kinesiology; Neuromechanics and Ergonomics Lab.

### Additional information

**Maximum number of students:** 2

**Financial support/scholarship:** possibility to apply to extra eu scholarship