Master Thesis Project

**Cross-over effect of muscle fatigue and brain activity**

Rehabilitation exercises are mostly performed unilaterally and it has been shown that a unilateral exercise reduces the performance of the contralateral homologous muscle or limb [1–6]. During a unilateral task, the muscle activity can irradiate in the non-exercising muscles [3] and task-dependant changes have been shown in the ipsilateral primary motor cortex to an active arm [7–10].

This master project aims at investigating neural and muscular mechanisms underlying unilateral contractions over the contralateral (non-exercising) homologous muscle, muscle group or limb.

Surface electromyographic (sEMG) techniques, to measure the muscle electrical activity, and electroencephalography (EEG) to investigate changes in brain electrical activity will be used.

If you are interested, please contact Clémence Doix

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