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Project

Upper limb activity monitoring in the rehabilitation of human SCI

Keywords

Spinal cord injury; upper limb function; rehabilitation

Short Description

Following spinal cord injury people suffer from a loss of motor function. In the case of high (in the cervical spinal cord) injuries this means that the use of the arms and hands is severely impaired. For people with cervical spinal cord injuries (tetraplegics) this leads to a loss of independence due to difficulties in carrying out activities of daily life. Regaining use of the arms and hands is therefore a high priority for such people. The aim of this project is to use a novel, long-term activity sensor to measure the amount and type of activities made with the upper limbs of tetraplegics as they recover from the injury. In addition, the project will involve the development of new data analysis methods using MATLAB and also the development of algorithms to predict particular activities. The overall aim of the study will be to describe the recovery of use of the upper limb in tetraplegics patients in order to develop novel rehabilitation methods and clinical assessments.

Necessary skills

Applicants should have a university degree in either biology or human movement sciences. They should have good computer skills and knowledge of statistics. Applicants should also have an interest in learning MATLAB or experience with using it. Good use of English would also be an advantage.

Beginning of the thesis

April 1, 2012

For further questions please contact

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Links

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