

Liste-77

THE NEUROS PROJECT - NEUROMUSCULAR SENSING AND STIMULATION

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NEUROS is a project within the EU Training and Mobility of Researchers Program (TMR). The objective is to train young scientists throughout Europe in research in the area of artificial neuromuscular sensing and control and to further the knowledge in this area by the intensive cooperation and exchange of researchers in a network of expert groups. The main research objective is a collaborative effort in the field of neural prostheses to increase and to improve the applicability of FES systems using closed-loop control systems, deriving signals from natural sensors and developing electrodes and systems for selective stimulation and recording. The University of Twente coordinates the NEUROS network project. Effective cooperation with the SENSATIONS project (EU BIOMED2 program) has been established.

Research topics within the NEUROS network are: recording of signals from physiological sensors, the design and application of inertial 3-axial sensors, biomechanics and control of FES-assisted mobility, the design and application of implantable stimulators and multichannel stimulation electrodes. Furthermore, the influence of stimulation protocols on energy expenditure, mechanical output, fatigue and damage of muscles is being investigated.