



ISTITUTO ITALIANO
DI TECNOLOGIA

TITLE

Systems And Methods For Assessing And Training Wrist Joint Proprioceptive Function

INVENTORS

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DESCRIPTION

This invention concerns a comprehensive, integrated system for the rehabilitation of sensory or motor dysfunction at the wrist due to neurological or orthopedic disease. Integration refers first of all to the system's ability to perform assessment of proprioceptive status and to a wrist proprioceptive training in a single device. It comprises a hardware device (from here on referred to as wristbot) to allow for controlled movements of the wrist the active or set of specialized software modules that allow for the objective assessment of sensory dysfunction in patients, and provide specialized training modules designed to improve motor function of the wrist. This technology can be used in rehabilitation clinical settings. It can also be utilized in research settings. The integrated system would mean that only one device is needed, and if it can be networked a therapist could provide periodic assessments while the patient is at home (fewer visits to the clinic would be needed). Expanding to other joints is another option, along with separating the software from the hardware (produce assessment and training software that is compatible with other devices on the market).



APPLICATIONS

Rehabilitation, biomechanics

KEYWORDS

Wrist, rehabilitation, wristbot, disease, orthopedic, proprioceptive, training

BIBLIOGRAPHIC DATA

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