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Keywords

- Stroke
- Patient assessment in neuro-rehabilitation
- Force mapping of movement planning
- Whole-body isometric force measurements

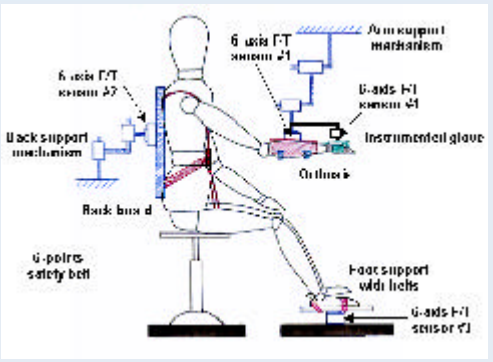
Natural language based decision support in neurorehabilitation

Why ALLADIN ?

Every year there are over 920,000 new stroke cases in Europe and a remarkable upward trend of demand for rehabilitation is on the way. This will lead to a steady growth in expenses for rehabilitation in Europe.
Three fourths of the physiotherapists find it difficult to exchange information on the recovery of neurological patients, because no clear standards are in use. They welcome a universal coding system that is independent of a therapeutic approach. Only a minority accepts the existing measuring scales as sufficient to describe and predict the evolution of a patient. Moreover the majority is convinced that they can describe their clinical findings in natural language (NL) descriptions. This highlights that applying current assessment techniques to complex problems encountered during neuro-rehabilitation is inefficient and a new approach is needed.

What does ALLADIN offer?

ALLADIN offers an innovative platform for whole-body isometric force measurements and a user-friendly natural language based decision support software and for neurorehabilitation,in particular in stroke. This support is offered through an innovative human like communication with a computer. The rehabilitation professional examines the patient and tells his/her findings to the computer in a descriptive way.



An innovative platform for whole-body isometric force measurements

The computer replies automatically with a message, which is a marker or milestone for recovery for that particular patient. These markers and milestones result from the analysis of force mapping of functional movement planning and are correlated with the natural language expressions used by the physiotherapist. The message generated by the computer helps to decide what to do next. It opens perspectives for the determination of individual therapies and accurate monitoring of the individual rehabilitation progress with knowledge-based techniques. This is a brand new method for decision support and risk management in neuro-rehabilitation.

Project Consortium

Arteveldehogeschool (B)
Language and Computing NV (B)
Budapest University of Technology and Economics (HU)
Faculty of Electrical Engineering, University of Ljubljana (SI)
Zenon SA, Robotics and Informatics (EL)
University of Wales, Cardiff (UK)
Multitel ASBL (B)
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Trinity College Dublin (IRL)
Scuola Superiore Sant'Anna (I)