UNIVERSITY
CHILDREN'S HOSPITAL
ZURICH

Rehabilitation Centre
Affoltern am Albis

iMiC – Innovative Movement-Therapies in Childhood

Background: This interdisciplinary translational research project aims to improve movement therapies for children with cerebral motor impairment using innovative rehabilitation technologies such as virtual realty therapy systems for upper and lower extremities. These technologies have been proven to be feasible for use with children by previous research of the involved groups. The systems will be extended and systematically tested on children with cerebral palsy, stroke and traumatic brain injuries in both hospital and outpatient settings. The clinical trials are designed to measure the outcome of defined interventions and include functional, neuropsycho-logical and neurophysiological assessment, as well as neuroimaging and gait analysis.

Goal

These rehabilitation technologies have been designed to enhance patient motivation and active participation to maximize neural plasticity and functional rehabilitation outcomes.

Project onset

2010

Project members

- Rob Labruyère
- Corinna Gerber
- Andreas Meyer-Heim
- Huub van Hedel

Cooperating partners

- Sensory-Motor Systems Lab, ETH Zurich, Prof. Robert Riener
- Rehabilitation Engineering Lab, Prof. Roger Gassert
- Zürcher Hochschule der Künste ZHdK, Game Design, Prof. Ulrich Götz, René Bauer, Reto Spörri, Florian Faller
- Institute of Neuroinformatics, Dr. Kynan Eng