Industry Workshop

Workshop Title
Translational Research using Advanced Rehabilitation Technologies

Workshop Responsible
Frans Steenbrink (VP Research Solutions at Motek Medical)

Speakers
Jaap van Dieën, Maarten Prins, Frans Steenbrink

Attendee Engagement
Propositions with color cards for each attendee to vote and associated discussions

Abstract
There is nothing new about Advanced Rehabilitation Technology, so one may wonder, how advanced is it? While new technologies are being developed at Universities, we are entering the next phase for many existing technologies. This workshop focusses on Translational Research, i.e. research seeking to produce clinically applicable results benefiting human balance and gait, and specifically research using rehabilitation technology such as instrumented treadmills, movable platforms, motion capture and interactive Virtual Reality. The goal of this workshop is to discuss translational research in this field, and to translate basic scientific outcomes and results more quickly and efficiently into clinical practice.

For several years researchers have been using perturbations to study and influence human balance and locomotion. There is eminent work on the use of visual perturbations (e.g. manipulating vision) or cognitive perturbations (e.g. cognitive dual tasking while performing a motor task). Recently the focus is increasingly on mechanical perturbations, where robotic platforms are used to destabilize patients or impose near fall situations. These types of perturbations are also used for interventional studies to study compensations, improve motor behavior or e.g. reduce fall risk. Implementation of the results of these studies in clinics allows the knowledge and understanding from lab-based studies to reach those for whom they were initially intended, the patients.

Besides learning from researchers and clinicians in the field, in this workshop we will discuss the crucial elements for transferring scientific findings in to clinical implementation. How can we encourage and promote multidisciplinary collaboration between lab settings and clinical researchers. How can we incorporate the wishes and needs of both patients and therapists, with the existing research community? And finally how can we identify and support the adoption of best practices in rehabilitation?