

Industry Workshop

Workshop title

Maximizing therapy outcomes, from research to clinic –smart devices and research protocols

Workshop responsible

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Speakers

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Workshop goals

Understand:

- How robotics and smart technology open up new ways to study (pathological) human movement and improve therapy outcomes
- How robotics and smart technology offer research a whole new toolset for their human movement studies

Abstract

Participants will learn how smart technology can be used to provide customized therapy that meets each individual needs while offering therapists and researchers new and better methods to treat and study their patients. More specifically, we will focus on real-time visual feedback, gait adaptability, and gait perturbations using an instrumented dual-belt treadmill, motion capturing and other technology in combination with an application development framework to create custom research applications. Compared to most other (over-ground) motion labs, the treadmill set-up allows for more functional gait tasks to be evaluate in scientific protocols. Also controlled manipulations, such as slit-belt walking with deviating speeds for each belt, can be used to study motor-control in both healthy individuals and patients. They will see smart technology in rehabilitation devices like Grail, Caren, and Rysen in action and experience what it's like to use them from different perspectives. Furthermore, examples of the world's most advanced human movement laboratories will be provided and demonstrated in a hands-on session.

Where do rehabilitation robotics and technology stand today? What is considered state-of-the-art and what goes beyond? Experts from the field will give you insights in these topics and explain what it means for clinics. Additionally, experts will conduct an interactive panel discussion on when and how we can use protocols in both research and clinical settings.