



MAY 12-16 2025 · CHICAGO, IL USA · REHABWEEK.ORG



Category: Industry

Workshop Title: The Future of Rehabilitation Robotics: Innovations, Applications, and Hands-On Experience

Organizer(s): Zen KOH

Speaker(s): Prof Oetomo , Denny from the University of Melbourne
Prof Riener, Robert from ETH
Prof Pons , Jose from Shirley Ryan Ability Lab
Prof Loureiro , Rui from UCL
Professor , Prof Park , Hyung-Soon from KIST
Prof Shimoda , Shingo from Nagoya University

Workshop Time: 13:45 - 15:15

Attendee Engagement: Our workshop is designed to maximize attendee interaction and engagement through a variety of collaborative and hands-on activities. Each session includes structured discussion rounds, breakout brainstorming groups, and interactive demonstrations to ensure attendees are active participants throughout the event, rather than passive listeners.

1) Discussion Rounds: Following each expert presentation, attendees will join small group discussions where they can interact directly with the presenter and explore practical applications of the concepts introduced. These discussions will be led by expert facilitators to encourage questions, share experiences, and stimulate insights relevant to diverse clinical settings.

2) Breakout Brainstorming Sessions: In both sessions, attendees will participate in breakout groups to brainstorm solutions and adaptations for specific rehabilitation scenarios, such as integrating robotics for different patient needs or settings. Each group will summarise their ideas and present them to the larger group, fostering a collaborative atmosphere.

3) Hands-On Demonstrations: Attendees will have the opportunity to experience Robotimize's devices, such as ArmVivante and GaitVivante, in a hands-on environment. This hands-on time allows attendees to test device functions, ask questions in real-time, and gain practical understanding directly from Robotimize engineers and clinicians.

4) Interactive Q&A and Quiz: Rather than a single Q&A at the end, we'll conduct short, interactive Q&A sessions after each activity to keep discussions fluid. We'll also incorporate quizzes during the hands-on session to check understanding and keep the energy high.

Our aim is for every attendee to leave with actionable knowledge they can apply to their work and insights gained through real-time interaction with presenters, experts, and peers.

Abstract: This industrial workshop offers the latest advancements in rehabilitation robotics, led by top experts in robotics technology. In two 90-minute sessions, participants will explore cutting-edge applications for upper and lower extremities, intelligent behaviour, and emerging

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trends in rehabilitation robotics. In the first session, Prof. Denny Oetomo (University of Melbourne) will present Robotimize's innovations and future trends, followed by Prof. Robert Riener (ETH Zurich) on upper extremity robotics for functional recovery. Attendees will engage in a hands-on demonstration of Robotimize's ArmVivante and GaitVivante, with a collaborative session to discuss adapting robotics for diverse clinical needs.

The second session delves into lower-extremity robotics and intelligent systems. Prof. Jose Pons (Shirley Ryan AbilityLab) will address advancements for mobility post-stroke and spinal injury, while Prof. Hyung-Soon Park (KIST) and Prof. Shingo Shimoda (Nagoya University) will discuss neuroengineering and adaptive robotics innovations. Prof. Rui Loureiro (UCL) will close with insights on NRC's AI-driven rehabilitation initiatives. This interactive workshop includes live demos, group discussions, and real-world applications, providing clinicians, therapists, engineers, and researchers with actionable knowledge to apply in their daily practices.