



Category: Development and Implementation of Technology, Human Centered Design

Workshop Title: Bridging research and real world: how to exploit collaborative, user-centered design for rehabilitation technology?

Workshop Organizer(s): Andrea Marinelli

In person Speaker(s):

- De Michieli, Lorenzo, Head of the Rehab Technologies Lab at Istituto Italiano di Tecnologia - Technology Transfer Directorate at Istituto Italiano di Tecnologia;
- Laffranchi, Matteo, Coordinator of Robotics of the Rehab Technologies Lab at Istituto Italiano di Tecnologia;
- Gruppioni, Emanuele, Direttore tecnico Area ricerca e formazione at Centro Protesi Inail
- Molteni, Franco, Director of Complex Operative Unit Functional Recovery and Rehabilitation of Villa Beretta Rehabilitation Center;
- Dosen, Strahinja, Professor of Department of Health Science and Technology at Aalborg University;
- Castellini, Claudio, Professor of Assistive Intelligent Robotics Lab and Artificial Intelligence in Biomedical Engineering at Friedrich-Alexander-Universität;
- Tai, Zhi Kang, Business Development Director at Fourier Intelligence, Singapore

Workshop Time: 13:45 - 15:15

Attendee Engagement:

Rehabilitation devices demos, Discussion, Brainstorming and active hands-on time

Abstract:

Collaborative design involves all stakeholders during the creation process, from planning to feedback and improvements. A good planned collaborative design process ensures that the outcome is both functional and meets expectations. Currently, research in rehabilitation technologies is going over the edges; however, the application to real-life scenarios is still challenging.

How can we facilitate the transfer between applied research and clinical needs?

How can we apply collaborative design strategies in the field of rehabilitation technology, to bridge the gap between research and clinics?

During the workshop, speakers from these three different fields will discuss about these topics: representatives from research, clinic and industry will offer their point of view on how it is possible to set up an effective technology transfer model for rehabilitative devices from research to the industrial world. These three worlds will meet to discuss and propose how the research solutions can become real applications for the end-users.

Different design paradigms will be proposed. The session will start with a presentation of the Rehab Technologies IIT-INAIL Lab design approach, giving us the opportunity to show our prototypes (with remotely and in presence demos) and explain our user-centered strategy. Further, invited speakers will then present additionally case studies to promote their approach on research and devices

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development. In conclusion, an objectively discussion between the involved speakers will focus on rehabilitation technologies and the proposed different collaborative design paradigms. Moreover, the attendees will have the opportunity to actively participate to the general brainstorming.