

**Category:** Clinical Application of Technology, Upper Limb

**Workshop Title:** Bringing Technology-Assisted Upper Limb Neurorehabilitation From Clinic to Home: An Interdisciplinary Perspective

**Workshop Organizer(s):** Simone Kager, Hsiao-Ju Cheng, Olivier Lambercy

**In person Speaker(s):**

- Lambercy, Olivier, Rehabilitation Engineering Laboratory, Department of Health Sciences and Technology, ETH Zurich, Switzerland
- Kowatsch, Tobias, Centre for Digital Health Interventions, Department of Management, Technology, and Economics, ETH Zurich, Switzerland
- Hussain, Asif, Articares Pte. Ltd., Singapore
- Burdet, Etienne, Bioengineering Department, Imperial College of Science Technology and Medicine, UK

**Workshop Time:** 16:00 - 17:30

**Attendee Engagement:**

After every talk, attendees of the workshop will be given the opportunity to ask questions to the respective speakers.

**Abstract:**

Stroke survivors commonly suffer from upper limb sensorimotor impairments that limit their ability to participate in activities of daily living. Intensive neurorehabilitation starting early after stroke in clinic and continuing all the way after discharge is essential for promoting post-stroke upper limb function. Robotics and technology-aided therapies are promising at providing the possibility to increase therapy intensity in clinical settings. Past studies have demonstrated the non-inferiority of technology-assisted therapy to improve functional impairments and independence compared to standard care in clinics. Yet after discharge, the therapy intensity is not maintained and typically decreases due to barriers such as time constraints, high cost of transportation, dependence on care givers' availability, etc. By bringing rehabilitation technologies home some of these barriers could be addressed and overcome. However, there remain many challenges: development of technologies for home-based use, implementation, acceptance and compliance, safety and regulatory concerns, and health economic aspects.

In this workshop, we aim to discuss the benefits and challenges of bringing technology-assisted neurorehabilitation home. We will bring together high-profile researchers, such as engineers, clinicians, industry experts, and health economists who will share their interdisciplinary perspectives on the topic.