Category: Telerehabilitation

Workshop Title: Boosting the Implementation of Tele-Assessments for Individuals With Stroke

Workshop Organizer(s): Lena Sauerzopf

In person Speaker(s):

- Martina Spiess (ZHAW Zurich University of Applied Sciences, PI Project "Tele-Assessment: Leveraging Deep Learning to Assess Upper Limb Kinematics after Stroke with Off-the-shelf Webcams")
- Lena Sauerzopf (ZHAW Zurich University of Applied Sciences, University of Zurich, PhD student)
- Michael Sy (University of the Philippines Manila and ZHAW)
- Raymond Francis R. Sarmiento (Director National Telehealth Center, University of the Philippines Manila)
- Jonghyun Kim (Associate Professor Sungkyunkwan University Jongno-gu, Republic of Korea: Mechanical Engineering, Bioengineering)
- Christina Rodriguez-de-Pablo (Neurorehabilitation Area of Health division of Tecnalia, Spain: Engineering)
- Thierry Keller (Managing Director at Tecnalia: Biomedical Engineering, Electrical Engineering)
- Liliana Paredes (CTO VAMED Switzerland)

Workshop Time: 10:30 - 12:00

Attendee Engagement:

Participants will perform assessments hands-on and at a distance (i.e. from one room to another) in small groups; in addition to that we will have discussion rounds.

Abstract:

Telerehabilitation after stroke has proven to be a meaningful and effective supplement to face-to-face interventions. This is attractive for several reasons. For example, in order to control rising health care costs, many countries experience a shift from prolonged inpatient rehab to outpatient and at-home care. Of course, care at a distance has been heavily boosted by the COVID-19 pandemic.

To adequately set and monitor treatment goals during tele-rehabilitation, we also need valid and reliable tele-assessments. Most importantly, they must be consistently applied in clinical practice. However, while a number of task-oriented and function-based observational tele-assessments have been validated for stroke rehabilitation, they are not yet commonly used in clinical practice by therapists. Clearly, knowledge transfer about tele-assessments from research to clinic has not yet adequately taken place.

Therefore, in this workshop we will (1) provide an overview about currently available tele-assessments for individuals with stroke, (2) facilitate exchange between peers by discussing participants' experiences and needs with regard to tele-assessments and (3) gain hands-on

experience with tele-assessments through practice in small groups. We will explore differences, difficulties, advantages and disadvantages of several tele-assessments by comparing them to in-person assessments. Participants will split into two rooms for practicing tele-assessments.

The workshop addresses clinicians, researchers, and engineers alike: It offers clinicians the opportunity for learning and self-experience with evidence-based tele-assessments after stroke. Researchers and engineers can use learnings from the discussions to inform the development of new assessments (and supporting technologies) and the creation of educational offers in the area of tele-assessments.