Scientific/Clinical Workshop

Workshop Title

NeuroRehabilitation technology: An uncertain journey from basic research to clinical deployment

Workshop Responsible

Zlatko Matjacic (University Rehabilitation Institute, Republic of Slovenia)

Speakers

Zlatko Matjacic, Heike Vallery, Onneweer Bram

Attendee Engagement

We envisage a panel discussion with the attendees as a brainstorming session with hands on time for examples presented by the panelists or the examples put forward by the attendees.

Abstract

The number of certified neurorehabilitation devices is low compared to the scale of research and development in this multidisciplinary field. A substantial number of spin-offs aiming at deploying new devices to the market fail due to various reasons. Rehabilitation technology needs to fulfill expectations of patients, therapists and healthcare insurance companies while at the same time complying with the provisions of Medical Device Regulation. Additionally, it must appropriately address situation awareness and associated risk assessment to ensure safety of both patient and therapist. Finally, the producer must demonstrate effectiveness of their product in an appropriate clinical trial.

We will address the above issues by presenting examples of both successful and unsuccessful journeys from basic science through early clinical testing, followed by product development and certification. Workshop participants and panelists will engage in a discussion about user acceptance, transformation of early complex research prototypes first into œleaner product prototypes, focused on function, followed by the development of a final product. In presentations of three panelists, particular attention will be paid to potential pit-falls and common mistakes researchers and clinicians that undertake a path toward transforming a new idea into a product make. The panelists come from clinical and university environments thus emphasizing and complementing various aspects.

Following 20-minutes presentations, a panel discussion will be held on what we can learn from each of the presented cases. The attendees will be encouraged to present their own ideas, and to pose questions related to any aspect of the development of a new product. This can be done ad hoc, but interested attendees may also prepare short descriptions of their cases and send them to panelists in advance so that smaller working groups addressing selected cases would be organized.