

SYMPOSIUM

Innovation and implementation of complex rehabilitation technology: state-of-the-art ideas and solutions/products

TUESDAY 20TH OF APRIL 2021

Interreg
Euregio Meuse-Rhine
European Regional Development Fund



Ministerium für Wirtschaft, Energie,
Industrie, Mittelstand und Handwerk
des Landes Nordrhein-Westfalen



provincie limburg

Provincie Noord-Brabant



In rehabilitation many novel technology innovations do not mature and are not implemented in rehabilitative care. These technologies could however facilitate increases in training frequency and intensity, assist the patient in home-training, or just offer support in daily life.

The Euregional network i2-CoRT is bridging this gap between healthcare, rehabilitation technology innovation and knowledge with the support of the Interreg V-A Euregion Meuse-Rhine programme (www.i2-CoRT.eu).

The project partners kindly invite you to an online symposium on state-of-the-art, ideas and solutions regarding innovation and implementation of complex rehabilitation technology:

Several keynote speakers will share their views with you on future developments and challenges in rehabilitation medicine and the growing importance of rehabilitation technology. The i2-CoRT partners and the cooperating companies will present to you the results from the i2-CoRT project related to the technologies and technology-assisted rehabilitation approaches that have been developed. Also the three i2-CoRT clinical test centres in the Euregion will present themselves. On the following pages you will find a brief overview of the symposium programme. A more detailed overview of all presentations can be found at:

<https://www.i2-cort.eu/i2-cort-symposium-april-20th-2021/>

REGISTRATION

You can register for the symposium via the following website:

<https://www.i2-cort.eu/i2-cort-symposium-2021-registration/>

The symposium is free of charge, but registration is mandatory.

Please register before **April 17th 2021**.

Venue:

The i2-CoRT symposium will be online.
You will receive a link after confirmation of your registration.

Target groups:

This symposium will be interesting for all rehabilitation specialists, therapists, researchers, companies, organizations and patients concerned within this field.



- 09.15** ● **Opening online platform**
- 09.30** ● **Welcome & Introduction**
Henk Seelen, PhD, Adelante Zorggroep, project leader i2-CoRT project, Hoensbroek, NL.
- 09.40** ● **Invited lecture: Future developments and challenges in rehabilitation medicine**
Henk Seelen, PhD, Adelante Zorggroep, project leader i2-CoRT project, Hoensbroek, NL.
- 10.00** ● **Invited lecture: Brilliant Failures: Working together, Failing together, Learning together**
Prof. Dr. Paul Iske, Maastricht University, School of Business and Economics, Maastricht, NL.
- 10.45** ● **Break**
- 11.00** ● **Invited lecture: Rehabilitation Robotics**
Prof. Dr. Dirk Lefeber, Free University of Brussels, Faculty of Applied Sciences, Department of Mechanical Engineering, Brussels, B.
- 11.30** ● **ReHab-TOAT: training approach, clinical feasibility and pilot study results**
Jule Elmanowski, MSc, Adelante Zorggroep, Hoensbroek, NL.
- 12.00** ● **Invited lecture: Wearable sensors for measuring physical behaviour in chronic conditions: current and future developments, applications and challenges**
Hans Bussmann, PhD, associate professor, Erasmus Medical Centre, Department of Rehabilitation Medicine, Rotterdam, NL.
- 12.30** ● **Break**
- 13.00** ● **Understanding patient arm-hand daily activity beyond the rehabilitation sessions**
Gustavo Rovelo-Ruiz, PhD, Hasselt University, Expertise Centre for Digital Media, Hasselt, B.
- 13.15** ● **Embroidered Inflatables: crafting soft actuators based on digital machine embroidery**
Bruna Goveia da Rocha, MSc, Eindhoven University of Technology, Future Everyday cluster of the Industrial Design Department, Eindhoven, NL.
- 13.30** ● **Development of the SitApp - A journey**
An Stevens, PhD, Maastricht University, Department of Research Engineering, Maastricht, NL; Steven Palmaers, MSc, PXL University of Applied Sciences and Arts, Centre of Expertise – Innovation in Care, Hasselt, B.
- 14.00** ● **Break**
- 14.15** ● **Invited lecture: eHealth in mixed reality to monitor, train, and assist patients with gait limitations**
Melvyn Roerdink, PhD, Associate professor Technology in Motion, Free University Amsterdam, Department of Human Movement Sciences, Amsterdam, NL.
- 14.45** ● **Technical aids to assist training of complex (bimanual task oriented) skills in rehabilitation**
Eugene Rameckers, PhD, Adelante Zorggroep, Hoensbroek, NL; Cyriel Dreissen, MSc, Maastricht University, Faculty of Health, Medicine and Life Sciences, Maastricht, NL; Els Knippenberg, MSc, PXL University of Applied Sciences and Arts, Centre of Expertise – Innovation in Care, Hasselt, B.
- 15.15** ● **Development of an innovative hand orthosis to boost neurophysiological recovery of the hand post stroke**
Sarah Meyer, PhD, Jessa Hospital, Rehabilitation centre, Campus Sint-Ursula, Herk-de-Stad, B.
- 15.30** ● **Down the kinematic chain: protocol to quantify effects of wearing a hand orthosis on upper extremity performance**
Hans Essers, PhD, Maastricht University, Department of Nutrition and Movement Sciences, NUTRIM, Maastricht, NL.
- 15.45** ● **Wrap-up**

Parallel session A: i2-CoRT Clinical test centres: 11:30 – 16:00 hours

Get to know the three clinical test centres developed in the i2-CoRT project:

- Test centre at Centre Hospitalier Universitaire in Esneux, B
- Test centre at Jessa Ziekenhuis, rehabilitation centre campus Sint-Ursula in Herk-de-Stad, B
- Test centre at Adelante rehabilitation centre, Hoensbroek, NL

In this parallel session exemplary activities in each of the three clinical test centres in the i2-CoRT project will be presented. Aspects like multidisciplinary co-creation of novel rehabilitation technology concepts, SME & company involvement, student ecosystems, standardised routing of procedures (including the i2-CoRT gateway) and valorisation of products will be shown and discussed.

Parallel session B: i2-CoRT other partners: 11:00 – 16:00 hours

In this parallel session 14 different projects related to a variety of challenges in rehabilitation technology development and evaluation, performed by the i2-CoRT partners in the Euregion, will be presented.

Parallel session C: Posters & demo-videos: 11:00 – 16:00 hours

In this parallel session 19 topics ranging from activity trackers and healthcare apps to gamification and actuated hand orthoses will be presented through continuous posters or video demonstrations.

Wrap-up & closing of symposium: 16:00 hours

A detailed overview of all presentations in the symposium programme can be found on the i2-CoRT website:

<https://www.i2-cort.eu/i2-cort-symposium-april-20th-2021/>