

RehabWeek Virtual '21  
SCIENTIFIC PROGRAM  
23 - 25 September 2021

TIME			September 23, 2021						
US (EST)	EU (CET)	ASIA (SGP)	ICORR	IFESS	INRS	ISVR	Industry Hall 1	Industry Hall 2	
02:50 - 03:00	08:50 - 09:00	14:50 - 15:00	OPENING						
			KEYNOTE LECTURE 1A						
			Moderator: <i>Iris Jakob</i>						
			Speakers: James Sulzer & Lindsay S. Karfeld-Sulzer, US						
			Title: Our child's TBI: a rehabilitation engineer's personal experience, technological approach, and lessons learned						
04:00 - 05:30	10:00 - 11:30	16:00 - 17:30	<p><b>SESSION 1A:</b> Current status of robot-assisted rehabilitation and assistive robotics: scientific and technological challenges for the next decade Moderator: <i>Stefano Mazzoleni, Italy</i></p> <p>Arm Therapy Robot ARMin: Transfer to Clinics and Industry, <i>Robert Riener, Switzerland</i></p> <p>Robot-assisted treatments and neuromodulation for restoration of movements in persons affected by stroke, <i>Stefano Mazzoleni, Italy</i></p> <p>Why hybrid neuroprostheses and robotics?, <i>Alessandra Pedrocchi, Italy</i></p> <p>Neuro-robotics to assist and restore upper limb and hand functions, <i>Silvestro Micera, Switzerland / Italy</i></p>	<p><b>SESSION 2A:</b> FES, Critical Care and COVID 19 Moderator: <i>Jonathan Jarvis, UK &amp; Tamsyn Street, UK</i></p> <p>Non-Invasive Phrenic Nerve Stimulation to Avoid Ventilator Induced Diaphragm Deconditioning in Critical Care: Parameter Optimisation, <i>Conor Keogh, UK</i></p> <p>Non-Invasive Phrenic Nerve Stimulation to Avoid Ventilator Induced Diaphragm Deconditioning in Critical Care: System Design and Feasibility, <i>Francisco Saavedra, Chile</i></p> <p>Reduction in mechanical ventilation time using diaphragm pacing to decrease the burden on ICU resources during COVID Pandemic, <i>Tony Ignagni, USA</i></p> <p>Lungpacer diaphragm pacing therapy: empowering independent breathing, <i>Doug Evans, USA</i></p>	<p><b>SESSION 3A:</b> Designing Rehab Technologies with Accessibility in Mind Moderator: <i>Martina Spiess, Switzerland</i></p> <p>Speaker: <i>Gigi Etienne, UK</i></p> <p>Organized by the Rehab Tech Summit</p>	<p><b>SESSION 4A:</b> Virtual agents and virtual avatars Moderator: <i>Anne-Hélène Olivier, France</i></p> <p>An interdisciplinary approach between Human Movement Sciences and Digital Sciences to understand collision avoidance behaviour between pedestrians, <i>Anne Hélène Olivier, France</i></p> <p>Embodiment of virtual self-avatars to induce proprioceptive illusions and affect motor control, <i>David Labbé, Canada</i></p> <p>Interactions with virtual agents and avatars for locomotor rehabilitation, <i>Anouk Lamontagne, Canada</i></p> <p>Embodying an asymmetrical virtual body: what are the impacts on the user's motor behaviour? <i>Valentin Vallageas, Canada</i></p> <p>Training with Agency-Inspired Feedback from a Sensor Glove in Virtual Reality to Improve Grasp Performance, <i>Mingxiao Liu, USA</i></p>			
05:30 - 06:15	11:30 - 12:15	17:30 - 18:15	EU-ASIA TIME ZONE				Industry Symposia	<p><b>INDUSTRY SESSION 1A - Fourier Intelligence</b> The Evolution of ArmMotus™ – 1st Unveiling of EMU Moderator: <i>Taya Hamilton</i></p> <p>Development of a Novel 3D End-Effector Upper Limb Rehabilitation Robot, <i>Denny Oetomo, Marlana Klais</i></p>	<p><b>INDUSTRY SESSION 3A - Tyromotion</b> Connection is Key - Experiences using the TyroTherapy Concept for Lower Extremity Rehabilitation Moderator: <i>Iris Jakob</i></p> <p>New Ways to Promote Recovery of Lower Limb and Walking Function in Neurorehabilitation, <i>Andrea Turolla, Italy</i></p> <p>Re-thinking Rehab - Why Intensive Rehab Requires Robotic Technology, <i>Sarah Daniel, UK</i></p> <p>Sensor-based Gait Assessment for Treatment Planning, <i>Andreas Jocham, Austria</i></p>
06:15 - 06:45	12:15 - 12:45	18:15 - 18:45	BREAK / NETWORKING SESSION						
06:45 - 08:15	12:45 - 14:15	18:45 - 20:15	<p><b>SESSION 5A:</b> Clinical Site Visit Hobbs Moderator: <i>Jen Mellows, UK</i></p> <p>Joint session with INRS</p>	<p><b>SESSION 6A:</b> H2020 ReHyb Project minisymposium Moderator: <i>Thierry Keller, Spain</i></p> <p>The H2020 ReHyb project develops robotic, FES and VR technologies for hybrid upper-limb exoskeletons that use its own sensing and novel actuation capabilities to generate a digital twin of the user: ReHyb Introduction, <i>Satoshi Endo, Germany</i></p> <p>End-user / clinical requirements analysis, <i>Carmen Krewer, Germany</i></p> <p>Control concept and challenges for FES, <i>Hassein Kaviani, Germany &amp; Thierry Keller, Spain</i></p> <p>General concept and approaches in neurorehabilitation, <i>Paul Verschure, Spain &amp; Anna Muro, Spain</i></p> <p>Hybrid FES and Robot Feedback to Accelerate Motor Learning, <i>Aaron Yurkewich, UK &amp; Martin Einkenkel, UK &amp; Lucille Cazenave, UK</i></p> <p>Schön Klinik video demo, <i>Carmen Krewer, Germany</i></p> <p>Imperial College London live/video demo, <i>Aaron Yurkewich, UK &amp; Hassein Kaviani, Germany</i></p> <p>Technical University Munich live demo, <i>Satoshi Endo, Germany &amp; Miruna Werkmeister, Germany</i></p>	<p><b>SESSION 7A:</b> Clinical Site Visit Hobbs Moderator: <i>Jen Mellows, UK</i></p> <p>Joint session with ICORR</p>	<p><b>SESSION 8A:</b> VR and computational techniques to enhance rehabilitation Moderator: <i>Tamar Weiss, Israel</i></p> <p>Dynamic personalization of virtual games as a tool to enhance upper limb and trunk rehabilitation for children with cerebral palsy, <i>Tamar Weiss, Israel</i></p> <p>Using Pose Estimation and Machine Learning to predict Fugl-Meyer and Balance Test scores in patients, <i>Hagit Hel Or, Israel</i></p> <p>Harnessing Technology for Precision Rehabilitation, <i>Rachel Proffitt, USA</i></p> <p>Validating Machine Learning for classifying individuals with Concussion using VR-based Posturography and Clinical Assessments, <i>Michael James Cleek, USA</i></p> <p>Motion Tracking Using AI and Standard Video for Exergaming, <i>Elise Vonstad, Norway</i></p> <p>Multi-sensory feedback for upper-extremity myoelectric control, <i>Sean Sanford, USA</i></p> <p>3D Body Landmark Detection for Movement Tracking in VR Rehabilitation, <i>Bhawna Shiwani, USA</i></p>			
08:15 - 10:45	14:15 - 16:45	20:15 - 22:45	BREAK / NETWORKING SESSION						

10:50 - 11:00	16:50 - 17:00	22:50 - 23:00	OPENING					
11:00 - 12:00	17:00 - 18:00	23:00 - 00:00	KEYNOTE LECTURE 1B Moderator: Rui Loureiro Speakers: James Sulzer & Lindsay S. Karfeld-Sulzer; US Title: Our child's TBI: a rehabilitation engineer's personal experience, technological approach, and lessons learned					
12:00 - 13:30	18:00 - 19:30	00:00 - 01:30	<p>ICORR / IFESS JOINT SESSION 1B / 2B: 18:00 - 19:00 Hybrid systems based on robotics and FES Moderators: Jules Dewald, USA &amp; Mike Ellis, USA</p> <p>Smart use of mechatronics and brain imaging approaches to study movement impairments post unilateral brain injury, <b>Jules Dewald, USA</b></p> <p>Science based Robotic interventions post hemiparetic stroke, <b>Mike Ellis, USA</b></p> <p>Smart use of FES for the paretic hand in chronic hemiparetic stroke, <b>Jun Yao, USA</b></p> <p>Development of a new home-based measure of hypertononia and kinematics using AI, <b>Hongchul Sohn, USA</b></p> <p>19:00 - 19:30 Transdisciplinary training for a full deployment of technologies in rehabilitation Moderator: <b>Emilia Ambrasin, Italy</b></p> <p>Why rehabilitation medicine requires transdisciplinary competences, <b>Franco Molteni, Italy</b></p> <p>Transdisciplinary education in rehab technologies, <b>Alessandra Pedrocchi, Italy</b></p>	<p>SESSION 3B: Designing Rehab Technologies with Accessibility in Mind Moderator: <b>Lauren Sheehan, USA</b></p> <p>Speaker: <b>Gigi Etienne, UK</b></p> <p>Organized by the Rehab Tech Summit</p>	<p>SESSION 4B: Coming to consensus about terminology Moderators: <b>Mindy F. Levin, Canada &amp; Judith Deutsch, USA</b></p> <p>Virtual Rehabilitation: History and Definitions, <b>Mindy F. Levin, Canada</b></p> <p>Active Video Games and Exergames: History and Definitions, <b>Judith Deutsch, USA</b></p>			
13:30 - 14:45	19:30 - 20:45	01:30 - 02:45	BREAK / NETWORKING SESSION					
14:45 - 16:15	20:45 - 22:15	02:45 - 04:15	<p>SESSION 5B: The Triangle of User Centered Design: Users, Clinicians, Engineers Moderator, <b>Robert Riener, Switzerland</b></p> <p><b>Verena Klamroth-Marganska, Switzerland</b></p> <p>Joint session with INRS</p>	<p>SESSION 6B: Live Event From Clinic @ Toronto Moderators: <b>Ines Bersch, Switzerland &amp; Cesar Marquez-Chin, Canada</b></p> <p>Transcutaneous Functional Electrical Stimulation: Demonstration of clinical applications for restoring upper extremity function, <b>Naaz Desai, Canada</b></p>	<p>SESSION 7B: The Triangle of User-Centered Design: Users, Clinicians, Engineers Moderator: <b>Robert Riener, Switzerland</b></p> <p><b>Verena Klamroth-Marganska, Switzerland</b></p> <p>Joint session with ICORR</p>	<p>SESSION 8B: Measuring behavioral change, motivation, engagement in VR Moderator: <b>Philippe Archambault, Canada</b></p> <p>Rehabilitation and skill transfer from virtual reality to the real world, <b>Philippe Archambault, Canada</b></p> <p>Considerations for ethical and equitable use of telerehabilitation, <b>Dahlia Kairy, Canada</b></p> <p>Cognitive stimulation through OroCognitive, a virtual reality app for older people, <b>Adriana Gómez, Spain</b></p> <p>Parents &amp; children experiences using a mixed-reality videogame for home-based rehabilitation in children with hemiplegia, <b>Daniela Chan-Viquez, Canada</b></p> <p>Motivation for rehabilitation: Young people with brain injuries' experiences of virtual reality innovations for therapy, <b>Dido Green, UK</b></p>		
16:15 - 18:15	22:15 - 00:15	04:15 - 06:15	NETWORKING SESSION					
			<p>ICORR Program</p> <p>IFESS Program</p>	<p>INRS Program</p> <p>ISVR Program</p>	<p>RehabWeek Common Scientific Program</p> <p>RehabWeek Common Social Program</p> <p>Industry Sessions</p>			

EU-AMERICAS TIME ZONE

RehabWeek Virtual '21  
SCIENTIFIC PROGRAM  
23 - 25 September 2021

TIME			September 24, 2021						
US (EST)	EU (CET)	ASIA (SIN)	ICORR	IFESS	INRS	ISVR	Industry Hall 1	Industry Hall 2	
03:00 - 04:00	09:00 - 10:00	15:00 - 16:00	<p>KEYNOTE LECTURE 2A Moderator: <i>Tamar Weiss, Israel</i> Speaker: <i>Aliki Thomas, Canada</i> Title: Challenges and Solutions Involving the Uptake of Technology in Rehabilitation: The Promise of Integrated Knowledge Translation</p>						
04:00 - 05:30	10:00 - 11:30	16:00 - 17:30	<p>SESSION 9A: Rehabilitation and Assistive Robotics Moderator: <i>Tijana Jevtic Vojinovic, UK</i></p> <p>The Myoshirt: A Textile Exomuscle That Assists the Shoulder in Everyday Life, <i>Anna-Maria Georgarakis, Switzerland</i> Mirror robotic therapy rehabilitation of wrist and forearm: Pilot study, <i>Nicolas Garcia-Aracil, Spain</i> Preliminary Results in Partial Gait Assistance Using the lower Limb Exoskeleton autonomy, <i>Zeynep Ozge Orhan, Switzerland</i> Novel end-effector device for patient-in-charge model-based progressive gait rehabilitation, <i>Marco Maddalena, UK</i> Human-in-the-Loop Optimization of Hip and Knee Assistance for Downhill Walking with the Myosuit, <i>Lukas Bergmann, Germany</i></p>	<p>SESSION 10A: History of IFESS: It all started in 1963 in Opatija Moderators: <i>Thierry Keller, Spain &amp; Simona Ferrente, Italy &amp; Marinko Rade, Croatia</i> <i>Dejan Popovic, Serbia</i> <i>Winfried Mayr, Austria</i></p>	<p>SESSION 11A Shanghai Yongqi Rehabilitation Hospital Site Visit Speaker: <i>Dr Cheng Peng</i> (Vice President) and therapist team of Shanghai Yongqi Rehabilitation Hospital Host: <i>Sarah Lim</i></p>	<p>SESSION 12A / REPLAY OF SESSION 4B: Coming to consensus about terminology Moderator: <i>Mindy F. Levin, Judith Deutsch</i> Virtual Rehabilitation: History and Definitions, <i>Mindy F. Levin, Canada</i> Active Video Games and Exergames: History and Definitions, <i>Judith Deutsch, USA</i></p>			
05:30 - 06:15	11:30 - 12:15	17:30 - 18:15	<p>INDUSTRY SYMPOSIA</p>						<p>INDUSTRY SESSION 5A Fourier Intelligence RehabHub™ - Future of Interconnected Rehabilitation Moderator: <i>Taya Hamilton, USA</i></p> <p>Lecture 1: Networked Lower Extremity Rehabilitation Robots: Beyond Conventional Rehabilitation Paradigms, <i>Jose Pons, USA</i> Lecture 2: Prediction and Rollback for Latency in 5G Force Control of Rehabilitation Robot, <i>Minos Niu, China</i></p>
06:15 - 06:45	12:15 - 12:45	18:15 - 18:45	<p>BREAK / NETWORKING SESSION</p>						
06:45 - 08:15	12:45 - 14:15	18:45 - 20:15	<p>SESSION 13A: Robotics for Clinical Practice Mohamed Bouri, Switzerland</p> <p>Combined use of LOKOMAT and RYSEN for gait training in spinal cord injury, <i>Javier Sanchez Aguilar, Spain</i> Serious game based training using an assistive device at home may provide long term improvement in the upper limb function of patients in the chronic phase of stroke, <i>Samantha G. Rozevink, The Netherlands</i> Functional Real-world Robotic Assisted Training: The EMU Feasibility Study, <i>Vincent Crocher, Australia</i> Comparison of Walking with a Knee-Ankle-Foot-Orthosis (KAFO) and a Powered Knee Exoskeleton in People with Spinal Cord Injury: A Randomized Crossover Clinical Trial, <i>Antonio Rodriguez, Spain</i> The Longitudinal Evolution of Proprioceptive, Motor, and Sensorimotor Hand Impairments in the Sub-Acute Phase After Stroke, <i>Monika Zbytniewska, Switzerland</i></p>	<p>IFESS/INRS JOINT SESSION 14A/15A: Live Event in Clinic @Nottwil Paraplegic centre: Effectiveness of technologies in clinical practice- from an idea to implementation Moderator: <i>Ines Bersch, Switzerland &amp; Jonathan Jarvis, UK</i></p>		<p>SESSION 16A: Measuring behavioral change, motivation, engagement in VR Moderator: <i>Philippe Archambault, Canada</i></p> <p>Rehabilitation and skill transfer from virtual reality to the real world, <i>Philippe Archambault, Canada</i> Considerations for ethical and equitable use of telerehabilitation, <i>Dahlia Kairy, Canada</i> Cognitive stimulation through OroCognitive, a virtual reality app for older people, <i>Adriana Gómez, Spain</i> Parents &amp; children experiences using a mixed-reality videogame for home-based rehabilitation in children with hemiplegia, <i>Daniela Chan-Viquez, Canada</i> Motivation for rehabilitation: Young people with brain injuries' experiences of virtual reality innovations for therapy, <i>Dido Green, UK</i></p>			
08:15 - 10:55	14:15 - 16:55	20:15 - 22:55	<p>BREAK / NETWORKING SESSION</p>						

EU-ASIA TIME ZONE

11:00 - 12:00	17:00 - 18:00	23:00 - 00:00	<p align="center"><b>KEYNOTE LECTURE 2B</b>  Moderator: <i>Phillippe Archambault, Canada</i>  Speaker: <i>Ailki Thomas, Canada</i></p> <p align="center">Title: Integrated Knowledge Translation with a focus on challenges and solutions to KT involving the uptake of technology in rehabilitation</p>			
12:00 - 13:30	18:00 - 19:30	00:00 - 01:30	<p><b>SESSION 9B:</b>  <b>Computational Neurorehabilitation</b>  Moderator: <i>Ana Luisa Trejos, Canada</i></p> <p>Forward Dynamics-based Simulation Algorithm for Robotic Rehabilitation Purposes, <i>Denis Mascioni, Brazil</i>  A Locomotor Cat Model for Restoring Walking after Complete Spinal Cord Injury: Assessing the Capability of a Predictive Control Algorithm, <i>Pauria Faridi, Canada</i>  Operant conditioning of monosynaptic spinal reflexes: a simulated environment approach, <i>Kyungsoon Kim, USA</i>  Changes in Resting State Functional Connectivity Associated with Dynamic Adaptation of the Wrist, <i>Andria Jean Farrens, USA</i>  Training Somatosensation with Proprioceptive Robots and Propriopixels, <i>David Reinkensmeyer, USA</i></p>	<p><b>SESSION 10B:</b>  <b>18:00 - 19:00 Role of electrodes and stimulation parameters in the recruitment of nerves and muscle fibers;</b>  Moderators: <i>Jonathan Jarvis &amp; Tamsyn Street, UK</i></p> <p>Role of electrodes and stimulation parameters in the recruitment of nerves and muscle fibers, <i>Winfried Mayr, Austria</i>  Sub-threshold pre-pulses to modify the excitability of nerve fibers during transcutaneous electrical stimulation, <i>Jose Luis Vargas Luna, Austria</i>  Electrical neuromodulation during robot-assisted stepping in humans with spinal cord injury, <i>Matthias Krenn, USA</i></p> <p><b>19:00 - 19:30 Artificial Organs: the IFESS official Journal</b>  Moderators: <i>Jonathan Jarvis &amp; Tamsyn Street, UK</i>  <i>Vakhtang Tchanchaleishvili</i></p>	<p><b>SESSION 11B</b>  Clinical Site Visit Americas Neurowork  Moderators: <i>Jan Black, USA &amp; Marissa Moran, USA &amp; Matt Hansen, USA</i></p>	<p><b>SESSION 12B:</b>  Virtual Rehabilitation and Brain-Computer interface and Neurofeedback  Moderator: <i>Athanasios Vourvopoulos, Portugal</i></p> <p>EEG-based Brain-Computer Interfaces and VR for Neurorehabilitation, <i>Athanasios Vourvopoulos, Portugal</i>  BCI-driven functional electrical stimulation for stroke rehabilitation, <i>Serafelm Perdikis, UK</i>  Training on an eye-controlled game: a fMRI study with a stroke patient, <i>Barbara Rachel Garcia-Ramos, Spain</i>  ARROW-CP: Virtual walking rehabilitation for children with cerebral palsy. Game design framework and Preliminary results, <i>Anne-Laure Guinet, France</i></p>
13:30 - 14:15	19:30 - 20:15	01:30 - 02:15	<p align="center"><b>EU-AMERICAS TIME ZONE</b></p>			<p align="center"><b>INDUSTRY SESSION 7B - Tyromotion</b>  Connection is Key - Experiences using the TyroTherapy Concept for Lower Extremity Rehabilitation  Moderator: <i>Iris Jakob, Austria</i></p> <p>New Ways to Promote Recovery of Lower Limb and Walking Function in Neurorehabilitation, <i>Andrea Turolla, Italy</i>  Re-thinking Rehab - Why Intensive Rehab Requires Robotic Technology, <i>Sarah Daniel, UK</i>  Sensor-based Gait Assessment for Treatment Planning, <i>Andreas Jocham, Austria</i></p>
14:15 - 14:45	20:15 - 20:45	02:15 - 02:45	<p align="center"><b>BREAK / NETWORKING SESSION</b></p>			
14:45 - 16:15	20:45 - 22:15	02:45 - 04:15	<p><b>SESSION 13B:</b>  <b>Wearable devices</b>  Moderator: <i>Peter Snow, UK</i></p> <p>An SEMS-Based Force Feedback Device for Teleoperation and Rehabilitation, <i>Marek Sierotowicz, Germany</i>  Survey-based Identification of Design Requirements and Constraints for a Wearable Tremor Suppression Device, <i>Yue Zhou, Canada</i>  Considering the Human Form and its Influence on the Moment- and Power-Generating Abilities of Soft Hip-Flexion Exosuits: Effects of Wearer BMI and Sex, <i>Ross Michael Neuman, USA</i>  Feasibility of Using Low-End Wearable Armbands and Unsupervised Transfer Learning for Seamless Myoelectric Control, <i>Yuxiao (Sonia) Lai, USA</i>  Comprehensive Kinematic Model of a Tendon-Driven Wearable Tremor Suppression Device, <i>Parisa Daemi, Canada</i></p>	<p><b>SESSION 14B:</b>  <b>IFESS contributions Fast Forward Session and Live discussion</b>  Moderators: <i>Jonathan Jarvis, UK, Winfried Mayr, Austria, Cesar Marquez-Chin, Canada, Simona Ferrante, Italy</i></p> <p>For presentation details please check the IFESS program on the website <a href="https://2021.rehabweek.org/#Agenda">https://2021.rehabweek.org/#Agenda</a>.</p>	<p><b>SESSION 15B:</b>  <b>Covid19 Silver-Lining – Tech Take-Aways for In- and Outpatients</b>  Moderator: <i>Tamsin Reed, UK</i></p> <p>Lesley Holdsworth's Silver Lining from COVID-19, <i>Lesley Holdsworth, UK</i></p>	<p><b>SESSION 16B:</b>  <b>Breaking down barriers to clinical uptake of VR</b>  Moderators: <i>Marika Demers, USA &amp; Dido Green, UK</i></p> <p>From Evidence to Practice – Applications for VR in rehabilitation, <i>Dido Green, UK</i>  Bridging the Disciplines – Perspectives from a Computer Scientist, <i>Crina Grosan, UK</i>  Knowledge Translation – Best practices for promoting the sustainable, evidence-based uptake of VR in rehabilitation, <i>Danielle Levac, Canada</i>  At the Coal Face – Clinical scenarios, <i>Melanie Borough, UK</i>  An Affordable, Wearable Virtual Rehabilitation Setup, <i>Marek Sierotowicz, Germany</i>  Debate on breaking down barriers to clinical implementation</p>
16:15 - 18:15	22:15 - 00:15	04:15 - 06:15	<p align="center"><b>NETWORKING SESSION</b></p>			
			<p><b>ICORR Program</b></p>	<p><b>INRS Program</b></p>	<p><b>RehabWeek Common Scientific Program</b></p>	
			<p><b>IFESS Program</b></p>	<p><b>ISVR Program</b></p>	<p><b>RehabWeek Common Social Program</b></p>	
			<p><b>Industry Sessions</b></p>			

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TIME			September 25, 2021						
US (EST)	EU (CET)	ASIA (SIN)	ICDRR	IFESS	INRS	ISVR	Industry Hall 1	Industry Hall 2	
03:00 - 04:00	09:00 - 10:00	15:00 - 16:00	<b>KEYNOTE LECTURE 3A</b> Moderator: <i>Jonathan Jarvis, UK</i> Speaker: <i>Vivian Muchahwar, Canada</i> Title: Novel approaches for restoring mobility after neural injury or disease						
04:00 - 05:30	10:00 - 11:30	16:00 - 17:30	SESSION 17A: Poster Session Asia/Europe	<b>SESSION 18A:</b> IFESS contributions Fast Forward Session and Live discussion Moderators: <i>Matija Milosevic, Canada, Simona Ferrante, Italy, Thierry Keller, UK</i>  For presentation details please check the IFESS program on the website <a href="https://2021.rehabweek.org/#Agenda">https://2021.rehabweek.org/#Agenda</a> .	SESSION 19A Poster Session Asia/Europe	<b>SESSION 20A:</b> Virtual Rehabilitation and Brain-Computer interface and Neurofeedback Moderator: <i>Athanasios Vourvopoulos, Portugal</i>  EEG-based Brain-Computer Interfaces and VR for Neurorehabilitation, <i>Athanasios Vourvopoulos, Portugal</i> BCI-driven functional electrical stimulation for stroke rehabilitation, <i>Serafelm Perdikis, UK</i> Training on an eye-controlled game: a fMRI study with a stroke patient, <i>Barbara Rachel Garcia-Ramos, Spain</i> ARRoW-CP: Virtual walking rehabilitation for children with cerebral palsy. Game design framework and Preliminary results, <i>Anne-Laure Guinet, France</i>			
05:30 - 06:45	11:30 - 12:00 12:00 - 12:45	17:30 - 18:45	<b>BREAK / NETWORKING SESSION</b>						
				<b>Vodovnik Student Award Ceremony</b> Moderators: <i>Erika G. Spaich &amp; Cesar Marquez &amp; Winfried Mayr &amp; Simona Ferrante</i>  Speaker: <i>Matija Milosevic</i>					
06:45 - 08:15	12:45 - 14:15	18:45 - 20:15	<b>SESSION 21A:</b> Human-machine interfaces in rehabilitation Moderator: <i>Rui Loureiro, UK</i>  An Adaptive Filter for Low-Tolerance SEMG-Based Intention Prediction, <i>Marek Sierotowicz, Germany</i> Case Study to explore the benefit of virtual reality interface combined with robotic facilitated movement to reduce supernumerary phantom limbs occurring after traumatic high-level tetraplegia (C2 AIS C), <i>Peter Snow, UK</i> Adaptive Virtual Reality-based Rehabilitation in Children with Cerebral Palsy: A proof-of-concept, <i>Ilaria Bortone, Italy</i> The effect of feedback modality on learning a novel wrist visuomotor transformation, <i>Giulia Aurora Albanese, Italy</i>	<b>SESSION 22A:</b> Neuroscience, rehabilitation and human-machine interfaces Moderator: <i>Thierry Keller, UK</i> SPECS-lab, IBEC, ICREA: Translating brain theory to neurorehabilitation: Introduction, <i>Paul Verschure, Spain</i> Insel Spital Bern: Linking BCI to FES in post-stroke upper limb recovery, <i>Adrian Guggisberg, Italy</i> Eodyne Systems / SPECS-lab, Barcelona: Whole brain models of Diaschisis as a new tool for diagnostics and prognostics, <i>Francisco Santos</i> Predicting recovery from goal-oriented movement, <i>Ton Coolen, Netherlands &amp; Fabrizio Antenucci, Italy</i> SPECS-lab, IBEC, ICREA: Translating brain theory to neurorehabilitation: The Rehabilitation Gaming System use case, <i>Paul Verschure, Spain</i> Heinrich Heine University: Diaschisis and post-stroke recovery, <i>Anna Mura, Germany</i> Nobel institute for neurophysiology Karolinska institute, Neural principles of motor control and their translation to the clinic, <i>Sten Grillner, Sweden</i>	<b>SESSION 23A:</b> Clinical Site Visit CEN Moderator: <i>José Lopez Sanchez, Spain</i>	<b>SESSION 24A:</b> Breaking down barriers to clinical uptake of VR Moderators: <i>Astrid Ferreira, Australia &amp; Dido Green, UK</i>  From Evidence to Practice – Applications for VR in rehabilitation, <i>Dido Green, UK</i> Bridging the Disciplines – Perspectives from a Computer Scientist, <i>Crina Grosan, UK</i> Knowledge Translation – Best practices for promoting the sustainable, evidence-based uptake of VR in rehabilitation, <i>Danielle Levac, Canada</i> At the Coal Face – Clinical scenarios, Melanie Burrough, <i>Melanie Burrough, UK</i> An Affordable, Wearable Virtual Rehabilitation Setup, <i>Marek Sierotowicz, Germany</i> Debate on breaking down barriers to clinical implementation			
08:15 - 08:25	14:15 - 14:25	20:15 - 20:25	<b>CLOSING SESSION</b>						
08:30 - 10:55	14:30 - 16:55	20:30 - 22:55	<b>NETWORKING SESSION</b>						

EU-ASIA TIME ZONE

11:00 - 12:00	17:00 - 18:00	23:00 - 00:00	<p align="center"><b>KEYNOTE LECTURE 9B</b>  Moderator: Ken Yoshida  Speaker: Vivian Mushahwar, Canada  Title: Novel approaches for restoring mobility after neural injury or disease</p>			
12:00 - 13:30	18:00 - 19:30	00:00 - 01:30	<p align="center">SESSION 17B Poster Session Europe/Americas</p>	<p align="center"><b>SESSION 18B:</b> Development of clinical guidelines for FES in mobility Moderator: Tamsyn Street, UK</p> <p>Development of Clinical Guidelines for Functional Electrical Stimulation in mobility, <i>Jane Burridge, UK &amp; Cathy Bulley, UK</i></p> <p>A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post-Stroke, <i>Therese E. Johnston, USA &amp; Lisa Brown, USA</i></p> <p>Interactive discussion of guideline implementation and education, <i>Cathy Bulley, UK</i></p> <p>Round table discussion: Key challenges in guideline development and implementation, <i>Tamsyn Street, UK</i></p> <p>Discussant: <i>Adine Adonis, UK</i></p>	<p align="center">SESSION 19B Poster Session Europe/Americas</p>	<p align="center"><b>SESSION 20B:</b> Virtual agents and virtual avatars Moderator: Anouk Lamontagne, Canada</p> <p>An interdisciplinary approach between Human Movement Sciences and Digital Sciences to understand collision avoidance behaviour between pedestrians, <i>Anne-Hélène Olivier, France</i></p> <p>Embodiment of virtual self-avatars to induce proprioceptive illusions and affect motor control, <i>David Labbé, Canada</i></p> <p>Interactions with virtual agents and avatars for locomotor rehabilitation, <i>Anouk Lamontagne, Canada</i></p> <p>Embodying an asymmetrical virtual body: what are the impacts on the user's motor behaviour? <i>Valentin Vallageas, Canada</i></p> <p>Training with Agency-Inspired Feedback from a Sensor Glove in Virtual Reality to Improve Grasp Performance, <i>Mingxiao Liu, US</i></p>
13:30 - 14:45	19:30 - 20:45	01:30 - 02:45	BREAK			
14:45 - 16:15	20:45 - 22:15	02:45 - 04:15	<p align="center">SESSION 21B Meet the Entrepreneurs Moderator: Martina Spiess, Switzerland</p> <p>Gery Colombo, Switzerland David Fried, UK Zen Koh, Singapore Alfons Carnicero, Spain Anne Vivian-Scott, Canada Alexander Kollreider, Austria</p> <p align="center"><i>Joint session with INRS</i></p>	<p align="center"><b>SESSION 22B:</b> IFESS Webinar series: Functionally relevant brain stimulation; The feasibility and efficacy of FES for the upper limb in young children with unilateral cerebral palsy; Restoration of bladder and bowel function following spinal cord injury. Moderator: Tamsyn Street, UK &amp; Ken Yoshida, USA</p> <p>Restoration of bladder and bowel function following spinal cord injury, <i>Sean Doherty, UK</i></p> <p>Functionally relevant brain stimulation, <i>Luka Milosevic, Canada</i></p> <p>The feasibility and efficacy of FES for the upper limb in young children with unilateral cerebral palsy, <i>Kristin Musselman, Canada</i></p>	<p align="center">SESSION 23B: Meet the Entrepreneurs Moderator: Martina Spiess, Switzerland</p> <p>Gery Colombo, Switzerland David Fried, UK Zen Koh, Singapore Alfons Carnicero, Spain Anne Vivian-Scott, Canada Alexander Kollreider, Austria</p> <p align="center"><i>Joint session with ICORR</i></p>	<p align="center"><b>SESSION 24B:</b> VR and computational techniques to enhance rehabilitation Moderator: W. Geoffrey Wright, USA</p> <p>Dynamic personalization of virtual games as a tool to enhance upper limb and trunk rehabilitation for children with cerebral palsy, <i>Tamar Weiss, Israel</i></p> <p>Using Pose Estimation and Machine Learning to predict Fugl-Meyer and Balance Test scores in patients, <i>Hagit Hel Or, Israel</i></p> <p>Harnessing Technology for Precision Rehabilitation, <i>Rachel Proffitt, USA</i></p> <p>Validating Machine Learning for classifying individuals with Concussion using VR-based Posturography and Clinical Assessments, <i>Michael James Cleek, USA</i></p> <p>Motion Tracking Using AI and Standard Video for Exergaming, <i>Elise Vonstad, Norway</i></p> <p>Multi-sensory feedback for upper-extremity myoelectric control, <i>Sean Sanford, USA</i></p> <p>3D Body Landmark Detection for Movement Tracking in VR Rehabilitation, <i>Bhawna Shiwani, USA</i></p>
16:15 - 16:25	22:15 - 22:25	04:15 - 04:25	CLOSING SESSION			
16:30 - 18:30	22:30 - 00:30	04:30 - 06:30	NETWORKING SESSION			

EU-AMERICAS TIME ZONE

- ICORR Program
- IFESS Program
- INRS Program
- ISVR Program
- Industry Sessions
- RehabWeek Common Scientific Program
- RehabWeek Common Social Program