



Poster Sessions

Asia-Pacific and Europe-Africa Session

September 25, 2021, Session starts at 4pm SGP / 10.00 CEST

Europe-Africa & Americas Session

September 25, 2021, Session starts at 18.00 CEST / 12pm EDST

10.00am CET / 4pm SGP Poster Session

Poster #	Presenting Author	Poster Title	Remo Floor
ICORR102	Peter William Snow	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)	1
ICORR103	Yansong Wang	Extracting Human-Robot Interaction Torque Based on a Novel Cable-Driven Upper-Limb Exoskeleton Equipped With Torque Sensors	1
Scientific Poster: INRS04	Hyunmi Lim	Effect of Brain Computer Interface Based Rehabilitation Combined With Action Observation and Peripheral Nerve Electrical Stimulation on Mu Suppression in Stroke Patients	1

Poster #	Presenting Author	Poster Title	Remo Floor
ICORR105	Anna-Maria Georgarakis	The Myoshirt: A Textile Exomuscle That Assists the Shoulder in Everyday Life	1
Scientific Poster: INRS05	Florence Martinache	Assessment of the Effects of Early Functional Proprioceptive Stimulations in Patients With Spinal Cord Injury	1
ICORR106	Thomas Bowman	Wearable Devices for Biofeedback Rehabilitation: A Systematic Review and Meta-Analysis to Design Application Rules and Estimate the Effectiveness on Balance and Gait Outcomes in Neurological Diseases	1
ICORR107	Marek Sierotowicz	An Adaptive Filter for Low-Tolerance SEMG-Based Intention Prediction	1
Scientific Poster: INRS10	Sara Skalli	Adhesive Capsulitis: What if Robotics Rehabilitation Can Be Used for Management?	1
ICORR109	Chrysovalanto Messiou	Table Docking System and Negative Obstacle Detection for a Smart Wheelchair	1
Scientific Poster: INRS11	Marc Sebastián-Romagosa	Brain-Computer Interface System for Gait Rehabilitation of Chronic Stroke Patients	1
ICORR110	Giada Devittori	Minimally-Supervised Robot-Assisted Therapy After Stroke: A Feasibility Study in a Clinical Setting	1
ICORR112	Javier Sánchez Aguilar	Combined Use of LOKOMAT and RYSEN for Gait Training in Spinal Cord Injury	1
Scientific Poster: INRS12	Franziska Herzog	Study Protocol of a Clinical Investigation on Safety, Feasibility and Usability of the ABLE Exoskeleton Device With Spinal Cord Injured Patients in a Hospital Setting	1

Poster #	Presenting Author	Poster Title	Remo Floor
ICORR116	Monika Zbytniewska	The Longitudinal Evolution of Proprioceptive, Motor, and Sensorimotor Hand Impairments in the Sub-Acute Phase After Stroke	1
Scientific Poster: INRS13	Ji-Eun Cho	Effects of Community-Based Ambulation Training With 3D-Printed Ankle-Foot-Orthoses on Walking on Even/Uneven Surfaces in Patients With Chronic Stroke	1
ICORR117	Jessica Gantenbein	Tailoring a Robotic Hand Orthosis For Individuals With Tetraplegia in View of Independent Use at Home	2
ICORR118	Vincent Crocher	Functional Real-world Robotic Assisted Training: The EMU Feasibility Study	2
Scientific Poster: INRS15	Michela Goffredo	Monitoring Patient Progress During Upper Limb Exoskeleton-assisted Stroke Rehabilitation: Analysis of Built-in Data	2
ICORR119	Chiara Basla	Validation of a Gait Safety Metric for Robot-assisted Walking With an Alcohol Intoxication Experiment	2
Scientific Poster: INRS16	Sanaz Pournajaf	Clinical and Neurophysiologic Effects of Upper Limb Robot-assisted Rehabilitation on Motor Recovery in Patients With Subacute Stroke: A Study Protocol of a Single-blind Multicenter Randomized Controlled Trial.	2
ICORR120	Eva Josse	Machine Learning-based Prediction of Upper Limb Rehabilitation Outcomes in Multiple Sclerosis: A Preliminary Analysis	2
ICORR122	Henry Eberle	Robust Sensor Fault Detection for a Shared Control Wheelchair	2
Scientific Poster: INRS17	Sofia Straudi	Motor Cortical Activation and Peripheral Blood Biomarkers in Progressive Multiple Sclerosis After a Robot-assisted Gait	2

Poster #	Presenting Author	Poster Title	Remo Floor
		Training: A Secondary Analysis of the RAGTIME Trial	
ICORR123	Yangmengfei Xu	Towards Rehabilitation of Pathological Synergies With Volitional Movement Using a Manipulandum Robot	2
Scientific Poster: INRS19	Daniele Munari	Feasibility of Adaptive Gait Support in a Robot-aided Gait Trainer (Lokomat) in Neurological Disorders	2
ICORR124	Arzu Guneysu Ozgur	Enhancing Social Interaction in Upper Limb Rehabilitation Through Co-located and Online Multiplayer Games	2
ICORR125	Samantha G. Rozevink	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	2
Clinical Poster: INRS20	Nurten Küçükçakir	The Use of C-Mill VR+ for Rehabilitation of Balance and Gait Adaptability Training in a Chronic Traumatic Injury Patient.	2
ICORR127	Adam Giles Metcalf	Multi-Domain Dynamic Modelling of an Upper Limb Rehabilitation Robot for Tracking Patient Progress	2
ICORR128	Shuhao Dong	A Maching Learning Based Performance Classification for Post-Stroke Rehabilitation Using Kinematic Features	2
Clinical Poster: INRS21	Alison Sarah Bean	Masterclass in Neurotechnology (MiNT) – An Innovative Online Educational Platform Embedding the Use of Neurotechnology in Clinical Practice	3
ICORR129	Frieder Wittmann	A Novel Wheelchair Ergometer for Automatic Optimization of Seat Positions of Everyday-Life and Sports Wheelchairs	3
ICORR134	Ilaria Bortone	Adaptive Virtual Reality-based Rehabilitation in Children with Cerebral Palsy: A proof-of-concept	3

Poster #	Presenting Author	Poster Title	Remo Floor
Clinical Poster: INRS22	Dominika Kozak	How Robotics Can Be Implemented for Bedside Treatment at Early Stage of Rehabilitation Process	3
ICORR136	Ahmad Zahedi	Design and Kinematic Modeling of a Novel Cable-Driven Shoulder-Elbow Exoskeleton	3
ICORR141	Lukas Bergmann	Human-in-the-Loop Optimization of Hip and Knee Assistance for Downhill Walking With the Myosuit	3
Clinical Poster: INRS23	Vicki Abraham	The Use of Robotic/Computer Assistive Technologies (R/CAT) During Upper Limb Rehabilitation Therapy Sessions	3
ICORR142	Yuxiao (Sonia) Lai	Feasibility of Using Low-End Wearable Armbands and Unsupervised Transfer Learning for Seamless Myoelectric Control	3
Clinical Poster: INRS24	Anna Biddiscombe	Integrating a Robotic Assisted Gait Training Device, LEXO(R), Into Clinical Practice: Gold Standard Treatment Approach	3
ICORR152	Nicolas Garcia-Aracil	Mirror Robotic Therapy Rehabilitation of Wrist and Forearm: Pilot Study	3
ICORR154	Antonio Rodríguez Fernández	A Biofeedback System for Improving Gait Performance in People With Spinal Cord Injury while Using a Wearable Exoskeleton	3

Poster #	Presenting Author	Poster Title	Remo Floor
Industry Poster: INRS26	Sarah Lim	Fourier Intelligence RehabHub™	3
ICORR159	Antonio Rodríguez Fernández	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	3
Industry Poster: INRS27	Iris Jakob	Connection Is Key - Tyrotherapy Concept For Lower Extremity Rehabilitation	3
ICORR174	Marco Maddalena	Novel End-effector Device for Patient-in-charge Model-based Progressive Gait Rehabilitation	3
Industry Poster: INRS28	Katlin Kreamer Tonin	From User Feedback to Meaningful Changes: Redesign of the ABLE Exoskeleton	3

18.00 CET/ 12pm EST Poster Session

Poser Nr	Presenting Author	Poster Title	Floor
ICORR101	Denis Mosconi	Forward Dynamics-based Simulation Algorithm for Robotic Rehabilitation Purposes	1
ICORR102	Peter William Snow	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)	1
ICORR104	Amanda (Harris) Bernstein	Rehabilitation and Cortical Remodeling After Surgical Intervention for Spinal Cord Injury	1
ICORR105	Anna-Maria Georgarakis	The Myoshirt: A Textile Exomuscle That Assists the Shoulder in Everyday Life	1
Scientific Poster: INRS02	Kailynn Mannella	Preliminary Validation of an Adaptive Robotic Training Program of the Hand and Wrist for Persons With Multiple Sclerosis	1
ICORR106	Thomas Bowman	Wearable Devices for Biofeedback Rehabilitation: A Systematic Review and Meta-Analysis to Design Application Rules and Estimate the Effectiveness on Balance and Gait Outcomes in Neurological Diseases	1
ICORR108	Marek Sierotowicz	An SEMS-Based Force Feedback Device for Teleoperation and Rehabilitation.	1
ICORR109	Chrysovalanto Messiou	Table Docking System and Negative Obstacle Detection for a Smart Wheelchair	1
ICORR110	Giada Devittori	Minimally-Supervised Robot-Assisted Therapy After Stroke: A Feasibility Study in a Clinical Setting	1
Scientific Poster: INRS03	Manuel Murie Fernandez	Neurovision: Visual Rehabilitation for Homonymous Hemianopsia	1
ICORR111	Gregory LeMasurier	Shopping Assistance for People Who Are Blind or Have Low Vision	1

Poser Nr	Presenting Author	Poster Title	Floor
ICORR113	Vishwanath Ketkar	Design and Development of a Spherical Five-Bar Thumb Exoskeleton Mechanism for Post-Stroke Rehabilitation	1
ICORR114	Christopher Bitikofer	A Novel Passivity Based Friction Gravity Adaptive Admittance Control for Upper Limb Human Exoskeleton Interaction	1
ICORR115	Pouria Faridi	A Locomotor Cat Model for Restoring Walking After Complete Spinal Cord Injury: Assessing the Capability of a Predictive Control Algorithm	1
Scientific Poster: INRS06	Behdad Parhizi	Effects of Transcutaneous Spinal Cord Stimulation on Sensorimotor Circuitry and Cervico-Lumbar Coupling in Neurologically Intact Participants	1
ICORR116	Monika Zbytniewska	The Longitudinal Evolution of Proprioceptive, Motor, and Sensorimotor Hand Impairments in the Sub-Acute Phase After Stroke	2
ICORR117	Jessica Gantenbein	Tailoring a Robotic Hand Orthosis For Individuals With Tetraplegia in View of Independent Use at Home	2
ICORR121	Ali Reza Manzoori	Comparative Evaluation of Hip Partial Assistance Control Strategies	2
ICORR126	Giulia Aurora Albanese	The Effect of Feedback Modality on Learning a Novel Wrist Visuomotor Transformation	2
Scientific Poster: INRS07	Trevor Scott Barss	Electrode Number Alters the Relationship Between the Stimulation Frequency of Functional Electrical Stimulation and Quadriceps Torque in Individuals Who Are Neurologically Intact or Living With a Spinal Cord Injury	2
ICORR127	Adam Giles Metcalf	Multi-Domain Dynamic Modelling of an Upper Limb Rehabilitation Robot for Tracking Patient Progress	2
ICORR129	Frieder Wittmann	A Novel Wheelchair Ergometer for Automatic Optimization of Seat Positions of Everyday-Life and Sports Wheelchairs	2

Poser Nr	Presenting Author	Poster Title	Floor
ICORR130	Heather E. Williams	Using Transfer Learning to Reduce the Burden of Training for Position-Aware Myoelectric Prosthetic Control	2
ICORR131	Luis Vargas	Functional Interaction of Objects During Myoelectric Control of a Prosthetic Hand With Non-Invasive Somatotopic Tactile Feedback	2
Scientific Poster: INRS09	Véronique Flamand	Vibratory Alerts to Counter Developmental Disregard in Children With Unilateral Cerebral Palsy: A Feasibility Study	2
ICORR132	Valeria Falzarano	Implications of Fatigue on Wrist Stiffness and Position Sense	2
ICORR133	Javad K. Mehr	Compliant Motion Planning and Intelligent Postural Stability for Lower-Limb Exoskeletons	2
ICORR134	Ilaria Bortone	Adaptive Virtual Reality-based Rehabilitation in Children with Cerebral Palsy: A Proof-of-Concept	2
ICORR135	Mojtaba Sharifi	Design, Analysis, Development, and EMG-Based Control of an Upper-Limb Exoskeleton With Soft Artificial Muscles	2
Scientific Poster: INRS10	Sara Skalli	Adhesive Capsulitis: What if Robotics Rehabilitation Can Be Used for Management?	2
ICORR137	Vahidreza Molazadeh	Novel Multilayer Perceptron Based Controller for Precise Delivery of Exoskeleton Assistance During Walking	3
ICORR138	Rhet Osborne Hailey	Rehabilitation Training Under Gravity Compensation With Harmony Exoskeleton Improves in Movement Quality for Individuals With Chronic Stroke	3
ICORR139	Kyoungsoon Kim	Operant Conditioning of Monosynaptic Spinal Reflexes: A Simulated Environment Approach	3
ICORR140	Andria Jean Farrens	Changes in Resting State Functional Connectivity Associated with Dynamic Adaptation of the Wrist	3

Poser Nr	Presenting Author	Poster Title	Floor
Scientific Poster: INRS11	Marc Sebastián-Romagosa	Brain-Computer Interface System for Gait Rehabilitation of Chronic Stroke Patients	3
ICORR142	Yuxiao (Sonia) Lai	Feasibility of Using Low-End Wearable Armbands and Unsupervised Transfer Learning for Seamless Myoelectric Control	3
ICORR143	Yue Zhou	Survey-based Identification of Design Requirements and Constraints for a Wearable Tremor Suppression Device	3
ICORR144	Michael Rory Dawson	Joint Action is a Framework for Understanding Partnerships Between Humans and Upper Limb Prostheses	3
ICORR145	Parisa Daemi	Comprehensive Kinematic Model of a Tendon-Driven Wearable Tremor Suppression Device	3
Scientific Poster: INRS16	Sanaz Pournajaf	Clinical and Neurophysiologic Effects of Upper Limb Robot-assisted Rehabilitation on Motor Recovery in Patients With Subacute Stroke: A Study Protocol of a Single-blind Multicenter Randomized Controlled Trial.	3
ICORR146	Michael Gonzalez	Somatotopic Sensation in Upper and Lower Limb Prosthesis Users: A Systematic Review	3
ICORR147	Keya Ghonasgi	Effects of Environmental Intervention on Learning and Performance in a Novel Motor Skill Task	3
ICORR148	Giovanni Oppizzi	Inter-Digit Coupling Changes During Active Finger Motion Post Stroke: A Preliminary Study	3
ICORR149	Ana De Oliveira	Assessment of Upper-body Movement Quality Using Harmony Exoskeleton	3
Scientific Poster: INRS18	Luis Enrique Sucar	Facial Therapy: A Remote Biofeedback System for Patients With Sequels of Peripheral Facial Paralysis	3
ICORR150	Paria Esmatloo	Simultaneous Real-Time Control of Hand Pose and Grasp Strength With an EMG-Driven Hand Exoskeleton	4

Poser Nr	Presenting Author	Poster Title	Floor
ICORR151	Haider Ali Chishty	Kinematic Compatibility of a Wrist Robot with Cable Differential Actuation: Effects of Misalignment Compensation via Passive Joints	4
ICORR153	Nicolas Garcia-Aracil	Physiological Reaction to Competitive Rehabilitation Game Assisted by Robotic Devices: Pilot Study With Patients	4
ICORR155	Grace Hunt	Neural Control Enables Stand-Up, Squat, Lunge, and Walk With a Robotic Knee and Ankle Prosthesis	4
Scientific Poster: INRS19	Daniele Munari	Feasibility of Adaptive Gait Support in a Robot-Aided Gait Trainer (Lokomat) in Neurological Disorders	4
ICORR156	Stephany Bonilla Montero	Model Predictive Control for Active-assisted Hand Rehabilitation Using an EMG-driven Exoskeleton	4
ICORR157	Marc-Antoine Maheux	Engineering Autonomous Robotic Solutions for Older Adults in Long-Term Care Facilities	4
ICORR158	Marshall Ishmael	Powered Hip Exoskeleton Increases Self-Selected Walking Speed in Stroke: A Case Study	4
ICORR160	Sarah Hood	Design and Amputee Testing of an Adaptive Stair Ascent Control for Powered Knee and Ankle Prostheses	4
Clinical Poster: INRS21	Alison Sarah Bean	Masterclass in Neurotechnology (MiNT) – An Innovative Online Educational Platform Embedding the Use of Neurotechnology in Clinical Practice	4
ICORR161	Minh Tran	A Lightweight, Compact Powered Knee Prosthesis with Elastic Torque-Sensitive Actuation	4
ICORR162	Courtney Celian	A Day in the Life: A Qualitative Study of Clinical Decision-Making and Uptake of Neurorehabilitation Technology	4
ICORR163	Andrew Gunnell	Powered Knee Exoskeleton With Proportional EMG Control Improves Sit-to-Stand Transition Symmetry in a Stroke Subject	4

Poser Nr	Presenting Author	Poster Title	Floor
ICORR164	Kaitlin G. Rabe	Comparing Sonomyography and Electromyography Using Bayesian Regression to Continuously Estimate Joint Torques During Ambulation on Varying Terrains	4
Clinical Poster: INRS25	Jessi Vaught	Discovering Innovation in Existing Rehabilitation Technologies	4
ICORR165	Feng Xu	Robust Neural Decoding of Individual Finger Forces over a Multi-Day Evaluation	5
ICORR166	Lukas Gabert	Underactuated Powered Ankle and Toe Prosthesis	5
ICORR167	Ross Michael Neuman	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	5
ICORR168	Anna Diop	An Experimental Protocol to Study Motor Adaptation in Response to Perturbations Generated by a Lower-Limb Exoskeleton	5
Industry Poster: INRS27	Iris Jakob	CONNECTION IS KEY - TYROTHERAPY CONCEPT FOR LOWER EXTREMITY REHABILITATION	5
ICORR169	Zeynep Ozge Orhan	Preliminary Results in Partial Gait Assistance Using the lower Limb Exoskeleton autonomy	5
ICORR170	David Reinkensmeyer	Training Somatosensation With Proprioceptive Robots and Propriopixels	5
ICORR171	Jayesh Jayashankar	Combining Convolutional Neural Networks With LSTM for Real Time Decoding of Multi-Joint Arm Movements in Stroke Survivors	5
ICORR172	Rinku Roy	Prediction of Fingertip Force and Joint Kinematics of Individual Fingers Using Motoneuron Firing Activities	5

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Industry Poster: INRS28	Katlin Kreamer Tonin	From User Feedback to Meaningful Changes: Redesign of the ABLE Exoskeleton	5
ICORR173	Mohid Khan	Exploring the Efficacy of Cutaneous Haptic Feedback in Post-Stroke Rehabilitation	5
ICORR174	Marco Maddalena	Novel End-effector Device for Patient-in- charge Model-based Progressive Gait Rehabilitation	5
Scientific Poster: INRS29	Hala Osman	Characterizing the feasibility of Progressive Gait Perturbation Protocol for Individuals Poststroke	5