

Thursday, October 1st					
Time	Track A - Rehabilitation and Wearable Robotics Chairs: Junho Choi, Jiyeon Kang, Denny Oetomo Room A	Track B - AI and Computational Methods for Precision Rehabilitation Chairs: Sang Hoon Kang, Jinsook Roh, Megan K. O'Brien Room B	Track C - Clinical Motor Control Chairs: Dong-Wook Rha, Ghaith Androwis Room C	Track D - Neural Interfaces and Stimulation Chairs: Jonghyun Kim, Thomas Bulea Room D	Track E - Clinical Translation and Industry Track Chairs: Zen Koh, Bong-Keun Jung, Jesus Tornero Room E
08:30-09:15	Prof. B.J. Fregly, Plenary Lecture (Room A) Chair: Jose L. Pons				
09:15-10:45	RWR09 - Human Connection Through Robots: A New Paradigm for Neurorehabilitation Chair: Marta Gandolla	AICM05 - Motor and Cognitive Biomarkers in Neurorehabilitation: A Data-Driven Perspective Chairs: Marianna Semprini, Jorge Gomez Garcia	CMC06A - Advanced Methods and Techniques in Clinical MotormControl and Neurorehabilitation (I) Chair: Dong-Wook Rha	NIS06 - Spinal Cord Epidural Stimulation a tool for multisystem recovery following spinal cord injury Chair: Claudia Angeli	CTIT03 - A Life-Course, Evidence-Driven Pathway from HealthTech Innovation to Adoption Chair: Rui Loureiro
10:45-11:15	Coffee break				
11:15-12:45	RWR11 - Pros, Cons and Challenges during modern technology based post-stroke rehabilitation Chairs: Luca Toth, Péter Maróti	AICM06 - Neuromuscular modeling from electrophysiological signals: from muscles to brain Chair: Andres Ubeda	CMC06B - Advanced Methods and Techniques in Clinical MotormControl and Neurorehabilitation (II) Chairs: Joeeun Ahn, Beom-Chan Lee	NIS07 - Brain-Computer Interface, Robotic Devices, and Non-Invasive Brain-Muscular Stimulations for Rehabilitation of Chronic Stroke Chairs: Teodiano Bastos-Filho, Ana Cecilia Villa Parra	CTIT04 - AI and Neurorehabilitation: the regulatory, ethics and education landscape Chair: María Amparo Grau Ruiz
12:45-13:45	Lunch break				
13:45-14:30	Prof. Aaron Young, Plenary Lecture (Room A) Chair: Hyung-Soon Park				
14:30-16:00	RWR02A - From Data to Action: Wearable Sensor Technology to Drive Neurorehabilitation (I) Chair: Megan K. O'Brien	AICM07 - Computational Methods and Techniques in Neruorehabilitation Chair: Seungbum Koo	NIS11 - Emerging Neuroengineering Technologies for Personalized Neurorehabilitation and Diagnostics Chair: Minkyu Ahn	NIS08 - Peripheral Stimulation for Movement Disorders Management: Mechanisms, Technologies and Clinical Translation Chair: Jose L. Pons	NIS12 - Brain-Computer Interface for Stroke Rehabilitation Based on Motor Learning Principles Chair: Juan Moreno, Floriana Pichiorri
16:00-16:30	Coffee break				
16:30-17:45	Poster Session	Poster Session	Poster Session	Poster Session	Poster Session
17:45-19:00	Poster Session	Poster Session	Poster Session	Poster Session	Poster Session

Room A 09:15-10:40	RWR09 - Human Connection Through Robots: A New Paradigm for Neurorehabilitation Chair: Marta Gandolla	ID028. Beatrice Luciani, Alex van den Berg, Matti Lang, Alexandre L. Ratschat and Laura Marchal-Crespo. From Automation to Facilitation: Designing Robotic Systems as Intuitive Interfaces for Therapist-Patient Connection
		ID033. Lorenzo Amato, Lorenzo Vianello, Emek Küçüktabak, Alberto Cantón, Matthew Short, Jesus Tornero and Jose L. Pons. Therapist-Robot-Trainee Interaction for Gait Rehabilitation
		ID141. Mohammad Sohorab Hossain and Vesna Novak. Toward Automated Exercise Adaptation in Collaborative Neurorehabilitation using Physiological Responses
		ID223. Francesco Di Tommaso, Lorenzo Vianello, Matthew Short, Domenico Formica, Nevio Luigi Tagliamonte and Jose Pons. Modulation of Coupling Stiffness in Physical Patient-Robot-Therapist Interaction
		ID384. Sébastien Muheim, Sri Sai Sathvik Kadimisetty, Lauren Stephanie Waiman Chee, Nicolas Gerig and Georg Rauter. Towards Robot-Mediated Physical Human-Human Interaction in Overground Gait Rehabilitation: Therapist-in-the-Loop FLOAT
Room A 11:15-12:45	RWR11 - Pros, Cons and Challenges during modern technology based post-stroke rehabilitation Chairs: Luca Toth, Péter Maróti	ID380. Ghaith J. Androwis, Brett Gordon, Juan Ramirez, Sergei Adamovich, Steven Kirshblum and Guang Yue. Effectiveness of Myoelectric Wearable Orthoses for Upper Extremity Function and Rehabilitation in Acute Spinal Cord Injury
		ID071. Saskia Neumann, Yann Ennassih, Jose Albites-Sanabria, Tim Unger, Irina Djuraskovic, J.D. Peiffer, R. James Cotton and Chris Easthope Awai. Validating Monocular Markerless Motion Capture as a Practical Tool for Temporal Gait Assessment in Clinical and Ecological Scenarios
		ID328. Péter Maróti, Luca Tóth, Roland Told, Attila Péntek and Judit Pongrácz. Personalized 3D Printed Hand Orthosis for Post Stroke Spasticity: Functional Evaluation and Sterilization Properties
		ID334. Peter Hillebrand, Péter Kupó, Viktória Tamás, Szilárd Rendeki, Péter Maróti and Luca Tóth. Virtual Reality in Patient Education and Training of Unilateral Visuospatial Neglect Syndrome
		ID365. Luca Toth, Attila Péntek, Éva Aradi, Alexandra Straub, Árpád Sipőcz and Péter Maróti. Leap Motion-Based Markerless Hand Kinematic Assessment in Acute Post Stroke Patients: A Feasibility Study
Room A 14:30-16:00	RWR02A - From Data to Action: Wearable Sensor Technology to Drive Neurorehabilitation (I) Chair: Megan K. O'Brien	ID015. Heesoo Kim, Bohyung Choi and Jae-Woong Jeong. Seamless Wearable Electrophysiological Sensors for Advanced Rehabilitation and Assistive Technologies
		ID154. Megan O'Brien, Francesco Lanotte, Katelyn Aragon, Anthony Chau and Arun Jayaraman. Stroke Recovery Toolkit: Leveraging wearables data for comprehensive patient assessment and precision intervention
		ID204. Peter B. Shull. Real-time Biofeedback from Wearable Sensors to Accelerate Adaptive Motor Learning
		ID248. Kaymie Shiozawa, Sukirat Bhullar, Teresa Baker, Sara Zoeller, Matthias Jammot, Franchino Porciuncula, Chih-Kang Chang, Andrew Chin, Nicole Eklund, Paul Sabin, Lou Awad, Terry Ellis and Conor Walsh. Sensor-informed soft robotic apparel assistance improves gait biomechanics in Parkinsonian freezing of gait
		ID403. Karen Nolan, Mohammed I. Huzien, Sharon Franco, Juan J. Ramirez, Courtney Craven, Julie M. Eng and Ghaith J. Androwis. Safety, Feasibility, and Preliminary Efficacy of a Pediatric Robotic Exoskeleton for Cerebral Palsy

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Room B 09:15-10:45	AICM05 - Motor and Cognitive Biomarkers in Neurorehabilitation: A Data-Driven Perspective Chairs: Marianna Semprini, Jorge Gomez Garcia	ID100. Indya Ceroni, Eleonora Guanziroli, Franco Molteni and Marianna Semprini. Impact of Float Exoskeleton on the Modularity of Anterior Reaching in Chronic Post-Stroke Subjects
		ID155. Jorge Andrés Gómez-García, Valerio Antonio Arcobelli, Serena Moscato and Diego Torricelli. A Multilayered Approach to Interoperability in Human Biomechanics: The path to EUROBENCH 2.0
		ID277. Mouhamed Zorkot, Luka Maksimovic, Daniela M.O. Utiyama, Andre T. Sugawara, Erica C. Leite, Rafael F. V. de Melo, Silvestro Micera, Solaiman Shokur, Linamara Batistella and Mohamed Bouri. Real-Time Gait Event Detection in Stroke and Spinal Cord Injury: Algorithmic Strategies, Sensor Placement, and Insights for Rehabilitation Applications
		ID317. Annemarie Laudanski, Pablo Romero Sorozábal, Sara Alvarez Herranz and Eduardo Rocon. Exploration of Multimodal Neuromechanical Biomarkers for Classifying GMFCS Severity and Tracking Longitudinal Motor Adaptation in Pediatric Cerebral Palsy Rehabilitation
Room B 11:15-12:45	AICM06 - Neuromuscular modeling from electrophysiological signals: from muscles to brain Chair: Andres Ubeda	ID001. Alvaro Costa Garcia and Akihiko Murai. Single Channel sEMG Conduction Velocity Estimation via MUAP Modelling and EMS
		ID054. Cristina Romero, Álvaro Costa, Carlos Alberto Jara and Andrés Úbeda. Linear stability in the modulation of HD-EMG spectral components during fatiguing isometric contractions
		ID066. Desirée I. Gracia, Chan-Shien Ho, Mario Ortiz, José L. Pons, Eduardo Iáñez and Jose M. Azorin. Case study on Isometric Ankle Control Assessed Through Electrosinography and Electromyography
Room B 14:30-16:00	AICM07. Computational Methods and Techniques in Neurorehabilitation Chair: Seungbum Koo	ID221. Junyo Boo and Seungbum Koo. Compensatory Muscle Activation and Resultant Ligamentous Loading Changes in PCFD: A Forward-Dynamics Simulation Study
		ID337. Annika Gram, David Zeugin, Loredana Catinari, Yann Perret, Andrea Serino, Sonia Crottaz-Herbette and Daniel Pérez-Marcos. Enhanced Detection of Extrapersonal Spatial Neglect Using Immersive Virtual Reality, Eye-Tracking, and Machine Learning
		ID364. Minh Chae and Sukyung Park. Ground Reaction Force Estimation from a Single Wrist IMU in Older Adults via Transfer Learning from Young Adult Gait
		ID391. Giada Parodi, Ludovica Viola, Arianna Li Noce, Laura Bandini, Giancarlo Mascetti, Cecilia De Vicariis and Vittorio Sanguineti. Human contribution to game-theoretic active-assisted reaching
		ID304. Yifei Yuan, Erick H. Nunez, Easter S. Suviseshamuthu, Sergei Adamovich, Ghaith J. Androwis and Xianlian Zhou. Sim-to-Real Deployment of a Deep Reinforcement Learning Controller for a Lower-Limb Rehabilitation Exoskeleton
		ID94. I-Han Cheng, Karan Malhotra, Peter W. Snow, Steve Taylor and Rui C.V. Loureiro. Predictive Neuromusculoskeletal Simulation of Posterior Tibialis Tendon Transfer for the Rehabilitation of Neurological Foot Drop
Room C 09:15-10:45	CMC06A - Advanced Methods and Techniques in Clinical Motor Control and Neurorehabilitation (I) Chair: Dong-Wook Rha	ID059. Cosima Prahm, Hannah Blaurock, Hakan Candar, Alexander Hönning, Leila Harhaus-Wähner and Michael Bressler. MyoOsu - Usability and Clinical Evaluation of a Music-Based EMG-controlled Game for Pre-Protsthetic Motor Training
		ID215. Wanyi Qing, Hantao Song, Fuqiang Ye, Legeng Lin, Yixun Wang, Mingxin Jiang, Honwah Wai, Waisang Poon, Weiwei Ye, Yanhuan Huang and Xiaoling Hu. Internet-of-Exoneuromusculoskeleton (Io-ENMS)-Assisted Self-help Post-stroke Gait Telerehabilitation with Continuous Progress Management
		ID289. Xiaoqian Min and Ke Li. A Bilateral Upper-Limb Exoskeleton Robot for Quantitative Mirror Rehabilitation
		ID402. Ghaith J. Androwis, Mohammed Huzien, Brett R. Gordon, Guang Yue and Steven Kirshblum. Upper Extremity Functional Outcomes Following Use of a Myoelectric Powered Orthosis in Chronic Spinal Cord Injury
Room C 11:15-12:45	CMC06B - Advanced Methods and Techniques in Clinical Motor Control and Neurorehabilitation (II) Chairs: Jooeun Ahn, Beom-Chan Lee	ID080. Jeonghoon Oh, Alexander Steele, Michelle Scheffler, Catherine Martin, Argyrios Stampas, Radha Korupolu, Amir Faraji, Phillip Horner and Dmitry Sayenko. Optimization of epidural spinal stimulation for upper limb recovery after complete cervical spinal cord injury
		ID085. Gaju Shin, Chihyeong Lee, Seoung Hoon Park, Beom-Chan Lee and Jooeun Ahn. Short-term Transfer of Propulsion-Targeted Treadmill Training to Overground Gait Symmetry and Weaker-Limb Ankle Joint Entropy in Older Adults
		ID370. Georgii Kurshakov, Andrea Maffia, Monica Parodi, Ludovica Viola, Tiziano Cosso, Giorgio Delzanno and Vittorio Sanguineti. Towards Outdoor Human Motion Capture for Neurorehabilitation Based on IMU and Satellite Positioning

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Room C 14:30-16:00	NIS11 - Emerging Neuroengineering Technologies for Personalized Neurorehabilitation and Diagnostics Chair: Minkyu Ahn	ID053. Hyejeong Han, Yerim Huh, Yun-Hee Kim and Minji Lee. Longitudinal EEG Markers of Motor Recovery After Non-Invasive Brain Stimulation in Stroke
		ID087. Minh Duc Hoang, Doeun Kim, Yunjong Lee and Sung-Min Park. A Miniatured Fully Wireless Wearable System for Closed-loop Neuromodulation in Mice
		ID123. Hyeong-Yeong Park, Se-Na Jang, Seong-Wook Kim and Ji-Hoon Jeong. Ensemble Attention-gating EEG Decoding Framework towards Semantic Neural Language Translation
		ID129. Seungmin Bang, Daeun Gwon, Seungjun Ryu, Hyundong Yoo and Minkyu Ahn. Altered State-Dependent Gamma-Band EEG Activity in Ruptured Cerebral Aneurysm Patients During Anesthesia Induction
		ID133. Sergey Bordovsky, Renata Murtazina, Sergey Andreev, Kseniya Shevtsova, Oksana Zinchenko and Vladimir Parfenov. Transcranial direct current stimulation in Parkinson's Disease
Room D 09:15-10:45	NIS06 - Spinal Cord Epidural Stimulation a tool for multisystem recovery following spinal cord injury Chair: Claudia Angeli	ID093. Claudia Angeli, Todd Linsenmeyer, Steven Kirshblum and Gail Forrest. Application of Spinal Cord Epidural Stimulation to Improve Bladder Function in Subacute Spinal Cord Injury: A Case Study
		ID234. Tommaso Lambresa, Daniele Emedoli, Filippo Gasperotti, Federico Colombo, Filippo Agnesi, Simone Romeni, Sandro Iannaccone, Luigi Albano, Pietro Mortini, Silvestro Micera and Solaiman Shokur. Longitudinal Stabilometric Assessment of Standing Recovery via eSCS and Rehabilitation in Motor Complete SCI
		ID246. Claudia Angeli, Steven Kirshblum and Gail Forrest. Preserved Voluntary Motor Control and Enhanced Intermuscular Coherence with Epidural Stimulation in an individual with SCI
		ID369. Mehmed Bugrahan Bayram, Manikandan Ravi, Manan Anjaria, Claudia Angeli, Susan Harkema and Gail F. Forrest. Augmenting stand activity-based training with dynamic exercises asks during spinal cord epidural stimulation: A Case Study
		ID404. Gail Forrest, Akhil Bheemreddy, Manikandan Ravi, Manan Anjaria, Susan Harkema and Claudia Angeli. Linking Neural Drive to the Transition to Independent Standing After Activity-Based Recovery Training with Epidural Stimulation in Cervical Spinal Cord Injury
		ID353. Hui Yu Koh, Xun Li, Carol Er, Megan Si En Lau, Pablo Cruz Gonzalez, Ananda Sidarta and Karen Sui Geok Chua. Exploring the Mental Health Dimensions in Stroke Rehabilitation
	NIS07 - Brain-Computer Interface, Robotic Devices, and Non-Invasive Brain-Muscular Stimulations for Rehabilitation of Chronic Stroke Chairs: Teodiano Bastos-Filho, Ana Cecilia Villa Parra	ID003. Teodiano Freire Bastos Filho and Ana Cecilia Villa-Parra. Evaluating the Combination of New Technologies for Rehabilitation of Chronic Stroke
		ID010. Mauro Callejas-Cuervo, Andrea Catherine Alarcon-Aldana, Rosy Paola Cárdenas-Sandoval, Mario Fernando Jimenez Hernandez and Sonia Rocio Moreno-Castelblanco. Architectural Proposal of an Optimised BCI-EEG Platform for Upper and Lower Limb Rehabilitation through Real-Time Visual Biofeedback
		ID117. Anacecilia Villa-Parra and Teodiano Freire Bastos Filho. Control of Robotic Rehabilitation Devices based on Emotiv EPOC: A Preliminary Study
		ID151. Aura Ximena Gonzalez Cely, Cornelius Leon Angerhoefer, Surjo Raphael Soekadar, Denis Delisle Rodriguez and Teodiano Freire Bastos-Filho. Cortical Activation During SMR-Based BCI Control of Morning Walk Gait Rehabilitation Robot
		ID139. Víctor Martínez-Cagigal, Eduardo Santamaria-Vázquez, Selene Moreno, Sergio Pérez-Velasco, Ana Cignal, Diego Marcos-Martínez, Juan C. Fraile, Javier Pérez-Turiel and Roberto Hornero. A novel BCI platform for post-stroke upper-limb neurorehabilitation: A feasibility study
Room D 14:30-16:00	NIS08 - Peripheral Stimulation for Movement Disorders Management: Mechanisms, Technologies and Clinical Translation Chair: Jose L. Pons	ID200. Ilham Rais and Tomohiko Igasaki. Toward taVNS for Stroke Rehabilitation: Multimodal ECG-EEG Analysis Reveals Distinct Response Phenotypes
		ID072. Shrinivas Patwardhan and Thomas Bulea. Closed-Loop Control of Functional Electrical Stimulation using Ultrasound: Preliminary Feasibility in Individuals with Cerebral Palsy
		ID213. Kei Nakayoshi and Takashi Watanabe. A Feasibility Study through Model Simulation of Closed-loop FES Control of Reaching Movement Using Real-time Generation of Target Trajectory
		ID270. Jumpei Kashiwakura, Patrick Alva, Paul Bentley and Dario Farina. VIPAS: A Wearable Neuromodulation Technology for Volition-Induced Paired Associative Stimulation to Improve Post-Stroke Motor Rehabilitation
		ID405. Vivian Mushahwar and Amin Arefadib. Comparison of the Capacity of three Spinal Cord Stimulation Modalities for Locomotor Control: Implications for Restoring Walking after Spinal Cord Injury

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Room E 09:15-10:45	CTIT03 - A Life-Course, Evidence-Driven Pathway from HealthTech Innovation to Adoption Chair: Rui Loureiro	ID207. Anne Canning, Michelle Poland, Steve Morgan, John Hunt, Kristen Clements, Andrew Capel, Myra Conway and Ben Coomber. Accelerating the Translation of Rehabilitation Research from the Laboratory Bench to Bedside: A Whole New Period of Discovery Research a UK Perspective From EMERGE
		ID264. Vicky Booth, Dan Clark, Pip Logan, Jacqueline Swift, Kimberley Messam, Anna Lion, Kate Frost, Hok Tung Ng and Adejoke Ogunsolu. Patient and Public Involvement and Engagement (PPIE) that Changes Decisions: Inclusion, Equity and Lived-Experience Co-Design
		ID283. Rui Loureiro, Alison Wildt, Emma Salt, Lal Russell, Manoj Sivan, Javvad Haider and Miriam Duffy. An Integrated Recovery Science Ecosystem: Research, Innovation and Translation at the National Rehabilitation Centre
Room E 11:15-12:45	CTIT04 - AI and Neurorehabilitation: the regulatory, ethics and education landscape Chair: María Amparo Grau Ruiz	ID108. Fiachra O'Brolchain. Neurorehabilitation, AI and Patient Autonomy
		ID202. Miriam Rafferty, Courtney Celian, Kristen Hohl and Steven Jackson. Integrating Rehabilitation Technologies into Clinical Practice: An Observational Case Study Applying the Designing for Accelerated Translation of Rehabilitation Technology Framework
		ID205. Bruna Franceschini and Txexu Ausín. Ethics and Rehabilitation Robotics: Shifting Care Contexts
		ID399. Arun Jayaraman. Practical Challenges in Integrating Robotic Systems into Existing Clinical Workflows and Reimbursement Models
		ID409. María Amparo Grau Ruiz. International Legal Foundations to Ensure the Protection of Human Rights when Applying AI to Rehabilitation
Room E 14:30-16:00	NIS12 - Brain-Computer Interface for Stroke Rehabilitation Based on Motor Learning Principles Chair: Juan Moreno, Floriana Pichiorri	ID198. Floriana Pichiorri, Emma Colamarino, Jlenia Toppi, Shiva Mohebban, Emanuela Rotondo, Josè Jesús Hernandez Gloria, Natalie Mrachacz-Kersting and Donatella Mattia. Brain and muscle interplay in lower limb motor recovery: insights for a comprehensive BCI approach for neurorehabilitation
		ID199. Jose Jesus Hernandez Gloria, Shreyansh Pathak, Xueyun Xu, Andres Jaramillo Gonzalez, Andrej Savic, Dario Farina and Natalie Mrachacz-Kersting. Influence of Motor Task Complexity on Movement-Related Cortical Potentials for Lower Limb Recovery in BCI-Based Rehabilitation
		ID237. Giovanni Corvini, Yoel Alonso-Cadierno, Ivan Ortiz-García, Natalie Mrachacz-Kersting, Adrià Colomé Figueras and Juan Moreno. Exploration of High-Density EMG Metrics for assessing Motor Adaptation in Robot-Assisted Ankle Training
		ID134. Diego Marcos-Martínez, Eduardo Santamaría-Vázquez, Víctor Martínez-Cagigal, Kyriaki Kostogiou, Gernot Müller-Putz and Roberto Hornero. Towards Continuous EEG-Based Muscle Activity Estimation via Subject-Adaptive BCIs

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