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Title	Authors	Author Affiliations	Date	Time
O.1.1 - Is the distal-to-proximal redistribution in joint mechanics a significant determinant of the metabolic cost of walking in older adults?	Lauri Stenroth¹, Salla Vasankari¹, Ellen Hellman¹, Jari Arokoski², Rami Korhonen¹	¹ University of Eastern Finland, ² Helsinki University Hospital and Helsinki University	Weds 24 June	13:00 - 14:30
O.1.2 - Effect of pushing activities on spine curvature	Catherine Disselhorst-Klug¹, Finn Jamros²	¹ RWTH Aachen University, ² Rehabilitation & Prevention Engineering, RWTH Aachen University, Germany	Weds 24 June	13:00 - 14:30
O.1.3 - Attenuated intersegmental cancellation compromises whole-body angular momentum control during perturbed locomotion	Maria-Elissavet Nikolaidou¹, Christos Theodorakis^{2,3}, Lida Mademli^{4,5}, Falk Mersmann³, Sebastian Bohm^{3,6}, Adamantios Arampatzis²	¹ National and Kapodistrian University of Athens, School of Physical Education and Sport Science, ² Humboldt University Berlin, ³ Humboldt-Universität zu Berlin, ⁴ School of Physical Education and Sport Science (Serres), Faculty of Physical Education and Sport Sci, ⁵ Aristotle University of Thessaloniki, ⁶ Humboldt-Universität zu Berlin, Germany	Weds 24 June	13:00 - 14:30
O.1.4 - Validity of markerless methods for assessing segmental trunk kinematics during seated reaching	Maria Del Rocio Hidalgo Mas¹, Chuang-Yuan Chiu², Eduardo Martinez-Valdes¹, Tom Nightingale¹, Zubair Ahmed¹, Shin-Yi Chloe Chiou¹	¹ University of Birmingham, ² Sheffield Hallam University	Weds 24 June	13:00 - 14:30
O.1.5 - Muscle deformation of the quadriceps femoris in individuals with knee osteoarthritis	Jun Umehara¹, Masashi Taniguchi², Masahide Yagi^{1,2}, Mazen Soufi^{3,4}, Yoshito Otake³, Yoshinobu Sato³, Ryusuke Nakai², Masashi Kobayashi⁵, Noriaki Ichihashi^{1,2}	¹ Kansai Medical University, ² Kyoto University, ³ Nara Institute of Science and Technology, ⁴ University of Miyazaki, ⁵ Kobayashi Orthopaedic Clinic	Weds 24 June	13:00 - 14:30
O.1.6 - Paraspinal muscle activation asymmetry during walking and running in adolescents with idiopathic scoliosis	Sara Ylijärvi¹, Mikko Mattila², Andrey Zhdanov², Jari Arokoski³, Juha-Pekka Kulmala⁴	¹ HUS, ² Helsinki University Hospital, ³ University of Helsinki, Finland., ⁴ New Children's Hospital	Weds 24 June	13:00 - 14:30
O.2.1 - Modeling regenerative peripheral nerve interfaces (RPNIS) to inform surgical practices and	Richard Weir^{1,2}, Amber Bollinger³	¹ University of Colorado Denver Anschutz Medical Campus, ² University of Colorado Denver, ³ University of Colorado Denver Anschutz	Weds 24 June	15:00 - 16:30



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surface electrode design for prosthesis control				
O.2.2 - Using Whole-System Error to Update Muscle Models in a Hybrid FES-Exoskeleton System	Skye Carlson¹, Cameron Lamack², Marcia O'malley³, Eric Schearer⁴	¹ Cleveland State University, ² Quinnipiac University, ³ Rice University, ⁴ The MetroHealth System	Weds 24 June	15:00 - 16:30
O.2.3 - To Decompose or Not To Decompose: The Necessity of EMG Decomposition into Motor Unit Spike Trains for Identifying Neural Drives	Tijn Logtens¹, Samuel Deslauriers-Gauthier², Simon Avrillon^{3,4}, Dario Farina⁵, Francois Hug¹	¹ Université Côte d'Azur, ² Université Côte d'Azur, Inria, ³ French Institute of Sport (INSEP), ⁴ Nantes Université, ⁵ Imperial College London	Weds 24 June	15:00 - 16:30
O.2.4 - Advanced interface for respiratory electromyography simulations	Andra Oltmann¹, Jan Graßhoff¹, Tobias Knopp¹, Philipp Rostalski¹	¹ Fraunhofer IMTE	Weds 24 June	15:00 - 16:30
O.2.5 - MyoLytica: A Modern, Modular Framework for Physiologically Constrained Single-Channel EMG Decomposition	Devon Rohlf¹	¹ Friedrich-Alexanders-Universität	Weds 24 June	15:00 - 16:30
O.2.6 - Automatic Detection of Tremor-Affected Muscles and Harmonic Components in Parkinsonian Needle EMG Signals	Alice Taborelli¹, Sofia Cupini¹, Mattia Tosi², Sara Rinaldo², Roberto Eleopra², Simona Ferrante¹	¹ Politecnico di Milano, ² IRCCS Istituto Neurologico Carlo Besta	Weds 24 June	15:00 - 16:30
O.3.1 - The Hand Adaptive Neuromuscular Dynamometer (HAND): one platform for measuring isometric hand forces in neuromuscular studies	Tiffany Hamstreet¹, Chiara Fantinato¹, Enrico Merlo², Silvia Muceli¹	¹ Chalmers University of Technology, ² OT Bioelettronica	Thurs 25 June	10:00 - 11:30
O.3.2 - Naturalistic movement evoked proprioceptive afference from the ankle joint modulates the corticospinal excitability	Vesa Onnia¹, Feiyue Li², Harri Piitulainen¹	¹ University of Jyväskylä, ² University of Jyväskylä	Thurs 25 June	10:00 - 11:30
O.3.3 - Modulation of corticospinal excitability to proprioceptive afference from the hand	Feiyue Li¹, Mia Ahinko¹, Vesa Onnia², Harri Piitulainen²	¹ University of Jyväskylä, ² University of Jyväskylä	Thurs 25 June	10:00 - 11:30



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O.3.4 - An End-to-end, Closed-loop Model of Myoelectric Control	Balint Hodossy¹, Dario Farina¹	¹ Imperial College London	Thurs 25 June	10:00 - 11:30
O.3.5 - Association between patellar tendon morphomechanical characteristics, quadriceps muscle architecture, and motor unit firing properties	Ragul Selvamoorthy¹, Michail Arvanitidis¹, Francesco Negro², Patricio Pincheira³, David Evans¹, Eduardo Martinez-Valdes¹	¹ University of Birmingham, ² Università degli Studi di Brescia, ³ The University of Southern Queensland	Thurs 25 June	10:00 - 11:30
O.3.6 - The biarticularity of the gastrocnemii muscles provides relevant mechanisms for managing drop-like gait perturbations in humans	Christos Theodorakis¹, Sebastian Bohm¹, Falk Mersmann¹, Adamantios Arampatzis¹	¹ Humboldt University Berlin	Thurs 25 June	10:00 - 11:30
O.3.7 - Balance-state modulation of the soleus H-reflex is altered by wearing vibrotactile shoe insoles in adults with typical plantar sensation	Wolbert Van Den Hoorn¹, Eugeenia Wen², Robert Lees², Jacob Thorstensen^{3,4}, Kylie Tucker¹, Anna Hatton^{1,2}	¹ The University of Queensland, ² The University of Queensland, School of Health and Rehabilitation Sciences, ³ Griffith University, ⁴ Bond University	Thurs 25 June	10:00 - 11:30
O.4.1 - Motor Unit Responses to Electrically Evoked Somatosensory Input: Which Factors Shape Excitability?	Yannick Finck¹, Demetris Soteropoulos², Alessandro Del Vecchio^{3,4}	¹ Friedrich-Alexander-University Erlangen-Nürnberg, ² Newcastle University, ³ Friedrich-Alexander Universität, Erlangen-Nürnberg, ⁴ Friedrich-Alexander Universität, Erlangen-Nürnberg	Thurs 25 June	10:00 - 11:30
O.4.2 - Association between quadriceps activation failure and motor units activation features in patients with end-stage knee osteoarthritis	Federico Temporiti¹, Davide De Leo², Corrado Cescon³, Paolo Ghirardi², Alessandro Gargano², Paola Adamo², Marco Barbero³, Roberto Gatti¹	¹ Humanitas University, ² IRCCS Humanitas Research Hospital, ³ University of Applied Sciences and Arts of Southern Switzerland	Thurs 25 June	10:00 - 11:30
O.4.3 - High-Density sEMG Assessment of Tracked Motor Units Across Contraction Intensities	Daniel Marcos Frutos¹, Kevin Méndez-Bouza², David Colomer-Poveda³, Amador García-Ramos⁴, Gonzalo Márquez²	¹ Faculty of Sport Sciences, University of Granada, Spain, ² Faculty of Sports Sciences and Physical Education, University of A Coruña, A Coruña, Spain, ³ Centre for Sport Studies, Rey Juan Carlos University, Madrid, Spain, ⁴ Faculty of Sport Sciences, University of Granada, Granada, Spain	Thurs 25 June	10:00 - 11:30



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O.4.4 - Clustering of surface HDEMG channels prior to decomposition increases the number of identified motor units	Ales Holobar^{1,2}, Jakob Škarabot³	¹ University of Maribor, ² University of Maribor, Faculty of Electrical Engineering and Computer Science, ³ Loughborough University	Thurs 25 June	10:00 - 11:30
O.4.5 - Motor unit discharge rates during maximal dynamic fatiguing contractions and recovery in human dorsiflexors	Daniel Basile^{1,2}, Charles Rice²	¹ University of Western Ontario, ² Western University	Thurs 25 June	10:00 - 11:30
O.4.6 - Altered Motoneuron Excitability in Parkinson's Disease and the Role of Dopaminergic Treatment	Parisa Alaei^{1,2}, Greg Pearcey³, Daryl Wile⁴, Ales Holobar⁵, Jennifer Jakobi⁶	¹ The University of British Columbia, ² University of British Columbia, ³ Memorial University of Newfoundland, ⁴ Centre for Chronic Disease Prevention and Management, University of British Columbia Okanagan, Kelow, ⁵ University of Maribor, ⁶ University of British Columbia Okanagan	Thurs 25 June	10:00 - 11:30
O.5.1 - A Robust Adaptive Pipeline for Intramuscular Fat Detection in MR Images Reveals Altered 2D and 3D Spatial Distribution Patterns in Cerebral Palsy	Zhenkai Zhao¹, Emma Hodson-Tole¹	¹ Manchester Metropolitan University	Thurs 25 June	12:30 - 14:00
O.5.2 - Correlating MU firing behavior from HDsEMG with MU-specific twitch profiles from ultrafast ultrasound	Marco Carbonaro¹, Robin Rohlén², Utku S. Yavuz¹, Dario Farina², Massimo Sartori¹	¹ University of Twente, ² Imperial College London	Thurs 25 June	12:30 - 14:00
O.5.3 - Anatomical variation in the three-dimensional shape of the human Achilles tendon in vivo	Afet Mustafaoglu^{1,2}, Bryce A. Killen³, Raad Khair^{2,4}, Yu Chou Lin², Alessia Funaro³, Ine Mylle³, Taija Finni⁴, Benedicte Vanwanseele^{5,6}	¹ Neuromuscular Research Center, University of Jyväskylä, ² Faculty of Sport and Health Sciences, Neuromuscular Research Center, University of Jyväskylä, Jyväskylä, ³ Human Movement Biomechanics Research Group, Department of Movement Sciences, KU Leuven, Leuven, Belg, ⁴ University of Jyväskylä, ⁵ Katholieke Universiteit Leuven, ⁶ 2Human Movement Biomechanics Research Group, Department of Movement Sciences, KU Leuven, Leuven, Bel	Thurs 25 June	12:30 - 14:00



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O.5.4 - Three-dimensional imaging of single motor unit activation volumes using HDsEMG and ultrafast ultrasound	Elena Cesti¹, Marco Carbonaro², Ilenia Tedone¹, Marta Boccardo¹, Silvia Seoni¹, Giacinto Luigi Cerone^{1,3}, Kristen Meiburger¹, Alberto Botter¹	¹ Politecnico di Torino, ² University of Twente, ³ LISiN - Politecnico di Torino	Thurs 25 June	12:30 - 14:00
O.5.5 - Muscle unit mapping during stimulated contractions in the mouse triceps surae using high-frame-rate ultrasound imaging	Salomé Vignat¹, Sébastien Salles², Veronique Marchand-Pauvert³, Guillaume Caron⁴, Quentin Grimal⁵	¹ LIB, sorbonne université, ² UNIVERSITÉ DE BORDEAUX, CNRS, Bordeaux, France, ³ INSERM, ⁴ Institut des Neurosciences Paris Saint-Pères, UNIVERSITÉ PARIS CITÉ, CNRS, Paris, France, ⁵ Sorbonne Université	Thurs 25 June	12:30 - 14:00
O.5.6 - The Use of Muscle Ultrasound in Neuromuscular Disease: A Systematic Review of Clinical Application and Computational Analysis	Chloe Boden-Moore¹, Chuin Hong Yap¹, Adrian Davison¹, Moi Hoon Yap¹, Emma Hodson-Tole¹	¹ Manchester Metropolitan University	Thurs 25 June	12:30 - 14:00
O.6.1 - Afferent blockade does not abolish late MEP facilitation, revealing central non-corticospinal pathways	Jonathan Shemmell¹, Dylan Carter²	¹ University of Wollongong, ² Imperial College London	Thurs 25 June	16:05 - 17:35
O.6.2 - Variation of Corticospinal Excitability During Kinesthetic Illusion Induced by Musculotendinous Vibration	Lydiane Lauzier¹, Marie-Pier Perron², Laurence Munger³, Émilie Bouchard¹, Jacques Abboud⁴, Francois Nougrou⁵, Louis-David Beaulieu⁶	¹ UQAC, ² University of Quebec in Chicoutimi, ³ Université du Québec à Chicoutimi, UQAC, ⁴ Université du Québec à Trois-Rivières, ⁵ University of Quebec in Trois-Rivieres, ⁶ Université du Québec à Chicoutimi	Thurs 25 June	16:05 - 17:35
O.6.3 - H-reflex and M-wave recruitment curves shift during and after complete blood flow occlusion	Amin Chetouani¹, Basílio Gonçalves², Arnold Baca³, Janne Avela⁴	¹ University of Vienna & University of Jyväskylä, ² University of Vienna, Neuromechanics Research Group, Vienna, Austria, ³ University of Vienna, ⁴ University of Jyväskylä	Thurs 25 June	16:05 - 17:35
O.6.4 - A revised motor unit number estimate detects presymptomatic motor neuron loss in amyotrophic lateral sclerosis	James Bashford¹, Judith Bilgorai¹	¹ King's College London	Thurs 25 June	16:05 - 17:35



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O.6.5 - Neural control of isometric calf muscle contractions in typically developing children and children with cerebral palsy	Andrea Sgarzi ¹ , Agnese Grison ² , Dario Farina ³ , Bart Bolsterlee ⁴ , Nigel Lovell ⁵ , Luca Modenese ¹	¹ University of New South Wales, ² Imperial College London, ³ University Medical Center Goettingen, ⁴ Neuroscience Research Australia (NeuRA), ⁵ University of New South Wales, Kensington	Thurs 25 June	16:05 - 17:35
O.6.6 - Bilateral activation failure of ankle dorsiflexors in patients with hip osteoarthritis undergoing total hip arthroplasty	Federico Temporiti ¹ , Paola Adamo ² , Francesco Baldracco ³ , Andrea Tarasconi ² , Davide De Leo ² , Arianna Colpani ² , Nicola Maffiuletti ⁴ , Roberto Gatti ¹	¹ Humanitas University, ² IRCCS Humanitas Research Hospital, ³ IRCCS Humanitas Research Hospital, ⁴ Schulthess Clinic	Thurs 25 June	16:05 - 17:35
O.6.7 - The immediate effect of induced pain in the neuromuscular control of the quadriceps HD-sEMG and force in people with patellofemoral pain	Max Roizman ^{1,2} , Maria Isabel Orselli ³ , Jane S. S. P Ferreira ² , Ronaldo H. Cruvinel-Júnior ² , Fábio M. Azevedo ⁴ , Eneida Yuri Suda ⁵ , Isabel C. N Sacco ²	¹ USP - University of São Paulo, ² School of Medicine, University of São Paulo, São Paulo, Brazil, ³ Israeli College of Health Sciences Albert Einstein, São Paulo, Brazil, ⁴ Physical Therapy Department, School of Science and Technology, São Paulo State University (UNESP), ⁵ Universidade Cidade de São Paulo (UNICID), Master's and Doctoral Program in Physical Therapy	Thurs 25 June	16:05 - 17:35
O.7.1 - Compensatory Neuromuscular Reorganization with Aging Revealed Through Muscle Synergies in Voluntary Upright Reaching	Imma Ceriello ¹ , Marco Ghislieri ² , Valentina Camomilla ¹ , Andrea Macaluso ¹ , Riccardo Borzuola ³	¹ University of Rome Foro Italico, ² Politecnico di Torino, ³ Università di Roma "Foro Italico"	Thurs 25 June	16:05 - 17:35
O.7.2 - Intermuscular coherence at the ankle joint during maximal voluntary contractions	Jonah Dekker ¹ , David Gabriel ² , Anita Christie ^{1,3}	¹ University of Western Ontario, ² Brock University, ³ The University of Western Ontario	Thurs 25 June	16:05 - 17:35
O.7.3 - Effects of running-induced fatigue on lower limb muscle activity and muscle synergies among male and female endurance runners	Cinthuja Pathmanathan ¹ , Leonardo Gizzi ² , Deborah Falla ³ , Caroline Paquette ⁴ , Julie N Côté ⁵	¹ McGill University, ² Department of Biomechatronic Systems, Fraunhofer Institute for Manufacturing Engineering and Automat, ³ University of Birmingham, ⁴ 1Department of Kinesiology and Physical Education, McGill University, Montreal, Quebec, Canada, ⁵ School of Human Kinetics, University of Ottawa, Ottawa, Ontario, Canada	Thurs 25 June	16:05 - 17:35



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O.7.4 - Knee Loading Time-Series Clusters and Muscle Activation Synergies in Gait: Direct Kinematics and Static Optimization	Harald Penasso¹, Sebastian Durstberger¹, Peter Putz¹, Klaus Widhalm¹	¹ University of Applied Sciences Campus Vienna	Thurs 25 June	16:05 - 17:35
O.7.5 - How aging reshapes the neuromechanical organization of human running	Sina Salehpour¹, Mario Nuñez-Lisboa², Marine Moulin¹, Alessandro Eburnea³, Michael Trivilini¹, Raphael Mesquita¹, Arthur Dewolf¹	¹ Laboratory of Physiology and Biomechanics of Human Locomotion, IoNs, UCLouvain, Belgium, ² Exercise Science Laboratory, School of Kinesiology, Faculty of Medicine, Universidad Finis Terrae, ³ Department of Public Health, Experimental Medicine and Forensic Sciences, University of Pavia, Italy	Thurs 25 June	16:05 - 17:35
O.7.6 - Reorganisation of Shoulder Brain–Muscle Networks During Dynamic Movement in Acute Experimental Pain	Giacomo Nardese¹, Tjeerd Boonstra², Paul Hodges³, Wolbert Van Den Hoorn³, Arthur Fabre¹, Simon Summers⁴, Johan Van Der Meer⁵, Eric Su⁶, Graham Kerr¹	¹ Queensland University of Technology, ² Maastricht University, ³ The University of Queensland, ⁴ School of Biomedical Sciences, Faculty of Health, Queensland University of Technology, Brisbane, QLD, ⁵ School of Biomedical Sciences, Faculty of Health, Queensland University of Technology, Brisbane, AUS, ⁶ School of Exercise and Nutrition Sciences, Faculty of Health, Queensland University of Technology	Thurs 25 June	16:05 - 17:35
O.8.1 - Motor Unit–Based EEG Component Extraction Enhances Corticomuscular Coherence Analysis	Nina Murks¹, Ciaran Mcgeady², Ales Holobar¹, Dario Farina²	¹ University of Maribor, ² Imperial College London	Fri 26 June	10:00 - 11:30
O.8.2 - Kv2.1 Regulates Excitability and Repetitive Firing in Adult Spinal Motoneurons	Andrew Deutsch¹, Morgan Highlander¹, Ibrahim Abdulhalim¹, Kalin Gerber¹, Bradley Lehoty¹, Teresa Garrett¹, Sherif Elbasiouny¹	¹ Wright State University	Fri 26 June	10:00 - 11:30
O.8.3 - Higher-order correlation across motor unit spike trains demonstrates largely shared synaptic inputs to spinal motoneurons	Hélio Cabral¹, J Greig Inglis², Silvia Rio², Francesco Negro²	¹ Federal University of Rio de Janeiro, ² Università degli Studi di Brescia	Fri 26 June	10:00 - 11:30



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O.8.4 - Impaired Motor-Unit Derecruitment Reveals Distinct Spinal Phenotypes After Cervical Spinal Cord Injury: Evidence from Surface and Intramuscular EMG	Devon Rohlf ¹	¹ Friedrich-Alexanders-Universität	Fri 26 June	10:00 - 11:30
O.8.5 - High-frequency common synaptic inputs to alpha motor neurons are modulated with force gradation	Nijia Hu ¹ , Hélio Cabral ² , J Greig Inglis ³ , Francesco Negro ³	¹ University of Brescia, ² Federal University of Rio de Janeiro, ³ Università degli Studi di Brescia	Fri 26 June	10:00 - 11:30
O.8.6 - Neuromodulation gates persistent sodium currents to enable force-enhancing doublet firing in motoneurons	Robin Rohlén ¹ , David Bennett ² , Monica Gorassini ² , Dario Farina ¹	¹ Imperial College London, ² University of Alberta	Fri 26 June	10:00 - 11:30
O.9.1 - Action observation and motor imagery increase quadriceps voluntary activation in patients with end-stage knee osteoarthritis	Roberto Gatti ^{1,2} , Paola Adamo ^{2,3} , Francesca Murer ² , Luca Cantaluppi ² , Alessandro Valsecchi ² , Isabella Barajon ^{4,5} , Nicola Maffiuletti ⁶ , Federico Temporiti ⁵	¹ Humanitas Clinical and Research Center ; Humanitas University, ² Physiotherapy Unit, IRCCS Humanitas Research Hospital, Rozzano, Milan, Italy, ³ IRCCS Humanitas Research Hospital, ⁴ Department of Biomedical Sciences, Humanitas University, Pieve Emanuele, Milan, Italy, ⁵ Humanitas University, ⁶ Schulthess Clinic	Fri 26 June	13:00 - 14:30
O.9.2 - Estimating medial knee contact force during walking using a single video camera	Jere Lavikainen ¹ , Hunmin Kim ² , David Pagnon ³ , Lauri Stenroth ¹	¹ University of Eastern Finland, ² Korea Institute of Sport Science, ³ ForceTeck Ltd.	Fri 26 June	13:00 - 14:30
O.9.3 - Lumbar muscle perfusion-based responses to exercise may predict rehabilitation outcomes in people with low disability presenting with chronic low back pain	Frederique Dupuis ¹ , David Berry ² , Samuel Ward ² , Kamshad Raiszadeh ³ , Bahar Shahidi ²	¹ University of California in San Diego, ² University of California in San Diego, Department of Orthopaedic Surgery, ³ Spine Zone Medical Fitness	Fri 26 June	13:00 - 14:30
O.9.4 - Surface HDEMG and Afterhyperpolarisation as Biomarker in Stroke Rehabilitation	Tanja Botić ¹ , Mónica Rojas Martínez ² , Marta Borrás ² , Ferran Esquinas Dominguez ² , Miguel Ángel Mañanas ² , Mark	¹ University of Maribor, ² Universitat Politècnica de Catalunya, ³ Institut Guttmann Neurorehabilitation Hospital	Fri 26 June	13:00 - 14:30



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	Wright³, Hatice Kumru³, Ales Holobar¹			
O.9.5 - Neuromuscular alterations associated with elevated CAF levels in healthy sedentary older women: insights from motor unit behaviour and functional performance	Riccardo Magris¹, Matteo Bozzato¹, Gioi Spinello¹, Alessandro Sampieri¹, Federica Gonnelli¹, Vittorio Giorgio Della Costa¹, Marta Canato¹, Giacomo Valli², Marco Narici³, Giovanni Martino⁴, Giuseppe De Vito⁴	¹ University of Padua, ² Università degli Studi di Brescia, ³ University of Padova Italy, ⁴ University of Padova	Fri 26 June	13:00 - 14:30
O.9.6 - Design and validation of a HD-sEMG and US-transparent electrode grid functionalized with an adhesive interface replacing conductive gel and foam	Giacinto Luigi Cerone^{1,2}, Taian Martins^{1,3}, Marco Gazzoni^{1,3}, Alberto Botter^{2,3}	¹ LISiN - Politecnico di Torino, ² LISiN - Politecnico di Torino & ReC Bioengineering Laboratories, ³ Politecnico di Torino	Fri 26 June	13:00 - 14:30
O.9.7 - Electrotactile stimulation strategies in closed-loop abstract myoelectric control	Felix Jarto¹, Sigrid Dupan¹	¹ University College Dublin	Fri 26 June	13:00 - 14:30
O.10.1 - Rapid force production declines with motor unit recruitment rate and maximal discharge rate in healthy ageing and type 2 diabetes	Edoardo Lecce¹, Fiorella Martire¹, Alessandro Scotto Di Palumbo¹, Giuseppe Greco², Stefano Balducci³, Jonida Haxhi⁴, Giuseppe Pugliese⁴, Massimo Sacchetti¹, Ilenia Bazzucchi¹	¹ University of Rome Foro Italico, ² University of Rom Foro Italico, ³ Sant'Andrea Medical Hospital, ⁴ Sapienza University of Rome	Saturday 27 June	11:00 - 12:30
O.10.2 - Biceps femoris long-head motor unit discharge rates and recruitment thresholds vary across 9 weeks of eccentric training	Max Andrews¹, Eduardo Martinez-Valdes², Glen Lichtwark³, Patricio Pincheira⁴	¹ The University of Queensland, ² University of Birmingham, ³ Queensland University of Technology, ⁴ The University of Southern Queensland	Saturday 27 June	11:00 - 12:30
O.10.3 - Spinal Mechanisms in Post-Activation Potentiation: Facilitation of Presynaptic Inhibition Contrasts H-Reflex Amplitude Reduction	Miloš Kalc¹, Ales Holobar², Matej Kramberger², Nina Murks², Jakob Škarabot³	¹ Science and Research Centre Koper, ² University of Maribor, ³ Loughborough University	Saturday 27 June	11:00 - 12:30



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O.10.4 - Head rotation affects contralateral motor-evoked potential amplitude in biceps brachii but the modulation is not specific to late phases of the motor-evoked potential	Simon Walker ¹ , Luca Ruggiero ^{2,3}	¹ University of Jyväskylä, ² University of Padua, ³ University of Konstanz	Saturday 27 June	11:00 - 12:30
O.10.5 - Motor units' behaviour after induced non-functional overreaching period	Marco Gatti ¹ , Marta Boccardo ² , Letizia Giusti ³ , Marco Carbonaro ⁴ , Marta Colosio ⁵ , Simone Villanova ⁶ , Alberto Botter ⁷ , Simone Porcelli ¹	¹ University of Pavia, ² Polytechnic of Turin, ³ Department of Molecular Medicine, University of Pavia, Pavia, Italy, ⁴ Department of Biomechanical Engineering, University of Twente, Enschede, The Netherlands, ⁵ Department of Medicine, Division of Geriatrics & Gerontology, University of Wisconsin – Madison, Mad, ⁶ Department of Movement, Human and Health Sciences, University of Rome 'Foro Italico', Rome, Italy, ⁷ Politecnico di Torino	Saturday 27 June	11:00 - 12:30
O.10.6 - The effects of short-term resistance exercise training on the motor unit firing rates of the first dorsal interosseus	Andrew Veith ¹ , Trent Herda ¹ , Keifer Bass ¹	¹ University of Kansas	Saturday 27 June	11:00 - 12:30
O.11.1 - Locomotor phenotypes: a multivariate analysis of the maturation of locomotor control on irregular surfaces	Silvère De Freitas ¹ , Fabien Dal Maso ¹ , Yosra Cherni ^{1,2}	¹ University of Montreal, ² Université de Montréal	Saturday 27 June	11:00 - 12:30
O.11.2 - Sex Differences in Force Complexity During Low-Intensity Isometric Contractions: The Role of Entropy Parameter Selection	Shamim Noroozi ¹ , Eric Smith ² , Francesco Negro ³ , Jennifer Jakobi ⁴	¹ School of Engineering, University of British Columbia Okanagan, ² University of British Columbia, ³ Università degli Studi di Brescia, ⁴ University of British Columbia Okanagan	Saturday 27 June	11:00 - 12:30
O.11.3 - Neurofeedback Training on Motor Cancellation Enhances Peripheral but not Cortical Beta-Band Oscillations	Emanuele Abbagnano ¹ , Alejandro Pascual Valdunciel ² , Jaime Ibanez ¹ , Dario Farina ^{1,3}	¹ Imperial College London, ² University of Zaragoza, ³ University Medical Center Goettingen	Saturday 27 June	11:00 - 12:30
O.11.4 - Modulation of sense of effort during plantarflexion contractions by	Tushar Sharma ¹ , Ryan Weller ² , Jayne Kalmar ² , Leah Bent ¹	¹ University of Guelph, ² Wilfrid Laurier University	Saturday 27 June	11:00 - 12:30



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cutaneous stimulation of the foot sole				
O.11.5 - How preparatory and motor neural commands shape fast motor output?	Simon Avrillon ¹ , Dario Farina ² , Stuart Baker ³	¹ Nantes Université, ² Imperial College London, ³ Newcastle University	Saturday 27 June	11:00 - 12:30
O.11.6 - Integrating motor control and muscle energetics: A novel experimental framework for studying muscle fatigue	Thomas Klotz ¹ , Justus Marquetand ² , Franziska Bubeck ¹ , Silvia Muceli ³ , Jeroen Jeneson ⁴ , Melissa Hooijmans ⁵ , Jana Disch ¹	¹ University of Stuttgart, ² University of Tübingen, ³ Chalmers University of Technology, ⁴ University Medical Center Utrecht, ⁵ University medical center Amsterdam/ Vrije Universiteit Amsterdam	Saturday 27 June	11:00 - 12:30
O.12.1 - Task Dependency of Vastii Motor Unit Firing Responses to Fatigue During Single- and Multi-Joint Actions	Macarena Soldan ¹ , Ragul Selvamoorthy ¹ , Francesco Negro ² , Eduardo Martinez-Valdes ¹	¹ University of Birmingham, ² Università degli Studi di Brescia	Saturday 27 June	14:00 - 15:30
O.12.2 - Optimising recovery parameters in a motor unit-based model of muscle fatigue	Ryan Foley ¹ , Jim Potvin ² , Andrew Fuglevand ³ , Nicholas La Delfa ¹	¹ Ontario Tech University, ² McMaster University, ³ University of Arizona, College of Medicine	Saturday 27 June	14:00 - 15:30
O.12.3 - The effect of resistance training on muscle fatigue-induced changes in cortico-reticulospinal excitability	Jun Zhou ¹ , Juha Ahtiainen ² , Jarmo Piirainen ² , Dawson Kidgell ³ , Janne Avela ² , Simon Walker ²	¹ University of Jyväskylä, ² University of Jyväskylä, ³ Monash University	Saturday 27 June	14:00 - 15:30
O.12.4 - What velocity does not tell you: effects of different velocity loss thresholds on rate of torque development and central/peripheral fatigability	Ludovico Grossio ¹ , Francesco Salvaggio ¹ , Tommaso Berbenni ¹ , Pierre Samozino ² , Alberto Rainoldi ¹ , Gennaro Boccia ¹	¹ University of Turin, ² Université Savoie Mont Blanc	Saturday 27 June	14:00 - 15:30
O.12.5 - Muscle fatigue weakens corticospinal coupling between cortex and ankle muscles	Junru Chen ¹ , Toni Mujunen ^{2,3} , Harri Piitulainen ¹	¹ University of Jyväskylä, ² Aalborg University, ³ Toni Mujunen	Saturday 27 June	14:00 - 15:30
O.12.6 - Impaired Brain Energy Metabolism and Corticospinal Function Associate with Exaggerated	Gemma Brownbill ¹ , Jeanne Dekerle ² , Mara Cercignani ³ , James Stone ⁴	¹ Loughborough University, ² University of Brighton, ³ Cardiff University, ⁴ Brighton and Sussex Medical School	Saturday 27 June	14:00 - 15:30



ISEK 2026 ORAL LISTINGS

Fatigue Perception in Multiple Sclerosis				
O.12.7 - Intermittent activation in synergistic muscles during long-duration low-force contractions. Is there more than a simple load sharing among those muscles?	Gennaro Boccia¹, Alberto Rainoldi¹	¹ University of Turin	Saturday 27 June	14:00 - 15:30
O.13.1 - Estimating deltoid common drive from spatially filtered high-density EMG: comparison against a motor-unit approach	Wolbert Van Den Hoorn^{1,2}, Kylie Tucker¹, Kenneth Cutbush¹, Francois Hug³	¹ The University of Queensland, ² Queensland University of Technology, ³ Université Côte d'Azur	Saturday 27 June	14:00 - 15:30
O.13.2 - Reciprocal inhibition reflex excitability in transtibial amputees with an agonist-antagonist myoneural interface (AMI)	Luis Angel Pardo Sanches¹, Viktoria Witowski¹, Magnus Kalff¹, Frodo Muijzer², Jennifer Ernst¹, Utku Yavuz³	¹ Hannover Medical School, Department of Trauma Surgery, Hannover, Germany, ² The University of Twente, Biomedical Signals and Systems, Enschede, The Netherlands, ³ The University of Twente	Saturday 27 June	14:00 - 15:30
O.13.3 - Eccentric-Overload Resistance Training Preferentially Modifies High-Threshold Motor Unit Discharge Behaviour	Mohammadhossein Ghasemi¹, Clarissa Brusco², Giuseppe De Vito², Martino Franchi², Giovanni Martino²	¹ Department of Biomedical Sciences, University of Padova, ² University of Padova	Saturday 27 June	14:00 - 15:30
O.13.4 - Subthalamic nucleus Deep Brain Stimulation partially entrains motor unit firing times at clinical settings.	Jérémy Liegey¹, Ben O'Callaghan¹, Richard Walsh², Madeleine Lowery¹	¹ University College Dublin, ² Mater Misericordiae University Hospital	Saturday 27 June	14:00 - 15:30
O.13.5 - Parallel Threshold-based Segmentation on Motor Unit Spike Trains in HDsEMG Decomposition, optimised by Differential Evolution	Leon Kutos¹, Matej Kramberger¹, Miloš Kalc², Dario Farina³, Ales Holobar¹	¹ University of Maribor, ² Science and Research Centre Koper, ³ Imperial College London	Saturday 27 June	14:00 - 15:30
O.13.6 - Differences in biceps brachii motor unit discharge rate across tasks and intensities are compartment-specific	Rafael Fujita¹, Simon Avrillon², Kaitlyn Sutton¹, Riley Pike¹, Emma Mitchell¹, Jakob Škarabot³, Gregory Pearcey¹	¹ School of Human Kinetics and Recreation, Memorial University of Newfoundland, St. John's, Canada, ² Nantes Université, ³ School of Sport, Exercise and Health Sciences, Loughborough University, Loughborough, United Kingdom	Saturday 27 June	14:00 - 15:30