INTERNATIONAL SOCIETY OF POSTURE & GAIT RESEARCH

ISPGR 2025

PROGRAM SCHEDULE

ISPGR WORLD CONGRESS, MAASTRICHT, NLD

29 JUNE - 3 JULY, 2025

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ISPGR WORLD CONGRESS PROGRAM

DATE	START	END	LOCATION	SESSION
29 JUNE				
29-JUN	ALL DAY @ VARIOUS LOCATIONS			HALF DAY WORKSHOPS (PRE-REGISTRATION ONLY)
29-JUN-	4:30 PM	5:00 PM	AUDITORIUM 2	OPENING CEREMONY KIM DELBAERE, ISPGR PRESIDENT, CATERINA ROSANO, MELVYN ROERDINK, CONGRESS CO-CHAIRS
29-JUN-	5:00 PM	6:00 PM	AUDITORIUM 2	**OPENING KEYNOTE: BAS BLOEM, RADBOUDUMC** GAIT DISTURBANCES IN PERSONS WITH PARKINSON'S: A JOURNEY ACROSS THE ENTIRE DISEASE SPECTRUM CHAIR: ALICE NIEUWBOER, KU LEUVEN
29-JUN-	6:00 PM	7:30 PM	PRAETORIUM	OPENING RECEPTION
30 JUNE				
30-JUN-	08:30 AM	09:30 AM	AUDITORIUM 2	**KEYNOTE 2: FABRISIA AMBROSIO, HARVARD UNIVERSITY** FROM MOLECULES TO MOVEMENT: MAPPING BIOCHEMICAL SIGNATURES OF AGING AND EXERCISE CHAIR: CATERINA ROSANO, UNIVERSITY OF PITTSBURGH
30-JUN-	09:30 AM	10:00 AM	AUDITORIUM 2	**HONOURARY MEMBER PRESENTATION**
30-JUN-	10:00 AM	12:30 PM	EXPO FOYER	POSTER SESSION 1 (REFRESHMENTS 10:00 AM - 10:30 AM)
30-JUN-	12:30 PM	01:30 PM	EXPO FOYER	LUNCH
30-JUN-	01:30 PM	03:00 PM	AUDITORIUM 2	**S.01: NOVEL TECHNOLOGIES FOR ENHANCING REHABILITATION IN PARKINSON'S DISEASE** CHAIRS: ROSIE MORRIS, NORTHUMBRIA UNIVERSITY & MORAN GILAT, KU LEUVEN S.01.1 - NEW TECHNOLOGICAL APPROACHES - FEASIBILITY AND EFFECTS IN ADVANCED DISEASE ALICE NIEUWBOER, KU LEUVEN S.01.2 - INNOVATIVE TECHNOLOGY TO IMPROVE GAIT OUTCOMES IN PARKINSON DISEASE TERRY ELLIS, BOSTON UNIVERSITY S.01.3 - A TACTILE CUEING DEVICE TO IMPROVE GAIT AUTOMATICITY IN PARKINSON'S DISEASE: MARTINA MANCINI, OREGON HEALTH & SCIENCE UNIVERSITY S.01.4 - NOVEL TECHNOLOGIES FOR ENHANCING REHABILITATION IN PARKINSON'S DISEASE: A CO-DESIGNED APP FOR FALLS REPORTING IN PEOPLE WITH PARKINSON'S ROSIE MORRIS, NORTHUMBRIA UNIVERSITY
30-JUN-	01:30 PM	03:00 PM	0.5 PARIS	**S.02: BRIDGING ROBOTS AND HUMANS IN BALANCE CONTROL** CHAIR: NOEL KEIJSERS, SINT MAARTENSKLINIEK S.02.1 - DATA-DRIVEN APPROACHES TO ENHANCE STABILITY WITH WEARABLE ROBOTS DURING PERTURBED WALKING AARON YOUNG, GEORGIA INSTITUTE OF TECHNOLOGY S.02.2 - ADVANCING BALANCE ASSESSMENT: TECHNOLOGY'S ROLE IN EVALUATING DYNAMIC TASKS LIKE CYCLING NURIA PENA-PEREZ, RWTH AACHEN S.02.3 - ADAPTATION OF CENTER OF MASS KINEMATICS AND EMG ACTIVITY TO EXOSKELETON BALANCE SUPPORT EDWIN VAN ASSELDONK, UNIVERSITY OF TWENTE S.02.4 - EXOSKELETON MOTOR LEARNING AND MOTOR CONTROL IN INDIVIDUALS WITH COMPLETE SPINAL CORD INJURY NOEL KEIJSERS, SINT MAARTENSKLINIEK
30-JUN-	01:30 PM	03:00 PM	0.4 BRUSSELS	**S.03: REACHING CONSENSUS ON PRIORITIES FOR AI APPLICATIONS FOR FALL RISK MANAGEMENT** CHAIRS: KIMBERLEY VAN SCHOOTEN, UNIVERSITY OF NEW SOUTH WALES & PIERPAOLO PALUMBO, UNIVERSITY OF BOLOGNA S.03.1 – CONOR WALL

				S.03.2 - Wearable inertial sensors for fall risk assessment in community-living individuals: Preliminary findings and insights from a systematic review and individual participant data meta-analysis Paola Di Florio, University of Bologna S.03.3 - Towards AI-driven Personalization in Home-Based Cognitive-Motor Exergame Training for Older Adults: a Conceptual Framework Asli Karamanlargil, ETH Zurich
30-JUN-	01:30 PM	03:00 PM	0.2 Berlin + 0.3 Copenhagen	**S.04: I am my environment: Pushing the theories of adaptive locomotor control** Chair: Anne-Hélène Olivier, University of Rennes S.04.1 - Stepping intentionally: The goal-directedness of walking Jonathan Dingwell, Pennsylvania State University S.04.2 - An ecological perspective on the interplay between the observer and the environment in controlling and adapting locomotion Michael Cinelli, Wilfrid Laurier University S.04.3 - Adaptive locomotor control in populated environments Anne-Hélène Olivier, University of Rennes S.04.4 - Conceptualizing Visuo-locomotor adaptive control Bradford McFadyen, Université Laval-Cirris
30-JUN-	03:00 PM	03:30 PM	Expo Foyer	Coffee Break
30-JUN-	03:30 PM	05:30 PM	Auditorium 2	**O.01: Coordination of posture and gait in PD** Chair: Kara Patterson, KITE-Research Institute O.01.1 - Limb coordination in Parkinson's disease patients with freezing of gait Marco Romanato, Sorbonne Université O.01.2 - Characterising anticipatory postural adjustments in turning: A comparison between healthy older adults and people with Parkinson's disease Yuri Russo, University of Exeter O.01.3 - Investigating foot placement control as a mechanism of gait instability in Parkinson's disease Charlotte Lang, ETH Zurich O.01.4 - Effect of intensity personalization on wearable systems for real-time freezing of gait prevention in Parkinson's disease Ayham Alakhras, University of Waterloo O.01.5 - Enhancing fall risk assessment in Parkinson's disease using AI-driven contextual gait analysis Alan Godfrey, Northumbria University O.01.6 - Discordance between balance ability and perception predicts falls in Parkinson's disease: A coordinated analysis and replication Jason Longhurst, Saint Louis University O.01.7 - Diurnal variations in gait quality in isolated REM sleep behaviour disorder Hajr Hameed, University of Waterloo O.01.8 - From increased heart rate to stride variability: How short physical exertion can influence free walking in Cerebellar Ataxia Jens Seemann, Hertie Institute for Clinical Brain Research
30-JUN-	03:30 PM	05:30 PM	0.5 Paris	**O.02: Aging and the brain** Chair: Paulo Pelicioni, University of New South Wales O.02.1 - Association between mobility function and aperiodic EEG components in older adults Charlotte Devol, University of Florida O.02.2 - Interstride spectral power in theta band EEG is correlated with mediolateral excursion in both older and younger individuals walking at a range of speeds Jacob Salminen, University of Florida O.02.3 - Age-related reduction in the contribution of the supplementary motor area (SMA) to the perturbation-evoked balance N1 during standing Janna Protzak, Emory University & Georgia Institute of Technology

				O.02.4 - Effect of perceived postural threat on prefrontal cortex activity during walking in older people with and without fear of falling Jasmine Menant, Neuroscience Research Australia; University of New South Wales O.02.5 - Uneven terrain walking is associated with brain white matter characteristics in young and older adults with varying physical function Seda Tasci, University of Florida O.02.6 - Gait reserve and variability as predictors of dementia markers Jenna Yentes, Texas A&M University O.02.7 - The dose-response relationship between the electrical field of tDCS targeting left dlPFC and dual-task gait performance in older adults Junhong Zhou, Harvard Medical School O.02.8 - Reactive balance control may be regulated by different neural networks in older adults with mild cognitive impairment compared to cognitively intact adults: A resting state fMRI analysis Tanvi Bhatt, University of Illinois Chicago
30-JUN-	03:30 PM	05:30 PM	0.4 Brussels	**O.03: Falls: mechanism prediction and intervention**
				Chair: Christopher McCrum, Maastricht University O.03.1 - Cortical modulation of reactive balance control for fall prevention: Changes in beta frequencies during motor adaptation to walk-slips in healthy adults Rudri Purohit, University of Illinois Chicago O.03.2 - Preventing fall injuries in older people via reactive balance training using repeated trips and slips: The SafeTrip blinded randomised controlled trial Yoshiro Okubo, Neuroscience Research Australia O.03.3 - Baseline life-space mobility predicts falls in older adults with chronic stroke: a secondary analysis of a 6-month randomized clinical trial Jennifer Davis, University of British Columbia, Okanagan O.03.4 - Participatory evaluation of environmental fall risk factors Antoine Langeard, Université de Caen Normandie O.03.5 - The cost-effectiveness of the dutch in balance fall prevention intervention compared to exercise recommendations among community-dwelling older adults with an increased risk of falls: A randomized controlled trial Maaike Gameren, Vrije Universiteit Amsterdam O.03.6 - Human-object interactions and risk for head injury during video-captured falls in older adults Stephen Robinovitch, Simon Fraser University O.03.7 - Age-related associations between parameters of balance recovery stepping, self-initiated stepping and gray matter volume Inbal Paran, Ben Gurion University of the Negev
30-JUN-	03:30 PM	05:30 PM	0.2 Berlin + 0.3 Copenhagen	**O.04: Adaptation and coordination**
				Chair: Masahiro Shinya, Hiroshima University O.04.1 - Linear and angular momentum are simultaneously controlled in walking Jaap Van Dieën, Vrije Universiteit Amsterdam O.04.2 - Visual information influences how people regulate lateral stepping while walking on curved paths Anna Render, Pennsylvania State University O.04.3 - POI more accurately reflects risk of instability while walking than the mean of MOS Jonathan Dingwell, Pennsylvania State University O.04.4 - Reliability and discriminative validity of the Walking Adaptability Ladder Test in an adult population Marijne Nieuwelink, Sint Maartenskliniek O.04.5 - The contribution of vestibular and proprioceptive information to trunk stabilization varies between postural tasks and walking speeds Yiyuan Li, Vrije Universiteit Amsterdam

				O.04.6 - Cortical dynamics underlying initiation of rapid steps with contrasting postural demands Ilse Giesbers, Radboud University Medical Center O.04.7 - Whole-body reaching: Strategy classification in healthy adults during bimanual and unimanual lifting Paola Di Florio, University of Bologna O.04.8 - Exoskeleton balance support alters the relationship between CoM kinematics and reactive ankle muscle activity Edwin Van Asseldonk, University of Twente

JULY 1

01-JUL-	08:30 AM	09:30 AM	Auditorium 2	**Keynote 3: Ole Kiehn, University of Copenhagen** Unravelling brainstem circuits for movement: Insights into locomotor control and implications for treatment of gait disorders Chair: Melvyn roerdink, Maastricht University
01-JUL-	09:30 AM	10:00 AM	Auditorium 2	**Promising Scientist Award Talk** Fall prevention through the lens of a sprints coach: 11 years of research on task-specific methodology and interventions Christopher McCrum, Maastricht University
01-JUL-	10:00 AM	12:00 PM	Expo Foyer	**Poster Session 2 (refreshments 10:00 AM - 10:30 AM)**
01-JUL-	12:00 PM	01:00 PM	Auditorium 2	**Yes / No debate: End-to-end patient and public involvement in research: Panacea or pitfall?** moderator: Kim Delbaere, ISPGR President Yes team: Bas Bloem & Meghan Ambrens No team: Will Young & Morag Taylor
01-JUL-	01:00 PM	02:00 PM	Expo Foyer	Lunch
01-JUL-	02:00 PM	03:30 PM	Auditorium 2	**S.05: Worth the effort? Rethinking best practices for co-developing technology enhanced training approaches**
				Chair: Patrick Manser, Karolinska Institutet S.05.1 - Key methodological learnings from 'Brain-IT' on personalized exergame-based training with biofeedback breathing in neurocognitive disorders Eling De Bruin, OST St.Gallen & IBWS ETH S.05.2 - Developing exergames for enhancing cognition in older adults: conceptual and methodological frameworks Jean-Jacques Temprado, Aix Marseille Université S.05.3 - Co-develop-IT^2: co-design, development, and evaluation of serious individually tailored technology-enhanced training approaches - methodological guideline development study Jean-Jacques Temprado, Aix Marseille Université S.05.4 - Park-MOVE: Moving towards precision rehabilitation through co-design, development and evaluation of an exergame-based training concept for individuals with Parkinson's disease Erika Franzén, Karolinska Institutet S.05.5 - Co-development of augmented-reality home-based motor-cognitive exercises for individuals with Parkinson's disease Lotte Hardeman, Vrije Universiteit Amsterdam
01-JUL-	02:00 PM	03:30 PM	0.5 Paris	**S.06: Leveraging peripheral stimulation strategies for neuromodulation of reactive balance responses**
				Chair: Tanvi Bhatt, University of Illinois Chicago S.06.1 - Tanvi Bhatt, University of Illinois Chicago S.06.2 - The priming effects of mechanical vibrations on trip-like stance perturbations in healthy adults Tamaya Van Criekinge, Maastricht University S.06.3 - Investigating vestibular contributions to compensatory stepping reactions via galvanic vestibular stimulation Brye McMorran, Northwestern Polytechnic

01-JUL-	02:00 PM	03:30 PM	0.4 Brussels	**S.07: Disentangling real-world signatures of locomotion in ageing and neurodegeneration: from disease-specific early signs to decreased functional mobility**
				Chairs: Lisa Alcock, Newcastle University & Winfried Ilg, Hertie Institute for Clinical Brain Research S.07.1 - Turning characteristics during everyday gait reflect fall risk in older people Kimberley Van Schooten, University of New South Wales S.07.2 - Real-world mobility monitoring across dementia subtypes: applications in diagnosis and post-diagnostic support Riona Mc Ardle, Newcastle University S.07.3 - Signatures of real-world mobility in Parkinson's disease Lisa Alcock, Newcastle University S.07.4 - Signatures of real-world walking behavior in cerebellar ataxia Winfried Ilg, Hertie Institute for Clinical Brain Research
01-JUL-	02:00 PM	03:30 PM	0.2 Berlin + 0.3 Copenhagen	**S.08: Fear in motion: Exploring psychological factors behind falling in older adults and neurodegenerative conditions**
				Chair: Taylor Takla, Wayne State University S.08.1 - From confidence to fear: New insights into emotional factors related to falls Toby Ellmers, Imperial College London S.08.2 - Breaking the vicious cycle: Why all falls and fear of falling must be prevented Taylor Takla, Wayne State University S.08.3 - Rethinking falls and fear of falling in neurodegenerative diseases: A critical examination of context and physical activity Nora Fritz, Wayne State University S.08.4 - How fear of falling and participation may be impacted by misalignment of perceived and actual balance ability Jason Longhurst, Saint Louis University & Daniel Peterson, Arizona State University
01-JUL-	03:30 PM	04:00 PM	Expo Foyer	Coffee Break
01-JUL-	04:00 PM	05:30 PM	Auditorium 2	**S.09: Measures, measures, measures... and what about the outcomes?**
				Chair: Claudia Mazzà, The University of Sheffield S.09.1 - The art of translating digital outcomes into clinically relevant insights Charalampos Sotirakis, University of Oxford S.09.2 - Using wearable sensors in clinical practice, are we there yet? Applications to evaluate, monitor, and support clinical decision making Luca Palmerini, University of Bologna S.09.3 - From structural health monitoring to patients with Multiple Sclerosis: Does predictive maintenance work in gait? Matthew Jones, University of Sheffield S.09.4 - Progression vs intervention – two sides of the same medal or two different problems? Examples from gait and beyond Silvia Del Din, Newcastle University
01-JUL-	04:00 PM	05:30 PM	0.5 Paris	**S.10: Mobile brain-body imaging: What have we learnt about the neural control of human balance and gait?**
				Chairs: Tjeerd Boonstra, Radboud University Medical Center & Klaus Gramann, Technische Universität Berlin S.10.1 - A SWOT analysis of mobile brain-body imaging (MoBI) with high-density EEG Daniel Ferris, University of Florida S.10.2 - Brain imaging of whole body movement with wearable MEG Meaghan Spedden, UCL Queen Square Institute of Neurology S.10.3 - Cortical dynamics of reactive balance control in health and disease Vivian Weerdesteyn, Radboud University Medical Center
01-JUL-	04:00 PM	05:30 PM	0.4 Brussels	**O.05: PD assessment & interventions**

				Chair: Isabelle Killane, Technological University Dublin O.05.1 - Identifying meaningful digital mobility outcomes in Parkinson's disease for regulatory approval: A focus on underserved groups Jack Lumsdon, Newcastle University O.05.2 - Cueing-assisted gamified augmented-reality gait-and-balance rehabilitation at home for people with Parkinson's disease: A pragmatic randomized controlled trial implemented in the clinical pathway Eva Hoogendoorn, Vrije Universiteit Amsterdam O.05.3 - Longitudinal changes in digital gait and balance markers in early vs. mid-stage Parkinson's disease David Engel, Oregon Health & Science University O.05.4 - Group exercise incorporating behaviour change increases high intensity physical activity in people with Parkinson's disease, a randomised controlled trial Sandra Brauer, University of Queensland O.05.5 - Real-world gait training for persons with Parkinson's disease: A pilot long-term tele-rehabilitation program Ilaria D'ascanio, University of Bologna O.05.6 - Instrumented vision-based pull test assessment for differential diagnosis and fall risk assessment in Parkinsonian syndromes Andreas Zwergal, University Hospital of Munich
01-JUL-	04:00 PM	05:30 PM	0.2 Berlin + 0.3 Copenhagen	**O.06: Gait, falls and cognition** Chairs: Toby Ellmers, Imperial College London & Elmar Kal, Brunel University of London O.06.1 - Exploring the relationship between fatigue severity, prefrontal cortex activation (PFCA), and motor-cognitive performance during repeated dual-task walking bouts in people with Multiple Sclerosis: A cross-sectional and interventional analysis Irina Galperin, Tel Aviv University; Sourasky Medical Center O.06.2 - Cognitive-motor dual-task interference during recovery from unexpected balance loss in lower limb prostheses users Itshak Melzer, Ben Gurion University of the Negev O.06.3 - Distracted standing: Ambiguous tactile cues trigger startle responses when standing with increased cognitive load John Misiaszek, University of Alberta O.06.4 - A cluster analysis exploring the interplay of gait, balance, and cognition in falls risk assessment and rehabilitation Brittany Samulski, Old Dominion University O.06.5 - Effects of anxiety on reactive balance following trip-like perturbations in older people Daina Sturnieks, University of New South Wales O.06.6 - Misjudgment in older adult domestic ladder use Erika Pliner, University of Utah
JULY 2				
02-JUL-	08:30 AM	09:30 AM	Auditorium 2	**Keynote 4: Peter Shull, Robotics Institute at Shanghai Jiao Tong University** Paper or product? How to impact society through wearables research Chair: Melvyn Roerdink, Maastricht University
02-JUL-	09:30 AM	10:00 AM	Auditorium 2	**Emerging Scientist Talk** Machine learning for gait assessment in Parkinson's Disease: Insights from two multicentre studies Benjamin Filtjens, KU Leuven
02-JUL-	10:00 AM	12:00 PM	Expo Foyer	**Poster Session 3 (refreshments 10:00 AM - 10:30 AM)**
02-JUL-	12:00 PM	01:00 PM	Expo Foyer	Lunch
02-JUL-	01:00 PM	02:30 PM	Auditorium 2	**S.11: Exergames for health: randomized controlled trials and systematic review evidence for the effects on physical and cognitive functioning, brain modulation, and informing the designing for healthy and clinical populations**

				Chair: Eleftheria Giannouli, ETH Zurich S.11.1 - The smart±step trial - preventing falls with home-based exergame training in older people Daina Sturnieks, Falls, Balance and Injury Research Centre, Neuroscience Research Australia S.11.2 - Improving gait disorders with exergaming in Parkinson's disease : Clinical and neurophysiological effects Marie-Laure Welter, Centre Hospitalier Universitaire Rouen S.11.3 - Feasibility and Effectiveness of Home-Based Exergames for Cognitive-Motor Training in Older Adults: Evidence from a Pragmatic RCT and Systematic Review Eleftheria Giannouli, ETH Zurich S.11.4 - Leveling up the exergame: Merging scientific evidence with user-centered design Anna Lisa Martin-Niedecken, Zurich University of the Arts
02-JUL-	01:00 PM	02:30 PM	0.5 Paris	**S.12: Relevance of real-world digital mobility outcomes for quantifying disease progression and therapeutic response in Parkinson's disease and atypical parkinsonian syndromes**
				Chairs: Lisa Alcock, Newcastle University & Heiko Gaßner, University Hospital Erlangen S.12.1 - Towards digital mobility as outcome measures in Parkinson's disease Alison Yarnall, Newcastle University S.12.2 - Dynamic fall risk in people with Parkinson's disease: Utility of real-world digital mobility outcomes Lisa Alcock, Newcastle University S.12.3 - Daily variations of mobility at home: does it relate to Freezing of Gait in Parkinson's disease? Christian Schlenstedt, Medical School Hamburg S.12.4 - Effects of tailored intense physical exercise in the hospital and patients' daily life in Parkinson's disease and atypical parkinsonian disorders. A multicenter, double-blind, randomized controlled trial Heiko Gaßner, University Hospital Erlangen
02-JUL-	01:00 PM	02:30 PM	0.4 Brussels	**S.13: Current and emerging approaches to improving balance and gait in vestibulopathy**
				Chair: Christopher McCrum, Maastricht University S.13.1 - Gait impairments in patients with vestibulopathy Anissa Boutabla, Geneva University Hospitals S.13.2 - Individualized rehabilitation therapy to improve gait and balance in bilateral vestibular hypofunction Klaus Jahn, Schön Klinik Bad Aibling S.13.3 - Enhancing perceptual and postural function in bilateral vestibulopathy through low-intensity vestibular noise stimulation Andreas Zwergal, University Hospital of Munich S.13.4 - Effects of the vestibulocochlear implant on balance and gait in bilateral vestibulopathy Meichan Zhu, Maastricht University
02-JUL-	01:00 PM	02:30 PM	0.2 Berlin + 0.3 Copenhagen	**S.14: Compensatory neural mechanisms in the prefrontal cortex: attentional resources for gait and balance in aging and mild cognitive impairment**
				Chair: Gelsy Torres-Oviedo, University of Pittsburgh S.14.1 - Retention rate in motor adaptation: A biomarker of mild cognitive impairment Pieter Medendorp, Radboud University; Donders Institute for Brain, Cognition and Behaviour S.14.2 - Cognitive contributions to walking in older adults Gelsy Torres-Oviedo, University of Pittsburgh S.14.3 - Gait adaptation and modulation deficits in older adults with and without cognitive impairments

				Trisha Kesar, Emory University S.14.4 - Tanvi Bhatt, University of Illinois Chicago
02-JUL-	02:30 PM	03:00 PM	Expo Foyer	Coffee break
02-JUL-	03:00 PM	05:00 PM	Auditorium 2	**O.07: Stroke mechanisms and treatment** Chair: Avril Mansfield, University Health Network; University of Toronto O.07.1 - Reduced capacity to modulate sensory information processing during reactive balance control is associated with lower balance and cognitive set shifting ability in aging and after stroke Jasmine Mirdamadi, Emory University O.07.2 - Time course of pro- and reactive balance control changes during quiet standing in relation to leg motor recovery in early subacute stroke - a prospective longitudinal study Amber Van Hinsberg, University of Antwerp O.07.3 - Altered gaze behavior after a stroke reflects poor balance and gait Yogev Koren, University of Antwerp O.07.4 - An initial exploration of the clinical presentation of people with stroke who respond to a visual feedback training intervention for temporal gait asymmetry Janna Marvyn, UHN - KITE Research Institute, University of Toronto O.07.5 - Longitudinal changes in recovery and real-world performance during the first 6 months post-stroke Aishwarya Shenoy, University of British Columbia O.07.6 - Functional electrical stimulation-aided perturbation-based training can enhance neuromodulation of reactive balance control to reduce fall-risk in people with chronic stroke Tanvi Bhatt, University of Illinois Chicago O.07.7 - Differences in centre of mass measurements between markerless and marker-based motion capture systems during balance and mobility assessments in individuals with sub-acute stroke Nigel Majoni, University of Toronto O.07.8 - Effect of surgical correction of pes equinovarus in people with upper motor neuron syndrome Jorik Nonnekes, Radboud University Medical Centre
02-JUL-	03:00 PM	05:00 PM	0.5 Paris	**O.08: PD and the brain** Chair: Paulo Pelicioni, University of New South Wales O.08.1 - Preserved neuroplasticity in patients affected by Parkinson's disease responders to compensatory external auditory cueing strategies for gait impairments Alessandro Botta, IRCCS San Martino Hospital O.08.2 - Higher cortical sensorimotor beta oscillations prior to balance perturbations are associated with balance impairments in older adults with–but not without–Parkinson's disease Andrew Monaghan, Queen's University Belfast O.08.3 - Cholinergic system changes associated with freezing of gait in Parkinson's Disease have right hemispheric lateralisation Nicolaas Bohnen, University of Michigan O.08.4 - Resting-state functional near-infrared spectroscopy in people with Parkinson's disease Franziska Albrecht, Karolinska Institutet O.08.5 - Neural activity underpinning real-time gait and postural control in Parkinson's disease using a novel FDG-PET/MR imaging methodology: The dynamo-PD study Hilmar Sigurdsson, Newcastle University O.08.6 - Resting-state EEG alpha reactivity is reduced in Parkinson's disease and associated with gait variability and cognition Rodrigo Vitorio, University of São Paulo O.08.7 - Neural activity during turning in Parkinson's disease: A mobile EEG study Samuel Stuart, Northumbria University

02-JUL-	03:00 PM	05:00 PM	0.4 Brussels	**O.09: Vestibular function and disorders** Chairs: Natela Shanidze, Smith-Kettlewell Eye Research Institute & Kate Agathos, Smith-Kettlewell Eye Research Institute O.09.1 - A modeling approach to identifying causes and potential treatments for poor walking stability in people with vestibular hypofunction Michelle Harter, University of Pittsburgh O.09.2 - Acute imbalance syndrome (AIS) versus acute vestibular syndrome (AVS): Differentiation matters Ken Möhwald, University Hospital, LMU Munich O.09.3 - The geneva balance test as a useful tool to monitor pediatric patients with bilateral vestibulopathy after vestibular rehabilitation Emile Monin, University Hospital of Geneva O.09.4 - Visual-vestibular integration during walking after concussion Stephen Perry, Wilfrid Laurier University O.09.5 - Unperturbed and perturbed gait variability in bilateral vestibulopathy vs. age-matched heathy controls Meichan Zhu, Maastricht University O.09.6 - Lifetime noise exposure is associated with greater postural sway during quiet stance Natela Shanidze, Smith-Kettlewell Eye Research Institute O.09.7 - The acute influence of cannabis ingestion on whole-body vestibular-evoked balance responses Paige Copeland, University of British Columbia, Okanagan O.09.8 - Despite an impaired postural control after repositioning maneuvers, fear of falling normalized in older adults with Benign Paroxysmal Positioning Vertigo Sara Pauwels, Hasselt University
02-JUL-	03:00 PM	05:00 PM	0.2 Berlin + 0.3 Copenhagen	**O.10: Sensorimotor control: methods and findings** Chair: Ann Hallemans, University of Antwerp O.10.1 - The postural control system responds to three-dimensional pseudorandom perturbations Manami Fujii, The Ohio State University O.10.2 - Presbyopia onset affects Dynamic Visual Acuity via motor adaptation in naturalistic viewing conditions Mira Baroud, Essilor Luxottica O.10.3 - Re-learning to stand with novel sensorimotor delays in balance control Brandon Rasman, Donders Institute for Brain, Cognition and Behaviour O.10.4 - Proprioceptive training improves postural control in people with low back pain: A proof-of-concept study Sofie Dierckx, Hasselt University O.10.5 - Do children with CP have a greater dependency on visual information to maintain standing balance than typically developing children? A systematic review with meta-analysis Jonas Schröder, Hasselt University O.10.6 - A protocol and software to assess coil-head stability during TMS gait studies Sjoerd Bruijn, Vrije Universiteit Amsterdam O.10.7 - On the origin of sensory reweighting in human standing balance Lorenz Assländer, Universität Konstanz O.10.8 - The influence of hindlimb afferent inputs on lumbar spinal interneurons in the cat Martin Zaback, Temple University
02-JUL-	05:00 PM	05:45 PM		**Committees meeting**
02-JUL-	07:00 PM	Late	Ipanema:	**Gala Dinner:** Avenue Ceramiue 250 6221 KX Maastricht

JULY 3

03-JUL-	08:30 AM	09:30 AM	Auditorium 2	**Keynote 5: Kathy Cullen, Johns Hopkins University** Defying gravity: Neural computations for postural stability and voluntary motion Chair: Caterina Rosano, University of Pittsburgh
03-JUL-	09:30 AM	10:30 AM	Auditorium 2	**3MT Competition**
03-JUL-	10:30 AM	11:00 AM	Expo Foyer	Coffee break
02-JUL-	11:00 AM	12:30 PM	Auditorium 2	**S.15: Perturbation-based balance training – the way to go in falls prevention?** Chair: Jessica Koschate-Storm, University of Oldenburg & Avril Mansfield, University Health Network; University of Toronto S.15.1 - Influence of reactive balance training program characteristics on reactive balance control and fall risk: A systematic review and meta-analysis Hadas Nachmani, Hadassah Medical Center S.15.2 - Effects of trip and slip training on daily-life falls and neuromuscular mechanisms Yoshiro Okubo, Neuroscience Research Australia S.15.3 - Reactive balance in standing improves following participation in Reactive-Based Perturbation training performed on a perturbation bicycle Itshak Melzer, Ben Gurion University of the Negev S.15.4 - Training at the limit of balance control on a perturbation treadmill to prevent unrecovered falls in geriatric patients with and without cognitive impairment (TRAIL) – a study protocol Michel Hackbarth, University of Oldenburg
02-JUL-	11:00 AM	12:30 PM	0.5 Paris	**S.16: The use of large-scale virtual reality systems for basic and clinical research of gait and posture** Chairs: Meir Plotnik, Sheba Medical Center & Menno Veldman, University Medical Center, University of Groningen S.16.1 - Studying integrative processes of cognitive, motor and affect competencies in health adults using virtual reality Meir Plotnik, Sheba Medical Center & Menno Veldman S.16.2 - Effects of age and physical activity on adaptation of kinematic and spectral gait parameters to optic flow perturbation Chunchun Wu, University Medical Center Groningen S.16.3 - Gait assessment through the GRAIL system in children with Cerebral Palsy during Agilik exoskeleton training Emilia Biffi, Scientific Institute, IRCCS Eugenio Medea – Ass. La Nostra Famiglia, Bosisio Parin S.16.4 - Will Young, University of Exeter
03-JUL-	11:00 AM	12:30 PM	0.4 Brussels	**O.11: Digital real world mobility outcomes** Chair: Giuseppe Vannozzi, Università di Roma Foro Italico O.11.1 - Walking in older adults: Comparing lab-based and real-world assessments using digital mobility outcomes Jose Albites-Sanabria, University of Bologna O.11.2 - A novel cardiovascular adaptation response based on 24-hr time-locked heart rate and daily activities in community-dwelling older adults Eitan Asher, Sourasky Medical Center O.11.3 - Integrating IMU and narrative reports for comprehensive understanding of real-world fall dynamics Naser Taleshi, University of Exeter O.11.4 - Measuring head movements during free-living daily life Selena Cho, University of Utah O.11.5 - A sensor fusion method to reconstruct CoM vertical displacement during daily-activities based on barometric and inertial data Alessandra Audisio, Politecnico di Torino

				O.11.6 - Feasibility of estimating digital mobility outcomes from smartphones in real-world conditions with MobGap, the open-source package for mobility assessment by mobilise-D Paolo Tasca, Politecnico di Torino
03-JUL-	11:00 AM	12:30 PM	0.2 Berlin + 0.3 Copenhagen	**O.12: Rehabilitation: mechanism, assessments and interventions** Chair: Meghan Ambrens, Neuroscience Research Australia O.12.1 - From hip to ankle: Evidence for generalized proprioceptive deficits in children with Cerebral Palsy through 3D motion analysis Nina Jacobs, Hasselt University O.12.2 - Frontoparietal brain activity during an anticipatory postural control task in children with developmental coordination disorder, Cerebral Palsy and those with typical development: An fNIRS study Charlotte Johnson, University of Antwerp; Hasselt University O.12.3 - Movements that matter to people with Multiple Sclerosis: A photovoice exploration into the walking experience Emily Wood, Murdoch University O.12.4 - Understanding trip mechanisms in children with Cerebral Palsy on uneven pavements: Insights for fall prevention Richard Foster, Alder Hey Children's NHS Foundation Trust O.12.5 - Machine learning models for predicting treatment outcomes in chronic non-specific back pain undergoing lumbar extension traction Paul Oakley, York University O.12.6 - Effect of an anti-gravity exosuit on kinematics in individuals with incomplete spinal cord injury Lara Visch, Sint Maartenskliniek
03-JUL-	12:30 PM	12:45 PM	Auditorium 2	**AGM and Awards** Kim Delbaere, ISPGR President + ISPGR Board Members