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118658	Measuring dynamic balance control in children with cerebral palsy	Ruud Van der Weel <sup>1</sup> , Audrey Van der Meer <sup>1</sup>	<sup>1</sup> Norwegian University of Science & Technology
118664	Protective stepping in multiple sclerosis: a pilot study	Charles Van Liew <sup>1</sup> , Leland Dibble <sup>1</sup> , Grace Hunt <sup>2</sup> , K. Foreman <sup>2</sup> , Daniel Peterson <sup>1</sup>	<sup>1</sup> Arizona State University, <sup>2</sup> University of Utah
118676	Are a few millimeters added under the big toe enough to improve postural control in elite handball players?	Frédéric Viseux <sup>1</sup> , Philippe Villeneuve <sup>2</sup> , Rodolfo Parreira <sup>3</sup> , Franck Barbier <sup>1</sup> , Antoine Lemaire <sup>4</sup> , Sebastien Leteneur <sup>1</sup>	<sup>1</sup> LAMIH - University of Valenciennes - France, <sup>2</sup> Posture Lab - Paris - France, <sup>3</sup> LaNEx - University of Southern Santa Catarina - Brazil, <sup>4</sup> CETD - Centre Hospitalier de Valenciennes - France
118780	Occupational therapy intervention to improve the quality of life of client with Friedreich's Ataxia- A case study of complete rehabilitation from complete dependency to living independently	Deepa Pradhan <sup>1</sup>	<sup>1</sup> Mumbai University
118899	Light touch with two hands rather than one more effectively reduces postural sway, but number of contact points does not similarly influence the effectiveness of the haptic anchors in older adults	Renato Moraes <sup>1</sup> , Bruno Bedo <sup>1</sup> , Vitor Arpini <sup>1</sup> , Rosangela Batistela <sup>1</sup> , Paulo Santiago <sup>1</sup> , Eliane Mauerberg-Decastro <sup>2</sup>	<sup>1</sup> University of Sao Paulo at Ribeirao Preto, <sup>2</sup> Sao Paulo State University
118903	Older adults adopted a more conservative strategy to step into a hole when compared to the task of stepping down a curb	Renato Moraes <sup>1</sup> , Luciana Santos <sup>1</sup> , Rosangela Batistela <sup>1</sup>	<sup>1</sup> University of Sao Paulo at Ribeirao Preto



118930	Effects of ankle muscle fatigue and visual behavior on postural sway in young adults	Fabio Barbieri <sup>1</sup> , Tiago Penedo <sup>2</sup> , Lucas Simieli <sup>2</sup> , Ricardo Barbieri <sup>3</sup> , Alessandro Zagatto <sup>4</sup> , Jaap Van Dieën <sup>5</sup> , Mirjam Pijnappels <sup>5</sup> , Sérgio Rodrigues <sup>6</sup> , Paula Polastri <sup>6</sup>	<sup>1</sup> São Paulo State University (UNESP), Human Movement Research Laboratory (MOVI-LAB), Graduate Program in Movement Science, Bauru, São Paulo, Brazil, <sup>2</sup> São Paulo State University (UNESP), Human Movement Research Laboratory (MOVI-LAB), Graduate Program, <sup>3</sup> Graduate Program in Physical Education and Sport at School of Physical Education and Sport of Ribeir, <sup>4</sup> São Paulo State University (UNESP), Laboratory of Physiology and Human Performance (LAFIDE), Graduat, <sup>5</sup> Vrije Universiteit Amsterdam, Department of Human Movement Sciences, Research Institute Amsterdam Mo, <sup>6</sup> São Paulo State University (UNESP), Laboratory of Information, Vision and Action (LIVIA), Graduate P
118952	Reliability of different clinical techniques for assessing foot posture	Muge Kirmizi <sup>1</sup> , Mehmet Cakiroglu <sup>1</sup> , Ibrahim Simsek <sup>1</sup> , Ata Elvan <sup>1</sup> , Salih Angin <sup>1</sup>	<sup>1</sup> Dokuz Eylul University
118953	Relationship between foot posture assessment techniques and dynamic plantar pressure variables	Muge Kirmizi <sup>1</sup> , Mehmet Cakiroglu <sup>1</sup> , Ibrahim Simsek <sup>1</sup> , Salih Angin <sup>1</sup>	<sup>1</sup> Dokuz Eylul University
118961	Low function based on spatio-temporal gait variables and disability	Takehiko Doi <sup>1</sup> , Sho Nakakubo <sup>1</sup> , Kota Tsutsumimoto <sup>1</sup> , Minji Kim <sup>1</sup> , Satoshi Kurita <sup>1</sup> , Hideaki Ishii <sup>1</sup> , Hiroyuki Shimada <sup>1</sup>	<sup>1</sup> National Center for Geriatrics and Gerontology
119024	Development of postural control during single-leg standing in children aged 3-10 years	Hiroki Mani <sup>1</sup> , Saori Miyagishima <sup>2</sup> , Naoki Kozuka <sup>3</sup> , Kenji Taneda <sup>1</sup> , Takahiro Inoue <sup>1</sup> , Kenta Takeda <sup>1</sup> , Tadayoshi Asaka <sup>1</sup>	<sup>1</sup> Hokkaido university, <sup>2</sup> Sapporo medical university hospital, <sup>3</sup> Sapporo medical university



119100	How does visual input affect the learning process of a balance skill?	Orit Elion <sup>1</sup> , Yotam Bahat <sup>2</sup> , Itamar Sela <sup>3</sup> , Itzchak Siev-Ner <sup>4</sup> , Patrice (Tamar) Weiss <sup>5</sup> , Avi Karni <sup>6</sup>	<sup>1</sup> Ariel University, <sup>2</sup> The C. Sheba Medical Center, <sup>3</sup> University of Haifa, Israel, <sup>4</sup> C. Sheba Medical Center, Tel Hashomer, Israel, <sup>5</sup> University of Haifa, <sup>6</sup> University of Haifa,
119101	Testing the potential of immersive technologies for measuring motor skills	Mshari Alghadier <sup>1</sup> , Jack Brooks <sup>1</sup> , Faisal Mushtaq <sup>1</sup> , Mark Mon-Williams <sup>1</sup>	<sup>1</sup> Institute of Psychological Sciences
119103	Electrocortical dynamics related to ankle proprioception reweighting	Martin Simoneau <sup>1</sup> , Catherine Bluteau <sup>1</sup> , Anctil Noémie <sup>1</sup>	<sup>1</sup> Laval University
119105	Synergies between postural control, eye movements and cognitive involvement in precise visual tasks performed upright	Cedrick Bonnet <sup>1</sup> , Tanguy Davin <sup>1</sup> , Jean-Yves Hoang <sup>1</sup> , Stéphane Baudry <sup>2</sup>	<sup>1</sup> University of Lille, <sup>2</sup> Université Libre de Bruxelles
119110	Gait analysis by the use of handy three-dimensional acceleration sensors	Kazuo Ishikawa <sup>1</sup> , Aya Asari <sup>1</sup> , Hiromoto Kimura <sup>1</sup>	<sup>1</sup> Japanese Red Cross, Akita Hospital, Dizziness Center
119118	Effect of High Intensity Interval Training combined with citrulline supplementation on gait parameters and its predictors in healthy older women: a pilot study	Mylene Aubertin-Leheudre <sup>1</sup>	<sup>1</sup> UQAM
119121	Frailty status predicts falls in early Parkinson's disease	Alison Yarnall <sup>1</sup> , Shauna Holland <sup>1</sup> , Rosie Morris <sup>1</sup> , Sue Lord <sup>1</sup> , Brook Galna <sup>1</sup> , Lynn Rochester <sup>1</sup>	<sup>1</sup> Newcastle University
119122	Non-Invasive Vagus Nerve Stimulation: A non-pharmacological approach to target gait impairment in Parkinson's disease?	Alison Yarnall <sup>1</sup> , Rosie Morris <sup>1</sup> , John-Paul Taylor <sup>1</sup> , Mark Baker <sup>1</sup> , Lynn Rochester <sup>1</sup>	<sup>1</sup> Newcastle University
119129	Associations between mobility and dementia subtypes in nursing home residents	Karen Sverdrup <sup>1</sup> , Sverre Bergh <sup>2</sup> , Geir Selbæk <sup>1</sup> , Pernille Thingstad <sup>3</sup> , Gro Tangen <sup>1</sup>	<sup>1</sup> Norwegian National Advisory Unit on Ageing and Health, <sup>2</sup> Innlandet Hospital trust., <sup>3</sup> Norwegian University of Science and Technology



119145	Effects of thin plantar stimulation on postural coordination patterns	Marc Janin <sup>1</sup> , Emmanuelle Pivron Braquet <sup>1</sup> , Frédéric Noé <sup>2</sup>	<sup>1</sup> Podologue, <sup>2</sup> Laboratoire Mouvement, Equilibre, Performance, Santé (EA 4445)
119185	Children's walking in complex environments: one step at a time?	Rachel Mowbray <sup>1</sup> , Janna Gottwald <sup>2</sup> , Manfei Zhao <sup>1</sup> , Anthony Atkinson <sup>1</sup> , Dorothy Cowie <sup>1</sup>	<sup>1</sup> Durham University, <sup>2</sup> Uppsala University
119193	How to encourage others: A perception-empathy biofeedback system for preventing falls in older adults	Kazuhiro Yasuda <sup>1</sup> , Yuki Hayashi <sup>1</sup> , Hiroyasu Iwata <sup>1</sup>	<sup>1</sup> Waseda University
119200	Perturbation treadmill training: sustainable effects on clinical gait and postural stability symptoms as well as gait variability in Parkinson's disease	Heiko Gaßner <sup>1</sup> , Simon Steib <sup>2</sup> , Sarah Klamroth <sup>2</sup> , Cristian Pasluosta <sup>3</sup> , Werner Adler <sup>2</sup> , Bjoern Eskofier <sup>2</sup> , Klaus Pfeifer <sup>2</sup> , Jürgen Winkler <sup>1</sup> , Jochen Klucken <sup>1</sup>	<sup>1</sup> University Hospital Erlangen, <sup>2</sup> Friedrich-Alexander University (FAU) Erlangen-Nürnberg, <sup>3</sup> University of Freiburg
119204	Monitoring walking activity with wearable technology in rural-dwelling older adults in Tanzania: a feasibility study nested within a frailty prevalence study	Silvia Del Din <sup>1</sup> , Emma Grace Lewis <sup>2</sup> , William Gray <sup>2</sup> , Harry Collin <sup>1</sup> , John Kissima <sup>3</sup> , Lynn Rochester <sup>1</sup> , Catherine Dotchin <sup>2</sup> , Sarah Urasa <sup>4</sup> , Richard Walker <sup>2</sup>	<sup>1</sup> Newcastle University, <sup>2</sup> Northumbria Healthcare NHS Foundation Trust, North Tyneside General Hospital, <sup>3</sup> Hai District Hospital, <sup>4</sup> Kilimajaro Christian Medical Centre
119205	Identification of gait characteristics for early diagnosis of Parkinson's disease with machine learning	Rana Zia Ur Rehman <sup>1</sup> , Silvia Del Din <sup>1</sup> , Yu Guan <sup>1</sup> , Jian Qing Shi <sup>1</sup> , Lynn Rochester <sup>1</sup>	<sup>1</sup> Newcastle University
119214	Associations between motor cortex inhibition and stable turning characteristics in healthy controls and people with multiple sclerosis	Clayton Swanson <sup>1</sup> , Andrew Monaghan <sup>1</sup> , Sutton Richmond <sup>1</sup> , Tyler Whittier <sup>1</sup> , Brett Fling <sup>1</sup>	<sup>1</sup> Colorado State University
119217	Validation of divergent neural dysfunction in idiopathic REM sleep behaviour disorder patients separated using clinical phenotyping	Kaylena Ehgoetz Martens <sup>1</sup> , Elie Matar <sup>1</sup> , James Shine <sup>1</sup> , Joseph Phillips <sup>2</sup> , Ronald Grunstein <sup>1</sup> , Glenda Halliday <sup>1</sup> , Simon Lewis <sup>1</sup>	<sup>1</sup> University of Sydney, <sup>2</sup> Western Sydney University
119228	Elucidation of the trunk motion affecting the knee joint stress during gait	Masahiro Edo <sup>1</sup> , Fumiko Kamijo <sup>2</sup> , Toshihiko Sato <sup>3</sup>	<sup>1</sup> Chiba Prefectural University of Health Sciences, <sup>2</sup> Showa University, <sup>3</sup> Bunkyo Gakuin University



119230	Motor training improves motor performance at the preclinical stage of degenerative cerebellar ataxia	Winfried Ilg <sup>1</sup> , Matthis Synofzik <sup>1</sup>	<sup>1</sup> Hertie Institute for Clinical Brain Research
119233	Controlling the uncontrollable - perceptions of balance in people with Parkinson's disease	Hanna Johansson <sup>1</sup> , Erika Franzén <sup>1</sup> , Kirsti Skavberg Roaldsen <sup>1</sup> , Maria Hagströmer <sup>1</sup> , Breiffni Leavy <sup>1</sup>	<sup>1</sup> Karolinska Institutet
119234	Postural instability in subjects with Usher syndrome	Simona Caldani <sup>1</sup> , Maria Pia Bucci <sup>1</sup> , Maud Tisne <sup>1</sup> , Isabelle Audo <sup>2</sup> , Thierry Van Den Abbeele <sup>1</sup> , Sylvette Wiener Vacher <sup>1</sup>	<sup>1</sup> Hopital Robert Debré, <sup>2</sup> CHNO
119237	Repetitive experience touching door edges with fingers while walking through an aperture to improve fine-tuning of collision-avoidance behavior	Tomoki Hakamata <sup>1</sup> , Yoshitsugu Kondo <sup>2</sup> , Takahiro Higuchi <sup>1</sup>	<sup>1</sup> Department of Health Promotion Science, Tokyo Metropolitan University, <sup>2</sup> Tokushima Bunri University
119243	Avoiding 3D holographic obstacles: Does it differ from negotiating real obstacles?	Bert Coolen <sup>1</sup> , Daphne Geerse <sup>1</sup> , Melvyn Roerdink <sup>1</sup>	<sup>1</sup> Faculty of Behavioural and Movement Sciences



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"COgnitive and Motor interaction in Older populatioNs (ComOn)" - A prospective multi-center study for quantitative evaluation of treatment effectiveness in 1000 geriatric patients with cognitive and motor deficits

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119247	Postural adjustments during manual motor imagery in young and older people	Chloe Wider <sup>1</sup> , Mark Andrews <sup>1</sup> , Hayley Boulton <sup>1</sup> , Suvobrata Mitra <sup>1</sup>	<sup>1</sup> Nottingham Trent University
119249	The effects of varying midsole cushioning in footwear on gait in females with multiple sclerosis	Andrew Monaghan <sup>1</sup> , Sutton Richmond <sup>1</sup> , Clayton Swanson <sup>1</sup> , Daniel Peterson <sup>2</sup> , Brett Fling <sup>1</sup>	<sup>1</sup> Colorado State University, <sup>2</sup> Arizona State University
119265	Effect of slope squat on lower-extremity muscle activity	Yi Wan <sup>1</sup> , Jianqiao Wang <sup>2</sup> , Jennifer Davies <sup>1</sup> , Kate Button <sup>1</sup> , Mohammad Al-Amri <sup>1</sup>	<sup>1</sup> Cardiff University, <sup>2</sup> China Rehabilitation Research Center
119266	Functional gait in children with developmental coordination disorder compared to typically developing children	Rosanne Kuijpers <sup>1</sup> , Ellen Smulders <sup>2</sup> , Vivian Weerdesteyn <sup>2</sup>	<sup>1</sup> Department of Rehabilitation, Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center, Nijmegen, The Netherlands, <sup>2</sup> Department of Rehabilitation, Donders Institute for Brain, Cognition and Behaviour, Radboud University
119271	Increasing plantar somatosensory performance on the one leg stance test in elderly	Emmanuelle Pivron Braquet <sup>1</sup> , Marc Janin <sup>2</sup>	<sup>1</sup> Podiatrist, <sup>2</sup> Laboratoire Mouvement, Equilibre, Performance, Santé (EA4445)
119301	Effect of community-based brisk walking on enhancing motor and non-motor symptoms in people with Parkinson's disease	Margaret Mak <sup>1</sup> , Irene Wong <sup>1</sup>	<sup>1</sup> The Hong Kong Polytechnic University
119322	Evaluation of adult cerebral palsy gait with spasticity of gluteus medius anterior fibers before and after local treatment with botulinum toxin	Philippe Thoumie <sup>1</sup> , Florence Babany <sup>1</sup>	<sup>1</sup> Hopital Rothschild Aphp Sorbonne University
119339	Virtual time-to-contact indicates deficits in state prediction in women with multiple sclerosis	Tyler Whittier <sup>1</sup> , Sutton Richmond <sup>1</sup> , Andrew Monaghan <sup>1</sup> , Clayton Swanson <sup>1</sup> , Brett Fling <sup>1</sup>	<sup>1</sup> Colorado State University



119351	Botulinum toxin injection to the upper limb may indirectly improve gait in patients with post-stroke spasticity- an open-label prospective pilot study	Shani Kimel Naor <sup>1</sup> , Oren Cohen <sup>2</sup> , Elizabeta Shprits <sup>3</sup> , Sharon Hassin-Baer <sup>1</sup> , Yael Dotan-Marom <sup>1</sup> , Gilad Yahalom <sup>1</sup> , Oleg Marzeliak <sup>1</sup> , Lilach Ephraty <sup>1</sup> , Hanna Strauss <sup>1</sup> , Rivka Inzelberg <sup>2</sup> , Meir Plotnik <sup>1</sup>	<sup>1</sup> Sheba medical center, <sup>2</sup> Tel-Aviv University, <sup>3</sup> Technion, Technological Institute of Israel
119352	Parkinsonian gait in aging: a signature of Alzheimer's pathology	Gilles Allali <sup>1</sup> , Eric Morel <sup>2</sup> , Stephane Armand <sup>1</sup> , Frederic Assal <sup>1</sup>	<sup>1</sup> Geneva University Hospitals, <sup>2</sup> University of Geneva
119353	Ability to change gait speed in older adults aged 60 to 102 years old	Daniela Abreu <sup>1</sup> , Paola Magnani <sup>1</sup> , Renato Freire Junior <sup>1</sup>	<sup>1</sup> University of São Paulo, Ribeirao Preto Medical School
119354	Effects of perturbation-based balance training on balance, gait and balance confidence in subacute persons with stroke: a randomized controlled trial	Shirley Handelzalts <sup>1</sup> , Michal Kanner-Furman <sup>1</sup> , Ganit Gray <sup>1</sup> , Nachum Soroker <sup>2</sup> , Itshak Melzer <sup>1</sup>	<sup>1</sup> Ben Gurion university, <sup>2</sup> Loewenstein rehabilitation hospital
119355	Different types of tripping over an unexpected obstacle while walking on level ground - age and contributing factors	Ilan Kurz <sup>1</sup> , Shlomit Eyal <sup>2</sup> , Inbal Maiden <sup>2</sup> , Anat Mirelman <sup>2</sup> , Nir Giladi <sup>3</sup> , Jeff Hausdorff <sup>2</sup>	<sup>1</sup> Ben Gurion University, Beer-Sheva, Israel, <sup>2</sup> Center for the Study of Movement, Cognition and Mobility, Neurological Institute, Tel Aviv Sourasky, <sup>3</sup> Department of Neurology, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel.
119357	Muscle activity in the affected leg of stroke patients can be manipulated by altering guidance offered to the unaffected leg during Lokomat walking	Sylvana Weiland <sup>1</sup> , Heleen Reinders-Messelink <sup>2</sup> , Annemarijke Boonstra <sup>2</sup> , Lucas Van der Woude <sup>1</sup> , Rob Den Otter <sup>1</sup>	<sup>1</sup> University Medical Center Groningen, <sup>2</sup> Rehabilitation center 'Revalidatie Friesland'
119358	Normative data for Balance Tracking System (BTrackS) modified Clinical Test of Sensory Integration and Balance (mCTSIB)	Daniel Goble <sup>1</sup> , Harshan Brar <sup>1</sup> , Elise Brown <sup>1</sup> , Charles Marks <sup>1</sup> , Harsimran Baweja <sup>2</sup>	<sup>1</sup> Oakland University, <sup>2</sup> San Diego State University
119359	Specific gait measures predict cognitive decline in highly educated older adults	Elissa Ash <sup>1</sup> , Tali Ben Porat <sup>2</sup> , Odelia Elkana <sup>1</sup> , Natalie Ganz <sup>1</sup> , Jeffrey Hausdorff <sup>1</sup>	<sup>1</sup> Tel Aviv Sourasky Medical Center, <sup>2</sup> Academic College of Tel Aviv-Yaffo





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119363	Medical, sensorimotor and cognitive factors associated with gait variability: a longitudinal population-based study	Oshadi Jayakody <sup>1</sup> , Monique Breslin <sup>1</sup> , Velandai Srikanth <sup>2</sup> , Michele Callisaya <sup>1</sup>	<sup>1</sup> University of Tasmania, <sup>2</sup> Peninsula Health, Monash University
119364	Gait patterns and cognitive decline: A longitudinal population-based study	Oshadi Jayakody <sup>1</sup> , Monique Breslin <sup>1</sup> , Velandai Srikanth <sup>2</sup> , Michele Callisaya <sup>1</sup>	<sup>1</sup> University of Tasmania, <sup>2</sup> Peninsula Health, Monash University
119365	Kinesiological study for normal walking gait on irregular surface	Kenta Igarashi <sup>1</sup> , Koichi Koganezawa <sup>1</sup>	<sup>1</sup> Tokai university
119366	The influence of anxiety on motor strategy selection during a stepping down paradigm in older adults	Nick Kluit <sup>1</sup> , Sjoerd Bruijn <sup>1</sup> , Jaap Van Dieën <sup>1</sup> , Mark Carpenter <sup>2</sup> , Mirjam Pijnappels <sup>1</sup>	<sup>1</sup> Vrije Universiteit Amsterdam, <sup>2</sup> University of British Columbia
119367	Gait adaptations in response to perturbation treadmill training in Parkinson's disease: Time-course, sustainability and transfer	Simon Steib <sup>1</sup> , Sarah Klamroth <sup>1</sup> , Gassner Heiko <sup>1</sup> , Cristian Pasluosta <sup>1</sup> , Bjoern Eskofier <sup>1</sup> , Juergen Winkler <sup>1</sup> , Jochen Klucken <sup>1</sup> , Klaus Pfeifer <sup>1</sup>	<sup>1</sup> Friedrich-Alexander University Erlangen-Nürnberg
119368	The path curvature of the body centre of mass during walking as an index of balance control in patients with Multiple Sclerosis	Chiara Diletta Malloggi <sup>1</sup> , Luigi Catino <sup>2</sup> , Viviana Rota <sup>1</sup> , Laura Perucca <sup>1</sup> , Stefano Scarano <sup>1</sup> , Luigi Tesio <sup>1</sup>	<sup>1</sup> Istituto Auxologico Italiano, IRCCS, Ospedale San Luca, Milano, Italy, <sup>2</sup> Università degli Studi di Milano, Milano, Italy
119369	Antero-posterior foot placement is disturbed in people with Parkinson's disease: preliminary data	Lucas Simieli <sup>1</sup> , Sjoerd Bruijn <sup>2</sup> , Erwin E Van Wegen <sup>3</sup> , Fabio Barbieri <sup>4</sup> , Jaap Van Dieën <sup>2</sup>	<sup>1</sup> Univ Estadual Paulista at Bauru - UNESP/Vrije Universiteit Amsterdam, <sup>2</sup> Vrije Universiteit Amsterdam, Department of Human Movement Sciences, Amsterdam Movement Sciences, Th, <sup>3</sup> Amsterdam Universitair Medisch Centrum, Department of Rehabilitation Medicine, Amsterdam Movement Sc, <sup>4</sup> São Paulo State University (UNESP), Human Movement Research Laboratory (MOVI-LAB), Graduate Program



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119370	Performance of dual-tasking between arm movement and postural adjustments in subjects with stroke	Yosuke Tomita <sup>1</sup> , Nicolas Turpin <sup>2</sup> , Daniele Piscitelli <sup>3</sup> , Mindy Levin <sup>3</sup>	<sup>1</sup> Takasaki University of Health and Welfare, <sup>2</sup> University of la Réunion, <sup>3</sup> McGill University
119371	Quantitative gait analysis of acoustic neuroma patients using portable accelerometer	Koh Koizumi <sup>1</sup> , Kazuo Ishikawa <sup>2</sup>	<sup>1</sup> Akita University, <sup>2</sup> Japanese Red Cross Akita Hospital
119372	Postural balance at children survived after posterior fossa tumor	Dmitry Skvortsov <sup>1</sup> , Anna Dreneva <sup>2</sup> , Vladimir Kasatkin <sup>2</sup> , Alexander Karelin <sup>2</sup>	<sup>1</sup> Government University, <sup>2</sup> Rehabilitation center "Russcoe Pole"
119373	The nature of motor-cognitive relationship beyond age and disease	Inbal Maidan <sup>1</sup> , Preeti Sunderaraman <sup>2</sup> , Eran Gazit <sup>1</sup> , Anat Mirelman <sup>1</sup> , Yaakov Stern <sup>2</sup> , Jeffrey Hausdorff <sup>1</sup>	<sup>1</sup> Tel Aviv Medical Center, <sup>2</sup> Columbia University Medical Center
119374	Postural balance at children survived after posterior fossa tumor, acute lymphoblastic leukemia and hematopoietic stem cell transplantation	Dmitry Skvortsov <sup>1</sup> , Alexey Parshikov <sup>2</sup> , Daria Zhuk <sup>2</sup> , Vlad Nikulin <sup>2</sup> , Serafima Chechel'nitskaya <sup>2</sup> , Vladimir Kasatkin <sup>2</sup> , Alexander Karelin <sup>2</sup>	<sup>1</sup> Government University, <sup>2</sup> Rehabilitation center "Russcoe Pole"
119375	Combined study of segmental movements and motion of the centre of mass during adaptation on a split-belt treadmill	Luigi Catino <sup>1</sup> , Chiara Diletta Malloggi <sup>2</sup> , Luigi Tesio <sup>2</sup>	<sup>1</sup> University of Milan, <sup>2</sup> Istituto Auxologico Italiano IRCCS
119378	The effects of obstacle size and timing on prefrontal cortex activation in patients with Parkinson's disease	Inbal Maidan <sup>1</sup> , Topaz Sharon <sup>1</sup> , Ilan Kurz <sup>1</sup> , Hagar Bernad-Elazari <sup>1</sup> , Shiran Shustak <sup>1</sup> , Ira Galperin <sup>1</sup> , Anat Mirelman <sup>1</sup> , Jeffrey Hausdorff <sup>1</sup>	<sup>1</sup> Tel Aviv Medical Center
119379	Tandem Walking Test kinematics - a normal data	Dmitry Skvortsov <sup>1</sup> , Alina Aisenshtein <sup>2</sup> , Vladimir Kasatkin <sup>2</sup> , Anatoliy Shipilov <sup>2</sup>	<sup>1</sup> Government University, <sup>2</sup> Rehabilitation center "Russcoe Pole"
119380	Fear of heights saturates 20 to 40 meters above ground	Max Wühr <sup>1</sup> , Katharina Breitkopf <sup>1</sup> , Julian Decker <sup>1</sup> , Gerado Ibarra <sup>1</sup> , Doreen Huppert <sup>1</sup> , Thomas Brandt <sup>1</sup>	<sup>1</sup> Ludwig-Maximilians-University Munich
119382	Gait as a potential marker of cognitive decrements in Type 2 Diabetes (T2DM): Early results from the ENBIND study	Adam Dyer <sup>1</sup> , Isabelle Killane <sup>2</sup> , Benjamin Campbell <sup>2</sup> , Killian Tobin <sup>2</sup> , Richard Reilly <sup>1</sup> , Isabella Batten <sup>1</sup> , Nollaig Bourke <sup>1</sup> , James Gibney <sup>1</sup> , Sean Kennelly <sup>1</sup>	<sup>1</sup> Trinity College Dublin, <sup>2</sup> Dublin Institute of Technology



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119383	Treadmill training in a virtual environment improves gait and balance in patients with incomplete spinal cord injury	Rosanne Van Dijsseldonk <sup>1</sup> , L.A.F. De Jong <sup>2</sup> , B.E. Groen <sup>2</sup> , M. Vos-Van der Hulst <sup>2</sup> , A.C.H. Geurts <sup>3</sup> , N.L.W. Keijsers <sup>2</sup>	<sup>1</sup> Radboudumc & Sint Maartenskliniek, <sup>2</sup> Sint Maartenskliniek, <sup>3</sup> Radboudumc
119384	Experimental study of biomechanics of "military crawl" locomotion, pilot study	Dmitry Skvortsov <sup>1</sup> , Alina Aisenshtein <sup>2</sup> , Vladimir Kasatkin <sup>2</sup> , Anatoliy Shipilov <sup>2</sup> , Victor Anisimov <sup>2</sup>	<sup>1</sup> Government University, <sup>2</sup> Rehabilitation center "Russcoe Pole"
119385	Loading response peak anchoring: A novel solution for the double-belt problem	Oran Ben-Gal <sup>1</sup> , Glen Doniger <sup>1</sup> , Maya Cohen <sup>1</sup> , Michal Schnaider-Beer <sup>1</sup> , Meir Plotnik <sup>1</sup>	<sup>1</sup> Sheba Medical Center Hospital
119386	Abnormal subjective vertical perception in patients with vestibular migraine	Mitsuhiro Aoki <sup>1</sup> , Hisamitsu Hayashi <sup>1</sup> , Bunya Kuze <sup>1</sup>	<sup>1</sup> Gifu University Hospital
119387	Evaluation of after-effects of noisy vestibular stimulation on vestibular motion perception	Max Wühr <sup>1</sup> , Aram Keywan <sup>1</sup> , Klaus Jahn <sup>1</sup>	<sup>1</sup> Ludwig-Maximilians-University Munich
119388	Automatic detection of Bradykinesia in Parkinson's disease	Elke Warmerdam <sup>1</sup> , Gerhard Schmidt <sup>1</sup> , Clint Hansen <sup>1</sup> , Walter Maetzler <sup>1</sup> , Rana Zia Ur Rehman <sup>2</sup>	<sup>1</sup> Kiel University, <sup>2</sup> Newcastle University
119389	The association between spatial navigation and physical function in memory clinic patients.	Gro Tangen <sup>1</sup> , Anne-Brita Knapskog <sup>2</sup> , Elisabeth Telenius <sup>1</sup> , Geir Selbæk <sup>1</sup> , Kristin Taraldsen <sup>3</sup>	<sup>1</sup> Norwegian National Advisory Unit on Ageing and Health, <sup>2</sup> Oslo University Hospital, <sup>3</sup> The Norwegian University of Science and Technology
119391	Healthy older adults regulate lateral stepping in destabilizing environments	Jonathan Dingwell <sup>1</sup> , Meghan Kazanski <sup>1</sup> , Joseph Cusumano <sup>1</sup>	<sup>1</sup> Pennsylvania State University
119393	How persons with transtibial amputation regulate lateral stepping in destabilizing environments	Jonathan Dingwell <sup>1</sup> , Jonathan Rylander <sup>2</sup> , Joseph Cusumano <sup>1</sup> , Jason Wilken <sup>3</sup>	<sup>1</sup> Pennsylvania State University, <sup>2</sup> Baylor University, <sup>3</sup> University of Iowa
119394	The inter relations between arm-leg, arm-arm and leg-leg coordination during human walking	Maya Cohen <sup>1</sup> , Uri Rosenblum <sup>1</sup> , Desiderio Cano Porrás <sup>1</sup> , Oran Ben Gal <sup>1</sup> , Meir Plotnik <sup>1</sup>	<sup>1</sup> Center of Advanced Technologies in Rehabilitation, Sheba Medical Center, Tel Hashomer, Israel



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119397	Developing exercise groups for persons with dementia	Kristin Taraldsen <sup>1</sup> , Elisabeth Boulton <sup>2</sup> , Jorunn Helbostad <sup>1</sup> , Ingvild Saltvedt <sup>1</sup> , Gro Tangen <sup>3</sup> , Randi Granbo <sup>1</sup>	<sup>1</sup> NTNU, <sup>2</sup> University of Manchester, <sup>3</sup> Ageing and Health
119398	The effect of bed rest on balance control in healthy adults: A systematic scoping review	Tyler Saumur <sup>1</sup> , Sarah Gregor <sup>1</sup> , George Mochizuki <sup>1</sup> , Avril Mansfield <sup>2</sup> , Sunita Mathur <sup>1</sup>	<sup>1</sup> University of Toronto, <sup>2</sup> Toronto Rehabilitation Institute
119401	Body spatial representation in unilateral vestibular patients: Evolution before and after surgery	Liliane Borel <sup>1</sup> , Mathilde Bachelard-Serra <sup>2</sup> , Laurence Bernard-Demanze <sup>2</sup> , Jean-Pierre Lavieille <sup>2</sup> , Arnaud Saj <sup>3</sup> , Jacques Honoré <sup>4</sup>	<sup>1</sup> CNRS/Aix-Marseille University, <sup>2</sup> Hôpital de la Conception, AP-HM, <sup>3</sup> Geneva University Hospitals, <sup>4</sup> Université de Lille
119404	Clinical meaningful thresholds of temporal and spatial gait parameters in the context of the differential diagnosis in gait ataxia	Roman Schniepp <sup>1</sup> , Max Wuehr <sup>1</sup> , Julian Decker <sup>1</sup>	<sup>1</sup> Ludwig-Maximilians Universität München
119406	Bridging the callosal gap in gait: a mechanistic evaluation of white matter's role in bilateral coordination	Sutton Richmond <sup>1</sup> , Clayton Swanson <sup>1</sup> , Tyler Whittier <sup>1</sup> , Daniel Peterson <sup>2</sup> , Brett Fling <sup>1</sup>	<sup>1</sup> Colorado State University, <sup>2</sup> Arizona State University
119407	Motor flexibility during locomotion: an important component of functional mobility in older adults	Noah Rosenblatt <sup>1</sup> , Christopher Hurt <sup>2</sup> , Nils Eckardt <sup>3</sup>	<sup>1</sup> Rosalind Franklin University of Medicine and Science, <sup>2</sup> University of Alabama at Birmingham, <sup>3</sup> University of Oldenburg



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119409	The effects of fatigue and age on gait dynamics	Paulo Cezar Santos <sup>1</sup> , Tibor Hortobágyi <sup>2</sup> , Inge Zijdewind <sup>2</sup> , Lilian Teresa Gobbi <sup>3</sup> , Fabio Barbieri <sup>4</sup> , Claudine Lamoth <sup>2</sup>	<sup>1</sup> University of Groningen, University Medical Center Groningen, Center for Human Movement Sciences, Groningen, The Netherlands, <sup>2</sup> University of Groningen, University Medical Center Groningen, Center for Human Movement Sciences, Gr, <sup>3</sup> São Paulo State University (UNESP), Post-graduation Program in Movement Sciences, Institute of Biosc, <sup>4</sup> São Paulo State University (UNESP), Post-graduation Program in Movement Sciences, Human Movement Res
119410	Task-specific modulation of the soleus H-reflex following a single balance training session	Craig Tokuno <sup>1</sup> , Louis-Solal Giboin <sup>2</sup> , Andreas Kramer <sup>2</sup> , Markus Gruber <sup>2</sup>	<sup>1</sup> Brock University, <sup>2</sup> University of Konstanz
119411	Functional Gait Assessment (FGA) after a 12-week attentionally focused balance training intervention: Preliminary data	Danielle Felsberg <sup>1</sup> , Lauren Higgins <sup>1</sup> , Ruth Stout <sup>1</sup> , Masahiro Yamada <sup>1</sup> , Sean Cochran <sup>1</sup> , Chanel Lojaco <sup>1</sup> , Amanda Barclift <sup>1</sup> , John Palazzolo <sup>1</sup> , Jeffrey Labban <sup>1</sup> , Jeffrey Fairbrother <sup>1</sup> , Christopher Rhea <sup>1</sup> , Louisa Raisbeck <sup>1</sup>	<sup>1</sup> University of North Carolina at Greensboro
119412	The utricular hypofunction of patients with type 2 diabetes mellitus has a subtle influence on the static postural control with neck extension.	Kathrine Jáuregui-Renaud <sup>1</sup> , Catalina Aranda-Moreno <sup>1</sup> , Julio Villaseñor-Moreno <sup>1</sup> , María Giraldez-Fernandez <sup>1</sup> , Martha Gutierrez-Castañeda <sup>1</sup> , Ignacio Figueroa-Padilla <sup>1</sup> , Ana Saucedo-Zainos <sup>1</sup>	<sup>1</sup> Instituto Mexicano Del Seguro Social
119414	Balance control during the reintegration of proprioceptive and vestibular information	Jean-Philippe Cyr <sup>1</sup> , Martin Simoneau <sup>1</sup> , Noémie Ancil <sup>1</sup>	<sup>1</sup> Université Laval



119415	Static balance following a 12-week attentionally focused balance training intervention: preliminary data	Lauren Higgins <sup>1</sup> , Masa Yamada <sup>1</sup> , Ruth Stout <sup>1</sup> , Danielle Felsberg <sup>1</sup> , Chanel Lojacono <sup>1</sup> , Sean Cochran <sup>1</sup> , Amanda Barclift <sup>1</sup> , John Palazzolo <sup>1</sup> , Jeffrey Labban <sup>1</sup> , Jeffrey Fairbrother <sup>2</sup> , Christopher Rhea <sup>1</sup> , Louisa Raisbeck <sup>1</sup>	<sup>1</sup> University of North Carolina Greensboro, <sup>2</sup> University of Tennessee
119417	Normative data of turning parameters in a large cohort of older adults using wearable sensors a four-year longitudinal study	Morad Elshehabi <sup>1</sup> , Minh Pham <sup>1</sup> , Clint Hansen <sup>1</sup> , Elke Warmerdam <sup>1</sup> , Susanne Nussbaum <sup>2</sup> , Daniela Berg <sup>1</sup> , Walter Maetzler <sup>1</sup>	<sup>1</sup> Christian-Albrechts University, Kiel, Germany, <sup>2</sup> University Hospitals of Tuebingen
119418	Postural stability during reaching-to-grasping while standing in young adults and older adults with and without a history of falls	Natalia Rinaldi <sup>1</sup> , Renato Moraes <sup>2</sup>	<sup>1</sup> Federal University of Espirito Santo, <sup>2</sup> School of Physical Education and Sport of Ribeirao Preto
119419	Virtual reality training affects joint angle strategies which correlate with safer real-world obstacle crossing	Chanel Lojacono <sup>1</sup> , Michael Kress <sup>1</sup> , Christopher Rhea <sup>1</sup>	<sup>1</sup> University of North Carolina at Greensboro
119420	Rate of muscle force development during fatigue: Impact of age	Marc Belanger <sup>1</sup> , Charlotte Pion <sup>1</sup> , Justine Lai <sup>1</sup> , Said Mamouh <sup>1</sup> , Mylène Aubertin-Leheudre <sup>1</sup>	<sup>1</sup> Université du Québec à Montréal
119421	Dynamic reweighting of three modalities for sensor fusion after repetitive head impact	Jaclyn Caccese <sup>1</sup> , Fernando Dos Santos <sup>1</sup> , John Jeka <sup>1</sup>	<sup>1</sup> University of Delaware
119422	Sensory weighting and organization strategies used by young adults with CLBP during standing	Jennifer Sansom <sup>1</sup> , Karen Lomond <sup>2</sup>	<sup>1</sup> Central Michigan University, <sup>2</sup> Ithaca College
119423	Specificity of trunk postural responses to three-dimensional surface stimuli	Adam Goodworth <sup>1</sup> , Cody Barrett <sup>2</sup> , Jonathan Rylander <sup>2</sup> , Brian Garner <sup>2</sup>	<sup>1</sup> University of Hartford, <sup>2</sup> Baylor University
119425	Increasing the distance of an external focus of attention enhances learning: A replication and extension of McNevin, Shea and Wulf (2003)	Nadia Polskaia <sup>1</sup> , Rebecca Bond <sup>1</sup> , Juliane Ratte <sup>1</sup> , Yves Lajoie <sup>1</sup>	<sup>1</sup> University of Ottawa



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119428	Examining neural plasticity for slip-perturbation training: An fMRI study	Tanvi Bhatt <sup>1</sup> , Patel Prakruti <sup>1</sup> , Shamali Dusane <sup>1</sup> , Sophie Deldonno <sup>1</sup> , Scott Scott Langenecker <sup>1</sup>	<sup>1</sup> University of Illinois at Chicago
119429	Is there an optimal recovery step landing range to prevent backward fall from slips: Evidence from large-scale overground slips	Tanvi Bhatt <sup>1</sup> , Shuaijie Wang <sup>1</sup> , Yiru (Emma) Wang <sup>1</sup>	<sup>1</sup> University of Illinois at Chicago
119430	Treadmill gait-slip training in healthy community-dwelling older adults: Mechanisms of within trial adaptation for a progressive ascending-and-mixed intensity protocol	Yiru Wang <sup>1</sup> , Shuaijie Wang <sup>1</sup> , Anna Lee <sup>1</sup> , Clive Pai <sup>2</sup> , Tanvi Bhatt <sup>1</sup>	<sup>1</sup> University of Illinois at Chicago, <sup>2</sup> Retired from University of Illinois at Chicago
119432	Examining the relationship between visual acuity, executive function and postural control in cognitively healthy adults and adults with Alzheimer's dementia	Susan Hunter <sup>1</sup> , Alison Divine <sup>2</sup> , Humberto Omana <sup>1</sup> , Andrew Johnson <sup>1</sup> , Jeff Holmes <sup>1</sup> , Keith Hill <sup>3</sup> , Walter Wittich <sup>4</sup>	<sup>1</sup> University of Western Ontario, <sup>2</sup> University of Leeds, <sup>3</sup> Curtin University, <sup>4</sup> University of Montreal
119434	Effect of learning to use a single-point cane on gait and cognitive demands of walking in people with mild to moderate Alzheimer's dementia	Susan Hunter <sup>1</sup> , Alison Divine <sup>2</sup> , Humberto Omana <sup>1</sup> , Walter Wittich <sup>3</sup> , Andrew Johnson <sup>1</sup> , Keith Hill <sup>4</sup> , Jeff Holmes <sup>1</sup>	<sup>1</sup> University of Western Ontario, <sup>2</sup> University of Leeds, <sup>3</sup> University of Montreal, <sup>4</sup> Curtin University
119435	Effect of multi-tasking on gait and cognitive demands in adults with Alzheimer's dementia experienced in using a 4-wheeled walker	Susan Hunter <sup>1</sup> , Alison Divine <sup>2</sup> , Humberto Omana <sup>1</sup> , Walter Wittich <sup>3</sup> , Andrew Johnson <sup>1</sup> , Keith Hill <sup>4</sup>	<sup>1</sup> University of Western Ontario, <sup>2</sup> University of Leeds, <sup>3</sup> University of Montreal, <sup>4</sup> Curtin University
119438	Activity in the sensorimotor cortex during action observation of walking combined with motor imagery	Naotsugu Kaneko <sup>1</sup> , Hikaru Yokoyama <sup>2</sup> , Yohei Masugi <sup>3</sup> , Katsumi Watanabe <sup>4</sup> , Kimitaka Nakazawa <sup>1</sup>	<sup>1</sup> The University of Tokyo, <sup>2</sup> Tokyo University of Agriculture and Technology, <sup>3</sup> Tokyo International University, <sup>4</sup> Waseda University



119439	Body equilibrium function in the course of Ménière's disease	Masahiko Yamamoto <sup>1</sup>	<sup>1</sup> Toho University
119440	Fluctuation of center of pressure and the affecting factors in young children	Naomi Tsugita <sup>1</sup> , Syuhei Kobayashi <sup>1</sup> , Shino Ogawa <sup>1</sup> , Taiko Shiwa <sup>1</sup> , Yasuko Funabiki <sup>1</sup>	<sup>1</sup> Kyoto University
119441	Falling down - limbs and trunk muscles responses to vertical perturbations	Desiderio Cano Porras <sup>1</sup> , Jesse Jacobs <sup>2</sup> , Rivka Inzelberg <sup>3</sup> , Ofer Keren <sup>1</sup> , Gabriel Zeilig <sup>1</sup> , Meir Plotnik <sup>1</sup>	<sup>1</sup> Sheba Medical Center, <sup>2</sup> University of Vermont, <sup>3</sup> Tel Aviv University
119442	Protective postural control with divided attention: Effects of Parkinson's disease	Daniel Peterson <sup>1</sup> , Jordan Barajas <sup>1</sup> , Anandita Nadkarni <sup>2</sup> , Linda Denney <sup>3</sup> , Shyamal Mehta <sup>4</sup>	<sup>1</sup> Arizona State University, <sup>2</sup> Carnegie Mellon University, <sup>3</sup> Northern Arizona University, <sup>4</sup> Mayo Clinic
119443	Function of the knee joint during walking before and after the meniscus resection	Sergey Kaurkin <sup>1</sup> , Dmitriy Skvortsov <sup>2</sup> , Alexander Akhpashev <sup>1</sup>	<sup>1</sup> Federal Research and Clinical Centre of Russias Federal Medical-Biological Agency (FNKC FMBA), <sup>2</sup> Federal Research and Clinical Centre of Russia's Federal Medical-Biological Agency (FNKC FMBA)
119445	Knee joint function and walking biomechanics in patients in acute phase anterior cruciate ligament (ACL) tear	Sergey Kaurkin <sup>1</sup> , Dmitriy Skvortsov <sup>1</sup> , Alexander Akhpashev <sup>1</sup>	<sup>1</sup> Federal Research and Clinical Centre of Russia's Federal Medical-Biological Agency (FNKC FMBA)
119447	Do high and low spinal cord injured subjects learn exoskeleton skills differently?	Rosanne Van Dijsseldonk <sup>1</sup> , I.J.W. Van Nes <sup>2</sup> , H. Rijken <sup>2</sup> , H. Van De Meent <sup>3</sup> , N.L.W. Keijsers <sup>2</sup>	<sup>1</sup> Radboudumc & Sint Maartenskliniek, <sup>2</sup> Sint Maartenskliniek, <sup>3</sup> Radboudumc
119448	The effect of real-time biofeedback on lumbar spine and lower limb kinematics and kinetics during repetitive lifting	Yanto Naudé <sup>1</sup> , Grant Mawston <sup>1</sup> , Jeff Kilby <sup>1</sup> , Mark Boocock <sup>1</sup>	<sup>1</sup> Auckland University of Technology
119449	Short postural training affects stability in children with autism spectrum disorders	Simona Caldani <sup>1</sup> , Maud Tisné <sup>1</sup> , Paola Atzori <sup>1</sup> , Hugo Peyre <sup>1</sup> , Richard Delorme <sup>1</sup> , Maria Pia Bucci <sup>1</sup>	<sup>1</sup> Hopital Robert Debré
119450	Functional electrical stimulation during gait following anterior cruciate ligament reconstruction - a preliminary study	Shmuel Springer <sup>1</sup> , Uria Moran <sup>2</sup> , Uri Gottlieb <sup>2</sup> , Arnon Gam <sup>2</sup>	<sup>1</sup> Ariel University Israel, <sup>2</sup> IDF Medical Corps





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119454	Retention, savings and interlimb transfer of reactive gait adaptations in humans following unexpected perturbations	Christopher Mccrum <sup>1</sup> , Kiros Karamanidis <sup>2</sup> , Paul Willems <sup>1</sup> , Wiebren Zijlstra <sup>3</sup> , Kenneth Meijer <sup>1</sup>	<sup>1</sup> Maastricht University, <sup>2</sup> London South Bank University, <sup>3</sup> German Sport University Cologne
119457	Gait as a signature of cognitive impairment and dementia disease subtype	Riona Mc Ardle <sup>1</sup> , Brook Galna <sup>2</sup> , Alan Thomas <sup>2</sup> , Lynn Rochester <sup>2</sup>	<sup>1</sup> Institute of Neuroscience, <sup>2</sup> Newcastle University
119458	Step-length changes caused by a dual-task test among individuals undergoing memory assessment - a pilot study	Anna Cristina Åberg <sup>1</sup> , Fredrik Tinmark <sup>2</sup> , Lars Berglund <sup>1</sup> , Kjartan Halvorsen <sup>1</sup> , Vilmantas Giedraitis <sup>1</sup>	<sup>1</sup> Uppsala University, <sup>2</sup> The Swedish School of Sport and Health Sciences, GIH
119459	Comparative characteristics of obstacle avoidance strategy in young and older adults in various walking conditions	Kotaro Shimizu <sup>1</sup> , Yuriko Kihara <sup>1</sup> , Koki Iwata <sup>1</sup> , Takahiro Higuchi <sup>1</sup> , Taketo Furuna <sup>1</sup>	<sup>1</sup> Sapporo Medical University
119460	Is free-living gait assessment a useful marker of cognitive impairment and dementia disease subtype?	Riona Mc Ardle <sup>1</sup> , Brook Galna <sup>1</sup> , Silvia Del Din <sup>1</sup> , Alan Thomas <sup>1</sup> , Lynn Rochester <sup>1</sup>	<sup>1</sup> Newcastle University
119461	Influence of smartphone use while walking: the relationship between obstacle avoidance and adaptive walking caused by smartphone use	Sato Ren <sup>1</sup> , Kotaro Shimizu <sup>1</sup> , Koyuki Nishikawa <sup>2</sup> , Yuriko Kihara <sup>3</sup> , Kazunari Itou <sup>4</sup> , Keita Tai <sup>5</sup> , Taketo Furuna <sup>1</sup>	<sup>1</sup> Sapporo Medical University, <sup>2</sup> Goryokaku Hospital, <sup>3</sup> Japan Health Care College, <sup>4</sup> Asahikawa Rehabilitation Hospital, <sup>5</sup> Houseikai Motomachi Himawari Clinic
119462	The effect of changes in body weight on postural control in obese and non-obese adults: a pilot study	Daniela Godoi <sup>1</sup> , Rafael Santi <sup>1</sup>	<sup>1</sup> Federal University of São Carlos (UFSCar)
119463	Post-stroke walking characteristics on association between motor paralysis and walking speed by cluster analysis	Naomichi Mizuta <sup>1</sup> , Yusaku Takamura <sup>1</sup> , Shintaro Fujii <sup>1</sup> , Naruhito Hasui <sup>2</sup> , Tomoki Nakatani <sup>2</sup> , Masako Tsutsumi <sup>2</sup> , Junji Taguchi <sup>2</sup> , Shu Morioka <sup>3</sup>	<sup>1</sup> Department of Neurorehabilitation, Graduate School of Health Sciences, Kio University, <sup>2</sup> Medical Corporation SYOWAKAI, Takarazuka Rehabilitation Hospital, <sup>3</sup> Kio University



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119466	Developing resilience to unpredictable body balance perturbations: contextual interference effect in the training of compensatory arm and leg movements	Luis Teixeira <sup>1</sup> , Patricia Takazono <sup>1</sup> , Marina Betelli <sup>1</sup> , Caroline Souza <sup>1</sup> , Julia Oliveira <sup>1</sup> , Daniel Coelho <sup>1</sup> , Jacques Duysens <sup>2</sup>	<sup>1</sup> University of São Paulo, <sup>2</sup> Catholic University of Leuven
119467	Feedforward motor control in developmental dyslexia and developmental coordination disorder: does comorbidity matter?	Christine Assaiante <sup>1</sup> , Fabien Cignetti <sup>2</sup> , Marianne Vaugoyeau <sup>1</sup> , Aurelie Fontan <sup>1</sup> , Marianne Jover <sup>3</sup> , Brigitte Chabrol <sup>3</sup>	<sup>1</sup> CNRS, <sup>2</sup> CNRS, TIMC-IMAG UMR 5525, <sup>3</sup> AMU
119468	Can a fractal visual motion cue modulate postural sway complexity?	Harris Sotirakis <sup>1</sup> , Nicholas Stergiou <sup>2</sup> , Dimitrios Patikas <sup>1</sup> , Vassilia Hatzitaki <sup>1</sup>	<sup>1</sup> Aristotle University of Thessaloniki, <sup>2</sup> University of Nebraska at Omaha
119469	The Kids-BESTest of postural control predicts gross motor coordination in primary school children with and without coordination difficulties.	Leanne Johnston <sup>1</sup> , Gemma Allinson <sup>1</sup> , Breanna Raatz <sup>1</sup> , Rosalee Dewar <sup>1</sup> , Sally Hannah <sup>2</sup>	<sup>1</sup> The University of Queensland, <sup>2</sup> St Peters Lutheran College Indooroopilly
119470	Evaluation of balance recovery from unpredictable large-magnitude perturbations through the compensatory arm and leg movements (CALM) scale	Luis Teixeira <sup>1</sup> , Marina Betelli <sup>1</sup> , Patricia Takazono <sup>1</sup> , Caroline Souza <sup>1</sup> , Julia Oliveira <sup>1</sup> , Daniel Coelho <sup>2</sup> , Jacques Duysens <sup>3</sup>	<sup>1</sup> University of São Paulo, <sup>2</sup> Federal University of ABC, <sup>3</sup> Catholic University of Leuven
119471	Thinking about walking: a new approach to quantifying gait initiation using a wearable sensor	Eran Gazit <sup>1</sup> , Marina Brozgol <sup>1</sup> , Pablo Cornejo Thumm <sup>1</sup> , Robert Dawe <sup>2</sup> , Thomas Curran <sup>2</sup> , Anat Mirelman <sup>3</sup> , Jeff Hausdorff <sup>4</sup> , Aron Buchman <sup>2</sup>	<sup>1</sup> Center for the study of Movement, Cognition and Mobility, Tel Aviv Sourasky Medical Center, <sup>2</sup> Rush Alzheimer's Disease Center, <sup>3</sup> [1] Center for the study of Movement, Cognition and Mobility, Tel Aviv Sourasky Medical Center [2] S, <sup>4</sup> [1] Center for the study of Movement, Cognition and Mobility, Tel Aviv Sourasky Medical Center, Tel



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119472	Reproducibility of the Timed Up and Go (TUG) standard and dual task versions in school-aged children with and without coordination difficulties.	Leanne Johnston <sup>1</sup> , Breanna Raatz <sup>1</sup> , Gemma Allinson <sup>1</sup> , Rosalee Dewar <sup>1</sup> , Sally Hannah <sup>1</sup>	<sup>1</sup> The University of Queensland
119473	Reduced balance stability in obese individuals is associated with low tactile sensibility of the feet soles	Luis Teixeira <sup>1</sup> , Jair Bueno <sup>1</sup> , Caroline Souza <sup>1</sup> , Daniel Coelho <sup>2</sup>	<sup>1</sup> University of São Paulo, <sup>2</sup> Federal University of ABC
119474	Gaps between gait measured in the lab during usual and dual-task walking compared to free-living walking: evidence from 24/7 monitoring of older adults	Inbar Hillel <sup>1</sup> , Laura Avanzino <sup>2</sup> , Lynn Rochester <sup>3</sup> , Ugo Della Croce <sup>4</sup> , Marcel Olde Rikkert <sup>5</sup> , Silvia Del Din <sup>6</sup> , Pieter Ginis <sup>7</sup> , Nir Giladi <sup>8</sup> , Anat Mirelman <sup>8</sup> , Jeffrey Hausdorff <sup>8</sup>	<sup>1</sup> Center for the study of Movement, Cognition and Mobility, Neurological Institute, Tel Aviv Sourasky Medical Center, Israel., <sup>2</sup> 1)University of Genova, 2)IRCCS San Martino Teaching Hospital, <sup>3</sup> 1)Institute of Neuroscience, Newcastle University Institute for Ageing, Clinical Ageing Research Uni, <sup>4</sup> 1)Bioengineering unit, University of Sassari, 2)Interuniversity Centre of Bioengineering of the Huma, <sup>5</sup> Donders Institute for Brain, Cognition and Behaviour; Radboudumc, department of Neurology, Nijmegen,, <sup>6</sup> Institute of Neuroscience, Newcastle University Institute for Ageing, Clinical Ageing Research Unit,, <sup>7</sup> KU Leuven, <sup>8</sup> 1)Center for the study of Movement, Cognition and Mobility, Neurological Institute, Tel Aviv Sourask



119475	Associations between laboratory-based assessments and daily physical activity in patients with Parkinson's disease: Can one replace the other?	Inbar Hillel <sup>1</sup> , Ira Galperin <sup>1</sup> , Silvia Del Din <sup>2</sup> , Esther Bekkers <sup>3</sup> , Alice Nieuwboer <sup>3</sup> , Giovanni Abbruzzese <sup>4</sup> , Laura Avanzino <sup>5</sup> , Freek Nieuwhof <sup>6</sup> , Bastiaan Bloem <sup>7</sup> , Lynn Rochester <sup>8</sup> , Ugo Della Croce <sup>9</sup> , Andrea Cereatti <sup>10</sup> , Nir Giladi <sup>11</sup> , Anat Mirelman <sup>11</sup> , Jeffrey Hausdorff <sup>11</sup>	<sup>1</sup> Center for the study of Movement, Cognition and Mobility, Tel-Aviv Sourasky Medical Center, <sup>2</sup> Institute of Neuroscience, Newcastle University Institute for Ageing, Clinical Ageing Research Unit,, <sup>3</sup> KU Leuven, <sup>4</sup> 1)University of Genova,2) IRCCS San Martino Teaching Hospital, <sup>5</sup> 1)University of Genova, 2)IRCCS San Martino Teaching Hospital, <sup>6</sup> 1)Donders Institute for Brain, Cognition and Behaviour,2)Radboud university medical center, <sup>7</sup> Donders Institute for Brain, Cognition and Behaviour;, <sup>8</sup> 1)Institute of Neuroscience, Newcastle University Institute for Ageing, Clinical Ageing Research Uni, <sup>9</sup> 1)Bioengineering unit, University of Sassari, 2)Interuniversity Centre of Bioengineering of the Huma, <sup>10</sup> 1)University of Sassari;2) Interuniversity Centre of Bioengineering of the Human Neuromusculoskeleta, <sup>11</sup> 1)Center for the study of Movement, Cognition and Mobility, Neurological Institute, Tel Aviv Sourask
119476	Effect of the horizontal-vertical illusion on stepping-over action	Ryota Sakurai <sup>1</sup> , Kentaro Kodama <sup>2</sup> , Yu Ozawa <sup>3</sup>	<sup>1</sup> Tokyo Metropolitan Institute of Gerontology, <sup>2</sup> Kanagawa University, <sup>3</sup> Waseda University
119478	The effects of levodopa on prefrontal activation during gait in individuals with Parkinson's disease	Moria Dagan <sup>1</sup> , Hagar Bernad-Elazari <sup>2</sup> , Talia Herman <sup>2</sup> , Rachel Harrison <sup>3</sup> , Junhong Zhou <sup>3</sup> , Shiran Shustak <sup>2</sup> , Marina Brozgol <sup>2</sup> , Nir Giladi <sup>4</sup> , Anat Mirelman <sup>2</sup> , Brad Manor <sup>3</sup> , Jeffrey Hausdorff <sup>1</sup>	<sup>1</sup> Sagol School of Neuroscience, Tel Aviv University, <sup>2</sup> Center for the Study of Movement, Cognition and Mobility, Tel Aviv Sourasky Medical Center, <sup>3</sup> Institute for Aging Research, Hebrew SeniorLife, Harvard Medical School, <sup>4</sup> Department of Neurology, Sackler Faculty of Medicine, Tel Aviv University



119480	Will my child walk? New insights into the relationship between lower limb muscle strength and gross motor function in children with spina bifida myelomeningocele.	Leanne Johnston <sup>1</sup> , Ashleigh Gehrig <sup>1</sup> , Nicole Thomas <sup>2</sup>	<sup>1</sup> The University of Queensland, <sup>2</sup> Children's Health Queensland Hospital & Health Service
119481	Assessing recovery time from unexpected loss of balance during walking in young and older adults	Uri Rosenblum Belzer <sup>1</sup> , Itzik Melzer <sup>2</sup> , Shani Kimel-Naor <sup>1</sup> , Lotem Kribus-Shmiel <sup>1</sup> , Yotam Bahat <sup>1</sup> , Gabi Zeilig <sup>1</sup> , Meir Plotnik <sup>1</sup>	<sup>1</sup> Sheba Medical Center, <sup>2</sup> Ben-Gurion University of the Negev
119483	Phase- and speed-dependent modulation of vestibulo-ocular reflexes during walking	Max Wühr <sup>1</sup> , Haike Dietrich <sup>1</sup>	<sup>1</sup> Ludwig-Maximilians-University Munich
119484	Effects of Dance for Parkinson's on gait and dual-task gait in Parkinson's disease assessed using Vicon 3D-motion capture	Nadeesha Kalyani <sup>1</sup> , Karen Sullivan <sup>2</sup> , Gene Moyle <sup>3</sup> , Sandy Brauer <sup>4</sup> , Erica Rose Jeffrey <sup>5</sup> , Graham Kerr <sup>6</sup>	<sup>1</sup> Queensland University of Technology, <sup>2</sup> School of Psychology and Counselling, Faculty of Health, Queensland University of Technology, <sup>3</sup> School of Creative Practice, Faculty of Creative Industries, Queensland University of Technology, <sup>4</sup> School of Health and Rehabilitation Sciences, Faculty of Health and Behavioural Sciences, University, <sup>5</sup> Dance for Parkinson's Australia and Queensland Ballet, <sup>6</sup> Movement Neuroscience, Institute of Health and Biomedical Innovation, Queensland University of Techn
119485	Effects of strength training the hip abductor-adductor muscles on protective stepping: a pilot study	Marie-Laure Mille <sup>1</sup> , Maria Papaioordanidou <sup>2</sup> , Guillaume Florent <sup>1</sup> , Karim El Koulali <sup>1</sup> , Jean-Louis Vercher <sup>1</sup> , Richard Fitzpatrick <sup>3</sup>	<sup>1</sup> CNRS & Aix-Marseille Univ, <sup>2</sup> URF STAPS, Univ. de Bourgogne, <sup>3</sup> Univ of Now South Wales
119487	Plantar foot mechanoreceptor topography and lower limb muscle activity	Kelly Robb <sup>1</sup> , Stephen Perry <sup>1</sup>	<sup>1</sup> Wilfrid Laurier University



119488	Biomechanical balance control in older adults: a systematic review and meta-analysis	Pieter Meyns <sup>1</sup> , Lotte Palmers <sup>1</sup> , Sander Verbeek <sup>1</sup> , Joke Spildooren <sup>1</sup>	<sup>1</sup> Hasselt University
119490	Can quantitative gait parameters serve as progression marker of Parkinson's disease? A longitudinal study over 5 years	Markus Hobert <sup>1</sup> , Susanne Nussbaum <sup>2</sup> , Tanja Heger <sup>2</sup> , Daniela Berg <sup>1</sup> , Walter Maetzler <sup>1</sup> , Sebastian Heinzl <sup>1</sup>	<sup>1</sup> University of Kiel, <sup>2</sup> University of Tuebingen
119491	The effect of an exergame intervention on clinical balance scales in children with cerebral palsy: preliminary results from two non-randomized trials.	Pieter Meyns <sup>1</sup> , Ian Blanckaert <sup>2</sup> , Chloé Bras <sup>3</sup> , Jaap Harlaar <sup>4</sup> , Laura Van De Pol <sup>3</sup> , Frederik Barkhof <sup>3</sup> , Hilde Van Waelvelde <sup>2</sup> , Annemieke Buizer <sup>3</sup>	<sup>1</sup> Hasselt University, <sup>2</sup> Ghent University, <sup>3</sup> Amsterdam UMC, Vrije Universiteit Amsterdam, <sup>4</sup> TU Delft
119492	Are there associations between prefrontal cortex activity and turning behaviors in people with and without freezing of gait?	Valeria Belluscio <sup>1</sup> , Samuel Stuart <sup>2</sup> , Elena Bergamini <sup>1</sup> , Giuseppe Vannozzi <sup>1</sup> , Martina Mancini <sup>1</sup>	<sup>1</sup> Interuniversity Centre of Bioengineering Bohnes, University of Rome Foro Italico, <sup>2</sup> Oregon Health and Science University
119493	Motor descriptors of locomotor performance in children and young adults with Developmental Coordination Disorder.	Maria Cristina Bisi <sup>1</sup> , Manuela Fabbri <sup>2</sup> , Manuela Manfredini <sup>2</sup> , Rita Stagni <sup>1</sup>	<sup>1</sup> University of Bologna, <sup>2</sup> AUSL Bologna
119494	Monitoring postural control development in children using inertial sensors: should we account for body size and gender?	Maria Cristina Bisi <sup>1</sup> , Rita Stagni <sup>1</sup>	<sup>1</sup> University of Bologna
119495	Postural control following a sport-related concussion changes in response to continuous platform rotations	Harry Bailey <sup>1</sup> , Cameron Kirk <sup>1</sup> , Richard Mills <sup>2</sup> , Richard Foster <sup>1</sup>	<sup>1</sup> Liverpool John Moores University, <sup>2</sup> Manchester Metropolitan University
119496	Test-retest reliability of force plate balance measures in individuals with chronic stroke	Andrew Huntley <sup>1</sup> , Elise Belhacel <sup>2</sup> , Raabeae Aryan <sup>1</sup> , Alison Schinkel-Ivy <sup>3</sup> , Anthony Aquil <sup>1</sup> , Avril Mansfield <sup>1</sup>	<sup>1</sup> Toronto Rehabilitation Institute - University Health Network, <sup>2</sup> Institut ESIPÉ Créteil (ISBS) - Université Paris-Est Créteil, <sup>3</sup> Nipissing University



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119498	Validity and usability of a mixed reality headset for automated mobility assessment	Ruopeng Sun <sup>1</sup> , Roberto Aldunate <sup>1</sup> , Jacob Sosnoff <sup>1</sup>	<sup>1</sup> University of Illinois at Urbana-Champaign
119499	Support Surface Translation - Sway responses of vestibular able subjects resemble those of vestibular loss subjects	Thomas Mergner <sup>1</sup> , Emre Akcay <sup>2</sup> , Vittorio Lippi <sup>1</sup> , Lorenz Assländer <sup>3</sup>	<sup>1</sup> University Clinics Freiburg, <sup>2</sup> Koecaeli Univeristy, <sup>3</sup> University Konstanz
119500	An evaluation of a proprietary motion capture system via kinematic analysis	Vincenzo Di Bacco <sup>1</sup> , Dmitry Verniba <sup>1</sup> , William Gage <sup>1</sup>	<sup>1</sup> York University
119501	Influence of reactive balance training on responses to an unexpected slip in individuals with chronic stroke: A randomized controlled trial	Andrew Huntley <sup>1</sup> , Alison Schinkel-Ivy <sup>2</sup> , Anthony Aquil <sup>1</sup> , Avril Mansfield <sup>1</sup>	<sup>1</sup> Toronto Rehabilitation Institute - University Health Network, <sup>2</sup> Nipissing University
119502	Anticipatory postural adjustments while initiating a step on a flat surface or over an obstacle	Hirofumi Ida <sup>1</sup>	<sup>1</sup> Jobu University
119507	Assessment of balance after repeated sub-concussive head trauma in female athletes	Christopher Rhea <sup>1</sup> , Sam Dubois <sup>1</sup> , Victoria Blevins <sup>1</sup> , Kristen Schleich <sup>2</sup> , Scott Ross <sup>1</sup> , Donna Duffy <sup>1</sup>	<sup>1</sup> University of North Carolina at Greensboro, <sup>2</sup> Elon University



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119511	Retention of entrained auditory fractal patterns during gait	Vincenzo Di Bacco <sup>1</sup> , Jeevaka Kiriella <sup>1</sup> , Kristen Hollands <sup>2</sup> , William Gage <sup>1</sup>	<sup>1</sup> York University, <sup>2</sup> University of Salford
119512	Foot speed perception during split-belt treadmill adaptation in adults with Parkinson's disease.	Dorelle Hinton <sup>1</sup> , Roger Wei <sup>1</sup> , David Conradsson <sup>2</sup> , Caroline Paquette <sup>1</sup>	<sup>1</sup> McGill University, <sup>2</sup> Karolinska Institutet
119514	The effects of virtual reality-induced postural threat on performance of a walking balance task.	Amir Boroomand-Tehrani <sup>1</sup> , Andrew Huntley <sup>2</sup> , David Jagroop <sup>2</sup> , Jennifer Campos <sup>2</sup> , Kara Patterson <sup>1</sup> , Luc Tremblay <sup>1</sup> , Avril Mansfield <sup>2</sup>	<sup>1</sup> University of Toronto, <sup>2</sup> Toronto Rehabilitation Institute - University Health Network
119515	Application and evaluation of the extrapolated centre of mass as a clinical gait stability measure	Albert Vette <sup>1</sup> , Jeremy Hall <sup>1</sup> , Juan Forero <sup>1</sup> , Jacqueline Hebert <sup>1</sup>	<sup>1</sup> University of Alberta
119516	Tumors of cerebellum effect on saccadic system and gait	Alina Aizenshtein <sup>1</sup> , Marina Shurupova <sup>1</sup> , Vladimir Kasatkin <sup>1</sup> , Dmitriy Skvortsov <sup>1</sup> , Alexander Karelin <sup>1</sup>	<sup>1</sup> Dmitry Rogachev National Research Center of Pediatric Hematology, Oncology and Immunology
119517	Recovery of head trunk kinematics during functional movement tasks following unilateral vestibular hypofunction	Lee Dibble <sup>1</sup> , Brian Loyd <sup>1</sup> , Grace Hunt <sup>1</sup> , Mark Lester <sup>2</sup> , Serene Paul <sup>3</sup>	<sup>1</sup> University of Utah, <sup>2</sup> Army-Baylor University, <sup>3</sup> University of Sydney





119518	Collision avoidance between two walkers: Reduced avoidance behaviour in previously concussed athletes	Natalie Snyder <sup>1</sup> , Michael Cinelli <sup>1</sup> , Victoria Rapos <sup>1</sup> , Armel Crétual <sup>2</sup> , Anne-Hélène Olivier <sup>2</sup>	<sup>1</sup> Wilfrid Laurier University, <sup>2</sup> University of Rennes 2, Inria, M2S
119519	Quantification of seated balance control using system identification	Albert Vette <sup>1</sup> , Kshitij Agarwal <sup>1</sup> , Alireza Noamani <sup>1</sup> , Andrew Williams <sup>1</sup> , Hossein Rouhani <sup>1</sup>	<sup>1</sup> University of Alberta
119521	Minimum Predicted Distance: applying a common metric to collision avoidance strategies between typically developing children and adult walkers	Victoria Rapos <sup>1</sup> , Michael Cinelli <sup>1</sup> , Natalie Snyder <sup>1</sup> , Armel Crétual <sup>2</sup> , Anne-Hélène Olivier <sup>2</sup>	<sup>1</sup> Wilfrid Laurier University, <sup>2</sup> University of Rennes 2, Inria, M2S
119522	The effect of closed-loop tactile feedback on gait initiation in people with Parkinson's disease with Freezing of Gait	Christian Schlenstedt <sup>1</sup> , Daniel Peterson <sup>2</sup> , Martina Mancini <sup>3</sup>	<sup>1</sup> University Kiel, Germany, <sup>2</sup> College of Health Solutions, <sup>3</sup> Oregon Health & Science University
119523	A balance control model for vestibular loss subjects balancing on a tilting support	Lorenz Assländer <sup>1</sup> , Georg Hettich <sup>2</sup> , Markus Gruber <sup>1</sup> , Thomas Mergner <sup>3</sup>	<sup>1</sup> University of Konstanz, <sup>2</sup> Aesculab, <sup>3</sup> University Clinics Freiburg
119524	Examining body size-characteristics on obstacle avoidance behaviour in human locomotion	Sheryl Bourgaize <sup>1</sup> , Bradford Mcfadyen <sup>2</sup> , Michael Cinelli <sup>1</sup>	<sup>1</sup> Wilfrid Laurier University, <sup>2</sup> Université Laval
119525	Vestibular precision and postural sway variability	Adam Goodworth <sup>1</sup> , Yulia Valko <sup>2</sup> , Robert Peterka <sup>3</sup> , Daniel Merfeld <sup>4</sup> , Faisal Karmali <sup>5</sup>	<sup>1</sup> University of Hartford, <sup>2</sup> University Hospital Zurich, <sup>3</sup> VA Portland Health Care System, <sup>4</sup> Ohio State University, <sup>5</sup> Massachusetts Eye and Ear Infirmary
119526	Healthy young adults use vision for postural control similarly at low and high virtual heights	Eric Anson <sup>1</sup> , Nicole Kuznetsov <sup>1</sup> , Raul Rodriguez <sup>1</sup> , Kyle Critelli <sup>1</sup> , Benjamin Crane <sup>1</sup>	<sup>1</sup> University of Rochester
119527	Fast paced gait may be more discriminating than dual tasking for detecting severity of gait and turn deficits in Fragile X-Associated Tremor/Ataxia Syndrome (FXTAS)	Joan O'keefe <sup>1</sup> , Danielle Carns <sup>1</sup> , Joseph Guan <sup>1</sup> , Erin Robertson <sup>1</sup> , Timothy Tung <sup>1</sup> , Nicollette Purcell <sup>1</sup> , Elizabeth Berry-Kravis <sup>1</sup> , Deborah Hall <sup>1</sup>	<sup>1</sup> Rush University Medical Center



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119530	The association of confidence in walking, fear of falling and cautious gait in older adults	Maha Almarwani <sup>1</sup> , Jennifer Brach <sup>2</sup>	<sup>1</sup> King Saud University, <sup>2</sup> University of Pittsburgh
119531	Athletes adopt different control strategies compared to non-athletes with increased postural demands	Jenna Pitman <sup>1</sup> , Rhianna Malcolm <sup>1</sup> , David Shulman <sup>1</sup> , Becky Breau <sup>1</sup> , Michael Cinelli <sup>2</sup> , Lori Ann Vallis <sup>1</sup>	<sup>1</sup> University of Guelph, <sup>2</sup> Wilfred Laurier University
119532	Differences in pre-season postural control based on sport type	John Palazzolo <sup>1</sup> , Daniel Goble <sup>2</sup> , Jeff Labban <sup>1</sup> , Scott Ross <sup>1</sup> , Donna Duffy <sup>1</sup> , Christopher Rhea <sup>1</sup>	<sup>1</sup> University of North Carolina at Greensboro, <sup>2</sup> Oakland University
119533	Postural biomechanical predictors of subjective and objective measures of severity of freezing of gait in Parkinson's disease	Daniel Coelho <sup>1</sup> , Caroline Souza <sup>2</sup> , Carla Silva-Batista <sup>2</sup> , Andrea De Lima-Pardini <sup>1</sup> , Alexandre Bastos <sup>1</sup> , Luis Teixeira <sup>2</sup>	<sup>1</sup> Federal University of ABC, <sup>2</sup> University of São Paulo
119534	Influence of environmental context on locomotor skill learning in virtual reality in people with Parkinson's disease	Aram Kim <sup>1</sup> , James Finley <sup>1</sup>	<sup>1</sup> University of Southern California
119535	Correlation between mandibular position and modification of stabilometric parameters (LFS, VarVit)	Michele Barbera <sup>1</sup> , Nicolò Barbera <sup>1</sup> , Emanuele Barbera <sup>2</sup> , Andrea Fregoni <sup>1</sup>	<sup>1</sup> Studio Dentistico Barbera, <sup>2</sup> università degli studi di Milano
119538	Understanding the hemodynamic response and sensory contribution to automatic postural control	Gabrielle St-Amant <sup>1</sup> , Tabassum Rahman <sup>1</sup> , Nadia Polskaia <sup>1</sup> , Sarah Fraser <sup>1</sup> , Yves Lajoie <sup>1</sup>	<sup>1</sup> University of Ottawa
119539	Motoric Cognitive Risk syndrome, falls incidence and trajectory of gait and cognitive change in an octogenarian cohort: Te Puawaitanga o Nga Tapuwae Kia Ora Tonu, LiLACS NZ	Sue Lord <sup>1</sup> , Simon Moyes <sup>2</sup> , Ruth Teh <sup>2</sup> , Waiora Port <sup>2</sup> , Marama Muru-Lanning <sup>2</sup> , Catherine Bacon <sup>2</sup> , Tim Wilkinson <sup>3</sup> , Ngaire Kerse <sup>2</sup>	<sup>1</sup> Auckland University of Technology, <sup>2</sup> University of Auckland, <sup>3</sup> Otago University



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119543	Can years of education predict gait speed? A cross-sectional study of community-dwelling Brazilian older adults	Renato Freire Júnior <sup>1</sup> , Jaqueline Porto <sup>2</sup> , Julia Fernandes <sup>3</sup> , Larissa Bocarde <sup>3</sup> , Tatiane Pontes <sup>3</sup> , Karoliny Cruz <sup>1</sup> , Juliane Belém <sup>4</sup> , Daniela Abreu <sup>3</sup>	<sup>1</sup> Federal University of Amazonas - UFAM, <sup>2</sup> Ribeirão Preto Medical school - University of São Paulo, <sup>3</sup> Ribeirão Preto Medical school - University of São Paulo, <sup>4</sup> Family Health Support Center - Coari - AM
119544	Collegiate athletes with a conservative gait strategy are more likely to sustain a lower extremity musculoskeletal injury following concussion	Jessie Oldham <sup>1</sup> , David Howell <sup>2</sup> , Christopher Knight <sup>3</sup> , Jeremy Crenshaw <sup>3</sup> , Thomas Buckley <sup>3</sup>	<sup>1</sup> Boston Children's Hospital, <sup>2</sup> Children's Hospital Colorado, <sup>3</sup> University of Delaware
119545	Brain functional connectivity changes associated to freezing of gait in Parkinson's disease	Alexandra Potvin-Desrochers <sup>1</sup> , Trina Mitchell <sup>1</sup> , Thomas Gisiger <sup>1</sup> , Caroline Paquette <sup>1</sup>	<sup>1</sup> McGill University
119546	The ability to switch from a trail limb avoidance to a lead limb accommodation strategy	Félix Fiset <sup>1</sup> , Bradford Mcfadyen <sup>1</sup>	<sup>1</sup> Université Laval
119547	Impact of a thin plantar orthopaedic insert on posture and locomotion	Carole Puil <sup>1</sup> , Anne Hélène Olivier <sup>2</sup> , Armel Cretual <sup>3</sup>	<sup>1</sup> Rennes University - IFPEK - M2S Laboratory, <sup>2</sup> Rennes University -INRIA - M2S Laboratory, <sup>3</sup> Rennes University - INRIA - M2S Laboratory
119548	Integrating technology into clinical practice for the assessment of balance and mobility: perspectives of exercise professionals practicing in retirement and long-term care	Kathryn Sibley <sup>1</sup> , Karen Van Ooteghem <sup>2</sup> , Elizabeth Inness <sup>3</sup> , Avril Mansfield <sup>3</sup> , Jaimie Killingbeck <sup>4</sup>	<sup>1</sup> University of Manitoba, <sup>2</sup> University of Waterloo, <sup>3</sup> Toronto Rehabilitation Institute-University Health Network, <sup>4</sup> Schlegel Villages
119549	The effects of cognitive interference on gait and turning in Huntington's disease	Nicollette Purcell <sup>1</sup> , Jennifer Goldman <sup>1</sup> , Bryan Bernard <sup>1</sup> , Joan O'keefe <sup>1</sup>	<sup>1</sup> Rush University Medical Center
119550	Central sensorimotor integration delays: does response latency to pseudorandom balance perturbations relate to reaction time?	Douglas Martini <sup>1</sup> , Lucy Parrington <sup>1</sup> , Peter Fino <sup>2</sup> , Robert Peterka <sup>3</sup> , Laurie King <sup>1</sup>	<sup>1</sup> Oregon Health and Science University, <sup>2</sup> University of Utah, <sup>3</sup> Veteran's Affairs Portland Health Care System



119551	Negative effects of cognitive interference and altered sensory input on balance in Huntington's disease	Nicollette Purcell <sup>1</sup> , Jennifer Goldman <sup>1</sup> , Bichun Ouyang <sup>1</sup> , Bryan Bernard <sup>1</sup> , Joan O'keefe <sup>1</sup>	<sup>1</sup> Rush University Medical Center
119554	The influence of social anxiety on balance and walking task assessment in older women	Diego Orcioli-Silva <sup>1</sup> , Elizabeth Pasman <sup>2</sup> , Lilian Gobbi <sup>1</sup> , Mark Beauchamp <sup>2</sup> , Mark Carpenter <sup>2</sup>	<sup>1</sup> São Paulo State University (Unesp), Institute of Biosciences, <sup>2</sup> School of Kinesiology, University of British Columbia
119556	Staying UpRight in Parkinson's disease: a novel postural intervention	Samuel Stuart <sup>1</sup> , Alan Godfrey <sup>2</sup> , Lynn Rochester <sup>3</sup> , Fay Horak <sup>1</sup> , Martina Mancini <sup>1</sup>	<sup>1</sup> Oregon health and Science University, <sup>2</sup> Northumbria University, <sup>3</sup> Newcastle University
119558	Cortical response to open and closed-loop tactile cueing during walking and turning in Parkinson's	Samuel Stuart <sup>1</sup> , Martina Mancini <sup>1</sup>	<sup>1</sup> Oregon health and Science University
119559	Visual exploration during walking and turning in mild traumatic brain injury and controls	Samuel Stuart <sup>1</sup> , Lucy Parrington <sup>1</sup> , Doug Martini <sup>1</sup> , Peter Fino <sup>2</sup> , James Chesnutt <sup>1</sup> , Laurie King <sup>1</sup>	<sup>1</sup> Oregon health and Science University, <sup>2</sup> University of Utah
119560	The effect of roll circularvection on the subjective postural horizontal	Taylor Cleworth <sup>1</sup> , John H. Allum <sup>2</sup> , Emma Nielsen <sup>3</sup> , Mark Carpenter <sup>4</sup>	<sup>1</sup> University of Waterloo, <sup>2</sup> University of Basel Hospital, <sup>3</sup> Univeristy of British Columbia, <sup>4</sup> University of British Columbia
119561	Full body responses in visually perturbed quiet stance	David Engel <sup>1</sup> , Adrian Schütz <sup>1</sup> , Frank Bremmer <sup>1</sup>	<sup>1</sup> Philipps-Universität Marburg
119563	Regional associations of grey matter volume with gait variability-the Tasmanian Study of Cognition and Gait	Oshadi Jayakody <sup>1</sup> , Monique Breslin <sup>1</sup> , Richard Beare <sup>2</sup> , Velandai Srikanth <sup>2</sup> , Helena Blumen <sup>3</sup> , Michele Callisaya <sup>1</sup>	<sup>1</sup> University of Tasmania, <sup>2</sup> Peninsula Health, Monash University, <sup>3</sup> Albert Einstein College of Medicine
119565	Quantity and quality of gait in PD, MS and healthy people in a community setting	Vrutangkumar Shah <sup>1</sup> , James Mcnames <sup>2</sup> , Patricia Carlson-Kuhta <sup>1</sup> , Rebecca Spain <sup>1</sup> , John Nutt <sup>1</sup> , Mahmoud El Gohary <sup>3</sup> , Fay Horak <sup>1</sup> , Carolin Curtze <sup>4</sup>	<sup>1</sup> Oregon Health and Science University, <sup>2</sup> Portland State University, <sup>3</sup> APDM, <sup>4</sup> University of Nebraska at Omaha
119566	Comparison among PD, MS and healthy people between prescribed gait test and continuous monitoring of gait in a community setting	Vrutangkumar Shah <sup>1</sup> , James Mcnames <sup>2</sup> , Patricia Carlson-Kuhta <sup>1</sup> , Rebecca Spain <sup>1</sup> , John Nutt <sup>1</sup> , Mahmoud El Gohary <sup>3</sup> , Fay Horak <sup>1</sup> , Carolin Curtze <sup>4</sup>	<sup>1</sup> Oregon Health and Science University, <sup>2</sup> Portland State University, <sup>3</sup> APDM, <sup>4</sup> University of Nebraska at Omaha



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119568	Effects of modified exercise programme for improving axial rigidity and turning dysfunction in individuals with Parkinson's disease	Fuengfa Khobkhun <sup>1</sup> , Mark Hollands <sup>2</sup> , Amornpan Ajjimaporn <sup>3</sup>	<sup>1</sup> Liverpool John Moores University and Mahidol University, <sup>2</sup> Liverpool John Moores University, <sup>3</sup> Mahidol University
119569	Detecting alterations in head movements in individuals with vestibulopathy of varying etiology	Lee Dibble <sup>1</sup> , Brian Loyd <sup>1</sup> , Annie Fangman <sup>1</sup> , Janie Savier-Steiger <sup>1</sup> , Mark Lester <sup>2</sup> , Serene Paul <sup>3</sup>	<sup>1</sup> University of Utah, <sup>2</sup> Army-Baylor University, <sup>3</sup> University of Sydney
119570	Factors associated with texting while walking performance across different environments	Tal Krasovsky <sup>1</sup> , Patrice Weiss <sup>1</sup> , Rachel Kizony <sup>1</sup>	<sup>1</sup> University of Haifa
119572	Feedforward and feedback control components in the generation of automatic postural responses	Nametala Azzi <sup>1</sup> , Julia Oliveira <sup>1</sup> , Daniel Coelho <sup>2</sup> , Luis Teixeira <sup>1</sup>	<sup>1</sup> University of São Paulo, <sup>2</sup> UFABC
119574	Dual task gait interference in Parkinson's disease: the impact of baseline cognitive capacity	Rosie Morris <sup>1</sup> , Ellen Lirani-Silva <sup>2</sup> , Rachael Lawson <sup>3</sup> , Alison Yarnall <sup>3</sup> , Brook Galna <sup>3</sup> , Sue Lord <sup>4</sup> , Lynn Rochester <sup>1</sup>	<sup>1</sup> Oregon Health & Science University, <sup>2</sup> Sao Paulo State University, <sup>3</sup> Newcastle University, <sup>4</sup> Auckland University of Technology
119575	Adaptation induced change in overground slip recovery outcomes: Distinct strategies or continuum of an emerging single strategy control?	Tanvi Bhatt <sup>1</sup> , Shuaijie Wang <sup>1</sup> , Yi-Chung Pai <sup>2</sup> , Yiru Wang <sup>1</sup>	<sup>1</sup> University of Illinois at Chicago, <sup>2</sup> Retired
119576	Association of walk ratio during normal gait speed and fall in community-dwelling elderly people	Sho Nakakubo <sup>1</sup> , Takehiko Doi <sup>1</sup> , Kota Tsutsumimoto <sup>1</sup> , Min-Ji Kim <sup>1</sup> , Satoshi Kurita <sup>1</sup> , Hideaki Ishii <sup>1</sup> , Hiroyuki Shimada <sup>1</sup>	<sup>1</sup> National Center for Geriatrics and Gerontology
119577	Feature selection of objective metrics of balance dysfunction in Parkinson's disease	Naoya Hasegawa <sup>1</sup> , Vrutangkumar Shah <sup>1</sup> , Anjanibhargavi Ragothaman <sup>1</sup> , Samuel Stuart <sup>1</sup> , Patricia Carlson-Kuhta <sup>1</sup> , John Nutt <sup>1</sup> , Fay Horak <sup>1</sup> , Tadayoshi Asaka <sup>2</sup> , Martina Mancini <sup>1</sup>	<sup>1</sup> Oregon Health and Science University, <sup>2</sup> Hokkaido University
119578	Dual task gait cost in Parkinson's disease patients with and without depressive symptoms	Carolina Silveira <sup>1</sup> , Frederico Pieruccini-Faria <sup>2</sup> , Eric Roy <sup>3</sup> , Quincy Almeida <sup>4</sup>	<sup>1</sup> Lawson Health Research Institute, <sup>2</sup> University of Western Ontario, <sup>3</sup> University of Waterloo, <sup>4</sup> Wilfrid Laurier University



119579	Does it matter where you look during obstacle crossing?	Hyeyoung Cho <sup>1</sup> , Nathaniel Romine <sup>1</sup> , Fabio Barbieri <sup>2</sup> , Shirley Rietdyk <sup>1</sup>	<sup>1</sup> Purdue University, <sup>2</sup> São Paulo State University (UNESP)
119581	Unidirectional beta connectivity from motor cortex to muscle is involved in voluntary modification of locomotor muscle activity in humans	Hikaru Yokoyama <sup>1</sup> , Naotsugu Kaneko <sup>2</sup> , Yohei Masugi <sup>3</sup> , Tetsuya Ogawa <sup>2</sup> , Katsumi Watanabe <sup>4</sup> , Kimitaka Nakazawa <sup>2</sup>	<sup>1</sup> Tokyo University of Agriculture and Technology, <sup>2</sup> The University of Tokyo, <sup>3</sup> Tokyo International University, <sup>4</sup> Waseda University
119582	Influence of ankle-foot orthosis with different type of joint on walking parameters in stroke patients	Naruhito Hasui <sup>1</sup> , Naomichi Mizuta <sup>1</sup> , Yasutaka Higa <sup>2</sup> , Yasutada Yamamoto <sup>2</sup> , Ayaka Matsunaga <sup>2</sup> , Tomoki Nakatani <sup>2</sup> , Masako Tsutsumi <sup>2</sup> , Junji Taguchi <sup>2</sup> , Yohei Okada <sup>3</sup>	<sup>1</sup> Department of Neurorehabilitation, Graduate School of Health Sciences, University of Kio, <sup>2</sup> Takarazuka Rehabilitation Hospital, <sup>3</sup> University of Kio
119583	Older people with dementia have reduced daily-life activity and impaired daily-life gait when compared to age-sex matched controls	Morag Taylor <sup>1</sup> , Matthew Brodie <sup>1</sup> , Kimberley Van Schooten <sup>1</sup> , Kim Delbaere <sup>1</sup> , Jacqeline Close <sup>1</sup> , Narelle Payne <sup>1</sup> , Lyndell Webster <sup>1</sup> , Jessica Chow <sup>1</sup> , Garth Mcinerney <sup>1</sup> , Susan Kurrle <sup>2</sup> , Stephen Lord <sup>1</sup>	<sup>1</sup> Neuroscience Research Australia, <sup>2</sup> University of Sydney
119584	The effect of hearing loss on balance control - do hearing aids help?	Nicoleta Bugnariu <sup>1</sup> , Victoria Kowalewski <sup>1</sup> , Rita Patterson <sup>1</sup> , Linda Thibodeau <sup>2</sup>	<sup>1</sup> University of North Texas Health Science Center, <sup>2</sup> University of Texas at Dallas
119587	Comparing the effects of four different haptic modalities on the standing balance of individuals with an incomplete spinal cord injury	Pawan Kumar <sup>1</sup> , Tarun Arora <sup>2</sup> , Joel Lanovaz <sup>1</sup> , Renato Moraes <sup>3</sup> , Kristin Musselman <sup>4</sup> , Alison Oates <sup>1</sup>	<sup>1</sup> University of Saskatchewan, <sup>2</sup> Cleveland clinic, <sup>3</sup> University of São Paulo - USP, <sup>4</sup> University of Toronto
119588	Effect of arm motion on postural strategies during uphill and downhill walking	Mary Elise Macdonald <sup>1</sup> , Allen Hill <sup>1</sup> , Julie Nantel <sup>1</sup>	<sup>1</sup> University of Ottawa
119589	Development of instrumented shoe with miniature high-capacity load vector sensor and application to gait assessment	Masato Shindo <sup>1</sup> , Takeshi Yamaguchi <sup>1</sup> , Yoshihiro Sasaki <sup>2</sup> , Kazuo Hokkirigawa <sup>1</sup>	<sup>1</sup> Tohoku University, <sup>2</sup> Research Institute for Electromagnetic Materials



119594	The effects of non-invasive transcranial brain current stimulation (tDCS) on posture over stable and unstable surfaces in people with Parkinson's: A randomised double-blind sham-controlled crossover study	Jing Qi <sup>1</sup> , Graham Kerr <sup>1</sup> , Karen Sullivan <sup>1</sup> , Simon Smith <sup>2</sup> , Marcus Meinzer <sup>3</sup>	<sup>1</sup> Institute of Health and Biomedical Innovation, <sup>2</sup> Recover Injury Research Centre, <sup>3</sup> UQ Centre for Clinical Research
119595	The impact of freezing of gait in daily life: a wearable sensors approach	Martina Mancini <sup>1</sup> , Vrutangkumar Shah <sup>1</sup> , Carolin Curtze <sup>2</sup> , Samuel Stuart <sup>1</sup> , Mahmoud El-Gohary <sup>3</sup> , James Mcnames <sup>3</sup> , Fay Horak <sup>1</sup> , John Nutt <sup>1</sup>	<sup>1</sup> Oregon Health & Science University, <sup>2</sup> University of Nebraska at Omaha, <sup>3</sup> APDM
119596	The beneficial effects of multisensory balance training in older adults: a systematic review	Shu-Chun Lee <sup>1</sup> , Li-Yun Yeh <sup>1</sup>	<sup>1</sup> Taipei Medical University
119599	Spinal cord stimulation improves gait and modulates cortical activity in parkinsonian patients unresponsive to dopaminergic medication	Olivia Samotus <sup>1</sup> , Maria Alamos <sup>2</sup> , Andrew Parrent <sup>1</sup> , Mandar Jog <sup>1</sup>	<sup>1</sup> London Health Sciences Centre, <sup>2</sup> Pontificia Universidad Catolica de Chile
119600	Age-related differences in lower limb joint moments during turning gait	Yuto Fukuda <sup>1</sup> , Takeshi Yamaguchi <sup>1</sup>	<sup>1</sup> Tohoku University
119601	Fall risk and falls are related to spatiotemporal gait asymmetry in older adults: Effect of gait speed	Brian Street <sup>1</sup>	<sup>1</sup> California State University, Bakersfield
119602	Gait variability decreases with use of carbon fiber footplates in children with idiopathic toe walking	Srikant Vallabhajosula <sup>1</sup> , Melissa Scales <sup>1</sup>	<sup>1</sup> Elon University
119603	Total knee replacement patient's preoperative time to recovery expectations are related to fall risk	Brian Street <sup>1</sup>	<sup>1</sup> California State University, Bakersfield
119604	Functional near infra-red spectroscopy neuroimaging of prefrontal cortex in Parkinson's disease during cognitive tasks under different postures.	Graham Kerr <sup>1</sup> , Mark Muthalib <sup>2</sup> , Roger Pegoraro <sup>1</sup> , Luisa Roeder <sup>1</sup> , Ian Stewart <sup>1</sup> , Simon Smith <sup>3</sup>	<sup>1</sup> Queensland University of Technology, <sup>2</sup> University of Montpellier, <sup>3</sup> University of Queensland



119606	Objective quantifiable assessment of nocturnal movements in patients with Parkinson's disease using a wearable sensor	Anat Mirelman <sup>1</sup> , Inbar Hillel <sup>2</sup> , Lynn Rochester <sup>3</sup> , Bastiaan Bloem <sup>4</sup> , Laura Avanzino <sup>5</sup> , Alice Nieuwboer <sup>6</sup> , Inbal Maidan <sup>1</sup> , Shirley Shiratzki <sup>1</sup> , Talia Herman <sup>1</sup> , Jesse Cederbaum <sup>7</sup> , Nir Giladi <sup>8</sup> , Jeffrey Hausdorff <sup>8</sup>	<sup>1</sup> Tel Aviv Sourasky Medical Center, <sup>2</sup> Center for the study of Movement, Cognition and Mobility, Neurological Institute, Tel Aviv Sourasky, <sup>3</sup> Institute of Neuroscience, Newcastle University, UK, <sup>4</sup> Donders Institute for Brain, Cognition and Behavior, Nijmegen, The Netherlands, <sup>5</sup> Department of Neurosciences University of Genoa, Italy, <sup>6</sup> Department of Rehabilitation Sciences, Katholieke Universiteit Leuven, Belgium, <sup>7</sup> Biogen Biotechnologies, Cambridge Massachusetts, USA, <sup>8</sup> Center for the study of Movement, Cognition and Mobility, Neurological Institute, Tel Aviv Sourasky
119607	Lateral loss of balance among one-time fallers and recurrent fallers reveals contrasted differences in step thresholds and spatiotemporal parameters compared to non-fallers	Shani Batcir <sup>1</sup> , Guy Shani <sup>2</sup> , Amir Shapiro <sup>2</sup> , Yoav Gimmon <sup>1</sup> , Ilan Kurz <sup>1</sup> , Itshak Melzer <sup>1</sup>	<sup>1</sup> Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel, <sup>2</sup> Faculty of Engineering Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel
119610	Using analogies to overcome freezing of gait: a first step towards making the first step	William Young <sup>1</sup> , Amy Maslivec <sup>1</sup> , Anna Fielding <sup>1</sup> , Mark Wilson <sup>2</sup> , Meriel Norris <sup>1</sup> , John Cossar <sup>1</sup>	<sup>1</sup> Brunel University London, <sup>2</sup> University of Exeter
119611	Visual effects on human balancing responses to support surface translation	Emre Akcay <sup>1</sup> , Vittorio Lippi <sup>2</sup> , Lorenz Aszländer <sup>3</sup> , Thomas Mergner <sup>2</sup>	<sup>1</sup> Kocaeli University, <sup>2</sup> Neurological University Clinics, Freiburg, <sup>3</sup> Sensorimotor Performance Lab, University of Konstanz
119612	Effects of age-related changes in step length and step width on the friction requirement at shoe-floor interface during straight level walking	Takeshi Yamaguchi <sup>1</sup> , Kei Masani <sup>2</sup>	<sup>1</sup> Tohoku University, <sup>2</sup> University of Toronto, Toronto Rehabilitation Institute-University Health Network
119613	A new approach using electrical muscle stimulation to elucidate	Shota Hagio <sup>1</sup> , Anvar Azat <sup>1</sup> , Daichi Nozaki <sup>1</sup>	<sup>1</sup> The University of Tokyo





	sensorimotor adaptation in human postural control system		
119614	Development of a clinical scale to assess retropulsion in neurological disorders	Jeannine Bergmann <sup>1</sup> , Carmen Krewer <sup>2</sup> , Eberhard Koenig <sup>2</sup> , Friedemann Müller <sup>2</sup> , Klaus Jahn <sup>1</sup>	<sup>1</sup> Schön Klinik Bad Aibling, DSGZ LMU Munich, <sup>2</sup> Schön Klinik Bad Aibling
119615	Accepting the null hypothesis: how and why?	John Stins <sup>1</sup>	<sup>1</sup> Department of Human Movement Sciences
119617	Relating reaction times to local sway features to unveil intermittency in postural control	John Stins <sup>1</sup> , Melvyn Roerdink <sup>1</sup>	<sup>1</sup> Department of Human Movement Sciences
119618	Using induced acceleration to study the effects of age and grade on the joint moment strategy to control knee flexion during weight acceptance in walking	Jeroen Waanders <sup>1</sup> , Tibor Hortobágyi <sup>1</sup> , Alessio Murgia <sup>1</sup> , Paul Devita <sup>2</sup> , Jason Franz <sup>3</sup>	<sup>1</sup> University of Groningen, University Medical Center Groningen, <sup>2</sup> East Carolina University, <sup>3</sup> University of North Carolina at Chapel Hill and North Carolina State University
119620	Move aside: Approach-avoidance theories scrutinized	Daniëlle Bouman <sup>1</sup> , John Stins <sup>1</sup> , Peter Beek <sup>1</sup>	<sup>1</sup> Vrije Universiteit Amsterdam, Amsterdam Movement Sciences
119621	Changes in muscle activation patterns underlie split-belt gait adaptation	Danique Vervoort <sup>1</sup> , Rob Den Otter <sup>1</sup> , Tom Buurke <sup>1</sup> , Nicolas Vuillerme <sup>2</sup> , Tibor Hortobágyi <sup>1</sup> , Claudine Lamothe <sup>1</sup>	<sup>1</sup> University of Groningen, University Medical Center Groningen, <sup>2</sup> University Grenoble-Alpes
119624	Combined diabetes and arthritis are associated with declined gait speed	Bader Alqahtani <sup>1</sup> , Aqeel Alenazi <sup>1</sup> , Mohammed Alshehri <sup>2</sup>	<sup>1</sup> Prince Sattam Bin Abdualziz University, <sup>2</sup> Jazan University
119625	The role of vision in backward walking in patients with stroke	Meng Ru Tsai <sup>1</sup> , Pei-Yun Lee <sup>2</sup> , Nai-Hua Kuo <sup>1</sup> , Chih-Hung Chen <sup>1</sup> , Sang-I Lin <sup>1</sup> , Pei-Yun Lee <sup>1</sup>	<sup>1</sup> National Cheng Kung University, <sup>2</sup> National Taiwan University Hospital Bei-Hu Branch
119626	Looking downward while walking is more challenging than looking forward for ambulatory chronic stroke patients	Yu-Chu Hsueh <sup>1</sup> , Pei-Yun Lee <sup>2</sup> , Pei-Yun Lee <sup>1</sup> , Chih-Hung Chen <sup>1</sup> , Hui-Yu Tseng <sup>3</sup> , Sang-I Lin <sup>1</sup>	<sup>1</sup> National Cheng Kung University, <sup>2</sup> National Taiwan University Hospital Bei-Hu Branch, <sup>3</sup> Tainan Hospital, Ministry of Health and Welfare
119627	Towards better quantification of freezing of gait in Parkinson's disease: the added value of performance timing	Talia Herman- Feinstein <sup>1</sup> , Moria Dagan <sup>2</sup> , Shirley Shema-Shiratzky <sup>1</sup> , Marina	<sup>1</sup> Tel Aviv Sourasky Medical Center, <sup>2</sup> Tel Aviv University, <sup>3</sup> Harvard Medical School



		Brozgol <sup>1</sup> , Tal Reches <sup>2</sup> , Nir Giladi <sup>1</sup> , Brad Manor <sup>3</sup> , Jeffrey Hausdorff <sup>1</sup>	
119628	Effect of postural training in age-related macular degeneration subjects	Hortense Chatard <sup>1</sup> , Laure Tepenier <sup>2</sup> , Talal Beydoun <sup>2</sup> , Olivier Offret <sup>2</sup> , Sawsen Salah <sup>2</sup> , José-Alain Sahel <sup>3</sup> , Saddek Mohand-Said <sup>3</sup> , Maria Pia Bucci <sup>4</sup>	<sup>1</sup> INSERM, <sup>2</sup> Department of Ophthalmology, Assistance Publique-Hôpitaux de Paris, Paris Descartes University, <sup>3</sup> Sorbonne University, Institut de la Vision, Centre Hospitalier National d'Ophtalmologie des Quinze-V, <sup>4</sup> UMR 1141-INSERM
119629	Enhanced postural control in experienced karate practitioners: Further evidence that practice does make perfect	Amit Hadad <sup>1</sup> , Natalie Ganz <sup>2</sup> , Eran Gazit <sup>2</sup> , Nathan Intrator <sup>1</sup> , Jeffrey Hausdorff <sup>2</sup>	<sup>1</sup> Tel Aviv University, <sup>2</sup> Center for the study of Movement, Cognition and Mobility, Neurological Institute, Tel Aviv Sourasky
119630	Characteristics of postural adjustments in sitting reach task in adults with cerebral palsy.	Yui Sato <sup>1</sup> , Hideyuki Tashiro <sup>1</sup> , Naoki Kozuka <sup>1</sup>	<sup>1</sup> Sapporo Medical University
119631	Gait speed does not mediate the association between antidepressants and falls	Orna Donoghue <sup>1</sup> , Robert Briggs <sup>1</sup> , Frank Moriarty <sup>2</sup> , Rose Kenny <sup>1</sup>	<sup>1</sup> Trinity College Dublin, <sup>2</sup> Royal College of Surgeons in Ireland
119634	Clinical correlates of fatigue in patients with multiple sclerosis: Is mental fatigue more important than gait speed?	Shirley Shema Shiratzky <sup>1</sup> , Ruopeng Sun <sup>2</sup> , Keren Regev <sup>1</sup> , Arnon Karni <sup>1</sup> , Jacob Sosnoff <sup>2</sup> , Jeffrey Hausdorff <sup>1</sup> , Anat Mirelman <sup>1</sup>	<sup>1</sup> Tel Aviv Sourasky Medical Center, <sup>2</sup> University of Illinois at Urbana-Champaign
119635	Deterioration of specific aspects of gait during the instrumented 6-minute walk test among people with multiple sclerosis	Shirley Shema Shiratzky <sup>1</sup> , Eran Gazit <sup>1</sup> , Ruopeng Sun <sup>2</sup> , Keren Regev <sup>1</sup> , Arnon Karni <sup>1</sup> , Jacob Sosnoff <sup>2</sup> , Anat Mirelman <sup>1</sup> , Jeffrey Hausdorff <sup>1</sup>	<sup>1</sup> Tel Aviv Sourasky Medical Center, <sup>2</sup> University of Illinois at Urbana-Champaign
119637	Haste makes waste: on the trade-off between walking speed and target-stepping accuracy	Melvyn Roerdink <sup>1</sup> , Daphne Geerse <sup>1</sup> , Lieke Peper <sup>1</sup>	<sup>1</sup> Vrije Universiteit Amsterdam



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119638	Development of an automated, instrumented composite index to quantify the performance of a 'freezing provoking test' in patients with Parkinson's disease	Tal Reches <sup>1</sup> , Eran Gazit <sup>1</sup> , Moria Dagan <sup>1</sup> , Talia Herman <sup>1</sup> , Pablo Cornejo Thumm <sup>1</sup> , Nir Giladi <sup>1</sup> , Manor Brad <sup>2</sup> , Jeffrey Hausdorff <sup>1</sup>	<sup>1</sup> Tel Aviv Sourasky Medical Center, <sup>2</sup> Hebrew SeniorLife, Harvard Medical School
119640	Exploring the relationships between trunk sway, walking speed and gender	Joel Lanovaz <sup>1</sup> , Sahya Bhargava <sup>1</sup> , Robert Downey <sup>1</sup> , Alison Fedoriuk <sup>1</sup> , Logan Michalishen <sup>1</sup> , Serena Saini <sup>1</sup> , Alison Oates <sup>1</sup>	<sup>1</sup> University of Saskatchewan
119641	Anticipatory postural adjustment for an accurate step	Masahiro Shinya <sup>1</sup> , Hiroki Yamada <sup>1</sup>	<sup>1</sup> Hiroshima University
119642	A do-it-yourself low-cost foot switch device to measure stride intervals	Masahiro Okano <sup>1</sup> , Tadao Isaka <sup>1</sup>	<sup>1</sup> Ritsumeikan University
119644	Increased resilience of judoists to unpredictable large-magnitude perturbations to body balance	Marina Betelli <sup>1</sup> , Julia Oliveira <sup>1</sup> , Patricia Takazono <sup>1</sup> , Caroline Souza <sup>1</sup> , Daniel Coelho <sup>2</sup> , Luis Teixeira <sup>1</sup>	<sup>1</sup> School of Physical Education of University of Sao Paulo, <sup>2</sup> Federal University of ABC
119645	Walking with large axial pelvis rotations causes changes in axial thorax-pelvis coordination as observed in low back pain	Maarten Prins <sup>1</sup> , Luca Cornelisse <sup>2</sup> , Onno Meijer <sup>2</sup> , Peter Van der Wurff <sup>1</sup> , Sjoerd Bruijn <sup>2</sup> , Jaap Van Dieën <sup>2</sup>	<sup>1</sup> Military Rehabilitation Centre 'Aardenburg', <sup>2</sup> Vrije Universiteit Amsterdam
119646	Effect of muscle fatigue on postural stability and muscular activation of the supporting leg in soccer players' kicking	Julia Oliveira <sup>1</sup> , Caroline Souza <sup>1</sup> , Daniel Coelho <sup>2</sup> , Luis Teixeira <sup>1</sup>	<sup>1</sup> School of Physical Education and Sport of University of São Paulo, <sup>2</sup> Federal University of ABC
119649	Perception of verticality correlates with postural and balance deficits in patients with Parkinson disease.	Gaia Bonassi <sup>1</sup> , Laura Mori <sup>1</sup> , Martina Putzolu <sup>1</sup> , Chiara Ponte <sup>1</sup> , Alessandro Botta <sup>1</sup> , Giovanna Lagravinese <sup>1</sup> , Laura Avanzino <sup>1</sup> , Elisa Pelosin <sup>1</sup>	<sup>1</sup> University of Genoa
119650	Predictors of subjective and objective measures of severity of freezing of gait in Parkinson's disease	Caroline Souza <sup>1</sup> , Acacio Neto <sup>1</sup> , Daniel Coelho <sup>2</sup> , Andrea Lima-Pardini <sup>2</sup> , Raquel Marquesini <sup>1</sup> , Alana Batista <sup>1</sup> , Egberto	<sup>1</sup> University of São Paulo, <sup>2</sup> Federal University of ABC



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		Barbosa <sup>1</sup> , Carlos Ugrinowitsch <sup>1</sup> , Luis Teixeira <sup>1</sup> , Carla Silva-Batista <sup>1</sup>	
119651	Instrumenting gait and balance assessment at home and in the community; exploratory data from the ACTIVATE feasibility study	Christopher Buckley <sup>1</sup> , Silvia Del Din <sup>1</sup> , Patrica Mccue <sup>1</sup> , Heather Hunter <sup>2</sup> , Sue Lord <sup>3</sup> , Chris Price <sup>1</sup> , Lisa Shaw <sup>1</sup> , Helen Rogers <sup>1</sup> , Lynn Rochester <sup>1</sup> , Sarah Moore <sup>1</sup>	<sup>1</sup> Newcastle University, <sup>2</sup> The Newcastle upon Tyne Hospitals NHS Foundation Trust, <sup>3</sup> Auckland university of technology
119652	The effect of a high intensity treadmill training and self-management program on physical activity in stroke patients undergoing rehabilitation: A RCT.	Sandra Brauer <sup>1</sup> , Suzanne Kuys <sup>2</sup> , Jenny Paratz <sup>3</sup> , Louise Ada <sup>4</sup>	<sup>1</sup> University of Queensland, <sup>2</sup> Australian Catholic University, <sup>3</sup> Griffith University, <sup>4</sup> University of Sydney
119653	Concurrent validity of the Clinical Test of Sensory Interaction of Balance (CTSIB) Kids-BESTest criteria with laboratory center of pressure measures in children with and without cerebral palsy	Leanne Johnston <sup>1</sup> , Rosalee Dewar <sup>1</sup> , Kylie Tucker <sup>1</sup> , Andrew Claus <sup>1</sup> , Rob Ware <sup>2</sup>	<sup>1</sup> The University of Queensland, <sup>2</sup> Griffith University
119654	Unravelling quantitative measures of free-living ataxic gait in cerebellar patients using wearable sensors	Winfried Ilg <sup>1</sup> , Jens Seemann <sup>1</sup> , Matthis Synofzik <sup>1</sup>	<sup>1</sup> Hertie Institute for Clinical Brain Research
119655	Functional interplay between body sway and parieto-premotor network revealed by somatosensory potentials evoked by foot sole stimulation and microneurography	Laurence Mouchnino <sup>1</sup> , Marie Fabre <sup>1</sup> , Edith Ribot-Ciscar <sup>1</sup> , Rochelle Ackerley <sup>1</sup> , Jean-Marc Aimonetti <sup>1</sup> , Pascale Chavet <sup>1</sup> , Jean Blouin <sup>1</sup> , Martin Simoneau <sup>2</sup>	<sup>1</sup> Aix Marseille Univ, CNRS, <sup>2</sup> Université Laval
119656	The effects of lighting level on balance in dancers	Elizabeth Coker <sup>1</sup> , Terry Kaminski <sup>2</sup>	<sup>1</sup> NYU/Tisch School of the Arts, <sup>2</sup> Teachers College of Columbia University
119658	Central cholinergic activity and risk of falls in patients with Parkinson's disease and freezing of gait	Giovanna Lagravinese <sup>1</sup> , Gaia Bonassi <sup>1</sup> , Martina Putzolu <sup>1</sup> , Alessandro Botta <sup>1</sup> , Carola Cosentino <sup>1</sup> , Anat Mirelman <sup>2</sup> , Elisa Pelosin <sup>1</sup> , Laura Avanzino <sup>1</sup>	<sup>1</sup> University of Genoa, <sup>2</sup> Tel-Aviv Sourasky Medical Center



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119659	Removal of artifacts to compute intra stride cortical dynamics with EEG in Parkinson's disease	Marlieke Scholten <sup>1</sup> , Markus Siegel <sup>2</sup> , Daniel Weiss <sup>1</sup>	<sup>1</sup> Hertie Institute, <sup>2</sup> Centre for Integrative Neuroscience (CIN) & MEG Center
119661	Sagittal balance control during perturbed walking	Maud Van Den Bogaart <sup>1</sup> , Sjoerd Bruijn <sup>2</sup> , Jaap Van Dieën <sup>2</sup> , Pieter Meyns <sup>1</sup>	<sup>1</sup> UHasselt, <sup>2</sup> VU Amsterdam
119662	Two-year change in gait variability in community-living older adults	Bård Bogen <sup>1</sup> , Mona Aaslund <sup>1</sup> , Anette Ranhoff <sup>1</sup> , Rolf Moe-Nilssen <sup>1</sup>	<sup>1</sup> University of Bergen
119663	Comparing muscle power and muscle strength training using Thera-band for reducing fall risk in community-dwelling older adults	Kenneth Cheng <sup>1</sup> , Kim Chan <sup>1</sup>	<sup>1</sup> Chinese University of Hong Kong
119664	Lateral balance capacity after external perturbation in persons with chronic stroke	Hideyuki Tashiro <sup>1</sup> , Yui Sato <sup>1</sup> , Naoki Kozuka <sup>1</sup>	<sup>1</sup> Sapporo Medical University
119665	Re-enactment - a method to reproduce real-world fall events	Kim Sczuka <sup>1</sup> , Lars Schwickert <sup>1</sup> , Clemens Becker <sup>1</sup> , Jochen Klenk <sup>1</sup>	<sup>1</sup> Robert-Bosch-Hospital
119666	Automated and quantification of the tandem walking using a wearable device	Natalie Ganz <sup>1</sup> , Eran Gazit <sup>1</sup> , Amit Hadad <sup>2</sup> , Aron Buchman <sup>3</sup> , Anat Mirelman <sup>4</sup> , Jeff Hausdorff <sup>4</sup>	<sup>1</sup> Center for the study of Movement, Cognition and Mobility, Tel Aviv Sourasky Medical Center, <sup>2</sup> Sackler Faculty of Medicine and Sagol School of Neuroscience, Tel Aviv University, <sup>3</sup> Rush Alzheimer's Disease Center, <sup>4</sup> [1] Center for the study of Movement, Cognition and Mobility, Tel Aviv Sourasky Medical Center [2]
119667	Augmenting balance with tactile robotic feedback	Raymond Reynolds <sup>1</sup> , Lorenz Asslander <sup>2</sup> , Craig Smith <sup>1</sup>	<sup>1</sup> University of Birmingham, <sup>2</sup> University of Konstanz
119668	Neuromuscular adaptations in balance control following a lower-limb transfemoral amputation	Cristian Pasluosta <sup>1</sup> , Claudia Ramos Claret <sup>1</sup> , Georg Herget <sup>1</sup> , Lukas Kouba <sup>1</sup> , Daniel Wiest <sup>2</sup> , Jochen Adler <sup>2</sup> , Vinzenz Von Tscherner <sup>3</sup> , Thomas Stieglitz <sup>1</sup>	<sup>1</sup> University of Freiburg, <sup>2</sup> Sanitätshaus Pfänder, <sup>3</sup> University of Calgary



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119669	Use of cluster analysis for gait classification of patients with syndrome of Dravet	Ann Halleman <sup>1</sup> , Lore Wyers <sup>1</sup> , Karen Verheyen <sup>1</sup> , An-Sofie Schoonjans <sup>2</sup> , Bertien Ceulemans <sup>2</sup> , Patrica Van De Walle <sup>1</sup>	<sup>1</sup> University of Antwerp, <sup>2</sup> Antwerp University Hospital
119670	After-effect magnitude predicts retention in split-belt gait adaptation	Tom Buurke <sup>1</sup> , Claudine Lamothe <sup>1</sup> , Lucas Van der Woude <sup>1</sup> , Rob Den Otter <sup>1</sup>	<sup>1</sup> University of Groningen, University Medical Center Groningen
119671	A development of a bicycle-simulator-balance trainer with a novel system that provide customized unexpected perturbations during bicycling (the PerStBiRo system)	Shani Batcir <sup>1</sup> , Yaakov Livne <sup>2</sup> , Rotem Lev Lehman <sup>3</sup> , Guy Shani <sup>3</sup> , Amir Shapiro <sup>3</sup> , Itshak Melzer <sup>1</sup>	<sup>1</sup> Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel, <sup>2</sup> faculty of engineering science, Ben-Gurion University of the Negev, Beer-Sheva, Israel, <sup>3</sup> Faculty of Engineering Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel
119673	Locomotor savings of split-belt gait adaptation indicate long-term adaptation processes	Tom Buurke <sup>1</sup> , Claudine Lamothe <sup>1</sup> , Lucas Van der Woude <sup>1</sup> , Rob Den Otter <sup>1</sup>	<sup>1</sup> University of Groningen, University Medical Center Groningen
119674	The validity of the Swedish King's PD Pain Scale in people with Parkinson's disease	Conran Joseph <sup>1</sup> , Hanna Johansson <sup>1</sup> , Breiffni Leavy <sup>1</sup> , Erika Franzen <sup>1</sup>	<sup>1</sup> Karolinska Institutet
119676	Falling for it: The effects of anxiety on balance control	Anna Fielding <sup>1</sup> , Will Young <sup>1</sup> , Andrew Parton <sup>1</sup>	<sup>1</sup> Brunel University London
119677	Gross and fine balance control during walking in stroke patients and healthy controls	Noel Keijsers <sup>1</sup> , Yara Luijten <sup>1</sup> , Bart Nienhuis <sup>1</sup>	<sup>1</sup> Sint Maartenskliniek
119678	Elderly fallers and non-fallers adjust their posture in anticipation of perturbations	Thomas Robert <sup>1</sup> , Charlotte Le Mouel <sup>2</sup> , Romain Tisserand <sup>3</sup> , Romain Brette <sup>4</sup>	<sup>1</sup> Université de Lyon - IFSTTAR, <sup>2</sup> Max Planck Institute of Intelligent Systems, <sup>3</sup> University of British Columbia, <sup>4</sup> Sorbonne Université, INSERM, CNRS, Institut de la Vision
119679	Creating and validating a shortened version of the community balance & mobility scale for application in young seniors	Katharina Gordt <sup>1</sup> , A. Stefanie Mikolaizak <sup>2</sup> , Kristin Taraldsen <sup>3</sup> , Ronny Bergquist <sup>3</sup> , Jeanine Van Ancum <sup>4</sup> , Corinna Nerz <sup>2</sup> , Mirjam Pijnappels <sup>4</sup> , Andrea Maier <sup>4</sup> ,	<sup>1</sup> Network Aging Research, <sup>2</sup> Robert-Bosch-Hospital, <sup>3</sup> Norwegian University of Science and Technology Trondheim, <sup>4</sup> Vrije Universiteit Amsterdam



		Jorunn Helbostad <sup>3</sup> , Beatrix Vereijken <sup>3</sup> , Clemens Becker <sup>2</sup> , Michael Schwenk <sup>1</sup>	
119680	Fear of falling following a 12-week attentionally focused balance training intervention: Preliminary data	Louisa Raisbeck <sup>1</sup> , Lauren Higgins <sup>1</sup> , Ruth Stout <sup>1</sup> , Danielle Felsberg <sup>1</sup> , Sean Cochran <sup>1</sup> , John Palazzolo <sup>1</sup> , Jeff Labban <sup>1</sup> , Christopher K <sup>1</sup>	<sup>1</sup> The University of North Carolina, Greensboro
119681	Robotic intervention improves lateral gait symmetry in acute post-stroke patients	Chun Kwang Tan <sup>1</sup> , Hideki Kadone <sup>2</sup> , Hiroki Watanabe <sup>1</sup> , Aiki Marushima <sup>1</sup> , Yasushi Hada <sup>1</sup> , Masashi Yamazaki <sup>1</sup> , Yoshiyuki Sankai <sup>1</sup> , Kenji Suzuki <sup>1</sup>	<sup>1</sup> University of Tsukuba, Tsukuba, Japan, <sup>2</sup> University of Tsukuba Hospital, Tsukuba, Japan
119682	Effect of orthopaedic shoes and orthopaedic insoles on gait in patients with Dravet syndrome	Lore Wyers <sup>1</sup> , Karen Verheyen <sup>1</sup> , Bertien Ceulemans <sup>1</sup> , An-Sofie Schoonjans <sup>1</sup> , Kaat Desloovere <sup>2</sup> , Patricia Van De Walle <sup>1</sup> , Ann Hallemans <sup>1</sup>	<sup>1</sup> University of Antwerp, <sup>2</sup> KU Leuven
119683	Collision avoidance between a walker and a person on an electric powered wheelchair	Anne-Hélène Olivier <sup>1</sup> , Nicolas Le Borgne <sup>2</sup> , Marie Babel <sup>2</sup> , Armel Créteul <sup>1</sup> , Julien Pettré <sup>2</sup>	<sup>1</sup> University of Rennes / Inria, <sup>2</sup> Inria
119684	Investigation of the relationship between talking time on the mobile phone and neck proprioception, pain, and disability in the university students	Gamze Yalcinkaya <sup>1</sup> , Nurullah Buker <sup>1</sup> , Yesim Sengul <sup>2</sup>	<sup>1</sup> Health Sciences Institute, <sup>2</sup> None
119685	Large errors upon introduction vs. removal of the training environment have distinct effect on the generalization of locomotor adaptation.	Gelsy Torres-Oviedo <sup>1</sup> , Digna De Kam <sup>1</sup> , Wouter Staring <sup>2</sup>	<sup>1</sup> University of Pittsburgh, <sup>2</sup> Radboud University Medical Center
119686	Evaluation of measurement properties of the instrumented and repeated Timed Up and Go (5iTUG)	Ronny Bergquist <sup>1</sup> , Corinna Nerz <sup>2</sup> , Kristin Taraldsen <sup>1</sup> , Clemens Becker <sup>2</sup> , Sabato Mellone <sup>3</sup> , Beatrix Vereijken <sup>1</sup> , Jorunn Helbostad <sup>1</sup> , Stefanie Mikolaizak <sup>2</sup>	<sup>1</sup> Norwegian University of Science and Technology, <sup>2</sup> Robert-Bosch-Krankenhaus, <sup>3</sup> University of Bologna



119687	Evaluation of corrective moment of measurement orthosis using CB brace for knee osteoarthritis	Yasuhiro Mine <sup>1</sup> , Tamotsu Sakima <sup>2</sup>	<sup>1</sup> Toyo University, <sup>2</sup> SAKIMA Prosthetics & Orthotics Co.,Ltd.
119689	Muscle coordination changes with assistance from lumbar support exoskeleton	Chun Kwang Tan <sup>1</sup> , Hideki Kadone <sup>2</sup> , Kousei Miura <sup>3</sup> , Tetsuya Abe <sup>3</sup> , Masao Koda <sup>3</sup> , Yasushi Hada <sup>3</sup> , Masashi Yamazaki <sup>3</sup> , Yoshiyuki Sankai <sup>1</sup> , Kenji Suzuki <sup>1</sup>	<sup>1</sup> University of Tsukuba, Tsukuba, Japan, <sup>2</sup> University of Tsukuba Hospital, Tsukuba, Japan, <sup>3</sup> Faculty of Medicine, University of Tsukuba, Tsukuba, Japan
119691	Falls in a longitudinal Parkinson's disease cohort: What can we learn from baseline gait assessment in non-fallers over six years?	Heather Hunter <sup>1</sup> , Lisa Alcock <sup>2</sup> , Sue Lord <sup>3</sup> , Rosie Morris <sup>4</sup> , Lynn Rochester <sup>2</sup> , Alison Yarnall <sup>2</sup>	<sup>1</sup> Newcastle-upon-Tyne Hospitals NHS Foundation Trust, <sup>2</sup> Newcastle University, <sup>3</sup> Auckland University of Technology, <sup>4</sup> Oregon Health and Sciences University
119692	The effects of changes to body dimensions on an aperture crossing task	Braden Boley <sup>1</sup> , Michael Cinelli <sup>1</sup>	<sup>1</sup> Wilfrid Laurier University
119694	Development and content validity of a scale assessing lateropulsion in stroke patients: the SCALA	Dominic Pérennou <sup>1</sup> , Anais Odin <sup>2</sup> , Emmuelle Clarac <sup>2</sup> , Andréa Kistner <sup>2</sup> , Shenhao Dai <sup>2</sup> , Maud Barbado <sup>2</sup> , Emilie Chipon <sup>2</sup> , Carole Vuillerot <sup>2</sup> , Jean-Luc Bosson <sup>2</sup> , Alexandre Moreau-Gaudry <sup>2</sup> , Céline Piscicelli <sup>1</sup>	<sup>1</sup> University Hospital Grenoble-Alpes, <sup>2</sup> Grenoble Alpes University Hospital
119695	Singular Spectrum Analysis for the detection of adaptation rates in split-belt data	Rob Den Otter <sup>1</sup> , Tom Burke <sup>1</sup> , Claudine Lamoth <sup>1</sup>	<sup>1</sup> University Medical Center Groningen, University of Groningen
119696	Lateropulsion is common after right hemisphere stroke, strongly related to spatial neglect, and the primary cause of mobility limitation	Dominic Pérennou <sup>1</sup> , Shenhao Dai <sup>2</sup> , Emmauelle Clarac <sup>2</sup> , Andréa Kistner <sup>2</sup> , Patrice Davoine <sup>2</sup> , Anne Chripin <sup>2</sup> , Marie Jaeger <sup>2</sup> , Olivier Detante <sup>2</sup> , Marc Hommel <sup>2</sup> , Monica Baci <sup>2</sup> , Céline Piscicelli <sup>2</sup>	<sup>1</sup> University Hospital Grenoble-Alpes, <sup>2</sup> Grenoble Alpes University Hospital
119697	Modular control of the leading and trailing limbs during obstacle clearance in children: Preliminary results	Michael Maclellan <sup>1</sup>	<sup>1</sup> University of Prince Edward Island





119698	Motor deficits in Parkinson's disease are heterogeneously corrected for by Deep Brain Stimulation	Christoph Maurer <sup>1</sup>	<sup>1</sup> University Freiburg
119699	Leukoaraiosis, an invisible factor contributes to balance and gait disorders after stroke	Dominic Pérennou <sup>1</sup> , Shenhao Dai <sup>2</sup> , Céline Piscicelli <sup>2</sup> , Emmanuelle Clarac <sup>2</sup> , Patrice Davoine <sup>2</sup> , Anne Chrispin <sup>2</sup> , Andréa Kistner <sup>2</sup> , Marie Jaeger <sup>2</sup> , Olivier Detante <sup>2</sup> , Monica Baci <sup>2</sup> , Marc Hommel <sup>2</sup>	<sup>1</sup> University Hospital Grenoble-Alpes, <sup>2</sup> Grenoble Alpes University Hospital
119701	The differences in sagittal plane whole-body angular momentum during gait between patients with hemiparesis and healthy people	Keita Honda <sup>1</sup> , Yusuke Sekiguchi <sup>1</sup> , Takayuki Muraki <sup>1</sup> , Shin-Ichi Izumi <sup>2</sup>	<sup>1</sup> Tohoku University Graduate School of Medicine, <sup>2</sup> Graduate School of Biomedical Engineering, Tohoku University
119703	Risk of falling in bilateral vestibulopathy: How should we predict this?	Nolan Herssens <sup>1</sup> , Evi Verbecque <sup>2</sup> , Wim Saeys <sup>1</sup> , Luc Vereeck <sup>1</sup> , Bieke Dobbels <sup>3</sup> , Julie Moyaert <sup>3</sup> , Vincent Van Rompaey <sup>1</sup> , Ann Halleman <sup>1</sup>	<sup>1</sup> University of Antwerp, <sup>2</sup> University of Hasselt, <sup>3</sup> Antwerp University Hospital
119704	Modulation of H-reflex; effect of age and surface stiffness	Leila Alizadehsaravi <sup>1</sup> , Sjoerd Bruijn <sup>1</sup> , Huub Maas <sup>1</sup> , Jaap Van Dieen <sup>1</sup>	<sup>1</sup> Vrije universiteit amsterdam
119705	Reactive and anticipatory postural response mechanisms during continuous platform oscillation in children and adolescents	Richard Mills <sup>1</sup> , Heidi Sveistrup <sup>2</sup>	<sup>1</sup> Manchester Metropolitan University, <sup>2</sup> University of Ottawa
119706	How do spatiotemporal gait parameters change from the acute phase to 3 months later following a stroke?	Ole Petter Norvang <sup>1</sup> , Torunn Askim <sup>1</sup> , Anne Eitrem Dahl <sup>2</sup> , Pernille Thingstad <sup>2</sup>	<sup>1</sup> Norwegian University of Science and Technology, <sup>2</sup> Trondheim University Hospital
119708	Can an Inertial Measurement Unit assess the Shank-to-Vertical Angle in healthy individuals?	Lysanne De Jong <sup>1</sup> , Yvette Kerkum <sup>2</sup> , Jeske Jansens <sup>1</sup> , Noel Keijsers <sup>1</sup>	<sup>1</sup> Sint Maartenskliniek, <sup>2</sup> OIM Orthopedie
119709	Effect of trunk brace on forward bending movement characteristics in patients with scoliosis	Wei-Chun Hsu <sup>1</sup> , Muhammad Izhar Ahmed <sup>1</sup> , Chao-Chin Chang <sup>1</sup> , Chi Kuang Feng <sup>2</sup> , Shi-Jinn Horng <sup>1</sup> , Chung-Hsien Kuo <sup>1</sup> , Shang-Chih Lin <sup>1</sup>	<sup>1</sup> National Taiwan University of Science and Technology, <sup>2</sup> Taipei Veterans General Hospital, National Yang Ming University, National Defense Medical Center.



119710	What can EMG tell us about the neuromotor control of gait in Parkinson's disease?	Aisha Islam <sup>1</sup> , Lisa Alcock <sup>1</sup> , Kianoush Nazarpour <sup>1</sup> , Lynn Rochester <sup>1</sup> , Annette Pantall <sup>1</sup>	<sup>1</sup> Newcastle University
119711	Balance recovery following mediolateral pelvis perturbations during slow walking	Michelle Van Mierlo <sup>1</sup> , Boris Ruwe <sup>1</sup> , Mark Vlutters <sup>1</sup> , Edwin H. F. Van Asseldonk <sup>1</sup> , Herman Van der Kooij <sup>1</sup>	<sup>1</sup> University of Twente
119713	Transfer and retention effects of perturbation-based treadmill training in older adults.	Markus Rieger <sup>1</sup> , Selma Papegaij <sup>2</sup> , Mirjam Pijnappels <sup>1</sup> , Frans Steenbrink <sup>2</sup> , Jaap Van Dieën <sup>1</sup>	<sup>1</sup> Vrije Universiteit Amsterdam, <sup>2</sup> Motek Medical BV
119714	Lightly gripping a motionless handle: Study of postural sway decrease and correlation between transient force changes applied to the handle and balance	Angélica Bellicha <sup>1</sup> , Andrés Trujillo-León <sup>1</sup> , Wael Bacht <sup>1</sup>	<sup>1</sup> Sorbonne Université - ISIR
119715	Variability of the inter-joint coordination during grade walking	Arthur Dewolf <sup>1</sup> , Patrick Willems <sup>1</sup>	<sup>1</sup> Université catholique de Louvain
119716	Balance performance in bilateral vestibulopathy in relation to sensorimotor integration	Nolan Herzsens <sup>1</sup> , Evi Verbecque <sup>2</sup> , Wim Saeys <sup>1</sup> , Luc Vereeck <sup>1</sup> , Vincent Van Rompaey <sup>1</sup> , Christopher Mccrum <sup>3</sup> , Kenneth Meijer <sup>3</sup> , Ann Hallemans <sup>1</sup>	<sup>1</sup> University of Antwerp, <sup>2</sup> University of Hasselt, <sup>3</sup> Maastricht University Medical Centre+
119717	Feasibility of visual cues to promote walking turns in Parkinson's disease	Rebecca Reed-Jones <sup>1</sup> , Tyler Baker <sup>1</sup> , Jenna Pitman <sup>1</sup>	<sup>1</sup> University of Prince Edward Island
119718	Age-related changes in reactive arm responses following support surface perturbations	David Shulman <sup>1</sup> , Jaykob Price <sup>1</sup> , Lori Ann Vallis <sup>1</sup>	<sup>1</sup> University of Guelph
119719	Walking speed choices among married couples: Middle-aged and older adults walk slower when walking with their partner	Hyeyoung Cho <sup>1</sup> , Anna Forster <sup>1</sup> , Samuel Hatala <sup>1</sup> , Manuel Ochoa <sup>1</sup> , Sharon Christ <sup>1</sup> , Melissa Franks <sup>1</sup> , Elizabeth Richards <sup>1</sup> , Shirley Rietdyk <sup>1</sup>	<sup>1</sup> Purdue University
119720	Is trunk strength associated with functional mobility in older women?	Emily Gregg <sup>1</sup> , Gareth Nicholson <sup>1</sup> , Clive Beggs <sup>1</sup> , Athanassios Bissas <sup>1</sup>	<sup>1</sup> Leeds Beckett University



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119721	Balance control impairments in Fabry disease	Philippe Perrin <sup>1</sup> , Laetitia Peultier-Celli <sup>2</sup> , François Feillet <sup>2</sup> , Roland Jausaud <sup>2</sup>	<sup>1</sup> University of Lorraine and University Hospital Nancy, <sup>2</sup> Université de Lorraine et CHRU de Nancy
119722	The effects of intensive balance training in individuals with chronic spinal cord injury on quiet standing centre of pressure measures	Olinda Habib Perez <sup>1</sup> , Janelle Unger <sup>2</sup> , Katherine Chan <sup>1</sup> , Jae Lee <sup>2</sup> , Kei Masani <sup>1</sup> , Kristin Musselman <sup>1</sup>	<sup>1</sup> Toronto Rehabilitation Institute - University Health Network, <sup>2</sup> University of Toronto
119723	Immediate effects of Voluntary-induced Stepping Response (VSR) training on protective stepping in persons with chronic stroke: A randomized control trial	Kristen Hollands <sup>1</sup> , Pornprom Chayasit <sup>2</sup> , Mark Hollands <sup>3</sup> , Rumpa Boonsinsukh <sup>2</sup>	<sup>1</sup> University of Salford, <sup>2</sup> Srinakharinwirot University, <sup>3</sup> Liverpool John Moores University
119727	Can saccadic eye movements minimize the deleterious effect of ankle muscle fatigue on postural control in people with Multiple Sclerosis?	Felipe Santinelli <sup>1</sup> , Emerson Sebastião <sup>2</sup> , Fabiana Silva <sup>1</sup> , Gabriel Moretto <sup>1</sup> , Luiz Felipe Imaizumi <sup>1</sup> , Lucas Simieli <sup>1</sup> , Richard Van Emmerik <sup>3</sup> , Fabio Barbieri <sup>1</sup>	<sup>1</sup> São Paulo State University, <sup>2</sup> Northern Illinois University, <sup>3</sup> University of Massachusetts
119729	Cortical muscle synergy representations reveal functional modulation as a function of short-term balance training	Coen Zandvoort <sup>1</sup> , Jaap Van Dieën <sup>1</sup> , Nadia Dominici <sup>1</sup> , Andreas Daffertshofer <sup>1</sup>	<sup>1</sup> Vrije Universiteit Amsterdam
119730	The effects of Parkinson's disease and essential tremor on the multiscale dynamics of hand tremor motion	Junhong Zhou <sup>1</sup> , Dongning Su <sup>2</sup> , Shuo Yang <sup>2</sup> , Ying Wang <sup>2</sup> , Zhu Liu <sup>2</sup> , Hua Pan <sup>2</sup> , Tao Feng <sup>2</sup>	<sup>1</sup> Havard Medical School, <sup>2</sup> Beijing Tiantan Hospital, Capital Medical University
119731	A novel functional ambulation toolkit to assess children with locomotor deficits	Alexandra Leclerc-Valade <sup>1</sup> , Jolin Jiang <sup>1</sup> , Liav Lugassy <sup>1</sup> , Zachary Weber <sup>1</sup> , Elizabeth Dannenbaum <sup>2</sup> , Claire Perez <sup>1</sup> , Filomena Pietrangelo <sup>2</sup> , Lora Salvo <sup>2</sup> , Joyce Fung <sup>1</sup>	<sup>1</sup> McGill University, <sup>2</sup> Jewish Rehabilitation Hospital (CISSS-Laval)
119732	The neural correlates of discrete gait characteristics in ageing: A structured review	Joanna Wilson <sup>1</sup> , Liesl Allcock <sup>2</sup> , Ríona Mc Ardle <sup>1</sup> , John-Paul Taylor <sup>1</sup> , Lynn Rochester <sup>1</sup>	<sup>1</sup> Newcastle University, <sup>2</sup> Hexham General Hospital



119733	Lightbulb characteristics affect stepping biomechanics during stair descent in young and older adults	Neil Thomas <sup>1</sup> , Costis Maganaris <sup>1</sup> , Thomas O'brien <sup>1</sup> , Richard Foster <sup>1</sup> , Vasilios Baltzopoulos <sup>1</sup> , Carolyn Lees <sup>1</sup> , Timmion Skervin <sup>1</sup> , Mark Hollands <sup>1</sup>	<sup>1</sup> Liverpool John Moores University
119734	A retrospective study towards characterizing the long-term effects of single-event multilevel surgery on gait consistency in children with spastic bilateral cerebral palsy	Rosa Visscher <sup>1</sup> , Nadine Hasler <sup>1</sup> , Marie Freslier <sup>2</sup> , Navrag Singh <sup>1</sup> , Reinald Brunner <sup>2</sup> , Erich Rutz <sup>2</sup>	<sup>1</sup> ETH Zurich, <sup>2</sup> University Children's Hospital Basel
119735	The impact of split-belt treadmill walking on freezing related gait features in Parkinson's disease	Christian Schlenstedt <sup>1</sup> , Jana Seuthe <sup>1</sup> , Pieter Ginis <sup>2</sup> , Markus Hobert <sup>1</sup> , Nicholas D'cruz <sup>2</sup> , Alice Nieuwboer <sup>2</sup>	<sup>1</sup> University Kiel, Germany, <sup>2</sup> KU Leuven
119736	Lifestyle integrated functional exercise for inpatients suffering from cognitive impairment - a transitional approach to prevent hospitalized older adults from functional decline	Nacera Belala <sup>1</sup> , Michael Schwenk <sup>1</sup> , Clemens Becker <sup>2</sup>	<sup>1</sup> Heidelberg University, <sup>2</sup> Robert-Bosch-Hospital Stuttgart
119738	Structural neural correlates of independent gait characteristics in Parkinson's disease	Joanna Wilson <sup>1</sup> , Brook Galna <sup>1</sup> , Sue Lord <sup>2</sup> , Alison Yarnall <sup>1</sup> , Rachael Lawson <sup>1</sup> , Gordon Duncan <sup>3</sup> , Tien Khoo <sup>4</sup> , David Burn <sup>1</sup> , Lynn Rochester <sup>1</sup> , John-Paul Taylor <sup>1</sup>	<sup>1</sup> Newcastle University, <sup>2</sup> Auckland University of Technology, <sup>3</sup> University of Edinburgh, <sup>4</sup> Griffith University
119739	Designing optimal visual cues to increase stair climbing safety in young and older adults	Timmion Skervin <sup>1</sup> , Mark Hollands <sup>1</sup> , Constantinos Maganaris <sup>1</sup> , Andrew Schofield <sup>2</sup> , Neil Thomas <sup>1</sup> , Richard Foster <sup>1</sup>	<sup>1</sup> Liverpool John Moores University, <sup>2</sup> Aston University
119740	Natural progression of gait impairment in early Parkinson's disease: A six-year prospective incident cohort study	Joanna Wilson <sup>1</sup> , Alison Yarnall <sup>1</sup> , Sue Lord <sup>2</sup> , Lisa Alcock <sup>1</sup> , Rosie Morris <sup>3</sup> , David Burn <sup>1</sup> , Lynn Rochester <sup>1</sup> , Brook Galna <sup>1</sup>	<sup>1</sup> Newcastle University, <sup>2</sup> Auckland University of Technology, <sup>3</sup> Oregon Health and Science University
119741	Split-Belt Treadmill walking in people with Parkinson's disease: a systematic review	Jana Seuthe <sup>1</sup> , Nicholas D'cruz <sup>2</sup> , Pieter Ginis <sup>2</sup> , Burkhard Weisser <sup>3</sup> , Daniela Berg <sup>1</sup> , Günther Deuschl <sup>1</sup> , Alice Nieuwboer <sup>2</sup> , Christian Schlenstedt <sup>1</sup>	<sup>1</sup> University Hospital Schleswig Holstein, Christian-Albrechts University Kiel, <sup>2</sup> KU Leuven, <sup>3</sup> Christian-Albrechts University Kiel



119742	Walking speed improves with arm swing manipulation in people with Parkinson's disease	Vinicius Zampier <sup>1</sup> , Rodrigo Vitório <sup>1</sup> , Victor Beretta <sup>1</sup> , Diego Jaimes <sup>1</sup> , Diego Orcioli-Silva <sup>1</sup> , Lilian Gobbi <sup>1</sup>	<sup>1</sup> São Paulo State University
119743	Adaptive capacity to split-belt treadmill walking of people with Parkinson's disease with freezing of gait	Jana Seuthe <sup>1</sup> , Nicholas D'cruz <sup>2</sup> , Pieter Ginis <sup>2</sup> , Burkhard Weisser <sup>3</sup> , Alice Nieuwboer <sup>2</sup> , Christian Schlenstedt <sup>1</sup>	<sup>1</sup> University Hospital Schleswig Holstein, Christian-Albrechts University Kiel, <sup>2</sup> KU Leuven, <sup>3</sup> Christian-Albrechts University Kiel
119744	Effect of the rate of change of an external balance perturbation	Thomas Robert <sup>1</sup> , Marine Guinamard <sup>1</sup> , Pascal Chabaud <sup>1</sup> , Laurence Cheze <sup>1</sup> , Marie-Laure Mille <sup>2</sup>	<sup>1</sup> Université de Lyon, <sup>2</sup> Aix Marseille Université
119745	Walking for better outcomes and recovery: The effect of WALK-FOR in preventing hospital-associated functional decline among older adults	Maayan Agmon <sup>1</sup> , Anna Zisberg <sup>1</sup> , Yaniv Cohen <sup>1</sup> , Efrat Gil <sup>2</sup> , Yehudith Chayat <sup>3</sup> , Chedva Levin <sup>4</sup> , Nurit Gur-Yaish <sup>1</sup> , Debbi Rand <sup>5</sup>	<sup>1</sup> University of Haifa, <sup>2</sup> Clalit Health Services, Israel, <sup>3</sup> Hemek Medical Center, <sup>4</sup> Lev Academic Center, Jerusalem, Israel, <sup>5</sup> Tel-Aviv University
119746	The effect of handrail cross-sectional design on centre of mass control during compensatory reach-to-grasp reactions to recover balance	Philippa Gosine <sup>1</sup> , Vicki Komisar <sup>2</sup> , Alison Novak <sup>1</sup>	<sup>1</sup> Toronto Rehabilitation Institute, <sup>2</sup> Simon Fraser University
119747	Efficacy and clinical effectiveness of highly challenging balance training for Parkinson's disease a comparison between two clinical trials.	Erika Franzén <sup>1</sup> , Conran Joseph <sup>1</sup> , Hanna Johansson <sup>1</sup> , Breiffni Leavy <sup>1</sup>	<sup>1</sup> Karolinska Institutet
119748	Is gait variability a biomarker of neurodegenerative disorders?	Manuel Montero Odasso <sup>1</sup> , Yanina Sarquis-Adamson <sup>2</sup> , Natalie Ravid <sup>3</sup> , Quincy Almeida <sup>4</sup> , Frederico Pieruccini-Faria <sup>1</sup> , Kerry Howell <sup>3</sup> , Richard Camicioli <sup>3</sup>	<sup>1</sup> Gait and Brain Lab, Lawson Health Research Institute, Univ. of Western Ontario, <sup>2</sup> Lawson Health Research Institute, <sup>3</sup> University of Alberta, <sup>4</sup> Wilfrid Laurier University
119749	Postural control in young adults with high-functioning Autism Spectrum Disorder (ASD): Distinguishing between general and sensory channel-specific impairments	Rebekah Knox <sup>1</sup> , Michail Doulmas <sup>1</sup>	<sup>1</sup> Queen's University Belfast



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119751	The effects of time-pressure on adaptive gait in individuals with and without central vision loss	Tjerk Zult <sup>1</sup> , Matthew Timmis <sup>2</sup> , Jonathan Allsop <sup>3</sup> , Shahina Pardhan <sup>1</sup>	<sup>1</sup> Faculty of Health, Education, Medicine, and Social Care, Anglia Ruskin University, <sup>2</sup> Anglia Ruskin University, <sup>3</sup> Royal Air Force College Cranwell
119752	MTBI and PTSD are dissociable using novel posturography assessments	W. Geoffrey Wright <sup>1</sup> , Amanda Haskell <sup>2</sup> , Labeby Servatius <sup>2</sup> , Justin Handy <sup>3</sup> , Richard Servatius <sup>2</sup>	<sup>1</sup> Temple University, <sup>2</sup> Veterans Administration Medical Center (VAMC), <sup>3</sup> NSMRL
119753	The effect of self-paced and fixed speed treadmill walking on the energetic cost of transport	Kyra Theunissen <sup>1</sup> , Guy Plasqui <sup>1</sup> , Peter Feys <sup>2</sup> , Annelies Boonen <sup>1</sup> , Annick Timmermans <sup>2</sup> , Pieter Meyns <sup>2</sup> , Kenneth Meijer <sup>1</sup>	<sup>1</sup> Maastricht University Medical Center+, <sup>2</sup> Hasselt University
119754	Estimating lateral margin of stability during walking and turning using inertial sensors	Peter Fino <sup>1</sup> , Carolin Curtze <sup>2</sup>	<sup>1</sup> University of Utah, <sup>2</sup> University of Nebraska Omaha
119755	Reduced weight-shifting skills during single- and dual-task conditions are accompanied by altered neural activation in ageing	Veerle De Rond <sup>1</sup> , Diego Orcioli-Silva <sup>2</sup> , Lynn Rochester <sup>3</sup> , Jean-Jacques Orban De Xivry <sup>1</sup> , Annette Pantall <sup>3</sup> , Alice Nieuwboer <sup>1</sup>	<sup>1</sup> KU Leuven, <sup>2</sup> São Paulo State University, Institute of Biosciences, <sup>3</sup> Institute of Neuroscience/Newcastle University Institute of Ageing
119756	Effects of neutralization of symmetry of the Maxwell spot on postural control in children with dyslexia. Clinical cases report	Emmanuelle Pivron Braquet <sup>1</sup> , Marc Janin <sup>2</sup> , Alix Couvrat <sup>3</sup> , Claire Carraurer <sup>3</sup> , Lucie Pirodeau <sup>3</sup> , Marina Vincent <sup>3</sup> , Marion Miral <sup>3</sup> , Sophie Richer De Forge <sup>3</sup> , Tipahaine Dreillard <sup>3</sup> , Valerie Riviere <sup>3</sup> , Benoit Maille <sup>3</sup> , Nicolas Imbert <sup>3</sup> , Briskmann Didier <sup>3</sup>	<sup>1</sup> Podiatrist office, 11 Bis Rue Hervet, <sup>2</sup> Université de Pau et des pays de Ladour.Laboratoire MEPS, département STAPS,, <sup>3</sup> Krys Poitiers
119759	Characteristics of people with stroke who withdraw from mobility and balance rehabilitation research studies.	Kara Patterson <sup>1</sup> , Jennifer Wong <sup>2</sup> , Avril Mansfield <sup>2</sup>	<sup>1</sup> University of Toronto, <sup>2</sup> Toronto Rehabilitation Institute - UHN



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119761	Objective gait and balance outcome measures for efficacy of cyclodextrin treatment in Niemann-Pick Type C (NPC): a case series	Joan O'keefe <sup>1</sup> , Jessica Joyce <sup>1</sup> , Nicollette Purcell <sup>1</sup> , Kathryn Wrobel <sup>1</sup> , Medha Parulekar <sup>1</sup> , Elizabeth Berry-Kravis <sup>1</sup>	<sup>1</sup> Rush University Medical Center
119762	Mobility disability in older adults through the eyes of the tandem walk	Natalie Ganz <sup>1</sup> , Eran Gazit <sup>1</sup> , Aron Buchman <sup>2</sup> , Anat Mirelman <sup>3</sup> , Jeff Hausdorff <sup>3</sup>	<sup>1</sup> Center for the study of Movement, Cognition and Mobility, Tel Aviv Sourasky Medical Center, <sup>2</sup> Rush Alzheimer's Disease Center, <sup>3</sup> [1] Center for the study of Movement, Cognition and Mobility, Tel Aviv Sourasky Medical Center [2]
119764	Exploring the interaction between motor competence and dual task walking in adolescents	Benjamin Weedon <sup>1</sup> , Patrick Esser <sup>1</sup> , Johnny Collett <sup>1</sup> , Hooshang Izadi <sup>1</sup> , Shawn Joshi <sup>1</sup> , Andy Meaney <sup>1</sup> , Anne Delestrat <sup>1</sup> , Helen Dawes <sup>1</sup>	<sup>1</sup> Oxford Brookes University
119765	Could lifestyle-integrated exercise interventions change physical activity behavior of young older adults?	Gaëlle Prigent <sup>1</sup> , Anisoara Ionescu <sup>1</sup> , Wei Zhang <sup>1</sup> , Kristin Taraldsen <sup>2</sup> , Beatrix Vereijken <sup>2</sup> , Jorunn L. Helbostad <sup>2</sup> , Kamiar Aminian <sup>1</sup>	<sup>1</sup> Ecole Polytechnique Fédérale de Lausanne (EPFL), <sup>2</sup> The Norwegian University of Science and Technology
119766	The modulation of trunk coordination for various step widths	Hai-Jung (Steffi) Shih <sup>1</sup> , Kornelia Kulig <sup>1</sup>	<sup>1</sup> University of Southern California
119767	The effects of cognitive impairment on the multi-scale dynamics of standing postural control in older adults	Junhong Zhou <sup>1</sup> , Brad Manor <sup>1</sup> , J. Riley Mccarten <sup>2</sup> , Michael Wade <sup>3</sup> , Azizah Jor'dan <sup>1</sup>	<sup>1</sup> Havard Medical School, <sup>2</sup> Minneapolis Veterans Affairs Medical Center, <sup>3</sup> University of Minnesota-Twin Cities
119768	Improvements in balance control for multiple sclerosis patients with vibrotactile biofeedback of trunk sway	John Allum <sup>1</sup> , Christel Schouenborg <sup>2</sup> , Bettina Fischer-Barnicol <sup>1</sup> , Venessa Haller <sup>1</sup> , Nathanael Lutz <sup>2</sup> , Heiko Rust <sup>3</sup> , Oezguer Yaldizli <sup>1</sup>	<sup>1</sup> University Hospital Basel, <sup>2</sup> Bern University of Applied Sciences, <sup>3</sup> Charing Cross Hospital
119769	Balance control in young adult athletes with a history of recent concussion (> 3	Katelyn Mitchell <sup>1</sup> , Michael Cinelli <sup>1</sup>	<sup>1</sup> Wilfrid Laurier University



	months) during a lower limb reaching task		
119770	Targeted familiarization based on user feedback and motor control principles to optimize positive adaptation strategies for learning to walk with a passive load-bearing exoskeleton: a feasibility study	Laurent Bouyer <sup>1</sup> , Krista Best <sup>1</sup> , Thomas Karakolis <sup>2</sup> , Gabriel Diamond-Ouellette <sup>3</sup> , Etienne Lamoureux <sup>3</sup> , Kurt Modie <sup>4</sup>	<sup>1</sup> CIRRIS-Universite Laval, <sup>2</sup> Defence Research and Development Canada, <sup>3</sup> Mawashi Science & Technology, <sup>4</sup> Defence Science and Technology Australia
119771	Influence of anxiety on prefrontal cortical activity during usual walking and obstacle crossing in older adults.	Nubia Conceição <sup>1</sup> , Priscila Sousa <sup>1</sup> , Diego Orcioli-Silva <sup>1</sup> , Victor Beretta <sup>1</sup> , Ellen Lirani-Silva <sup>1</sup> , Lillian Teresa Gobbi <sup>1</sup> , Rodrigo Vitório <sup>1</sup>	<sup>1</sup> São Paulo State University
119772	Executive functioning, muscle power and reactive balance are major contributors of gait adaptability in people with Parkinson's disease	Maria Joana Duarte Caetano <sup>1</sup> , Stephen Lord <sup>2</sup> , Natalie Allen <sup>3</sup> , Joeeun Song <sup>3</sup> , Serene Paul <sup>3</sup> , Colleen Canning <sup>3</sup> , Jasmine Menant <sup>2</sup>	<sup>1</sup> Prefeitura Municipal de São Carlos, <sup>2</sup> Neuroscience Research Australia, <sup>3</sup> The University of Sydney
119773	A validation and comparison of Actigraph GT9X Link and RunScribe Plus accelerometers for the estimation of skeletal loading during habitual physical activities	Simon Higgins <sup>1</sup> , Srikant Vallabhajosula <sup>1</sup>	<sup>1</sup> Elon University
119774	Do falls precede or follow changes in self-efficacy scores regarding falls and gait in community dwelling older adults?	Roel Weijer <sup>1</sup> , Marco Hoozemans <sup>1</sup> , Jaap Van Dieën <sup>1</sup> , Mirjam Pijnappels <sup>1</sup>	<sup>1</sup> VU Amsterdam
119775	Can transcranial direct current stimulation improve gait initiation in individuals with Parkinson's disease?	Jonathan Lommen <sup>1</sup> , Anthony Carlsen <sup>1</sup> , Julie Nantel <sup>1</sup>	<sup>1</sup> University of Ottawa
119776	How does balance affect gait in stroke survivors?	Susanne Van der Veen <sup>1</sup> , Ulrike Hammerbeck <sup>2</sup> , Kristen Hollands <sup>3</sup>	<sup>1</sup> Virginia Commonwealth University, <sup>2</sup> Manchester University, <sup>3</sup> Salford University
119777	The influence of virtual height on visually evoked balance responses	Emma Nielsen <sup>1</sup> , Taylor Cleworth <sup>2</sup> , Mark Carpenter <sup>1</sup>	<sup>1</sup> University of British Columbia, <sup>2</sup> University of Waterloo





119778	Why do asymmetric gait patterns persist after deep brain stimulation in Parkinson's disease?	Deepak Ravi <sup>1</sup> , Michelle Gwerder <sup>1</sup> , Niklas Ignasiak <sup>2</sup> , Christian Baumann <sup>3</sup> , Mechtild Uhl <sup>3</sup> , William Taylor <sup>1</sup> , Navrag Singh <sup>1</sup>	<sup>1</sup> ETH Zurich, <sup>2</sup> Chapman University, <sup>3</sup> University Hospital Zurich
119779	Consistency and test-retest reliability of stepping tests designed to measure self-perceived and actual physical stepping ability in older adults	Roel Weijer <sup>1</sup> , Marco Hoozemans <sup>1</sup> , Jaap Van Dieën <sup>1</sup> , Mirjam Pijnappels <sup>1</sup>	<sup>1</sup> VU Amsterdam
119781	Effect of holding and grasping objects on risk for head impact during falls in older adults	Vicki Komisar <sup>1</sup> , Nataliya Shishov <sup>1</sup> , Stephen Robinovitch <sup>1</sup>	<sup>1</sup> Simon Fraser University
119782	The effect of walking speed on cortical activity in young and older adults	Lisa Alcock <sup>1</sup> , Rodrigo Vitorio <sup>2</sup> , Samuel Stuart <sup>3</sup> , Lynn Rochester <sup>1</sup> , Annette Pantall <sup>1</sup>	<sup>1</sup> Newcastle University, <sup>2</sup> Sao Paulo State University, <sup>3</sup> Oregon Health and Science University
119783	Optimal treatment period for vestibular balance rehabilitation in patients with chronic unilateral vestibular dysfunction	Toshiaki Yamanaka <sup>1</sup>	<sup>1</sup> Nara Medical University
119786	Collision avoidance between walkers with a twist: strategies for curvilinear and rectilinear paths	Sean Lynch <sup>1</sup> , Richard Kulpa <sup>1</sup> , Laurentius Meerhoff <sup>2</sup> , Anthony Sorel <sup>1</sup> , Julien Pettre <sup>2</sup> , Anne-Hélène Olivier <sup>1</sup>	<sup>1</sup> University Rennes / Inria, <sup>2</sup> Inria Rennes
119787	Does discrete versus cyclic full body reaching tasks influence hip and spine excursions?	James Thomas <sup>1</sup>	<sup>1</sup> Virginia Commonwealth University
119788	Mechanical consequences of trunk flexion on slopes during human walking	Amy Wu <sup>1</sup> , Salman Faraji <sup>2</sup> , Christopher Easthope <sup>3</sup> , Auke Ijspeert <sup>2</sup>	<sup>1</sup> Queen's University, <sup>2</sup> Ecole Polytechnique Federale de Lausanne, <sup>3</sup> Uniklinik Balgrist
119789	Dynamic stability measures respond uniquely to destabilization during asymmetric walking	Tarique Siragy <sup>1</sup> , Julie Nantel <sup>1</sup>	<sup>1</sup> University of Ottawa



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119793	Does postural threat influence the StartReact effect in a lateral stepping task?	Vivian Weerdesteyn <sup>1</sup> , Milou Coppens <sup>1</sup> , Tim Inglis <sup>2</sup> , Mark Carpenter <sup>2</sup>	<sup>1</sup> Radboud University Medical Centre, <sup>2</sup> University of British Columbia
119794	Perceptions of induced temporal gait asymmetry in healthy adults	Lucas Crosby <sup>1</sup> , Jessica Grahn <sup>2</sup> , Joyce Chen <sup>3</sup> , Kara Patterson <sup>4</sup>	<sup>1</sup> University of Toronto, <sup>2</sup> Brain & Mind Institute - Western University, <sup>3</sup> Faculty of Kinesiology & Physical Education - University of Toronto, <sup>4</sup> Department of Physical Therapy - University of Toronto
119795	Effect of different exercise regimens on walking performance in people with multiple sclerosis	Klara Novotna <sup>1</sup> , Lucie Sucha <sup>1</sup> , Petr Reznicek <sup>1</sup> , Lukas Sobisek <sup>2</sup> , Eva Kubala Havrdova <sup>1</sup>	<sup>1</sup> Charles University, <sup>2</sup> Czech Economical Univesity, Faculty of Probability
119796	Clinical outcome measures and the patient experience: what we can learn from conducting a process evaluation of a balance training intervention	Breiffni Leavy <sup>1</sup> , Conran Joseph <sup>1</sup> , Hanna Johansson <sup>1</sup> , Erika Franzén <sup>1</sup>	<sup>1</sup> Karolinksa Institutet
119797	Extending the centre of pressure to include handhold forces	Emily King <sup>1</sup> , James Borrelli <sup>2</sup> , Vicki Komisar <sup>3</sup> , Brian Maki <sup>4</sup> , Alison Novak <sup>4</sup>	<sup>1</sup> University of Waterloo, <sup>2</sup> University of Maryland, <sup>3</sup> Simon Fraser University, <sup>4</sup> Toronto Rehabilitation Institute - University Health Network
119798	An exploratory in vivo voxel-based PET analysis of cholinergic correlates of postural sway variability in Parkinson disease	Martijn Muller <sup>1</sup> , Uros Marusic <sup>2</sup> , Prabesh Kanel <sup>1</sup> , Nicolaas Bohnen <sup>1</sup>	<sup>1</sup> University of Michigan, <sup>2</sup> Science and Research Centre Koper



119799	Influence of mild impairment of Parkinson's disease on gait initiation	Ana Barela <sup>1</sup> , Giovanna Machado <sup>1</sup> , Douglas Russo-Junior <sup>1</sup> , Flávia Doná <sup>2</sup> , Henrique Ferraz <sup>2</sup> , José Barela <sup>3</sup>	<sup>1</sup> Cruzeiro do Sul University, <sup>2</sup> Federal University of São Paulo, <sup>3</sup> São Paulo State University
119800	Unpredictable gait perturbation training improves reactive responses, and gait stability functions contrary to gait training without perturbations in stroke individuals	Vahid Esmaeili Mahani <sup>1</sup> , Laurent Bouyer <sup>2</sup> , Cyril Duclos <sup>1</sup>	<sup>1</sup> Université de Montréal, <sup>2</sup> Université Laval
119801	The influence of fear priming on whole-body reaching in young and older adults	Alexander Stamenkovic <sup>1</sup> , Susanne Van der Veen <sup>1</sup> , James Thomas <sup>1</sup>	<sup>1</sup> Virginia Commonwealth University
119803	Obstacle crossing in fallers with and without Parkinson's disease; influence of attentional demand	Lisa Alcock <sup>1</sup> , Brook Galna <sup>1</sup> , Richard Foster <sup>2</sup> , Jeffrey Hausdorff <sup>3</sup> , Sue Lord <sup>4</sup> , Lynn Rochester <sup>1</sup>	<sup>1</sup> Newcastle University, <sup>2</sup> Liverpool John Moores University, <sup>3</sup> TelAviv Sourasky Medical Center, <sup>4</sup> Auckland University of Technology
119804	Parkinson's disease delays predictable visual cue processing although does not affect complex and non-predictable visual cue processing in postural control	Jose Barela <sup>1</sup> , Caio Cruz <sup>2</sup> , Flávia Dona <sup>3</sup> , Vitor Amaral <sup>4</sup> , Henrique Ferraz <sup>3</sup> , Ana Barela <sup>4</sup>	<sup>1</sup> Sao Paulo State University, <sup>2</sup> University of São Paulo, <sup>3</sup> Federal University of São Paulo, <sup>4</sup> Cruzeiro do Sul University
119805	Brain functional substrate of gait observation in Parkinson's disease	Martina Putzolu <sup>1</sup> , Giulia Bommarito <sup>1</sup> , Cecilia Cerulli <sup>1</sup> , Giovanna Lagravinese <sup>1</sup> , Carla Ogliastro <sup>1</sup> , Gaia Bonassi <sup>1</sup> , Laura Avanzino <sup>1</sup> , Matilde Inglese <sup>1</sup> , Elisa Pelosin <sup>1</sup>	<sup>1</sup> University of Genoa
119806	The role of the vestibular system in the preparation of arm movements	Michael Kennefick <sup>1</sup> , Joel Burma <sup>1</sup> , Paige Copeland <sup>1</sup> , Paul Van Donkelaar <sup>1</sup> , Chris Mcneil <sup>1</sup> , Brian Dalton <sup>1</sup>	<sup>1</sup> University of British Columbia Okanagan
119808	Can we elicit increasing lumbar flexion movement using a standardized reaching paradigm in an immersive virtual reality environment?	Susanne Van der Veen <sup>1</sup> , Dana Nocera <sup>2</sup> , Kellen Kubik <sup>2</sup> , Emma Fish <sup>2</sup> , James Thomas <sup>1</sup>	<sup>1</sup> Virginia Commonwealth University, <sup>2</sup> Ohio University



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119809	A biomechanics-based investigation of walking aid use in gait laboratory and home settings	Sibylle Thies <sup>1</sup> , Alex Bates <sup>1</sup> , Eleonora Costamagna <sup>1</sup> , Laurence Kenney <sup>1</sup> , Malcolm Granat <sup>1</sup> , Jo Webb <sup>1</sup> , Helen Dawes <sup>2</sup>	<sup>1</sup> University of Salford, <sup>2</sup> Oxford Brookes University
119810	The motor control of running in children and their development	Margit Bach <sup>1</sup> , Andreas Daffertshofer <sup>1</sup> , Nadia Dominici <sup>1</sup>	<sup>1</sup> Vrije Universiteit Amsterdam
119812	Resting state functional connectivity of normal and dual-task walking in healthy older adults	On-Yee Amy Lo <sup>1</sup> , Mark Halko <sup>2</sup> , Victoria Poole <sup>1</sup> , Junhong Zhou <sup>1</sup> , Lewis Lipsitz <sup>1</sup> , Brad Manor <sup>1</sup>	<sup>1</sup> Hebrew SeniorLife / Harvard Medical School, <sup>2</sup> Beth Israel Deaconess Medical Center / Harvard Medical School
119814	Global lower limb coactivation during gait in patients with cerebellar ataxia	Mariano Serrao <sup>1</sup> , Lorenzo Fiori <sup>2</sup> , Tiwana Varrecchia <sup>3</sup> , Carmela Conte <sup>4</sup> , Antonella Tatarelli <sup>2</sup> , Carlo Casali <sup>1</sup> , Francesco Pierelli <sup>1</sup> , Francesco Draicchio <sup>2</sup> , Alberto Ranavolo <sup>2</sup>	<sup>1</sup> Sapienza University of Rome, <sup>2</sup> INAIL, <sup>3</sup> University Roma Tre, <sup>4</sup> Fondazione Don Gnocchi, Milan, Italy
119815	Posturography differences between recurrent and non-recurrent fallers	Kyra Twohy <sup>1</sup> , Vinayak Vijayan <sup>1</sup> , Kimberly Bigelow <sup>1</sup>	<sup>1</sup> University of Dayton
119817	A novel multivariate approach to characterise stair-negotiating behaviour and detect fall risk in older adults	Thijs Ackermans <sup>1</sup> , Natasha Francksen <sup>1</sup> , Raul Casana-Eslava <sup>1</sup> , Carolyn Lees <sup>1</sup> , Vasilios Baltzopoulos <sup>1</sup> , Paulo Lisboa <sup>1</sup> , Mark Hollands <sup>1</sup> , Thomas O'brien <sup>1</sup> , Constantinos Maganaris <sup>1</sup>	<sup>1</sup> Liverpool John Moores University
119818	Accounting for sensory noise is important to simulate stable and human-like control of perturbed standing balance	Tom Van Wouwe <sup>1</sup> , Friedl De Groote <sup>1</sup> , Lena Ting <sup>2</sup>	<sup>1</sup> KU Leuven, <sup>2</sup> Georgia Tech
119819	The development of running in children	Margit Bach <sup>1</sup> , Francesco Menna <sup>2</sup> , Andreas Daffertshofer <sup>1</sup> , Nadia Dominici <sup>1</sup>	<sup>1</sup> Vrije Universiteit Amsterdam, <sup>2</sup> University of Rome Tor Vergata, Rome, Italy
119820	Perturbation Induced Stepping in Stroke: a way to use the more involved leg	Katherine Martinez <sup>1</sup> , Mary Blackinton <sup>2</sup> , M. Samuel Cheng <sup>2</sup> , Mark Rogers <sup>3</sup> , Marie-Laure Mille <sup>4</sup>	<sup>1</sup> Northwestern University Feinberg School of Medicine, <sup>2</sup> Nova Southeastern University, <sup>3</sup> University of Maryland School of Medicine, <sup>4</sup> CNRS & Aix-Marseille Univ



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119821	Effect of dopamine on mediolateral dynamic balance in Parkinson's disease and freezing of gait	Moran Gilat <sup>1</sup> , Bauke Dijkstra <sup>1</sup> , Alice Nieuwboer <sup>1</sup>	<sup>1</sup> KU Leuven
119822	Non-invasive spinal cord stimulation for the treatment of motor symptoms of Parkinson's disease	Maria Alamos <sup>1</sup> , Aquiles Martinez <sup>2</sup> , Carlos Juri <sup>1</sup> , Rómulo Fuentes <sup>2</sup>	<sup>1</sup> Pontificia Universidad Catolica de Chile, <sup>2</sup> Universidad de Chile
119823	Postural control during induced stabilization of the center of mass and light touch	Dasa Gorjan <sup>1</sup> , Angélica Bellicha <sup>2</sup> , Jernej Camernik <sup>1</sup> , Wael Bachta <sup>2</sup> , Jan Babic <sup>1</sup>	<sup>1</sup> Institute Jozef Stefan, <sup>2</sup> Sorbonne Université - ISIR
119824	Frequency characteristics of heteronymous Achilles tendon reflexes during quiet stance	Gregg Eschelmuller <sup>1</sup> , Robyn Mildren <sup>1</sup> , Jean-Sébastien Blouin <sup>1</sup> , Mark Carpenter <sup>1</sup> , J. Timothy Inglis <sup>1</sup>	<sup>1</sup> University of British Columbia
119825	Threat-related changes in postural control in virtual environments	Jernej Camernik <sup>1</sup> , Sanja Kezic <sup>1</sup> , Jan Babic <sup>1</sup>	<sup>1</sup> Jozef Stefan Institute
119826	Balance mechanisms differ across cadences on a self-paced treadmill	Tyler Fettrow <sup>1</sup> , David Grenet <sup>1</sup> , Hendrik Reimann <sup>1</sup> , Ian Sotnek <sup>1</sup> , Elizabeth Kaye <sup>1</sup> , Maelyn Arcodia <sup>1</sup> , John Jeka <sup>1</sup>	<sup>1</sup> University of Delaware
119827	Emotional, cognitive, and postural adaptations to repeated postural threat exposure	Kyle Johnson <sup>1</sup> , Martin Zaback <sup>2</sup> , Craig Tokuno <sup>1</sup> , Mark Carpenter <sup>2</sup> , Allan Adkin <sup>1</sup>	<sup>1</sup> Brock University, <sup>2</sup> University of British Columbia
119828	Changes in Achilles tendon reflex strength during quiet standing with age	Margot Schmidt <sup>1</sup> , Robyn Mildren <sup>1</sup> , Gregg Eschelmuller <sup>1</sup> , Jean-Sébastien Blouin <sup>1</sup> , Mark Carpenter <sup>1</sup> , J. Timothy Inglis <sup>1</sup>	<sup>1</sup> University of British Columbia
119829	Mediolateral constraints during overhead unloading result in altered gait dynamics and balance regulation	Christopher Easthope <sup>1</sup> , Niklas Ignasiak <sup>2</sup> , Mathias Bannwart <sup>1</sup> , Sara Bayer <sup>1</sup> , Armin Curt <sup>1</sup> , Georg Rauter <sup>3</sup> , Marc Bolliger <sup>1</sup>	<sup>1</sup> University Hospital Balgrist, <sup>2</sup> Chapman University, <sup>3</sup> University Basel
119830	Cognitive-motor interference in older adults while navigating in an ecological environment	Catherine Agathos <sup>1</sup> , Marcia Bécu <sup>1</sup> , Konogan Baranton <sup>2</sup> , Delphine Bernardin <sup>3</sup> , Angelo Arleo <sup>1</sup>	<sup>1</sup> Sorbonne Université, INSERM, CNRS, Institut de la Vision, <sup>2</sup> Essilor International, <sup>3</sup> Essilor Canada



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119831	Sensory contributions to head and lumbar sway in healthy individuals and those with mild traumatic brain injury	Tiphanie Raffegeau <sup>1</sup> , Mindie Clark <sup>1</sup> , Lucy Parrington <sup>2</sup> , Robert Peterka <sup>2</sup> , James Chesnutt <sup>2</sup> , Laurie King <sup>2</sup> , Peter Fino <sup>1</sup>	<sup>1</sup> University of Utah, <sup>2</sup> Oregon Health
119833	How much does pregnancy affect female's gait pattern?	Wanda Forczek <sup>1</sup> , Yury Ivanenko <sup>2</sup> , Marcin Salamaga <sup>3</sup> , Agata Maslon <sup>1</sup> , Marta Curylo <sup>1</sup> , Barbara Fraczek <sup>1</sup> , Agnieszka Suder <sup>1</sup>	<sup>1</sup> University of Physical Education, <sup>2</sup> IRCCS Santa Lucia Foundation, <sup>3</sup> Cracow University of Economics
119834	Predicting physical activity in obese and normal weight older adults based on cognitive and physical function	Noah Rosenblatt <sup>1</sup> , Sai Yalla <sup>1</sup>	<sup>1</sup> Rosalind Franklin University of Medicine and Science
119835	Is mediolateral dynamic balance in Parkinson's disease similar between freezers and non-freezers?	Bauke Dijkstra <sup>1</sup> , Moran Gilat <sup>1</sup> , L. Eduardo Cofré Lizama <sup>2</sup> , Sabine Verschueren <sup>1</sup> , Alice Nieuwboer <sup>1</sup>	<sup>1</sup> KU Leuven, <sup>2</sup> University of Melbourne
119836	Influence of body weight supported treadmill training parameters on muscle coordination in hemiparetic walking	Bryant Seamon <sup>1</sup> , Shraddha Srivastava <sup>1</sup> , Richard Neptune <sup>2</sup> , Lindsay Perry <sup>3</sup> ,Carolynn Patten <sup>4</sup> , Steven Kautz <sup>1</sup>	<sup>1</sup> Ralph H. Johnson VA Medical Center, <sup>2</sup> The University of Texas at Austin, <sup>3</sup> University of St. Augustine for Health Sciences, <sup>4</sup> University of California Davis School of Medicine
119838	Expanding a model of the dynamic Margin of Stability to evaluate balance control following support-surface perturbations	Keaton Inkol <sup>1</sup> , Lori Ann Vallis <sup>1</sup>	<sup>1</sup> University of Guelph
119839	Control of the trunk during walking: Early manifestations of antero-posterior angle changes	Ioannis Bargiotas <sup>1</sup> , Juan Mantilla <sup>1</sup> , Danping Wang <sup>1</sup> , Pierre-Paul Vidal <sup>1</sup>	<sup>1</sup> CNRS, SSA, University Paris Descartes (Paris IV)
119840	Effect of postural insoles on iliotibial band syndrome in runners: a multicentre prospective study	Isabelle Barnier <sup>1</sup> , Marie-Emmanuelle Rouchon <sup>2</sup> , Frederic Viseux <sup>2</sup>	<sup>1</sup> Posturopody Class 2016/17, Connaissance & Evolution, FR75012 Paris, France, <sup>2</sup> Posture Lab, FR75012 Paris, France
119841	Comparison of EMG parameters during uphill walking on a self-paced treadmill and outdoors	Eunice Ibala <sup>1</sup> , Karen Chase <sup>1</sup> , Nicholas Smith <sup>1</sup> , Andrew Kerr <sup>1</sup>	<sup>1</sup> University of Strathclyde



119842	A brainstem, subcortical and cortical network for dynamic balance control in healthy older adults	Elizabeth Pasman <sup>1</sup> , Martin Mckeown <sup>1</sup> , Saurabh Garg <sup>1</sup> , Taylor Cleworth <sup>2</sup> , Bastiaan Bloem <sup>3</sup> , J Timothy Inglis <sup>1</sup> , Mark Carpenter <sup>1</sup>	<sup>1</sup> University of British Columbia, <sup>2</sup> University of Waterloo, <sup>3</sup> Radboud University Medical Center
119843	Association of gait domains and incident falls in mild cognitive impairment: Results from the gait and brain study	Frederico Pieruccini-Faria <sup>1</sup> , Yanina Sarquis-Adamson <sup>1</sup> , Manuel Montero-Odasso <sup>1</sup>	<sup>1</sup> University of Western Ontario
119844	Prolonged exposure to height-related threat: adaptation and retention of standing balance outcomes	Martin Zaback <sup>1</sup> , Minh Luu <sup>1</sup> , Allan Adkin <sup>2</sup> , Mark Carpenter <sup>1</sup>	<sup>1</sup> University of British Columbia, <sup>2</sup> Brock University
119845	The frequency and circumstances of falls reported by unilateral lower limb prosthesis users	Janis Kim <sup>1</sup> , Matthew Major <sup>2</sup> , Brian Hafner <sup>3</sup> , Andrew Sawers <sup>1</sup>	<sup>1</sup> University of Illinois at Chicago, <sup>2</sup> Northwestern University, <sup>3</sup> University of Washington
119846	Analysis of center of mass velocity during dual-task in fallers and non-fallers elderly: gait combined with prehension task during avoidance of an obstacle	Natalia Rinaldi <sup>1</sup> , Janine Carvalho Camargos <sup>1</sup> , Leticia Avellar <sup>1</sup> , Anselmo Frizera <sup>1</sup>	<sup>1</sup> Federal University of Espirito Santo
119847	Preliminary evaluation of a self-guided fall risk assessment tool for older adults	Ruopeng Sun <sup>1</sup> , Roberto Aldunate <sup>1</sup> , Vignesh Paramathayalan <sup>2</sup> , Rama Ratnam <sup>1</sup> , Sanjiv Jain <sup>3</sup> , Daniel Morrow <sup>1</sup> , Jacob Sosnoff <sup>1</sup>	<sup>1</sup> University of Illinois at Urbana-Champaign, <sup>2</sup> Robert Bosch SEA Pte., <sup>3</sup> Carle Foundation Hospital
119852	Arm swing and gait symmetry affects gait stability and interlimb coordination	Allen Hill <sup>1</sup> , Julie Nantel <sup>1</sup>	<sup>1</sup> University of Ottawa
119853	The effects of dopaminergic drug on turning in people with and without Parkinson's disease	Douglas Martini <sup>1</sup> , Graham Harker <sup>1</sup> , John Nutt <sup>1</sup> , Fay Horak <sup>1</sup>	<sup>1</sup> Oregon Health and Science University
119854	Initial center of pressure position prior anticipatory postural adjustments during gait initiation in people with Parkinson's disease with freezing of gait	Madli Bayot <sup>1</sup> , Delval Arnaud <sup>1</sup> , Hansen Clint <sup>2</sup> , Walter Maetzler <sup>2</sup> , Christian Schlenstedt <sup>2</sup>	<sup>1</sup> University of Lille - Inserm U1171- Degenerative and Vascular Cognitive Disorders, <sup>2</sup> Christian-Albrechts-University - University Hospital Schleswig-Holstein



119855	Performance of surface and fine-wire electrodes over time when recording from the tibialis anterior in walking	Joanna Reeves <sup>1</sup> , Chelsea Starbuck <sup>1</sup> , Wasseem Rafiq <sup>1</sup> , Chris Nester <sup>1</sup>	<sup>1</sup> University of Salford
119857	Exploration of brain cholinergic correlates of gait in Parkinson disease: an in vivo voxel-based [ <sup>18</sup> F]FEOBV PET analysis	Martijn Muller <sup>1</sup> , Prabesh Kanel <sup>1</sup> , Nicolaas Bohnen <sup>1</sup>	<sup>1</sup> University of Michigan
119858	Investigating proactive balance control in individuals with incomplete spinal cord injury.	Mackenzie Bone <sup>1</sup> , Kristin Musselman <sup>2</sup> , Joel Lanovaz <sup>1</sup> , Tarun Arora <sup>3</sup> , Gary Linassi <sup>4</sup> , Alison Oates <sup>1</sup>	<sup>1</sup> University of Saskatchewan, <sup>2</sup> University of Toronto, <sup>3</sup> Cleveland Clinic Foundation, <sup>4</sup> Saskatchewan Health Authority
119859	Inertial sensor based normative spatiotemporal gait and Timed Up and Go parameters in typically developing children and young adults	Joan O'keefe <sup>1</sup> , Stephanie Voss <sup>1</sup> , Rachel Tracy <sup>1</sup> , Alexandra Palmer <sup>1</sup> , Medha Parulekar <sup>1</sup> , Nicollette Purcell <sup>1</sup> , Marie Fefferman <sup>1</sup> , Elizabeth Berry-Kravis <sup>1</sup>	<sup>1</sup> Rush University Medical Center
119860	Evaluating the efficacy of a novel therapeutic tool for standing balance after spinal cord injury: A case series	David Houston <sup>1</sup> , Jae Lee <sup>2</sup> , Emerson Grabke <sup>2</sup> , Angela (Jaeun) Yoo <sup>2</sup> , Kai-Lon Fok <sup>2</sup> , Janelle Unger <sup>1</sup> , Kei Masani <sup>3</sup> , Kristin Musselman <sup>3</sup>	<sup>1</sup> Rehabilitation Sciences Institute, University of Toronto, <sup>2</sup> Institute of Biomaterials and Biomedical Engineering, University of Toronto, <sup>3</sup> Toronto Rehabilitation Institute-University Health Network
119861	Patterns of dual-task interference at hospital discharge post stroke	Jody Feld <sup>1</sup> , Prudence Plummer <sup>1</sup>	<sup>1</sup> University of North Carolina at Chapel Hill
119863	Hands up in the air and wave them like you care: Effect of exposure on upper limb kinematics during continuous, multi-directional perturbations	Carolyn Duncan <sup>1</sup> , Alison Schinkel-Ivy <sup>2</sup> , Andrew Laing <sup>3</sup> , Vicki Komisar <sup>4</sup>	<sup>1</sup> Michigan Technological Institute, <sup>2</sup> Nipissing University, <sup>3</sup> University of Waterloo, <sup>4</sup> Simon Fraser University
119864	Factors associated with daily variation in gait performance in older adults	Alexa Ludington <sup>1</sup> , Junhong Zhou <sup>1</sup> , Wanting Yu <sup>1</sup> , Brad Manor <sup>1</sup> , On-Yee Lo <sup>1</sup>	<sup>1</sup> Harvard Medical School
119865	Postural adaptations in response to haptic forces during self-paced treadmill walking post-stroke	Gianluca Sorrento <sup>1</sup> , Philippe Archambault <sup>2</sup> , Joyce Fung <sup>2</sup>	<sup>1</sup> Jewish Rehabilitation Hospital (CISSS-Laval), <sup>2</sup> McGill University
119866	Can the vestibulocollic response be modulated by optic flow?	Yawen Yu <sup>1</sup> , Emily Keshner <sup>2</sup>	<sup>1</sup> Colorado State University, <sup>2</sup> Temple University





119867	Repetitive head impacts do not impair single task gait in collegiate ice hockey players	Thomas Buckley <sup>1</sup> , Melissa Difabio <sup>1</sup> , Jessie Oldham <sup>2</sup> , Katherine Breedlove <sup>3</sup> , Curtis Johnson <sup>1</sup>	<sup>1</sup> University of Delaware, <sup>2</sup> Boston Children's Hospital, <sup>3</sup> University of Michigan
119868	Impact of attentional abilities on step initiation in patients with Parkinson's disease with and without freezing of gait	Madli Bayot <sup>1</sup> , Aurore Braquet <sup>1</sup> , Céline Tard <sup>1</sup> , Luc Defebvre <sup>1</sup> , Kathy Dujardin <sup>1</sup> , Arnaud Delval <sup>1</sup>	<sup>1</sup> University of Lille - Inserm U1171- Degenerative and Vascular Cognitive Disorders
119869	The effect of dopaminergic medication on planned gait termination in Parkinson's disease	Ali Aljaroudi <sup>1</sup> , Nicolaas Bohnen <sup>1</sup> , Martijn Müller <sup>1</sup>	<sup>1</sup> University of Michigan
119870	Prefrontal and motor cortical activity during stepping tasks in older people at low and high risk of falling	Paulo Pelicioni <sup>1</sup> , Stephen Lord <sup>1</sup> , Nigel Seng <sup>1</sup> , Bethany Halmy <sup>1</sup> , Daina Sturnieks <sup>1</sup> , Rui Liu <sup>1</sup> , Jasmine Menant <sup>1</sup>	<sup>1</sup> Neuroscience Research Australia
119871	Synergistic ground reaction forces during double support while negotiating a curb	Chuyi Cui <sup>1</sup> , Hyeyoung Cho <sup>1</sup> , Ashwini Kulkarni <sup>1</sup> , Shirley Rietdyk <sup>1</sup> , Fabio Barbieri <sup>2</sup> , Satyajit Ambike <sup>1</sup>	<sup>1</sup> Purdue University, <sup>2</sup> São Paulo State University (UNESP)
119872	Joint angle variance in the bipedal linked chain during curb negotiation	Ashwini Kulkarni <sup>1</sup> , Hyeyoung Cho <sup>1</sup> , Chuyi Cui <sup>1</sup> , Shirley Rietdyk <sup>1</sup> , Satyajit Ambike <sup>1</sup> , Fabio Barbieri <sup>2</sup>	<sup>1</sup> Purdue University, <sup>2</sup> São Paulo State University (UNESP)
119873	Effects of dance on motor and non-motor symptoms of Parkinson's disease: A feasibility study	Anna Carapellotti <sup>1</sup> , Michail Doulmas <sup>1</sup>	<sup>1</sup> Queen's University Belfast
119874	Effects of discrete visual cues on anticipatory eye movement and segment rotation during walking turns in neurotypical young adults and persons with Parkinson's disease	Tyler Baker <sup>1</sup> , Jenna Pitman <sup>1</sup> , Adam Johnston <sup>1</sup> , Andrew Godbout <sup>1</sup> , Rebecca Reed-Jones <sup>1</sup>	<sup>1</sup> University of Prince Edward Island
119875	The multiscale dynamics of resting-state brain activity is associated with the performance of dual task standing postural control in older adults	Junhong Zhou <sup>1</sup> , Laura Dubreuil Vall <sup>2</sup> , Brad Manor <sup>1</sup> , Giulio Ruffini <sup>2</sup>	<sup>1</sup> Havard Medical School, <sup>2</sup> Neuroelectrics



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119876	The neural correlates of motor imagery of mediolateral dynamic balance in Parkinson's disease	Bauke Dijkstra <sup>1</sup> , Moran Gilat <sup>1</sup> , Sabine Verschueren <sup>1</sup> , Alice Nieuwboer <sup>1</sup>	<sup>1</sup> KU Leuven
119879	Sex differences in predictors of subsequent falls in senior fallers: A prospective study of the Vancouver Falls Prevention Cohort	Deborah Jehu <sup>1</sup> , Jennifer Davis <sup>1</sup> , Kristin Vesley <sup>1</sup> , Winnie Cheung <sup>1</sup> , Anna Egbert <sup>1</sup> , Liu-Ambrose Teresa <sup>1</sup>	<sup>1</sup> University of British Columbia
119880	Examining the long term effects of using the anchor system on postural control during walking	Kirat Shukla <sup>1</sup> , Joel Lanovaz <sup>1</sup> , Alison Oates <sup>1</sup>	<sup>1</sup> University of Saskatchewan
119881	Oxygenated hemoglobin concentration levels during usual walking and obstacle course in people with Parkinson's Disease (PD)	Lilian Gobbi <sup>1</sup> , Diego Orcioli-Silva <sup>1</sup> , Priscila Sousa <sup>1</sup> , Nubia Conceição <sup>1</sup> , Victor Beretta <sup>1</sup> , Ellen Lirani-Silva <sup>1</sup> , Rodrigo Vitorio <sup>1</sup>	<sup>1</sup> São Paulo State University (UNESP)
119882	3D head stability of people with vestibular dysfunction during gait in variable sensory conditions	Brian Loyd <sup>1</sup> , Janie Saviers-Steiger <sup>1</sup> , Peter Fino <sup>1</sup> , Serene Paul <sup>2</sup> , Mark Lester <sup>3</sup> , Lee Dibble <sup>1</sup>	<sup>1</sup> University of Utah, <sup>2</sup> The University of Sydney, <sup>3</sup> Army-Baylor University
119883	Dual-task gait training is not superior to single-task gait training within 3 years of stroke: a randomized controlled trial	Prudence Plummer <sup>1</sup> , Jody Feld <sup>1</sup> , Lisa Zukowski <sup>2</sup> , Bijan Najafi <sup>3</sup>	<sup>1</sup> University of North Carolina at Chapel Hill, <sup>2</sup> High Point University, <sup>3</sup> Baylor College of Medicine
119884	Persons with MS exhibit declines in upper body control during walking	Steven Morrison <sup>1</sup> , Cortney Armitano <sup>1</sup> , Corey Rynders <sup>2</sup> , Jake Sosnoff <sup>3</sup>	<sup>1</sup> Old Dominion University, <sup>2</sup> University of Colorado, <sup>3</sup> University of Illinois
119885	Turning velocity and coordination in multiple sclerosis	Brian Loyd <sup>1</sup> , Grace Hunt <sup>1</sup> , Annie Fangman <sup>1</sup> , Peter Fino <sup>1</sup> , Lee Dibble <sup>1</sup>	<sup>1</sup> University of Utah
119886	Gait speed assessed by a 4-meter walk test is not representative of daily-life gait speed in community-dwelling adults	Mirjam Pijnappels <sup>1</sup> , Jeanine Van Ancum <sup>1</sup> , Kimberley Van Schooten <sup>2</sup> , Nini Jonkman <sup>1</sup> , Bas Huijben <sup>3</sup> , Rob Van Lummel <sup>3</sup> , Carel Meskers <sup>4</sup> , Andrea Maier <sup>5</sup>	<sup>1</sup> Vrije Universiteit Amsterdam, <sup>2</sup> Neuroscience Research Australia, University of New South Wales, <sup>3</sup> McRoberts, <sup>4</sup> Amsterdam UMC, <sup>5</sup> The Royal Melbourne Hospital, The University of Melbourne
119887	A feasibility study for gait training with foot-floor contact angle feedback	Christina Ma <sup>1</sup> , Tian Bao <sup>2</sup> , Victor Le <sup>2</sup> , April Chambers <sup>3</sup> , Peter Shull <sup>4</sup> , Yong-Ping Zheng <sup>5</sup> , Rakié Cham <sup>3</sup> , Kathleen Sienko <sup>2</sup>	<sup>1</sup> Jönköping University, <sup>2</sup> University of Michigan, <sup>3</sup> University of Pittsburgh,



			<sup>4</sup> Shanghai Jiao Tong University, <sup>5</sup> The Hong Kong Polytechnic University
119888	Kinematic analysis of videos of real-life falls in older adults using Kinovea software	Nataliya Shishov <sup>1</sup> , Karam Elabd <sup>1</sup> , Vicki Komisar <sup>1</sup> , Stephen Robinovitch <sup>1</sup>	<sup>1</sup> Simon Fraser University
119889	The effect of age and anxiety on objective and subjective instability	Patricia Castro <sup>1</sup> , Diego Kaski <sup>1</sup> , Richard Ibitoye <sup>1</sup> , Marco Schieppati <sup>2</sup> , Michael Furman <sup>1</sup> , Qadeer Arshad <sup>1</sup> , Adolfo Bronstein <sup>1</sup>	<sup>1</sup> Imperial College London, <sup>2</sup> Lunex University
119891	Functional near-infrared imaging of the temporo-parietal junction during vestibular rotational stimulation	Patrick Sparto <sup>1</sup> , Theodore Huppert <sup>1</sup> , Helmet Karim <sup>1</sup> , Joseph Furman <sup>1</sup>	<sup>1</sup> University of Pittsburgh
119892	Excessive arm swings and asymmetric walking lead to more variability in the trunk kinematics	César Mezher <sup>1</sup> , Allen Hill <sup>1</sup> , Tarique Siragy <sup>1</sup> , Julie Nantel <sup>1</sup>	<sup>1</sup> University of Ottawa
119893	Test-retest reliability of frequency-domain measures of balance among people with sub-acute stroke.	Raabeae Aryan <sup>1</sup> , Andrew Huntley <sup>2</sup> , Elizabeth Inness <sup>2</sup> , Kara Patterson <sup>1</sup> , Avril Mansfield <sup>2</sup>	<sup>1</sup> University of Toronto, <sup>2</sup> Toronto Rehabilitation Institute-University Health Network
119894	Development of a body balance assessment system with integrated virtual reality technology; construct validity testing in healthy older adults	Yu Imaoka <sup>1</sup> , Nadja Saba <sup>1</sup> , Anne Vanhoestenbergh <sup>2</sup> , Eling De Bruin <sup>3</sup>	<sup>1</sup> ETH Zurich, <sup>2</sup> University College London, <sup>3</sup> Karolinska Institutet
119896	Targeted transcranial electric stimulation mitigates the dual task cost to gait speed in older adults	Brad Manor <sup>1</sup> , Junhong Zhou <sup>1</sup> , On-Ye Lo <sup>1</sup> , Alexa Ludington <sup>1</sup> , Racheli Katz <sup>2</sup> , Marina Brozgol <sup>2</sup> , Pablo Cornejo Thumm <sup>2</sup> , Jeffrey Hausdorff <sup>2</sup>	<sup>1</sup> Harvard Medical School, <sup>2</sup> Tel Aviv Sourasky Medical Center
119897	Prefrontal cortex activity requirements when young and older people perform cognitively-demanding stepping tasks in supported and unsupported conditions: a fNIRS study	Jasmine Menant <sup>1</sup> , Paulo Pelicioni <sup>1</sup> , Daina Sturnieks <sup>1</sup> , Stephen Lord <sup>1</sup>	<sup>1</sup> Neuroscience Research Australia



119898	Fat mass index and the performance of older people in the 6-minute walking test	Tatiane Pontes <sup>1</sup> , Fernanda Pessanha <sup>1</sup> , Renato Freire Junior <sup>2</sup> , Natália Alves <sup>1</sup> , Karina Pfrimer <sup>1</sup> , Priscila Fassini <sup>1</sup> , Eduardo Ferriolli <sup>1</sup>	<sup>1</sup> Faculty of Medicine of Ribeirão Preto, <sup>2</sup> Faculty of Physical Education and Physiotherapy
119899	Effects of freezing joint degrees of freedom on dynamic postural balancing	Kentaro Kodama <sup>1</sup> , Kazuhiro Yasuda <sup>2</sup> , Hideo Yamagiwa <sup>3</sup>	<sup>1</sup> Kanagawa University, <sup>2</sup> Waseda University, <sup>3</sup> Tokyo Metropolitan Tobu Medical Center
119900	Unwinding the control of walking turns	Carolyn Curtze <sup>1</sup>	<sup>1</sup> Oregon Health & Science University
119901	Factors related to unanticipated obstacle negotiation success: association with Parkinson's disease and motor planning	Irina Galperin <sup>1</sup> , Eran Gazit <sup>1</sup> , Ilan Kurtz <sup>1</sup> , Topaz Sharon <sup>2</sup> , Marina Brozgol <sup>1</sup> , Nir Giladi <sup>3</sup> , Anat Mirelman <sup>3</sup> , Jeffrey Hausdorff <sup>1</sup>	<sup>1</sup> Center for the study of Movement, Cognition, and Mobility (CMCM), <sup>2</sup> Sackler Faculty of Medicine, <sup>3</sup> Tel Aviv Sourasky Medical Center
119902	Immediate effect of a rehabilitation dog on weight-bearing and balance during early prosthetic training in individuals with vascular lower-limb amputation	Cyril Duclos <sup>1</sup> , Brendon Pham <sup>1</sup> , Valérie Martin-Lemoyne <sup>2</sup> , Dany Gagnon <sup>1</sup>	<sup>1</sup> Université de Montréal, School of rehabilitation, <sup>2</sup> Centre for Interdisciplinary Research in Rehabilitation (CRIR-IRGLM)
119903	Evaluation of gait parameter thresholds to distinguish idiopathic Parkinson's disease from atypical parkinsonism using instrumented gait analysis	Ken Möhwald <sup>1</sup> , Julian Decker <sup>2</sup> , Max Wuehr <sup>1</sup> , Roman Schniepp <sup>1</sup>	<sup>1</sup> University Hospital, LMU Munich, <sup>2</sup> Schoen Klinik Bad Aibling
119904	Aggressive proactive balance training using a multi-directional harness system and adapted video gaming: a case series	M Ann Reinthal <sup>1</sup> , Debbie Espy <sup>1</sup> , Lorenzo Bianco <sup>1</sup> , John Demarco <sup>1</sup> , Emily Punchak <sup>1</sup>	<sup>1</sup> Cleveland State University
119905	Effects of sensory augmentation activation thresholds on balance performance in people with vestibular disorders	Tian Bao <sup>1</sup> , Tian Bao <sup>1</sup> , Catherine Kinnaird <sup>1</sup> , Wendy Carender <sup>1</sup>	<sup>1</sup> University of Michigan
119906	Validating the rate of perceived stability scale to measure balance training intensity among older adults	M Ann Reinthal <sup>1</sup> , Debbie Espy <sup>1</sup> , Lorenzo Bianco <sup>1</sup> , Kathryn Kroszkewicz <sup>1</sup>	<sup>1</sup> Cleveland State University
119907	Brain activation during real-time walking post-stroke: systematic review	Shannon Lim <sup>1</sup> , Dennis Riley Louie <sup>1</sup> , Janice Eng <sup>1</sup>	<sup>1</sup> University of British Columbia



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119909	Evaluation of balance in adolescent idiopathic toe walkers	Marybeth Grant-Beuttler <sup>1</sup> , R. Caprice Hollandsworth <sup>1</sup> , Shweta Chheda <sup>1</sup> , Richard Beuttler <sup>1</sup> , Afshin Aminian <sup>2</sup> , Rahul Soangra <sup>1</sup>	<sup>1</sup> Chapman University, <sup>2</sup> Children's Hospital of Orange County
119910	The moving platform illusion in older adults: Effects of the duration of adaptation to a sway-referenced environment on perceptual delays and postural aftereffects	Mihalis Doumas <sup>1</sup> , Laura Coulter <sup>1</sup>	<sup>1</sup> Queens University Belfast
119911	Development of an active mechanical harness system	M Ann Reinthal <sup>1</sup> , Debbie Espy <sup>1</sup> , Lorenzo Bianco <sup>1</sup> , Poya Khalaf <sup>1</sup> , John Demarco <sup>1</sup>	<sup>1</sup> Cleveland State University
119912	Adaptability of human gait: Effect of training with red noise auditory stimuli on gait fluctuation patterns	Cecilia Power <sup>1</sup> , Jeevaka Kiriella <sup>1</sup> , Janessa Drake <sup>1</sup> , William Gage <sup>1</sup>	<sup>1</sup> York University
119915	Reshaping of gait coordination with robotic intervention in myelopathy patients with residual motor disturbances after surgery	Sandra Puentes <sup>1</sup> , Hideki Kadone <sup>2</sup> , Shigeki Kubota <sup>3</sup> , Tetsuya Abe <sup>3</sup> , Yukiyo Shimizu <sup>3</sup> , Yasushi Hada <sup>3</sup> , Aiki Marushima <sup>3</sup> , Masashi Yamazaki <sup>3</sup> , Yoshiyuki Sankai <sup>4</sup> , Kenji Suzuki <sup>4</sup>	<sup>1</sup> Faculty of Engineering, Information and Systems, University of Tsukuba, <sup>2</sup> University of Tsukuba Hospital, <sup>3</sup> Faculty of Medicine, University of Tsukuba Hospital, <sup>4</sup> University of Tsukuba
119916	Modification of gait intralimb coordination: objective comparison of hip-knee cyclograms of individuals with incomplete spinal cord injury vs healthy subjects	Maude Barreau <sup>1</sup> , Manuel Jose Escalona Castillo <sup>1</sup> , Alexandre Tapin <sup>1</sup> , Martin Vermette <sup>2</sup> , Dany H. Gagnon <sup>1</sup> , Cyril Duclos <sup>1</sup>	<sup>1</sup> Université de Montréal, <sup>2</sup> IRGLM
119917	Balance and postural control in healthy children under 12 years of age: A systematic review	Prasath Jayakaran <sup>1</sup> , Katie Bromley <sup>1</sup> , Hayley Foster <sup>1</sup> , Nikko Kim <sup>1</sup> , Karaitiana Smith <sup>1</sup>	<sup>1</sup> University of Otago



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119920	How varying levels of skin stretch affect perceived skin stretch sensitivity	William Macdonald <sup>1</sup> , Simone Smith <sup>1</sup> , Shawn Beaudette <sup>2</sup> , Stephen Brown <sup>1</sup> , Leah Bent <sup>1</sup>	<sup>1</sup> University of Guelph, <sup>2</sup> University of Ottawa
119922	Effects of concussion history on centre of pressure during static dual-tasking in collegiate athletes	Kelsey Bryk <sup>1</sup> , Jaclyn Caccese <sup>1</sup> , Katherine Hunzinger <sup>1</sup> , Thomas Buckley <sup>1</sup>	<sup>1</sup> University of Delaware
119923	Bilateral reshaping of gait coordination in hemiparetic stroke patients after early robotic intervention	Sandra Puentes <sup>1</sup> , Hideki Kadone <sup>2</sup> , Hiroki Watanabe <sup>3</sup> , Yasushi Hada <sup>2</sup> , Tomoyuki Ueno <sup>2</sup> , Aiki Marushima <sup>2</sup> , Yoshiyuki Sankai <sup>3</sup> , Kenji Suzuki <sup>3</sup>	<sup>1</sup> Faculty of Engineering, Information and Systems, University of Tsukuba, <sup>2</sup> University of Tsukuba Hospital, <sup>3</sup> University of Tsukuba
119924	Ankle and hip joint coordination during quiet standing for individuals with incomplete spinal cord injury	Jae Lee <sup>1</sup> , Angela (Jaeun) Yoo <sup>2</sup> , Katherine Chan <sup>2</sup> , Janelle Unger <sup>2</sup> , Kristin Musselman <sup>2</sup> , Kei Masani <sup>2</sup>	<sup>1</sup> University of Toronto, <sup>2</sup> Toronto Rehabilitation Institute - Lyndhurst Centre
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119926	Falls and hip fractures: A biomechanically based model of sex and age specific risk assessment	Andrew Hudson <sup>1</sup> , Brian Street <sup>1</sup>	<sup>1</sup> University of California, Bakersfield
119928	Postural state modulation of cortical activity associated with balance reactions	Mark Laylor <sup>1</sup> , Paula Polastri <sup>2</sup> , Jessy Varghese <sup>1</sup> , William Mcilroy <sup>1</sup>	<sup>1</sup> University of Waterloo, <sup>2</sup> Sao Paulo State University
119929	Larger visual perturbations affect the foot placement, but not the ankle roll or push-off mechanism for balance control during walking	Hendrik Reimann <sup>1</sup> , Tyler Fettrow <sup>1</sup> , Elizabeth Kaye <sup>1</sup> , Maelyn Arcodia <sup>1</sup> , David Grenet <sup>1</sup> , John Jeka <sup>1</sup>	<sup>1</sup> University of Delaware



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119932	Characterization of novel centre of pressure cyclogram measures during double support phase of gait in people with stroke	Sarah Gregor <sup>1</sup> , Julie Vaughan-Graham <sup>2</sup> , Kara Patterson <sup>1</sup>	<sup>1</sup> University of Toronto, <sup>2</sup> Toronto Rehabilitation Institute
119933	Age-related differences in the energy cost of walking while thinking	Britney Williams <sup>1</sup> , Taylor Woods <sup>1</sup> , James Lang <sup>2</sup> , Jessie Vanswearingen <sup>3</sup> , Kristin Lowry <sup>1</sup>	<sup>1</sup> Des Moines University, <sup>2</sup> Iowa State University, <sup>3</sup> University of Pittsburgh
119935	Smartphone-based balance assessment for older adults enrolled a 12-week attentionally focused balance training intervention: Preliminary data	Ruth Stout <sup>1</sup> , Lauren Higgins <sup>1</sup> , Danielle Felsburg <sup>1</sup> , Masahiro Yamada <sup>1</sup> , Sean Cochrane <sup>1</sup> , Chanel Lojacono <sup>1</sup> , Amanda Barclift <sup>1</sup> , John Palazzolo <sup>1</sup> , Jeff Labban <sup>1</sup> , Louisa Raisbeck <sup>1</sup> , Jeffery Fairbrother <sup>2</sup> , Christopher Rhea <sup>1</sup>	<sup>1</sup> UNC-Greensboro, <sup>2</sup> University of Tennessee
119938	Diurnal systematic variance of gait during normal daily monitoring	James Mcnames <sup>1</sup> , Vrutangkumar Shah <sup>2</sup> , Patty Carlson-Kuhta <sup>2</sup> , Mahmoud El-Gohary <sup>3</sup> , John Nutt <sup>2</sup> , Rebecca Spain <sup>2</sup> , Fay Horak <sup>2</sup> , Carolin Curtze <sup>4</sup>	<sup>1</sup> Portland State University, <sup>2</sup> Oregon Health and Science University, <sup>3</sup> APDM, <sup>4</sup> University of Nebraska Omaha
119939	Auditory-evoked cortical activity preceding postural instability	Paula Polastri <sup>1</sup> , Mark Laylor <sup>2</sup> , Jessy Varghese <sup>2</sup> , William Mcilroy <sup>2</sup>	<sup>1</sup> Sao Paulo State University (UNESP), <sup>2</sup> University of Waterloo
119940	Virtual perturbations: Individual differences in static posture	Robert Mcilroy <sup>1</sup> , Michael Barnett-Cowan <sup>1</sup>	<sup>1</sup> University of Waterloo
119941	Inertial sensor based normative postural sway parameters in typically developing children and young adults	Joan O'keefe <sup>1</sup> , Alexandra Palmer <sup>1</sup> , Rachel Tracy <sup>1</sup> , Stephanie Voss <sup>1</sup> , Medha Parulekar <sup>1</sup> , Caitlin Bailey <sup>1</sup> , Nicollette Purcell <sup>1</sup> , Elizabeth Berry-Kravis <sup>1</sup>	<sup>1</sup> Rush University Medical Center



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119944	Developmental Coordination Disorder co-occurs at high rates among children and adolescents with Autism Spectrum Disorder	Haylie Miller <sup>1</sup> , Gabriela Sherrod <sup>2</sup> , Priscila Caçola <sup>3</sup>	<sup>1</sup> University of North Texas Health Science Center, <sup>2</sup> University of Alabama - Birmingham, <sup>3</sup> University of Texas at Arlington
119945	The contribution of intralimb kinetic coordination in lower limb to control of propulsion and weight support at a wide range of gait speed in young and elderly people	Yusuke Sekiguchi <sup>1</sup> , Dai Owaki <sup>2</sup> , Keita Honda <sup>1</sup> , Shin-Ichi Izumi <sup>3</sup>	<sup>1</sup> Tohoku University Hospital, <sup>2</sup> Department of Robotics, Graduate School of Engineering, Tohoku University, <sup>3</sup> Tohoku University Graduate school
119946	Design improvement and clinical assessment of personal standing mobility Qolo for voluntary sit-to-stand posture transition of persons with thoracic level spinal cord injury	Hideki Kadone <sup>1</sup> , Yukiyo Shimizu <sup>1</sup> , Shigeki Kubota <sup>1</sup> , Diego Paez <sup>1</sup> , Yasushi Hada <sup>1</sup> , Masashi Yamazaki <sup>1</sup> , Kenji Suzuki <sup>1</sup>	<sup>1</sup> University of Tsukuba
119947	Postural sway of the fallers based on retrospective and prospective studies with CTSIB	Taeho Kim <sup>1</sup> , Jinsoo Lee <sup>1</sup> , Junggil Kim <sup>1</sup> , Jeongwoo Seo <sup>1</sup> , Jinseong Choi <sup>1</sup> , Gyeræ Tack <sup>1</sup>	<sup>1</sup> Konkuk University
119948	Effects of repetitive head impacts on tandem gait performance over an ice hockey season	Melissa Difabio <sup>1</sup> , Jessie Oldham <sup>2</sup> , Thomas Buckley <sup>1</sup>	<sup>1</sup> University of Delaware, <sup>2</sup> Boston Children's Hospital
119949	Effect of voluntary gaze movement on gait steering control	Felix Dollack <sup>1</sup> , Monica Perusquia-Hernandez <sup>1</sup> , Hideki Kadone <sup>1</sup> , Kenji Suzuki <sup>1</sup>	<sup>1</sup> University of Tsukuba
119951	Cholinergic upregulation in dorsomedial thalamus prior to conversion to freezing of gait in Parkinson's disease	Nicholas D'cruz <sup>1</sup> , Martijn Muller <sup>2</sup> , Prabesh Kanel <sup>2</sup> , Alice Nieuwboer <sup>1</sup> , Nico Bohnen <sup>2</sup>	<sup>1</sup> KU Leuven, <sup>2</sup> University of Michigan





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119956	EEG correlates of postural dizziness of aging	Richard Ibitoye <sup>1</sup> , Patricia Castro <sup>1</sup> , Onur Guven <sup>1</sup> , Amy Edwards <sup>1</sup> , Qadeer Arshad <sup>1</sup> , Adolfo Bronstein <sup>1</sup>	<sup>1</sup> Imperial College London
119957	Do falls or fragility predict fracture in Māori and non-Māori in advanced age; LiLACS NZ	Ngaire Kerse <sup>1</sup> , Ruth Teh <sup>1</sup> , Leah Palaper <sup>1</sup> , Oliver Menzies <sup>1</sup> , Catherine Bacon <sup>1</sup>	<sup>1</sup> University of Auckland
119963	Priming distorts sense of instability during postural control	Adolfo Bronstein <sup>1</sup> , Patricia Castro <sup>1</sup> , Sami Mahmoud <sup>2</sup> , Efstratia Papoutselou <sup>1</sup> , Constanza Fuentealba <sup>3</sup> , Qadeer Arshad <sup>1</sup>	<sup>1</sup> Imperial College London, <sup>2</sup> Technische Universität München, <sup>3</sup> Universidad San Sebastian
119964	Body sway is mediated by vestibular cortical dominance	Adolfo Bronstein <sup>1</sup> , Patricia Castro <sup>1</sup> , Diego Kaski <sup>1</sup> , Hussein Al-Fazly <sup>1</sup> , Deniz Ak <sup>1</sup> , Liam Oktay <sup>1</sup> , Qadeer Arshad <sup>1</sup>	<sup>1</sup> Imperial College London
119967	Functional gait disorders and the broken escalator phenomenon	Diego Kaski <sup>1</sup> , Denise Lin <sup>2</sup> , Akila Ramamoorthy <sup>2</sup> , Patricia Castro <sup>2</sup> , Amy Edwards <sup>2</sup> , Jan Coebergh <sup>3</sup> , Mark Edwards <sup>3</sup> , Adolfo Bronstein <sup>2</sup>	<sup>1</sup> University College London, <sup>2</sup> Imperial College London, <sup>3</sup> St George's Hospital