



3DAHM 2024 Montevideo URUGUAY 3-6 December 2024

3DAHM 2024 Oral Sessions Program

18th International Symposium on 3D Analysis of Human Movement
in Uruguay, Latin America, December 2024
Program chair: Natalia Garay Badenian

Tuesday, Dec 3

13:00		<i>Back to the Moon: accumulated knowledge and new perspectives in adapted human locomotion</i>	Alberto Minetti
14:00		Break	
14:15	Claudio Belvedere	"3D flatfoot characterization in weight-bearing condition before and after correction surgery"	CLINICAL BIOMECHANICS Chairs: Paola Cardenas & Raphael Dumas
14:30	Carlos Cruz-Montecinos	Increased Intermuscular Coherence During Gait Reflects Neural Adaptations in Non-Neurological Knee Flexion Contracture	
14:45	Bela Agarwal	"Instance of peak knee flexion and adduction moment during deep-squat"	
15:00	Shishir Shah	Development of a Powered Transtibial Prosthesis	
15:15	Marco Lagones	Design and Validation of a Prosthetic Foot Adaptable to Sagittal Plane Ground Irregularity	
15:30	Gonzalo Giannechini	Does Diabetes Mellitus type II affect the mechanics of walking?	
15:45	Ayaka Hobo	Non-invasive evaluation of plantar fascia strain during locomotion considering its insertion site by motion capture-ultrasound combination	

Wednesday, Dec 4

9:00		<i>Movement for Health: Human Movement Science in Health & Wellness</i>	Rajani Mullerpatan
10:00	Carol Torres	Biomechanics of Tango walking	LOCOMOTION GENERAL & CLINICAL GAITS I Chairs: Mauro Callejas Cuervo & Georgios Stylianides
10:15	Inae de Oliveira	Joint stiffness during jump landing tasks with or without a condition of muscle soreness	
10:30	Gaspere Pavei	Hypogravity-driven kinematic and dynamic changes in bouncing gaits	
10:45	Aline Dalfito Gava	Plexus brachial traumatic injuries affect spatiotemporal gait parameters	
11:00		Break	
11:15	Gustavo Grinspan	Rectus Femoris Shear Elasticity Varies with Flexio-Extension of Hip and Knee During Gait	LOCOMOTION GENERAL & CLINICAL GAITS II Chairs: Chris Baten & Pablo Eduardo Caicedo-Rodríguez
11:30	Raphael Mesquita	Upper and lower limb coordination in running at different step frequencies	
11:45	Natsuki Sado	"Asymmetric kinematic responses to verbal gait instructions: stooped posture induces shorter steps, but not vice versa"	
12:00	O+P Digital Designer	COMMERCIAL INTERVAL	





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Wednesday, Dec 4

12:15	Heron Baptista de Oliveira Medeiros	"The Effect of Elastic Band Positioning on Hip Torques and Electromyographic Activity During Side-Stepping Exercise"	LOCOMOTION GENERAL & CLINICAL GAITS II Chairs: Chris Baten & Pablo Eduardo Caicedo-Rodríguez
12:30	Luis Alberto Parada	Parameters and mechanical description of lateral walking	
12:45	Claudio Belvedere	Knee osteotomy alone and combined with meniscal allograft transplantation: a clinical trial merging clinical, biological and biomechanical evaluations	
14:00		<i>3D reaction force-sharing of synergistic muscles during walking & running</i>	Walter Herzog
15:00	Vinish Yogesh	"Comprehensive Study of UWB Distance Estimation Errors in LOS and NLOS Caused by the Human Body in 3D-AHM Scenario"	BIOMEDICAL ENGINEERING & WIRELESS SENSORS Chairs: Ariel Braidot & Mariana Rampinelli
15:15	Mauro Callejas Cuervo	"Active Video Game Using an Inertial-Magnetic System for Kinematic Analysis in Older Adults"	
15:30	Vinish Yogesh	"Position Estimation with a Swarm of Integrated UWB/MIMU Sensors within the Context of 3D Analysis of Human Movement"	
15:45	Paolo Brasiliano	"Gait smoothness estimation during walking: indexes and walking speed influences"	
16:00		Break	
17:00	Beatrice De Lazzari	"Smartphone-based Classifier for ACL Injury Risk Assessment Using Vertical Drop Jump Tasks and the Landing Error Scoring System"	AI – MODELLING Chairs: Valentina Camomilla & Raphael Dumas
17:15	Diego Vicente Contreras	"Automatic Counting of Dynamic Technical Actions Using Computer Vision in the Biomechanical Risk Assessment of Work-Related Musculoskeletal Disorders of the Upper Limb"	
17:30	Zoé Pomarat	"Estimation of ground reaction forces in rugby scrummaging using instrumented insoles and machine learning"	
17:45	Néstor Duque	Machine learning en el análisis de la velocidad de la marcha en personas de la tercera edad	

Thursday, Dec 5

9:00		<i>Muscle & Joint Function in Human Gait</i>	Marcus Pandy
10:00	Rosario Ulloa	"Data Standardization for Gait Analysis in the Oritel Network."	METHODOLOGY Chairs: Felipe Carpes & Leonardo Lagos
10:15	Ariane Lallès	Dynamic criterion to quantify instability during locomotion	
10:30	Chris Baten	"Pointer-based segment calibration facilitates sensor-based gait analysis for more patients"	
10:45	Raphael Dumas	"Is it possible to use confidence information to drive a multibody kinematics optimization in markerless motion capture?"	
11:00		Break	
15:00	Magalí Sganga	"Comparative methodological approaches for analyzing margin of stability during walking"	BALANCE & POSTURE Chairs: Rony Silvestre & Georgios Stylianides





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Thursday, Dec 5

15:15	Pablo Eduardo Caicedo Rodríguez	The foot impact in human gait. A definition.	BALANCE & POSTURE Chairs: Rony Silvestre & Georgios Stylianides
15:30	Giorgio Poletto	"Effect of weightlifting shoes on stability during barbell squat in high intensity cross training athletes"	
15:45	Manami Fujii	"Repeatability of a three-dimensional pseudorandom balance perturbation assessment"	
15:45		Break	
17:00	Rajani Mullerpatan	"Lower extremity joint Kinematics of Cross-legged sitting posture: A preliminary study report"	ERGONOMICS Chairs: Annamária Várkonyi-Kóczy & Paola Cardenas
17:15	Sneha Kirve	"Influence of Spring Loaded Passive Exoskeleton on Erector Spinae Muscle Activity in Mathadi Workers with and without Low Back Pain"	
17:30	Maria Cristina Herrera Valerio	"Estimating overhead postures with Accelerometer Data in skilled trade workers: model validation considerations for in-field application"	
17:45	Lessby Gómez-Salazar	"Opencap y Opensim para el análisis cinemático 3D de tareas de manipulación de cargas realizadas en la construcción"	

Friday, Dec 6

9:00		<i>Innovative Biomech Research and Technology Development from Africa: Advancing Clinical and Athletic Applications</i>	Yumna Albertus
10:00	Arthur Dewolf	The bouncing mechanism of running in the wind	SPORTS BIOMECHANICS I Chairs: Rodrigo Zacca & Frantisek Zahalka
10:15	Arthur Dewolf	"Impact of physical activity levels on age-related gait characteristics young and older adults"	
10:30	Pablo Fabian Moscoso Fernandez-Salvador	"Development of a System based Force Load Cells for Measuring Vertical Jump Parameters"	
10:45		Break	
11:00	Heron Baptista de Oliveira Medeiros	"Influence of the Shoulder Multiplanar Position on Shoulder Rotation Torque"	SPORTS BIOMECHANICS II Chairs: Rony Silvestre
11:15	Bernardo Artcardi	"Knee joint position reproduction and isometric strength measurements in healthy subjects using IMU"	
11:30	Magali Sganga	"The immediate effects of three different ankle taping on static postural stability in healthy amateur athletes"	
11:45	Laura Camila Mayorga Lozada	"Time-frequency analysis of sEMG signals to assess knee function during drop jump performance"	

3DAHM is a Technical Group of the ISB International Society of Biomechanics

www.3dahm2024.com

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3dahm2024@gmail.com

