

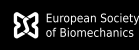
# Congress Programme



**8th World Congress  
of Biomechanics**  
8 - 12 July 2018  
Dublin, Ireland

[www.wcb2018.com](http://www.wcb2018.com)

In conjunction with



Hosted by



Tuesday 10th of July 2018

Program Code	Title	Presenting	Decision	Final session	Session Time	Room
O0670	Associations of muscle morphology and selective motor control with muscle strength and gait impairment in children with spastic cerebral palsy	Britta Hanssen	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0671	Quantification of stretch reflexes during gait using treadmill perturbations in children with cerebral palsy	Lizeth Sloot	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0672	Impaired Selective Motor Control and Gait Temporal-spatial Parameters in Children with Spastic Cerebral Palsy	Joanne Zhou	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0673	Does medial gastrocnemius muscle and fascicle extensibility contribute to reduced ankle range of motion in children with spastic cerebral palsy: a three-dimensional freehand ultrasonography journey	Simon-Henri Schless	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0674	Active (Not Passive) State Mechanics and Intermuscular Interactions Determine the Pathological Knee Joint Condition in Cerebral Palsy for Gait Relevant Knee Positions	Cemre Su Kaya	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0675	Muscle architecture in children with cerebral palsy-related muscle contractures: a diffusion tensor imaging investigation	Arkiev D'Souza	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0676	Effects of functional power training on gait in children with cerebral palsy.	Laura Oudenhoven	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0677	Intraoperative Tests in Patients with Cerebral Palsy Show That Spastic Hamstring Muscles' Force Production Potential Is Low in Flexed and High in Extended Knee Positions	Can A. Yucesoy	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0678	The trunk as locomotor in cerebral palsy	Sebastian Wolf	Oral Presentation	Gait in cerebral palsy: Neuromuscular control versus muscle mechanics 2	Tuesday 10th July, 09:20 -10:50	Auditorium
O0679	Clinical personalization of multiscale models of total heart function	Gernot Plank	Invited Speaker	From physiology to clinics: Clinical applications of multiscale modelling of the heart	Tuesday 10th July, 09:20 -10:50	Liffey B
O0680	Modelling Cardiac Mechanics in the Human heart	Steven Niederer	Invited Speaker	From physiology to clinics: Clinical applications of multiscale modelling of the heart	Tuesday 10th July, 09:20 -10:50	Liffey B
O0681	Interventricular rather than intraventricular dyssynchrony is essential to predict response to cardiac resynchronization therapy: a combined clinical - computational evaluation	Peter Huntjens	Oral Presentation	From physiology to clinics: Clinical applications of multiscale modelling of the heart	Tuesday 10th July, 09:20 -10:50	Liffey B
O0682	Automated and personalized parameter identification of the three-element Windkessel model based on clinical data	Laura Marx	Oral Presentation	From physiology to clinics: Clinical applications of multiscale modelling of the heart	Tuesday 10th July, 09:20 -10:50	Liffey B
O0683	Left-right ventricular interaction during cardiac resynchronization therapy (CRT) optimization	Erik Willemen	Oral Presentation	From physiology to clinics: Clinical applications of multiscale modelling of the heart	Tuesday 10th July, 09:20 -10:50	Liffey B
O0684	Multi-fidelity Personalisation and Population-based Priors for Multi-scale Modelling of Large and Heterogeneous Databases	Maxime Sermesant	Oral Presentation	From physiology to clinics: Clinical applications of multiscale modelling of the heart	Tuesday 10th July, 09:20 -10:50	Liffey B
O0685	Particle-based and haemodynamics modeling for assessing the risk of thrombus formation in left atrial appendages	Andy Olivares	Oral Presentation	From physiology to clinics: Clinical applications of multiscale modelling of the heart	Tuesday 10th July, 09:20 -10:50	Liffey B
O0686	Simplified oblique helmet test methods for short duration direct head impacts based on real accident data and biomechanical understanding	Peter Halldin	Invited Speaker	Head impact biomechanics and head protection 1	Tuesday 10th July, 09:20 -10:50	Liffey Hall 1
O0687	Headform Mass, Inertia and Oblique Impact Response	Thomas Connor Marta Palomar	Oral Presentation	Head impact biomechanics and head protection 1	Tuesday 10th July, 09:20 -10:50	Liffey Hall 1
O0688	Effect of head size over the performance of an Advanced Combat Helmet	Toledano	Oral Presentation	Head impact biomechanics and head protection 1	Tuesday 10th July, 09:20 -10:50	Liffey Hall 1
O0689	Video analysis of head impact sensor data from adolescent soccer players	Declan Patton	Oral Presentation	Head impact biomechanics and head protection 1	Tuesday 10th July, 09:20 -10:50	Liffey Hall 1
O0690	A Comparison Between Two Oblique Impact Test Protocols for Cycling Helmets	Kevin Adanty	Oral Presentation	Head impact biomechanics and head protection 1	Tuesday 10th July, 09:20 -10:50	Liffey Hall 1
O0691	Analysis Of Single Head Impacts Collected In Amateur Athletes	Adam Bartsch	Oral Presentation	Head impact biomechanics and head protection 1	Tuesday 10th July, 09:20 -10:50	Liffey Hall 1

O0692	Laboratory methods for biomechanical evaluation of motorcycle helmet subject to oblique impacts	Shiyang Meng	Oral Presentation	Head impact biomechanics and head protection 1	Tuesday 10th July, 09:20 -10:50	Liffey Hall 1
O0693	Factors Affecting Head Impact Exposure in College Football Practices: A Multi-Institutional Study	Eamon Campolettano	Oral Presentation	Head impact biomechanics and head protection 1	Tuesday 10th July, 09:20 -10:50	Liffey Hall 1
O0694	Novel mechanosensitive pathways involved in aortic valve fibrosis and calcification	Craig Simmons	Invited Speaker	Mechanobiology of heart valves	Tuesday 10th July, 09:20 -10:50	Liffey Hall 2
O0695	Mechanobiology of in-situ heart valve tissue engineering using degradable polymeric scaffolds	Carlijn Bouten	Invited Speaker	Mechanobiology of heart valves	Tuesday 10th July, 09:20 -10:50	Liffey Hall 2
O0696	Effects of Ischemic Regurgitation on Mitral Valve Mechanics and Structure	Bruno Rego	Oral Presentation	Mechanobiology of heart valves	Tuesday 10th July, 09:20 -10:50	Liffey Hall 2
O0697	The Role of Cyclic Mechanical Stretch on Aortic Valve Pro-Fibrotic Signaling	Kartik Balachandran	Oral Presentation	Mechanobiology of heart valves	Tuesday 10th July, 09:20 -10:50	Liffey Hall 2
O0698	Unphysiological Mitral Leaflet Biomechanics after Surgical Repair Induces Progressive Leaflet Thickening and Fibrosis via the TGF-beta Pathway in a Chronic Porcine Model	Muralidhar Padala	Oral Presentation	Mechanobiology of heart valves	Tuesday 10th July, 09:20 -10:50	Liffey Hall 2
O0699	Effect of mechanical tension on 3D co-cultured valvular cells with hydroxyapatite	Terence W Gee	Oral Presentation	Mechanobiology of heart valves	Tuesday 10th July, 09:20 -10:50	Liffey Hall 2
O0700	Flow- and side-dependent regulation of aortic valve calcification by microRNA-483 in aortic valve endothelial cells	Hanjoong Jo	Oral Presentation	Mechanobiology of heart valves	Tuesday 10th July, 09:20 -10:50	Liffey Hall 2
O0701	Biophysics of mechanosensitive cadherin adhesion and its regulation	Sanjeevi Sivasankar	Invited Speaker	Molecular force transduction	Tuesday 10th July, 09:20 -10:50	Liffey MR1
O0702	Transducing matrix mechanical and spatial properties from integrins to the nucleus.	Pere Roca-Cusachs	Invited Speaker	Molecular force transduction	Tuesday 10th July, 09:20 -10:50	Liffey MR1
O0703	Time dependent change in nano-mechanical properties of nascent focal complex	Nobuhiko Nakao	Oral Presentation	Molecular force transduction	Tuesday 10th July, 09:20 -10:50	Liffey MR1
O0704	Nanoscale mechanics guides cellular decision making	Deborah Leckband	Oral Presentation	Molecular force transduction	Tuesday 10th July, 09:20 -10:50	Liffey MR1
O0705	Mechanism of PECAM-1 mechanotransduction	Keigi Fujiwara	Oral Presentation	Molecular force transduction	Tuesday 10th July, 09:20 -10:50	Liffey MR1
O0706	Molecular forces during early events of clathrin-mediated endocytosis of viral particles	E. Ada Cavalcanti-Adam	Oral Presentation	Molecular force transduction	Tuesday 10th July, 09:20 -10:50	Liffey MR1
O0707	Single-molecule nanomechanics of the molecular spring that underlies hearing	Tobias F. Bartsch	Oral Presentation	Molecular force transduction	Tuesday 10th July, 09:20 -10:50	Liffey MR1
O0708	Evaluation of Optimal Control Formulations for Obtaining Dynamically Consistent Walking Motions	Roger Pallarès-López	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0709	Influence of Robotic Orthosis Dynamic Parameters on Optimization-Based Prediction of Assisted Walking	Míriam Febrer-Nafría	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0710	Computationally efficient predictive muscle-driven simulations of 3D walking	Antoine Falisse	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0711	Walking stability in response to medio-lateral perturbations is controlled by activity of either stance or swing leg gluteus medius	Maarten Afschrift	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0712	A 'Predict-Adapt' musculo-skeletal model to reduce ACL injury risk during high contact activity	Oishee Mazumder	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0713	Increased Trunk Stiffness and Decreased Arm Swing Amplitude Have Similar Effects on Thorax-Pelvis Coordination During Gait	Maarten R Prins	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0714	A parameter estimation algorithm to fit the strength and flexibility of a musculoskeletal model to experimental data	Matthew Millard	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0715	Rehabilitation Robot Accommodates Therapy with Model-Predicted Biological Feedback	Borna Ghannadi	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0716	A model-based assessment of the relationship between metabolic cost and dynamic stability in gait	Russell Johnson	Oral Presentation	Predictive human movement simulation 2	Tuesday 10th July, 09:20 -10:50	Liffey MR2
O0717	In vivo imaging of interstitial flow and histological correlation within the brain tumor microenvironment	Jennifer Munson	Invited Speaker	Brain biotransport	Tuesday 10th July, 09:20 -10:50	Liffey MR3

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O0718	Dynamic blood brain barrier regulation in sub-concussive brain injuries Nitric Oxide Synthase Inhibition Reduces Transient Increase in the Blood-Brain Barrier	Matthew Campbell	Invited Speaker	Brain biotransport	Tuesday 10th July, 09:20 -10:50	Liffey MR3
O0719	Solute Permeability in Rat Brain by Transcranial Direct Current Stimulation	Bingmei Fu Magdoom Kulam,	Oral Presentation	Brain biotransport	Tuesday 10th July, 09:20 -10:50	Liffey MR3
O0720	Mapping Perivascular Connectome in Whole Rat Brain in 3D	Malisa Sarntinoranont	Oral Presentation	Brain biotransport	Tuesday 10th July, 09:20 -10:50	Liffey MR3
O0721	Two-photon uncaging of neuropeptides	Zhenpeng Qin	Oral Presentation	Brain biotransport	Tuesday 10th July, 09:20 -10:50	Liffey MR3
O0723	Focused ultrasound-mediated transfection of cerebral vasculature independent of blood-brain barrier opening	Catherine Gorick	Oral Presentation	Brain biotransport	Tuesday 10th July, 09:20 -10:50	Liffey MR3
O0724	Experimental measurements versus model predictions of fiber rotations in soft tissues	Stéphane Avril	Invited Speaker	Image-based multiscale modelling of fibrous tissues – tools and theories	Tuesday 10th July, 09:20 -10:50	Ecocem
O0725	Structure-based Multiscale FE Model of Human Lumbar Facet Capsular Ligament During Spine Motions	Victor Barocas James McConnell, Julia Behensen, Michael Sherratt	Invited Speaker	Image-based multiscale modelling of fibrous tissues – tools and theories	Tuesday 10th July, 09:20 -10:50	Ecocem
O0726	Micro-structure and micro-mechanics of healthy and cancerous human breast tissue	Jean-Marc Allain	Oral Presentation	Image-based multiscale modelling of fibrous tissues – tools and theories	Tuesday 10th July, 09:20 -10:50	Ecocem
O0727	Multiscale quantitation of skin biomechanics	Frances Davis	Oral Presentation	Image-based multiscale modelling of fibrous tissues – tools and theories	Tuesday 10th July, 09:20 -10:50	Ecocem
O0728	Application of the Virtual Fields Method to characterize the strain rate sensitivity of pig skin	Sebastian Skatulla	Oral Presentation	Image-based multiscale modelling of fibrous tissues – tools and theories	Tuesday 10th July, 09:20 -10:50	Ecocem
O0729	A Micromorphic Approach Modelling the Anisotropic Material Behaviour of the Human Heart	Heiko Stark	Oral Presentation	Image-based multiscale modelling of fibrous tissues – tools and theories	Tuesday 10th July, 09:20 -10:50	Ecocem
O0730	Imagexd - A tool for tracing fibrous structures in volumetric image data					Ecocem
O0731	A three-dimensional multiscale model of fracture healing in mice: Sensitivity of callus microstructure to osteoblast polarization and initial MSC density	Duncan C Betts	Oral Presentation	ESB Student Award finalists	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2A
O0732	Modelling bone formation at the cranial sutures in normal and craniosynostotic mice	Arsalan Marghoub	Oral Presentation	ESB Student Award finalists	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2A
O0733	Cartilage on chip: hyper-physiological compression in a microscale platform triggers osteoarthritic traits in a cartilage model	Andrea Mainardi	Oral Presentation	ESB Student Award finalists	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2A
O0734	Real-time FEA allows homogenization of strain profiles in individual mice for improved fracture healing after cyclic loading	Graeme R. Paul	Oral Presentation	ESB Student Award finalists	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2A
O0735	Application of biomechanical modelling for the analysis of fastball pitching	DirkJan Veeger	Invited Speaker	Shoulder biomechanics 1	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2B
O0736	Contribution of biomechanics for the choice of the vertical orientation of the sphere during the implantation of a reverse shoulder arthroplasty (RSA)	Favard Luc	Invited Speaker	Shoulder biomechanics 1	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2B
O0737	Bone adaptation of the humerus after resurfacing and stemless shoulder arthroplasties	Joao Folgado	Oral Presentation	Shoulder biomechanics 1	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2B
O0738	In-vitro strain analysis of rotator cuff tear repair during dynamic cyclic abduction	Ines Santos	Oral Presentation	Shoulder biomechanics 1	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2B
O0739	Improving musculoskeletal shoulder modelling using anthropometric measures	Christian Klemt	Oral Presentation	Shoulder biomechanics 1	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2B
O0740	EMG-Based vs Optimization-Based Prediction of Muscle Forces in Human Upper-Extremity	Ehsan Sarshari	Oral Presentation	Shoulder biomechanics 1	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2B
O0741	Machine learning reduces the amount of necessary maximum voluntary isometric contractions tests of the shoulder muscles	Romain Martinez	Oral Presentation	Shoulder biomechanics 1	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 2B
O0742	Mechanosensing drives $\alpha\beta$ T cell recognition	Yinnian Feng, Matthew Lang	Invited Speaker	USNCB - Cell mechanosignaling in immunological diseases	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 1

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O0743	Mechanogenetics For The Remote And Non-Invasive Control Of Cancer Immunotherapy A potent glycomimetic antagonist for selectins that inhibits mechanotransduced integrin activation and neutrophil arrest is in clinical trials for vaso-occlusive crisis in sickle cell disease	Yingxiao Wang	Invited Speaker	USNCB - Cell mechanosignaling in immunological diseases	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 1
O0744	Single-molecule measurements reveal how adhesion composition regulates force transmission by individual integrin heterodimers	John Magnani	Invited Speaker	USNCB - Cell mechanosignaling in immunological diseases	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 1
O0745	Role of glycans in regulating leukocyte adhesion biomechanics and cellular signaling	Alexander Dunn	Invited Speaker	USNCB - Cell mechanosignaling in immunological diseases	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 1
O0746	Physical interactions within the T-cell receptor complex drives signal transduction	Sriram Neelamegham	Oral Presentation	USNCB - Cell mechanosignaling in immunological diseases	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 1
O0747	Deformable microparticle force reporters reveal the complex cellular forces generated during phagocytosis	Cheng Zhu	Oral Presentation	USNCB - Cell mechanosignaling in immunological diseases	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 1
O0748		Daan Vorselen	Oral Presentation	USNCB - Cell mechanosignaling in immunological diseases	Tuesday 10th July, 09:20 -10:50	Wicklow Hall 1
O0749	Pediatric cardiac shear wave elastography: Healthy controls	James Greenleaf	Invited Speaker	Cardiovascular imaging 1	Tuesday 10th July, 09:20 -10:50	Wicklow MR1
O0750	A Doppler-based regularization problem for intraventricular vector flow mapping	Damien Garcia	Invited Speaker	Cardiovascular imaging 1	Tuesday 10th July, 09:20 -10:50	Wicklow MR1
O0751	Very Short Peripheral Catheter for Reduction of Catheter-Related Thrombophlebitis	Dar Weiss	Oral Presentation	Cardiovascular imaging 1	Tuesday 10th July, 09:20 -10:50	Wicklow MR1
O0752	Registering multimodal MRI to guide patient-specific cardiac resynchronization therapy	Thien-Khoi Phung	Oral Presentation	Cardiovascular imaging 1	Tuesday 10th July, 09:20 -10:50	Wicklow MR1
O0753	The Intravascular Ultrasound Anisotropic Elasticity-Palpography Technique: A Reliable Tool for the Detection of Vulnerable Coronary Atherosclerotic Plaques	Armida L. Gomez	Oral Presentation	Cardiovascular imaging 1	Tuesday 10th July, 09:20 -10:50	Wicklow MR1
O0754	Full-field strain measurements in the dynamic cardiac biosimulator using 3D digital image correlation	Paolo Ferraiuoli	Oral Presentation	Cardiovascular imaging 1	Tuesday 10th July, 09:20 -10:50	Wicklow MR1
O0755	MRI and CFD derived wall shear stress in pulmonary hypertension	Stephanie George	Oral Presentation	Cardiovascular imaging 1	Tuesday 10th July, 09:20 -10:50	Wicklow MR1
O0756	Actomyosin contractility-dependent matrix stretch and recoil induces rapid cell migration	William Wang	Oral Presentation	ASME: Biomechanics at the Cell, Tissue and Multiscale Level	Tuesday 10th July, 09:20 -10:50	Wicklow MR2
O0757	de novo gene transcription is required for persistent cell motility by controlling cytoskeletal dynamics	Devon Mason	Oral Presentation	ASME: Biomechanics at the Cell, Tissue and Multiscale Level	Tuesday 10th July, 09:20 -10:50	Wicklow MR2
O0758	Multiscale model of the effects of mechanical loading on tendon healing	Kellen Chen	Oral Presentation	ASME: Biomechanics at the Cell, Tissue and Multiscale Level	Tuesday 10th July, 09:20 -10:50	Wicklow MR2
O0759	Characterizing the osteovascular network and blood supply in mouse bones	Nicholas Hanne, Jacqueline Cole	Oral Presentation	ASME: Biomechanics at the Cell, Tissue and Multiscale Level	Tuesday 10th July, 09:20 -10:50	Wicklow MR2
O0760	Stribeck curve analysis of temporomandibular joint condylar cartilage reveals friction coefficients are dependent on anatomic location	Jill Middendorf	Oral Presentation	ASME: Biomechanics at the Cell, Tissue and Multiscale Level	Tuesday 10th July, 09:20 -10:50	Wicklow MR2
O0761	Development of a novel block copolymer hydrogel for meniscal replacement	Kristine Fischenich	Oral Presentation	ASME: Biomechanics at the Cell, Tissue and Multiscale Level	Tuesday 10th July, 09:20 -10:50	Wicklow MR2
O0762	A Biphasic Finite Element Model to Study Drug Dispersion Volume of a Multiport Catheter for Convection Enhanced Delivery	Egleide Elenes	Oral Presentation	ASME: Biotransport, Cryopreservation and Cardiovascular Modelling	Tuesday 10th July, 09:20 -10:50	Wicklow MR3
O0763	Selective Thermal Stimulation Delays the Progression of Vasoconstriction during Body Cooling	Laura Hemmen Namisnak	Oral Presentation	ASME: Biotransport, Cryopreservation and Cardiovascular Modelling	Tuesday 10th July, 09:20 -10:50	Wicklow MR3
O0764	Effects of spleno-mesenteric confluence angle on helicity and flow distribution in the portal vein	David Rutkowski	Oral Presentation	ASME: Biotransport, Cryopreservation and Cardiovascular Modelling	Tuesday 10th July, 09:20 -10:50	Wicklow MR3
O0765	Inductive rewarming improves recovery of cryopreserved arteries	Zonghu Han	Oral Presentation	ASME: Biotransport, Cryopreservation and Cardiovascular Modelling	Tuesday 10th July, 09:20 -10:50	Wicklow MR3
O0766	FSI models of murine hemodynamics in wild type and Fbln5 <sup>-/-</sup> populations	Federica Cuomo	Oral Presentation	ASME: Biotransport, Cryopreservation and Cardiovascular Modelling	Tuesday 10th July, 09:20 -10:50	Wicklow MR3

					ASME: Biotransport, Cryopreservation and Cardiovascular Modelling		
O0767	The development of phase change electrodes for electroporation-based therapies	Timothy OBrien	Oral Presentation		Tuesday 10th July, 09:20 - 10:50	Wicklow MR3	
O0768	Mechanical regulation of chondroprogenitor fate	Martin J. Stoddart	Invited Speaker	Physical regulators and transport cues in tissue engineering	Tuesday 10th July, 09:20 - 10:50	Wicklow MR4	
O0770	Frequency and duration of mechanical stimulation influence mineralisation of developing chick limbs cultured in vitro	Cristian Parisi	Invited Speaker	Physical regulators and transport cues in tissue engineering	Tuesday 10th July, 09:20 - 10:50	Wicklow MR4	
O0771	MSCs activation with magnetic nanoparticles for chondrogenic differentiation	Iria Echevarria	Oral Presentation	Physical regulators and transport cues in tissue engineering	Tuesday 10th July, 09:20 - 10:50	Wicklow MR4	
O0772	Visualization and quantification of temporal and spatial relationships amongst blebbistatin particle release kinetics, myofibroblast activity, and collagen deposition	Edward Sander	Oral Presentation	Physical regulators and transport cues in tissue engineering	Tuesday 10th July, 09:20 - 10:50	Wicklow MR4	
O0773	A numerical model of a microfluidics chip designed as an in vitro platform to study angiogenesis in bone healing	Nicole van Gestel	Oral Presentation	Physical regulators and transport cues in tissue engineering	Tuesday 10th July, 09:20 - 10:50	Wicklow MR4	
O0774	Fluid shear stress on biomimetic mineralization of calcium phosphate and collagen-based composites	Xufeng Niu, Tianming Du, Yubo Fan	Oral Presentation	Physical regulators and transport cues in tissue engineering	Tuesday 10th July, 09:20 - 10:50	Wicklow MR4	
O0780	How rehabilitation robots can be used to quantify and understand post-stroke balance and gait	Herman van der Kooij	Invited Speaker	Human locomotion in diseased/injured populations - post-stroke	Tuesday 10th July, 11:20 - 12:50	Auditorium	
O0781	Relearning to walk: training with or without errors?	Laura Marchal-Crespo	Invited Speaker	Human locomotion in diseased/injured populations - post-stroke	Tuesday 10th July, 11:20 - 12:50	Auditorium	
O0782	Propulsion forces, rather than step length symmetry, regulate locomotor learning: implications for post-stroke gait rehabilitation	Carly Sombric	Oral Presentation	Human locomotion in diseased/injured populations - post-stroke	Tuesday 10th July, 11:20 - 12:50	Auditorium	
O0783	Implementation of a neuro-mechanical link for the control of a lower-limb exoskeleton: case study on stroke patient	Guillaume Durandau	Oral Presentation	Human locomotion in diseased/injured populations - post-stroke	Tuesday 10th July, 11:20 - 12:50	Auditorium	
O0784	Changes in the neural and non-neural related properties of the spastic wrist flexors after treatment with botulinum toxin A in stroke patients: An optimization study	Ruoli Wang	Oral Presentation	Human locomotion in diseased/injured populations - post-stroke	Tuesday 10th July, 11:20 - 12:50	Auditorium	
O0785	Simultaneous dimensionality reduction and regression to draw inference in gait analysis: an application to understanding gait asymmetry post-stroke	James Finley	Oral Presentation	Human locomotion in diseased/injured populations - post-stroke	Tuesday 10th July, 11:20 - 12:50	Auditorium	
O0786	A soft robotic exosuit assisting the paretic ankle in patients post-stroke: effect on muscle activation during overground walking	Lizeth Sloot	Oral Presentation	Human locomotion in diseased/injured populations - post-stroke	Tuesday 10th July, 11:20 - 12:50	Auditorium	
O0787	Integrating Vascular Biomechanics Simulations into the Clinical Work Flow of Abdominal Aortic Aneurysm Patient Treatment	T.Christian Gasser	Invited Speaker	Beyond vFFR: Emerging clinical applications of multiscale vascular biomechanics	Tuesday 10th July, 11:20 - 12:50	Liffey B	
O0788	Quantifying Blood Flow and Pressure in the Coronary Arteries of Patients with Nonobstructive Coronary Artery Disease	Charles Taylor	Invited Speaker	Beyond vFFR: Emerging clinical applications of multiscale vascular biomechanics	Tuesday 10th July, 11:20 - 12:50	Liffey B	
O0789	What is needed to make cardiovascular models suitable for clinical decision support?	Wouter Huberts	Oral Presentation	Beyond vFFR: Emerging clinical applications of multiscale vascular biomechanics	Tuesday 10th July, 11:20 - 12:50	Liffey B	
O0790	Closed-loop lumped parameter model for hepatic and systemic hemodynamics including different vascular regulatory mechanisms.	Chloe Audebert	Oral Presentation	Beyond vFFR: Emerging clinical applications of multiscale vascular biomechanics	Tuesday 10th July, 11:20 - 12:50	Liffey B	
O0791	Simulation of Transitional Hemodynamic Stages using Broadcasting in Closed-loop Models of the Circulation in CRIMSON	C. Alberto Figueroa	Oral Presentation	Beyond vFFR: Emerging clinical applications of multiscale vascular biomechanics	Tuesday 10th July, 11:20 - 12:50	Liffey B	
O0792	Physiological measures of mechanical stimuli derived from coronary CTA in saphenous vein grafts with and without stenosis	M. Owais Khan	Oral Presentation	Beyond vFFR: Emerging clinical applications of multiscale vascular biomechanics	Tuesday 10th July, 11:20 - 12:50	Liffey B	
O0793	Data-augmented multi-scale modeling of intracranial pressure dynamics	Shawn Shadden	Oral Presentation	Beyond vFFR: Emerging clinical applications of multiscale vascular biomechanics	Tuesday 10th July, 11:20 - 12:50	Liffey B	

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O0794	Frequency-Dependent Changes in Resting State EEG Functional Networks in Piglets After Rapid Head Rotations - Implications for Identifying Traumatic Brain Injury	Susan Margulies	Invited Speaker	Head impact biomechanics and head protection 2	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 1
O0795	End-to-end microscopic analysis of bridging veins: A microstructural investigation of the collagen structure as it unfolds throughout the complete length of the vessel.	Rebeca Alejandra Gavriola Laic	Oral Presentation	Head impact biomechanics and head protection 2	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 1
O0796	Effect of head friction coefficient on head impact kinematics	Michel Woering	Oral Presentation	Head impact biomechanics and head protection 2	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 1
O0797	Scalp tissue and head impact biomechanics: mechanical and sliding properties	Antonia Trotta	Oral Presentation	Head impact biomechanics and head protection 2	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 1
O0798	Evaluation of brain-skull interaction modelling approaches regarding predictability of acute subdural hematoma risk associated with brain atrophy	Zhou Zhou	Oral Presentation	Head impact biomechanics and head protection 2	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 1
O0799	Towards moderate DAI tolerance limits per age-class based on axonal strain computation	Caroline Deck	Oral Presentation	Head impact biomechanics and head protection 2	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 1
O0800	Could lowering the tackle height law in rugby union to below the chest reduce long-term brain degeneration?	Gregory Tierney	Oral Presentation	Head impact biomechanics and head protection 2	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 1
O0801	On the development of an elasticity-density relationship for cranial bone	Lilibeth A. Zambrano M.	Oral Presentation	Head impact biomechanics and head protection 2	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 1
O0802	Genotype-to-Phenotype Multiscale Biomechanical Models for Inherited Cardiomyopathies	Stuart Campbell	Invited Speaker	Cardiac growth and remodelling mechanics	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 2
O0803	Post-infarction remodeling: looking for growth in all the wrong places?	Jeffrey Holmes	Invited Speaker	Cardiac growth and remodelling mechanics	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 2
O0804	Significant differences in the mechanical modeling of confined growth predicted by the Lagrangian and Eulerian formulations	Mahmoud Safadi	Oral Presentation	Cardiac growth and remodelling mechanics	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 2
O0805	A finite element implementation of growth and remodeling based on the homogenized constrained mixture model	S. Jalleddin Mousavi	Oral Presentation	Cardiac growth and remodelling mechanics	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 2
O0806	Pathophysiological micro-mechanical viscoelastic properties of developing, ageing and infarcted myocardium	Giorgio Mattei	Oral Presentation	Cardiac growth and remodelling mechanics	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 2
O0807	A microstructure-based model of passive myocardial mechanics	Martyn Nash	Oral Presentation	Cardiac growth and remodelling mechanics	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 2
O0808	A Fiber-Specific Model of Myocardial Growth and Remodeling under Hypertension	Reza Avaz	Oral Presentation	Cardiac growth and remodelling mechanics	Tuesday 10th July, 11:20 - 12:50	Liffey Hall 2
O0809	Exploring the Mechanical Factors in Pathologies Caused by Heart Disease Associated Lamin A/C Mutations	Anna Grosberg	Invited Speaker	Mechanobiology of tissue development on a chip	Tuesday 10th July, 11:20 - 12:50	Liffey MR1
O0810	Lighting up intracellular phase space	Clifford Brangwynne	Invited Speaker	Mechanobiology of tissue development on a chip	Tuesday 10th July, 11:20 - 12:50	Liffey MR1
O0811	Tensional gradients in pancreatic bud-mimicking cultures drive differentiation of induced pluripotent stem cells	Raymond Tran	Oral Presentation	Mechanobiology of tissue development on a chip	Tuesday 10th July, 11:20 - 12:50	Liffey MR1
O0812	Novel microfluidic platform to assess the influence of perfusion conditions on in vitro cardiac microtissue	Daniela Cruz-Moreira	Oral Presentation	Mechanobiology of tissue development on a chip	Tuesday 10th July, 11:20 - 12:50	Liffey MR1
O0813	Fiber-reinforcement of hydrogels promotes cell spreading and migration in 3D EpCAM, a key regulator of tissue biomechanics, acts as a cortical organizer of cell contractility	Daniel Matera	Oral Presentation	Mechanobiology of tissue development on a chip	Tuesday 10th July, 11:20 - 12:50	Liffey MR1
O0814	Living cells as building materials	Delphine Delacour	Oral Presentation	Mechanobiology of tissue development on a chip	Tuesday 10th July, 11:20 - 12:50	Liffey MR1
O0815	Human cardiac fibrosis-on-a chip	Kit Parker	Invited Speaker	Mechanobiology of tissue development on a chip	Tuesday 10th July, 11:20 - 12:50	Liffey MR1
O0816		Sara Nunes	Oral Presentation	Mechanobiology of tissue development on a chip	Tuesday 10th July, 11:20 - 12:50	Liffey MR1
O0817	In vivo paediatric tissue mechanics: How do children differ biomechanically from adults?	Lynne Bilston	Invited Speaker	Paediatric injury	Tuesday 10th July, 11:20 - 12:50	Liffey MR2
O0818	Youth concussion biomechanics and strategies for prevention	Kristy Arbogast	Invited Speaker	Paediatric injury	Tuesday 10th July, 11:20 - 12:50	Liffey MR2
O0819	Integrated iterative musculoskeletal modeling reveals muscular contributions to glenohumeral deformity after brachial plexus birth injury	Katherine Saul	Oral Presentation	Paediatric injury	Tuesday 10th July, 11:20 - 12:50	Liffey MR2
O0820	Validity of a real time clinical assessment of single leg hop for distance kinematics.	Janet Simon	Oral Presentation	Paediatric injury	Tuesday 10th July, 11:20 - 12:50	Liffey MR2

O0821	Age-dependent impact of complete and partial ACL injuries on in situ slack and stiffness of the knee during post-natal growth	Matthew Fisher	Oral Presentation	Paediatric injury	Tuesday 10th July, 11:20 - 12:50	Liffey MR2
O0822	Predictors of paediatric patellofemoral joint dislocation from medical imaging	Christopher Carty	Oral Presentation	Paediatric injury	Tuesday 10th July, 11:20 - 12:50	Liffey MR2
O0823	Can Hypoxia Affect Biomechanical Responses of Neonatal Nerves	Anita Singh	Oral Presentation	Paediatric injury	Tuesday 10th July, 11:20 - 12:50	Liffey MR2
O0824	Non-invasive MRI-guided treatments of the brain using focused ultrasound Contribution of Steady-Streaming to the Bulk Motion of the Cerebrospinal Fluid (CSF) in the Spinal Canal	Kullervo Hynynen	Invited Speaker	Biomechanics of the Central Nervous System	Tuesday 10th July, 11:20 - 12:50	Liffey MR3
O0825	Water transport and homeostasis in the brain	Juan Lasheras	Invited Speaker	Biomechanics of the Central Nervous System	Tuesday 10th July, 11:20 - 12:50	Liffey MR3
O0826	Brain injury due to blast overpressure	Andreas Linninger	Oral Presentation	Biomechanics of the Central Nervous System	Tuesday 10th July, 11:20 - 12:50	Liffey MR3
O0827	Biomechanics of the central nervous system in microgravity	John Cavanaugh	Oral Presentation	Biomechanics of the Central Nervous System	Tuesday 10th July, 11:20 - 12:50	Liffey MR3
O0828	The effects of coughing and Valsalva on cerebrospinal fluid flow and cranial venous drainage	Donna Roberts	Oral Presentation	Biomechanics of the Central Nervous System	Tuesday 10th July, 11:20 - 12:50	Liffey MR3
O0829	A personalised multiporoelastic model for exploring the risk factors associated with the early stages of Alzheimer's disease	Robert Lloyd	Oral Presentation	Biomechanics of the Central Nervous System	Tuesday 10th July, 11:20 - 12:50	Liffey MR3
O0830	Multiscale characterisation of 3D ceramic bone grafts for repair of large segmental bone defects	John Vardakis	Oral Presentation	Biomechanics of the Central Nervous System	Tuesday 10th July, 11:20 - 12:50	Liffey MR3
O0831	Multiscale Biomechanics of the Proximal Human Femur	Peter Pivonka	Invited Speaker	Musculoskeletal biomechanics across the scales	Tuesday 10th July, 11:20 - 12:50	Ecocem
O0832	Cortical bone matrix anisotropic stiffness determined by inverse homogenization and resonant ultrasound spectroscopy	Saulo Martelli	Invited Speaker	Musculoskeletal biomechanics across the scales	Tuesday 10th July, 11:20 - 12:50	Ecocem
O0833	Multiscale adaptation of different tendon types to loading using an in vitro model	Quentin Grimal	Oral Presentation	Musculoskeletal biomechanics across the scales	Tuesday 10th July, 11:20 - 12:50	Ecocem
O0834	Elastin quantity in tendon is dependent on species and specific tendon function	Rachel Choi, Margaret Smith, Christopher Little, Elizabeth Clarke	Oral Presentation	Musculoskeletal biomechanics across the scales	Tuesday 10th July, 11:20 - 12:50	Ecocem
O0835	Relationship between Weakness of Quadriceps Muscle and Joint Contact Pressure Distributions, and Patellofemoral Pain	Jeremy Eekhoff	Oral Presentation	Musculoskeletal biomechanics across the scales	Tuesday 10th July, 11:20 - 12:50	Ecocem
O0836	On Using Local Mean Sarcomere Length to Predict Force in Whole Muscle	Seong-won Han	Oral Presentation	Musculoskeletal biomechanics across the scales	Tuesday 10th July, 11:20 - 12:50	Ecocem
O0837	Gluteal muscle damage leads to higher in vivo hip joint loads 3 months after total hip arthroplasty	Eng Kuan Moo	Oral Presentation	Musculoskeletal biomechanics across the scales	Tuesday 10th July, 11:20 - 12:50	Ecocem
O0838	The effects of trabecular cutting on the diastolic and systolic function in ex vivo New Zealand rabbits	Philipp Damm	Oral Presentation	ESB Clinical Biomechanics award finalists	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2A
O0839	Laying the foundation for healthy gait asymmetry ranges outside the laboratory in everyday life activities	Hai-Chao Han	Oral Presentation	ESB Clinical Biomechanics award finalists	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2A
O0840	Selective dorsal rhizotomy normalizes muscle forces during walking in children with spastic cerebral palsy	Sónia Alves	Oral Presentation	ESB Clinical Biomechanics award finalists	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2A
O0841	Coordination variability in movements of the dominant and non-dominant sides of the upper extremity in performing activities of daily living	Hans Kainz	Oral Presentation	ESB Clinical Biomechanics award finalists	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2A
O0842	Changes in upper-limb dynamics and shoulder complex loading following the motor learning process in novice handrim wheelchair users	Maryamolsadat Mirhadizadeh	Oral Presentation	Shoulder biomechanics 2	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2B
O0843	Using inertial sensors to estimate the angle of arm elevation and the plane of arm elevation of manual wheelchair users in the real world	Marika Leving	Oral Presentation	Shoulder biomechanics 2	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2B
O0844	Effect of rotator cuff degeneration on glenohumeral force	Stephen Cain	Oral Presentation	Shoulder biomechanics 2	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2B
O0845	A musculoskeletal shoulder model to simulate muscle control of scapular movements	Yasmine Boulanaache	Oral Presentation	Shoulder biomechanics 2	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2B
O0846		Ajay Seth	Oral Presentation	Shoulder biomechanics 2	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2B



O0847	Quantifying the critical size of the glenoid track for functional activities to aid patient-specific surgical decision-making	Christian Klemt	Oral Presentation	Shoulder biomechanics 2	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2B
O0848	The effect of reverse total shoulder implant design on range of motion considering biomechanics and impingement	Josie Elwell	Oral Presentation	Shoulder biomechanics 2	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2B
O0849	Kinematics of the violinists' bow arm: effect of tempo, string played and play style and their interactions	Benjamin Michaud	Oral Presentation	Shoulder biomechanics 2	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 2B
O0851	Mechanics of Bacterial Cell Shape Regulation	Sean Sun	Invited Speaker	Microbial biomechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 1
O0852	Bacteria sense mechanics to know when to start forming a biofilm.	Vernita Gordon	Invited Speaker	Microbial biomechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 1
O0853	Mechanical Stress Regulates the Function of Membrane Proteins in Bacteria	Melanie Roberts	Oral Presentation	Microbial biomechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 1
O0854	Mechanical force-based regulation of flagellar motor-assemblies in bacteria	Pushkar Lele	Oral Presentation	Microbial biomechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 1
O0855	A scale for quantitative measure on strength of bacterial chemotaxis	Tomonobu Goto	Oral Presentation	Microbial biomechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 1
O0856	Physical determinants of Vibrio cholerae biofilm architectures at the single cell level	Raimo Hartmann	Oral Presentation	Microbial biomechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow Hall 1
O0858	Cine DENSE MRI as a novel tool for mapping the patient-specific, circumferentially heterogeneous strain of the aortic wall in vivo: regional analysis by age and pilot clinical applications	John S. Wilson	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0859	Localized 3D strain estimation of murine dissecting abdominal aortic aneurysms	Hannah Cebull	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0860	Optimized patient specific finite element models at the carotid bifurcation	Robert Johnston	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0861	Multiscale Imaging Based Calcification Modeling and Stress Computations in Atherosclerotic Plaques	Ali Akyildiz	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0862	Parametric mapping of porcine carotid artery models for quantifying cellularity in diseased models of arterial tissue	Céline Smekens	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0863	4D Ultrasound Reveals Reduced Murine Green-Lagrange Myocardial Strain After Infarction	Craig Goergen	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0864	Synchronous imaging of the pulse wave propagation and 2-D blood flow velocities with Pulse Wave Imaging and vector Doppler in vivo	Iason Zacharias	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0865	Validation of cardiac strain estimation from 3D-tagged magnetic resonance images using finite element image correlation	Ezgi Berberoglu	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0866	Pulse Wave Imaging for monitoring of hypertension induced stiffening in an Ang-II mice model	Elisa Konofagou	Oral Presentation	Cardiovascular imaging 2	Tuesday 10th July, 11:20 - 12:50	Wicklow MR1
O0867	Exploring mechanisms for functional changes in the major bundles of the anterior cruciate ligament of the knee during skeletal growth	Stephanie Cone	Oral Presentation	ASME: Musculoskeletal Mechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow MR2
O0868	Shear stress in bone marrow is correlated to altered gene expression in in situ culture	Kimberly Curtis	Oral Presentation	ASME: Musculoskeletal Mechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow MR2
O0869	ER $\alpha$ deletion from mature osteoblasts increases severity of load-induced osteoarthritis in female mice	Sophia Ziemian	Oral Presentation	ASME: Musculoskeletal Mechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow MR2
O0870	Comparison of knee joint mechanics in concurrent finite element musculoskeletal model of the healthy and mobile bearing prosthesis knee	Liming Shu	Oral Presentation	ASME: Musculoskeletal Mechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow MR2
O0871	A combined statistical shape modelling and musculoskeletal simulation approach to investigate the effect of patellofemoral geometry on joint mechanics in tibial tubercle osteotomy	Allison Clouthier	Oral Presentation	ASME: Musculoskeletal Mechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow MR2
O0872	Changes in bone tissue strength caused by disruption of the gut microbiome depend on stage of skeletal growth	Marysol Luna	Oral Presentation	ASME: Musculoskeletal Mechanics	Tuesday 10th July, 11:20 - 12:50	Wicklow MR2
O0873	The mechanical modulation of cardiac wound healing and scar formation	Laura Caggiano	Oral Presentation	ASME: Cardiovascular Imaging and Modelling	Tuesday 10th July, 11:20 - 12:50	Wicklow MR3

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O0874	Verifying Monte Carlo simulations of diffusion tensor cardiovascular magnetic resonance using a finite volume method	Jan N Rose	Oral Presentation	ASME: Cardiovascular Imaging and Modelling	Tuesday 10th July, 11:20 - 12:50	Wicklow MR3
O0875	On the prediction of plaque growth in atherosclerotic coronary arteries in pigs: which hemodynamic metric is the best?	Annette M. Kok	Oral Presentation	ASME: Cardiovascular Imaging and Modelling	Tuesday 10th July, 11:20 - 12:50	Wicklow MR3
O0876	Multidirectional failure of human ascending thoracic aortic aneurysms: a multiscale modeling approach	Christopher Korenczuk	Oral Presentation	ASME: Cardiovascular Imaging and Modelling	Tuesday 10th July, 11:20 - 12:50	Wicklow MR3
O0877	Estimation of material coefficients for an idealized model of the human abdominal aorta	Miguel Rodriguez	Oral Presentation	ASME: Cardiovascular Imaging and Modelling	Tuesday 10th July, 11:20 - 12:50	Wicklow MR3
O0878	Propagation-based phase-contrast imaging of aortic dissection in mice: from individual elastic lamella to 3D analysis	Gerlinde Logghe	Oral Presentation	ASME: Cardiovascular Imaging and Modelling	Tuesday 10th July, 11:20 - 12:50	Wicklow MR3
O0879	Template for Skin Regeneration	Dennis P Orgill	Invited Speaker	Mechanobiology and tissue engineering of skin	Tuesday 10th July, 11:20 - 12:50	Wicklow MR4
O0880	Skin Mechanotransduction in Overhealing and Underhealing Wounds	Geoffrey Gurtner	Invited Speaker	Mechanobiology and tissue engineering of skin	Tuesday 10th July, 11:20 - 12:50	Wicklow MR4
O0881	Development of skin models with stable capillary-like structures using gene-activated scaffolds	Helena R. Moreira	Oral Presentation	Mechanobiology and tissue engineering of skin	Tuesday 10th July, 11:20 - 12:50	Wicklow MR4
O0882	Bio-inspired criteria for engineering load-tolerant skin	Colin J. Boyle	Oral Presentation	Mechanobiology and tissue engineering of skin	Tuesday 10th July, 11:20 - 12:50	Wicklow MR4
O0883	Biomechanical evaluation of human keratinocytes on patterned surfaces	Atefeh Mobasser	Oral Presentation	Mechanobiology and tissue engineering of skin	Tuesday 10th July, 11:20 - 12:50	Wicklow MR4
O0884	Functionalising a collagen-based scaffold with on-demand drug delivery for diabetic wound healing	Cathal Kearney	Oral Presentation	Mechanobiology and tissue engineering of skin	Tuesday 10th July, 11:20 - 12:50	Wicklow MR4
O0885	Structural and Mechanical Characterization of Split Thickness Skin Autografts	Samar Tarraf	Oral Presentation	Mechanobiology and tissue engineering of skin	Tuesday 10th July, 11:20 - 12:50	Wicklow MR4
O0886	The GripAssist: An assistive device designed to increase the autonomy of disabled athletes	Brenna Barber	Oral Presentation	National Science Foundation / The Summer Biomechanics, Bioengineering & Biotransport Conference (SB3C) Undergraduate Design Competition	Tuesday 10th July, 13:30 - 15:00	Wicklow MR2
O0887	Development of a partial-hand prosthesis for pediatric amputees	Daniel Macko	Oral Presentation	National Science Foundation / The Summer Biomechanics, Bioengineering & Biotransport Conference (SB3C) Undergraduate Design Competition	Tuesday 10th July, 13:30 - 15:00	Wicklow MR2
O0888	Rice University senior capstone: Team hippos don't lie	Wesley Yee	Oral Presentation	National Science Foundation / The Summer Biomechanics, Bioengineering & Biotransport Conference (SB3C) Undergraduate Design Competition	Tuesday 10th July, 13:30 - 15:00	Wicklow MR2
O0889	Mechanical umbrella for power wheelchair users with an interchangeable bracket that increases usability for multiple models	Jessica Pieczynski	Oral Presentation	National Science Foundation / The Summer Biomechanics, Bioengineering & Biotransport Conference (SB3C) Undergraduate Design Competition	Tuesday 10th July, 13:30 - 15:00	Wicklow MR2
O0895	Continuously parameterizing the timing and task adaptations of human locomotion for the control of powered prosthetic legs	Robert Gregg	Invited Speaker	Motor control 1	Tuesday 10th July, 15:10 - 16:40	Auditorium
O0896	A Functional and Holistic Approach to the Identification of Human Motor Control	Antonie J. van den Bogert	Invited Speaker	Motor control 1	Tuesday 10th July, 15:10 - 16:40	Auditorium
O0897	Challenging human locomotion: stability and modular organisation in unsteady conditions	Alessandro Santuz	Oral Presentation	Motor control 1	Tuesday 10th July, 15:10 - 16:40	Auditorium
O0898	Investigating the Neural Control of Movement During Functional Exercise	Joshua Kline	Oral Presentation	Motor control 1	Tuesday 10th July, 15:10 - 16:40	Auditorium
O0899	Pre-treatment synergy activations are associated with post-treatment gait in cerebral palsy.	Benjamin Shuman	Oral Presentation	Motor control 1	Tuesday 10th July, 15:10 - 16:40	Auditorium

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O0900	Assessing differences in instantaneous multi-joint coordination of walking and running for typically developing youth using wavelet coherence analysis.	Gregor Kuntze	Oral Presentation	Motor control 1	Tuesday 10th July, 15:10 - 16:40	Auditorium
O0901	"You can tell by the way I use my walk." Predicting the presence of cognitive load with gait measurements	Pritika Dasgupta	Oral Presentation	Motor control 1	Tuesday 10th July, 15:10 - 16:40	Auditorium
O0902	Modeling Blood Flow and Pressure in the Coronary Arteries: From the Academy to the Clinic	Charles Taylor	Invited Speaker	Multiscale modelling of the Cardiovascular System: Disease development, progression, and clinical intervention	Tuesday 10th July, 15:10 - 16:40	Liffey B
O0903	Fluid Delivery and Mass Transport across Multiple Scales at the Interfaces of the Blood and Lymphatic Systems	James Moore	Invited Speaker	Multiscale modelling of the Cardiovascular System: Disease development, progression, and clinical intervention	Tuesday 10th July, 15:10 - 16:40	Liffey B
O0904	Multiscale modeling the properties of the vessel wall	T.Christian Gasser	Oral Presentation	Multiscale modelling of the Cardiovascular System: Disease development, progression, and clinical intervention	Tuesday 10th July, 15:10 - 16:40	Liffey B
O0905	Non-affine transformations in arterial mechanics: a continuum micromechanical investigation	Claire Morin	Oral Presentation	Multiscale modelling of the Cardiovascular System: Disease development, progression, and clinical intervention	Tuesday 10th July, 15:10 - 16:40	Liffey B
O0906	Estimation of aortic tissue strength under biaxial loading using uniaxial data and a structural finite element model	James Thunes	Oral Presentation	Multiscale modelling of the Cardiovascular System: Disease development, progression, and clinical intervention	Tuesday 10th July, 15:10 - 16:40	Liffey B
O0907	A Computational Heart Model of Pulmonary Arterial Hypertension	Reza Avaz	Oral Presentation	Multiscale modelling of the Cardiovascular System: Disease development, progression, and clinical intervention	Tuesday 10th July, 15:10 - 16:40	Liffey B
O0908	Contribution of Inter-lamellar Elastin and Collagen Fibers to Arterial Wall Integrity	Xunjie Yu	Oral Presentation	Multiscale modelling of the Cardiovascular System: Disease development, progression, and clinical intervention	Tuesday 10th July, 15:10 - 16:40	Liffey B
O0909	The role of multiphysics computational modeling in pressure ulcer prevention	Amit Gefen	Invited Speaker	Soft tissue injury mechanics: Skin injuries and wound formation associated with disabilities.	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 1
O0910	Multi-field modeling of pressure ulcer formation incorporating a cell-signaling regulatory network of inflammation	Adrian Buganza Tepole	Oral Presentation	Soft tissue injury mechanics: Skin injuries and wound formation associated with disabilities.	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 1
O0911	Investigating the biomechanical and physiological effects of simulated prosthetic loading on healthy lower limb tissues	Jennifer Bramley	Oral Presentation	Soft tissue injury mechanics: Skin injuries and wound formation associated with disabilities.	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 1
O0912	The role of skin structure on pressure injury tolerance of residual limb skin of amputees	Colin J. Boyle	Oral Presentation	Soft tissue injury mechanics: Skin injuries and wound formation associated with disabilities.	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 1
O0913	Generation of an in vitro 3D cell sheet-based model of scar-like tissue	Daniel B. Rodrigues	Oral Presentation	Soft tissue injury mechanics: Skin injuries and wound formation associated with disabilities.	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 1
O0914	Biomechanics of Heel Pressure Ulcers and the Effect of Haglund's Deformity.	Bethany Keenan	Oral Presentation	Soft tissue injury mechanics: Skin injuries and wound formation associated with disabilities.	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 1
O0915	External application of elastin has an inhibitory effect on the skin hypertrophy and hardening due to repetitive ultraviolet irradiation	Ei Yamamoto	Oral Presentation	Soft tissue injury mechanics: Skin injuries and wound formation associated with disabilities.	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 1
O0917	Elastin in developmental vascular growth and remodeling	Jessica Wagenseil	Invited Speaker	Vascular growth and remodelling mechanics	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 2
O0918	A Credibility Plan of Vascular Growth and Remodeling Simulation Tool	Seungik Baek	Invited Speaker	Vascular growth and remodelling mechanics	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 2
O0919	Effects of age and risk factors on the mechanical and structural characteristics of human femoropopliteal arteries	Alexey Kamenskiy	Oral Presentation	Vascular growth and remodelling mechanics	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 2
O0920	Modeling progressive aortic maladaptation in hypertension	Marcos Latorre	Oral Presentation	Vascular growth and remodelling mechanics	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 2
O0921	A biomechanical model for fibril recruitment: evaluation in tendons and arteries	Mark Thompson	Oral Presentation	Vascular growth and remodelling mechanics	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 2

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O0922	A histomechanical constitutive model considering the role of collagen remodelling in the expansion abdominal aortic aneurysms	Christopher Miller	Oral Presentation	Vascular growth and remodelling mechanics	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 2
O0923	Mechanical factors regulating neovascular invasion across tissue interfaces	Steven A. LaBelle	Oral Presentation	Vascular growth and remodelling mechanics	Tuesday 10th July, 15:10 - 16:40	Liffey Hall 2
O0924	Multiscale modeling of traumatic brain injuries	Svein Kleiven	Invited Speaker	USNCB Neuromechanics: Integrating across spatial and temporal scales	Tuesday 10th July, 15:10 - 16:40	Liffey MR1
O0925	Multiscale perspectives on mild traumatic brain injury and recovery	David Meaney	Invited Speaker	USNCB Neuromechanics: Integrating across spatial and temporal scales	Tuesday 10th July, 15:10 - 16:40	Liffey MR1
O0926	Investigating Cross-Species Scaling for Traumatic Brain Injuries using Finite Element Analysis	Matthew B. Panzer	Oral Presentation	USNCB Neuromechanics: Integrating across spatial and temporal scales	Tuesday 10th July, 15:10 - 16:40	Liffey MR1
O0927	A new approach for evaluation of finite element based tissue injury metrics for estimating axonal damage in piglets undergoing rapid head rotation	Susan Margulies	Oral Presentation	USNCB Neuromechanics: Integrating across spatial and temporal scales	Tuesday 10th July, 15:10 - 16:40	Liffey MR1
O0928	Comparison of helmet and mouth instrumentation approaches for measuring skull accelerations	Chiara Giordano	Oral Presentation	USNCB Neuromechanics: Integrating across spatial and temporal scales	Tuesday 10th July, 15:10 - 16:40	Liffey MR1
O0929	Bulk Motion and Dynamic Deformation of the Cerebellum During Magnetic Resonance Elastography	Ruth J. Okamoto	Oral Presentation	USNCB Neuromechanics: Integrating across spatial and temporal scales	Tuesday 10th July, 15:10 - 16:40	Liffey MR1
O0930	Tensile loading with in situ x-ray diffraction suggests high myelin sheath stiffness in peripheral nerve	Fabio Bianchi	Oral Presentation	USNCB Neuromechanics: Integrating across spatial and temporal scales	Tuesday 10th July, 15:10 - 16:40	Liffey MR1
O0931	Two challenges for the link between mechanics and energetics: 1) prevalent positive or negative muscle work in downhill ski and 2) energy dissipated by internal friction (joints/tissues) in locomotion.	Alberto Minetti	Invited Speaker	Locomotion and human movement energetics in sports 1	Tuesday 10th July, 15:10 - 16:40	Liffey MR2
O0932	Comparison of the anthropometrics, kinematics and kinetics in young swimmers of different competitive levels	Tiago M. Barbosa	Invited Speaker	Locomotion and human movement energetics in sports 1	Tuesday 10th July, 15:10 - 16:40	Liffey MR2
O0933	Joint specific mechanical power during the push phase of elite bobsleigh	Jan-Peter Goldmann	Oral Presentation	Locomotion and human movement energetics in sports 1	Tuesday 10th July, 15:10 - 16:40	Liffey MR2
O0934	Running economy and ground reaction force characteristics of elite middle distance runners across incremental faster running speeds	Geoffrey Burns	Oral Presentation	Locomotion and human movement energetics in sports 1	Tuesday 10th July, 15:10 - 16:40	Liffey MR2
O0935	Effects of an exercise induced alteration in the point of ground reaction force application on running energetics	Antonis Ekizos	Oral Presentation	Locomotion and human movement energetics in sports 1	Tuesday 10th July, 15:10 - 16:40	Liffey MR2
O0936	The mechanical determinants of the U-shaped speed-energy cost of running relationship	Davide Malatesta	Oral Presentation	Locomotion and human movement energetics in sports 1	Tuesday 10th July, 15:10 - 16:40	Liffey MR2
O0937	Running in the wild: Using large-scale wearable data to understand ecological running speed preferences	Jessica Selinger	Oral Presentation	Locomotion and human movement energetics in sports 1	Tuesday 10th July, 15:10 - 16:40	Liffey MR2
O0939	Arterial wall oxygen transport and vascular disease revisited	John M. Tarbell	Invited Speaker	Biotransport diagnostics and therapeutics	Tuesday 10th July, 15:10 - 16:40	Liffey MR3
O0940	Microbubble dynamics under ultrasound steering: Bjerknes, drag, and lift forces in the macrocirculation	Alicia Clark	Oral Presentation	Biotransport diagnostics and therapeutics	Tuesday 10th July, 15:10 - 16:40	Liffey MR3
O0941	Assessment of Enhanced Thermal Effect due to Gold Nano-Particles during MR-guided High Intensity Focused Ultrasound (HIFU) Procedures using a Mouse-Tumor Model	Rupak Banerjee	Oral Presentation	Biotransport diagnostics and therapeutics	Tuesday 10th July, 15:10 - 16:40	Liffey MR3
O0942	Thermoregulatory Manipulation to Reduce Overnight Blood Pressure without Drugs	Kenneth Diller	Oral Presentation	Biotransport diagnostics and therapeutics	Tuesday 10th July, 15:10 - 16:40	Liffey MR3
O0943	Numerical model of the drug carrier transport during targeted drug delivery for liver cancer: a feasibility study	Charlotte Debbaut	Oral Presentation	Biotransport diagnostics and therapeutics	Tuesday 10th July, 15:10 - 16:40	Liffey MR3
O0945	Statistical and musculoskeletal models to support decision making in gait analysis	Morgan Sangeux	Invited Speaker	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making 1	Tuesday 10th July, 15:10 - 16:40	Ecocem

O0946	Allies or adversaries? The role of biomechanics and data science in improving mobility	Jennifer Hicks	Invited Speaker	1	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 15:10 - 16:40	Ecocem
O0947	Dynamic stresses and strains during flexible neuro-musculoskeletal multibody simulation: experimental validation and osteogenic parameter analysis	Märuan Kebbach	Oral Presentation	1	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 15:10 - 16:40	Ecocem
O0948	Tibial fracture healing and nonunion: insights from epidemiology, computational mechanobiology, and mechanostructural analysis of clinical imaging data	Hannah Dailey	Oral Presentation	1	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 15:10 - 16:40	Ecocem
O0949	Statistical Finite Element Modelling for Maxillofacial Surgery Simulation and Clinical Decision Making	Paul Knoops	Oral Presentation	1	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 15:10 - 16:40	Ecocem
O0950	Can Hip Structural Analysis predict osteoporotic hip fracture? A patient-specific Finite Element study	Alessandra Aldieri	Oral Presentation	1	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 15:10 - 16:40	Ecocem
O0951	A Data-Driven Model to Classify Gait Pattern In Children with Cerebral Palsy	Julie Choisne	Oral Presentation	1	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 15:10 - 16:40	Ecocem
O0952	How does mechanical loading influence the biological microenvironment of the disc leading to failure?	Hans-Joachim Wilke	Invited Speaker	1	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2A
O0953	Repair and Regeneration of the Annulus Fibrosus of the Intervertebral Disc	James Iatridis	Invited Speaker	1	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2A
O0954	Mechanical loading under compression and torsion of bovine coccygeal intervertebral discs	Benjamin Gantenbein	Oral Presentation	1	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2A
O0955	Nucleotomy Increases Disc Bending Stiffness under Complex Loading Modalities	Bo Yang, Yintong Lu	Oral Presentation	1	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2A
O0956	Inflammatory stimulation and mechanical loading lead to a weakening of the Trans-lamellar bridging network of the Anulus fibrosis	Graciosa Teixeira	Oral Presentation	1	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2A
O0957	Residual Strain in the Annulus Fibrosus Decreases with Disc Degeneration	Grace O'Connell	Oral Presentation	1	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2A
O0958	A novel 3D-printed lateral lumbar interbody fusion (LLIF) cage has subsidence properties better than a generic annular cage	Ali Kiapour	Oral Presentation	1	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2A
O0959	Do we have a complete kinematic model of the carpus yet? And if so, can it help advance total wrist arthroplasties?	Joseph Crisco	Invited Speaker	1	Hand and wrist biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2B
O0960	Biomechanics of the Transverse Carpal Ligament	Zong-Ming Li	Invited Speaker	1	Hand and wrist biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2B
O0961	Does extensor retinaculum excision affect wrist muscle forces? An active wrist simulator study	Darshan Shah	Oral Presentation	1	Hand and wrist biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2B
O0962	Sensitivity analysis for the design of a finite element model of the wrist joint	Steffi Van Hees	Oral Presentation	1	Hand and wrist biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2B
O0963	Computational Wrist Analysis of Functional Restoration after Scapholunate Dissociation Repair	Jennifer Wayne	Oral Presentation	1	Hand and wrist biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2B
O0964	A hybrid finite element-musculoskeletal model of the finger to estimate in-vivo joint loading stresses: application to the understanding of hand osteoarthritis	Barthélémy Faudot	Oral Presentation	1	Hand and wrist biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2B
O0965	Biomechanical investigation of flexor digitorum tendons in trigger finger patients using sonography	Yi-Chuan Chou	Oral Presentation	1	Hand and wrist biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 2B

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O0966	Microparticle Delivered miR-27a Induced by Cyclic Stretch Modulates the Proliferation of Endothelial Cells in Hypertension	Ying-Xin Qi	Invited Speaker	Cell deformation and cell signalling	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 1
O0967	Cadherin-11 mechanobiology in cardiac fibrosis and disease	W. David Merryman	Invited Speaker	Cell deformation and cell signalling	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 1
O0968	Biophysics modeling on membrane biomechanics in a strong electromagnetic field	Hui Ye	Oral Presentation	Cell deformation and cell signalling	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 1
O0969	High-resolution traction force microscopy demonstrates the dynamic of cell contraction.	Yue Xu	Oral Presentation	Cell deformation and cell signalling	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 1
O0970	Real-time observation of F-actin fluctuation in living cell	Noriyuki Kataoka	Oral Presentation	Cell deformation and cell signalling	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 1
O0971	Effects of membrane surface viscoelasticity on the tank-treading motion of a red blood cell under shear flow	Ken-ichi Tsubota	Oral Presentation	Cell deformation and cell signalling	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 1
O0972	Different characteristics of calcium signaling response between needle indentation stimuli and substrate stretching stimuli in osteoblast cell	Katsuya Sato	Oral Presentation	Cell deformation and cell signalling	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 1
O0973	High-velocity stretching causes mechanically-induced tau pathology in neurons	Nicholas Braun	Oral Presentation	Cell deformation and cell signalling	Tuesday 10th July, 15:10 - 16:40	Wicklow Hall 1
O0974	How technological advances have led to innovative new products	Arthur G Erdman	Invited Speaker	Technology innovation in medical devices 1	Tuesday 10th July, 15:10 - 16:40	Wicklow MR1
O0975	Neural Prosthesis to Assist People with Muscle Weakness	Martin L. Tanaka	Invited Speaker	Technology innovation in medical devices 1	Tuesday 10th July, 15:10 - 16:40	Wicklow MR1
O0976	Optimal design of trapezoidal piezoelectric membrane with electrodes for artificial cochlea using machine learning techniques	Hiroki Yamazaki	Oral Presentation	Technology innovation in medical devices 1	Tuesday 10th July, 15:10 - 16:40	Wicklow MR1
O0977	An sEMG-based alternative for silent speech recognition	Bhawna Shiwani	Oral Presentation	Technology innovation in medical devices 1	Tuesday 10th July, 15:10 - 16:40	Wicklow MR1
O0978	Development and evaluation of an elastomeric auxetic mesh for pelvic organ prolapse repair: an alternative to knitted, polypropylene mesh	Katrina Knight	Oral Presentation	Technology innovation in medical devices 1	Tuesday 10th July, 15:10 - 16:40	Wicklow MR1
O0979	A powered hip-knee-ankle-foot orthosis can reduce energy consumption in non-disabled persons during stair climbing	Hanseung Woo	Oral Presentation	Technology innovation in medical devices 1	Tuesday 10th July, 15:10 - 16:40	Wicklow MR1
O0980	3D Printed Soft Robotic Actuators for Assistive Biomechanical Devices	Oisín Byrne	Oral Presentation	Technology innovation in medical devices 1	Tuesday 10th July, 15:10 - 16:40	Wicklow MR1
O0981	Investigating representative whole spinal alignments in a car occupant posture	Fusako Sato	Oral Presentation	ASME: Sports Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR2
O0982	Axolemma vulnerability in axonal injury: a computational perspective	Annaclaudia Montanino	Oral Presentation	ASME: Sports Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR2
O0983	Finite element based pelvic injury metric creation and validation in lateral impact for a human body model	Caitlin Weaver	Oral Presentation	ASME: Sports Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR2
O0984	Injury criterion assessment of high rate lateral loading	Donald Sherman	Oral Presentation	ASME: Sports Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR2
O0985	Comparison of reaction force generation between initiating manual wheelchair propulsion at self-selected fast speeds	Marisa Papp	Oral Presentation	ASME: Sports Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR2
O0986	Constant force shock absorbers for preventing traumatic brain injury	Michael Fanton	Oral Presentation	ASME: Sports Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR2
O0987	Degradation of arterial collagen with applied strain: critical influence of matrix content and collagen crimp	Robert Gaul	Oral Presentation	ASME: Cardiovascular Mechanics and Cell Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR3
O0988	Fiber-scale remodeling of an aortic medial lamellar unit (MLU) using volume-averaging theory	Ryan Mahutga	Oral Presentation	ASME: Cardiovascular Mechanics and Cell Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR3
O0989	Thermodynamic framework for cell spreading and dynamic contractility	Eoin McEvoy	Oral Presentation	ASME: Cardiovascular Mechanics and Cell Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR3
O0990	The osteocyte primary cilium mediates flow-induced changes in actin organization and cell shape.	Michael Duffy	Oral Presentation	ASME: Cardiovascular Mechanics and Cell Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR3
O0991	Dual functions of fluid shear stress in developmental EndMT	David Bassen	Oral Presentation	ASME: Cardiovascular Mechanics and Cell Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR3
O0992	Emergence of neuro-muscular junction and neural network in a novel co-culture platform	Onur Aydin	Oral Presentation	ASME: Cardiovascular Mechanics and Cell Biomechanics	Tuesday 10th July, 15:10 - 16:40	Wicklow MR3
O0993	Design and manufacture of 3D-printed scaffolds for regeneration of massive craniomaxillofacial bone loss.	Warren Grayson	Invited Speaker	Functional bone and cranio-facial tissue engineering	Tuesday 10th July, 15:10 - 16:40	Wicklow MR4

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O0994	The role of dynamic hydrogel mechanical properties and bone defect mechanical loading on cell behavior and tissue regeneration	Eben Alsberg	Invited Speaker	Functional bone and cranio-facial tissue engineering	Tuesday 10th July, 15:10 - 16:40	Wicklow MR4
O0995	Mechanobiology-informed tissue engineering: a collagen-scaffold-based delivery system for accelerating osteogenesis and bone repair by activating JNK3 in stem cells	Arlyng Gonzalez-Vazquez	Oral Presentation	Functional bone and cranio-facial tissue engineering	Tuesday 10th July, 15:10 - 16:40	Wicklow MR4
O0996	Maxillary bone regeneration using stem cells and biomaterials: from bench to bedside	Pierre Layrolle	Oral Presentation	Functional bone and cranio-facial tissue engineering	Tuesday 10th July, 15:10 - 16:40	Wicklow MR4
O0997	3D printing of composite constructs functionalized with ECM components for bone defect repair.	Fiona Freeman	Oral Presentation	Functional bone and cranio-facial tissue engineering	Tuesday 10th July, 15:10 - 16:40	Wicklow MR4
O0998	Scaffold mediated gene delivery using cell-penetrating peptides significantly accelerates bone healing in critical-sized bone defects	Rosanne M. Raftery	Oral Presentation	Functional bone and cranio-facial tissue engineering	Tuesday 10th July, 15:10 - 16:40	Wicklow MR4
O0999	Inferior In Vivo Osteogenesis and Superior Angiogenesis of Human Adipose-Derived Stromal Cells Compared with Bone Marrow-Derived Stromal Cells Cultured in Xeno-Free Conditions	Meadhbh Brennan	Oral Presentation	Functional bone and cranio-facial tissue engineering	Tuesday 10th July, 15:10 - 16:40	Wicklow MR4
O1000	Improvements in dynamic motor control following neurorehabilitation of chronic balance deficits due to prior traumatic brain injury	Samuel Acuña	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1001	Nonlinear measures for the analysis of human movement dynamics: a focus on the development of gross motor control in schoolchildren	Maria Cristina Bisi	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1002	Comparing the dimensionality of intramuscular EMGs and joint kinematics during increasingly complex hand movements	Misagh B. Mansouri	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1003	Stability of joint angle dynamics during oscillatory lower limb gaits is task-dependent	Peter Raffalt	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1004	Voluntary modulation of redundant muscle activity during gait using visual feedback	Scott Uhlich	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1005	Postural and suprapostural synergies during the sit-to-stand while holding a cup task: an uncontrolled manifold analysis	Valéria Pinto	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1006	The origin of muscle synergies during intact and decerebrate cat locomotion revealed by a neuromechanical model of spinal locomotor control	Boris I. Prilutsky	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1007	Assessing the effects of spatiotemporal asymmetry on intersegmental coordination elicited by slip-like perturbations during walking	Chang Liu	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1008	Experimental model identification of human balanced ball-and-beam systems	Tamas Insperger	Oral Presentation	Motor control 2	Tuesday 10th July, 17:10 - 18:40	Auditorium
O1009	The exquisite design of the endothelial glycocalyx and its amazing application to a jet ski train	Sheldon Weinbaum	Invited Speaker	Biomechanics of the Cardiovascular System: The Tarbell effect (John Tarbell 70th birthday session)	Tuesday 10th July, 17:10 - 18:40	Liffey B
O1010	Leveraging Fluid Dynamics to Improve Cardiovascular Devices: Tarbell's Contributions	Keefe Manning	Invited Speaker	Biomechanics of the Cardiovascular System: The Tarbell effect (John Tarbell 70th birthday session)	Tuesday 10th July, 17:10 - 18:40	Liffey B
O1011	Determinants of pro-atherogenic shear stress patterns in the thoracic aorta	Peter Weinberg	Oral Presentation	Biomechanics of the Cardiovascular System: The Tarbell effect (John Tarbell 70th birthday session)	Tuesday 10th July, 17:10 - 18:40	Liffey B
O1012	Biomechanics of the Vascular System: The Role of the Glycocalyx	Eno Ebong	Oral Presentation	Biomechanics of the Cardiovascular System: The Tarbell effect (John Tarbell 70th birthday session)	Tuesday 10th July, 17:10 - 18:40	Liffey B
O1013	Leaky Blood Vessels, Gags and Metastasis: An Ongoing Collaboration	Lance Munn	Oral Presentation	Biomechanics of the Cardiovascular System: The Tarbell effect (John Tarbell 70th birthday session)	Tuesday 10th July, 17:10 - 18:40	Liffey B
O1014	Targeting flow-sensitive genes to understand the underlying pathophysiological mechanisms and develop novel therapeutics for atherosclerosis	Hanjoong Jo	Oral Presentation	Biomechanics of the Cardiovascular System: The Tarbell effect (John Tarbell 70th birthday session)	Tuesday 10th July, 17:10 - 18:40	Liffey B
O1015	Ultra-Structure of Endothelial Surface Glycocalyx Revealed by Stochastic Optical Reconstruction Microscopy (STORM)	Bingmei Fu	Oral Presentation	Biomechanics of the Cardiovascular System: The Tarbell effect (John Tarbell 70th birthday session)	Tuesday 10th July, 17:10 - 18:40	Liffey B

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O1016	Opportunities for Biomechanics, Tissue Injury, and Rehabilitation Research in Obstetrics and Gynecology	Steven Abramowitch	Invited Speaker	Injuries and tissue mechanics in the lower abdomen	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 1
O1017	A data driven micro-structural model for the bladder wall in health and disease	Anne Robertson	Invited Speaker	Injuries and tissue mechanics in the lower abdomen	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 1
O1018	Urinary bladder and gastrointestinal tissue: A comparative study of biomechanical properties for the improvement of bladder repair	John Mulvihill	Oral Presentation	Injuries and tissue mechanics in the lower abdomen	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 1
O1019	The effect of enlarged hiatus on the exposed vaginal length and apical ligament tension in women with anterior vaginal wall prolapse: a 3D customizable finite element model analysis	Luyun Chen Alejandro Roldán-	Oral Presentation	Injuries and tissue mechanics in the lower abdomen	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 1
O1020	Biomechanics of BPH – MRI Approach	Alzate, Diego Hernando	Oral Presentation	Injuries and tissue mechanics in the lower abdomen	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 1
O1021	A preliminary study to assess saddle induced discomfort and non-traumatic perineal injuries for male cyclists	Mehdi Shirzadi	Oral Presentation	Injuries and tissue mechanics in the lower abdomen	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 1
O1022	Effects of swelling on urinary bladder wall mechanics	Tyler Tuttle	Oral Presentation	Injuries and tissue mechanics in the lower abdomen	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 1
O1023	Patient Specific Biomechanical Interaction of Transcatheter Aortic Valves: Towards Precision Medicine	Hoda Hatoum	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1024	Evaluation of transcatheter aortic valve performance in beating heart: a patient-specific numerical approach	Danny Bluestein	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1025	Transcatheter aortic valve replacement in a patient with bicuspid aortic valve and mitral regurgitation: a patient-specific fluid-structure interaction	Andres Caballero Immanuel David Madukauwa-David, Ajit	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1026	Transcatheter aortic valve leaflet thrombosis in the neosinus: fluid mechanics factors	P. Yoganathan	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1027	Novel hyaluronan enhanced polymeric transcatheter aortic valve replacement: A proof of concept	Megan Heitkemper Oren M. Rotman, Danny	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1028	Novel polymeric valve for transcatheter aortic valve replacement applications	Bluestein	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1029	State of the Art Simulation of Bioprosthetic Heart Valve Durability	Will Zhang	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1030	Development of a mechanically equivalent mitral sub-valvular apparatus	Michael Sacks	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1031	A Percutaneously Delivered Leaflet Extending Implant to Correct Mitral Regurgitation: Feasibility and Safety Study in Ex Vivo and Swine Models	Muralidhar Padala	Oral Presentation	Prosthetic heart valves	Tuesday 10th July, 17:10 - 18:40	Liffey Hall 2
O1032	Generation and Validation of subject-specific finite element models for preclinical and clinical assessment of bone mechanical properties	Enrico Dall'Ara	Invited Speaker	Biomechanics for the bedside: A snapshot of recent experimental and modelling trends with clinical impact	Tuesday 10th July, 17:10 - 18:40	Liffey MR1
O1033	Computational Challenges in Clinical Cardiovascular Mathematics: integration of data and mathematical models for clinical applications	Alessandro Veneziani	Invited Speaker	Biomechanics for the bedside: A snapshot of recent experimental and modelling trends with clinical impact	Tuesday 10th July, 17:10 - 18:40	Liffey MR1
O1034	Validation of Fluid Structure Interaction Models of the Aortic Valve with In-Vitro Testing	Gaetano Burriesci	Oral Presentation	Biomechanics for the bedside: A snapshot of recent experimental and modelling trends with clinical impact	Tuesday 10th July, 17:10 - 18:40	Liffey MR1
O1035	Image-based quantification of 3D cell cultures in microfluidic devices: a step forward the validation of computational models	Carlos Borau	Oral Presentation	Biomechanics for the bedside: A snapshot of recent experimental and modelling trends with clinical impact	Tuesday 10th July, 17:10 - 18:40	Liffey MR1



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O1036	Automatic generation of patient-specific finite element models of human femurs from clinical CT images	Lorenzo Grassi	Oral Presentation	Biomechanics for the bedside: A snapshot of recent experimental and modelling trends with clinical impact	Tuesday 10th July, 17:10 - 18:40	Liffey MR1
O1037	Advanced biomechanical methods - a basis for orthopaedic device optimisations in cementless hip arthroplasty	Thomas M Grupp	Oral Presentation	Biomechanics for the bedside: A snapshot of recent experimental and modelling trends with clinical impact	Tuesday 10th July, 17:10 - 18:40	Liffey MR1
O1038	Risk of hip fracture prediction: from DXA-based 3D patient-specific femur model simulations to patient classification	Carlos Ruiz Wills	Oral Presentation	Biomechanics for the bedside: A snapshot of recent experimental and modelling trends with clinical impact	Tuesday 10th July, 17:10 - 18:40	Liffey MR1
O1039	Performance of a manual wheelchair propulsion device optimized for the musculoskeletal system of the upper limbs – preliminary results	Margit Gfoehler	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1040	Performance behavior of the m. quadriceps femoris during maximal isokinetic knee extension: observations of elastic vs. direct force transmission	Philipp Kornfeind	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1041	An initial comparison in propulsion kinetics between synchronous and asynchronous handcycling in able-bodied men at low-intensity exercise	Cassandra Kraaijenbrink	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1042	Segmental power analysis of elbow valgus load during baseball pitching	Arnel Aguinaldo	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1043	The physiomechanical reasons why running up a short flight of stairs is sometimes preferable to ascending by walking.	Gaspare Pavei	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1044	Energy minimization in European premier football athletes as a function of locomotion speed	Michael Hahn	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1045	Center of Mass Acceleration Complexity is Related to Running Economy	Allison Gruber	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1046	Influence of running mileage on running biomechanics of middle-aged and young runners	Max R. Paquette	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1047	Nordic hamstring exercise torque and sprint acceleration mechanical profile and performance in team sports athletes; are they related?	Johan Lahti	Oral Presentation	Locomotion and human movement energetics in sports 2	Tuesday 10th July, 17:10 - 18:40	Liffey MR2
O1048	Model-based personalized Decision Support for heart valve interventions	David Rodney Hose	Invited Speaker	From the microcirculation to large artery flows: Challenges for clinical applications	Tuesday 10th July, 17:10 - 16:40	Liffey MR3
O1049	Hemorheology, red blood cells dynamics and their membrane in-plane elasticity: the necessary triptych to understand blood flow	Manouk Abkarian	Invited Speaker	From the microcirculation to large artery flows: Challenges for clinical applications	Tuesday 10th July, 17:10 - 16:40	Liffey MR3
O1050	Autodigestion: A Missing Link for Biomechanical Analysis of Cardiovascular Dysfunction and Disease	Geert Schmid-Schönbein	Oral Presentation	From the microcirculation to large artery flows: Challenges for clinical applications	Tuesday 10th July, 17:10 - 16:40	Liffey MR3
O1051	Cellular-scale blood flow and particulate transport in microvascular networks	Prosenjit Bagchi	Oral Presentation	From the microcirculation to large artery flows: Challenges for clinical applications	Tuesday 10th July, 17:10 - 16:40	Liffey MR3
O1052	In vitro biomimetic blood microcirculatory assays for cardiovascular targeted drug carrier design	Josue Sznitman	Oral Presentation	From the microcirculation to large artery flows: Challenges for clinical applications	Tuesday 10th July, 17:10 - 16:40	Liffey MR3
O1053	Correlation between multi-directional wall shear stress and risk factors of cerebral aneurysm rupture	Yuji Shimogonya	Oral Presentation	From the microcirculation to large artery flows: Challenges for clinical applications	Tuesday 10th July, 17:10 - 16:40	Liffey MR3
O1054	Rigidity-induced margination	Revaz Chachanidze	Oral Presentation	From the microcirculation to large artery flows: Challenges for clinical applications	Tuesday 10th July, 17:10 - 16:40	Liffey MR3
O1055	Evaluating the relationship between gait and clinical measures of plantar flexor function	Elisa Arch	Oral Presentation	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 17:10 - 18:40	Ecocem

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O1056	Intra-op biomechanical guidance improves articular fracture reduction quality, decreasing deleterious contact stress	Donald D. Anderson	Oral Presentation	2	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 17:10 - 18:40	Ecocem
O1057	Using Wearable Sensors to Assess Knees Joint Replacement Rehabilitation	Shasha Yeung	Oral Presentation	2	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 17:10 - 18:40	Ecocem
O1058	Implant position of a calcar-guided short stem affects stress-shielding of the proximal femur	Amelie Sas	Oral Presentation	2	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 17:10 - 18:40	Ecocem
O1059	Knee medial contact force response to customised and non-customised foot orthoses: a musculoskeletal study in medial knee osteoarthritis	Marco Mannisi	Oral Presentation	2	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 17:10 - 18:40	Ecocem
O1060	Femoral component axial rotation sensitivity to compartmental contact force, collateral ligament tension, and muscle forces in cruciate retaining total knee arthroplasty	Trent Guess	Oral Presentation	2	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 17:10 - 18:40	Ecocem
O1061	Predictive modeling of movement velocity for knee extension resistance exercise during 4 weeks of training	Randal Claytor	Oral Presentation	2	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 17:10 - 18:40	Ecocem
O1063	Dynamic imaging approaches for personalized musculoskeletal modeling	Nico Verdonshot	Oral Presentation	2	From models to decisions - How musculoskeletal, or statistical, models may inform clinical decision making	Tuesday 10th July, 17:10 - 18:40	Ecocem
O1064	Early extracellular matrix changes in intervertebral disc degeneration assessed by FTIR spectroscopy.	Kaj Emanuel	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1065	In vivo imaging of the murine lumbar intervertebral disc using contrast-enhanced high-resolution micro-computed tomography	Simon Y. Tang	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1066	Artificial hydrogel-based nucleus pulposus presenting high mechanical properties	Dominique Pioletti	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1067	Notochordal cell matrix hydrogel: a potential agent to stimulate intervertebral disc regeneration while providing mechanical support	Vivian Mouser	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1068	Solubilised extracellular matrix derived from nucleus pulposus tissue	Chiara Borrelli	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1069	Mechanical loading of genipin-enhanced fibrin hydrogel combined with engineered silk composite for intervertebral disc repair	Daniela Frauchiger, Benjamin Gantenbein	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1070	Geometric confinement on micropatterned islands regulates behaviors of human intervertebral disc cells	Amit Pathak	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1071	Intervertebral disc nutrition modeling : use of MRI to assess initial parameters	Olivier BOIRON	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1072	Heterogeneity and degradation of the cartilage endplate matrix: role in intervertebral disc degeneration according to multiphysics simulations.	Carlos Ruiz Wills	Oral Presentation	2	IVD degeneration / regeneration / repair mechanobiology	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2A
O1073	The scapholunate gap increases with forearm supination. A laboratory study.	Mireia Esplugas	Oral Presentation	2	Hand and wrist biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B
O1074	In Vivo Orientation of Wrist Functional Axes	Oluwalogbon Akinnola	Oral Presentation	2	Hand and wrist biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B
O1075	Measuring lateral stability of finger joints using a motion capture system	Pascal Behm	Oral Presentation	2	Hand and wrist biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B
O1076	Identification of optimum spots for recording EMG by using functional principal component analysis and clustering	NESTOR JARQUE-BOU	Oral Presentation	2	Hand and wrist biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B
O1077	Reliability of region-specific muscle architecture measurements from diffusion tensor images in human forearm muscles	Bart Bolsterlee	Oral Presentation	2	Hand and wrist biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B

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O1078	Using isometric strength measurements, electromyography and biomechanical modelling to estimate hand and forearm muscle forces during the tennis forehand: a pilot study	Benjamin Goislard de Monsabert	Oral Presentation	Hand and wrist biomechanics 2	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B
O1079	Effects of vibrotactile stimulus frequency on sensorimotor control and performance of the hand	Hsiu-Yun Hsu	Oral Presentation	Hand and wrist biomechanics 2	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B
O1080	Botulinum Neurotoxin Injections of Forearm Muscles Decreases Passive Range of Motion and Increases Passive Torques about the Fingers in Individuals with Chronic Hemiparetic Stroke	Benjamin Binder-Markey	Oral Presentation	Hand and wrist biomechanics 2	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B
O1081	Scapho-lunar kinematics study on healthy and injured wrist using low dose biplanar X-ray	François Loisel	Oral Presentation	Hand and wrist biomechanics 2	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 2B
O1082	Mechanobiology of tumor invasion: Lessons from glioblastoma	Sanjay Kumar	Invited Speaker	Cell biomechanics and oncology 1	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 1
O1083	Mechanical guidance of collective cell migration and invasion	Xavier Trepast	Invited Speaker	Cell biomechanics and oncology 1	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 1
O1084	Mechanical plasticity of extracellular matrix regulates cancer cell migration through confining microenvironments	Ovijit Chaudhuri	Oral Presentation	Cell biomechanics and oncology 1	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 1
O1085	Protein kinase D isoforms alter mechanosensitive cancer migration	Galina Khachatryan	Oral Presentation	Cell biomechanics and oncology 1	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 1
O1086	Obesity-associated adipose stromal cells (ASCs) promote collective invasion of premalignant breast cancer cells	Lu Ling	Oral Presentation	Cell biomechanics and oncology 1	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 1
O1087	Mechanical Memory in Collective Cell Migration	Amit Pathak	Oral Presentation	Cell biomechanics and oncology 1	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 1
O1088	Hemodynamic shear stress selects metastasis-initiating cells with metastatic advantages	Youhua Tan	Oral Presentation	Cell biomechanics and oncology 1	Tuesday 10th July, 17:10 - 18:40	Wicklow Hall 1
O1089	Mechanical and radiological behavior of a bioresorbable polymer during in vivo degradation. An in vivo rat study to develop an Internal biliary stent to reduce biliary complications after liver transplantation.	Edouard GIRARD	Oral Presentation	Technology innovation in medical devices 2	Tuesday 10th July, 17:10 - 18:40	Wicklow MR1
O1091	In vivo comparison of a silicone and mesh-based device-tissue interface for extracardiac devices.	Eimear Dolan	Oral Presentation	Technology innovation in medical devices 2	Tuesday 10th July, 17:10 - 18:40	Wicklow MR1
O1092	Heart-valve inspired aortic cannula to improve neonatal cardiopulmonary bypass hemodynamics	Ayse Nil Ozgule	Oral Presentation	Technology innovation in medical devices 2	Tuesday 10th July, 17:10 - 18:40	Wicklow MR1
O1093	Innovative Portable Insufflation Device to Stop Uncontrolled Abdominal Bleeding	Gabriel Gruionu	Oral Presentation	Technology innovation in medical devices 2	Tuesday 10th July, 17:10 - 18:40	Wicklow MR1
O1094	Detecting carotid stenosis from skin vibrations: proof-of-principle from hydraulic bench tests on a compliant stenotic carotid bifurcation model.	Viviana Mancini	Oral Presentation	Technology innovation in medical devices 2	Tuesday 10th July, 17:10 - 18:40	Wicklow MR1
O1095	A New Method for Simulating Flow Diverting Stents as Heterogeneous Porous Media	David Frakes	Oral Presentation	Technology innovation in medical devices 2	Tuesday 10th July, 17:10 - 18:40	Wicklow MR1
O1096	Strategic Application of Mitral Valve Annuloplasty Ring Flexibility to Improve Suture Mechanics	Eric Pierce	Oral Presentation	Technology innovation in medical devices 2	Tuesday 10th July, 17:10 - 18:40	Wicklow MR1
O1097	A Novel Right-Side Assist Device for Univentricular Fontan Patients	Ethan Kung	Oral Presentation	Technology innovation in medical devices 2	Tuesday 10th July, 17:10 - 18:40	Wicklow MR1
O1098	Do knee braces protect the knee against impacts and internal/external moments? – An experimental multi-sensor study	Steffen Hacker	Oral Presentation	German Society of Biomechanics session: Experimental Biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow MR2
O1099	Joint movement paths are affected by running induced fatigue	Steffen Willwacher	Oral Presentation	German Society of Biomechanics session: Experimental Biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow MR2
O1100	The effect of correct and misaligned knee braces on knee kinematics and anterior cruciate ligament strain – an in-vitro study	Florian Schall	Oral Presentation	German Society of Biomechanics session: Experimental Biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow MR2
O1101	SiN Coating of Tapers Does Not Influence the Relative Motion Within the Taper Junction of Modular Hip Prostheses	Henning Haschke	Oral Presentation	German Society of Biomechanics session: Experimental Biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow MR2
O1102	The effect of long-duration space flight on articular cartilage homeostasis	Anja Niehoff	Oral Presentation	German Society of Biomechanics session: Experimental Biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow MR2

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O1103	Do menisci contribute to the overall friction in the knee joint?	Daniela Warnecke	Oral Presentation	German Society of Biomechanics session: Experimental Biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow MR2
O1104	Effects of a triceps surae muscle-tendon unit exercise on adaptation and retention of gait stability in older adults: a longitudinal investigation over 1.5 years	Gaspar Epro	Oral Presentation	German Society of Biomechanics session: Experimental Biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow MR2
O1105	The effect of follower load on the intersegmental coupled motion behaviour of the human thoracic spine: An in vitro study using entire rib cage specimens	Christian Liebsch	Oral Presentation	German Society of Biomechanics session: Experimental Biomechanics	Tuesday 10th July, 17:10 - 18:40	Wicklow MR2
O1106	Mechanotransduction in embryonic development: from mesoderm mechanotransductive evolutionary origins to tumorigenic mechanical induction	Emmanuel Farge	Invited Speaker	Mechanobiology and embryogenesis 1	Tuesday 10th July, 17:10 - 18:40	Wicklow MR3
O1107	How to fold a tube	Celeste Nelson	Invited Speaker	Mechanobiology and embryogenesis 1	Tuesday 10th July, 17:10 - 18:40	Wicklow MR3
O1108	Elucidating the Role of Apical Mechanics in Neural Plate Convergent Extension.	Lance Davidson	Oral Presentation	Mechanobiology and embryogenesis 1	Tuesday 10th July, 17:10 - 18:40	Wicklow MR3
O1109	Measuring planar cell polarity of cortical tensions through triple-junction angle anisotropy	M. Shane Hutson	Oral Presentation	Mechanobiology and embryogenesis 1	Tuesday 10th July, 17:10 - 18:40	Wicklow MR3
O1110	Engineering the self-directed multicellular organization and morphogenesis of human pluripotent stem cells	Todd McDevitt	Oral Presentation	Mechanobiology and embryogenesis 1	Tuesday 10th July, 17:10 - 18:40	Wicklow MR3
O1111	Anisotropic actomyosin driving of morphogenetic flow in three-dimensions	Jocelyn Étienne	Oral Presentation	Mechanobiology and embryogenesis 1	Tuesday 10th July, 17:10 - 18:40	Wicklow MR3
O1112	Motor neurons in embryonic Drosophila actively maintain tension in axons which mediates neurotransmitter vesicle clustering at the presynaptic terminal	M Taher A Saif	Oral Presentation	Mechanobiology and embryogenesis 1	Tuesday 10th July, 17:10 - 18:40	Wicklow MR3
O1113	Image-based computational design and 3D biomaterial printing for patient specific devices and regenerative medicine	Scott Hollister	Invited Speaker	Technologies for validation in space and time of multiscale models of tissue engineering	Tuesday 10th July, 17:10 - 18:40	Wicklow MR4
O1114	Talking to cells via surface topography: from in vitro experiments to in silico models	Aurélie Carlier	Invited Speaker	Technologies for validation in space and time of multiscale models of tissue engineering	Tuesday 10th July, 17:10 - 18:40	Wicklow MR4
O1115	The new paradigm in multiscale biomechanical modelling of biological tissues: coupling different physics through different scales	Giuseppe Vairo	Invited Speaker	Technologies for validation in space and time of multiscale models of tissue engineering	Tuesday 10th July, 17:10 - 18:40	Wicklow MR4
O1116	Modelling and in-vitro experiments in bone regeneration	Laoise McNamara	Invited Speaker	Technologies for validation in space and time of multiscale models of tissue engineering	Tuesday 10th July, 17:10 - 18:40	Wicklow MR4
O1117	Modeling cell-mediated remodeling of tissue-engineered heart valves	Sandra Loerakker	Oral Presentation	Technologies for validation in space and time of multiscale models of tissue engineering	Tuesday 10th July, 17:10 - 18:40	Wicklow MR4
O1118	Computational Modeling of Alginate Hydrogel Gelation for Bioprinting Applications	Aidin Hajikhani	Oral Presentation	Technologies for validation in space and time of multiscale models of tissue engineering	Tuesday 10th July, 17:10 - 18:40	Wicklow MR4
O1119	Human adipose derived stromal cells form 3D tissue engineered bone in response to wall shear stress	Johanna Melke	Oral Presentation	Technologies for validation in space and time of multiscale models of tissue engineering	Tuesday 10th July, 17:10 - 18:40	Wicklow MR4