Congress Programme

8th World Congress of Biomechanics

8 - 12 July 2018
Dublin, Ireland

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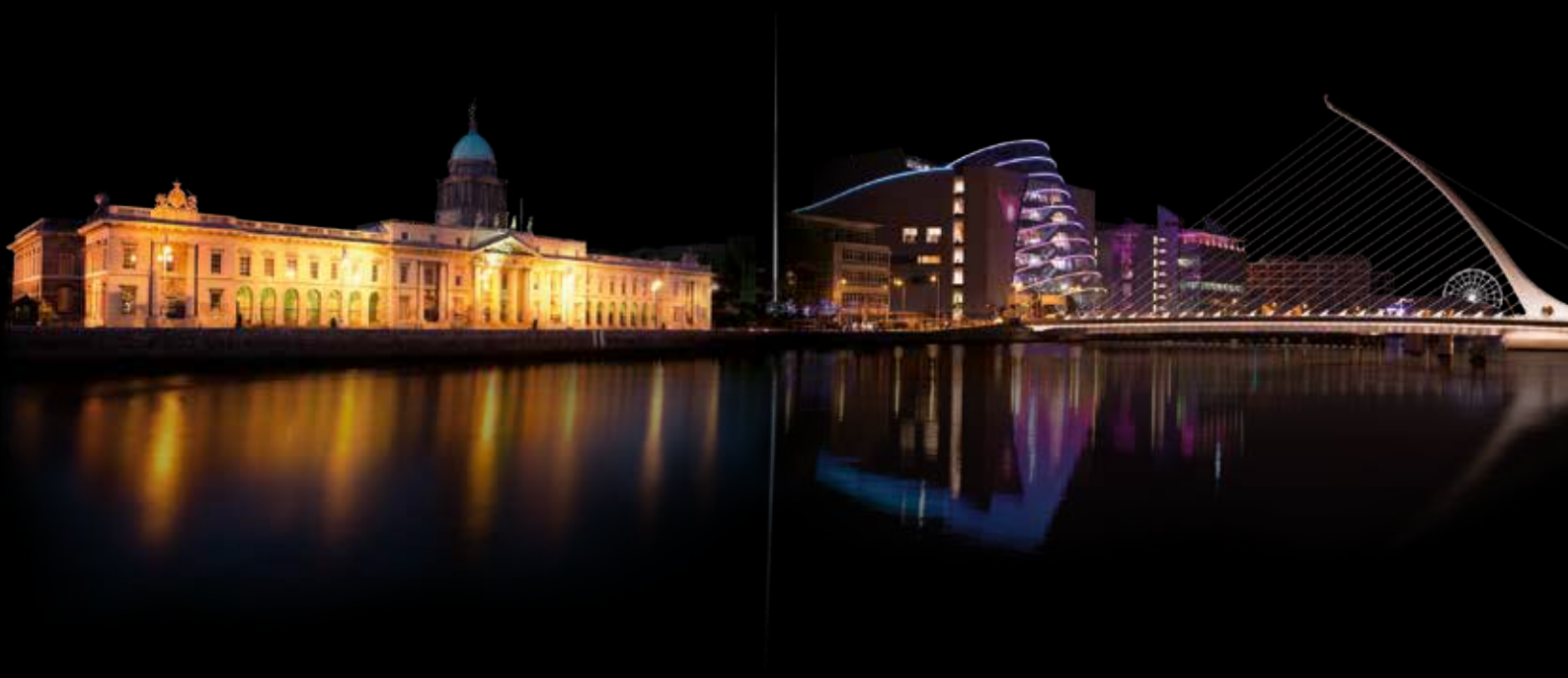
In conjunction with

The World Council for Biomechanics
European Society of Biomechanics
ASME BIOENGINEERING DIVISION
SB³C



Hosted by

RCSI Leading the world to better health
Trinity College Dublin, Coláiste na Tríonóide, Baile Átha Cliath, The University of Dublin
AMBER

Program Code	Title	Presenting	Decision	Final session	Session Time	Room
O1125	Variability attenuation from step-by-step fluctuations to trunk kinematics of young adults walking at different speeds	Marcus Vieira	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1126	Fitts' Law assessment of weighted full body reaching	Sam Leitkam	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1127	Identifying priority tasks during sport motions	Bruno Watier	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1128	A method to analyze free interceptive catching movements	Marc H. E. de Lussanet	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1129	Movement strategies to maintain sitting balance when exposed to aircraft perturbations in a simulated environment: A preliminary kinematic study in people living with a spinal cord injury	Mathias Blandeau	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1130	Can muscular synergies be used for an intuitive control of upper limb prostheses? – A clinical analysis	Alina Kettenbach	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1131	Differences in complexity of motor control between gait patterns in children with cerebral palsy.	Marije Goudriaan	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1132	Between-hands motor discrepancy in children with hemiplegic cerebral palsy and typically developing children	Wen-Feng Huang	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1133	The bilateral components of neuromuscular adaptationof lower limbs examined by a novel experimental paradigm based on asymmetric cycling	Magdalena Zych	Oral Presentation	Motor control 3	Wednesday 11th July, 09:20-10:50	Auditorium
O1134	Experimental investigation of the biomechanical response and the microstructure of the ventricular myocardium	Gerhard Sommer	Invited Speaker	Cardiac mechanics and heart modelling 1	Wednesday 11th July, 09:20-10:50	Liffey B
O1135	Modeling Viscoelasticity and Frequency Response in Cardiac Muscle	David Nordsletten	Invited Speaker	Cardiac mechanics and heart modelling 1	Wednesday 11th July, 09:20-10:50	Liffey B
O1136	New model of the electromechanical coupling in human cardiomyocytes including mechano-electric feedbacks	Nathalie Balakina-Vikulova, Leonid Katsnelson	Oral Presentation	Cardiac mechanics and heart modelling 1	Wednesday 11th July, 09:20-10:50	Liffey B
O1137	Modeling the impact of microscale heterogeneity on macroscopic myocardial function	Alex Clark	Oral Presentation	Cardiac mechanics and heart modelling 1	Wednesday 11th July, 09:20-10:50	Liffey B
O1138	Numerical modeling of the electromechanical activity of the left ventricle with inclusion of the Purkinje network	Christian Vergara	Oral Presentation	Cardiac mechanics and heart modelling 1	Wednesday 11th July, 09:20-10:50	Liffey B
O1139	The role of myocardium compressibility in organ-level simulations of actively contracting healthy and infarcted hearts	Joao S. Soares	Oral Presentation	Cardiac mechanics and heart modelling 1	Wednesday 11th July, 09:20-10:50	Liffey B
O1140	Regional strain analysis of the right ovine ventricle based on fiduciary markers	Manuel Rausch	Oral Presentation	Cardiac mechanics and heart modelling 1	Wednesday 11th July, 09:20-10:50	Liffey B
O1141	Real-time multiscale computational models for mechanobiological-targeted training of musculoskeletal tissues	David Lloyd	Invited Speaker	The role of multiscale subject-specific models in the planning and monitoring of rehabilitation programs	Wednesday 11th July, 09:20-10:50	Liffey Hall 1
O1142	New clinical perspectives for MRI based patient-specific musculo skeletal models	Claudia Mazzà	Invited Speaker	The role of multiscale subject-specific models in the planning and monitoring of rehabilitation programs	Wednesday 11th July, 09:20-10:50	Liffey Hall 1
O1143	Template based computational modeling of the knee joint as a clinical tool to predict progression of osteoarthritis	Mika E. Mononen	Oral Presentation	The role of multiscale subject-specific models in the planning and monitoring of rehabilitation programs	Wednesday 11th July, 09:20-10:50	Liffey Hall 1
O1144	Subject-specific geometry and loading patterns affect acetabular contact pressure during gait	Mariska Wesseling	Oral Presentation	The role of multiscale subject-specific models in the planning and monitoring of rehabilitation programs	Wednesday 11th July, 09:20-10:50	Liffey Hall 1
O1145	Can the Hamstrings Compensate for the ACL? Insights from Stochastic Neuromusculoskeletal Simulation	Colin Smith	Oral Presentation	The role of multiscale subject-specific models in the planning and monitoring of rehabilitation programs	Wednesday 11th July, 09:20-10:50	Liffey Hall 1
O1146	A multi-scale framework for the prevention of plantar ulcers in diabetic subjects: a multidisciplinary approach combining gait analysis, musculoskeletal and finite element foot modeling.	Zimi Sawacha	Oral Presentation	The role of multiscale subject-specific models in the planning and monitoring of rehabilitation programs	Wednesday 11th July, 09:20-10:50	Liffey Hall 1
O1147	EMG-based validation of musculoskeletal models considering crosstalk	Maximilian Aurbach	Oral Presentation	The role of multiscale subject-specific models in the planning and monitoring of rehabilitation programs	Wednesday 11th July, 09:20-10:50	Liffey Hall 1
O1148	Echo-Derived Biomechanics to Stratify Thoracic Aortic Aneurysm Patients	Kevin Lachapelle	Invited Speaker	Thoracic aortic aneurysms and aortic dissection 1	Wednesday 11th July, 09:20-10:50	Liffey Hall 2
O1149	Computational studies of hemodynamic performance of thoracic endograftsComputational studies of hemodynamic performance of thoracic endografts	C Alberto Figueroa	Invited Speaker	Thoracic aortic aneurysms and aortic dissection 1	Wednesday 11th July, 09:20-10:50	Liffey Hall 2
O1150	Development of a biomechanics-based risk potential for aortic dissection	David Vorp	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 1	Wednesday 11th July, 09:20-10:50	Liffey Hall 2
O1151	Layer- and region-specific mechanical properties of Ascending Thoracic Aortic Aneurysms	Taisiya Sigaeva	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 1	Wednesday 11th July, 09:20-10:50	Liffey Hall 2

O1152	Patient-Specific in vitro Assessment of Aortic Dissection False Lumen Hemodyanmics	Sylvana García-Rodríguez	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 1	Wednesday 11th July, 09:20-10:50	Liffey Hall 2
O1153	A statistical approach to associate micromechanical properties of idiopathic degenerative aneurysms with biochemical and clinical characteristics	Ya Hua Chim	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 1	Wednesday 11th July, 09:20-10:50	Liffey Hall 2
O1154	Predicting the Outcome in Type B Aortic Dissection: New Insights from the ADSORB Trial	Chloe Armour	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 1	Wednesday 11th July, 09:20-10:50	Liffey Hall 2
O1155	An inter-population morphometric study between African and European glenohumeral articulating surfaces.	Sudesh Sivarasu	Invited Speaker	Biomedical engineering research and education in Africa	Wednesday 11th July, 09:20-10:50	Liffey MR1
O1156	Affordable Polymeric Transcatheter Heart Valves for LMICs	Deon Bezuidenhout	Invited Speaker	Biomedical engineering research and education in Africa	Wednesday 11th July, 09:20-10:50	Liffey MR1
O1157	Evaluation of Reynolds, viscous and turbulent viscous shear stress obtained from particle imaging velocimetry in the design of low cost polyurethane valves	Kyle Davis	Oral Presentation	Biomedical engineering research and education in Africa	Wednesday 11th July, 09:20-10:50	Liffey MR1
O1158	Biomechanics education and research initiative in Sudan: UMST initiative roadmap	Mazin Sirry	Oral Presentation	Biomedical engineering research and education in Africa	Wednesday 11th July, 09:20-10:50	Liffey MR1
O1159	Validation of computational model of thrombosis in cerebral aneurysms following flow diverter placement	Malebogo Ngoepe	Oral Presentation	Biomedical engineering research and education in Africa	Wednesday 11th July, 09:20-10:50	Liffey MR1
O1160	International Academic Partnership for Diverse Bioengineering Design Education	William Richardson	Oral Presentation	Biomedical engineering research and education in Africa	Wednesday 11th July, 09:20-10:50	Liffey MR1
O1161	A computational analysis of the effect of femoral rotation on patellofemoral biomechanics	Jacobus Muller	Oral Presentation	Biomedical engineering research and education in Africa	Wednesday 11th July, 09:20-10:50	Liffey MR1
O1162	Dual-task, Concussion, and Sports Injuries: Connecting Mind and Movement to Better Understand Sports Injuries	David Howell	Invited Speaker	Dual-task, concussion, and sports injuries: Connecting mind and movement to better understand sports injuries	Wednesday 11th July, 09:20-10:50	Liffey MR2
O1163	Dual-task, concussion, and sports injuries: Connecting mind and movement to better understand sports injuries	Robert Lynall	Invited Speaker	Dual-task, concussion, and sports injuries: Connecting mind and movement to better understand sports injuries	Wednesday 11th July, 09:20-10:50	Liffey MR2
O1164	Detecting acute and long-term effects of concussion: dual-task gait balance control vs. computerized neurocognitive test	Li-Shan Chou	Oral Presentation	Dual-task, concussion, and sports injuries: Connecting mind and movement to better understand sports injuries	Wednesday 11th July, 09:20-10:50	Liffey MR2
O1165	Gait asymmetry after concussion during single-task and dual-task walking	David Howell	Oral Presentation	Dual-task, concussion, and sports injuries: Connecting mind and movement to better understand sports injuries	Wednesday 11th July, 09:20-10:50	Liffey MR2
O1166	The effect of a subsequent cognitive task on reaction time, gait velocity, and termination time during unplanned gait termination	Robert Lynall	Oral Presentation	Dual-task, concussion, and sports injuries: Connecting mind and movement to better understand sports injuries	Wednesday 11th July, 09:20-10:50	Liffey MR2
O1167	Neuroplasticity of Neuromuscular Training and Injury Risk Reduction Transfer to Simulated Sport	Dustin Grooms	Oral Presentation	Dual-task, concussion, and sports injuries: Connecting mind and movement to better understand sports injuries	Wednesday 11th July, 09:20-10:50	Liffey MR2
O1169	Mapping 3D Mechanical Strains during Tissue Morphogenesis with a Novel Fibronectin-based Nanomechanical Biosensor	Adam Feinberg	Invited Speaker	Cardiovascular development	Wednesday 11th July, 09:20-10:50	Liffey MR3
O1170	Mechanoregulation of heart valve morphogenesis	Jonathan Butcher	Invited Speaker	Cardiovascular development	Wednesday 11th July, 09:20-10:50	Liffey MR3
O1171	Reduced hemodynamic loading alters structural and mechanical properties of the chick embryo dorsal aorta	Gabriela Espinosa	Oral Presentation	Cardiovascular development	Wednesday 11th July, 09:20-10:50	Liffey MR3
O1172	Cell Chirality Regulates Cardiac C-looping	Leo Wan	Oral Presentation	Cardiovascular development	Wednesday 11th July, 09:20-10:50	Liffey MR3
O1173	Biophysical mechanisms involved in regulating cell behaviors during zebrafish heart morphogenesis	Hélène Vignes	Oral Presentation	Cardiovascular development	Wednesday 11th July, 09:20-10:50	Liffey MR3
O1174	Quantifying endodermal strain fields during heart tube assembly in the developing chicken embryo	Victor Varner	Oral Presentation	Cardiovascular development	Wednesday 11th July, 09:20-10:50	Liffey MR3
O1175	Biomechanical characterizations of the neonatal porcine pulmonary artery and aorta	Sara McMahan, Katherine M. Copeland	Oral Presentation	Cardiovascular development	Wednesday 11th July, 09:20-10:50	Liffey MR3
O1176	Biomechanics of Human Trabecular Bone: Advances and Limitations	Philippe Zysset	Invited Speaker	Bone fracture mechanics (in vitro and in vivo) 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 1
O1177	Advancing matrix-sensitive techniques to assess the fracture resistance of bone	Jeffry Nyman	Invited Speaker	Bone fracture mechanics (in vitro and in vivo) 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 1
O1178	Median canal diameter better predicts the fatigue life of bovine cortical bone than porosity	Lindsay Loundagin	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 1
O1179	Tougher, More Fatigue Resistant, Irradiation Sterilized Cortical Bone Allograft by Collagen Modification	Thomas Willett	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 1
O1180	Non-enzymatic glycation of collagen increases micro-damage in bone after fatigue loading	Graeme Campbell	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 1
O1181	Small Changes in Cancellous Bone Microstructure Increase Fatigue Life 10-100 Times	Christopher Hernandez	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 1

O1183	3D bioprinting of scaled-up tissues that mimic the structure, composition and biomechanics of articular cartilage	Daniel Kelly	Invited Speaker	Biomimetic implants for articular cartilage repair / regeneration	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2A
O1184	Targeted genome engineering of pluripotent stem cells as a basis for self-regulating, functional engineered tissues	Farshid Guilak	Invited Speaker	Biomimetic implants for articular cartilage repair / regeneration	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2A
O1185	Decorin is indispensable to cartilage biomechanical function in health and osteoarthritis	Lin Han	Oral Presentation	Biomimetic implants for articular cartilage repair / regeneration	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2A
O1186	Microscale compositional mapping predicts local mechanics across the interface of autologous chondrocyte transplantation (ACT) repair	Alexander Boys	Oral Presentation	Biomimetic implants for articular cartilage repair / regeneration	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2A
O1187	Manipulation of cell cycle phase stimulates chondrogenic potential of osteoarthritic chondrocytes	Clark Hung	Oral Presentation	Biomimetic implants for articular cartilage repair / regeneration	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2A
O1188	Influence of Phosphate on Mesenchymal Stem Cell Chondrogenesis in Various Microenvironment Stiffness Regimes	Rhima Coleman	Oral Presentation	Biomimetic implants for articular cartilage repair / regeneration	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2A
O1189	Effect of Low-Intensity Acoustic Radiation Force on Biochemical and Mechanical Properties of Articular Cartilage in Osteoarthritis Progression	Chaudhry Raza Hassan	Oral Presentation	Biomimetic implants for articular cartilage repair / regeneration	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2A
O1190	Biomechanics of the Skeletal Muscle Extracellular Matrix	Richard Lieber	Invited Speaker	Mechanics of passive muscle and connective tissue 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2B
O1191	Composition-dependent mechanisms of multiscale tendon mechanics	Spencer Lake	Invited Speaker	Mechanics of passive muscle and connective tissue 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2B
O1192	Passive muscle mechanical properties adapt to directly counter chronic pathology in the spine	Derek Zwambag	Oral Presentation	Mechanics of passive muscle and connective tissue 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2B
O1193	Intra- and Epimuscular Connective Tissues Are Not Just Passive Structural Elements, but Interfere with, and Affect Muscle's Active Mechanics	Can A. Yucesoy	Oral Presentation	Mechanics of passive muscle and connective tissue 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2B
O1194	Microscopy and computational analyses of meso-scale structure and its role for mechanics in skeletal muscle tissue	Alexander Ehret	Oral Presentation	Mechanics of passive muscle and connective tissue 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2B
O1195	Swine vs Human: Mechanical and Histological Analysis of the Uterosacral Ligament	Adwoa Baah-Dwomoh	Oral Presentation	Mechanics of passive muscle and connective tissue 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2B
O1196	Advanced mechanical characterization and modeling of facial soft tissues for aging studies	Marco Pensalfini	Oral Presentation	Mechanics of passive muscle and connective tissue 1	Wednesday 11th July, 09:20-10:50	Wicklow Hall 2B
O1197	Nanokick: stimulation of osteogenesis by mesenchymal stem cells using a nanovibrational bioreactor	Matthew Dalby	Invited Speaker	Multiscale biomechanics of scaffolds 1	Wednesday 11th July, 09:20-10:50	Ecocem
O1198	Regenerating bone with biomimetic scaffolds in large defects	Hanna Isaksson	Invited Speaker	Multiscale biomechanics of scaffolds 1	Wednesday 11th July, 09:20-10:50	Ecocem
O1199	Dynamic microenvironments to promote integrin and growth factor receptor signalling in cell engineering	Manuel Salmeron-Sanchez	Oral Presentation	Multiscale biomechanics of scaffolds 1	Wednesday 11th July, 09:20-10:50	Ecocem
O1200	Design and mechanical evaluation of a 3D printed polymeric support structure for an endochondral ossification-inducing mechano-hybrid scaffold	Martina Tortorici	Oral Presentation	Multiscale biomechanics of scaffolds 1	Wednesday 11th July, 09:20-10:50	Ecocem
O1201	Tailoring the geometry of 3D-printed polycaprolactone scaffolds to develop biomimetic constructs with mechanical properties comparable to articular cartilage	Rossana Schipani	Oral Presentation	Multiscale biomechanics of scaffolds 1	Wednesday 11th July, 09:20-10:50	Ecocem
O1202	Relationship between fatigue performance and bone tissue growth based on vivo tests and simulation	Ziyu Liu	Oral Presentation	Multiscale biomechanics of scaffolds 1	Wednesday 11th July, 09:20-10:50	Ecocem
O1203	Tissue grafts versus collagen mono-domain scaffolds: Improved mechanical properties and cytocompatibility	Héctor Capella-Monsonís	Oral Presentation	Multiscale biomechanics of scaffolds 1	Wednesday 11th July, 09:20-10:50	Ecocem
O1204	A novel approach to revision total knee arthroplasty using 3D printed titanium augments: A biomechanical cadaveric study	Charles Dion	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1205	A New Gliding Screw Concept For Plating Of Proximal Humerus Fractures.	Ivan Zderic	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1206	Biomechanical testing of a 3D printed pedicle screw expansion mechanism for the osteoporotic spine	Stewart McLachlin	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1207	Mechanical Component Optimization, Design and Testing of a Fully Passive Prosthetic Knee Mechanism	Murthy Arelekatti, Nina Petelina	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1208	Visualisation of pelvic floor muscle contractility. Do you know you are doing it right?	Poul Nielsen	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1209	Mechanical characterization of smart implant rods for scoliosis	Fatma Kübra Erbay Elibol	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1210	An image-analysis-based method to identify the anterior-posterior knee translation and evaluate the need to apply extraarticular tenodesis	Gil Serrancolí, Simone Perelli	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1211	Effect of a Novel Joint Unloading Implant on Tibiofemoral Joint Force – A Three-Dimensional Finite Element Analysis	Oliver Morgan	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1212	Novel electric stimulation systems for personalized bone implants	Marco Santos	Oral Presentation	Technology innovation in medical devices 3	Wednesday 11th July, 09:20-10:50	Wicklow MR1
O1213	Systematically modulating cell-cell adhesion in vivo reveals mechanisms of epithelial tissue morphogenesis	Xun Wang	Oral Presentation	Mechanobiology and embryogenesis 2	Wednesday 11th July, 09:20-10:50	Wicklow MR2
O1214	Emergent modes of apoptotic cell extrusion driven by mechanical instabilities	Horacio Lopez-Menendez	Oral Presentation	Mechanobiology and embryogenesis 2	Wednesday 11th July, 09:20-10:50	Wicklow MR2

O1215	Chiral cell sliding drives left-right asymmetric organ twisting	Mikiko Inaki	Oral Presentation	Mechanobiology and embryogenesis 2	Wednesday 11th July, 09:20-10:50	Wicklow MR2
O1216	Mathematical model of cavity formation in a homogeneous cell aggregate: a possible mechanism of blastocoel formation in the early embryo development	Seergey Logvenkov	Oral Presentation	Mechanobiology and embryogenesis 2	Wednesday 11th July, 09:20-10:50	Wicklow MR2
O1217	Supracellular actin cytoskeletal organization drives spontaneous folding of hydra fragments	Xinpeng Xu	Oral Presentation	Mechanobiology and embryogenesis 2	Wednesday 11th July, 09:20-10:50	Wicklow MR2
O1218	How does the little brain get its folds?	Tyler Engstrom	Oral Presentation	Mechanobiology and embryogenesis 2	Wednesday 11th July, 09:20-10:50	Wicklow MR2
O1220	Enhanced viscosity of the cytoplasm at the later stage of embryonic development	Fransisca A.S. van Esterik	Oral Presentation	Mechanobiology and embryogenesis 2	Wednesday 11th July, 09:20-10:50	Wicklow MR2
O1221	Characterisation of collagen distribution in the prenatal forelimb using immunofluorescence and high-resolution microscopy.	Saima Ahmed	Oral Presentation	Mechanobiology and embryogenesis 2	Wednesday 11th July, 09:20-10:50	Wicklow MR2
O1222	Matrix-mediated Mechanical Crosstalk Between Stroma and Cancer Cells.	Hamid Mohammadi	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1223	The implication of solid stress in fibroblast activation and tumor-stromal interactions	Maria Kalli	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1224	Mechanobiology as a bioengineering approach to reveal the metastatic capacity of cancer cells	Daphne Weihs	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1225	Pancreatic Cancer Associated Fibroblasts Stiffness and Invasion Properties are Modulated by Transforming Growth Factor-β	Andreas Stylianou	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1226	Podocyte biomechanics as a novel marker of chemotherapy-induced nephrotoxicity	Evren Azeloglu	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1227	TGF-β induced changes in breast cancer cell deformability depend on the cell invasive potential	Ankur Kulkarni	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1228	Constitutively active Ezrin acts as an actin-binding protein to promote actin fiber assembly and strengthen cell mechanical properties	Xiaoli Zhang	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1229	Intercellular Force-imbalance of Tumor Drives the Emergence of Cancer Stem Cells	Weiyi Qian	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1230	Mechanical strains trigger invasive behaviours in newly transformed epithelial cells	Sophie Chagnon-Lessard	Oral Presentation	Cell biomechanics and oncology 2	Wednesday 11th July, 09:20-10:50	Wicklow MR4
O1235	Predicting in vivo muscle force in running guinea fowl using a Hill-type muscle model that includes titin in active muscle contraction.	Kiisa Nishikawa	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1236	Motor Units in Children with Cerebral Palsy Present a Disorganized Muscle State	Zachary Adams	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1237	Complementing clinical decision-making with gait signatures: Identifying the effectiveness of Deep Brain Stimulation (DBS) therapy	Deepak K Ravi, Navrag B Singh	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1238	Improved coordination and reduced variability contribute to accurate overarm throwing at an early stage of learning.	Masahiro Shinya	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1239	Modulation of ankle intrinsic stiffness with postural sway	Pouya Amiri	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1240	Unifying forward and inverse models for motor control and recognition into a single neural network	Heiko Wagner	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1241	Changes in mediolateral dynamic balance control during imposed gait asymmetry on a split-belt treadmill strongly depend on passive dynamics in gait	Tom Buurke	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1242	Intramuscular measurement of EMG activity of the deep intrinsic foot muscles during walking using a novel insertion technique	Natalie Collins	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1243	Effects of visual feedback on spiral drawing in patients with Parkinson's disease and essential tremor	Ping En Sun	Oral Presentation	Motor control 4	Wednesday 11th July, 11:20 - 12:50	Auditorium
O1244	Subject-specific biventricular finite element models of healthy and failing swine hearts from high-resolution DT-MRI	Kevin Sack	Oral Presentation	Cardiac mechanics and heart modelling 2	Wednesday 11th July, 11:20 - 12:50	Liffey B
O1245	Generic registration-based pipeline for personalized cardiac flow simulations : application on 12 healthy cases	Alexandre This	Oral Presentation	Cardiac mechanics and heart modelling 2	Wednesday 11th July, 11:20 - 12:50	Liffey B
O1246	A Biomechanical Analysis of Suture Retention in Human Atrioventricular Valve Annuli	Eric Pierce	Oral Presentation	Cardiac mechanics and heart modelling 2	Wednesday 11th July, 11:20 - 12:50	Liffey B
O1247	Patient-Specific Modeling of Intraventricular Hemodynamics with Valves	Vijay Vedula	Oral Presentation	Cardiac mechanics and heart modelling 2	Wednesday 11th July, 11:20 - 12:50	Liffey B
O1248	Patient-specific electro-mechano-fluidic models to study the impact of aortic valve disease and coarctations upon ventricular load	Christoph M Augustin	Oral Presentation	Cardiac mechanics and heart modelling 2	Wednesday 11th July, 11:20 - 12:50	Liffey B
O1250	Patient-Specific Finite Element Simulation of Left Ventricle Hemodynamics and Mitral Valve Disease Based on Echocardiography	Johan Hoffman	Oral Presentation	Cardiac mechanics and heart modelling 2	Wednesday 11th July, 11:20 - 12:50	Liffey B
O1251	Cardiac resynchronization therapy simulations in virtualized heart models	Baris Cansiz	Oral Presentation	Cardiac mechanics and heart modelling 2	Wednesday 11th July, 11:20 - 12:50	Liffey B
O1252	Patient-specific computational modeling of cardiac biomechanics via adjoint-based data assimilation	Henrik Finsberg	Oral Presentation	Cardiac mechanics and heart modelling 2	Wednesday 11th July, 11:20 - 12:50	Liffey B
O1253	Modeling overuse injuries in sport as a mechanical fatigue phenomenon	W. Brent Edwards	Invited Speaker	Multiscale biomechanics of sport and sport injuries	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 1
O1254	Use of Shear Wave Tensiometers to Track Tendon Tissue Loads during Running	Darryl Thelen	Invited Speaker	Multiscale biomechanics of sport and sport injuries	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 1
O1255	Estimation of cervical spine internal loads with the use of validated bushing elements for sport collisions. Application in the analysis of head impacts in rugby contact events.	Pavlos Silvestros	Oral Presentation	Multiscale biomechanics of sport and sport injuries	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 1
O1256	Surface construction alters patellar tendon strains in jumping	Colin Firminger	Oral Presentation	Multiscale biomechanics of sport and sport injuries	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 1

O1257	Multidimensional ground reaction forces and moments from wearable sensor accelerations via deep learning	William Johnson	Oral Presentation	Multiscale biomechanics of sport and sport injuries	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 1
O1258	Mechanical load monitoring in sports: predicting ground reaction forces from segmental accelerations for high-intensity and dynamic tasks	Jasper Verheul	Oral Presentation	Multiscale biomechanics of sport and sport injuries	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 1
O1259	Predicting Cycling Injury Risk Using Individual Pedalling Parameters and Musculoskeletal Simulation	Penny Wen	Oral Presentation	Multiscale biomechanics of sport and sport injuries	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 1
O1260	Coupled morphological-hemodynamic computational analysis of type B aortic dissection: a longitudinal study	Huijuan Xu	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1261	Failure Properties of Human Thoracic Aortas in Relation to Their Microstructure	Selda Sherifova	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1262	MRI Derived Strain Imaging of the Ascending Aorta	Jessica Dakkak	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1263	Alterations in Smooth Muscle Cell Phenotype in a Mouse Model of Marfan Syndrome	Susan Lessner	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1264	Propagation of dissection in a residually-stressed, fibre-reinforced, hyperelastic artery model	Nicholas Hill	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1265	Mixed mode crack propagation in the aorta: anatomical factors influencing aortic dissection	Brian FitzGibbon	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1266	Experimental Investigation of Patient Specific Complex Fusiform Aortic Arch Aneurysms Treated with the MFM® Device	Liam Morris	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1267	Computational fluid dynamics as predictive tool of aneurysmal degeneration in the dissected descending thoracic aorta	Arianna Forneris	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1268	A combined in vivo, in vitro, in silico approach to study the patient-specific hemodynamics of aortic dissection	Gaia Franzetti	Oral Presentation	Thoracic aortic aneurysms and aortic dissection 2	Wednesday 11th July, 11:20 - 12:50	Liffey Hall 2
O1269	Experience of Biomedical Engineering Education in the United Arab Emirates	Tim McGloughlin	Invited Speaker	Biomedical engineering education 1	Wednesday 11th July, 11:20 - 12:50	Liffey MR1
O1270	Incorporating classroom based research experiences into biomechanical engineering education	Alisa Clyne	Invited Speaker	Biomedical engineering education 1	Wednesday 11th July, 11:20 - 12:50	Liffey MR1
O1271	Emerging Trends and Future Landscape of Biomedical Engineering Education	James Goh	Invited Speaker	Biomedical engineering education 1	Wednesday 11th July, 11:20 - 12:50	Liffey MR1
O1272	Acceleration of clinical innovation: a collaboration between biomedical engineering, nursing, and honors undergraduate students	Joel Berry	Oral Presentation	Biomedical engineering education 1	Wednesday 11th July, 11:20 - 12:50	Liffey MR1
O1273	Effectiveness of a flipped classroom environment adopted in an undergraduate biomedical engineering module – A case study in a South-East Asian cohort	Choon Hwai Yap	Oral Presentation	Biomedical engineering education 1	Wednesday 11th July, 11:20 - 12:50	Liffey MR1
O1274	Differential effects of public and private funding in the medical device industry	David N. Ku	Oral Presentation	Biomedical engineering education 1	Wednesday 11th July, 11:20 - 12:50	Liffey MR1
O1275	Can responses to gait perturbations be used to discriminate between older adults with and without history of falls?	Sanne Roeles	Invited Speaker	Advances in rehabilitation technology using virtual reality and perturbations to assess and train gait and balance	Wednesday 11th July, 11:20 - 12:50	Liffey MR2
O1276	Assessment of Dynamic Stability of the Lower Extremity Using Position Controlled Platform Perturbations	Maarten Prins	Invited Speaker	Advances in rehabilitation technology using virtual reality and perturbations to assess and train gait and balance	Wednesday 11th July, 11:20 - 12:50	Liffey MR2
O1277	No effect of visual flow on gait attractors during treadmill walking or running.	Randall Jensen, Christian Weich	Oral Presentation	Advances in rehabilitation technology using virtual reality and perturbations to assess and train gait and balance	Wednesday 11th July, 11:20 - 12:50	Liffey MR2
O1278	A target-tracking videogame for the assessment of balance in stroke population	L. Eduardo Cofré Lizama, Alaeldin Elmalik, Fary Khan, Mary Galea	Oral Presentation	Advances in rehabilitation technology using virtual reality and perturbations to assess and train gait and balance	Wednesday 11th July, 11:20 - 12:50	Liffey MR2
O1279	Biofeedback in virtual reality to improve gait in children with cerebral palsy.	Adam Booth	Oral Presentation	Advances in rehabilitation technology using virtual reality and perturbations to assess and train gait and balance	Wednesday 11th July, 11:20 - 12:50	Liffey MR2
O1280	Stability-normalised walking speed: a new approach for human gait perturbation research	Christopher McCrum	Oral Presentation	Advances in rehabilitation technology using virtual reality and perturbations to assess and train gait and balance	Wednesday 11th July, 11:20 - 12:50	Liffey MR2
O1281	Enhancing Stance Stability during Rotatory Head Movements and Support Surface Perturbations using Noisy Stimulation of the Vestibular System and the Foot Soles	Sara Lea Bayer	Oral Presentation	Advances in rehabilitation technology using virtual reality and perturbations to assess and train gait and balance	Wednesday 11th July, 11:20 - 12:50	Liffey MR2
O1282	Hemodynamics controls thrombosis to cause heart attacks and strokes	David Ku	Invited Speaker	Challenges of thrombosis modelling	Wednesday 11th July, 11:20 - 12:50	Liffey MR3
O1283	A predictive multiscale model for simulating platelet activation and aggregation in shear flow	Danny Bluestein	Invited Speaker	Challenges of thrombosis modelling	Wednesday 11th July, 11:20 - 12:50	Liffey MR3
O1284	A computational model of the biochemomechanics of evolving occlusive thrombus	Manuel Rausch	Oral Presentation	Challenges of thrombosis modelling	Wednesday 11th July, 11:20 - 12:50	Liffey MR3

O1285	Towards Developing Hybrid Particle-continuum Computational Frameworks For Thrombosis And Embolization Biomechanics In Large Arteries	Debanjan Mukherjee	Oral Presentation	Challenges of thrombosis modelling	Wednesday 11th July, 11:20 - 12:50	Liffey MR3
O1286	Advanced Bioengineering Approaches For The Comprehensive Analysis Of The Thrombogenic Potential Of Frequency Component Elements Of Hemodynamic Shear Stress Profiles Relevant To Cardiovascular Implantable Therapeutic Devices	Filippo Consolo	Oral Presentation	Challenges of thrombosis modelling	Wednesday 11th July, 11:20 - 12:50	Liffey MR3
O1287	A Non-Newtonian Thrombosis Numerical Simulation under Pulsatile Inlet Flow	Keefe Manning	Oral Presentation	Challenges of thrombosis modelling	Wednesday 11th July, 11:20 - 12:50	Liffey MR3
O1289	Is strength predicted by QCT-based subject-specific finite element models any better than DXA-based areal bone mineral density in the classification of patients at risk of fragile hip fracture?	Marco Viceconti	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1290	Biofidelic hip models can accurately predict hip fractures in elderly women: A retrospective AGES-Reykjavik study	Benedikt Helgason	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1291	Age-related changes in bone strength depend on outer bone size	Karl Jepsen	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1292	Osteoporosis and diabetes increase mineral heterogeneity in human femoral heads	Eoin Parle	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1293	Cortical Bone Mapping Improves Finite Element Strain Prediction Accuracy at the Proximal Femur	Fulvia Taddei	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1294	High Resolution pQCT micro-architectural parameters to predict bone failure in the case of a forward fall	Martin Revel	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1295	Micro-finite element analysis of a mechanically loaded bone defect model to estimate peak cyclic forces in caudal vertebrae of individual mice	Angad Malhotra	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1296	Validation of micro-FEM modelling: Linear models do not predict fracture at the trabecular level.	Martino Pani	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1297	Computational simulation of bone fracture healing under locking plate fixation	Saeed Miramini	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 1
O1298	A Paradigm for Using Physiological Inputs to In Vitro Models for Assessment of Cartilage Tribology	Suzanne Maher	Invited Speaker	Cartilage tribology	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2A
O1299	Motion is lotion: New insights into how movement helps maintain joint lubrication and health	David Burris	Invited Speaker	Cartilage tribology	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2A
O1300	Effect of synovial fluid pressurization at the periphery of contact region on biphasic lubrication property in articular cartilage	Shoko Horibata	Oral Presentation	Cartilage tribology	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2A
O1301	In-situ Raman spectroscopy as a tool for monitoring changes in cartilage during sliding tests	Maria Parkes	Oral Presentation	Cartilage tribology	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2A
O1302	The effect of collagen fiber direction in an accelerated in vitro wear test of articular cartilage	Diane Wagner	Oral Presentation	Cartilage tribology	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2A
O1303	Functional performance of osteochondral grafts in an in vitro porcine knee simulation model	Louise Jennings	Oral Presentation	Cartilage tribology	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2A
O1304	Acquired Lubricin (Prg4) Deficiency Increases Whole Joint Friction in Mice	Gregory Jay	Oral Presentation	Cartilage tribology	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2A
O1305	Does reorganisation of muscle connective tissue structure address tension/compression asymmetry observed in skeletal muscle passive response?	Melika Mohammadkhah	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1306	Finite Element Analysis of Intramuscular Pressure in Passive In Vivo Human Skeletal Muscle	Benjamin Wheatley	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1307	History-dependence of muscle slack length following contraction and stretch in the human vastus lateralis	Rob Herbert	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1308	Transversal elasticity of TIEG1 KO muscle fibers probed by atomic force microscopy	Malek Kammoun	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1309	Load transfer mechanisms in skeletal muscle – influence of connective tissue on the mechanical behaviour	Kay Leichsenring	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1310	The interaction of extracellular connective tissues and pressurized intracellular fluid influences active muscle force	David Sleboda	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1311	Slack lengths of the bands of the ulnar collateral ligament: experiment & model	David Jordan	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1312	Fatigue loading causes progressive molecular damage to collagen in tendon	Jared Zitnay	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1313	Histologically-based anisotropic constitutive model of the mechanical behaviour of human abdominal wall connective tissues	Laure Astruc	Oral Presentation	Mechanics of passive muscle and connective tissue 2	Wednesday 11th July, 11:20 - 12:50	Wicklow Hall 2B
O1314	Biphasic poroelastic fibrin fiber scaffolds for stem cell differentiation	Sarah Somers	Oral Presentation	Multiscale biomechanics of scaffolds 2	Wednesday 11th July, 11:20 - 12:50	Ecocem
O1315	Cyclic and Confined Compression of Tissue Engineered Intervertebral Discs: a dilemma between biological tolerance and mechanical performance	Yang Liu	Oral Presentation	Multiscale biomechanics of scaffolds 2	Wednesday 11th July, 11:20 - 12:50	Ecocem
O1316	Mechanics and tissue growth for beam-based 3D printed scaffolds	Paul Egan	Oral Presentation	Multiscale biomechanics of scaffolds 2	Wednesday 11th July, 11:20 - 12:50	Ecocem

O1317	Numerical and experimental analysis of cell migration in three dimensional microfluidic chip in presence of acoustic wave	Arindam Bit	Oral Presentation	Multiscale biomechanics of scaffolds 2	Wednesday 11th July, 11:20 - 12:50	Ecocem
O1318	Design of 3D-printed patient-specific porous titanium scaffolds for total mandibular reconstruction: a multiscale finite element study	Kaushik Mukherjee	Oral Presentation	Multiscale biomechanics of scaffolds 2	Wednesday 11th July, 11:20 - 12:50	Ecocem
O1319	Characterisation of novel powder formulation for 3D printing of composite ceramic – polymer scaffolds for bone regeneration	Nicholas Dunne	Oral Presentation	Multiscale biomechanics of scaffolds 2	Wednesday 11th July, 11:20 - 12:50	Ecocem
O1321	New generation 4D scaffold for tissue regeneration	Yanfei Lu, Tomasz Lekszycki	Oral Presentation	Multiscale biomechanics of scaffolds 2	Wednesday 11th July, 11:20 - 12:50	Ecocem
O1322	Length scale effects on poroviscoelasticity of hydrogels	Yin Chang	Oral Presentation	Multiscale biomechanics of scaffolds 2	Wednesday 11th July, 11:20 - 12:50	Ecocem
O1323	Evaluation of the Effects of Modified Orthopedic Drill Bits on Pilot Hole Drilling Energy, Orthopedic Screw Insertion Energy, and Orthopedic Screw Axial Pull-Out Strength	Scott Baskerville	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1324	Subsidence risk of vertebral body replacements using anew biomechanical in vitro test method	Laura Zengerle	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1325	A novel image-based creatinine monitor for kidney function disease	Alessandro Bellofiore	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1326	Dependence of Thermal Conductivity of Bovine Bone with Volume Fraction and Fabric	Michael Indermaur	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1327	Development and Image Testing of a MRI-Compatible Stereotatic Robot for Neurosurgery	Ming-Shaung Ju	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1328	Surface-to-surface interaction at the joints of the ankle complex and foot in varus and valgus deformities	Maui Jepsen	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1329	Fabrication of 3D Printed Microneedle Electrodes for Use in EMG	Kevin Krieger	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1330	Design and Characterization of a Novel In-Vivo Laparoscope Cleaning Device	Christopher Idelson	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1331	Effect of Matrix Substrate Composition on Neuronal Regeneration in Microporous Nerve Guidance Conduits	Alan Hibbitts	Oral Presentation	Technology innovation in medical devices 4	Wednesday 11th July, 11:20 - 12:50	Wicklow MR1
O1332	Invasion-Mutation: DNA Damage Portends Genome Variation in Cancer Cells after Pore Migration	Dennis Discher	Invited Speaker	Mechanogenetics for cell therapy	Wednesday 11th July, 11:20 - 12:50	Wicklow MR2
O1333	Outside-in/inside-out signaling loop of the TCR mechanosensor induced by negative selecting ligands in the thymus	Cheng Zhu	Invited Speaker	Mechanogenetics for cell therapy	Wednesday 11th July, 11:20 - 12:50	Wicklow MR2
O1334	Mechanical activation of hPiezo1 and mPiezo1 using high frequency ultrasound	Sangpil Yoon	Oral Presentation	Mechanogenetics for cell therapy	Wednesday 11th July, 11:20 - 12:50	Wicklow MR2
O1335	The critical roles of long-range mechanical force and molecular biophysical property in cell signaling	Mingxing Ouyang	Oral Presentation	Mechanogenetics for cell therapy	Wednesday 11th July, 11:20 - 12:50	Wicklow MR2
O1336	Mechano-biological coupling of multi-typed hepatic cells	Mian Long	Oral Presentation	Mechanogenetics for cell therapy	Wednesday 11th July, 11:20 - 12:50	Wicklow MR2
O1337	Engineered proteins with sensing and activating modules for automated reprogramming of cellular functions	Jie Sun	Oral Presentation	Mechanogenetics for cell therapy	Wednesday 11th July, 11:20 - 12:50	Wicklow MR2
O1338	Osteocyte Alteration in a Combined OVX and Concurrent Mechanical Disuse Rat Model, and Effects of Mechanobiology and Sclerostin Antibody	Yi-Xian Qin	Oral Presentation	Mechanogenetics for cell therapy	Wednesday 11th July, 11:20 - 12:50	Wicklow MR2
O1339	Dose-dependent Effects of Irisin on Osteoblast Proliferation and Differentiation	Zhang Yuwei	Invited Speaker	Cell interaction with microenvironment 1	Wednesday 11th July, 11:20 - 12:50	Wicklow MR4
O1340	Dynamic filopodial traction forces induce fast extracellular fibrous matrix remodeling that can be predicted with viscoplasticity	Andrea Malandrino, Roger D Kamm	Invited Speaker	Cell interaction with microenvironment 1	Wednesday 11th July, 11:20 - 12:50	Wicklow MR4
O1341	Quantification of the collectivity of cell polarization and arrangement on patterned substrate	Baohua Ji	Oral Presentation	Cell interaction with microenvironment 1	Wednesday 11th July, 11:20 - 12:50	Wicklow MR4
O1342	Contact guidance of single cells on adhesive lines	Hamsini Suresh	Oral Presentation	Cell interaction with microenvironment 1	Wednesday 11th July, 11:20 - 12:50	Wicklow MR4
O1343	Epithelial-mesenchymal-transition of cells in confined and defective microenvironments	Amit Pathak	Oral Presentation	Cell interaction with microenvironment 1	Wednesday 11th July, 11:20 - 12:50	Wicklow MR4
O1344	Fibrosis Mechanobiology and Its Therapeutic Implications in Cardiovascular Disease	Guoyou Huang	Oral Presentation	Cell interaction with microenvironment 1	Wednesday 11th July, 11:20 - 12:50	Wicklow MR4
O1345	Nonlinear elasticity of biological fibrous networks facilitates efficient intercellular mechaical signalling	Ayelet Lesman	Oral Presentation	Cell interaction with microenvironment 1	Wednesday 11th July, 11:20 - 12:50	Wicklow MR4
O1350	Movement Coordination after Unilateral Transtibial Amputation	Anne Silverman	Invited Speaker	Amputee biomechanics 1	Wednesday 11th July, 15:10 -16:40	Auditorium
O1351	Robust control of active upper limb prostheses by real-time neuromusculoskeletal modeling	Dario Farina	Invited Speaker	Amputee biomechanics 1	Wednesday 11th July, 15:10 -16:40	Auditorium
O1352	In vitro assessment of a Low Stiffness Implant for Transfemoral Amputees	Spencer C Barnes	Oral Presentation	Amputee biomechanics 1	Wednesday 11th July, 15:10 -16:40	Auditorium
O1353	Limb loading is associated with underlying movement patterns during a step-descent in transtibial amputees	Sarah Moudy	Oral Presentation	Amputee biomechanics 1	Wednesday 11th July, 15:10 -16:40	Auditorium
O1354	Relationships among trunk-pelvic motion, hip strength, and knee joint moments during gait among persons with lower limb loss	Courtney M. Butowicz	Oral Presentation	Amputee biomechanics 1	Wednesday 11th July, 15:10 -16:40	Auditorium
O1355	Comprehensive evaluation of markers of knee joint health in the intact limb of individuals following traumatic unilateral lower limb-loss	Rebecca Krupenevich	Oral Presentation	Amputee biomechanics 1	Wednesday 11th July, 15:10 -16:40	Auditorium
O1356	Applications of amputee specific computational model	David Henson	Oral Presentation	Amputee biomechanics 1	Wednesday 11th July, 15:10 -16:40	Auditorium
O1358	Designing better post-infarction scar	Jeffrey Holmes	Invited Speaker	Cardiac regeneration and healing	Wednesday 11th July, 15:10 -16:40	Liffey B
O1359	A bioresorbable carrier and passive stabilization device to improve heart function post-myocardial infarction	Eimear Dolan*	Oral Presentation	Cardiac regeneration and healing	Wednesday 11th July, 15:10 -16:40	Liffey B

O1360	How hydrogel injection affects local myocardium behavior under generalized 3D loading	David Li	Oral Presentation	Cardiac regeneration and healing	Wednesday 11th July, 15:10 -16:40	Liffey B
O1361	Therepi: an implantable system enabling targeted cardiac therapy with a replenishable, epicardial reservoir.	Ellen Roche	Oral Presentation	Cardiac regeneration and healing	Wednesday 11th July, 15:10 -16:40	Liffey B
O1362	Investigating the transient regenerative potential of cardiac muscle using a neonatal pig partial apical resection model	Katherine M. Copeland	Oral Presentation	Cardiac regeneration and healing	Wednesday 11th July, 15:10 -16:40	Liffey B
O1363	Artificial myocardial muscle using 3D printed micro-fiber scaffolds with human iPS-derived cardiomyocytes	Miguel Castilho	Oral Presentation	Cardiac regeneration and healing	Wednesday 11th July, 15:10 -16:40	Liffey B
O1364	Research into running injuries	Tim Derrick	Invited Speaker	Running Injuries 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 1
O1365	Running injuries protect runner's knees from osteoarthritis	Ross Miller	Invited Speaker	Running Injuries 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 1
O1366	Changes in lower limb kinematics of females during running with fatigue and addition of load	Laura-Anne Furlong	Oral Presentation	Running Injuries 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 1
O1367	Variability of foot strike pattern differs between runners with and without self-reported lower leg injuries	Peter Raffalt	Oral Presentation	Running Injuries 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 1
O1368	Subject-specific running profiles to quantify biomechanical changes throughout a marathon race.	Christian Clermont	Oral Presentation	Running Injuries 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 1
O1369	Novice runners display altered lower extremity and pelvic control compared to experienced runners	Jocelyn Hafer	Oral Presentation	Running Injuries 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 1
O1370	Effect of Running Barefoot on T2 Relaxation Time in Tibiotalar Cartilage and its Relationship to Running Biomechanics	Hyun Kyung Kim	Oral Presentation	Running Injuries 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 1
O1371	Predicting growth and rupture of abdominal aortic aneurysms; What have we learnt from retrospective clinical studies based on finite element modeling of wall stress and strength?	Joy Roy	Invited Speaker	Abdominal aortic aneurysms 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 2
O1372	Angiotensin II and the heterogeneity of the aorta - the basis for aneurysmal locations?	Alan Daugherty	Invited Speaker	Abdominal aortic aneurysms 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 2
O1373	Micro-structural damage during the early phase of Angiotensin II-induced dissecting aortic aneurysm: the role of aortic biomechanics	Bram Trachet	Oral Presentation	Abdominal aortic aneurysms 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 2
O1374	The role of tissue re-modelling in mechanics and pathogenesis of abdominal aortic aneurysms	J.A. Niestrawska	Oral Presentation	Abdominal aortic aneurysms 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 2
O1375	Ultrasound-based Biomechanical Modeling of Abdominal Aortic Aneurysms for Clinical Decision Support	Richard G.P. Lopata	Oral Presentation	Abdominal aortic aneurysms 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 2
O1376	Development of abdominal aortic aneurysm modeling and elucidating the role of hemodynamic variables in thrombus formation	Seungik Baek	Oral Presentation	Abdominal aortic aneurysms 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 2
O1377	Thrombus Promotes Vessel Wall Oxygen Starvation in Abdominal Aortic Aneurysms	Erica Kemmerling	Oral Presentation	Abdominal aortic aneurysms 1	Wednesday 11th July, 15:10 -16:40	Liffey Hall 2
O1378	Design as a Feature of BME Education: Satisfying ABET and Preparing Students to Solve Clinical Needs	Michele Grimm	Invited Speaker	Biomedical engineering education 2	Wednesday 11th July, 15:10 -16:40	Liffey MR1
O1379	Biomedical Engineering education at Eindhoven University of Technology	Cees Oomens	Invited Speaker	Biomedical engineering education 2	Wednesday 11th July, 15:10 -16:40	Liffey MR1
O1380	A case study in the growth of BME curricula in the United States	William Guilford	Invited Speaker	Biomedical engineering education 2	Wednesday 11th July, 15:10 -16:40	Liffey MR1
O1381	The design of a biomedical engineering programme at Queen Mary, University of London	Julia C. Shelton	Invited Speaker	Biomedical engineering education 2	Wednesday 11th July, 15:10 -16:40	Liffey MR1
O1382	Industrial Internships for Course Credit in a Master of Engineering in Design and Commercialization	Alan Eberhardt	Oral Presentation	Biomedical engineering education 2	Wednesday 11th July, 15:10 -16:40	Liffey MR1
O1383	Building Interactive Wearable Technology Devices to Motivate Hands-on Experience with Biomechanics and Biomedical Engineering Design	Eric G. Meyer	Oral Presentation	Biomedical engineering education 2	Wednesday 11th July, 15:10 -16:40	Liffey MR1
O1384	Massively Parallel Models of Multiscale Hemodynamics in the Human Vasculature	Amanda Randles	Invited Speaker	Computational challenges in multiscale modelling in biomechanics	Wednesday 11th July, 15:10 -16:40	Liffey MR2
O1385	Computational Challenges in Multi-scale Modelling of the Neuromuscular System	Oliver Roehrle	Invited Speaker	Computational challenges in multiscale modelling in biomechanics	Wednesday 11th July, 15:10 -16:40	Liffey MR2
O1386	Embarrassingly parallel analysis of a 1D cardiovascular network towards the generation of a virtual population	Alessandro Melis	Oral Presentation	Computational challenges in multiscale modelling in biomechanics	Wednesday 11th July, 15:10 -16:40	Liffey MR2
O1387	Subject-specific computational platform of a multiporoelastic model for the simulation of cerebrospinal fluid transport	Yiannis Ventikos	Oral Presentation	Computational challenges in multiscale modelling in biomechanics	Wednesday 11th July, 15:10 -16:40	Liffey MR2
O1388	Development of multi-scale musculo-skeletal simulator for understanding the mechanism of human motor control in musculo-skeletal system	Naoto Yamamura	Oral Presentation	Computational challenges in multiscale modelling in biomechanics	Wednesday 11th July, 15:10 -16:40	Liffey MR2
O1389	Bone as a complex system: Computing bone remodelling across biological hierarchies	Patrik Christen	Oral Presentation	Computational challenges in multiscale modelling in biomechanics	Wednesday 11th July, 15:10 -16:40	Liffey MR2
O1390	A finite element model to study the micromechanics of tendinous tissues	Eduardo Fancello	Oral Presentation	Computational challenges in multiscale modelling in biomechanics	Wednesday 11th July, 15:10 -16:40	Liffey MR2
O1391	Aortic Arches after Coarctation Repair - Geometry and Haemodynamics	Michael Quail	Invited Speaker	Arterial pulse wave mechanics and ventriculo-arterial interaction	Wednesday 11th July, 15:10 -16:40	Liffey MR3

O1392	Ventricular wave reflection and its effects on outflow patterns and external work	Jonathan Mynard	Invited Speaker	Arterial pulse wave mechanics and ventriculo-arterial interaction	Wednesday 11th July, 15:10 -16:40	Liffey MR3
O1393	Evolution of aortic pressure and wave reflections during normal ageing: a computational study	Stamatia Pagoulatou	Oral Presentation	Arterial pulse wave mechanics and ventriculo-arterial interaction	Wednesday 11th July, 15:10 -16:40	Liffey MR3
O1394	Tackling a clinical conundrum: the effect of repaired aortic coarctation on arterial hemodynamics and ventriculo-arterial interactions	Giovanni Biglino	Oral Presentation	Arterial pulse wave mechanics and ventriculo-arterial interaction	Wednesday 11th July, 15:10 -16:40	Liffey MR3
O1395	A numerical study of pulmonary vascular efficiency and right ventricular afterload during hypoxia induced pulmonary hypertension in mice	M. Umar Qureshi	Oral Presentation	Arterial pulse wave mechanics and ventriculo-arterial interaction	Wednesday 11th July, 15:10 -16:40	Liffey MR3
O1396	Modelling arterial pulse wave propagation during healthy ageing	Peter Charlton	Oral Presentation	Arterial pulse wave mechanics and ventriculo-arterial interaction	Wednesday 11th July, 15:10 -16:40	Liffey MR3
O1397	Arterial hemodynamics in the horse: insights from a 1D arterial network model	Daimé Campos	Oral Presentation	Arterial pulse wave mechanics and ventriculo-arterial interaction	Wednesday 11th July, 15:10 -16:40	Liffey MR3
O1398	Individualized cyclic mechanical loading improves callus properties in mice during the remodeling phase of fracture healing as assessed from time-lapsed in vivo imaging	Esther Wehrle	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 3	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 1
O1399	Macro-architectural alterations and accumulation of advanced glycation end-products compromise the biomechanical performance of T2DM- and RYGB-bone in C57Bl/6 mice	Carlos Marin	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 3	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 1
O1400	Mechanobiology of distraction osteogenesis	Nicholaus Meyers	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 3	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 1
O1401	Genetic variability in fracture healing under phosphate deficiency at the tissue and molecular levels	Amira Hussein	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 3	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 1
O1402	Biomechanical investigation of femoral bone strength after intramedullary bone graft harvesting	Boyko Gueorguiev	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 3	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 1
O1403	Estimation of the pull-out strength of a bone screw inserted in a vertebra by micro- finite element modeling	Ricardo Belda	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 3	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 1
O1404	Femoral shaft fractures: Bone behaviour under high and low energy trauma in paediatric, adult and older populations.	George Dixon, Henry Crouch-Smith	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 3	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 1
O1405	What is the influence of strain rate on human cortical bone crack propagation mechanisms?	Rémy Gauthier	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 3	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 1
O1407	Individual Trabecula Segmentation (ITS) and Microindentation Testing Reveal Structural and Mechanical Deteriorations in the Subchondral Trabecular Bone under Moderately Degenerated Cartilage in Osteoarthritis (OA)	X. Edward Guo	Invited Speaker	Bone-cartilage cross-talk	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2A
O1408	Deconstructing the mechanobiology of bone/cartilage cross-talk to identify therapeutic targets for musculoskeletal diseases	Farshid Guilak	Invited Speaker	Bone-cartilage cross-talk	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2A
O1409	Viscoelastic and histomorphological characterisation of human osteochondral tissue	Sophie Mountcastle	Oral Presentation	Bone-cartilage cross-talk	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2A
O1410	Mechanical alterations of the bone-cartilage unit in a rabbit model of early osteoarthrosis	Sarah Pragnère	Oral Presentation	Bone-cartilage cross-talk	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2A
O1411	Variation of Microstructure and Biomechanicl Properties of Subchondral Bone in Patient with Osteoporosis and Osteoarthritis	Zhifeng Yu	Oral Presentation	Bone-cartilage cross-talk	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2A
O1412	A Novel Microfluidic System for culturing and mechanically stimulate a multi-tissue 3D Articular Joint Model	Giovanni Stefano Ugolini	Oral Presentation	Bone-cartilage cross-talk	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2A
O1413	Role of Subchondral Bone Changes in an Acute Model of Post Traumatic Osteoarthritis	Tom Coughlin	Oral Presentation	Bone-cartilage cross-talk	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2A
O1414	Probing Molecular Damage and Failure of Collagen in Connective Tissues	Jeffrey Weiss	Invited Speaker	Tendon, ligament and enthesis biomechanics 1	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2B
O1415	Modelling of the twisted fibre structure of Achilles tendon	Chia-Han Yeh	Oral Presentation	Tendon, ligament and enthesis biomechanics 1	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2B
O1416	The Synergistic Effect of Microenvironmental Cues for Tenogenic Phenotype Maintenance	Dimitrios Tsiapalis	Oral Presentation	Tendon, ligament and enthesis biomechanics 1	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2B
O1417	Regulation of tenocyte response to interleukin-1β via controlling intracellular mechanical factors	Eijiro Maeda	Oral Presentation	Tendon, ligament and enthesis biomechanics 1	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2B
O1418	Biomechanical and histopathological investigation of the effects of high-dose vitamin C and hyaluronic acid on tendon healing	Yunus Ziya Arslan	Oral Presentation	Tendon, ligament and enthesis biomechanics 1	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2B
O1419	Piezoelectric scaffolds: Tendon repair through electromechanical stimulation.	Marc Fernandez	Oral Presentation	Tendon, ligament and enthesis biomechanics 1	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2B
O1420	Influence of menstrual cycle hormones on distal biceps brachii tendon mechanics	Samantha Kuzyk	Oral Presentation	Tendon, ligament and enthesis biomechanics 1	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2B
O1421	Constitutive modeling for tendon aging and healing under uncertain uniaxial stress-stretch response	Daniele E. Schiavazzi	Oral Presentation	Tendon, ligament and enthesis biomechanics 1	Wednesday 11th July, 15:10 -16:40	Wicklow Hall 2B
O1422	Extrusion-based 3D printing of biodegradable hydrogels	Jason Burdick	Invited Speaker	Biofabrication for musculoskeletal tissue engineering	Wednesday 11th July, 15:10 -16:40	Ecocem
O1423	Designing bio-ink and bio-resin platforms for 3D bioprinting and bioassembly	Tim BF Woodfield	Invited Speaker	Biofabrication for musculoskeletal tissue engineering	Wednesday 11th July, 15:10 -16:40	Ecocem
O1424	Bio-conditioning of Nanoengineered Ionic-Covalent Entanglement (NICE) Bioink Hydrogels Mimics the Osteogenic Niche for Craniomaxillofacial Implants	Roland Kaunas	Oral Presentation	Biofabrication for musculoskeletal tissue engineering	Wednesday 11th July, 15:10 -16:40	Ecocem
O1425	3D Bioprinting Spatial Gradients of VEGF to Enhance Vascularization for Bone Tissue Engineering	Fiona Freeman	Oral Presentation	Biofabrication for musculoskeletal tissue engineering	Wednesday 11th July, 15:10 -16:40	Ecocem

O1426	Bioprinting Strategy for Neovascularization of Tissue-Engineered Bone Constructs	Marco Santoro	Oral Presentation	Biofabrication for musculoskeletal tissue engineering	Wednesday 11th July, 15:10 -16:40	Ecocem
O1427	The development of 3D bioprinted, vascularised composite constructs for large bone repair	Jessica Nulty	Oral Presentation	Biofabrication for musculoskeletal tissue engineering	Wednesday 11th July, 15:10 -16:40	Ecocem
O1428	Mechanical characterization of electrospun nanofibrous multiscale scaffolds for tendon regeneration	Alberto Sensini	Oral Presentation	Biofabrication for musculoskeletal tissue engineering	Wednesday 11th July, 15:10 -16:40	Ecocem
O1429	Coronary drug eluting stents - time for some personalised medicine?	Keith Oldroyd	Invited Speaker	Stenting within the cardiovascular system 1	Wednesday 11th July, 15:10 -16:40	Wicklow MR1
O1430	A novel computational method for simulating arterial remodelling around a biodegradable magnesium stent utilising multiple remodelling stimuli.	Peter McHugh	Invited Speaker	Stenting within the cardiovascular system 1	Wednesday 11th July, 15:10 -16:40	Wicklow MR1
O1431	Bioresorbable vascular scaffold: an integrated quantification	Pei-Jiang Wang	Oral Presentation	Stenting within the cardiovascular system 1	Wednesday 11th July, 15:10 -16:40	Wicklow MR1
O1432	Stent strut geometry and hemodynamics modulate wound healing	Juan Jiménez	Oral Presentation	Stenting within the cardiovascular system 1	Wednesday 11th July, 15:10 -16:40	Wicklow MR1
O1433	On the influence of non-uniform binding site density in determining arterial drug distribution following stent-based delivery	Javier Escuer, Sean McGinty	Oral Presentation	Stenting within the cardiovascular system 1	Wednesday 11th July, 15:10 -16:40	Wicklow MR1
O1434	An OCT-based reconstruction methodology to investigate the link between wall shear stress and neointimal coverage in patient-specific stented coronary bifurcations	Susanna Migliori	Oral Presentation	Stenting within the cardiovascular system 1	Wednesday 11th July, 15:10 -16:40	Wicklow MR1
O1435	Investigating the effect of degradation on the micromechanical properties of a novel metallic biomaterial for stent application	Jennifer Frattolin	Oral Presentation	Stenting within the cardiovascular system 1	Wednesday 11th July, 15:10 -16:40	Wicklow MR1
O1436	Multiscale imaging-based computational modeling of knee joint, articular cartilage and chondrocyte	Rami Korhonen	Invited Speaker	Synergy of image-based modelling and model-based imaging for probing biological systems	Wednesday 11th July, 15:10 -16:40	Wicklow MR2
O1437	Imaging hearing in plants: integrated imaging and modeling to identify acoustic detection inArabidopsis thaliana	Guy Genin	Invited Speaker	Synergy of image-based modelling and model-based imaging for probing biological systems	Wednesday 11th July, 15:10 -16:40	Wicklow MR2
O1438	A multiscale computational model for mechanostat regulation in bone based on biochemical osteocyte feedback	Peter Pivonka	Oral Presentation	Synergy of image-based modelling and model-based imaging for probing biological systems	Wednesday 11th July, 15:10 -16:40	Wicklow MR2
O1439	Estimating patient-specific myofiber strain from in vivo MRI data by solving a computational model	Luigi E. Perotti	Oral Presentation	Synergy of image-based modelling and model-based imaging for probing biological systems	Wednesday 11th July, 15:10 -16:40	Wicklow MR2
O1440	Comparison of strains in cadaveric and intact, living human brains in response to mild angular head acceleration	Andrew Knutsen	Oral Presentation	Synergy of image-based modelling and model-based imaging for probing biological systems	Wednesday 11th July, 15:10 -16:40	Wicklow MR2
O1441	Distribution Features for Measuring Similarity in Strain Fields	Arnold D. Gomez	Oral Presentation	Synergy of image-based modelling and model-based imaging for probing biological systems	Wednesday 11th July, 15:10 -16:40	Wicklow MR2
O1442	Identification of anisotropic hyperelastic constitutive parameters for the anterior cruciate ligament using full-field displacements and the virtual fields method	Callan Luetkemeyer	Oral Presentation	Synergy of image-based modelling and model-based imaging for probing biological systems	Wednesday 11th July, 15:10 -16:40	Wicklow MR2
O1443	Interplay between mechanotransduction and force generation underlies cell division in confining microenvironments	Ovijit Chaudhuri	Oral Presentation	Cell interaction with microenvironment 2	Wednesday 11th July, 15:10 -16:40	Wicklow MR4
O1444	Probing the interplay of nuclear, cellular, and matrix mechanics within living tissues	Xin Xu	Oral Presentation	Cell interaction with microenvironment 2	Wednesday 11th July, 15:10 -16:40	Wicklow MR4
O1446	A three-dimensional in vitro osteocyte model for mechanobiology: Micro-3D printed lacuno-canalicular networks to control osteocyte morphology	Felicitas Flohr	Oral Presentation	Cell interaction with microenvironment 2	Wednesday 11th July, 15:10 -16:40	Wicklow MR4
O1447	Feeling the tension: cell-inducedstresses in the extracellular matrixFeeling the tension: cell-induced stresses in the extracellular matrix	Chase Broedersz	Oral Presentation	Cell interaction with microenvironment 2	Wednesday 11th July, 15:10 -16:40	Wicklow MR4
O1448	Mechanics Links Cell Interactions with Cancer Microenvironment	Cheng Dong	Oral Presentation	Cell interaction with microenvironment 2	Wednesday 11th July, 15:10 -16:40	Wicklow MR4
O1449	Gradient of HGF breaks symmetry in expanding MDCK monolayer	Hwanseok Jang	Oral Presentation	Cell interaction with microenvironment 2	Wednesday 11th July, 15:10 -16:40	Wicklow MR4
O1450	Cellular Responses to Electron-Beam Modified Elastomeric Surfaces Presenting Micron to Nanoscale Heterogeneous Rigidity	Marc Fernandez	Oral Presentation	Cell interaction with microenvironment 2	Wednesday 11th July, 15:10 -16:40	Wicklow MR4
O1451	Microenvironment dimensionality modulates nuclear envelope morphology and tension to regulate mesenchymal stem cell mechanotransduction	Brian Cosgrove	Oral Presentation	Cell interaction with microenvironment 2	Wednesday 11th July, 15:10 -16:40	Wicklow MR4
O1454	Fluid mechanics of left-right symmetry breaking in the zebrafish embryo	David Smith	Invited Speaker	Prenatal cardiovascular fluid mechanics and flow mechanobiology	Wednesday 11th July, 17:10 -18:40	Liffey B
O1455	Proximal shank progression in prosthetic gait	Rosa Kolbeinsdottir	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium
O1456	Stability and Variability Analysis of Transfemoral Amputees Gait Parameters	Andi Isra Mahyuddin, Tatacipta Dirgantara	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium
O1457	First results of a clinical study with trauma forefoot amputees: Comparison of gait parameters wearing a customized carbon and a standard silicone prosthesis.	Eugen Dötzel	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium
O1458	Development of a neural network based active ankle prosthesis algorithm to address amputation level and minimum sensor requirements.	Ahmet Dogukan Keles	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium
O1459	Force production capability during running in unilateral transfemoral amputees	Hiroyuki Sakata, Satoru Hashizume, Hiroshi Takemura, Hiroaki Hobara	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium

O1460	Rectus femoris, vastus lateralis and semimembranosus can be strengthened for unilateral transtibial amputees	Ziyun Ding	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium
O1461	Development of a Smart Socket for Pressure Measurement in Lower Limb Prosthetic Applications	Matthew Hopkins	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium
O1462	Hip work in runners with a unilateral transtibial amputation	Lauren A. Sepp	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium
O1463	Activity classification from prosthesis embedded sensors in a population of people with transfemoral amputation	Boris Dauriac	Oral Presentation	Amputee biomechanics 2	Wednesday 11th July, 17:10 -18:40	Auditorium
O1464	Selective Filopodia Adhesion Ensures Robust Cell Matching in the Drosophila Heart	Timothy Saunders	Invited Speaker	Prenatal cardiovascular fluid mechanics and flow mechanobiology	Wednesday 11th July, 17:10 -18:40	Liffey B
O1465	The Embryonic Cardiac Outflow Tract Features a Double Helical Flow that is Aligned with the Aorticopulmonary Septation	Sheldon Ho	Oral Presentation	Prenatal cardiovascular fluid mechanics and flow mechanobiology	Wednesday 11th July, 17:10 -18:40	Liffey B
O1466	Cardiac looping is driven by the mechanical properties of the embryonic heart wall.	David Bark	Oral Presentation	Prenatal cardiovascular fluid mechanics and flow mechanobiology	Wednesday 11th July, 17:10 -18:40	Liffey B
O1467	Histological Investigation of Aortic Arches in Conotruncal Banded Chicken Embryos	Merve Celik, Cansu Karakaya, Kerem Pekkan	Oral Presentation	Prenatal cardiovascular fluid mechanics and flow mechanobiology	Wednesday 11th July, 17:10 -18:40	Liffey B
O1468	Hemodynamic-driven growth and remodeling of the pharyngeal arch arteries, a multiscale modeling approach	Stephanie Lindsey	Oral Presentation	Prenatal cardiovascular fluid mechanics and flow mechanobiology	Wednesday 11th July, 17:10 -18:40	Liffey B
O1469	Spatial correlation of Dach1 and shear stress in embryonic coronary arteries	Suhaas Anbazhakan	Oral Presentation	Prenatal cardiovascular fluid mechanics and flow mechanobiology	Wednesday 11th July, 17:10 -18:40	Liffey B
O1470	Gender and age effects on lower limb joint torques and powers during running	Max R Paquette	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1471	The effect of footwear on stride length and sagittal-knee-flexion moments in overground running in a recreational-endurance-running population.	Richard Stoneham	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1472	Alterations of Foot Posture and Lower Extremity Biomechanics after Long Distance Running	Qichang Mei	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1473	The effect of shoe heel design on impact loading and joint kinematics during overground running	Zuo-Liang Liu	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1474	Finite Element Analysis of Fifth Metatarsal Stress Distribution and Concentration during Soccer Movements	Yusuke Miyazaki	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1475	The influence of prolonged weight bearing physical activities on plantar tissue behavior	Taeyong Lee	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1476	The Effect of Running Foot Strike Transition on Impulse per Kilometer	Gregory Freisinger	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1477	The effect of motion control footwear combined therapeutic exercise on pain ,lower extremity strength and foot alignment for runners with patellofemoral pain syndrome	Yen-Chen Tseng	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1561	Pelvic and trunk motion changes during late swing phase of maximal sprinting under fatigue condition	Terumitsu Miyazaki	Oral Presentation	Running Injuries 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 1
O1478	Influence of multiple overlapping uncovered stents on the local mechanical environment: porosity and cross-stent structure	Shuo Wang	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1479	Does aneurysm development weaken the abdominal aortic wall? Results of a 10-year investigation with age-matched controls	Suresh M.L. Raghavan	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1480	Impact of constitutive descriptions on calculated peak wall stress in abdominal aortic aneurysms	Stanislav Polzer	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1481	How Calcifications Can Be Used to Predict Abdominal Aortic Aneurysm Rupture	Hilary Barrett	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1482	Biomechanical Approach is superior to maximum diameter criterion in predicting Abdominal Aortic Aneurysm rupture - Blinded Study	Stanislav Polzer	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1483	Changes in the biomechanical properties of abdominal aortic aneurysm over the time course of expansion	Christopher Miller	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1484	Effects of Arterial Morphology on Outcomes for Isolated Common Iliac Artery Aneurysms: A Computational Fluid Dynamics Study of Ruptured and Intact Cases	Louis Parker	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1485	Patient-Specific Computational Analysis of the Impact of Fenestrated and Chimney Endovascular Aortic Repair on Haemodynamics in Renal Arteries	Sabrina Ben Ahmed	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1486	Finite element analysis-derived peak wall rupture index is increased in AAA patients prior to rupture and correlates to time to rupture	Antti Siika	Oral Presentation	Abdominal aortic aneurysms 2	Wednesday 11th July, 17:10 -18:40	Liffey Hall 2
O1487	Applying a science capital approach to increase engagement with biomechanics	Laura-Anne Furlong	Invited Speaker	Public engagement with biomechanics	Wednesday 11th July, 17:10 -18:40	Liffey MR1
O1488	Finding the balance between education outreach and research goals	Sarah Shultz	Invited Speaker	Public engagement with biomechanics	Wednesday 11th July, 17:10 -18:40	Liffey MR1
O1489	National Biomechanics Day: STEM outeach for high school students through the 21st century's breakthrough science	Paul DeVita	Oral Presentation	Public engagement with biomechanics	Wednesday 11th July, 17:10 -18:40	Liffey MR1
O1490	Using Sports to Engage Youth in Science, Technology, Engineering and Mathematics (STEM) Outreach	Robin Queen	Oral Presentation	Public engagement with biomechanics	Wednesday 11th July, 17:10 -18:40	Liffey MR1
O1491	Endeavours in recruitment via social media for biomechanical studies	Angela Kedgley	Oral Presentation	Public engagement with biomechanics	Wednesday 11th July, 17:10 -18:40	Liffey MR1

O1492	A tool for sharing best practices for biomechanics instruction and outreach: The American Society of Biomechanics-sponsored Teaching Repository	Kimberly Bigelow	Oral Presentation	Public engagement with biomechanics	Wednesday 11th July, 17:10 -18:40	Liffey MR1
O1493	Uncertainty quantification and sensitivity analysis for cardiovascular model predictions	Leif Rune Hellevik	Invited Speaker	Modelling uncertainty and propagation of data for biomechanics systems	Wednesday 11th July, 17:10 -18:40	Liffey MR2
O1494	Computational methods for uncertainty quantification of complex biological systems	Jennifer Rowson	Invited Speaker	Modelling uncertainty and propagation of data for biomechanics systems	Wednesday 11th July, 17:10 -18:40	Liffey MR2
O1495	Sensitivity Of Musculoskeletal Models to Planar Simplification Of Tibiofemoral Motion	Saulo Martelli	Oral Presentation	Modelling uncertainty and propagation of data for biomechanics systems	Wednesday 11th July, 17:10 -18:40	Liffey MR2
O1496	Parameter uncertainty in computational models of cochlear implantation surgery	Jérôme Noailly	Oral Presentation	Modelling uncertainty and propagation of data for biomechanics systems	Wednesday 11th July, 17:10 -18:40	Liffey MR2
O1497	What range of ligament material properties are needed for a probabilistic knee model to reproduce the variability in empirical measures of laxity and joint contact forces?	Joshua Roth	Oral Presentation	Modelling uncertainty and propagation of data for biomechanics systems	Wednesday 11th July, 17:10 -18:40	Liffey MR2
O1498	Quantifying the effect of material parameter uncertaintyin patient-specific, physics-based modeling of reconstructive surgery	Taeksang Lee	Oral Presentation	Modelling uncertainty and propagation of data for biomechanics systems	Wednesday 11th July, 17:10 -18:40	Liffey MR2
O1499	Modeling uncertainty and propagation of data in rigid musculoskeletal simulation: current knowledge, limitations and future challenges.	Tien Tuan Dao	Oral Presentation	Modelling uncertainty and propagation of data for biomechanics systems	Wednesday 11th July, 17:10 -18:40	Liffey MR2
O1500	An approach for uncertainty quantification in computational biomechanics feasible for complex, large scale models	Wolfgang A. Wall	Invited Speaker	Verification, validation and uncertainty quantification in cardiovascular CFD	Wednesday 11th July, 17:10 -18:40	Liffey MR3
O1501	New trends for advanced reduced order methods in CFD: applications to optimisation, control, uncertainty quantification and data assimilation of parametric cardiovascular flows	Gianluigi Rozza	Invited Speaker	Verification, validation and uncertainty quantification in cardiovascular CFD	Wednesday 11th July, 17:10 -18:40	Liffey MR3
O1502	Cerebral aneurysm hemodynamic comparison between computational fluid dynamics and dual-venc 4D Flow MRI	Sean Rothenberger	Oral Presentation	Verification, validation and uncertainty quantification in cardiovascular CFD	Wednesday 11th July, 17:10 -18:40	Liffey MR3
O1503	Uncertainty Quantification in drug-induced arrhythmias	Francisco Sahli Costabal	Oral Presentation	Verification, validation and uncertainty quantification in cardiovascular CFD	Wednesday 11th July, 17:10 -18:40	Liffey MR3
O1504	Modelling the effect of flow variability on intracranial aneurysms with Gaussian processes and lumped parameter models	Ali Sarrami-Foroushani	Oral Presentation	Verification, validation and uncertainty quantification in cardiovascular CFD	Wednesday 11th July, 17:10 -18:40	Liffey MR3
O1505	Impact of uncertainties in inlet conditions on the predictions of hemodynamic simulations in ascending thoracic aortic aneurysms	Alessandro Mariotti	Oral Presentation	Verification, validation and uncertainty quantification in cardiovascular CFD	Wednesday 11th July, 17:10 -18:40	Liffey MR3
O1506	Reduced models for uncertainty quantification in the cardiovascular network via domain decomposition	Sofia Guzzetti	Oral Presentation	Verification, validation and uncertainty quantification in cardiovascular CFD	Wednesday 11th July, 17:10 -18:40	Liffey MR3
O1507	An enhanced biomechanical femoral test setup to study multiple loading configurations in stance and sideways fall orientations on the same specimen	Morteza Amini	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1508	A biofidelic sideways fall simulator could aid in the design and testing of prophylactic femoral augmentation strategies	Anita Fung	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1509	Femoral biomechanics via CT-based finite element models with nonlinear constitutive response	Cristina Falcinelli	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1510	Supplemental dorsal locked plating enhances stability of unstable distal radius fractures	Boyko Gueorguiev	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1511	Mechanical analysis of mini-invasive bone augmentation to primary stabilization of the osteosynthesis of tibial plateau fractures: balloon vs bone tamp	Tanguy Vendeuvre	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1512	Finite element models of the tibia with realistic boundary constraints predict bending deformations consistent with in-vivo measurement	Ifaz Haider	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1513	A multiscale and poroelastic modeling of cortical bone based on the homogenization technique	Eléonore Perrin	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1514	Analysis of crack initiation and propagation in bone tissues using extended DIC method	Prasanth Bokam	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1515	Digital image correlation and acoustic emission used simultaneously to determine strain distribution and yielding during compression of cancellous bone	Athanassios Tsirigotis	Oral Presentation	Bone fracture mechanics (in vitro and in vivo) 4	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 1
O1516	Dynamic remodeling of a biomaterial niche alters hematopoietic stem cell lineage specification	Brendan Harley	Invited Speaker	Bone marrow properties and mechanobiology	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2A
O1517	MSCs and bone vs marrow fat: Coordinated increase of nuclear tension and lamin-A with matrix stiffness outcompetes lamin-B receptor which favors soft tissue phenotypes	Dennis Discher	Invited Speaker	Bone marrow properties and mechanobiology	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2A
O1518	A validated fluid-structure interaction model of trabecular bone and bone marrow under compression	Evelyn Frank	Oral Presentation	Bone marrow properties and mechanobiology	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2A
O1519	Multiscale Modelling of the Mechanical Environment of Trabecular Bone Marrow under Low-Magnitude High Frequency Vibration	Ted Vaughan	Oral Presentation	Bone marrow properties and mechanobiology	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2A
O1520	In vivo engineering of functional bone marrow tissues	Shyni Varghese	Oral Presentation	Bone marrow properties and mechanobiology	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2A
O1521	Role of ATP signaling in primary cilium-mediated mechanotransduction in human skeletal stem cells	Mathieu Riffault	Oral Presentation	Bone marrow properties and mechanobiology	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2A

O1522	Mechanically Activated Osteocyte-derived Extracellular Vesicles Promote Osteogenic Differentiation of human Skeletal Stem Cells.	Ian Woods	Oral Presentation	Bone marrow properties and mechanobiology	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2A
O1523	Harnessing helpful heterogenity: the new picture of hard-to-soft tissue attachment, and what it means for treatment and surgical repair	Guy Genin	Invited Speaker	Tendon, ligament and enthesis biomechanics 2	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2B
O1524	Adhesive tendon-to-bone repairs	Victor Birman	Oral Presentation	Tendon, ligament and enthesis biomechanics 2	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2B
O1525	Microstructural properties of the ulnar collateral ligament are bundle specific and align with differences in mechanical properties	Ryan Castile	Oral Presentation	Tendon, ligament and enthesis biomechanics 2	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2B
O1526	An indentation-based approach to determine the elastic constants of tendon	Amy Wagoner Johnson	Oral Presentation	Tendon, ligament and enthesis biomechanics 2	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2B
O1527	The mechanobiological response of healthy rat Achilles tendon can be captured with a fibre-reinforced poro-visco-hyper-elastic constitutive model	Thomas Notermans	Oral Presentation	Tendon, ligament and enthesis biomechanics 2	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2B
O1528	In Vitro Osmotic Swelling of the Periodontal Ligament	David Nedrelow	Oral Presentation	Tendon, ligament and enthesis biomechanics 2	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2B
O1529	Effect of tendon remodeling on supraspinatus tear propagation	Gerald A Ferrer	Oral Presentation	Tendon, ligament and enthesis biomechanics 2	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2B
O1530	The effect of anterior cruciate ligament shear properties on whole-knee biomechanics	Ryan Rosario	Oral Presentation	Tendon, ligament and enthesis biomechanics 2	Wednesday 11th July, 17:10 -18:40	Wicklow Hall 2B
O1531	A model to describe the heterogeneous mechanical behaviour of human skin	C.W.J. Oomens	Invited Speaker	Multiscale biomechanics and modeling of engineered tissues	Wednesday 11th July, 17:10 -18:40	Ecocem
O1532	On the relationship between fiber-level and network-level fatigue behavior of collagen networks	V.H. Barocas	Invited Speaker	Multiscale biomechanics and modeling of engineered tissues	Wednesday 11th July, 17:10 -18:40	Ecocem
O1533	Changes in scaffold permeability during bone tissue engineering in perfusion bioreactors considerably affect cell wall shear stresses	Feihu Zhao	Oral Presentation	Multiscale biomechanics and modeling of engineered tissues	Wednesday 11th July, 17:10 -18:40	Ecocem
O1534	The local structure-function relationship of human tissue engineered cartilage provides a new method of determining construct maturity	Jill Middendorf	Oral Presentation	Multiscale biomechanics and modeling of engineered tissues	Wednesday 11th July, 17:10 -18:40	Ecocem
O1535	Multi-scale computational modelling for predicting mechano-biological behaviour of 3D skeletal muscle collagen constructs	Rallia-Iliana Velliou	Oral Presentation	Multiscale biomechanics and modeling of engineered tissues	Wednesday 11th July, 17:10 -18:40	Ecocem
O1536	The role of dynamic mechanical stimuli on extracellular matrix synthesis and stiffness in cardiovascular tissue engineering	Joao S. Soares	Oral Presentation	Multiscale biomechanics and modeling of engineered tissues	Wednesday 11th July, 17:10 -18:40	Ecocem
O1537	Modeling the spatiotemporal evolution of stem cell niches during neotissue growth on triply periodic minimal surfaces in perfusion bioreactors	Liesbet Geris	Oral Presentation	Multiscale biomechanics and modeling of engineered tissues	Wednesday 11th July, 17:10 -18:40	Ecocem
O1538	Patient-specific design and development of occluder devices for Patent Ductus Arteriosus and its preliminary in-vitro and clinical testing	Ramses Galaz	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1539	An investigation into stent induced collagen fibre reorientation; experimental observations and in silico modelling	David Nolan	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1540	Influence of the plaque composition on mechanical performance of a carotid stent	Aike Qiao	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1541	Patient-specific computer simulation to elucidate the role of contact pressure in the development of new conduction abnormalities after catheter based implantation of a self-expanding aortic valve	Giorgia Rocatello	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1542	Experimental analysis of AAA treatment by multi-layer stent and fate of abdominal aortic branches	Simon Tupin	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1543	Establishment of a diffeomorphic mapping based reconstruction algorithm utilizing OCT and microCT to characterize the 3D deformed in vivo stent geometry	Lucas Timmins	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1544	Computational modelling of the effect of mechanical expansion on drug delivery from endovascular devices	Javier Escuer, Martina Cebollero, Estefanía Peña, Sean McGinty, Miguel Ángel Martínez	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1545	Computational design and physical process optimisation can improve the design of poly(L-lactic acid) bioresorbable stents	Ross Blair	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1546	Flow diverter treatment outcome of intracranial aneurysms is associated with blood flow modifications: In silico computational analysis of clinical cases	Robert Damiano	Oral Presentation	Stenting within the cardiovascular system 2	Wednesday 11th July, 17:10 -18:40	Wicklow MR1
O1547	Harmonic waves in anisotropic poroelastic and viscoelastic anisotropic tissues: Magnetic Resonance Elastography and Dynamic Nanoindentation	Pasquale Vena	Invited Speaker	Nano- and micro-mechanics of biological tissue, biomimetic and bioinspired materials and systems 1	Wednesday 11th July, 17:10 -18:40	Wicklow MR2
O1548	Micromechanics of collagen rich-tissues and nanomechanics of individual collagen fibrils as a function of hydration, cross-linking, age and tissue function	Philipp Thurner	Invited Speaker	Nano- and micro-mechanics of biological tissue, biomimetic and bioinspired materials and systems 1	Wednesday 11th July, 17:10 -18:40	Wicklow MR2
O1549	A novel finite element model of bone lamellae including all ultrastructural hierarchies	Xiaodu Wang	Oral Presentation	Nano- and micro-mechanics of biological tissue, biomimetic and bioinspired materials and systems 1	Wednesday 11th July, 17:10 -18:40	Wicklow MR2
O1550	Cracking Osteons From Anatomic Specimens: An image-guided assessment of failure mode	Caitlyn Collins	Oral Presentation	Nano- and micro-mechanics of biological tissue, biomimetic and bioinspired materials and systems 1	Wednesday 11th July, 17:10 -18:40	Wicklow MR2

O1551	Nanoscale compressive deformation mechanisms and yield properties of hydrated lamellar bone	Jakob Schwiedrzik	Oral Presentation	Nano- and micro-mechanics of biological tissue, biomimetic and bioinspired materials and systems 1	Wednesday 11th July, 17:10 -18:40	Wicklow MR2
O1552	Multiscale compressive behaviour of uniaxially aligned mineralised collagen fibres	Alexander Groetsch	Oral Presentation	Nano- and micro-mechanics of biological tissue, biomimetic and bioinspired materials and systems 1	Wednesday 11th July, 17:10 -18:40	Wicklow MR2
O1553	Impact of Viscous Phenomena in Nanoindentation Tests of Dental Cement Composites	Gianpaolo Serino	Oral Presentation	Nano- and micro-mechanics of biological tissue, biomimetic and bioinspired materials and systems 1	Wednesday 11th July, 17:10 -18:40	Wicklow MR2
O1554	Mechano-Active Materials to Direct Stem Cell Differentiation	Robert Mauck	Invited Speaker	Mechanotransduction in engineered tissue	Wednesday 11th July, 17:10 -18:40	Wicklow MR4
O1555	A macro-micro modeling approach to determine in-situ heart valve interstitial cell contractile behaviors in native and synthetic environments	Michael Sacks	Invited Speaker	Mechanotransduction in engineered tissue	Wednesday 11th July, 17:10 -18:40	Wicklow MR4
O1556	Microfabricated kidney-on-chip platform recapitulates spatial biomechanical heterogeneity of human podocytes in vitro	Evren Azeloglu	Oral Presentation	Mechanotransduction in engineered tissue	Wednesday 11th July, 17:10 -18:40	Wicklow MR4
O1557	Two-dimensional culture expansion for regeneration therapies induce epigenetic modifications influencing cell fate	Adrienne Scott	Oral Presentation	Mechanotransduction in engineered tissue	Wednesday 11th July, 17:10 -18:40	Wicklow MR4
O1558	Effects of static compression on lipid accumulation and gene expression in 3T3-L1 adipocytes	Anabela Areias	Oral Presentation	Mechanotransduction in engineered tissue	Wednesday 11th July, 17:10 -18:40	Wicklow MR4
O1559	Theoretical analysis of stress distribution and cell polarization surrounding a model wound	Assaf Zemel	Oral Presentation	Mechanotransduction in engineered tissue	Wednesday 11th July, 17:10 -18:40	Wicklow MR4
O1560	Measuring differential stiffness in cell monolayers using intranuclear particle tracking	Kris Dahl	Oral Presentation	Mechanotransduction in engineered tissue	Wednesday 11th July, 17:10 -18:40	Wicklow MR4