



Monday, 27th June 2022		Tuesday, 28th June 2022		Wednesday, 29th June 2022		Thursday, 30th June 2022			
Archive Hall	Infante Hall	D. Maria Hall	D. Luis Hall	Porto Hall	Arrabida Hall	Miragaia Hall	S. Joao Hall		
All day Registration opened									
8:30 - 9:45	<b>TR01.1</b> <b>CARDIOVASCULAR BIOMECHANICS I: DEVELOPMENTAL BIOMECHANICS AND MECHANOBIOLOGY</b> Chairs: Selda Sherifova, Stephane Avril 8:30am - 8:55am PHYLLOGENIC AND ONTOGENIC DETERMINANTS OF MECHANOTRANSDUCTION IN THE HUMAN AORTA J.-B. Michel 8:55am - 9:07am FLUID MECHANICS OF THE ZEBRAFISH EMBRYONIC HEART TRANSCRIPTION A. G. Carreñali, R. W. Chow, J. Vermeir, C. H. Yap 9:07am - 9:19am FLUID MECHANICS OF FETAL AORTIC VALVULOPLASTY IN FETAL AORTIC STENOSIS AND EVOLVING HLHS H. S. Wong, H. Wiputra, A. Tuzes, G. Tuzes, C. H. Yap 9:19am - 9:31am BIOMECHANICAL MODELLING OF THE AORTA IN ADULT ZEBRAFISH M. Van Impe, M. Stampamoni, P. Sips, J. DeBacker, P. Segers 9:31am - 9:43am HEMODYNAMICS-DRIVEN AORTIC GROWTH FOR GENETICALLY MODIFIED MICE MODELS M. S. Bazzi, J. E. Wogensivell, H. B. Barocas	<b>TR01.2</b> <b>IMPLANTS / ORTHOTICS / PROSTHETICS / DEVICES I: CRANIOAXILLOFACIAL</b> Chairs: Harry van Lenthe, Dennis Janssen 8:30am - 8:42am AN INSTRUMENTED ORTHOSIS PROTOTYPE FOR CRANIAL COORDINATION B. Garzate, A. Zabala, A. Elawadly, S. Taylor, O. Jeelani, D. Dunaway, G. James, S. Schievano, A. Borghi 8:42am - 8:54am A NOVEL METHOD TO MEASURE DISTRACTION FORCES DURING MID-FACE ADVANCEMENT L. Zabala, R. Rodriguez-Florez, D. Silva, O. Jeelani, G. James, D. Dunaway, J. Ong, S. Schievano, A. Borghi 8:54am - 9:06am TOWARDS THE DESIGN OF A NOVEL NITINOL DISTRATOR FOR CRANIOFACIAL SURGERY L. Zabala, R. Rodriguez-Florez, D. Silva, O. Jeelani, G. James, D. Dunaway, J. Ong, S. Schievano, A. Borghi 9:06am - 9:18am FINITE ELEMENT MODELLING OF A CRANIAL IMPLANT DURING IMPACT R. Alves de Sousa, P. Santos, F. Fernandes 9:18am - 9:30am FINITE ELEMENT MODELLING OF ACOUSTIC EMISSIONS FOR DENTAL IMPLANT MONITORING G. Boron, R. Reuben, U. Wolfram 9:30am - 9:42am ON THE BIOMECHANICS OF RECONSTRUCTED MANDIBLES WITH CAD/CAM FIXATION DEVICES G. Blesso, V. Orsini, C. Janke, C. Rendendach, S. Checo	<b>TR01.3</b> <b>BIOMECHANICS OF MOVEMENT AND POSTURE I: SENSOR-BASED EVALUATION OF MOVEMENT</b> Chairs: William R. Taylor, Erica Deouacque-Gourrou 8:30am - 8:55am CELLULAR FORCE EXERTION DURING VASCULAR INVASION: MEASUREMENT AND APPLICATION TO DISEASE H. Van Oosterwyck 8:55am - 9:07am QUANTITATIVE PHASE MICROSCOPY-BASED CELL VISCOELASTICITY VALIDATION OF AN INERTIAL-BASED GAIT ANALYSIS SYSTEM USING A SIX DEGREES-OF-FREEDOM JOINT SIMULATOR A. Ortigas Vázquez, A. Moas, W. R. Taylor, T. M. Grupp 9:07am - 9:19am BIOMECHANICS IN THE WILD: VALIDATION OF A WEARABLE KINETIC MEASUREMENT SYSTEM H. Wang, A. Basso, G. Durandau, M. Sartori 9:19am - 9:31am SINGLE IMU BASED OPEN-SOURCE AND LOW-COST GAIT EVENT DETECTION WEARABLE DEVICE M. Breitman, A. Fischer 9:31am - 9:43am KINEMATIC CHANGES DURING WALKING WITH WHOLE-BODY VIBRATION AND PSYCHOMOTOR TESTING A. P. Moorhead, A. Mazzoleni, A. Gaggi, S. Marelli, G. Lorenzini, M. Tarabochia	<b>TR01.4</b> <b>MECHANOBIOLOGY I: TOOLS</b> Chairs: Hans Van Oosterwyck, Daphne Welts 8:30am - 8:55am REAL-TIME MONITORING OF GAIT: CHALLENGES AND SOLUTIONS FOR A COMPREHENSIVE TECHNICAL VALIDATION C. Mazza 8:55am - 9:07am VALIDATION OF AN INERTIAL-BASED GAIT ANALYSIS SYSTEM USING A SIX DEGREES-OF-FREEDOM JOINT SIMULATOR A. Ortigas Vázquez, A. Moas, W. R. Taylor, T. M. Grupp 9:07am - 9:19am PHOTO-SWITCHABLE BIO-INTERFACES FOR DYNAMIC CELL CULTURES F. Mauro, C. Natale, V. Panzetta, P. A. Netti 9:19am - 9:31am MECHANOREGULATION OF CRISPR/CAS9 MEDIATED BONE CELL REPORTER GENE UNDER CYCLIC MECHANICAL LOADING D. Yilmaz, F. Correia Marques, E. Wehrle, G. A. Kuhn, R. Müller	<b>TR01.5</b> <b>SOFT TISSUE BIOMECHANICS I</b> Chairs: Maria José Gómez-Benito, José Félix Rodríguez Matas 8:30am - 8:55am FRACTURE TOUGHNESS DETERMINATION OF MUSCLE TISSUE BASED ON ADJUVANT MODEL DERIVED VISCOUS DISSIPATED ENERGY O. J. Arroyete, M. Frank, A. Lorenz, D. H. Pahr 8:55am - 9:07am MECHANICAL MEASUREMENTS FOR CLINICAL ASSESSMENT OF COMPARTMENT SYNDROME C. Tacchella, E. Clutton, Y. Chen, M. Crichton 9:07am - 9:19am THE IN-VITRO TEST CONDITIONS INFLUENCE THE BIOMECHANICAL PROPERTIES OF DEGENERATED LATERAL MENISCI L. de Roy, O. Piquet, G. Teixeira, M. Weiske, H. May, M. Seidensticker, A. Zeltz 9:19am - 9:42am TISSUE INTERNAL STRAINS COMPUTED BY A FINITE ELEMENT MODEL OF THE HUMAN HEEL AND MEASURED FROM MR IMAGES A. Trebbi, M. Bailet, A. Perrier, Y. Payan	<b>TR01.6</b> <b>BIOMATERIALS I</b> Chairs: Lucía Cristofolini, Ingmar Ples 8:30am - 8:42am BIODEGRADABLE EVALUATION OF AN ANTIBACTERIAL AND OSTEOGENIC SILICON NITRIDE REINFORCED CRYOGEL SYSTEM S. S. Lee, L. Lagopoulos, X. Du, W.-D. Hardt, S. J. Ferguson 8:42am - 8:54am CORRODED MAGNESIUM-BASED SCAFFOLDS FATIGUE STRAIN ACCUMULATION AND MECHANICAL BEHAVIOUR UNDER CYCLIC LOADING R. Bonithon, S. Davis, M. Morgan, G. Blum, A. Karali 8:54am - 9:06am MULTISCALE PERFORMANCES OF ELECTROSPUN BIODEGRADABLE DEVICES FOR TENDON AND LIGAMENT REPLACEMENT A. Sensi, C. Gatti, C. Gualandri, M. V. Riccio, G. Marchiori, N. Sansoni, M. Fini, M. L. Focarete, L. Cristofolini, A. Zucchielli 9:06am - 9:18am DYNAMIC MECHANICAL ANALYSIS OF COLLAGEN FIBRILS AND ELECTROSPUN PLLA NANOFIBERS M. Nollath, A. Sensi, N. Matori, M. Rufin, D. Andriotti, A. Zucchielli, G. Schitter, L. Cristofolini, P. Thurner 9:18am - 9:30am NATURE-INSPIRED MEMBRANES FOR ARTIFICIAL RESPIRATION - PRODUCTION OF MICRO-STRUCTURED POLYMER HOLLOW FIBERS M. Pekovits, P. Ecker, F. Imran, J. A. Kalarus, M. Horacek, M. Gföhler 9:30am - 9:42am NANOFIBRE CAPPED MELT ELECTROWRITTEN GRID STRUCTURES MIMICKING THE ARCHITECTURE OF ARTICULAR SURFACES M. Santchi, L. Bienz, M. Leunig, S. Ferguson	<b>TR01.7</b> <b>COMPUTER AIDED DIAGNOSIS, PLANNING AND SURGERY I</b> Chairs: Jérôme Noailly, Miguel Angel Ariza Garcia 8:30am - 8:55am PRESENT AND FUTURE OF COMPUTER-AIDED DIAGNOSIS, PLANNING AND SURGERY M. A. Perez Anson 8:55am - 9:07am AN INVESTIGATION OF SPARSE 3D POINT CLOUD REGISTRATION COST FUNCTIONS FOR ESTIMATING 3D POSE OF HUMAN BONE D. A. Christie, R. Fluit, G. Y. Daourdan, M. Sartori, N. J. J. Verdoornschot 9:07am - 9:19am PREDICTION OF GUIDEWIRE INDUCED AORTIC DEFORMATIONS DURING EVAR: FE AND IN VITRO STUDY M. Emendi, K.-H. Stoverud, G. Tangen, H. Ushaker, S. K. Dahl, V. E. Pot, T. Lango 9:19am - 9:31am IN-SILICO BIOMECHANICAL DESCRIPTORS TO STRATIFY REAL WORLD CASES OF PROXIMAL JUNCTION FAILURE IN SPINE SURGERY M. Razzouqandani, A. del Arca, F. Pelliss, M. González Ballester, F. Galbusera, J. Noailly 9:31am - 9:43am THE EFFECT OF TRIMMING LINE GEOMETRY ON FORCE TRANSMISSION BY ORTHODONTIC ALIGNERS (A FINITE ELEMENT STUDY) I. Ethabty, L. Ludger, A. Ghoneima, M. Abuzyada, C. Bourauel 9:43am - 9:55am DESIGN EVALUATION OF SIMPLIFIED CERAMIC CATHETER-SINGLE-RETAINER RESIN-BONDED FIXED DENTAL PROSTHESES USING FE M. Hjort, P. Baetelle, I. Sailer, J.-P. Attal, A. Benoit 9:55am - 9:42am EFFICIENCY AND LEARNABILITY OF MAGNETIC MALLETS AS A RETRIEVAL TOOL FOR DENTAL CROWNS: A PRELIMINARY STUDY A. T. Lugas, G. Caraceni, G. Schierano, A. L. Audenino, D. Baldi, C. Bignardi, M. Terzini	<b>TR01.8</b> <b>DENTAL BIOMECHANICS</b> Chairs: Christoph Bourauel, Benedikt Sagl 8:30am - 8:42am DIFFERENCES IN TMJ LOADING BETWEEN MEDIOTRUSIVE AND LATEROTRUSIVE TOOTH GRINDING B. Sagl, M. Schmid-Schwag, E. Phelesinger, X. Rausch-Fan, J. Stoveres 8:42am - 9:55am IMPACT OF SIMULATED TOOTHBRUSHING AND THERMOCYCLING ON SURFACE ROUGHNESS OF CAD/CAM RESIN MATRIX CERAMICS L. Porjan, R. D. Vasilis, F. R. Toma, S.D. Porjan 9:55am - 9:06am NUMERICAL AND EXPERIMENTAL ASSESSMENT OF MULTIROTOR DENTAL ANALOG IMPLANTS M. Aldeiski, L. Keilig, I. Dörsam, C. Bourauel 9:06am - 9:18am THE EFFECT OF TRIMMING LINE GEOMETRY ON FORCE TRANSMISSION BY ORTHODONTIC ALIGNERS (A FINITE ELEMENT STUDY) I. Ethabty, L. Ludger, A. Ghoneima, M. Abuzyada, C. Bourauel 9:18am - 9:30am DESIGN EVALUATION OF SIMPLIFIED CERAMIC CATHETER-SINGLE-RETAINER RESIN-BONDED FIXED DENTAL PROSTHESES USING FE M. Hjort, P. Baetelle, I. Sailer, J.-P. Attal, A. Benoit 9:30am - 9:42am EFFICIENCY AND LEARNABILITY OF MAGNETIC MALLETS AS A RETRIEVAL TOOL FOR DENTAL CROWNS: A PRELIMINARY STUDY A. T. Lugas, G. Caraceni, G. Schierano, A. L. Audenino, D. Baldi, C. Bignardi, M. Terzini	
09:45 - 10:15	Coffee break								
10:15 - 11:40	<b>TR01.2</b> <b>CARDIOVASCULAR BIOMECHANICS II: MATERIAL CHARACTERIZATION</b> Chairs: Selda Sherifova, Stephane Avril 10:15am - 10:27am AORTIC MEDIA UNDER RADIAL TENSION: GLOBAL AND LOCAL EFFECTS OF RELAXATION S. Sherifova, S. Avril, G. A. Holzapfel 10:27am - 10:39am CHARACTERISING DISSECTION IN AORTIC TISSUE: EFFECT OF LOCATION AND DISSECTED LAYER I. Rios-Ruiz, M. A. Martínez, E. Peña 10:39am - 10:51am GLOBAL AND LOCAL STIFFENING OF HUMAN THORACIC AORTAS UNDERGOING TEAR IN VITRO: A MOCK-LOOP STUDY E. Agrafiotis, G. Sammes, C. Mayer, M. Grabenwöger, P. Reingth, H. Mächler, G. A. Holzapfel 10:51am - 11:03am LOCAL RUPTURE ANALYSIS OF ATHEROSCLEROTIC HUMAN CAROTID PLAQUES BY STRUCTURAL IMAGING, DIC AND UNIAXIALLY TESTING S. Gaverri Toran, P. de Miguel Muñoz, H. Grelaud, H. J. Verhagen, A. van der Lugt, G. A. C. Akyildiz 11:03am - 11:15am MECHANICAL CHARACTERIZATION OF PASSIVE MYOCARDIAL TISSUE PROPERTIES IN HEALTHY AND INFARCTED PORCINE HEARTS N. Laita, M. A. Martínez, M. Doblaré, E. Peña 11:15am - 11:27am NON-HOMOGENEOUS GEOMETRICAL INFLUENCE ON RING-OPENING STRESS RECONSTRUCTION A. Ulvera, M. Inostroza, E. Rivera, D. Celentano, C. Garcia-Herrera 11:27am - 11:39am INVESTIGATING LOCAL PROPERTIES OF ATHEROSCLEROTIC PLAQUE CAPS USING A TISSUE-ENGINEERED MODEL H. Crieaard, T. B. Wissing, S. Gaverri Toran, P. de Miguel, R. M. Hengst, G. Kremers, F. J. H. Giesen, K. van der Heiden, A. C. Akyildiz	<b>TR02.1</b> <b>IMPLANTS / ORTHOTICS / PROSTHETICS / DEVICES II: 3D TECHNOLOGY</b> Chairs: Harry van Lenthe, Vojta Plešek 10:15am - 10:27am HARNESING 3D PRINTING TO OPTIMISE MEDICAL DEVICE INTERACTION WITH SOFT TISSUE E. O'Ceirbhail 10:27am - 10:39am 3D PRINTED SOFT METAMATERIAL FORCE SENSORS FOR GAIT MONITORING USING TPU-GRAPHENE COMPOSITES I. Rios-Ruiz, M. A. Martínez, E. Peña 10:39am - 10:51am AN EXPERIMENTAL AND COMPUTATIONAL STUDY ON A PATIENT SPECIFIC 3D PRINTED TIBIAL-AY HEMIPELVIS PROSTHESIS L. Grillo, F. Danelli, R. Verga, F. Alami, M. Cecco, J. F. M. Rodriguez, G. Pennati, L. La Barbera 10:51am - 11:03am 3D-PRINTED VORONOI STRUCTURES REDUCE FRICTION IN ORTHOPAEDIC IMPLANTS? C. Hou, C. Nemes-Károlyi, L. Pastrav, B. Vancsen, G. Kocsis, K. Denis, G. Szabenyi 11:03am - 11:15am MECHANICAL CHARACTERIZATION OF PASSIVE MYOCARDIAL TISSUE PROPERTIES IN HEALTHY AND INFARCTED PORCINE HEARTS N. Laita, M. A. Martínez, M. Doblaré, E. Peña 11:15am - 11:27am NON-HOMOGENEOUS GEOMETRICAL INFLUENCE ON RING-OPENING STRESS RECONSTRUCTION A. Ulvera, M. Inostroza, E. Rivera, D. Celentano, C. Garcia-Herrera 11:27am - 11:39am INVESTIGATING LOCAL PROPERTIES OF ATHEROSCLEROTIC PLAQUE CAPS USING A TISSUE-ENGINEERED MODEL H. Crieaard, T. B. Wissing, S. Gaverri Toran, P. de Miguel, R. M. Hengst, G. Kremers, F. J. H. Giesen, K. van der Heiden, A. C. Akyildiz	<b>TR02.2</b> <b>BIOMECHANICS OF MOVEMENT AND POSTURE II: MODELLING AND SIMULATION OF MOVEMENT</b> Chairs: Seyyed Hossein Nasab, Lennart Scheyb 10:15am - 10:27am PATELLAR TENDON LOADING AND STIFFNESS DERIVED FROM IN VIVO LOADS AND KINEMATICS P. F. Koelbel, P. Moewis, P. Damm, P. Schütz, J. Dymke, W. R. Taylor, G. N. Duda, A. Trepczynski 10:27am - 10:39am THE EFFECT OF FOOT ORIENTATION MODIFICATIONS ON KNEE JOINT SPECIFIC 3D PRINTED TIBIAL-AY HEMIPELVIS PROSTHESIS Y. Wang, J. Wang, B. M. Guiguen, A. Bilzon 10:39am - 10:51am EXPERIMENTAL INVESTIGATION OF TROPICOLLAGEN MECHANICS A. Rohatschek, P. Steinbocker, S. Baudis, P. Thurner 10:51am - 11:03am THEORETICAL AND EXPERIMENTAL MODELLING OF CELL AND TISSUE GROWTH B. Huzard, V. Kumar, L. McLamano, E. McEvoy 11:03am - 11:15am AN EXPERIMENTAL AND COMPUTATIONAL STUDY OF TENSIONAL HOMEOSTASIS IN CELL-SEED TISSUE-EQUIVALENTS D. Pauken, J. E. Fehlings, J. D. Humphrey, C. J. G. Ryan 11:15am - 11:27am CREEP BEHAVIOUR OF INDIVIDUAL COLLAGEN FIBRILS IN TENSION IS A QUALITY CHECK TO ENABLE RELIABLE MULTICENTRIC STRESSPHOTOGRAPHIC DATA COLLECTION M. Nabach, N. Matori, M. Rufin, O. Andriotti, G. Schitter, P. Thurner 11:27am - 11:39am PERFORMANCE OF LINEAR AND NONLINEAR APPROACHES IN TRACTION FORCE MICROSCOPY FOR COLLAGEN HYDROGELS A. Apolinari-Fernandez, J. Barrosa-Fano, M. Córdov, H. Van Oosterwyck, J. A. Sanz-Herrera	<b>TR02.3</b> <b>MECHANOBIOLOGY II: IN VITRO / IN SILICO</b> Chairs: Hans Van Oosterwyck 10:15am - 10:27am MECHANOBIOLOGY-BASED RAPID DIAGNOSIS AND EARLY BEHAVIOUR OF IN VITRO HUMAN THROMBI R. Chahale, J. A. de Vries, M. de Maat, K. van Gaalen, H. van Beuskom, A. van der Lugt, A. Akyildiz, F. Gijzen 10:27am - 10:39am A BAYESIAN CONSTITUTIVE MODEL SELECTION FRAMEWORK FOR BIAXIAL MECHANICAL TESTING OF PLANAR SOFT TISSUES: APPLICATION TO PORCINE AORTIC VALVES A. AGGARWAL, I. T. Hudson, D. W. Laurence, C.-H. Lee, S. Pant 10:39am - 10:51am MECHANICAL PROPERTIES OF PLANTAR TISSUES: A COUPLED EXPERIMENTAL AND NUMERICAL APPROACH S. Pettenazzo, A. B. Baraldi, E. Belluzzi, A. Pazzuoli, P. Ruggieri, R. Boscolo Berto, R. De Caro, E. A. Carmeli, C. G. Fontanella 10:51am - 11:03am OPTIMIZATION OF SINGLE-SIDED NMR AND INDENTATION PROTOCOLS IN EVALUATING CARTILAGE STRUCTURE AND MECHANICS M. Berni, C. Golini, N. F. Lopomo, L. Bristi, M. Baleani 11:03am - 11:15am STRUCTURAL MECHANISMS IN SOFT FIBROUS TISSUES: LESSONS FROM BIOMECHANICS M. Sharifi 11:15am - 11:27am VISCOELASTIC PROPERTIES OF TUMOUR TISSUE: RELATION WITH STRUCTURE AND COMPOSITION V. Badali, M. Mohamadhakthah, S. Checo, M.M. Zehn 11:27am - 11:39am CELLULAR SENSITIVITY IN A MECHANOBIOLOGICAL MODEL OF LONGITUDINAL BONE GROWTH OF THE FEMUR A. Lipphaus, A. Wegener-Panzer, R.-B. Trobs, U. Wittel 11:39am - 11:51am UNIAXIALLY TENSILE TESTS ON HUMAN FASCIA LATA: FRESH RELAXATION AND FAILURE PHENOMENA FROM FROZEN CADAVERS L. Bonaldi, C. G. Fontanella, C. Stecco, A. Berardo	<b>TR02.4</b> <b>SOFT TISSUE BIOMECHANICS II</b> Chairs: Dulce Oliveira, José Félix Rodríguez Matas 10:15am - 10:27am INTER-DONOR VARIABILITY IN THE TENSILE AND COMPRESSIVE BEHAVIOUR OF IN VITRO HUMAN THROMBI R. Chahale, J. A. de Vries, M. de Maat, K. van Gaalen, H. van Beuskom, A. van der Lugt, A. Akyildiz, F. Gijzen 10:27am - 10:39am A BAYESIAN CONSTITUTIVE MODEL SELECTION FRAMEWORK FOR BIAXIAL MECHANICAL TESTING OF PLANAR SOFT TISSUES: APPLICATION TO PORCINE AORTIC VALVES A. AGGARWAL, I. T. Hudson, D. W. Laurence, C.-H. Lee, S. Pant 10:39am - 10:51am MECHANICAL PROPERTIES OF PLANTAR TISSUES: A COUPLED EXPERIMENTAL AND NUMERICAL APPROACH S. Pettenazzo, A. B. Baraldi, E. Belluzzi, A. Pazzuoli, P. Ruggieri, R. Boscolo Berto, R. De Caro, E. A. Carmeli, C. G. Fontanella 10:51am - 11:03am OPTIMIZATION OF SINGLE-SIDED NMR AND INDENTATION PROTOCOLS IN EVALUATING CARTILAGE STRUCTURE AND MECHANICS M. Berni, C. Golini, N. F. Lopomo, L. Bristi, M. Baleani 11:03am - 11:15am STRUCTURAL MECHANISMS IN SOFT FIBROUS TISSUES: LESSONS FROM BIOMECHANICS M. Sharifi 11:15am - 11:27am VISCOELASTIC PROPERTIES OF TUMOUR TISSUE: RELATION WITH STRUCTURE AND COMPOSITION V. Badali, M. Mohamadhakthah, S. Checo, M.M. Zehn 11:27am - 11:39am CELLULAR SENSITIVITY IN A MECHANOBIOLOGICAL MODEL OF LONGITUDINAL BONE GROWTH OF THE FEMUR A. Lipphaus, A. Wegener-Panzer, R.-B. Trobs, U. Wittel 11:39am - 11:51am UNIAXIALLY TENSILE TESTS ON HUMAN FASCIA LATA: FRESH RELAXATION AND FAILURE PHENOMENA FROM FROZEN CADAVERS L. Bonaldi, C. G. Fontanella, C. Stecco, A. Berardo	<b>TR02.5</b> <b>SOFT TISSUE BIOMECHANICS III</b> Chairs: José Félix Rodríguez Matas, Maria José Gómez-Benito 2:00pm - 2:12pm HIGH FIDELITY SIMULATION OF CEREBRAL ANEURYSM WITH FLOW-DIVERTER E. Hachem 2:12pm - 2:24pm A COMPUTATIONAL METHODOLOGY FOR STUDYING THE MURINE BLOOD-BRAIN BARRIER HEMODYNAMICS S. Marinos, A. Sanz, C. Edero, A. Urbola, E. Rojas de Miguel, A. Ostiz, J. Cortes, N. Ramirez, C. Ortiz de Solórzano, A. Villanueva, M. Oteiza 2:24pm - 2:36pm HOW MACROSCOPIC TISSUE DEFORMATION AFFECTS THE BRAIN'S MICROSTRUCTURE M. Reiter, P. Paulsen, S. Buddy 2:36pm - 2:48pm CHARACTERIZATION OF MECHANICAL DAMAGE ON THE ESOPHAGEAL WALL OF CHRONIC HYPONIC LAMBS A. Bezmanovic, C. Garcia-Herrera 2:48pm - 2:59pm ALTERED MECHANICAL LOADING IN AMPUTEES RESULTS IN MILD GAINS OF KNEE DEGENERATION 8 YEARS POST TRAUMA J. C. Kathagen, J. Suißböck, M. J. Raschke, I. Herbst, F. Dyrna, O. Riesenbeck, J. Wermers, S. Oetting 3:00pm - 3:12pm NON-LINEAR HOMOGENIZATION OF SOFT TISSUES: APPLICATION TO TENDONS AND ARTERIES C. Morin, C. Helmrich, S. Avril 3:12pm - 3:24pm MESH ANCHORING TECHNIQUE IN UTERINE PROLAPSE REPAIR SURGERY: A FINITE ELEMENT ANALYSIS E. Silva, R. Rynkevicius, S. Brandão, T. Mascarenhas, A. Augusto Fernandes 3:24pm - 3:36pm PORCINE KNEE CARTILAGE MAPS DETERMINED WITH AUTOMATED INDENTATION AND CHARACTERIZED BY MACHINE LEARNING E. Hamsayeh Abbasi Niasar, L. Li	<b>TR02.6</b> <b>COMPUTATIONAL BIOLOGY I</b> Chairs: Maria Angeles Perez Anson, Aurélie Carlier 10:15am - 10:40am A NUMERICAL STUDY OF THE IMPACT ON GRAFT LONGEVITY FROM CORONARY ARTERY BYPASS GRAFTS' BULK-BODY GEOMETRY C. J. Bright, A. Deyranlou, S. Grant, A. Keshmiri 10:40am - 10:51am TOLERANCE ANGLE DETERMINATION FOR PEDICULAR SCREW INSERTION L. Leblond, Y. Godio-Rabouet, Y. Glard, M. Evrin 10:51am - 11:03am A WEB PLATFORM FOR DATA-DRIVEN REAL-TIME MODELING AND VISUALIZING CARDIOVASCULAR PROBLEMS M. Dema, P. Sieni, M. Girfolgio, M. Conti, G. Rozza, F. Auricchio 11:03am - 11:15am A BONE-MODELING DRIVEN NUMERICAL FRAMEWORK FOR HIP PROSTHESIS DESIGN F. Rostini, S. Marconi, G. Alaimo 11:15am - 11:27am EVALUATION OF PHARMACOLOGICAL TREATMENTS FOR OSTEOPOROSIS USING DXA-BASED 3D FINITE ELEMENT MODELS C. Ruiz Wills, M. Qasim, R. Winzenrieth, S. D. Gregorio, L. Del Rio, L. Humbert, J. Noailly 11:27am - 11:39am INFLUENCE OF PLATE DESIGN ON SUBCONDYLAR FRACTURE FIXATION: A COMPARATIVE FINITE ELEMENT ANALYSIS E. Vignali, E. Gasparotti, F. Bardi, S. Pritz, D. Xhadinemi, P. Del Sarto, S. Celli 11:39am - 11:51am LEFT VENTRICULAR ASSIST DEVICE SURGICAL OPTIMISATION USING COMPUTATIONAL FLUID DYNAMICS G. B. López	<b>TR02.7</b> <b>COMPUTER AIDED DIAGNOSIS, PLANNING AND SURGERY II</b> Chairs: Jérôme Noailly, Miguel Angel Ariza Garcia 10:15am - 10:27am A NUMERICAL STUDY OF THE IMPACT ON GRAFT LONGEVITY FROM CORONARY ARTERY BYPASS GRAFTS' BULK-BODY GEOMETRY C. J. Bright, A. Deyranlou, S. Grant, A. Keshmiri 10:27am - 10:39am TOLERANCE ANGLE DETERMINATION FOR PEDICULAR SCREW INSERTION L. Leblond, Y. Godio-Rabouet, Y. Glard, M. Evrin 10:39am - 10:51am A WEB PLATFORM FOR DATA-DRIVEN REAL-TIME MODELING AND VISUALIZING CARDIOVASCULAR PROBLEMS M. Dema, P. Sieni, M. Girfolgio, M. Conti, G. Rozza, F. 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Andriotti 10:27am - 10:39am EXPERIMENTAL VALIDATION OF A MECHANISTIC MODEL OF THE BERLIN HEART EXCOR USING A MOCK CIRCULATION LOOP Y. Yuan, L. Rompani, F. De Gaetano, M.L. Costantino 10:39am - 10:51am REPRODUCIBLE GENERATION OF PREDEFINED TIBIA FRACTURES K. Witek, M. Roland, A. Andres, S. Diebels 10:51am - 11:03am HOW DOES KINEMATIC ALIGNMENT INFLUENCE FEMOROTIBIAL KINEMATICS IN MEDIAL STABILISED TKA COMPARED TO MECHANICAL ALIGNMENT? L. Bauer, M. Wacziarg, C. Throesch, P. Müller, B. Holzapfel, J. Niehanneus, J.-M. Simon 11:03am - 11:15am DESIGN OF BIOMECHANICAL TESTING DEVICE FOR THE PELVIS INCLUDING GAIT MUSCLE FORCES A. Saliman, P. L. Ricci, S. Kedziora, V. Kheif, T. Gerich, S. Maas 11:15am - 11:27am DEVELOPMENT OF A PHYSICAL TWIN FOR CARDIOVASCULAR LIFE-SUPPORT DEVICES ANALYSIS AND COMPARISON E. Vignali, E. Gasparotti, F. Bardi, S. Pritz, D. Xhadinemi, P. Del Sarto, S. Celli 11:27am - 11:39am MECHANICAL PERFORMANCE OF HYBRID FIBROUS STRUCTURES FOR TENDON REPAIR T. Petosa, M. A.
11:45 - 12:30	Keynote lecture 1: PERSONALIZED MODELING OF ALZHEIMER'S DISEASE, Ellen Kuhl; Chairs: Harry van Lenthe, Joao Manuel R.S. Tavares								
12:30 - 13:15	Lunch break								
13:15 - 14:00	Poster sessions: P51 - P56								
14:00 - 15:30	<b>TR01.3</b> <b>CLINICAL BIOMECHANICS AWARDS SESSION</b> Chairs: Markus Heller, Michelle Conti 2:00pm - 2:12pm BIOMECHANICS INDEX FOR DIABETIC FOOT RISK CLASSIFICATION A. Gualotta, G. Barolami, A. Ciniglia, F. Spolaco, G. Guarnieri, A. Avogaro, F. Cibi, F. Silvestri, Z. Sawacha 2:12pm - 2:24pm BIOMECHANICAL EVALUATION OF DIAGNOSTIC TESTS FOR ROTATOR CUFF LESIONS J. Menze, T. Rojas, M. A. Zumstein, S. J. Ferguson, K. Gerber 2:24pm - 2:36pm EFFECT OF ALENDRONATE ON BONE FRACTURE TOUGHNESS IN OSTEOGENESIS IMPERFECTA A. Muñoz, A. Carriero 2:36pm - 2:48pm APPLICATION OF COG THREADS FOR VAGINAL WALL PROLAPSE REPAIR: EX-VIVO STUDY R. Sinyevs, C. Soares, L. Hypanova, E. Silva, T. Mascarenhas, P. Martins	<b>TR02.3</b> <b>IMPLANTS / ORTHOTICS / PROSTHETICS / DEVICES III: FRACTURE REPAIR</b> Chairs: Marlene Mengoni, Maikel Timmermans 2:00pm - 2:12pm MODELLING MECHANICAL DEMANDS ARISING FROM CLINICAL REQUIREMENTS FOR FRACTURE FIXATION P. Pankaj 2:12pm - 2:24pm LIGHT-CURABLE FIXATION COMPARABLE WITH PLATES IN TORSION P. Schwarzenberg, T. Colding-Rasmussen, D. J. Hutchinson, D. Mischke, P. Harstmann, M. Moerk Petersen, M. Mallock, C. Wang, P. Varga 2:24pm - 2:36pm ARTICULAR CONTACT VS. EMBEDDING: THE EFFECT OF BOUNDARY CONDITIONS ON VOLAR PLATE FIXATION AT THE DISTAL RADIUS L. Berger, D. H. Pahr, A. Symke 2:36pm - 2:48pm AFFORDABLE SOLUTION FOR LOW AND MIDDLE-INCOME COUNTRIES: UNILATERAL EXTERNAL FIXATOR M. Saiedi, S. Barnes, M. Berthoume, S. Rhoitok, A. M. J. Bull, J. Jeffers 2:48pm - 3:00pm BIOMECHANICAL ANALYSIS OF HELICAL VERSUS STRAIGHT PLATING OF PROXIMAL THIRD HUMERAL SHAFT FRACTURES I. Zderic, T. Pastor, K. van Kinsgeel, B.-C. Link, F. J. Beeres, F. Migliorini, R. Babst, S. Neuhang, B. Ganse, C. Schoneberg, B. Gueorguiev, M. Kinobe	<b>TR02.3</b> <b>HARD TISSUE I: TISSUE INTERACTIONS</b> Chairs: Uwe Wolfram, Pia Stefanek 2:00pm - 2:12pm MINERALIZED FIBROCARITILAGE AS A HIGHLY TUNABLE TISSUE ALLOWING THE INTEGRATION OF TENDON INTO BONE D. Ruffoni 2:12pm - 2:24pm COLD-WATER CORALS RETAIN OUTSTANDING TISSUE STRENGTH BUT LOSE TISSUE STIFFNESS IN ACIDIFIED WATERS M. Wollmann, M. Peña Fernández, S. McPhee, E. Smith, R. Beck, J. Shephard, M. Roberts, S. Henning 2:24pm - 2:36pm TEMPORAL CHANGES IN THE BONE MICROENVIRONMENT PRIOR TO AND FOLLOWING OVERT BREAST-CANCEROSTOLYLSIS A. S. Verbruggen, R. M. Dwyer, E. C. McCarthy, L. M. McLamano 2:36pm - 2:48pm DEGREE OF MINERALIZATION AND MINERALIZED COLLAGEN FIBRE ORIENTATION PREDICTS THE ELASTIC MODULUS OF BONE IN OSTEOGENESIS IMPERFECTA M. Inderman, T. Kochetkova, D. Casari, B. Willie, J. Michler, J. Schwedrick, P. Zysset 2:48pm - 3:00pm THERMAL ACTIVATION ANALYSIS OF HYDRATED LAMELLAR OVINE BONE C. R. P. Peruzzi, T. Kochetkova, S. Remund, B. Neuwirthswander, J. Michler, J. Schwedrick 3:00pm - 3:12pm MINERAL CONTENT AND BIOMECHANICAL PROPERTIES OF FIBROBLASTULAR BONE A. Cantamesa, F. Muraro, V. Delaunoy, P. Compère, S. Blouin, M. A. Hartmann, R. Ruffoni 3:12pm - 3:24pm OPTIMISING METHODS OF MODELLING OSTEOCHONDRAL GRAFTS IN HUMAN TIBIOFEMORAL JOINTS G. A. Day, A. Clones, M. Mengoni, R. KWLlax	<b>TR02.4</b> <b>MUSCULOSKELETAL BIOMECHANICS I: MULTIPLE TOPICS</b> Chairs: Vee San Cheong, Enrico Dall'Ara 2:00pm - 2:12pm MECHANODENSIFYING IN BONE USING FLUID FLOW THROUGH NETWORKS R. Weinkamer 2:12pm - 2:24pm A REPRESENTATIVE VOLUME ELEMENT FOR BONE EXTRACELLULAR MATRIX E. Alizadeh, D. Casari, J. Michler, J. Schwedrick, P. Zysset 2:24pm - 2:36pm TEMPORAL CHANGES IN THE BONE MICROENVIRONMENT PRIOR TO AND FOLLOWING OVERT BREAST-CANCEROSTOLYLSIS A. S. Verbruggen, R. M. Dwyer, E. C. McCarthy, L. M. McLamano 2:36pm - 2:48pm DEGREE OF MINERALIZATION AND MINERALIZED COLLAGEN FIBRE ORIENTATION PREDICTS THE ELASTIC MODULUS OF BONE IN OSTEOGENESIS IMPERFECTA M. Inderman, T. Kochetkova, D. Casari, B. Willie, J. Michler, J. Schwedrick, P. Zysset 2:48pm - 3:00pm THERMAL ACTIVATION ANALYSIS OF HYDRATED LAMELLAR OVINE BONE C. R. P. Peruzzi, T. Kochetkova, S. Remund, B. Neuwirthswander, J. Michler, J. Schwedrick 3:00pm - 3:12pm MINERAL CONTENT AND BIOMECHANICAL PROPERTIES OF FIBROBLASTULAR BONE A. Cantamesa, F. Muraro, V. Delaunoy, P. Compère, S. Blouin, M. A. Hartmann, R. Ruffoni 3:12pm - 3:24pm OPTIMISING METHODS OF MODELLING OSTEOCHONDRAL GRAFTS IN HUMAN TIBIOFEMORAL JOINTS G. A. Day, A. Clones, M. Mengoni, R. KWLlax	<b>TR02.5</b> <b>SOFT TISSUE BIOMECHANICS III</b> Chairs: José Félix Rodríguez Matas, Maria José Gómez-Benito 2:00pm - 2:12pm HIGH FIDELITY SIMULATION OF CEREBRAL ANEURYSM WITH FLOW-DIVERTER E. Hachem 2:12pm - 2:24pm A COMPUTATIONAL METHODOLOGY FOR STUDYING THE MURINE BLOOD-BRAIN BARRIER HEMODYNAMICS S. Marinos, A. Sanz, C. Edero, A. Urbola, E. Rojas de Miguel, A. Ostiz, J. Cortes, N. Ramirez, C. Ortiz de Solórzano, A. Villanueva, M. Oteiza 2:24pm - 2:36pm HOW MACROSCOPIC TISSUE DEFORMATION AFFECTS THE BRAIN'S MICROSTRUCTURE M. Reiter, P. Paulsen, S. Buddy 2:36pm - 2:48pm CHARACTERIZATION OF MECHANICAL DAMAGE ON THE ESOPHAGEAL WALL OF CHRONIC HYPONIC LAMBS A. Bezmanovic, C. Garcia-Herrera 2:48pm - 2:59pm ALTERED MECHANICAL LOADING IN AMPUTEES RESULTS IN MILD GAINS OF KNEE DEGENERATION 8 YEARS POST TRAUMA J. C. Kathagen, J. Suißböck, M. J. Raschke, I. Herbst, F. Dyrna, O. Riesenbeck, J. Wermers, S. Oetting 3:00pm - 3:12pm NON-LINEAR HOMOGENIZATION OF SOFT TISSUES: APPLICATION TO TENDONS AND ARTERIES C. Morin, C. Helmrich, S. Avril 3:12pm - 3:24pm MESH ANCHORING TECHNIQUE IN UTERINE PROLAPSE REPAIR SURGERY: A FINITE ELEMENT ANALYSIS E. Silva, R. Rynkevicius, S. Brandão, T. Mascarenhas, A. Augusto Fernandes 3:24pm - 3:36pm PORCINE KNEE CARTILAGE MAPS DETERMINED WITH AUTOMATED INDENTATION AND CHARACTERIZED BY MACHINE LEARNING E. Hamsayeh Abbasi Niasar, L. Li	<b>TR02.6</b> <b>COMPUTATIONAL BIOLOGY II</b> Chairs: Maria Angeles Perez Anson, Aurélie Carlier 2:00pm - 2:12pm A NUMERICAL STUDY OF THE IMPACT ON GRAFT LONGEVITY FROM CORONARY ARTERY BYPASS GRAFTS' BULK-BODY GEOMETRY C. J. Bright, A. Deyranlou, S. Grant, A. Keshmiri 2:12pm - 2:24pm TOLERANCE			









**Wednesday, 29th June 2022**

	Archie Hall	Infante Hall	D. Maria Hall	D. Luis Hall	Porto Hall	Arrabida Hall	Miragaia Hall	S. Joao Hall
8:30 – 9:45	<p><b>TR01.9</b> <b>PATIENT-SPECIFIC MODELING IV</b> Chair: Claudio Viegari</p> <p>8:30am - 8:42am CT-BASED FE AND COMPUTATIONAL FLUID DYNAMICS APPLIED TO SCAFFOLD-BASED RECONSTRUCTION OF A SHEEP MANDIBLE <i>B. M. Ferguson, W. Lewin, H. Zeigat, J. Clark, Q. Li</i></p> <p>8:42am - 8:54am ULTRASOUND-BASED FSI MODELING OF AORTIC ANEURYSMS: IMPACT OF THE AORTIC BIFURCATION AND INLET VELOCITY PROFILE <i>J. Fankem, E. van Engelen, E. Maas, A. Nieuweld, M. van Sambeek, F. van de Vosse, R. Laporta</i></p> <p>8:54am - 9:06am VALIDATION OF AN IMAGE-BASED APPROACH FOR PATIENT-SPECIFIC ARTERIAL MODELLING IN CORONARY STENTING SIMULATIONS <i>G. Poletti, L. Antonini, P. Tsoumpou, G. S. Karanasiou, D. I. Fotiadis, L. Perrini, G. Pennati</i></p> <p>9:06am - 9:18am EVALUATING THE EFFECT OF COMPUTATIONAL DOMAIN REDUCTION IN ASCENDING AORTA SIMULATIONS <i>A. Martinez, L. Geranzi, M. Daniel, P. Escrig, J. Tamasi, M. Rochette, M. E. Biancolini</i></p> <p>9:18am - 9:30am PATIENT-SPECIFIC PRE- AND POST-SURGICAL STOMACH MODELS <i>I. Toniolo, A. Berardo, S. Perrotti, G. Quera, C. Fianillo, E. L. Carmel</i></p> <p>9:30am - 9:42am ON THE USE OF DIGITAL TWIN TECHNOLOGY ARIELLE FOR THE DEVELOPMENT OF PERINATAL LIFE SUPPORT SYSTEMS <i>B. G. van Willigen, M. B. van der Hout-vander Jagt, W. Huberts, F. N. van de Vosse</i></p>	<p><b>TR02.9</b> <b>MUSCULOSKELETAL BIOMECHANICS III: HIP, TRUNK, FOOT</b> Chairs: Ivo Jonkers, Erica Beaucage-Gauvreau</p> <p>8:30am - 8:42am HIP CONTACT FORCES IN PATIENTS WITH INCREASED FEMORAL ANTEROSION DO NOT DIFFER WITH DIFFERENT GAIT PATTERNS <i>M. Alexander, E. Vriehwegger, J. Cip, R. G. Brunner, E. De Prier</i></p> <p>8:42am - 8:54am DIFFERENCES IN IMPINGEMENT PATTERNS IN CAM-TYPE HIP WITH SUPERIOR AND ANTERIOR ASPHERICITY OF THE FEMUR <i>A. C. Jones, T. D. Stewart, N. Mahes, C. Holton</i></p> <p>8:54am - 9:06am COMPARATIVE EFFECTS OF SURGICAL AND NON-SURGICAL THERAPY ON HIP CONTACT FORCE FOR FEMOROACETABULAR IMPINGEMENT SYNDROME <i>A. Massari, A. Diamond, T. Savage, I. Grant, M. Hall, K. Bennell, J. Eyles, L. Spiers, D. Hunter, D. Lloyd, D. Saxby</i></p> <p>9:06am - 9:18am SYNERGY-BASED MULTIBODY KINEMATICS OPTIMIZATION TO TRACK ALL THE FOOT BONES WITH A STANDARD GAIT PROTOCOL <i>A. Pompili, M. Concani, N. Santuci, A. Leardini, S. Durante, C. Belvedere</i></p> <p>9:18am - 9:30am REFINING THE OFFBOARD FOOT MODEL TO DESCRIBE THE KINEMATICS OF THE MEDIAL LONGITUDINAL ARCH <i>J. Uhan, A. Kothari, A. Zavracky, J. Stebbins</i></p> <p>9:30am - 9:42am VALIDATION OF AN ELECTROMYOGRAPHY-DRIVEN MUSCULOSKELETAL MODEL FOR TRUNK MECHANICAL ANALYSIS <i>A. Moya-Esteban, H. van der Kooij, M. Sartori</i></p>	<p><b>TR03.9</b> <b>IMPLANTS / ORTHOTICS / PROSTHETICS / DEVICES VII: BONE RESPONSE</b> Chairs: Peter Zioupos, Federica Andrea Bologna</p> <p>8:30am - 8:42am A COUPLED FINITE ELEMENT AND SYSTEMS BIOLOGY MODEL TO STUDY THE ROLE OF MECHANICS AND INFLAMMATION IN KNEE OA <i>S. Mukherjee, R. Lesage, L. Geris</i></p> <p>8:42am - 8:54am IDENTIFICATION OF THE MOST IMPORTANT CELLULAR PROCESSES BEHIND IMPAIRED BONE REGENERATION IN TYPE-2 DIABETES <i>M. Jaber, G. Dudu, S. Checa</i></p> <p>8:54am - 9:06am EMERGENCE OF BONE REMODELLING BEHAVIOUR FROM A MICRO-MULTIPHYSICS AGENT-BASED MODEL <i>J. J. Kendall, D. Bazzetti, C. Ledoux, C. C. Marques, E. Wehrle, R. Müller</i></p> <p>9:06am - 9:18am BIOMECHANICAL MODEL OF BONE REMODELING COUPLED WITH ADVANCED DISCRETIZATION METHODS <i>M. Poyoteo, E. Behling, R. Natal</i></p> <p>9:18am - 9:30am THE INFLUENCE OF WNT PATHWAY IN BONE REMODELING AND CALCIUM CONCENTRATION IN MICROGRAVITY CONDITIONS <i>A. Pica, A. Marinazzi, F. Marinazzi, F. Bini</i></p> <p>9:30am - 9:42am THE INFLUENCE OF SCREW CONFIGURATIONS ON LCP UNDER THE TIME-DEPENDENT CALLUS HEALING PROCESS <i>S. Verbruggen, C. Schurman, T. Alliston</i></p>	<p><b>TR04.9</b> <b>MECHANOBIOLOGY III: IN SILICO</b> Chair: Hans Van Oosterwyck</p> <p>8:30am - 8:42am A COUPLED FINITE ELEMENT AND SYSTEMS BIOLOGY MODEL TO STUDY THE ROLE OF MECHANICS AND INFLAMMATION IN KNEE OA <i>S. Mukherjee, R. Lesage, L. Geris</i></p> <p>8:42am - 8:54am IDENTIFICATION OF THE MOST IMPORTANT CELLULAR PROCESSES BEHIND IMPAIRED BONE REGENERATION IN TYPE-2 DIABETES <i>M. Jaber, G. Dudu, S. Checa</i></p> <p>8:54am - 9:06am EMERGENCE OF BONE REMODELLING BEHAVIOUR FROM A MICRO-MULTIPHYSICS AGENT-BASED MODEL <i>J. J. Kendall, D. Bazzetti, C. Ledoux, C. C. Marques, E. Wehrle, R. Müller</i></p> <p>9:06am - 9:18am BIOMECHANICAL MODEL OF BONE REMODELING COUPLED WITH ADVANCED DISCRETIZATION METHODS <i>M. Poyoteo, E. Behling, R. 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Singh</i></p> <p>9:06am - 9:18am HIGHER JOINT LOADING DUE TO INCREASED JOINT ANGLES IN PROFESSIONAL COMPARED TO NOVICE LATIN DANCERS <i>C. Egner, B. Schmedtmayer, H. Kainz</i></p> <p>9:18am - 9:30am A POSTURAL STRATEGY AT STRING RELEASE IN ELITE ARCHERS <i>A. Kuch, R. Tisserand, F. Durand, T. Monnet</i></p> <p>9:30am - 9:42am THE RELIABILITY OF A NOVEL 3D MOTION CAPTURE PROTOCOL FOR THE ANALYSIS OF INSTEP SOCCER KICK KINEMATICS <i>D. Al Otti, L. Schey</i></p>	<p><b>TR06.9</b> <b>IMPACT / INJURY BIOMECHANICS I</b> Chairs: David Milton, Ciaran Simms</p> <p>8:30am - 8:55am DIGITAL TWINS AND COUPLED APPROACHES FOR MANAGEMENT OF TIBIAL PLATEAU FRACTURE <i>A. Germaineau</i></p> <p>8:55am - 9:07am A MULTIMODAL FRAMEWORK FOR EVALUATING THE EFFICACY OF ORTHOPEDIC IMPLANTS IN A SIDEWAYS FALL IMPACT <i>E. Bilvan, A. Jung, J. Flaps, A. Baker, B. Helgason, P. Gay, P. Crighton</i></p> <p>9:07am - 9:19am MECHANICAL CHARACTERIZATION OF A KNEE COMPRESSION FRACTURE BY H-DVC ON A CLINICAL CT-SCAN <i>M. Seveyns, T. Vandevure, K. Aubert, V. Valle, A. Germaineau</i></p> <p>9:19am - 9:31am EXPERIMENTAL STUDY OF CERVICAL SPINE INJURY AND KINEMATICS IN LATERAL HEAD IMPACT <i>M.-H. Beausejour, N. Bailly, W. Wei, L. Troude, P. Panichelli, P.-J. Arnaud</i></p> <p>9:31am - 9:43am CHANGE OF DIRECTION BIOMECHANICS AND COORDINATION IN ANTERIOR CRUCIATE LIGAMENT-INJURED FEMALE FOOTBALLERS <i>S. Di Paolo, L. Braganzoni, A. Grassi, S. Zaffagnini</i></p>	<p><b>TR07.9</b> <b>SKIN BIOMECHANICS</b> Chair: Jérôme Molimard, Michael Crichton</p> <p>8:30am - 8:55am SKIN – AN ACCESSIBLE WINDOW TO HEALTH <i>M. Crichton</i></p> <p>8:55am - 9:07am CHARACTERISING THE MECHANICAL PROPERTIES OF SKIN WOUNDS <i>S. Medina-Lombardero, J. Cash, B. Reuben, M. Crichton</i></p> <p>9:07am - 9:19am COMBINED MEASUREMENT OF FRICTION AND THROUGH-THICKNESS DEFORMATION ON EX VIVO SKIN SAMPLES <i>B. Eydan, B. Pierrat, N. Curt, H. Zahouani, J. Molimard</i></p> <p>9:19am - 9:31am TENSILE TESTING OF CELL SHEETS: AN EXPERIMENTAL APPROACH <i>M. G. Fernandes, M. D. Mallo, A. André, P. Martins, A. P. Marques</i></p>	<p><b>TR08.9</b> <b>INSPIRATIONAL KEY NOTE LECTURE - HOW TO COMMUNICATE SCIENCE</b> Lecturer: Joana Lobo Antunes, Chair: Marta Campos Ferreira</p>
09:45 – 10:15	Coffee break							
10:15 – 11:40	<p><b>TR01.10</b> <b>CARDIOVASCULAR BIOMECHANICS VIII: MULTISCALE COMPUTATIONAL MODELING</b> Chairs: Fanette Chassagne, Diego Gallo</p> <p>10:15am - 10:40am OPPORTUNITIES IN MULTISCALE AND MULTIPHYSICS HUMAN HEART MODELING <i>M. Peiffer</i></p> <p>10:40am - 10:52am ON THE INFLUENCE OF THE ORTHOTROPIC TISSUE IN A ELECTROMECHANICAL HEART MODEL <i>D. Holz, D. Martonova, E. Schalles, M. T. Duong, M. Alkassar, S. Leyendecker</i></p> <p>10:52am - 11:04am USING THE DIGITAL TWIN OF HUMAN FETAL HEART TO PREDICT OUTCOMES OF A FETAL HEART INTERVENTION <i>L. E. Green, W. A. Chan, A. Tulez, G. Tulez, C. H. Yap</i></p> <p>11:04am - 11:16am COMPUTATIONAL STUDY ON TWO IDEALIZED MODELS OF THE LEFT VENTRICLE WITH DIFFERENT MYOFIBER ARCHITECTURES <i>K. Osouli, F. De Gaetano, P. Zunino, M. L. Costantino</i></p> <p>11:16am - 11:28am IMPACT OF HYPERTENSION AND ARCH MORPHOLOGY ON AORTIC HEMODYNAMICS: A PRELIMINARY NUMERICAL ANALYSIS <i>M. A. D'Elia, A. Gaimi, M. Marrocco-Trischitta, F. Starla, A. Redelli</i></p>	<p><b>TR02.10</b> <b>MUSCULOSKELETAL BIOMECHANICS IV: METHODS</b> Chairs: Claudia Mazza, Simon Herger</p> <p>10:15am - 10:40am BIOMECHANICS OF CRANIOFACIAL GROWTH <i>M. Moazen</i></p> <p>10:40am - 10:52am TENDON COMPLIANCE AFFECTS TIME-SERIES ENERGY EXPENDITURE <i>A. I. Luis Pena, M. Abshrift, F. De Groot, E. M. Gutierrez-Farewik</i></p> <p>10:52am - 11:04am CALIBRATION OF A NEUROMUSCULOSKELETAL MODEL AT THE JOINT TORQUE AND JOINT STIFFNESS LEVELS SIMULTANEOUSLY <i>C. P. Cop, A. S. Chouten, B. Koopman, M. Sartori</i></p> <p>11:04am - 11:16am ESTIMATING A SINGLE MAXIMUM MUSCLE-TENDON LENGTH FROM DISCRETISED MUSCLES <i>C. F. Hayford, E. Montefiori, E. Pratt, C. Mazza</i></p> <p>11:16am - 11:28am QUANTITATIVE VALIDATION OF A DEEP LEARNING BASED MARKERLESS MOTION CAPTURE SYSTEM <i>T. Tempkin, T. Ellison, D. Chambers, N. Louis, O. Medjagour, K. Saylor, D. Nicollella</i></p> <p>11:28am - 11:40am SMART FLEXIBLE GARMENT AND RAPID NEUROMUSCULOSKELETAL MODELLING FOR FAST AND ACCURATE CLINICAL DECISION-MAKING <i>D. Simonetti, B. Koopman, S. Massimo</i></p>	<p><b>TR03.10</b> <b>HARD TISSUE BIOMECHANICS IV: BONE REMODELING, AND DISEASES</b> Chairs: Enrico Dall'Acqua, Alexandra Tits</p> <p>10:15am - 10:27am EFFECTS OF AN ALTERNATING PTH AND MECHANICAL LOADING TREATMENT IN AN OVARIECTOMISED MOUSE MODEL <i>V. S. Cheung, B. Roberts, V. Kodikamanathan, E. Dall'Acqua</i></p> <p>10:27am - 10:39am HOMOGENIZED-FE-BASED INVERSE BONE REMODELING: MODIFIED OPTIMIZATION CRITERION AND EVALUATION ON THE DISTAL RADIUS <i>S. Bachmann, D. H. Pahr, A. Synek</i></p> <p>10:39am - 10:51am MICRO-RE DERIVED MECHANICAL PROPERTIES FOR TRABECULAR BONE REMODELING AND ADAPTATION UNDER LOADING <i>D. Boeretti, C. C. Marques, J. J. Kendall, G. A. Kuhn, E. Wehrle, Y. D. Bansod, L. Müller</i></p> <p>10:51am - 11:03am NUMERICAL AND EXPERIMENTAL APPROACH TO STUDY THE RESPONSE OF YAP AND NPC TO DIFFERENT MECHANICAL SIGNALS <i>S. Saporito, C. F. Natalo, C. Menna, P. A. Netti, M. Ventre</i></p> <p>11:03am - 11:15am DAMAGE MECHANICS OF TYPE-2 DIABETIC TRABECULAR BONE SUBJECT TO MONOTONIC AND CYCLIC LOADING <i>M. Britton, J. Schiavi, T. J. Vaughan</i></p> <p>11:15am - 11:27am IN ENDO-STAGE KNEE OSTEOARTHRITIS THE SUBCHONDRAL BONE MICROARCHITECTURE OF THE TIBIAL PLATEAU IS CORRELATED TO THAT OF THE DISTAL FEMUR <i>F. Azari, W. Olyn, J. Bellemans, L. Schey, G. H. van Lenthe</i></p> <p>11:27am - 11:39am NEW INSIGHTS INTO HIGH-RESOLUTION STRAIN FIELDS OF TRABECULAR BONE USING DIGITAL IMAGE CORRELATION <i>N. Amraoui, D. Pahr</i></p> <p>11:39am - 11:51am SITE-MATCHED MICROPIILLAR COMPRESSION AND RAMAN SPECTROSCOPY TO ASSESS JAW BONE QUALITY <i>T. Kochetkova, A. Groetsch, C. Peruzzi, M. Indermaur, S. Remund, B. Neuenchwander, J. Hofstetter, B. Bellon, J. Michler, P. Zysset, J. Schwedrzik</i></p>	<p><b>TR04.10</b> <b>MECHANOBIOLOGY IV: IN SILICO</b> Chairs: Hans Van Oosterwyck, Daphne Welts</p> <p>10:15am - 10:27am A 3D COMPUTATIONAL MODEL OF AORTIC VALVE INTERSTITIAL CELL CONTRACTILE BEHAVIOR WITHIN A PEG HYDROGEL MEDIUM <i>A. Zhang, M. S. Sacks</i></p> <p>10:27am - 10:39am AGENT - BASED MODEL OF VASCULOGENESIS INCLUDING CELL-ECM INTERACTIONS <i>A. Carrasco-Martín, T. Alarcón, J. A. Sanz-Herrera</i></p> <p>10:39am - 10:51am THE ROLE OF OUTER-VASCULAR MECHANICS ON SPROUTING ANGIOGENESIS: AN IN SILICO STUDY <i>C. Dazzi, J. Mehl, G. N. Dudu, S. Checa</i></p> <p>10:51am - 11:03am FINITE ELEMENT AND EXPERIMENTAL APPROACH TO STUDY THE RESPONSE OF YAP AND NPC TO DIFFERENT MECHANICAL SIGNALS <i>S. Saporito, C. F. Natalo, C. Menna, P. A. Netti, M. Ventre</i></p> <p>11:03am - 11:15am MAGNETO-ACOUSTIC INTERACTION IN MAGNETIC NANOSYSTEMS <i>R. Marques, A. Ashofteh Yazdi, J. Melchor, R. Ibarra, G. Rus</i></p> <p>11:15am - 11:27am AGENT-BASED MODEL OF LONG-TERM DISEASE PROGRESSION IN DUCHENNE MUSCULAR DYSTROPHY <i>K. Crump, S. Peice-Cottles, S. Blenkner</i></p> <p>11:27am - 11:39am IN SILICO AVATARS OF CELLS TO PREDICT AND DRIVE CELL MIGRATION ON TRAVELLING WAVES <i>J.-L. Milan, M. Vossaux, L. Pieuchot, R. Anselme, L. Manflicier</i></p>	<p><b>TR05.10</b> <b>SPORT BIOMECHANICS II</b> Chairs: António Prieto Veloso, Joao Paulo Vilas-Boas</p> <p>10:15am - 10:27am CONTRIBUTIONS TO THE SHAPE OF THE FORCE-VELOCITY RELATIONSHIP IN SIMULATIONS OF LOADED SQUAT JUMPS <i>S. J. Allen</i></p> <p>10:27am - 10:39am A KINEMATIC ANALYSIS OF THE 10- BALL BREAK IN PROFESSIONAL POOL BILLIARDS <i>P. Kornfeldt, J. Boinoff, A. Baca</i></p> <p>10:39am - 10:51am DO FATIGUE-INDUCED CHANGES IN COGNITIVE PERFORMANCE RELATE TO CHANGES IN KNEE MECHANICS? <i>F. Bertozzi, P. D. Fischer, F. Alfatouian, K. A. Hutchison, M. Galli, M. Tardino, C. Storza, S. M. Monfort</i></p> <p>10:51am - 11:03am FINITE ELEMENT MODELLING OF SPORTS FOOTWEAR GRIP PERFORMANCE ON WET HARD SURFACES <i>L. Sissler, J. Gringet-Chare, K. Beschornes, T. Tarrade</i></p> <p>11:03am - 11:15am ACCURACY OF A NEW LOCAL POSITIONING SYSTEM IN OBTAINING SPEED AND ACCELERATION DURING GAME SPORTS MOVEMENTS <i>P. X. Fuchs, Y.-C. Chau, W.-H. Chen, N. J. Fialo, F.-H. Shiang</i></p>	<p><b>TR06.10</b> <b>IMPACT / INJURY BIOMECHANICS II</b> Chairs: David Milton, Ciaran Simms</p> <p>10:15am - 10:40am MODELLING BLAST INJURY: FROM CLINICAL DATA TO PATHOPHYSIOLOGY AND PROTECTION <i>S. Masouras</i></p> <p>10:40am - 10:52am TOWARDS COMPUTATIONAL MODELLING OF ACTIVE RESPONSE IN CYCLIST FALLS FROM IN-THE-WILD FOOTAGE <i>K. Gildea, C. Simms</i></p> <p>10:52am - 11:04am SIMULATION OF BICYCLE ACCIDENTS USING HUMAN BODY MODELS <i>K. Bratby, V. Alvarez, A.-K. Sæther, D. Olsson, H. Wendelup</i></p> <p>11:04am - 11:16am PERI-PROSTHETIC FRACTURE MODELLING USING A COMBINED FINITE ELEMENT – SMOOTH PARTICLE HYDRODYNAMIC METHOD <i>O. Cebece, S. Checa</i></p> <p>11:16am - 11:28am SIMULATING HEAD-FIRST IMPACT IN SPORT: A HYBRID MULTIBODY AND FINITE ELEMENT HEAD AND NECK MODEL <i>T. Holzinger, J. Martinek, D. Cazzola, B. Sagl</i></p> <p>11:28am - 11:40am BIOMECHANICAL BEHAVIOUR OF THE TRANSVERSE LIGAMENT OF THE ATLAS: AN IN VITRO EXPERIMENTAL ANALYSIS <i>S. Laporte, S. Persohn, B. Sandaz</i></p>	<p><b>TR07.10</b> <b>ERGONOMICS / OCCUPATIONAL BIOMECHANICS / REHABILITATION I</b> Chairs: Margit Göhler, Xuyuang Wang</p> <p>10:15am - 10:40am EXPERIMENTAL AND BIOMECHANICAL MODELING INVESTIGATIONS FOR UNDERSTANDING SEATING DISCOMFORT <i>X. Wang</i></p> <p>10:40am - 11:05am EMMA-DRIVE - DIGITAL HUMAN TWINS FOR EVALUATING ERGONOMICS AND SAFETY IN NEW MOBILITY SOLUTIONS <i>J. Lim, J. Fahr</i></p> <p>11:05am - 11:17am MOTION ANALYSIS OF THERAPEUTIC CLIMBING: A REHABILITATION TOOL FOR CHILDREN WITH CEREBRAL PALSY <i>C. Monali, G. Simoni, J. A. Tuhtan, E. Palermi, M. Galli, A. Colombo</i></p> <p>11:17am - 11:29am MUSCLE ACTIVITY ASSOCIATED WITH PERFORMING ROBOT-ASSISTED AND CONVENTIONAL LAPAROSCOPY <i>A. Shugaba, J. Lambert, H. Nuttall, D. Subar, C. Gaffney, T. Bampouras</i></p>	<p><b>TR08.10</b> <b>BIOFLUID AND TRANSPORT I</b> Chairs: Frans van de Vosse, Junfeng Zhang</p> <p>10:15am - 10:40am COMPUTER MODELLING AND INVESTIGATIONS OF CAPSULE DYNAMICS IN FLOWS: MEMBRANE VISCOSITY EFFECT <i>J. Zhang</i></p> <p>10:40am - 10:52am UMBILICAL CORDS ABNORMALITIES CLASSIFICATION BASED ON FLOW SIGNALS FROM DOPPLER ULTRASOUND SIMULATOR <i>S. Nafidi, Y. Nazemzay Ashkenazi, A. Rattovsky</i></p> <p>10:52am - 11:04am NEAR WALL DYNAMICS OF A TILTED LIGHTHOUSE RETURN CANNULA FOR CHILDREN WITH CEREBRAL PALSY <i>F. Fiasco, L. M. Broman, L. PrahlWitzberg</i></p> <p>11:04am - 11:16am AN IN-SILICO PIPELINE FOR PATIENT-SPECIFIC HAEMODYNAMIC ANALYSIS OF THE AORTA <i>S. Black, C. Maclean, P. Hall Barrientos, K. Ritos, A. Kazakidi</i></p>
11:45 – 12:30	Keynote lecture 3: MODELLING THE HUMAN NEUROMUSCULAR SYSTEM ACROSS SPATIO-TEMPORAL SCALES FOR A NEW CLASS OF MOVEMENT ENHANCING TECHNOLOGIES, Massimo Sartori, Chairs: Jérôme Noailly, Paulo Rui Fernandes							
12:30 – 13:15	Lunch break							
13:15 – 14:00	Poster sessions: P513 - P518							
14:00 – 15:00	Best Doctoral Thesis Award, Chairs: Markus Heller, Ivo Jonkers							
15:00 – 15:30	Coffee break							
15:30 – 16:45	<p><b>TR01.12</b> <b>CARDIOVASCULAR IX: IMAGE-BASED BIOMECHANICS</b> Chairs: Fanette Chassagne, Diego Gallo</p> <p>3:30pm - 3:42pm DECIPHERING VORTICITY IN THE ABDOMINAL AORTIC ANEURYSM <i>V. Mazzi, K. Calò, D. Gallo, A. Jolla, U. Morbiducci</i></p> <p>3:42pm - 3:54pm PREDICTION OF ANALOG THROMBI MECHANICAL PROPERTIES, COMPOSITION, AND CONTRACTION USING CT IMAGING <i>J. M. H. Cruts, J.-A. Giesen, K. van Gaalen, R. Beurskens, Y. Ridwan, M. L. Djibakova, H. M. M. van Beusekom, N. Boodt, A. vander Lugt, F. Gijzen, R. Cihalova</i></p> <p>3:54pm - 4:06pm UNIVERSAL LEFT ATRIAL APPENDAGE COORDINATES TO COMPARE AND CLASSIFY PHENOTYPIC FLOW PATTERNS <i>J. Duenas-Pampalona, A. Gonzalez, S. F. Bifulca, P. M. Boyle, E. McVeigh, A. M. Kahn, P. Martinez-Legazpi, J. Garcia Garcia, J. Sierra-Pallares, M. Garcia-Villalba, O. Flores, J. Bermejo, J. C. del Alamo</i></p> <p>4:06pm - 4:18pm PATIENT-SPECIFIC FLOW SIMULATIONS OF A DISSECTED AORTA INFORMED BY 4D FLOW MRI: THE IMPACT OF SEGMENTAL ARTERIES <i>C. Stokes, F. Haupt, D. Becker, V. Muthurangu, H. von Tengg-Koblyk, S. Baisani, V. Diaz-Zuccarini</i></p> <p>4:18pm - 4:30pm 4D FLOW MRI AS NETWORK-BASED ANALYSIS OF THE HEMODYNAMIC CORRELATION PERSISTENCE LENGTH IN THE HEALTHY AORTA <i>K. Calò, A. Guato, D. Gallo, J. Rodriguez Palomares, S. Scarsoglio, L. Ridolfi, U. Morbiducci</i></p> <p>4:30pm - 4:42pm CALIBRATION OF THE MECHANICAL BOUNDARY CONDITIONS OF A THORACIC AORTA MODEL INCLUDING THE HEART MOTION EFFECT <i>L. Geranzi, A. Martinez, M. E. Biancolini, M. Rochette, O. Bouchot, A. Lalonde, P. P. Valentini</i></p>	<p><b>TR02.12</b> <b>MUSCULOSKELETAL BIOMECHANICS V: KNEE AND OTHERS</b> Chairs: Anneteg Mündermann, Claude Filib Hayford</p> <p>3:30pm - 3:42pm A NEW GENERALIZED CONTINUUM APPROACH TO MODEL SPINAL GROWTH <i>N. M. Castoldi, M. Antico, M. Martin, P. Pivonka, V. Sansalone</i></p> <p>3:42pm - 3:54pm EXPERIMENTAL INVESTIGATION OF THE FRACTURE MECHANICS OF FEMURS OF ZUCKER DIABETIC FATTY (ZDF) RATS <i>G. E. Manahan, J. Schiavi-trinz, T. J. Vaughan</i></p> <p>3:54pm - 4:06pm INFLUENCE OF LIMB ALIGNMENT AND KNEE JOINT LOADING ON CONDYLAR KINEMATICS USING DYNAMIC VIDEOFLUOROSCOPY <i>B. Postolka, O. Ulrich, W. R. Taylor, R. List, P. Schütz</i></p> <p>4:06pm - 4:18pm CHARACTERISING THE RELATIONSHIP BETWEEN KNEE BONE GEOMETRY AND PASSIVE KINEMATICS <i>D. O'Rourke, F. Bucci, W. Burton, R. Al-Dirini, M. Taylor, S. Martelli</i></p> <p>4:18pm - 4:30pm VARIATION IN KNEE CONTACT MECHANICS DUE TO ANATOMY <i>J. Yao, G. Day, N. Wijayathunga, A. Jones, R. Wilcox, M. Mengoni</i></p> <p>4:30pm - 4:42pm HIGH TIBIAL OSTEOTOMY NORMALIZES KNEE AMBULATORY LOADS <i>E. De Prier, C. Nüesch, G. Pagenstert, E. Vriehwegger, C. Egloff, A. Mündermann</i></p>	<p><b>TR03.12</b> <b>IMPLANTS / ORTHOTICS / PROSTHETICS / DEVICES VIII: MULTIPLE TOPICS</b> Chairs: Peter Varga, Mauricio Cruz Saldivar</p> <p>3:30pm - 3:42pm A COMPUTATIONAL MODEL OF THE ZEBRAFISH HEART ELECTROPHYSIOLOGY <i>L. Cestariolo, G. Luaghi, P. L'Epitainier, J. F. Rodriguez Matas</i></p> <p>3:42pm - 3:54pm LAMENESS INFLUENCES BREAKOVER DURATION IN HORSES <i>E. V. Briggs, C. Mazza</i></p> <p>3:54pm - 4:06pm HISTOMORPHOMETRIC ANALYSIS OF CANINE TRABECULAR BONE IN THE OSTEOOPROTIC CONTEXT <i>E. Kostenko, A. Pockevitus, A. Maknickas</i></p> <p>4:06pm - 4:18pm LOAD TRANSFER IN CUSTOM MADE IMPLANT FOR OSTEOCHONDRAL LESION, A FINITE ELEMENT STUDY <i>A. Ramos, M. Vieira</i></p> <p>4:18pm - 4:30pm BIOMECHANICAL EVALUATION OF A NOVEL BIOMIMETIC ARTIFICIAL DISC PROSTHESIS IN CANINE CERVICAL CADAVERIC SPINES <i>S. G. A. M. Jacobs, J. Doodkorte, S. A. Kamali, A. M. Abdelgawad, S. Ghazanfari, M. A. Tryfonidou, J. Arts, B. P. Meij, K. Ito</i></p> <p>4:30pm - 4:42pm NOVEL BIODEGRADABLE CAROTID GRAFT: EXPERIMENTAL ASSESSMENT THROUGH HAN ANIMAL TRIAL <i>A. Hendrickx, M. Ghazemi, T. Verveense, T. Langenaeken, H. Baues, H. Fehervary, M. Cox, P. Clous, F. Rega, N. Farnoya, B. Meuris</i></p> <p>4:42pm - 4:54pm INTEGRATION OF MUSCULOSKELETAL AND MODEL ORDER REDUCED FE SIMULATION FOR PASSIVE ANKLE FOOT ORTHOSIS DESIGN <i>D. Scherb, P. Steck, S. Wartzack, J. Hiebling</i></p> <p>4:54pm - 4:66pm HIGH-FIDELITY FINITE ELEMENT STENT-GRAFT MODELING <i>A. Ramella, E. Migliavacca, J. F. Rodriguez Matas, F. Dedola, M. Coratti, F. Heim, S. Allevi, D. Bissacco, M. Damiani, S. Tramacchi, G. Luaghi</i></p>	<p><b>TR04.12</b> <b>ANIMAL AND PLANT BIOMECHANICS</b> Chairs: Christian Peham, Balázs Gerics</p> <p>3:30pm - 3:42pm A COMPUTATIONAL MODEL OF THE ZEBRAFISH HEART ELECTROPHYSIOLOGY <i>L. Cestariolo, G. Luaghi, P. L'Epitainier, J. F. Rodriguez Matas</i></p> <p>3:42pm - 3:54pm LAMENESS INFLUENCES BREAKOVER DURATION IN HORSES <i>E. V. Briggs, C. Mazza</i></p> <p>3:54pm - 4:06pm HISTOMORPHOMETRIC ANALYSIS OF CANINE TRABECULAR BONE IN THE OSTEOOPROTIC CONTEXT <i>E. Kostenko, A. Pockevitus, A. Maknickas</i></p>	<p><b>TR05.12</b> <b>SPORT BIOMECHANICS III</b> Chairs: Joao Paulo Vilas-Boas, Hans Kainz</p> <p>3:30pm - 3:42pm BALL-FINGER POSITIONING FOR ACCURATE BASEBALL PITCHING <i>M. Kusafuka, K. Nishikawa, N. Tsukamoto, K. Kudo</i></p> <p>3:42pm - 3:54pm GROUND REACTION FORCE PREDICTION DURING RUNNING USING A FULL-BODY MULTIBODY MODEL <i>G. Marta, J. F. Faldago, C. Quental, F. G. Pinto</i></p> <p>3:54pm - 4:06pm EFFECT OF DIFFERENT PLAYERS' MOTION MODELS ON LINEAR AND NON-LINEAR MEASURES OF SPACE CONTROL IN FUTSAL <i>J. Bischofberger, J. Euel, B. Travassos, J. Sampato, A. Baca</i></p> <p>4:06pm - 4:18pm APPLYING PRINCIPAL COMPONENT ANALYSIS TO CHARACTERIZE THE BALANCING ABILITY OF ELITE SYNCHRONIZED ICE SKATERS <i>Z. Polya, B. Petra, R. M. Kiss</i></p> <p>4:18pm - 4:30pm THE INFLUENCE OF SEX, AGE AND PEAK KNEE ISOKINETIC TORQUE ON SINGLE LEG HOP DISTANCE <i>S. Herger, L. Bähli, C. Nüesch, S. Müller, C. Egloff, A. Mündermann</i></p>	<p><b>TR06.12</b> <b>IMPACT / INJURY BIOMECHANICS III</b> Chair: David Milton</p> <p>3:30pm - 3:42pm BIOMECHANICAL STUDY OF ELECTRIC SCOOTER FALLS <i>M. Fournier, H. Bailly, A. Schauble, Y. Petit</i></p> <p>3:42pm - 3:54pm E-SCOOTER CRASH SCENARIO AND KINEMATICS: ANALYSIS OF 112 FULL-BODY MULTIBODY MODEL <i>N. Bailly, S. Honore, Y. Petit, A. Noaim, A. Muller, W. Wei</i></p> <p>3:54pm - 4:06pm PELVIC SUBCUTANEOUS ADIPOSE TISSUE THICKNESS AND OUTER SHAPE CHANGE WITH POSITION FOR NUMERICAL MODELING <i>D. Hanesch, J. Muehlebauer, E. C. Sattler, N. Hoellhoff, R. E. Giunta, S. Peldschus, S. Schick</i></p> <p>4:06pm - 4:18pm BIOMECHANICAL EVALUATION OF THE SPATIAL CONFIGURATIONS OF STABILIZER USED IN DISTAL HUMERUS FRACTURE TREATMENT <i>A. Kruszewski, P. Piekarczyk, S. Piszczatowski</i></p> <p>4:18pm - 4:30pm CHANGES IN LOADING DURING FRACTURE HEALING DO NOT IMPACT BONE MICROARCHITECTURE OF THE CONTRALATERAL RADIUS <i>D. Whittier, M. Walle, P. Christen, P. Atkins, C. Collins, M. Blauth, K. Lippuner, R. Müller</i></p> <p>4:30pm - 4:42pm DEVELOPMENT OF A SIMPLIFIED HUMAN THORACIC FE MODEL FOR BLUNT IMPACT AND RELATED TRAUMA <i>M. Chaufer, R. Delille, B. Bourel, C. Marechal, F. Laura, O. Mauzac, S. Roth</i></p>	<p><b>TR07.12</b> <b>ERGONOMICS / OCCUPATIONAL BIOMECHANICS / REHABILITATION II</b> Chairs: Margit Göhler, Xuyuang Wang</p> <p>3:30pm - 3:55pm INDIVIDUALIZED VS. POPULATION-BASED MUSCULOSKELETAL SIMULATION FOR MEDICAL AND PRODUCT ENGINEERING <i>J. Mieling</i></p> <p>3:55pm - 4:07pm TOWARDS THE LEARNING OF HUMAN-SEAT INTERACTIONS FOR RUNTIME EFFICIENT HUMAN MODELS BASED ON PRESSURE DISTRIBUTION <i>D. A. Falvo, M. Ralle, F. Kempster, J. Fahr</i></p> <p>4:07pm - 4:19pm FE MODELING AND SIMULATION OF THE CUPULA DEFORMATION OF A SEMICIRCULAR CANAL IN A CLINICAL ROUTINE <i>M. Blaise, D. Baumgartner, A. Charpiot</i></p>	<p><b>TR08.12</b> <b>BIOFLUID AND TRANSPORT II</b> Chairs: Frans van de Vosse, Junfeng Zhang</p> <p>3:30pm - 3:42pm THROMBUS FORMATION IN A STENO TIC CHANNEL: A VISCOELASTIC MATERIAL MODEL <i>M. Rezaeimoghaddam, O. Dhaensens, A. Germain, F. N. van de Vosse</i></p> <p>3:42pm - 3:54pm STUDY OF THE FLUID BEHAVIOUR IN 3D PRINTED MACROSCAFFOLDS USING CFD ANALYSIS AND PIV <i>T. Baumgartner, E. Harov, M. Bösenhofer, O. Guillaume, A. Ovsianikov, M. Hanzek, M. Göhler</i></p> <p>3:54pm - 4:06pm HIGH DENSITY MICROFLUIDIC TRAP ARRAY GEOMETRIC OPTIMIZATION VIA COMPUTATIONAL FLUID DYNAMICS STUDY <i>N. Ruysen, J. Fattaccioni, M.-C. Jullien, R. Allena</i></p>
16:45 – 17:15	ESB 2022 Closing Ceremony							