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1606	Multiplanar dynamic humeral elevation effect on scapulothoracic 3D kinematics	Anne Charrier, Annie Viallat, Emmanuele Jordan Estes, Jeff Mann, David Stapleton, Traci Bush, Vassilios Vardaxis	Vassilios Vardaxis	P2195
1608	Local head injury criteria for cerebral contusion: a numerical study on their predictive capability.	Andrea Menichetti, Dries De Kegel, Bart Depreitere, Nele Famaey, Jos Vander Sloten	Andrea Menichetti	P2215
1610	Integration of models and experiments for bone tissue formation	Gabriele Nasello, María Ángeles Pérez, José Manuel García Aznar	Gabriele Nasello	P2293
1612	Mechanical Response of a Novel Synthetic Femur for Representing Osteoporotic Bone	Cooper Gluek, Radovan Zdero, Cheryl Quenneville	Cooper Gluek	P4357
1615	Muscle activation analysis during a functional motion of the wrist	Vasiliki Vardakastani, Oluwalogbon Akinnola, Angela E Kedgley	Vasiliki Vardakastani	P2148
1616	Influence of ice hockey helmet VN liner thickness on dynamic response of a Hybrid III headform in a rotational impact test	Ali Khatib, Andrew Meehan, Blaine Hoshizaki	Ali Khatib	P2216
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1619	Volume-dependent variation in human cortical bone microarchitecture using synchrotron radiation microCT	Lindsay Loundagin, David Cooper, W. Brent Edwards	Lindsay Loundagin	P3063
1622	Estimating linear elastic fracture mechanics factors for human skull	Lilibeth A. Zambrano M., Aisling Ni Annaidh	Lilibeth A. Zambrano M.	P2217



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1624	Reinforcing interpenetrating network hydrogels with 3D-printed polymeric networks leads to synergistic increase in mechanical properties	Rossana Schipani, Swetha Rathan, Romain Florentin, Caitríona Lally, Daniel Kelly	Rossana Schipani	P3100
1625	How variable are lower-limb musculoskeletal loads during walking among typically-developing children?	Giordano Valente, Elmer Middendorp, Alberto Leardini, Fulvia Taddei	Alberto Leardini	P1244
1628	On the fluid mechanical tuning of sperm behaviour: theoretical and numerical explorations.	Eamonn Gaffney, Kenta Ishimoto	Eamonn Gaffney	P4515
1632	Stent – artery interaction and altered haemodynamics : A parametric study of stent design using finite element method	Avinash Kumar, Pooja Bhati, Naresh Bhatnagar	Avinash Kumar	P3243
1635	Conformation affects posture and movement in German Shepherd Dogs.	Alex Humphries, Aliah Shaheen, Constanza Gomez Alvarez	Aliah Shaheen	P4036
1636	Effects of acute plantarflexion stretching on anterior cruciate ligament loading during single-leg landing	Shelby Peel, Matthew Hoch, Joshua Weinhandl	Shelby Peel	P4281
1637	Stump-socket interaction in prosthetic gait of subjects with above knee amputation	Firooz Salami, Julien Leboucher, Daniel Heitzmann, Julia Block, Merkur Alimusaj,	Firooz Salami	P3597
1638	Solid thermoplastic elastomer filament for hydrogel creation using conventional 3D printer	Justin Gangwish, Logan Farrand, Kristine Fischenich, Travis Bailey, Tammy Haut	Justin Gangwish, Kristine Fischenich	P3218
1640	Development of a data-driven framework for classifying movement patterns	Gwyneth Ross, Brittany Dowling, Nikolaus Troje, Steven Fischer, Ryan Graham	Gwyneth Ross	P1711
1642	A Longitudinal HR-pQCT Study of High-Impact Exercise on Trabecular Adaptation across Distal Tibia in Postmenopausal Women: Spatial Distribution	Juan Du, Chris Hartley, Katherine Brooke-Wavell, Margaret Paggiosi, Vadim	Juan Du	P1222
1643	Antibacterial Activity on Superhydrophobic Titania Nanotube Arrays as Interfaces of Implantable Medical Devices	Ketul Popat, Kevin Bartlett, Sanli Movafaghi, Arun Kota	Ketul Popat	P4365
1644	The use of acceleration data for classifying movement patterns using a data-driven framework	Gwyneth Ross, Brittany Dowling, Ryan Graham	Gwyneth Ross	P1712
1646	Anteroposterior stepping thresholds in children with and without cerebral palsy	Drew Petersen, Benjamin Conner, Jamie Pigman, James Tracy, Christopher Modlesky,	Drew Petersen	P1629
1651	Comparing hemodynamic and geometric profiles of commercial devices for endovascular AAA repair	Paola Tasso, Anastasios Raptis, Michalis Xenos, Maurizio Lodi Rizzini, Francesca	Paola Tasso	P3521
1652	Exploring flow disturbances at the carotid bifurcation through an integrated computational hemodynamics & complex networks-based approach	Karol Calò, Muhammad Owais Khan, Diego Gallo, Stefania Scarsoglio, David A. Steinman,	Karol Calò	P4552
1656	A study on stent-artery Compliance and wall shear stress using fluid –structure interaction simulation	Avinash Kumar, Pooja Bhati, Naresh Bhatnagar	Avinash Kumar	P4524
1657	Designing Modifications to a Powered Exoskeleton	Patrick Murphy, Alec Smith, John Montgomery, Ann Spungen, Gregory	Gregory Freisinger	P2093
1662	Quantification of the aortic hemodynamics after transcatheter aortic valve implantation combining 3D-printing, 4D PC-MRI and computational fluid	Selene Pirola, Francesco Sturla, Federico Lucherini, Michal Jaworek, Filippo Piatti,	Selene Pirola	P1576
1675	Investigating the human hip dislocation using a complex three-dimensional finite element human hip model	Kim Craig, Mohammad Akrami, Akbar Javadi, Abdelmalek Benatayallah, Christina Doyle,	Kim Craig	P1162
1677	Reducing bone tissue damage with temperature control for in situ SR-microCT mechanics	Marta Peña Fernández, Katerina Karali, Alexander Kao, Andrew J Bodey, Enrico	Marta Peña Fernández	P1111



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1684	Mechanics of phagocytosis: spreading and viscoelastic properties of PLB-985 neutrophil-like cells	Alexandra Zak, Sophie Dupré-Crochet, Elodie Hudik, Avin Babataheri, Oliver Nüsse, Julien	Alexandra Zak	P2027
1686	Organotypical 3D corneal equivalents to study anterior corneal diseases	Julia Fernández-Pérez, Mark Ahearne	Julia Fernández-Pérez	P2049
1689	4D flow MRI-based non-invasive hemodynamic assessment and diagnosis in aortic coarctations	Simone Saitta, Selene Pirola, Filippo Piatti, Francesca Pluchinotta, Federica Cuomo,	Selene Pirola	P2059
1691	High-density electromyographic identification of neuromuscular determinants of drop jump performance across varying drop heights	Robert Schuster, Florian Paternoster, Wolfgang Seiberl	Robert Schuster	P2665
1692	Acute stance phase kinetic and kinematic changes as a result of running shoe design	James Hopwood, Neil Messenger, Daniella Strauss	James Hopwood	P4310
1697	OpenSim 4.0: Exploring how injury, surgery, and augmentation affect human movement through simulation	Ajay Seth, Thomas Uchida, Jennifer Hicks, Ayman Habib, Christopher Dembia, James	Ajay Seth	P1645
1699	Effect of a downstream lesion on the apparent fractional flow reserve of a left main coronary artery stenosis: in vitro parametric study	Ricardo Coppel, Gérard Finet, François Dérimay, Saami K. Yazdani, Mauro Malvé,	Ricardo Coppel	P2584
1702	A Study on the Spatial Variance in the Mechanics and Microstructure of Heart Valves	Samuel Jett, Colton Ross, Jacob Richardson, Cortland Johns, Devin Laurence, Yi Wu, Chung-	Samuel Jett	P2501
1707	Development of a model based on artificial neural networks to estimate center of pressure parameters using qualitative data	Márcio Fagundes Goethel, Fernando Henrique Magalhães, Luis Mochizuki, Luciano	Márcio Fagundes Goethel	P1612
1708	Clinical quantification of tibial fracture healing using CT-derived finite element models	Peter Schwarzenberg, Karl James, Michael Maher, James Harty, Hannah Dailey	Peter Schwarzenberg	P1316
1711	Comparison of dynamic muscular imbalances in back pain patients and healthy controls	Simone Kubowitsch, Franz Suess, Petra Jansen, Sebastian Dendorfer	Simone Kubowitsch	P1193
1715	Determining sagittal plane multi-joint coordination in children and youth with spastic diplegia	Gregor Kuntze, Ion Robu, Gina Ursulak, Simon Goldstein, Carolyn Emery, Janet Ronsky	Gregor Kuntze	P1630
1716	The Effects of Protective Footwear on Spine Loading and Control during Lifting	Matthew Mavor, Ryan Graham	Matthew Mavor	P1194
1717	A Comparison of a markerless and a marker based motion capture system measuring trunk and lower limb kinematics across a range of common	Lara Coyne, Micheal Newell, Susan J. Brown, Andrew Morrison	Lara Coyne	P4107
1722	Effect of Mechanical Compression on Invasion Process of Malignant Melanoma Using In Vitro Three-dimensional Cell Culture Model.	Takashi Morikura, Shogo Miyata	Takashi Morikura	P4057
1724	On the Differences of Tissue Viscoelasticity and Elastic Wave Speed over the Human Chest Wall	Alexander Dyachenko, Maria Veremyeva, Ekaterina Fomina	Alexander Dyachenko	P3161
1727	Detecting the plantaris tendon in vivo: biomechanical implications of prevalence and anatomical variation for midportion Achilles tendinopathy	Chia-Han Yeh, James Calder, Jonathan Houghton, Anthony Bull, Angela Kedgley	Chia-Han Yeh	P3209
1730	Estimation of the load-bearing capacity of the reinforced acetabular component under acetabular dysplasia with local bone resorption	Oskar Sachenkov, Andrei Mazurenko, Rashid Tikhilov, Pavel Bol'shakov, Yurii Konoplev	Oskar Sachenkov	P1294
1732	Towards investigating the implications of joint incongruity on the elbow joint structure using finite element modelling	Joe Charnley, Mohammad Akrami, Akbar Javadi, Abdelmalek Benatayallah, Kim Craig	Kim Craig	P1163
1735	Change in the mechanical parameters of bone tissue under hypogravity and electromagnetic stimulation	Tatyana Baltina, Oleg Gerasimov, Elizaveta Koroleva, Igor Lavrov, Oskar Sachenkov	Oskar Sachenkov	P1227



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1736	Universal glass-forming behavior of living cytoplasm	Masahiro Ikenaga, Kenji Nishizawa, Daisuke Mizuno	Masahiro Ikenaga	P2531
1738	Development of an Improved Whole Body Heat Transfer Model for Determining Time of Death in Forensic Science	Ashley Wayne, Qimei Gu, Ronghui Ma, Liang Zhu	Liang Zhu	P2532
1739	Variation of the different locations of cardiopulmonary resuscitation, its effect on the thorax and the heart	Mario Suazo-Euceda, Youcef Azeli, Joan Herrero, Dolors Puigjaner, Gerard Fortuny	Mario Suazo-Euceda	P4358
1741	Mechanical energy transduction within the step in subjects with stroke	Gabriel Fábrica, Valentina Silva-Pereyra, Mariana Carriquiry, Pedro Gallardo	Gabriel Fábrica	P2638
1746	Finite element model of the ocular accommodative mechanism reveals effects of changes in biomechanical properties of the lens and sclera: applications to	Katherine Knaus, AnnMarie Hipsley, Silvia Blemker	Katherine Knaus	P1064
1748	The effect of shoe stiffness on plantar fascia strain, metatarsophalangeal, and midtarsal joint movements	Jeff Mettler, Erin Ward, Tim Derrick	Jeff Mettler	P1713
1749	Indentation Properties of Metastatic Vertebral Trabecular Bone	Christopher Lenherr, Benjamin Voumard, Marc Stadelmann, Florian Buck, Daniel	Marc Stadelmann	P4058
1750	On using meshy implant for arthroplasty of diaphysis of long bones	Regina Kashapova, Pavel Bol'shakov, Ivan Raginov, Elizaveta Koroleva, Oskar Sachenkov	Elizaveta Koroleva	P1295
1752	Measurement of Soleus Architecture Parameters in a post-stroke Subject using Diffusion Tensor Image	Clara Körting, Marius Schlippe, Sven Petersson, Taija Juutinen Finni, Ruoli Wang	Ruoli Wang	P1739
1758	Endothelial cell basal stresses are more heterogeneous in aged than in young arteries	Julie C. Kohn, Tamer Abdalrahman, Kevin L. Sack, Cynthia A. Reinhart-King, Thomas Franz	Thomas Franz	P3037
1760	Bovine Pericardium Durability, Stiffness, and Ultimate Tensile Strength are Governed by Collagen Fibre Orientation and Dispersion	Alison Whelan, John Duffy, Paul Gunning, David Nolan, Bruce Murphy, Caitriona Lally	Alison Whelan	P1555
1766	Remodeling of the bone tissue during proximal femur rotation osteotomy for treatment Legg-Calve-Perthes's disease	Elizaveta Koroleva, Oskar Sachenkov, Ruslan Hasanov, Petr Andreev, Yuri Konoplev	Elizaveta Koroleva	P1245
1767	Effect of Initial Bone Mineral Density on Bone Remodelling Outcome in Mandible with Dental Implant	Libor Borák, Petr Marcián	Petr Marcián	P4210
1770	Biomechanical assessment of walker-assisted gait	Daya Serrano Delgado, Marcela Múnera, Wilson A. Sierra, Carlos A. Cifuentes	Daya Serrano Delgado, Marcela Múnera	P1688
1772	Influence of a Condensed Competition Schedule on Mechanical Fatigue in Semi-Professional Rugby Union Players	Daniel Travis McMaster, C. Martyn Beaven, Brad Mayo, Nicholas Gill	Daniel Travis McMaster	P4282
1777	Knee Kinematics are Related to Single Leg Hop Performance	Jae Yom, Kyle Thompson, Janet Simon, Dustin Grooms	Jae Yom	P4108
1778	THE POTENTIAL CONTRIBUTION OF INTRINSIC MOTONEURON EXCITABILITY TO MUSCLE WEAKNESS AND AGING	Nathan Wages, Leatha Clark, Sherif Elbasiouny, Brian Clark	Nathan Wages	P2666
1780	Wall-Layer Specific Gene Expression and Finite Element Analysis-Derived Rupture Risk of Abdominal Aortic Aneurysms	Moritz Lindquist Liljeqvist, Antti Siika, Malin Kronqvist, Per Eriksson, T. Christian Gasser,	Moritz Lindquist Liljeqvist	P2616
1787	Profiling position specific head trauma in professional American football based on impact magnitude and frequency.	Clara Karton, T. Blaine Hoshizaki, Michael D. Gilchrist	Clara Karton	P2218
1789	Collateral revascularization: the effect of collateral vasculature presence on hemodynamic metrics in coronary artery bypass grafts	Victoria Plyler, Jacob Key, Nadia Francis, Bruce Ferguson, Stephanie George	Stephanie George	P4553
1792	Design and development of wrist rehabilitation and force sensing device	Saeideh Kohansal, Gholamreza Aminian, Ali Esteki	Saeideh Kohansal	P4178



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1794	Automation of material parameter identification of the soft tissues	Marina Franulovic, Kristina Markovic, Stjepan Pilicic	Marina Franulovic	P4327
1795	Biomechanical assessment of a lower limb exoskeleton device	Carlos A. Cortés Rodriguez, Alvaro Bocanegra, Marcela Múnera, Wilson Sierra, Carlos A.	Carlos A. Cortés Rodriguez, Marcela Múnera	P4154
1797	Biomechanics of residual type B aortic dissection	Fatma Khannous, Marine Gaudry, Carine Guivier-Curien, Philippe Piquet, Valérie	Carine Guivier-Curien	P3584
1801	The Long-Term Residual Effects of Low Intensity Vibration on Murine Femoral Bone Mineral Density	Kyle A. Bodnyk, Richard T. Hart	Kyle A. Bodnyk	P1228
1806	Investigating the effects of varying blade stiffness on the running biomechanics of unilateral transtibial amputees	Cleveland Barnett, Timmion Skervin, Alan De Asha, John Buckley, Richard Foster	Cleveland Barnett	P3598
1807	A finite element approach to studying instability in reverse shoulder arthroplasty	Vijay N. Permeswaran, Jessica E. Goetz, Donald D. Anderson	Donald D. Anderson	P2196
1809	Mechanics of glial scars in the central nervous system	Graham Sheridan, Kristian Franze, Emad Moeendarbary	Emad Moeendarbary	P2014
1811	Effective tissue modulus of human vertebral trabecular bone	Saghi Sadoughi, X Edward Guo, Tony Keaveny	Saghi Sadoughi	P1262
1812	Evaluation of the screw diameter and plate geometry influence in the fixations of mandibular plates	Tiago Semedo, Michel Mesnard, António Ramos	António Ramos	P2094
1815	A Method to Normalize CORA Scores Using PMHS Response Scores	Terry Smith, Hollie Pietsch	Terry Smith	P1342
1817	Improved Mechanical Characterization of Agarose Gel	Joshua Smith, Daniel Turchiano, Abraham Satten, Gerson Córdoba, José García	Joshua Smith	P4359
1820	A numerical model to investigate action of LIPUS in bone healing	Cécile Baron, Carine Guivier-Curien, Vu-Hieu Nguyen, Salah Naili	Cécile Baron	P2184
1824	Intrinsic Mechanobiological Stiffening is Associated with Enhanced Microvascular Morphogenesis and Stabilization	Jordan Whisler, Emad Moeendarbary, Roger Kamm	Emad Moeendarbary	P4366
1825	INSTRUMENTED GAIT ASSESSMENT ON ANTIGRAVITY TREADMILL OF A HIGH LEVEL ENDURANCE ATHLETE AFTER ANKLE FRACTURE SURGERY: A CASE	Roberto Napoli, Silvia Del Din	Roberto Napoli, Silvia Del Din	P4654
1826	Mechanical and visual assessment of uniaxial experimental parameters and their effect on bovine pericardial tissue.	Karl Joyce, Yury Rochev, Sohail Rahmani	Karl Joyce	P1556
1828	Positional Adjustments to Patients and Equipment May Reduce the Possibility of Musculoskeletal Diseases in Ophthalmologists During Retina Examination at	Safeer Siddicky, Gregory King, Scott Olitsky	Safeer Siddicky	P4211
1830	Biomechanical modeling and Magnetic Resonance Imaging to investigate CSF flow physiology	Patricia Cathalifaud, Mokhtar Zagzoule, Olivier Balédent	Patricia Cathalifaud	P2562
1832	Finite element analysis of cranial mini-plates and micro-screws using sub-modelling technique	Jakub Chamrad, Petr Marcián, Libor Borák	Jakub Chamrad	P3041
1833	Effects of Microgravity-induced Compromise of Cell Structure on MSC Mechanoreponse	Hallie Touchstone, Conner Patricelli, Matthew Goelzer, Stephanie Tuft, Julia Oxford, Gunes	Matthew Goelzer	P2515
1839	Physical and electrical analogs of multi-lymphangion systems	Benjamin Derleth, Benjamin Twigg, Luke Riexinger, Lance Munn, James Baish	James Baish	P1531
1845	Using low-cost ankle-mounted accelerometers to estimate gait kinetics in postmenopausal women	Stefan Madansingh, Dennis Murphree, Kenton Kaufman, Emma Fortune	Stefan Madansingh	P1689



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1846	An updated "living" Hill-based muscle model: 2. Robust muscle-reflex tissue model for postural tasks that includes history-dependent pre-conditioning	Jack Winters	Jack Winters	P1740
1848	Comparative mechanical, morphological, and microstructural properties of the mitral and tricuspid valve leaflets and chordae tendinae	Fatiesa Sulejmani, Anastassia Pokutta-Paskaleva, Marissa DelRocini, Wei Sun	Fatiesa Sulejmani	P1557
1850	Stretch-induced intimal failure in cerebral arteries	Matthew Converse, Kevin Nye, Kenneth Monson	Kenneth Monson	P1321
1852	Intramuscular EMG analysis of coactivation across the extrinsic hand muscles	Carl R. Beringer, Misagh B. Mansouri, Michael L. Boninger, Michael C. Munin, Jennifer L.	Carl R. Beringer	P2667
1853	Cinching the tricuspid annulus in an ex-vivo porcine model: Mechanical evaluation of the Kay procedure	Fatiesa Sulejmani, Joshua Pataky, Wei Sun	Fatiesa Sulejmani	P3555
1868	Microstructural, chemical and nanomechanical analysis of cat vibrissae	Gari Eberly, Kyle Fouke, Christopher Daniels, Donna Ebenstein	Donna Ebenstein	P4037
1869	Do hip and knee muscle strength gains mediate symptom improvement in knee osteoarthritis? Secondary analysis of a randomised controlled trial	Michelle Hall, Rana Hinman, Tim Wrigley, Jessica Kasza, Michael Hunt, David Hunter,	Michelle Hall	P4641
1872	Sensitivity analysis of density calibration phantom on finite element-predicted femoral strength	Carla Winsor, Muhammad Qasim, Ju Zhang, Xinshan Li, Timothy Szczykutowicz, Corinne	Carla Winsor	P2040
1881	An experimental setup for measuring tensile properties of bone extracellular matrix at the microscale	Daniele Casari, Patrik Schürch, Laszlo Pethö, Johann Michler, Philippe Zysset, Jakob	Daniele Casari	P1263
1882	Influence of geometry on proximal femoral shaft strains: implications for atypical femoral fracture	Ifaz Haider, Prism Schneider, Andrew Michalski, W Brent Edwards	Ifaz Haider	P1100
1884	Walking gait kinematics and kinetics in men and women with unilateral, symptomatic hip osteoarthritis: a cross sectional study exploring the influence	Kim Allison, Michelle Hall, Tim Wrigley, Yonghao Pua, Ben Metcalf, Kim Bennell	Kim Allison, Michelle Hall	P4642
1885	Heuristic-based co-adaptation of ankle exoskeleton assistance during human walking	Rachel Jackson, Steven Collins	Rachel Jackson	P4155
1886	Surface micro-topography changes contact mechanics in total hip modular taper junctions: a finite element analysis study	Jonathan Gustafson, Steven Mell, Robin Pourzal, Hannah Lundberg	Jonathan Gustafson	P2095
1887	Production and characterization of contractile cardiac fibers	Glenn Gaudette, Katrina Hansen	Glenn Gaudette	P3566
1888	In vitro measurement of initial forces generated during simulated anterior and posterior arch expansion using lingual orthodontic appliances	Dan Romanyk, Bill Tran, Lindsay Robertson, Alex Granley, Paul Major, Jason Carey,	Bill Tran	P4109
1889	A novel multiscale model of cardiac hypertrophy incorporating intracellular signaling	Ana Estrada, Matthew Sutcliffe, Colleen Witzenburg, Jeffrey Saucerman, Jeffrey	Ana Estrada	P2601
1894	The influence of diameter and length of the novel implant for direct skeletal attachment of limb prosthesis on a stress-shielding phenomena	Piotr Prochor, Eugeniusz Sajewicz	Piotr Prochor	P2096
1895	Effects of Bilateral Subthalamic Deep Brain Stimulation on Gait Performance in Patients with Advanced Parkinson's Disease	Mei-Ying Kuo, Chi-Chung Kuo, Jia-Da Li, Tung-Wu Lu	Mei-Ying Kuo	P4212
1897	Landing strategies of individuals who exhibit high ACL loading during unilateral landings	Joshua Weinhandl, Lauren Schroeder, Shelby Peel	Joshua Weinhandl	P4283
1900	Discriminability of simple and complex haptic vibrations in human psychophysical and computer-simulated experiments	Tiffany Senkow, Victor Barocas	Tiffany Senkow	P2275
1901	Comparison of three flexor tendon suture techniques. Influence of the epitendinous suture	Oscar Martel, Carlos Thams, Alejandro Yáñez, Alberto Cuadrado	Oscar Martel	P3182



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1902	Combined use of cartilage thickness and knee alignment better predicts proximal tibial subchondral bone mass than knee alignment alone: preliminary	Bryant Roberts, Sophie Rapagna, Bogdan Solomon, Karen Reynolds, Dominic Thewlis,	Bryant Roberts, Egon Perilli	P1274
1904	Whole brain simulation to elucidate mechanisms of autoregulation and functional hyperemia	Grant Hartung, Ryan Morley, Andreas Linninger	Andreas Linninger	P4554
1905	Influence of stem length on the primary stability of cementless revision tibial trays augmented with a sleeve in AORI type III defects. A multi subject	Maged Awadalla, Rami Al-Dirini, Dermot O'Rourke, Lucian Bogdan Solomon, Mark	Mark Taylor	P1296
1907	Factors influencing torsional fracture patterns in the infant porcine femur	Patrick E. Vaughan, Feng Wei, Roger C. Haut	Feng Wei	P3120
1909	Electromyography normalization strategies in individuals with Achilles tendon rupture	Sheridan Parker, Jennifer Zellers, Adam Marmon, Karin Gravare Silbernagel	Sheridan Parker	P2516
1911	Reduced-dimension model of parenchymal tethering mechanics	Jason Ryans, Hideki Fujioka, David Halpern, Donald Gaver	Donald Gaver	P1383
1913	Rapid quantification of fractal dimension within individual cells and tissues	Isaac Vargas, Kinan Alhallak, Ishita Tandon, Olivia Kolenc, Kartik Balachandran,	Kartik Balachandran	P2294
1915	Active Neck Muscles During Impacts in Sports Reduce Traumatic Brain Injury Risk	Jonathan Mortensen, Andrew Merryweather	Jonathan Mortensen	P2219
1920	Stent designs differentially influence limb flexion-induced femoropopliteal artery deformations	Jason MacTaggart, William Poulson, Andreas Seas, Paul Deegan, Carol Lomneth, Anastasia	Alexey Kamenskiy	P3082
1921	Subject Specific Motion Assessment Using a Depth Camera: Initial Longitudinal Results of Spinal Fusion	Robert Matthew, Jeannie Bailey, Sarah Seko, Patrick Curran, Brian Feeley, Louis Cheng,	Robert Matthew	P4655
1922	Effects of Angiotensin Signaling on Multiscale Aortic Valve Mechanical Properties	Jessica Perez, Josh Fahy, Prashanth Ravishankar, Taylor Prince, Kartik	Jessica Perez	P2548
1923	Rugby placekicking mechanics to inform coaching strategies and enhance performance	Kim Hébert-Losier, Martyn Beaven	Kim Hébert-Losier	P4284
1924	Evaluation of bioactive cranial implants: preliminary results from volumetric quantifications using computed tomography (CT)	Susanne Lewin, Sara Gallinetti, Lars Kihlström, Cecilia Persson, Ulrik Birgersson, Caroline	Susanne Lewin	P2097
1925	A non-invasive method for the determination of in-vivo mitral valve leaflet strains	Bruno Rego, Amir Khalighi, Andrew Drach, Eric Lai, Alison Pouch, Robert Gorman, Joseph	Bruno Rego	P2060
1926	The mammalian diaphragm: A unique pressure barrier in parallel with a conventional muscle and tendon.	Robert Griffiths, Ziad Abusara, Salvatore Federico, Venus Joumaa, Philip Berger,	Robert Griffiths	P4052
1928	Total Disc Arthroplasty Motion Patterns are Sensitive to Implant Design and Facet Joint Articulation	Chaochao Zhou, Ryan Willing	Ryan Willing	P1164
1930	3D Reconstruction of Coronary Arteries from Routine Single-plane Coronary Angiograms for Hemodynamic Simulations	M. Owais Khan, Jack Boyd, Alison Marsden Eui-Bum Choi, Hyeong-Min Jeon, Jae-Hoon	M. Owais Khan	P2061
1939	Effect of Foot Contact Strategy on Knee Joint Shear Force during Stair-Ascent	Heo, Gwang-Moon Eom	Eui-Bum Choi	P1666
1942	Force depression following a stretch-shortening cycle depends on the amount of residual force enhancement established in the initial stretch phase	Tobias Goecking, Rafael Fortuna, Wolfgang Seiberl, Walter Herzog	Tobias Goecking	P1741
1945	Examination of the Linearity and Eversion/Inversion Symmetry of Torsional Stiffness in Footwear	Ruth Talbott, Rebecca Zifchock, Roderick Wilson, William Blackmon	Rebecca Zifchock	P4110
1946	Three Point Bending Behavior of Lumbar Facet Capsular Ligaments	Emily Bermel, Madison Haugen, Victo Barocas	Emily Bermel	P3183



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1948	Mechanical Response of Porcine Tricuspid Valve Leaflets in the Absence of Native Extracellular Matrix Elastin	Samuel D Salinas, Keyvan Amini, James Houston, Marc Penn, Rouzbeh Amini	Rouzbeh Amini	P1365
1949	Effect of modulating crosslinking density of platelet-like particles on margination and biodistribution	John Nicosia, Dwight Chambers, Mary Harp, Alberto Fernandez-Nieves, Wilbur Lam,	John Nicosia	P3064
1952	Data-driven sonification of CFD aneurysm models	Dan MacDonald, Richard Windeyer, Thangam Natarajan, Peter Coppin, David Steinman	Dan MacDonald	P2533
1953	Preliminary Study of the Embolus Trapping Efficiency of the FDA Generic IVC Filter	Joshua Riley, Nicole Price, Brent Craven, Kenneth Aycock, Keefe Manning	Joshua Riley	P4111
1956	Learning Movement Primitives for Driving Tasks from Human Demonstration	Kenechukwu Mbanisi, Tess Meier, Hideyuki Kimpara, Jie Fu, Michael Gennert, Zhi Li	Hideyuki Kimpara	P1646
1959	3-Year Follow-up Research on Dynamic Plantar Pressure Distribution of Obese Children	Songhua Yan, Bing Liu, Kuan Zhang	Kuan Zhang	P4311
1960	Pre-impact Fall Detection using the Acceleration Triangle Feature	Soonjae Ahn, Jongman Kim, Sungjung Kim, Youngho Kim	Soonjae Ahn	P1614
1967	Intracellular Ca ²⁺ increase in endothelial cells evoked by shock waves	Akira Tsukamoto, Toru Takahashi, Shigeru Tada, Keichi Nakagawa	Akira Tsukamoto	P4020
1969	The performance of feature vectors in Korean finger language recognition system	Jongman Kim, Seonjung Kim, Bummo Koo, Soonjae Ahn, Youngho Kim	Jongman Kim	P2149
1970	Digital Volume Correlation Approach for Measuring Bone Strain and Failure during a Sideways Fall Configuration	Mohamad I Z Ridzwan, Chamaiporn Sukjamsri, Bidyut Pal, Monica Khanna, Richard	Mohamad I Z Ridzwan	P1112
1971	Procedure for geometry regularisation to separate the effects of torsion and curvature on flow structure	Jan N Rose, Qiwei Xiao, Charlotte McIntyre, Neil S Tolley, Denis J Doorly	Jan N Rose	P4503
1975	Patient and surgical variability in the primary stability of cementless acetabular cups: pre-clinical finite element analysis	Dermot O'Rourke, Rami Al-Dirini, Mark Taylor	Dermot O'Rourke	P1305
1976	Oscillatory forces – a biomechanical model for breast cancer	Joel Berry, Derek Van Vessem, Kenneth Hough, Tess Vessels, Paige Severino, Andra	Joel Berry	P2002
1978	Parameters affecting the mechanical competence of the aortic root and valve: a preliminary study	Dermot O'Rourke, Wong Pui Choo, Melissa Ryan, Jason Varzaly, Tim Surman, James	Dermot O'Rourke	P3585
1981	Non Invasive evaluation of skin tension lines and anisotropy with elastic waves	Aisling Ní Annaidh, Claire Deroy, Michel Destrade	Aisling Ní Annaidh	P2276
1985	Seated Pressure Redistribution via Chair Articulation	Justin Scott, Tamara Reid-Bush	Justin Scott, Tamara Reid-Bush	P2041
1986	Real-time inverse kinematics using inertial measurement units in OpenSim	Claudio Pizzolato, Luca Tagliapietra, David Thiel, David Lloyd	Claudio Pizzolato	P4213
1991	Evaluation of joint coordination in the lower-limb amputees during a gait	Chang-Yong Ko, Yunhee Chang, Bora Jeong, Jinho Son, Gyoosuk Kim, Jeicheong Ryu, Sung	Chang-Yong Ko, Yunhee Chang	P3599
1998	Biophysical Defense Mechanisms of Plant Trichome and Their Biomimetic Applications	Han Liu, Guo You Huang, Shao Bao Liu, Feng Xu	Han Liu	P2015
2002	Performance evaluation for the upper and lower extremity control via smart ball in adolescence with intellectual disabilities	Hsin-Yi Kathy Cheng, Ko-Tung Chen, Wann-Yun Shieh, Yu-Chun Yu, Yu-Chun Yang, Yan-	Hsin-Yi Kathy Cheng, Ko-Tung Chen, Yan-Ying Ju	P2668
2005	Chaotic features of oscillatory flow in expanding and contracting pulmonary acinus	Takashi Mizutani, Yuri Inagaki, Yoshimasa Miyachi, Toshihiro Sera, Gaku Tanaka	Takashi Mizutani	P4504



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2008	Effects of single trabecula stiffness on cancellous bone strength in bovine femoral neck and metaphysis	Satoshi Yamada, Masahiro Todoh, Shigeru Tadano	Satoshi Yamada	P3121
2009	Modeling and analysis of a sustained-release drug in the vitreous humor	Anita Penkova, Satwindar Sadhal	Anita Penkova	P1532
2010	Porosity and Location-Dependent Variation of Trabecular Length and Trabecular Number per Connection in Human Calcanei	Annalisa DePaolis, Sam Tran, Alessandra Carriero, Luis Cardoso	Alessandra Carriero	P1264
2011	Function of the Antagonistic Pair of Bi-articular Muscles of the Lower Limb During Toe Contact	Masanobu Manno, Takuya Koide, Tomohiko Fujikawa	Masanobu Manno	P3206
2012	The Immediate Effects of Using Different Supportable Elastic Knee Braces on Knee Biomechanics of Athletes	Jiun-Yi Li, Jonathan Kuo, Hsu-Fu Wu, Chia-Chi Yang, Lan-Yuen Guo	Lan-Yuen Guo	P1363
2013	Method for Calculating Three-Dimensional Knee Rotations with Body-Worn Inertial Measurement Units	Rachel Vitali, Andrew Lapointe, Noel Perkins	Rachel Vitali	P4656
2014	Hydrogel Based Material for Diabetic Insole	Ruwan Udayanandana, Pujitha Silva, Thilini Gunasekara, Supun Sankalpa	Pujitha Silva	P4156
2015	T2 relaxation time distribution characteristics in human knee patellar cartilage based on MR T2 imaging under in-vivo loading	Xu Dai, Richard Frayne, Tannin Schmidt, Gregor Kuntze, Janet Ronsky	Xu Dai	P1275
2017	Individual variability of joint negative work during running: examination of associated mechanical parameters	Satoru Hashizume, Hiroaki Hobara, Yoshiyuki Kobayashi, Mitsunori Tada, Masaaki	Satoru Hashizume	P1505
2020	Dynamic contributions of joint torques to knee valgus moment associated with ACL injury during sidestep-cutting maneuvers.	Masaaki Iwata, Sekiya Koike	Masaaki Iwata	P1343
2021	Low Intensity Vibrations Augment Mechanoreponse in Aging Mesenchymal Stem Cells	Guniz Bas Uzer, AnnaGrace Bloumquist, Richard Beard, Gunes Uzer	Guniz Bas Uzer	P2502
2022	Visco-Elasto-Plastic modeling of Small Intestinal Submucosa (SIS) for its application as a vascular graft	Paolo Francisco Sánchez, Juan Carlos Briceño	Paolo Francisco Sánchez	P1370
2024	Simulating the mechanical effects of diaphragmatic motion on inferior vena cava collapse	Philip Crompton, Keefe Manning	Philip Crompton	P2503
2025	Mechanical characterization of Spinal Cord Injury (SCI): tissue level thresholds in a rat model	Annalisa DePaolis, Preston Williams, Dennis Truong, John R. Brandenburg, Alan C. Seifert,	Sheldon Weinbaum	P1328
2030	Optimization algorithm to determine MAP-OpenSim model psoas and iliacus pathways using only wrapping surfaces	Simao Brito da Luz, Bryce Killen, David Saxby, David Lloyd	Bryce Killen	P1647
2031	A Reference Database of Cartilage Mechanical Properties and Thickness of Normal Human Knee Articular Surfaces	Sotcheadt Uzer, Insaf Hadjab, Martin Garon, Eric Quenneville, Patrick Lavigne, Michael	Eric Quenneville	P4112
2032	Ultrasound measurements of regional and temporal variations in the murine reproductive system	Hamna Qureshi, Daniel Capone, Cassandra Conway, Kristin Miller, Craig Goergen	Hamna Qureshi	P2504
2034	The nonlinear dynamics of Woven Dacron Aortic Prostheses conveying pulsatile blood flow	Eleonora Tubaldi, Giovanni Ferrari, Prabakaran Balasubramanian, Michael P.	Eleonora Tubaldi	P4525
2037	A systematic method to locate the femoral transepicondylar axis	Rajshree Hillstrom, Mathieu Daudrez, Oliver Morgan, Howard Hillstrom	Rajshree Hillstrom	P1165
2038	Consideration of feature dependence and electrode location changes for pattern recognition of hand motions	Seongjung Kim, Jongman Kim, Beommo Koo, Taehee Kim, Youngho Kim	Seongjung Kim	P4179
2040	Hyperspectral Imaging Platform for Non-invasive Spectral Analysis of Osteogenic Differentiation in Adipose Tissue Derived Adult Stem Cells	Nishir Mehta, Shahensha Shaik, Manas Gartia, Ram Devireddy	Ram Devireddy	P2098



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2041	Development of a method to evaluate the effects of aortic dissection through CFD and CT image geometry extraction	Ryo Takeda, Kodai Kijima, Hiroichi Yokoyama, Katsuhiko Sasaki, Nobuyuki Oshima, Akiyoshi	Ryo Takeda	P3586
2042	Leg stiffness during running in unilateral transfemoral amputees	Hiroaki Hobara, Hiroyuki Sakata, Satoru Hashizume, Yoshiyuki Kobayashi	Hiroaki Hobara	P3600
2044	A New CFD Boundary Condition for Evolving Arterial to Venous Malformations in the Lung and Brain	Gokce Nur Oguz, Senol Piskin, Hakan Hanimoglu, Ender A. Finol, Kerem Pekkan	Gokce Nur Oguz	P2617
2045	Haemodynamics in the fetoplacental vasculature of healthy and intrauterine growth restricted fetuses	Nikhilesh Bappoo, Andrew Evans, Lachlan Kelsey, Louis Parker, Yutthapong Tongpob,	Nikhilesh Bappoo	P2505
2046	Joint Torque Calculation for Exoskeleton Robot to Generate Joint Resistance under Earth Gravity in Space Environment	Jonging Han, Yoonsu Baek	Jonging Han	P1714
2047	The numerical method used to compute jump height affects rank ordering of jumpers	Torstein Eriksen Dæhlin, Sydney Schmidt, Loren Chiu	Torstein Eriksen Dæhlin	P2244
2053	An image-based finite element model to probe the roles of speech muscles in velopharyngeal closure	Catherine Pelland, Silvia Blemker	Silvia Blemker	P3057
2055	To Detect Diabetes Mellitus Using an Artificial Intelligence Hand Sensorimotor Function Model	Pu-Chun Mo, Hsiu-Yun Hsu, Li-Chieh Kuo, Che-Wei Lin, Fong-Chin Su	Pu-Chun Mo	P2150
2059	A comparison of two dynamic computational models for cardiac mechanics and assessment of intra-myocardial injection as a therapeutic strategy for	Yiling Fan, William Ronan, Irvin Teh, Jurgen E. Schneider, Peter E. McHugh, Sean B. Leen,	Yiling Fan	P2549
2060	Tibia cartilage thickness and subchondral bone microarchitecture in varus and valgus-aligned osteoarthritic knees: comparisons with controls	Sophie Rapagna, Bryant C Roberts, Lucian B Solomon, Karen J Reynolds, Dominic Thewlis,	Sophie Rapagna	P1276
2065	Study on effect of surrounding fluid property on sperm motility	Toru Hyakutake, Koichi Sato	Toru Hyakutake, Koichi Sato	P4516
2069	Microsoft Xbox One Kinect® as a portable tool for measuring excursion in star balance test	Andrew Sori, Jan Pieter Hommen, Shihab Asfour, Francesco Travascio	Francesco Travascio	P4657
2073	Development of a Micro-Particle Image Velocimetry Platform to Study Thrombosis In Vitro	Tice Harkins, Jeremy Myslowski, Keefe Manning	Tice Harkins	P2506
2077	Fibroblast growth, remodeling, and stiffness changes due to actin and microtubule re-alignment under cyclic stretch	Aritra Chatterjee, Paturu Kondaiah, Namrata Gundiah	Aritra Chatterjee	P4004
2079	Human knee FEA model for transtibial amputee tibial cartilage pressure in gait and cycling	Gregory Lane, Michael Rumery, Stephen Klisch, Scott Hazelwood	Gregory Lane	P1166
2081	Longitudinal ultrasound assessment of murine aneurysm expansion, circumferential Green strain reduction, and intraluminal thrombus formation	Alycia Berman, Craig Goergen	Alycia Berman	P3522
2082	Comparing the in-vivo loading effects on the magnetic resonance T2 relaxation time of healthy and osteoarthritic patellar cartilage	Xu Dai, Richard Frayne, Tannin Schmidt, Gregor Kuntze, Janet Ronsky	Xu Dai	P4080
2085	Evaluation of a Portable System for Measuring Functional Effective Muscle Strength	Takuya KOIDE, Masanobu MANNO, Hiroshi TAKAHAMA, Toru OSHIMA, Tomohiko	Takuya KOIDE	P4180
2086	Tensile Properties of Single Vaginal Smooth Muscle Cells	Zachary Miller, Jeffrey McGuire, Wally Grant, Barbara Peruzzi, Raffaella De Vita	Zachary Miller	P2550
2090	A more rapid nanoindentation method to measure modulus in the presence of adhesion	Jae Lee, Donna Ebenstein	Donna Ebenstein	P3065
2095	Mechanical conditions of nesprin-mediated nucleus-actin filament bindings affect polarized elongation of fibroblasts induced by cyclic stretching	Naoya Sakamoto, Mai Ogawa, Kiyomi Sadamoto, Masaki Takeuchi, Noriyuki Kataoka	Naoya Sakamoto	P2024



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2097	Reducing variability in foot trajectory during gait based on vibratory stimulation of the forefeet	Shun Yamashita, Kotaro Igarashi, Naomichi Ogihara	Shun Yamashita	P1690
2098	Construction of a concussion risk estimation system for contact sports	Zhang Yuelin, Satoru Yoneyama, Hiromichi Nakadate, Takayuki Koyama, Tadimitsu	Zhang Yuelin	P2220
2103	A marker-assisted single-plane fluoroscopic analysis for measuring three-dimensional canine tibiofemoral kinematics	Cheng-Chung Lin, Ming Lu, Shi-Nuan Wang, Tung-Wu Lu, Ching-Ho Wu	Ching-Ho Wu	P4081
2109	Measuring anisotropic brain stiffness properties by combining MR elastography and diffusion tensor imaging	Behzad Babaei, Daniel Fovargue, David Nordsletten, Lynne Bilston	Behzad Babaei	P1087
2116	Initial Lymphatic Network Structure and Plasticity: Discoveries and Impacts on Biotransport	Walter Murfee	Walter Murfee	P1533
2117	Validation of a real-time MRI analysis method for measuring 3-D spine vertebral kinematics	Cheng-Chung Lin, Hsin-Yi Lu, Chao-Yu Hsu, Ting-Fang Shih, Tung-Wu Lu	Cheng-Chung Lin	P4082
2118	Carbon dioxide therapy improved contractures after joint immobilization in rats	Naoyoshi Sakitani, Hideki Moriyama, Rui Miyamoto, Masato Nomura, Ryota Suzuki,	Naoyoshi Sakitani	P4113
2120	Changes in frequency-specific coupling between arterial blood pressure and cerebral oxygenation signals in post-stroke subjects	Congcong Huo, Bitian Wang, Gongcheng Xu, Qianying Liu, Lingguo Bu, Zengyong Li, Yubo	Zengyong Li, Yubo Fan	P1598
2121	Evaluation of the roll-over shape of a prosthetic foot using finite element analysis	T.M. Balaramakrishnan, Srinivasan Sujatha, Sundararajan Natarajan	T.M. Balaramakrishnan	P4157
2124	Computer simulation of precision grip between thumb and index finger based on a two-dimensional musculoskeletal model and a neural network model.	Takayuki Nakajima, Yuki Moritani, Naomichi Ogihara	Takayuki Nakajima	P1715
2125	Optiray350 as an alternate agent for contrast enhanced microCT imaging of mouse articular cartilage	Ren Yan Nigel Kour, Bente van Teeffelen, Zihui Li, Kathryn Stok	Kathryn Stok	P1075
2126	Kinematic and kinetic analysis of quadrupedal locomotion in a slow motor neuron-deleted transgenic mouse line, a possible model for studying the effect	Ayumu Ono, Daijiro Inomata, Lisa Ohgaki, Hidemi Misawa, Naomichi Ogihara	Ayumu Ono	P2669
2128	The frequency of ultrasound does not affect the charge density in cancellous bone	Young June Yoon	Young June Yoon	P1229
2129	Stepping onto uneven terrain employs multiple methods to maintain trunk stability	Gary Mangan, Luke Denomme, Stephen Prentice, James Frank	Gary Mangan	P2670
2131	Biomechanical pre-operative planning of total knee arthroplasty: How do soft tissue releases change knee biomechanics?	Joshua Roth, Dylan Schmitz, Darryl Thelen	Joshua Roth	P2137
2134	Optimizing Biopsy Needle Tip Geometry for Minimal Tissue Cutting Force	Chun Jung Yen, Yu-Chen Jheng, Chi-Lun Lin	Chun Jung Yen	P4230
2135	Synthesis of hand posture during power grip task using a three-dimensional musculoskeletal model and a load-minimization criterion	Takuya Tsunesaki, Yuki Asami, Mitsunori Tada, Yui Endo, Naomichi Ogihara	Takuya Tsunesaki, Yuki Asami, Mitsunori Tada, Yui Endo, Naomichi Ogihara	P2151
2136	Classifying individuals with patellofemoral pain from gait waveform pattern kinematics using fast fourier transform	Kristin Morgan, Brian Noehren	Kristin Morgan	P1344
2139	Changes in gait pattern of the faller and non-faller of the elderly after 2 years follow-up	Jinseung Choi, Jeongwoo Seo, Taeho Kim, Jinsoo Lee, Junggil Kim, Gyerae Tack	Jinseung Choi	P1691
2140	Mechanical Determinants of the Chronotropic Response to Sinoatrial Node Stretch	Eilidh A. MacDonald, T. Alexander Quinn	Eilidh A. MacDonald	P4016
2141	Three-dimensional inverse dynamic analysis of cane-assisted gait in post-stroke hemiplegic patient	Arinori Kamono, Naomichi Ogihara	Arinori Kamono	P2639



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2142	Investigation of appropriate pressure distribution of supportive underwear for pelvic floor relaxation based on a sagging bladder model	Daisuke Tawara, Masahiro Kumamoto, Sanae Ninomiya, Hisayo Okayama, Kiyoko Naito,	Masahiro Kumamoto	P4338
2143	Fabrication and characterization of an aligned poly(glycerol sebacate) fibrous membrane	Hsin-Ju Wu, Chia-Chun Lo, Jin-Jia Hu	Jin-Jia Hu	P1371
2144	The comparison of EMG activity between new and old methods during patient-handling tasks in health care workers	Noriyuki Yamamoto, Hitoshi Yanagi, Tadashi Wada, Fumiko Takenoya	Noriyuki Yamamoto	P1742
2148	Differences of the patients with Parkinson's disease through Hoehn and Yahr scale during forward and backward walking	Minji Son, Changhong Youm, Myeounggon Lee, Hwayoung Park	Minji Son	P1692
2149	In Situ Measurement of Native Extracellular Matrix Fibril Strain	Andrea Acuna, Craig J. Goergen, Sarah Calve	Andrea Acuna	P1113
2155	Cervical spine morphological variations between stature-matched male and female: How does it influence range of motion?	Jobin John, Mike Arun, Gurunathan Saravana Kumar, Narayan Yoganandan	Narayan Yoganandan	P4072
2157	Generating 3D muscle architecture of the hip joint muscles through Laplacian simulation	Andi Liu, Geoffrey Handsfield, Justin Fernandez, Thor Besier	Andi Liu	P2185
2159	Improvement of pointing operation ability of the cerebral palsies to promote their employment -Estimation of the optimal D/C gain for pointer movement	Hiromi Nishiguchi	Hiromi Nishiguchi	P2671
2164	Individually steerable micro-robots for novel culture and mechanical characterization of biological cells	Sudhanshu Shekhar, Shilpa R. Raju, G. K. Anathasuresh	Sudhanshu Shekhar, Shilpa R. Raju	P2003
2165	Validation of a wireless strain sensor for functional assessment in musculoskeletal soft tissues	Qiang Zhang, Stauffer Flurin, Byron Llerena, Janos Vörös, William Taylor	Qiang Zhang	P2099
2168	Development of a simplified orthotropic continuum damage model for hip fracture prediction	Pooya Sahandifar, Svein Kleiven	Pooya Sahandifar	P1265
2171	Thrombogenicity of Transcatheter Heart Valves: In-vitro Fluid Dynamic Assessment Using Volumetric Velocimetry	Nitish Acharya, Christopher Clifford, Prem Midha, Ikechukwu Okafor, Brian Thurow,	Vrshank Raghav	P2619
2172	Pericellular matrix in canaliculus regulates flow-induced deformation of osteocyte process	Yoshitaka Kameo, Masahiro Ozasa, Naoki Takeishi, Taiji Adachi	Yoshitaka Kameo	P2186
2173	Mapping the load intensity of jumping exercises in post-menopausal females: Implications for osteogenic training	Tine Alkjær, Kenneth B. Smale, Lisa H. Hansen, Julie K. Kristensen, Mette K. Zebis,	Tine Alkjær	P4285
2175	Comparing the behaviour of 5mm bone grafts between experimental analysis and computational analysis	Ashwin Jeyakar Dhanasekaran, Mark Taylor, Hamed Ziaei Poor, Maged Awadalla, Saulo Dongho Park, Hanseung Woo, Beomki Yoo,	Ashwin Jeyakar Dhanasekaran	P2170
2177	Changes in kinematics during stair climbing in persons with gastrocnemius medial head paralysis	Yeon-Jae Seong, Dong-wook Rha	Dongho Park	P2672
2179	Dynamic posterior stabilization device: Finite Element Modelling and validation.	Carolina Eleonora Lavecchia, Bernard M. Lawless, Daniel M. Espino, Duncan E.T.	Carolina Eleonora Lavecchia	P4114
2180	High-Resolution MR Image Reconstruction for Ankle Joint Motion Analysis	Karim Makki, Bhushan Borotikar, Marc Garetier, Sylvain Brochard, Douraied Ben	Francois Rousseau	P1076
2183	Effect of substrate mechanical properties on structure and function of alveolar epithelial cells	Sara Silvani, Marina Figliuzzi, Federica Boschetti, Andrea Remuzzi	Sara Silvani	P3004
2186	Effects of Disc Degeneration on Endplate Stresses and Vertebral Failure	Elise Morgan, Alexander DelMonaco, Paul Fein, Timothy Jackman	Elise Morgan	P3122
2189	Comparison of the effect of posttranslational modifications and cardiomyopathy mutations of tropomyosin on the actin-myosin interaction in	Galina Kopylova, Valentina Oshchepkova, Alexander Matyushenko, Sergey Bershitsky,	Galina Kopylova	P3556



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2190	A Simple Multi-Material Domain Iso-surface Mesher for Medical Images	Dieter Pahr	Dieter Pahr	P1101
2195	Blood flow in cerebral aneurysms – robustness of rupture indicators and data assimilation methods for boundary conditions	Kent-Andre Mardal	Kent-Andre Mardal	P4586
2198	Effect of manufacturing tolerances on taper wear in total hip arthroplasty	Thom Bitter, Imran Khan, Tim Marriott, Elaine Lovelady, Nico Verdonschot, Dennis Janssen	Thom Bitter	P2100
2200	Assessment of cancer metastatic capacity using a microfluidic device	Masanori Nakamura, Daichi Ono, Shukei Sugita	Masanori Nakamura	P2004
2201	The relationship between muscle tensions of the hip and knee extensors and ball speed during baseball pitching	Atsushi Yamaguchi, Shoma Kudo, Masahiro Fujimoto, Takahiko Sato, Akinori Nagano	Atsushi Yamaguchi	P4286
2202	Design of RF Thermal Plasty Balloon for Conformal Atherosclerosis Treatment	Shiqing Zhao, Aili Zhang, Lisa X. Xu	Shiqing Zhao, Aili Zhang	P2568
2210	Biomechanical comparison of primer and post-fusion stability of suture-anchor and interference screw fixation following single or multiple cycle loading	Pelin Coşkun, Tolga Tolunay, Ulunay Kanatli, Teyfik Demir	Pelin Coşkun	P2197
2211	Carbonylation extends attached state of atrial myosin.	Daniil Shchepkin, Galina Kopylova, Salavat Nabiev, Sergey Bershitsky	Daniil Shchepkin	P3557
2212	Numerical studies of flow alterations induced by incomplete flow-diverter expansion	Sergey Sindeev, Sergey Frolov, Dieter Liespich, Sascha Prothmann, Jan Kirschke, Claus	Sergey Sindeev, Sergey Frolov	P4587
2213	Effect of needle tip design and insertion speed on soft tissue fracture toughness for needle biopsy	Pin-Jui Huang, Chi-Lun Lin	Pin-Jui Huang	P2551
2214	New method for distraction callus material properties measurement with the use of nanoindentation	Flavy Roseren, Ophelie Pollet, Edouard Lamy, Thierry Hoc, Sandrine Roffino, Martine	Flavy Roseren	P1391
2221	Effect of Aging on Fall Using Timed Up and Go Test in the Elderly	Jeongwoo Seo, Jinseung Choi, Taeho Kim, Jinsoo Lee, Junggil Kim, Gyerai Tack	Jeongwoo Seo	P1615
2223	An eye model coupled with musculoskeletal model for visibility evaluation of car instrumental panel	Tomonari Takayanagi, Kazunori Hase, Makoto Yoshida, Kazumasa Onda, Hidenori Horita	Tomonari Takayanagi	P1716
2224	Loss of Capture During Mechanical Pacing of the Heart	Behzad Taeb, T. Alexander Quinn	T. Alexander Quinn	P4609
2225	Current concepts in calcaneus fracture treatment. Do variable-angle locking plates prevent articular surface collapse? A biomechanical study	Martin Jordan, Konrad Fuchs, Timo Heintel, Hendrik Jansen, Stefanie Hoelscher-Doht,	Martin Jordan	P3123
2227	Inclusion of surrounding tissue in the patient-specific, ultrasound-based modelling of abdominal aortic aneurysms	Niels Petterson, Emiel van Disseldorp, Frans van de Vosse, Marc van Sambeek, Richard	Niels Petterson	P3523
2232	Strain rate dependency of bovine trabecular bone under impact loading at sideways fall velocity	William Enns-Bray, Stephen Ferguson, Benedikt Helgason	William Enns-Bray	P3124
2233	Cell-free volume and high shear rate as markers for thrombus initiation	Britt van Rooij, Gábor Závodszy, Victor Azizi, Alfons Hoekstra	Britt van Rooij	P3502
2234	A Study of optimal Design for the Way of Exotendon Attachment of Non-powered Exoskeleton Assist Device while Lifting Action	Bokku Kang, Dong Hyun Kim, Dong Hyun Hwang, Seo Hyun Kim, Hana Lee, Chang-Yong	Bokku Kang	P4158
2236	Investigation of NIR absorption characteristics of tumor by hyperspectral camera	Kosuke Maeda, Hiroshi Takemura, Kohei Soga, Hiroaki Ikematsu, Takeshi Kuwata, Daiki	Kosuke Maeda	P1077
2237	Investigation of rear foot part bone alignment of osteoarthritis	Takuya Fujinuma, Hiroshi Tsubo, Shinichi Kosugi, Hiroaki Kurokawa, Yasuhito Tanaka,	Takuya Fujinuma	P4159



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2240	On the Role of Morphological Measures in Abdominal Aortic Aneurysm Rupture Risk Assessment for the Asian and Caucasian Patient Populations	Tejas Canchi, Hong Nguyen, Wei Wu, Sourav Patnaik, Eddie Y.K. Ng, Sriram Narayanan,	Wei Wu	P3524
2245	Similar dynamic knee stability but different movement strategies and between-leg asymmetries for hip and knee joints for ACL-reconstructed persons relative	Jonas Markström, Helena Grip, Charlotte Häger	Jonas Markström	P4287
2246	Fabrication and characterisation of flexible strain sensors for measuring knee kinematics in rowing	Yewande Adesida, Enrica Papi	Yewande Adesida	P4115
2247	Visco-Plastic Mechanical Properties of Implanted Bone Screws Identified by Rheological Modeling	Andreas Reisinger, Dieter Pahr	Andreas Reisinger	P3125
2249	Altered adventitial collagen fibril mechanics and morphology in patients with high pulse wave velocity	Zhuo Chang, Paolo Paoletti, Steve Barrett, Ya Hua Chim, Maria Lyck Hansen, Hans Christian	Riaz Akhtar	P4570
2255	The accuracy of quantifying PIP finger joint flexion changes using skin mounted reflective markers	Cheryl Metcalf, Christopher Phillips, Alexander Forrester, Jan Glodowski, Kara	Alex Dickinson	P2152
2257	Different dynamic knee stability and frontal plane kinematics and kinetics between landings in common one-leg hops for ACL-reconstructed women and	Jonas Markström, Charlotte Häger	Jonas Markström	P4288
2259	Fabrication of an anisotropic poly(glycerol sebacate) tubular scaffold for vascular tissue engineering	Tai-Hua Yang, Chen-Yu Li, Jin-Jia Hu	Tai-Hua Yang	P1372
2260	Three-dimensional biomechanical knee model for evaluation of knee brace	Sentong Wang, Kazunori Hase, Makoto Yoshida, Yuichiro Hayashi	Sentong Wang	P1102
2265	Analysis of the Correlation between Abnormal Gait and Function Connectivity in the Elderly with cognitive impairment	Ying Liu, Gongcheng Xu, Congcong Huo, Bitian Wang, Zengyong Li	Ying Liu	P1693
2266	Crack propagation and fracture resistance in cortical bone analyzed with the extended finite element method (XFEM)	Anna Gustafsson, Hanifeh Khayyeri, Mathias Wallin, Hanna Isaksson	Anna Gustafsson	P4214
2269	Does tendon stiffness in children affect jumping performance?	Shota Enomoto, Toshiaki Oda, Rie Ashida, Takayuki Hisano, Masaru Kaga	Shota Enomoto	P4289
2270	Volume-based calculation of maximal isometric muscle forces for the estimation of joint reaction forces in postmenopausal woman	Barbara Kalkman, Erica Montefiori, Michael Woodward, Claudia Mazzà	Barbara Kalkman	P1667
2273	Comparative analysis of three-dimensional foot bone kinematics in human and African great apes using a biplanar X-ray fluoroscopy system	Kohta Ito, Takuo Negishi, Koh Hosoda, Takeo Nagura, Tomohiko Ota, Nobuaki Imanishi,	Kohta Ito	P1506
2275	Utilization of mechanical stress by ultrasound to accelerate fracture healing in rats	Ryota Suzuki, Naoyoshi Sakitani, Shunsuke Shimaya, Masato Nomura, Yoshio Wakimoto,	Ryota Suzuki	P3126
2277	Postural stability of persons with transtibial amputation on flat and inclined surfaces : the influence of the prosthetic foot.	Coralie Villa, Marie Thomas, Joseph Bascou, Xavier Bonnet, Eric Lapeyre, Hélène Pillet	Hélène Pillet	P3601
2279	A method to determine the three-dimensional hip motion envelope based on magnetic resonance imaging and mesh contact detection	David John Saxby, Edin Suwarganda, David Lloyd, Laura Diamond, Claudio Pizzolato	David John Saxby	P2101
2280	Gait specific footwear design, facilitated through evolutionary computational methods	Dimitris Drougkas, Maria Papagiannaki, Evangelos Karatsis, Fotini Arabatzi, Stergios	Dimitris Drougkas	P4312
2286	Mechanisms by which 3D microgratings and 2D micropatterned substrates modulate endothelial cell cytoskeletal organization and morphology	Carlo Natale, Julie Lafaurie-Janvère, Avin Babataheri, Abdul Barakat	Carlo Natale	P4005
2288	Numerical predictions of coronary stent fatigue failure following representative in vivo loading	Claire Conway, Efrat Goffer, Gerard Desany, Brian Baker, Elazer Edelman	Claire Conway	P3083
2290	Mechanical analysis for articular cartilage based on biomolecular structure by Raman spectroscopy	Masahiro Todoh, Misaki Kitayama	Masahiro Todoh	P1277



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2291	Mechanical Stress Induces Interdigitation in Phospholipid/Cholesterol Bilayer: A Molecular Dynamics Simulation Study	Taiki Shigematsu, Kenichiro Koshiyama, Shigeo Wada	Taiki Shigematsu	P1138
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2293	Influence of different DVRT fixation methods on measured tissue strain	Florian Schall, Steffen Hacker, Andreas Seitz, Lutz Dürselen	Florian Schall	P3184
2297	Arterial hoop stress predicts endothelial preservation and stent-induced vascular injury	Claire Conway, Farhad Rikhtegar, Campbell Rogers, Adam Groothuis, James Squire, Elazer	Claire Conway	P3084
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2300	Altered scapula kinematics in asymptomatic subjects with rounded shoulder posture	Yuan-Chun Chiu, Yi-Hsuan Weng, Lin-Ling Huang, Szu-Jieh Mao, Chih-Chin Lai, Jiu-Jenq	Yuan-Chun Chiu	P2198
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2304	Investigation of material strength of sports prosthesis for amputees	Kohei Sakurai, Satoshi Kobayashi, Kazunori Hase, Goro Obinata	Kohei Sakurai	P4161
2305	Effect of increased mechanical stress on insect behavior	Jan-Henning Dirks	Jan-Henning Dirks	P4038
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2308	Patient specific FEM design of a carbon fiber forefoot prosthesis to support reintegration into daily sports	Muneer Gaashan, Thomas Engleder, Eugen Dötzel, Felix Capanni, Jürgen M. Steinacker	Muneer Gaashan	P4162
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2325	Biomechanical Effects of Calvarial Sutures on Osteocyte Lacuno-Canalicular Network Architecture in Mouse Skull	Junning Chen, Andreas Roschger, Stéphane Blouin, Catherine Julien, Bettina Willie, Paul	Junning Chen	P1246
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2379	Changed Viscosity behavior after high shear stress applied on okra mucilage	Zhu Weijun	Zhu Weijun	P4517
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3431	A mixed-reality surgical simulator for instrument evaluation in fetal minimally invasive surgery	Allan Javaux, David Bouget, Caspar Gruijthuisen, Jan Deprest, Kathleen Denis,	Allan Javaux	P2112
3433	Effect of pore microarchitecture in extracellular matrix derived scaffolds on chondrogenesis of mesenchymal stem cells	Pedro J. D�az-Payno, Dave C. Browe, Daniel J. Kelly	Pedro J. D�az-Payno	P4352
3435	Numerical model of stent deployment in the stenosed artery and modeling of atherosclerosis growing	Dan Krsmanovich, Igor Saveljic, Dalibor Nikolic, Velibor Isailovic, Milica Nikolic, Zarko	Nenad Filipovic	P1599
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3439	Distinguishing between knee rehabilitation exercises using sensor acceleration data	Philippa Jones, Pdraig Corcoran, Sam Woodgate, David Williams, Nidal Khatib,	Philippa Jones	P2046
3440	Estimating material properties of stenosed arteries using ultrasound functional imaging in combination with finite element modeling	Joerik de Ruijter, Frans van de Vosse, Marc van Sambeek, Richard Lopata	Joerik de Ruijter	P1563
3441	Multi-team comparison of head impact exposure in youth football practice drills	Mireille Kelley, Mark Espeland, William Flood, Joel Stitzel, Jillian Urban	Mireille Kelley	P2232
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3450	Vinculin force-sensitive dynamics in directed cell migration	Katheryn Rothenberg, David Scott, Nicolas Christoforou, Brenton Hoffman	Brenton Hoffman	P1119
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3462	Biomechanical Analysis of the Arms and Trunk for Developing a Paralympic Swimming Model: A Case of Study	Adrian Jefe El�as-Jim�nez, Carlos Fernando Aranda-Gonz�lez, Carlos Jaime Canchola-	Adrian Jefe El�as-Jim�nez	P2204
3467	Characterizing the relationship between metabolic energy consumption and step length asymmetry during locomotion in individuals with chronic stroke	Thu Nguyen, Rachel Jackson, Yashar Aucie, Digna de Kam, Steve Collins, Gelsy Torres-	Thu Nguyen	P2641
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4246	A comparison of healthy and osteoarthritic knee kinematics in six-degrees-of-freedom during loaded deep kneeling for participants over 50 years of age	Catherine Galvin, Mark Pickering, Jennie Scarvell, Diana Perriman, Paul Smith	Catherine Galvin	P1285
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