Manuel Doblar

List of Publications by Year in Descending Order

258 papers	8,735 citations	51 h-index	77 g-index
264 ext. papers	9,670 ext. citations	3.5 avg, IF	6.06 L-index

#	Paper	IF	Citations
258	Understanding glioblastoma invasion using physically-guided neural networks with internal variables.. *PLoS Computational Biology*, **2022**, 18, e1010019	5	1
257	Analysis of the Parametric Correlation in Mathematical Modeling of In Vitro Glioblastoma Evolution Using Copulas. *Mathematics*, **2021**, 9, 27	2.3	1
256	Data-Driven Computational Simulation in Bone Mechanics. *Annals of Biomedical Engineering*, **2021**, 49, 407-419	4.7	5
255	Force Spectroscopy Imaging and Constriction Assays Reveal the Effects of Graphene Oxide on the Mechanical Properties of Alginate Microcapsules. *ACS Biomaterials Science and Engineering*, **2021**, 7, 242-253	5.5	2
254	On the effect of antiresorptive drugs on the bone remodeling of the mandible after dental implantation: a mathematical model. *Scientific Reports*, **2021**, 11, 2792	4.9	3
253	Prediction and identification of physical systems by means of Physically-Guided Neural Networks with meaningful internal layers. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 381, 113816	5.7	5
252	Predicting cell behaviour parameters from glioblastoma on a chip images. A deep learning approach. *Computers in Biology and Medicine*, **2021**, 135, 104547	7	2
251	A multiscale data-driven approach for bone tissue biomechanics. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 368, 113136	5.7	7
250	A mechano-chemo-biological model for bone remodeling with a new mechano-chemo-transduction approach. *Biomechanics and Modeling in Mechanobiology*, **2020**, 19, 2499-2523	3.8	8
249	Thermomechanics. *Solid Mechanics and Its Applications*, **2020**, 53-79	0.4	
248	Finite element comparison of the effect of absorbers design in the surrounding bone of dental implants. *International Journal for Numerical Methods in Biomedical Engineering*, **2020**, 36, e3270	2.6	3
247	Mathematical formulation and parametric analysis of in vitro cell models in microfluidic devices: application to different stages of glioblastoma evolution. *Scientific Reports*, **2020**, 10, 21193	4.9	9
246	Enabling cell recovery from 3D cell culture microfluidic devices for tumour microenvironment biomarker profiling. *Scientific Reports*, **2019**, 9, 6199	4.9	19
245	Computational Multiscale Solvers for Continuum Approaches. *Materials*, **2019**, 12,	3.5	4
244	Multiscale Characterisation of Cortical Bone Tissue. *Applied Sciences (Switzerland)*, **2019**, 9, 5228	2.6	1
243	An unsupervised data completion method for physically-based data-driven models. *Computer Methods in Applied Mechanics and Engineering*, **2019**, 344, 120-143	5.7	9
242	A new reliability-based data-driven approach for noisy experimental data with physical constraints. *Computer Methods in Applied Mechanics and Engineering*, **2018**, 328, 752-774	5.7	19

241	Integrated Computational Materials Engineering in Solar Plants: The Virtual Materials Design Project. *Jom*, **2018**, 70, 1659-1669	2.1	2
240	Glioblastoma on a microfluidic chip: Generating pseudopalisades and enhancing aggressiveness through blood vessel obstruction events. *Neuro-Oncology*, **2017**, 19, 503-513	1	40
239	Development and characterization of a microfluidic model of the tumour microenvironment. *Scientific Reports*, **2016**, 6, 36086	4.9	67
238	Inhomogeneous Response of Articular Cartilage: A Three-Dimensional Multiphasic Heterogeneous Study. *PLoS ONE*, **2016**, 11, e0157967	3.7	5
237	Altered Mechano-Electrochemical Behavior of Articular Cartilage in Populations with Obesity. *Applied Sciences (Switzerland)*, **2016**, 6, 186	2.6	3
236	A PGD-based multiscale formulation for non-linear solid mechanics under small deformations. *Computer Methods in Applied Mechanics and Engineering*, **2016**, 305, 806-826	5.7	11
235	Zeolites for the selective adsorption of sulfur hexafluoride. *Physical Chemistry Chemical Physics*, **2015**, 17, 18121-30	3.6	16
234	Simulation of swallowing dysfunction and mechanical ventilation after a Montgomery T-tube insertion. *Computer Methods in Biomechanics and Biomedical Engineering*, **2015**, 18, 1596-605	2.1	5
233	Influence of first proximal phalanx geometry on hallux valgus deformity: a finite element analysis. *Medical and Biological Engineering and Computing*, **2015**, 53, 645-53	3.1	17
232	Evaluation of the stiffnesses of the Achilles tendon and soleus from the apparent stiffness of the triceps surae. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2015**, 229, 28-39	1.7	4
231	Structural biology response of a collagen hydrogel synthetic extracellular matrix with embedded human fibroblast: computational and experimental analysis. *Medical and Biological Engineering and Computing*, **2015**, 53, 721-35	3.1	5
230	Parameter-dependent behavior of articular cartilage: 3D mechano-electrochemical computational model. *Computer Methods and Programs in Biomedicine*, **2015**, 122, 491-502	6.9	9
229	Study of the Chemotactic Response of Multicellular Spheroids in a Microfluidic Device. *PLoS ONE*, **2015**, 10, e0139515	3.7	20
228	Chemical-diffusive modeling of the self-healing behavior in concrete. *International Journal of Solids and Structures*, **2015**, 69-70, 392-402	3.1	25
227	Reduction of Dorsal Displacement of the Proximal and Middle Phalanges Using a Neutral or Angled Implant for Joint Arthrodesis to Treat Hammertoe Deformity A Finite Element Study. *Journal of the American Podiatric Medical Association*, **2015**, 105, 493-502	1	0
226	Altered swelling and ion fluxes in articular cartilage as a biomarker in osteoarthritis and joint immobilization: a computational analysis. *Journal of the Royal Society Interface*, **2015**, 12, 20141090	4.1	15
225	Epicardial delivery of collagen patches with adipose-derived stem cells in rat and minipig models of chronic myocardial infarction. *Biomaterials*, **2014**, 35, 143-51	15.6	68
224	Computational modelling and analysis of mechanical conditions on cell locomotion and cell-cell interaction. *Computer Methods in Biomechanics and Biomedical Engineering*, **2014**, 17, 678-93	2.1	18

223	Zeolite screening for the separation of gas mixtures containing SO2, CO2 and CO. *Physical Chemistry Chemical Physics*, **2014**, 16, 19884-93	3.6	61
222	A pre-operative planning for endoprosthetic human tracheal implantation: a decision support system based on robust design of experiments. *Computer Methods in Biomechanics and Biomedical Engineering*, **2014**, 17, 750-67	2.1	4
221	A coupled mechano-biochemical model for bone adaptation. *Journal of Mathematical Biology*, **2014**, 69, 1383-429	2	18
220	Evolution of the properties of a poly(l-lactic acid) scaffold with double porosity during in vitro degradation in a phosphate-buffered saline solution. *Journal of Applied Polymer Science*, **2014**, 131, n/a-n/a	2.9	15
219	Numerical Calculation of Wind Loads over Solar Collectors. *Energy Procedia*, **2014**, 49, 163-173	2.3	22
218	In vitro osteoinduction of human mesenchymal stem cells in biomimetic surface modified titanium alloy implants. *Dental Materials Journal*, **2014**, 33, 305-12	2.5	8
217	Cartilage dysfunction in ALS patients as side effect of motion loss: 3D mechano-electrochemical computational model. *BioMed Research International*, **2014**, 2014, 179070	3	8
216	Computational modelling of multi-cell migration in a multi-signalling substrate. *Physical Biology*, **2014**, 11, 026002	3	19
215	Impedance-based outflow boundary conditions for human carotid haemodynamics. *Computer Methods in Biomechanics and Biomedical Engineering*, **2014**, 17, 1248-60	2.1	11
214	Culture of human bone marrow-derived mesenchymal stem cells on of poly(L-lactic acid) scaffolds: potential application for the tissue engineering of cartilage. *Knee Surgery, Sports Traumatology, Arthroscopy*, **2013**, 21, 1737-50	5.5	36
213	Computational methodology to determine fluid related parameters of non regular three-dimensional scaffolds. *Annals of Biomedical Engineering*, **2013**, 41, 2367-80	4.7	19
212	Effect of Sample Pre-Contact on the Experimental Evaluation of Cartilage Mechanical Properties. *Experimental Mechanics*, **2013**, 53, 911-917	2.6	11
211	3D computational modelling of cell migration: a mechano-chemo-thermo-electrotaxis approach. *Journal of Theoretical Biology*, **2013**, 329, 64-73	2.3	28
210	FE2 multiscale in linear elasticity based on parametrized microscale models using proper generalized decomposition. *Computer Methods in Applied Mechanics and Engineering*, **2013**, 257, 183-202	5.7	29
209	Preparation and characterization of collagen-based ADSC-carrier sheets for cardiovascular application. *Acta Biomaterialia*, **2013**, 9, 6075-83	10.8	34
208	Stress at the second metatarsal bone after correction of hammertoe and claw toe deformity: a finite element analysis using an anatomical model. *Journal of the American Podiatric Medical Association*, **2013**, 103, 260-73	1	5
207	Biomimetic hydroxyapatite coating on pore walls improves osteointegration of poly(L-lactic acid) scaffolds. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2013**, 101, 173-86	3.5	55
206	Hierarchical micro-adaptation of biological structures by mechanical stimuli. *International Journal of Solids and Structures*, **2013**, 50, 2353-2370	3.1	6

205	Insights on the Molecular Mechanisms of Hydrogen Adsorption in Zeolites. *Journal of Physical Chemistry C*, **2013**, 117, 14374-14380	3.8	22
204	Multiparametric response surface construction by means of proper generalized decomposition: An extension of the PARAFAC procedure. *Computer Methods in Applied Mechanics and Engineering*, **2013**, 253, 543-557	5.7	9
203	Response of sheep chondrocytes to changes in substrate stiffness from 2 to 20 Pa: effect of cell passaging. *Connective Tissue Research*, **2013**, 54, 159-66	3.3	26
202	CFD analysis of the human airways under impedance-based boundary conditions: application to healthy, diseased and stented trachea. *Computer Methods in Biomechanics and Biomedical Engineering*, **2013**, 16, 198-216	2.1	18
201	An affine micro-sphere-based constitutive model, accounting for junctional sliding, can capture F-actin network mechanics. *Computer Methods in Biomechanics and Biomedical Engineering*, **2013**, 16, 1002-12	2.1	3
200	Proper generalized decomposition of time-multiscale models. *International Journal for Numerical Methods in Engineering*, **2012**, 90, 569-596	2.4	40
199	Stress transfer properties of different commercial dental implants: a finite element study. *Computer Methods in Biomechanics and Biomedical Engineering*, **2012**, 15, 263-73	2.1	23
198	Influence of the macro and micro-porous structure on the mechanical behavior of poly(l-lactic acid) scaffolds. *Journal of Non-Crystalline Solids*, **2012**, 358, 3141-3149	3.9	45
197	Computational fluid-dynamics optimization of a human tracheal endoprosthesis. *International Communications in Heat and Mass Transfer*, **2012**, 39, 575-581	5.8	6
196	Mechanical stress redistribution in the calcaneus after autologous bone harvesting. *Journal of Biomechanics*, **2012**, 45, 1219-26	2.9	25
195	Anisotropic material behaviours of soft tissues in human trachea: an experimental study. *Journal of Biomechanics*, **2012**, 45, 1717-23	2.9	29
194	Anisotropic microsphere-based approach to damage in soft fibered tissue. *Biomechanics and Modeling in Mechanobiology*, **2012**, 11, 595-608	3.8	34
193	In vitro osteoinduction of human mesenchymal stem cells in biomimetic surface modified titanium alloy implants. *Dental Materials Journal*, **2012**, 31, 843-50	2.5	6
192	Influence of intraocular pressure on the photorefractive keratectomy for myopia correction. a numerical analysis. *Acta Ophthalmologica*, **2012**, 90, 0-0	3.7	
191	An anisotropic microsphere-based approach for fiber orientation adaptation in soft tissue. *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 3500-3	5	4
190	A Decission Support System for Endoprosthetic Patient-Specific Surgery of the Human Trachea. *Studies in Mechanobiology, Tissue Engineering and Biomaterials*, **2011**, 281-334	0.5	
189	Is arterial wall-strain stiffening an additional process responsible for atherosclerosis in coronary bifurcations?: an in vivo study based on dynamic CT and MRI. *American Journal of Physiology - Heart and Circulatory Physiology*, **2011**, 301, H1097-106	5.2	39
188	Mechanical characterization and numerical simulation of polyether-ether-ketone (PEEK) cranial implants. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 1819-32	4.1	54

187	Quantification of restitution dispersion from the dynamic changes of the T-wave peak to end, measured at the surface ECG. *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 1172-82	5	34
186	Modularity in developmental biology and artificial organs: a missing concept in tissue engineering. *Artificial Organs*, **2011**, 35, 656-62	2.6	21
185	Mechanical behaviour of synthetic surgical meshes: finite element simulation of the herniated abdominal wall. *Acta Biomaterialia*, **2011**, 7, 3905-13	10.8	72
184	Mechanical and histological characterization of the abdominal muscle. A previous step to modelling hernia surgery. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 392-404	4.1	57
183	Experimental study and constitutive modelling of the passive mechanical properties of the porcine carotid artery and its relation to histological analysis: Implications in animal cardiovascular device trials. *Medical Engineering and Physics*, **2011**, 33, 665-76	2.4	43
182	FE simulation of human trachea swallowing movement before and after the implantation of an endoprothesis. *Applied Mathematical Modelling*, **2011**, 35, 4902-4912	4.5	12
181	Mechanical properties of cross-linked collagen meshes after human adipose derived stromal cells seeding. *Journal of Biomedical Materials Research - Part A*, **2011**, 96, 341-8	5.4	7
180	Modeling of the fluid structure interaction of a human trachea under different ventilation conditions. *International Communications in Heat and Mass Transfer*, **2011**, 38, 10-15	5.8	21
179	Numerical modeling of a human stented trachea under different stent designs. *International Communications in Heat and Mass Transfer*, **2011**, 38, 855-862	5.8	22
178	Mechanical characterization of the softening behavior of human vaginal tissue. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 275-83	4.1	51
177	FSI Analysis of a healthy and a stenotic human trachea under impedance-based boundary conditions. *Journal of Biomechanical Engineering*, **2011**, 133, 021001	2.1	31
176	Numerical simulation of bone remodelling around dental implants. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2011**, 225, 897-906	1.7	13
175	FSI analysis of a human trachea before and after prosthesis implantation. *Journal of Biomechanical Engineering*, **2011**, 133, 071003	2.1	27
174	Modelling bone tissue engineering. Towards an understanding of the role of scaffold design parameters. *Computational Methods in Applied Sciences (Springer)*, **2011**, 71-90	0.4	1
173	The Effect of Intraocular Pressure on the Outcome of Myopic Photorefractive Keratectomy: A Numerical Approach. *Journal of Healthcare Engineering*, **2010**, 1, 461-476	3.7	7
172	An interspecies computational study on limb lengthening. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2010**, 224, 1245-56	1.7	17
171	Advantages and drawbacks of proximal interphalangeal joint fusion versus flexor tendon transfer in the correction of hammer and claw toe deformity. A finite-element study. *Journal of Biomechanical Engineering*, **2010**, 132, 051002	2.1	15
170	Prediction of nonlinear elastic behaviour of vaginal tissue: experimental results and model formulation. *Computer Methods in Biomechanics and Biomedical Engineering*, **2010**, 13, 327-37	2.1	29

169	FSI Analysis of the Human Trachea under Impedance-Based Boundary Conditions. *IFMBE Proceedings*, **2010**, 710-713	0.2	
168	Comparative analysis of bone remodelling models with respect to computerised tomography-based finite element models of bone. *Computer Methods in Biomechanics and Biomedical Engineering*, **2010**, 13, 71-80	2.1	25
167	Patient-specific models of human trachea to predict mechanical consequences of endoprosthesis implantation. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2010**, 368, 2881-96	3	20
166	On the use of the Bingham statistical distribution in microsphere-based constitutive models for arterial tissue. *Mechanics Research Communications*, **2010**, 37, 700-706	2.2	42
165	Experimental characterization and constitutive modeling of the mechanical behavior of the human trachea. *Medical Engineering and Physics*, **2010**, 32, 76-82	2.4	65
164	Biomechanical response of a mandible in a patient affected with hemifacial microsomia before and after distraction osteogenesis. *Medical Engineering and Physics*, **2010**, 32, 860-6	2.4	11
163	Experimental study and constitutive modeling of the viscoelastic mechanical properties of the human prolapsed vaginal tissue. *Biomechanics and Modeling in Mechanobiology*, **2010**, 9, 35-44	3.8	47
162	Growth mixture model of distraction osteogenesis: effect of pre-traction stresses. *Biomechanics and Modeling in Mechanobiology*, **2010**, 9, 103-15	3.8	33
161	Unraveling changes in myocardial contractility during human fetal growth: a finite element analysis based on in vivo ultrasound measurements. *Annals of Biomedical Engineering*, **2010**, 38, 2702-15	4.7	6
160	FSI analysis of the coughing mechanism in a human trachea. *Annals of Biomedical Engineering*, **2010**, 38, 1556-65	4.7	37
159	Adaptive macro finite elements for the numerical solution of monodomain equations in cardiac electrophysiology. *Annals of Biomedical Engineering*, **2010**, 38, 2331-45	4.7	63
158	On the modelling of biological patterns with mechanochemical models: Insights from analysis and computation. *Bulletin of Mathematical Biology*, **2010**, 72, 400-31	2.1	9
157	A higher order method based on local maximum entropy approximation. *International Journal for Numerical Methods in Engineering*, **2010**, 83, 741-764	2.4	30
156	Numerical framework for patient-specific computational modelling of vascular tissue. *International Journal for Numerical Methods in Biomedical Engineering*, **2010**, 26, 35-51	2.6	36
155	Mechanobiological Models for Bone Tissue. Applications to Implant Design **2010**, 123-143		
154	A rotating bed system bioreactor enables cultivation of primary osteoblasts on well-characterized Sponceram regarding structural and flow properties. *Biotechnology Progress*, **2010**, 26, 671-8	2.8	10
153	An accurate validation of a computational model of a human lumbosacral segment. *Journal of Biomechanics*, **2010**, 43, 334-42	2.9	61
152	A constitutive formulation of vascular tissue mechanics including viscoelasticity and softening behaviour. *Journal of Biomechanics*, **2010**, 43, 984-9	2.9	55

151	Scaffold microarchitecture determines internal bone directional growth structure: a numerical study. *Journal of Biomechanics*, **2010**, 43, 2480-6	2.9	37
150	Influence of the frequency of the external mechanical stimulus on bone healing: a computational study. *Medical Engineering and Physics*, **2010**, 32, 363-71	2.4	31
149	A comparison of implicit and explicit natural element methods in large strains problems: Application to soft biological tissues modeling. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 1691-1700	5.7	23
148	Modelling Living Tissues: Mechanical and Mechanobiological Aspects. *Mathematics in Industry*, **2010** , 3-8	0.2	1
147	A numerical model of the eye for simulation of corneal surgery and corneal biomechanical properties. *Acta Ophthalmologica*, **2010**, 88, 0-0	3.7	
146	Load transfer mechanism for different metatarsal geometries: a finite element study. *Journal of Biomechanical Engineering*, **2009**, 131, 021011	2.1	49
145	Novel 3D biomaterials for tissue engineering based on collagen and macroporous ceramics. *Materialwissenschaft Und Werkstofftechnik*, **2009**, 40, 54-60	0.9	6
144	On the use of non-linear transformations for the evaluation of anisotropic rotationally symmetric directional integrals. Application to the stress analysis in fibred soft tissues. *International Journal for Numerical Methods in Engineering*, **2009**, 79, 474-504	2.4	25
143	A bone remodelling model including the directional activity of BMUs. *Biomechanics and Modeling in Mechanobiology*, **2009**, 8, 111-27	3.8	27
142	Modeling distraction osteogenesis: analysis of the distraction rate. *Biomechanics and Modeling in Mechanobiology*, **2009**, 8, 323-35	3.8	38
141	A reaction-diffusion model for long bones growth. *Biomechanics and Modeling in Mechanobiology*, **2009**, 8, 381-95	3.8	27
140	Does increased bone-cement interface strength have negative consequences for bulk cement integrity? A finite element study. *Annals of Biomedical Engineering*, **2009**, 37, 454-66	4.7	15
139	Study on tracheal collapsibility, compliance, and stress by considering nonlinear mechanical property of cartilage. *Annals of Biomedical Engineering*, **2009**, 37, 2380-9	4.7	15
138	The effect of material model formulation in the stress analysis of abdominal aortic aneurysms. *Annals of Biomedical Engineering*, **2009**, 37, 2218-21	4.7	49
137	On the effect of substrate curvature on cell mechanics. *Biomaterials*, **2009**, 30, 6674-86	15.6	71
136	Bone ingrowth on the surface of endosseous implants. Part 2: Theoretical and numerical analysis. *Journal of Theoretical Biology*, **2009**, 260, 13-26	2.3	15
135	Study of tracheal collapsibility, compliance and stress by considering its asymmetric geometry. *Medical Engineering and Physics*, **2009**, 31, 328-36	2.4	8
134	On modelling damage process in vaginal tissue. *Journal of Biomechanics*, **2009**, 42, 642-51	2.9	64

133	An anisotropic pseudo-elastic approach for modelling Mullins effect in fibrous biological materials. *Mechanics Research Communications*, **2009**, 36, 784-790	2.2	45
132	Permeability evaluation of 45S5 Bioglass-based scaffolds for bone tissue engineering. *Journal of Biomechanics*, **2009**, 42, 257-60	2.9	98
131	Finite-element simulation of flexor digitorum longus or flexor digitorum brevis tendon transfer for the treatment of claw toe deformity. *Journal of Biomechanics*, **2009**, 42, 1697-704	2.9	31
130	Anisotropic micro-sphere-based finite elasticity applied to blood vessel modelling. *Journal of the Mechanics and Physics of Solids*, **2009**, 57, 178-203	5	94
129	Bone ingrowth on the surface of endosseous implants. Part 1: Mathematical model. *Journal of Theoretical Biology*, **2009**, 260, 1-12	2.3	44
128	Appearance and location of secondary ossification centres may be explained by a reaction-diffusion mechanism. *Computers in Biology and Medicine*, **2009**, 39, 554-61	7	30
127	Computational modelling of bone cement polymerization: temperature and residual stresses. *Computers in Biology and Medicine*, **2009**, 39, 751-9	7	16
126	On the Mullins effect and hysteresis of fibered biological materials: A comparison between continuous and discontinuous damage models. *International Journal of Solids and Structures*, **2009**, 46, 1727-1735	3.1	61
125	Numerical modeling of a mechano-chemical theory for wound contraction analysis. *International Journal of Solids and Structures*, **2009**, 46, 3597-3606	3.1	55
124	On scaffold designing for bone regeneration: A computational multiscale approach. *Acta Biomaterialia*, **2009**, 5, 219-29	10.8	155
123	Effect of limbal relaxing incisions during phacoemulsification surgery based on nomogram review and numerical simulation. *Cornea*, **2009**, 28, 1042-9	3.1	11
122	A mathematical approach to bone tissue engineering. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2009**, 367, 2055-78	3	34
121	Towards an Isogeometric Meshless Natural Element Method **2009**, 237-257		
120	Mechanical stresses in abdominal aortic aneurysms: influence of diameter, asymmetry, and material anisotropy. *Journal of Biomechanical Engineering*, **2008**, 130, 021023	2.1	116
119	Post-repolarization refractoriness in human ventricular cardiac cells **2008**,		5
118	Simulation of Bone Remodelling and Bone Ingrowth within Scaffolds. *Key Engineering Materials*, **2008**, 377, 225-273	0.4	3
117	On the role of bone damage in calcium homeostasis. *Journal of Theoretical Biology*, **2008**, 254, 704-12	2.3	18
116	An experimental study of the mouse skin behaviour: damage and inelastic aspects. *Journal of Biomechanics*, **2008**, 41, 93-9	2.9	74

115	An accurate finite element model of the cervical spine under quasi-static loading. *Journal of Biomechanics*, **2008**, 41, 523-31	2.9	66
114	On modelling nonlinear viscoelastic effects in ligaments. *Journal of Biomechanics*, **2008**, 41, 2659-66	2.9	58
113	Experimental study and constitutive modelling of the passive mechanical properties of the ovine infrarenal vena cava tissue. *Journal of Biomechanics*, **2008**, 41, 3038-45	2.9	51
112	A mathematical model for bone tissue regeneration inside a specific type of scaffold. *Biomechanics and Modeling in Mechanobiology*, **2008**, 7, 355-66	3.8	68
111	Clenching TMJs-loads increases in partial edentates: a 3D finite element study. *Annals of Biomedical Engineering*, **2008**, 36, 1014-23	4.7	22
110	On finite-strain damage of viscoelastic-fibred materials. Application to soft biological tissues. *International Journal for Numerical Methods in Engineering*, **2008**, 74, 1198-1218	2.4	45
109	Higher-order natural element methods: Towards an isogeometric meshless method. *International Journal for Numerical Methods in Engineering*, **2008**, 74, 1928-1954	2.4	15
108	Mechanical and flow characterization of Sponceram carriers: Evaluation by homogenization theory and experimental validation. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2008**, 87, 42-8	3.5	31
107	Computational simulation of dental implant osseointegration through resonance frequency analysis. *Journal of Biomechanics*, **2008**, 41, 316-25	2.9	23
106	Finite element simulation of arcuates for astigmatism correction. *Journal of Biomechanics*, **2008**, 41, 797-805	2.9	55
105	Modelling adaptative volumetric finite growth in patient-specific residually stressed arteries. *Journal of Biomechanics*, **2008**, 41, 1773-81	2.9	26
104	Nonlinear mechanical property of tracheal cartilage: a theoretical and experimental study. *Journal of Biomechanics*, **2008**, 41, 1995-2002	2.9	23
103	Dynamic 3D FE modelling of the human temporomandibular joint during whiplash. *Medical Engineering and Physics*, **2008**, 30, 700-9	2.4	15
102	A finite element model to accurately predict real deformations of the breast. *Medical Engineering and Physics*, **2008**, 30, 1089-97	2.4	87
101	Finite element implementation of a stochastic three dimensional finite-strain damage model for fibrous soft tissue. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 946-958	5.7	31
100	Application of the natural element method to finite deformation inelastic problems in isotropic and fiber-reinforced biological soft tissues. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 1983-1996	5.7	14
99	Micro-macro numerical modelling of bone regeneration in tissue engineering. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 3092-3107	5.7	55
98	Computer simulation of damage on distal femoral articular cartilage after meniscectomies. *Computers in Biology and Medicine*, **2008**, 38, 69-81	7	34

97	Fourth-order compact schemes with adaptive time step for monodomain reaction–diffusion equations. *Journal of Computational and Applied Mathematics*, **2008**, 216, 39-55	2.4	17
96	Modeling mechanosensing and its effect on the migration and proliferation of adherent cells. *Acta Biomaterialia*, **2008**, 4, 613-21	10.8	72
95	An uncoupled directional damage model for fibred biological soft tissues. Formulation and computational aspects. *International Journal for Numerical Methods in Engineering*, **2007**, 69, 2036-2057	2.4	107
94	Computational comparison of reamed versus unreamed intramedullary tibial nails. *Journal of Orthopaedic Research*, **2007**, 25, 191-200	3.8	34
93	Modelling the mechanical behaviour of living bony interfaces. *Computer Methods in Applied Mechanics and Engineering*, **2007**, 196, 3300-3314	5.7	34
92	Effect of the size and location of osteochondral defects in degenerative arthritis. A finite element simulation. *Computers in Biology and Medicine*, **2007**, 37, 376-87	7	68
91	An anisotropic visco-hyperelastic model for ligaments at finite strains. Formulation and computational aspects. *International Journal of Solids and Structures*, **2007**, 44, 760-778	3.1	79
90	Structural damage models for fibrous biological soft tissues. *International Journal of Solids and Structures*, **2007**, 44, 5894-5911	3.1	59
89	A constitutive model for fibrous tissues considering collagen fiber crimp. *International Journal of Non-Linear Mechanics*, **2007**, 42, 391-402	2.8	60
88	An accurate simulation model of anteriorly displaced TMJ discs with and without reduction. *Medical Engineering and Physics*, **2007**, 29, 216-26	2.4	31
87	Computational simulation of fracture healing: influence of interfragmentary movement on the callus growth. *Journal of Biomechanics*, **2007**, 40, 1467-76	2.9	92
86	A damage model for the growth plate: application to the prediction of slipped capital epiphysis. *Journal of Biomechanics*, **2007**, 40, 3305-13	2.9	15
85	Influence of unilateral disc displacement on the stress response of the temporomandibular joint discs during opening and mastication. *Journal of Anatomy*, **2007**, 211, 453-63	2.9	10
84	A finite element dual porosity approach to model deformation-induced fluid flow in cortical bone. *Annals of Biomedical Engineering*, **2007**, 35, 1687-98	4.7	33
83	Assessing the use of the "opening angle method" to enforce residual stresses in patient-specific arteries. *Annals of Biomedical Engineering*, **2007**, 35, 1821-37	4.7	67
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