

Manuel DoblarÃ©

List of Publications by Year in descending order

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259
papers

10,541
citations

30068

54
h-index

53222

85
g-index

264
all docs

264
docs citations

264
times ranked

8103
citing authors

#	ARTICLE	IF	CITATIONS
1	Modelling bone tissue fracture and healing: a review. <i>Engineering Fracture Mechanics</i> , 2004, 71, 1809-1840.	4.3	404
2	A three-dimensional finite element analysis of the combined behavior of ligaments and menisci in the healthy human knee joint. <i>Journal of Biomechanics</i> , 2006, 39, 1686-1701.	2.1	391
3	Finite element analysis of the effect of meniscal tears and meniscectomies on human knee biomechanics. <i>Clinical Biomechanics</i> , 2005, 20, 498-507.	1.2	240
4	Non-linear dynamics of three-dimensional rods: Exact energy and momentum conserving algorithms. <i>International Journal for Numerical Methods in Engineering</i> , 1995, 38, 1431-1473.	2.8	207
5	Anisotropic bone remodelling model based on a continuum damage-repair theory. <i>Journal of Biomechanics</i> , 2002, 35, 1-17.	2.1	196
6	On scaffold designing for bone regeneration: A computational multiscale approach. <i>Acta Biomaterialia</i> , 2009, 5, 219-229.	8.3	183
7	Influence of fracture gap size on the pattern of long bone healing: a computational study. <i>Journal of Theoretical Biology</i> , 2005, 235, 105-119.	1.7	176
8	Why lateral meniscectomy is more dangerous than medial meniscectomy. A finite element study. <i>Journal of Orthopaedic Research</i> , 2006, 24, 1001-1010.	2.3	148
9	Application of an anisotropic bone-remodelling model based on a damage-repair theory to the analysis of the proximal femur before and after total hip replacement. <i>Journal of Biomechanics</i> , 2001, 34, 1157-1170.	2.1	139
10	Mechanical Stresses in Abdominal Aortic Aneurysms: Influence of Diameter, Asymmetry, and Material Anisotropy. <i>Journal of Biomechanical Engineering</i> , 2008, 130, 021023.	1.3	136
11	Biomechanical Modeling of Refractive Corneal Surgery. <i>Journal of Biomechanical Engineering</i> , 2006, 128, 150-160.	1.3	135
12	Overview and recent advances in natural neighbour galerkin methods. <i>Archives of Computational Methods in Engineering</i> , 2003, 10, 307-384.	10.2	132
13	An uncoupled directional damage model for fibred biological soft tissues. Formulation and computational aspects. <i>International Journal for Numerical Methods in Engineering</i> , 2007, 69, 2036-2057.	2.8	126
14	Permeability evaluation of 45S5 Bioglass®-based scaffolds for bone tissue engineering. <i>Journal of Biomechanics</i> , 2009, 42, 257-260.	2.1	117
15	Anisotropic micro-sphere-based finite elasticity applied to blood vessel modelling. <i>Journal of the Mechanics and Physics of Solids</i> , 2009, 57, 178-203.	4.8	114
16	A bone remodelling model coupling microdamage growth and repair by 3D BMU-activity. <i>Biomechanics and Modeling in Mechanobiology</i> , 2005, 4, 147-167.	2.8	110
17	Adaptive Macro Finite Elements for the Numerical Solution of Monodomain Equations in Cardiac Electrophysiology. <i>Annals of Biomedical Engineering</i> , 2010, 38, 2331-2345.	2.5	109
18	Computational simulation of fracture healing: Influence of interfragmentary movement on the callus growth. <i>Journal of Biomechanics</i> , 2007, 40, 1467-1476.	2.1	106

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19	A finite element model to accurately predict real deformations of the breast. <i>Medical Engineering and Physics</i> , 2008, 30, 1089-1097.	1.7	100
20	Imposing essential boundary conditions in the natural element method by means of density-scaled shapes. <i>International Journal for Numerical Methods in Engineering</i> , 2000, 49, 519-546.	2.8	96
21	Development and characterization of a microfluidic model of the tumour microenvironment. <i>Scientific Reports</i> , 2016, 6, 36086.	3.3	95
22	Three-Dimensional Finite Element Analysis of Several Internal and External Pelvis Fixations. <i>Journal of Biomechanical Engineering</i> , 2000, 122, 516-522.	1.3	92
23	A stochastic-structurally based three dimensional finite-strain damage model for fibrous soft tissue. <i>Journal of the Mechanics and Physics of Solids</i> , 2006, 54, 864-886.	4.8	91
24	Epicardial delivery of collagen patches with adipose-derived stem cells in rat and minipig models of chronic myocardial infarction. <i>Biomaterials</i> , 2014, 35, 143-151.	11.4	90
25	An anisotropic visco-hyperelastic model for ligaments at finite strains. Formulation and computational aspects. <i>International Journal of Solids and Structures</i> , 2007, 44, 760-778.	2.7	89
26	Modeling mechanosensing and its effect on the migration and proliferation of adherent cells. <i>Acta Biomaterialia</i> , 2008, 4, 613-621.	8.3	87
27	Mechanical behaviour of synthetic surgical meshes: Finite element simulation of the herniated abdominal wall. <i>Acta Biomaterialia</i> , 2011, 7, 3905-3913.	8.3	87
28	An experimental study of the mouse skin behaviour: Damage and inelastic aspects. <i>Journal of Biomechanics</i> , 2008, 41, 93-99.	2.1	86
29	Experimental characterization and constitutive modeling of the mechanical behavior of the human trachea. <i>Medical Engineering and Physics</i> , 2010, 32, 76-82.	1.7	86
30	A mathematical model for bone tissue regeneration inside a specific type of scaffold. <i>Biomechanics and Modeling in Mechanobiology</i> , 2008, 7, 355-366.	2.8	84
31	On the effect of substrate curvature on cell mechanics. <i>Biomaterials</i> , 2009, 30, 6674-6686.	11.4	83
32	An accurate finite element model of the cervical spine under quasi-static loading. <i>Journal of Biomechanics</i> , 2008, 41, 523-531.	2.1	82
33	Finite element analysis of the temporomandibular joint during lateral excursions of the mandible. <i>Journal of Biomechanics</i> , 2006, 39, 2153-2163.	2.1	81
34	Zeolite screening for the separation of gas mixtures containing SO ₂ , CO ₂ and CO. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 19884.	2.8	81
35	A finite element simulation of the effect of graft stiffness and graft tensioning in ACL reconstruction. <i>Clinical Biomechanics</i> , 2005, 20, 636-644.	1.2	80
36	Effect of the size and location of osteochondral defects in degenerative arthritis. A finite element simulation. <i>Computers in Biology and Medicine</i> , 2007, 37, 376-387.	7.0	80

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37	On the Mullins effect and hysteresis of fibered biological materials: A comparison between continuous and discontinuous damage models. <i>International Journal of Solids and Structures</i> , 2009, 46, 1727-1735.	2.7	78
38	A constitutive model for fibrous tissues considering collagen fiber crimp. <i>International Journal of Non-Linear Mechanics</i> , 2007, 42, 391-402.	2.6	77
39	An accurate validation of a computational model of a human lumbosacral segment. <i>Journal of Biomechanics</i> , 2010, 43, 334-342.	2.1	76
40	On modelling damage process in vaginal tissue. <i>Journal of Biomechanics</i> , 2009, 42, 642-651.	2.1	74
41	Assessing the Use of the "Opening Angle Method" to Enforce Residual Stresses in Patient-Specific Arteries. <i>Annals of Biomedical Engineering</i> , 2007, 35, 1821-1837.	2.5	73
42	Numerical estimation of bone density and elastic constants distribution in a human mandible. <i>Journal of Biomechanics</i> , 2007, 40, 828-836.	2.1	72
43	Mechanical characterization and numerical simulation of polyether-ether-ketone (PEEK) cranial implants. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 1819-1832.	3.1	70
44	Mechanical and histological characterization of the abdominal muscle. A previous step to modelling hernia surgery. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 392-404.	3.1	70
45	On modelling nonlinear viscoelastic effects in ligaments. <i>Journal of Biomechanics</i> , 2008, 41, 2659-2666.	2.1	66
46	A constitutive formulation of vascular tissue mechanics including viscoelasticity and softening behaviour. <i>Journal of Biomechanics</i> , 2010, 43, 984-989.	2.1	66
47	Structural damage models for fibrous biological soft tissues. <i>International Journal of Solids and Structures</i> , 2007, 44, 5894-5911.	2.7	65
48	Mechanical characterization of the softening behavior of human vaginal tissue. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 275-283.	3.1	64
49	Numerical modeling of a mechano-chemical theory for wound contraction analysis. <i>International Journal of Solids and Structures</i> , 2009, 46, 3597-3606.	2.7	63
50	On the employ of meshless methods in biomechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2005, 194, 801-821.	6.6	62
51	Finite element simulation of arcuates for astigmatism correction. <i>Journal of Biomechanics</i> , 2008, 41, 797-805.	2.1	62
52	Biomimetic hydroxyapatite coating on pore walls improves osteointegration of poly(L-lactic acid) scaffolds. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2013, 101B, 173-186.	3.4	61
53	Micro-macro numerical modelling of bone regeneration in tissue engineering. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 3092-3107.	6.6	60
54	Experimental study and constitutive modeling of the viscoelastic mechanical properties of the human prolapsed vaginal tissue. <i>Biomechanics and Modeling in Mechanobiology</i> , 2010, 9, 35-44.	2.8	60

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55	On finite-strain damage of viscoelastic-fibred materials. Application to soft biological tissues. <i>International Journal for Numerical Methods in Engineering</i> , 2008, 74, 1198-1218.	2.8	57
56	Load Transfer Mechanism for Different Metatarsal Geometries: A Finite Element Study. <i>Journal of Biomechanical Engineering</i> , 2009, 131, 021011.	1.3	57
57	The Effect of Material Model Formulation in the Stress Analysis of Abdominal Aortic Aneurysms. <i>Annals of Biomedical Engineering</i> , 2009, 37, 2218-2221.	2.5	56
58	Experimental study and constitutive modelling of the passive mechanical properties of the ovine infrarenal vena cava tissue. <i>Journal of Biomechanics</i> , 2008, 41, 3038-3045.	2.1	55
59	An anisotropic pseudo-elastic approach for modelling Mullins effect in fibrous biological materials. <i>Mechanics Research Communications</i> , 2009, 36, 784-790.	1.8	54
60	Bone ingrowth on the surface of endosseous implants. Part 1: Mathematical model. <i>Journal of Theoretical Biology</i> , 2009, 260, 1-12.	1.7	54
61	Proper generalized decomposition of time-multiscale models. <i>International Journal for Numerical Methods in Engineering</i> , 2012, 90, 569-596.	2.8	52
62	Bone remodelling simulation: a tool for implant design. <i>Computational Materials Science</i> , 2002, 25, 100-114.	3.0	51
63	Glioblastoma on a microfluidic chip: Generating pseudopalisades and enhancing aggressiveness through blood vessel obstruction events. <i>Neuro-Oncology</i> , 2017, 19, now230.	1.2	51
64	Finite element study of intramedullary osteosynthesis in the treatment of trochanteric fractures of the hip: Gamma and PFN. <i>Injury</i> , 2004, 35, 130-135.	1.7	50
65	Influence of the tunnel angle in ACL reconstructions on the biomechanics of the knee joint. <i>Clinical Biomechanics</i> , 2006, 21, 508-516.	1.2	50
66	Natural element meshless simulation of flows involving short fiber suspensions. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2003, 115, 51-78.	2.4	49
67	Numerical integration in Natural Neighbour Galerkin methods. <i>International Journal for Numerical Methods in Engineering</i> , 2004, 60, 2077-2104.	2.8	49
68	An accurate simulation model of anteriorly displaced TMJ discs with and without reduction. <i>Medical Engineering and Physics</i> , 2007, 29, 216-226.	1.7	48
69	On the use of the Bingham statistical distribution in microsphere-based constitutive models for arterial tissue. <i>Mechanics Research Communications</i> , 2010, 37, 700-706.	1.8	48
70	Finite Element Prediction of Proximal Femoral Fracture Patterns Under Different Loads. <i>Journal of Biomechanical Engineering</i> , 2005, 127, 9-14.	1.3	47
71	Three-dimensional simulation of aluminium extrusion by the \hat{I} -shape based natural element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 4269-4286.	6.6	47
72	Computational Modelling of Diarthrodial Joints. Physiological, Pathological and Pos-Surgery Simulations. <i>Archives of Computational Methods in Engineering</i> , 2007, 14, 47-91.	10.2	47

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73	FSI Analysis of the Coughing Mechanism in a Human Trachea. <i>Annals of Biomedical Engineering</i> , 2010, 38, 1556-1565.	2.5	47
74	A natural element updated Lagrangian strategy for free-surface fluid dynamics. <i>Journal of Computational Physics</i> , 2007, 223, 127-150.	3.8	46
75	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. <i>Medical Engineering and Physics</i> , 2011, 33, 665-676.	1.7	46
76	Influence of the macro and micro-porous structure on the mechanical behavior of poly(l-lactic acid) scaffolds. <i>Journal of Non-Crystalline Solids</i> , 2012, 358, 3141-3149.	3.1	46
77	The effect of collagen reinforcement in the behaviour of the temporomandibular joint disc. <i>Journal of Biomechanics</i> , 2006, 39, 1075-1085.	2.1	45
78	Modeling distraction osteogenesis: analysis of the distraction rate. <i>Biomechanics and Modeling in Mechanobiology</i> , 2009, 8, 323-335.	2.8	45
79	A procedure to simulate coronary artery bypass graft surgery. <i>Medical and Biological Engineering and Computing</i> , 2007, 45, 819-827.	2.8	44
80	Modelling three-dimensional piece-wise homogeneous domains using the \pm -shape-based natural element method. <i>International Journal for Numerical Methods in Engineering</i> , 2002, 54, 871-897.	2.8	43
81	Scaffold microarchitecture determines internal bone directional growth structure: A numerical study. <i>Journal of Biomechanics</i> , 2010, 43, 2480-2486.	2.1	43
82	On the numerical treatment of initial strains in biological soft tissues. <i>International Journal for Numerical Methods in Engineering</i> , 2006, 68, 836-860.	2.8	42
83	Numerical framework for patient-specific computational modelling of vascular tissue. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2010, 26, 35-51.	2.1	42
84	Is arterial wall-strain stiffening an additional process responsible for atherosclerosis in coronary bifurcations?: an in vivo study based on dynamic CT and MRI. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2011, 301, H1097-H1106.	3.2	42
85	Anisotropic material behaviours of soft tissues in human trachea: An experimental study. <i>Journal of Biomechanics</i> , 2012, 45, 1717-1723.	2.1	41
86	Culture of human bone marrow-derived mesenchymal stem cells on of poly(l-lactic acid) scaffolds: potential application for the tissue engineering of cartilage. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2013, 21, 1737-1750.	4.2	41
87	Meshless methods with application to metal forming. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 6661-6675.	6.6	40
88	A 3D Computational Simulation of Fracture Callus Formation: Influence of the Stiffness of the External Fixator. <i>Journal of Biomechanical Engineering</i> , 2006, 128, 290-299.	1.3	40
89	Finite-element simulation of flexor digitorum longus or flexor digitorum brevis tendon transfer for the treatment of claw toe deformity. <i>Journal of Biomechanics</i> , 2009, 42, 1697-1704.	2.1	40
90	A mathematical approach to bone tissue engineering. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2009, 367, 2055-2078.	3.4	40

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91	Study of crack propagation in orthotropic materials by using the boundary element method. <i>Engineering Fracture Mechanics</i> , 1990, 37, 953-967.	4.3	39
92	Quantification of Restitution Dispersion From the Dynamic Changes of the ST-T Wave Peak to End, Measured at the Surface ECG. <i>IEEE Transactions on Biomedical Engineering</i> , 2011, 58, 1172-1182.	4.2	39
93	Preparation and characterization of collagen-based ADSC-carrier sheets for cardiovascular application. <i>Acta Biomaterialia</i> , 2013, 9, 6075-6083.	8.3	39
94	Updated Lagrangian free surface flow simulations with natural neighbour Galerkin methods. <i>International Journal for Numerical Methods in Engineering</i> , 2004, 60, 2105-2129.	2.8	38
95	Probabilistic analysis of the influence of the bonding degree of the stem-cement interface in the performance of cemented hip prostheses. <i>Journal of Biomechanics</i> , 2006, 39, 1859-1872.	2.1	38
96	3D Finite Element Simulation of the Opening Movement of the Mandible in Healthy and Pathologic Situations. <i>Journal of Biomechanical Engineering</i> , 2006, 128, 242-249.	1.3	38
97	Prediction of nonlinear elastic behaviour of vaginal tissue: experimental results and model formulation. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2010, 13, 327-337.	1.6	38
98	Computational comparison of reamed versus unreamed intramedullary tibial nails. <i>Journal of Orthopaedic Research</i> , 2007, 25, 191-200.	2.3	37
99	Computer simulation of damage on distal femoral articular cartilage after meniscectomies. <i>Computers in Biology and Medicine</i> , 2008, 38, 69-81.	7.0	37
100	Anisotropic microsphere-based approach to damage in soft fibered tissue. <i>Biomechanics and Modeling in Mechanobiology</i> , 2012, 11, 595-608.	2.8	37
101	Volumetric locking in natural neighbour Galerkin methods. <i>International Journal for Numerical Methods in Engineering</i> , 2004, 61, 611-632.	2.8	36
102	On solving large strain hyperelastic problems with the natural element method. <i>International Journal for Numerical Methods in Engineering</i> , 2005, 62, 159-185.	2.8	36
103	A Finite Element Dual Porosity Approach to Model Deformation-Induced Fluid Flow in Cortical Bone. <i>Annals of Biomedical Engineering</i> , 2007, 35, 1687-1698.	2.5	36
104	FE2 multiscale in linear elasticity based on parametrized microscale models using proper generalized decomposition. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 257, 183-202.	6.6	36
105	On non-linear transformations for the integration of weakly-singular and Cauchy Principal Value integrals. <i>International Journal for Numerical Methods in Engineering</i> , 1997, 40, 3325-3358.	2.8	35
106	Modelling the mechanical behaviour of living bony interfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2007, 196, 3300-3314.	6.6	35
107	Finite element implementation of a stochastic three dimensional finite-strain damage model for fibrous soft tissue. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 946-958.	6.6	35
108	Influence of the frequency of the external mechanical stimulus on bone healing: A computational study. <i>Medical Engineering and Physics</i> , 2010, 32, 363-371.	1.7	35

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109	Impedance-based outflow boundary conditions for human carotid haemodynamics. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2014, 17, 1248-1260.	1.6	35
110	Growth mixture model of distraction osteogenesis: effect of pre-traction stresses. <i>Biomechanics and Modeling in Mechanobiology</i> , 2010, 9, 103-115.	2.8	34
111	FSI Analysis of a Healthy and a Stenotic Human Trachea Under Impedance-Based Boundary Conditions. <i>Journal of Biomechanical Engineering</i> , 2011, 133, 021001.	1.3	34
112	3D computational modelling of cell migration: A mechano-chemo-thermo-electrotaxis approach. <i>Journal of Theoretical Biology</i> , 2013, 329, 64-73.	1.7	34
113	A Comparative Analysis of Different Treatments for Distal Femur Fractures using the Finite Element Method. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2004, 7, 245-256.	1.6	33
114	A bone remodelling model including the directional activity of BMUs. <i>Biomechanics and Modeling in Mechanobiology</i> , 2009, 8, 111-127.	2.8	33
115	A reaction-diffusion model for long bones growth. <i>Biomechanics and Modeling in Mechanobiology</i> , 2009, 8, 381-395.	2.8	33
116	Insights on the Molecular Mechanisms of Hydrogen Adsorption in Zeolites. <i>Journal of Physical Chemistry C</i> , 2013, 117, 14374-14380.	3.1	33
117	Enabling cell recovery from 3D cell culture microfluidic devices for tumour microenvironment biomarker profiling. <i>Scientific Reports</i> , 2019, 9, 6199.	3.3	33
118	Mechanical and flow characterization of Sponceram [®] carriers: Evaluation by homogenization theory and experimental validation. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2008, 87B, 42-48.	3.4	32
119	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. <i>International Journal for Numerical Methods in Engineering</i> , 2009, 79, 474-504.	2.8	31
120	Appearance and location of secondary ossification centres may be explained by a reaction-diffusion mechanism. <i>Computers in Biology and Medicine</i> , 2009, 39, 554-561.	7.0	31
121	A higher order method based on local maximum entropy approximation. <i>International Journal for Numerical Methods in Engineering</i> , 2010, 83, 741-764.	2.8	31
122	FSI Analysis of a Human Trachea Before and After Prosthesis Implantation. <i>Journal of Biomechanical Engineering</i> , 2011, 133, 071003.	1.3	31
123	Response of Sheep Chondrocytes to Changes in Substrate Stiffness from 2 to 20 Pa: Effect of Cell Passaging. <i>Connective Tissue Research</i> , 2013, 54, 159-166.	2.3	31
124	Chemical-diffusive modeling of the self-healing behavior in concrete. <i>International Journal of Solids and Structures</i> , 2015, 69-70, 392-402.	2.7	31
125	An Anisotropic Internal-External Bone Adaptation Model Based on a Combination of CAO and Continuum Damage Mechanics Technologies. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2001, 4, 355-377.	1.6	30
126	Simulation of axisymmetric discharging in metallic silos. Analysis of the induced pressure distribution and comparison with different standards. <i>Engineering Structures</i> , 2002, 24, 1561-1574.	5.3	30

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127	Clenching TMJs-Loads Increases in Partial Edentates: A 3D Finite Element Study. <i>Annals of Biomedical Engineering</i> , 2008, 36, 1014-1023.	2.5	30
128	Numerical modeling of a human stented trachea under different stent designs. <i>International Communications in Heat and Mass Transfer</i> , 2011, 38, 855-862.	5.6	30
129	Mechanical stress redistribution in the calcaneus after autologous bone harvesting. <i>Journal of Biomechanics</i> , 2012, 45, 1219-1226.	2.1	30
130	A new reliability-based data-driven approach for noisy experimental data with physical constraints. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 328, 752-774.	6.6	30
131	A natural neighbour Galerkin method with quadtree structure. <i>International Journal for Numerical Methods in Engineering</i> , 2005, 63, 789-812.	2.8	29
132	Modelling the mixed-mode failure of cementâ€“bone interfaces. <i>Engineering Fracture Mechanics</i> , 2006, 73, 1379-1395.	4.3	29
133	Computational simulation of dental implant osseointegration through resonance frequency analysis. <i>Journal of Biomechanics</i> , 2008, 41, 316-325.	2.1	29
134	Nonlinear mechanical property of tracheal cartilage: A theoretical and experimental study. <i>Journal of Biomechanics</i> , 2008, 41, 1995-2002.	2.1	29
135	Comparative analysis of bone remodelling models with respect to computerised tomography-based finite element models of bone. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2010, 13, 71-80.	1.6	29
136	Study of the Chemotactic Response of Multicellular Spheroids in a Microfluidic Device. <i>PLoS ONE</i> , 2015, 10, e0139515.	2.5	29
137	A comparative FEA of the debonding process in different concepts of cemented hip implants. <i>Medical Engineering and Physics</i> , 2006, 28, 525-533.	1.7	28
138	On the role of bone damage in calcium homeostasis. <i>Journal of Theoretical Biology</i> , 2008, 254, 704-712.	1.7	28
139	Modelling adaptative volumetric finite growth in patient-specific residually stressed arteries. <i>Journal of Biomechanics</i> , 2008, 41, 1773-1781.	2.1	28
140	On the imposition of essential boundary conditions in natural neighbour Galerkin methods. <i>Communications in Numerical Methods in Engineering</i> , 2003, 19, 361-376.	1.3	27
141	A comparison of implicit and explicit natural element methods in large strains problems: Application to soft biological tissues modeling. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010, 199, 1691-1700.	6.6	27
142	Modeling of the fluid structure interaction of a human trachea under different ventilation conditions. <i>International Communications in Heat and Mass Transfer</i> , 2011, 38, 10-15.	5.6	27
143	CFD analysis of the human airways under impedance-based boundary conditions: application to healthy, diseased and stented trachea. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 198-216.	1.6	27
144	Numerical Calculation of Wind Loads over Solar Collectors. <i>Energy Procedia</i> , 2014, 49, 163-173.	1.8	27

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145	Analysis of the debonding of the stem-cement interface in intramedullary fixation using a non-linear fracture mechanics approach. <i>Engineering Fracture Mechanics</i> , 2005, 72, 1125-1147.	4.3	26
146	External bone remodeling through boundary elements and damage mechanics. <i>Mathematics and Computers in Simulation</i> , 2006, 73, 183-199.	4.4	26
147	A coupled viscoplastic rate-dependent damage model for the simulation of fatigue failure of cement-bone interfaces. <i>International Journal of Plasticity</i> , 2007, 23, 2058-2084.	8.8	26
148	A coupled mechano-biochemical model for bone adaptation. <i>Journal of Mathematical Biology</i> , 2014, 69, 1383-1429.	1.9	26
149	Influence of first proximal phalanx geometry on hallux valgus deformity: a finite element analysis. <i>Medical and Biological Engineering and Computing</i> , 2015, 53, 645-653.	2.8	26
150	Stress transfer properties of different commercial dental implants: a finite element study. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2012, 15, 263-273.	1.6	25
151	Modularity in Developmental Biology and Artificial Organs: A Missing Concept in Tissue Engineering. <i>Artificial Organs</i> , 2011, 35, 656-662.	1.9	24
152	Computational modelling of multi-cell migration in a multi-signalling substrate. <i>Physical Biology</i> , 2014, 11, 026002.	1.8	24
153	Computational Methodology to Determine Fluid Related Parameters of Non Regular Three-Dimensional Scaffolds. <i>Annals of Biomedical Engineering</i> , 2013, 41, 2367-2380.	2.5	23
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