

# Peter E Mchugh

## List of Publications by Citations

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178  
papers

5,407  
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37  
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66  
g-index

187  
ext. papers

6,026  
ext. citations

4.3  
avg, IF

5.81  
L-index

#	Paper	IF	Citations
178	A review on dielectric elastomer actuators, technology, applications, and challenges. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 071101	2.5	471
177	Dependence of mechanical properties of polyamide components on build parameters in the SLS process. <i>Journal of Materials Processing Technology</i> , <b>2007</b> , 182, 477-488	5.3	393
176	Osteogenic differentiation of mesenchymal stem cells is regulated by osteocyte and osteoblast cells in a simplified bone niche. <i>European Cells and Materials</i> , <b>2012</b> , 23, 13-27	4.3	333
175	Comparison of the implicit and explicit finite element methods using crystal plasticity. <i>Computational Materials Science</i> , <b>2007</b> , 39, 481-494	3.2	130
174	Bioreactors for cardiovascular cell and tissue growth: a review. <i>Annals of Biomedical Engineering</i> , <b>2003</b> , 31, 1017-30	4.7	128
173	A corrosion model for bioabsorbable metallic stents. <i>Acta Biomaterialia</i> , <b>2011</b> , 7, 3523-33	10.8	117
172	Real-time ultrasound in the diagnosis of congenital dislocation and dysplasia of the hip. <i>Journal of Bone and Joint Surgery: British Volume</i> , <b>1985</b> , 67, 406-12		117
171	The role of elastic anisotropy, length scale and crystallographic slip in fatigue crack nucleation. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2013</b> , 61, 1224-1240	5	108
170	Vertebral osteoporosis and trabecular bone quality. <i>Annals of Biomedical Engineering</i> , <b>2007</b> , 35, 170-89	4.7	92
169	Computational modeling of metal matrix composite materials□ Isothermal deformation patterns in ideal microstructures. <i>Acta Metallurgica Et Materialia</i> , <b>1993</b> , 41, 1461-1476		85
168	Fabrication, mechanical and in vivo performance of polycaprolactone/tricalcium phosphate composite scaffolds. <i>Acta Biomaterialia</i> , <b>2012</b> , 8, 3446-56	10.8	83
167	Finite element implementation of multiaxial continuum damage mechanics for plain and fretting fatigue. <i>International Journal of Fatigue</i> , <b>2012</b> , 44, 260-272	5	75
166	The stress-strain behavior of coronary stent struts is size dependent. <i>Annals of Biomedical Engineering</i> , <b>2003</b> , 31, 686-91	4.7	75
165	Comparing coronary stent material performance on a common geometric platform through simulated bench testing. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2012</b> , 12, 129-38	4.1	74
164	A review of deformation and fatigue of metals at small size scales. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , <b>2005</b> , 28, 1119-1152	3	73
163	Finite element predictions compared to experimental results for the effective modulus of bone tissue engineering scaffolds fabricated by selective laser sintering. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2009</b> , 20, 1255-62	4.5	68
162	A prediction of cell differentiation and proliferation within a collagen-glycosaminoglycan scaffold subjected to mechanical strain and perfusive fluid flow. <i>Journal of Biomechanics</i> , <b>2010</b> , 43, 618-26	2.9	66

161	Response of mesenchymal stem cells to the biomechanical environment of the endothelium on a flexible tubular silicone substrate. <i>Biomaterials</i> , <b>2008</b> , 29, 1610-9	15.6	66
160	Analysis of the mechanical performance of a cardiovascular stent design based on micromechanical modelling. <i>Computational Materials Science</i> , <b>2004</b> , 31, 421-438	3.2	64
159	Optimizing the design of a bioabsorbable metal stent using computer simulation methods. <i>Biomaterials</i> , <b>2013</b> , 34, 8049-60	15.6	61
158	Heterogeneous linear elastic trabecular bone modelling using micro-CT attenuation data and experimentally measured heterogeneous tissue properties. <i>Journal of Biomechanics</i> , <b>2008</b> , 41, 2589-96	2.9	58
157	Sustained release of targeted cardiac therapy with a replenishable implanted epicardial reservoir. <i>Nature Biomedical Engineering</i> , <b>2018</b> , 2, 416-428	19	55
156	A Computational Test-Bed to Assess Coronary Stent Implantation Mechanics Using a Population-Specific Approach. <i>Cardiovascular Engineering and Technology</i> , <b>2012</b> , 3, 374-387	2.2	54
155	A finite element methodology for wear/fatigue analysis for modular hip implants. <i>Tribology International</i> , <b>2013</b> , 65, 113-127	4.9	53
154	Micromechanical methodology for fatigue in cardiovascular stents. <i>International Journal of Fatigue</i> , <b>2012</b> , 44, 202-216	5	52
153	A Review of Material Degradation Modelling for the Analysis and Design of Bioabsorbable Stents. <i>Annals of Biomedical Engineering</i> , <b>2016</b> , 44, 341-56	4.7	50
152	Strain-gradient modelling of grain size effects on fatigue of CoCr alloy. <i>Acta Materialia</i> , <b>2014</b> , 78, 341-358.4	4	47
151	Void growth simulations in single crystals. <i>Computational Mechanics</i> , <b>1997</b> , 20, 115-121	4	47
150	Measurement of the microstructural fracture toughness of cortical bone using indentation fracture. <i>Journal of Biomechanics</i> , <b>2007</b> , 40, 3285-8	2.9	47
149	A physical corrosion model for bioabsorbable metal stents. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 2313-22	10.8	46
148	Calibration of a constitutive model for the post-yield behaviour of cortical bone. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2009</b> , 2, 460-70	4.1	46
147	Computational modelling of the mechanics of trabecular bone and marrow using fluid structure interaction techniques. <i>Annals of Biomedical Engineering</i> , <b>2013</b> , 41, 814-26	4.7	43
146	Biomodels of bone: a review. <i>Annals of Biomedical Engineering</i> , <b>2005</b> , 33, 1295-311	4.7	41
145	Experimental characterisation for micromechanical modelling of CoCr stent fatigue. <i>Biomaterials</i> , <b>2014</b> , 35, 36-48	15.6	40
144	Coronary stent strut size dependent stress-strain response investigated using micromechanical finite element models. <i>Annals of Biomedical Engineering</i> , <b>2004</b> , 32, 202-11	4.7	39

143	Failure modelling of trabecular bone using a non-linear combined damage and fracture voxel finite element approach. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2013</b> , 12, 225-41	3.8	38
142	The effect of physiological cyclic stretch on the cell morphology, cell orientation and protein expression of endothelial cells. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2007</b> , 18, 1973-81	4.5	38
141	Nanomechanical properties of poly(lactic-co-glycolic) acid film during degradation. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 4695-4703	10.8	36
140	Computational study on the effect of contact geometry on fretting behaviour. <i>Wear</i> , <b>2011</b> , 271, 1462-1489	3.9	36
139	A LIQUID PHASE SINTERING MODEL: APPLICATION TO Si <sub>3</sub> N <sub>4</sub> AND WC-Co. <i>Acta Materialia</i> , <b>1997</b> , 45, 2995-3003	8.4	36
138	Endothelial cell response to biomechanical forces under simulated vascular loading conditions. <i>Journal of Biomechanics</i> , <b>2007</b> , 40, 3146-54	2.9	36
137	Micromechanical modelling of the static and cyclic loading of an Al 2124-SiC MMC. <i>International Journal of Plasticity</i> , <b>2001</b> , 17, 565-599	7.6	36
136	Characterization of strut indentation during mechanical thrombectomy in acute ischemic stroke clot analogs. <i>Journal of NeuroInterventional Surgery</i> , <b>2019</b> , 11, 891-897	7.8	35
135	Computational mechanics modelling of cell-substrate contact during cyclic substrate deformation. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2005</b> , 53, 2597-2637	5	34
134	Computational Bench Testing to Evaluate the Short-Term Mechanical Performance of a Polymeric Stent. <i>Cardiovascular Engineering and Technology</i> , <b>2015</b> , 6, 519-32	2.2	33
133	Gene-eluting stents: non-viral, liposome-based gene delivery of eNOS to the blood vessel wall in vivo results in enhanced endothelialization but does not reduce restenosis in a hypercholesterolemic model. <i>Gene Therapy</i> , <b>2012</b> , 19, 321-8	4	33
132	Computational investigation of the delamination of polymer coatings during stent deployment. <i>Annals of Biomedical Engineering</i> , <b>2010</b> , 38, 2263-73	4.7	33
131	Mechanical stimulation of bone marrow in situ induces bone formation in trabecular explants. <i>Annals of Biomedical Engineering</i> , <b>2015</b> , 43, 1036-50	4.7	32
130	Determination of elastic and plastic material properties using indentation: Development of method and application to a thin surface coating. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2005</b> , 399, 254-266	5.3	32
129	Micromotion and friction evaluation of a novel surface architecture for improved primary fixation of cementless orthopaedic implants. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2013</b> , 21, 37-46	4.1	31
128	Simulation of vertebral trabecular bone loss using voxel finite element analysis. <i>Journal of Biomechanics</i> , <b>2009</b> , 42, 2789-96	2.9	30
127	Mathematical models of cell motility. <i>Cell Biochemistry and Biophysics</i> , <b>2007</b> , 49, 14-28	3.2	30
126	Micromechanical modelling of ductile crack growth in the binder phase of WC-Co. <i>Computational Materials Science</i> , <b>2003</b> , 27, 423-436	3.2	30

125	Strain on the human sciatic nerve in vivo during movement of the hip and knee. <i>Journal of Bone and Joint Surgery: British Volume</i> , <b>2003</b> , 85, 363-5		30
124	Micro-scale testing and micromechanical modelling for high cycle fatigue of CoCr stent material. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2015</b> , 46, 244-60	4.1	29
123	Modelling of atherosclerotic plaque for use in a computational test-bed for stent angioplasty. <i>Annals of Biomedical Engineering</i> , <b>2014</b> , 42, 2425-39	4.7	29
122	Behavior of human mesenchymal stem cells in fibrin-based vascular tissue engineering constructs. <i>Annals of Biomedical Engineering</i> , <b>2010</b> , 38, 649-57	4.7	28
121	Predicting the elastic properties of selective laser sintered PCL/βTCP bone scaffold materials using computational modelling. <i>Annals of Biomedical Engineering</i> , <b>2014</b> , 42, 661-77	4.7	27
120	Micromechanical modelling of cortical bone. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2007</b> , 10, 159-69	2.1	27
119	Modelling of in vitro chondrocyte detachment. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2008</b> , 56, 1554-1565	5	27
118	Mechanical behavior of in vitro blood clots and the implications for acute ischemic stroke treatment. <i>Journal of NeuroInterventional Surgery</i> , <b>2020</b> , 12, 853-857	7.8	27
117	Evaluating the effect of increasing ceramic content on the mechanical properties, material microstructure and degradation of selective laser sintered polycaprolactone/βtricalcium phosphate materials. <i>Medical Engineering and Physics</i> , <b>2015</b> , 37, 767-76	2.4	25
116	Modelling of creep in a Ni base superalloy using a single crystal plasticity model. <i>Computational Materials Science</i> , <b>1997</b> , 9, 134-140	3.2	25
115	Computational Examination of the Effect of Material Inhomogeneity on the Necking of Stent Struts Under Tensile Loading. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2007</b> , 74, 978-989	2.7	25
114	Investigation of finite element mesh independence in rate dependent materials. <i>Computational Materials Science</i> , <b>2006</b> , 37, 442-453	3.2	25
113	An atomistic study of void growth in single crystalline copper. <i>Computational Materials Science</i> , <b>2000</b> , 18, 102-117	3.2	25
112	Computational modeling of microstructures. <i>Future Generation Computer Systems</i> , <b>1989</b> , 5, 295-318	7.5	25
111	A finite element prediction of strain on cells in a highly porous collagen-glycosaminoglycan scaffold. <i>Journal of Biomechanical Engineering</i> , <b>2008</b> , 130, 061001	2.1	24
110	The influence of passivation and electropolishing on the performance of medical grade stainless steels in static and fatigue loading. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2005</b> , 16, 107-17	4.5	24
109	Nitinol stent design - understanding axial buckling. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2014</b> , 40, 252-263	4.1	23
108	Engineering Assisted Surgery—A route for digital design and manufacturing of customised maxillofacial implants. <i>Journal of Materials Processing Technology</i> , <b>2007</b> , 183, 333-338	5.3	23

107	Modeling of size dependent failure in cardiovascular stent struts under tension and bending. <i>Annals of Biomedical Engineering</i> , <b>2007</b> , 35, 1539-53	4.7	23
106	Experimental mechanical testing of Poly (L-Lactide) (PLLA) to facilitate pre-degradation characteristics for application in cardiovascular stenting. <i>Polymer Testing</i> , <b>2016</b> , 54, 150-158	4.5	23
105	Modelling the degradation and elastic properties of poly(lactic-co-glycolic acid) films and regular open-cell tissue engineering scaffolds. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2016</b> , 54, 48-59	4.1	22
104	Review of Mechanical Testing and Modelling of Thrombus Material for Vascular Implant and Device Design. <i>Annals of Biomedical Engineering</i> , <b>2017</b> , 45, 2494-2508	4.7	22
103	Evaluation of human endothelial cells post stent deployment in a cardiovascular simulator in vitro. <i>Annals of Biomedical Engineering</i> , <b>2009</b> , 37, 1322-30	4.7	22
102	Comparison of trabecular bone behavior in core and whole bone samples using high-resolution modeling of a vertebral body. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2010</b> , 9, 469-80	3.8	22
101	Evaluation of cover effects on bare stent mechanical response. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2016</b> , 61, 567-580	4.1	22
100	Influence of statistical size effects on the plastic deformation of coronary stents. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2013</b> , 20, 61-76	4.1	21
99	Simulation of void growth in WC-Co hardmetals using crystal plasticity theory. <i>International Journal of Mechanical Sciences</i> , <b>1997</b> , 39, 173-183	5.5	21
98	Investigation of the strengthening of particulate reinforced composites using different analytical and finite element models. <i>Computational Materials Science</i> , <b>1999</b> , 15, 1-10	3.2	21
97	Computational modeling of metal matrix composite materialsIII. Comparisons with phenomenological models. <i>Acta Metallurgica Et Materialia</i> , <b>1993</b> , 41, 1489-1499		20
96	A combined computational and experimental methodology to determine the adhesion properties of stent polymer coatings. <i>Computational Materials Science</i> , <b>2013</b> , 80, 104-112	3.2	19
95	Finite element comparison of performance related characteristics of balloon expandable stents. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2007</b> , 10, 103-10	2.1	19
94	Numerical Simulation of Stent Angioplasty with Predilation: An Investigation into Lesion Constitutive Representation and Calcification Influence. <i>Annals of Biomedical Engineering</i> , <b>2017</b> , 45, 2244-2252 <sup>17</sup>	4.7	17
93	Fracture modelling of WC-Co hardmetals using crystal plasticity theory and the Gurson model. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , <b>1999</b> , 22, 77-86	3	17
92	Computational modeling of metal matrix composite materialsII. Isothermal stress-strain behavior. <i>Acta Metallurgica Et Materialia</i> , <b>1993</b> , 41, 1477-1488		17
91	Improving the finite element model accuracy of tissue engineering scaffolds produced by selective laser sintering. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2015</b> , 26, 5376	4.5	16
90	Preclinical trial of a novel surface architecture for improved primary fixation of cementless orthopaedic implants. <i>Clinical Biomechanics</i> , <b>2014</b> , 29, 861-8	2.2	16

89	Anterior cruciate ligament graft tensioning. Is the maximal sustained one-handed pull technique reproducible?. <i>BMC Research Notes</i> , <b>2011</b> , 4, 244	2.3	16
88	A combined experimental and computational study of deformation in grains of biomedical grade 316LVM stainless steel. <i>Acta Materialia</i> , <b>2006</b> , 54, 4825-4840	8.4	16
87	Micromechanical investigation of the fatigue crack growth behaviour of AlSiC MMCs. <i>International Journal of Fatigue</i> , <b>2004</b> , 26, 795-804	5	16
86	An Experimental and Computational Investigation of Bone Formation in Mechanically Loaded Trabecular Bone Explants. <i>Annals of Biomedical Engineering</i> , <b>2016</b> , 44, 1191-203	4.7	14
85	Investigation of the mechanical interaction of the trabecular core with an external shell using rapid prototype and finite element models. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2010</b> , 3, 63-76	4.1	14
84	Development of a novel bioreactor to apply shear stress and tensile strain simultaneously to cell monolayers. <i>Review of Scientific Instruments</i> , <b>2006</b> , 77, 104301	1.7	14
83	The influence of grain size on the ductility of micro-scale stainless steel stent struts. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2006</b> , 17, 1-6	4.5	14
82	Methodology for modelling the small crack fatigue behaviour of aluminium alloys. <i>International Journal of Fatigue</i> , <b>2002</b> , 24, 1071-1078	5	13
81	Computer Simulation of the Mechanical Behaviour of Implanted Biodegradable Stents in a Remodelling Artery. <i>Jom</i> , <b>2016</b> , 68, 1198-1203	2.1	12
80	Medical Stents: State of the Art and Future Directions. <i>Annals of Biomedical Engineering</i> , <b>2016</b> , 44, 274-5	4.7	12
79	Micro-macro wear-fatigue of modular hip implant taper-lock coupling. <i>Journal of Strain Analysis for Engineering Design</i> , <b>2014</b> , 49, 2-18	1.3	12
78	Liposomal surface coatings of metal stents for efficient non-viral gene delivery to the injured vasculature. <i>Journal of Controlled Release</i> , <b>2013</b> , 167, 109-19	11.7	12
77	Multi-axial mechanical stimulation of HUVECs demonstrates that combined loading is not equivalent to the superposition of individual wall shear stress and tensile hoop stress components. <i>Journal of Biomechanical Engineering</i> , <b>2009</b> , 131, 081001	2.1	12
76	Differences in the crack resistance of interstitial, osteonal and trabecular bone tissue. <i>Annals of Biomedical Engineering</i> , <b>2009</b> , 37, 2574-82	4.7	12
75	Investigation of the failure behaviour of vertebral trabecular architectures under uni-axial compression and wedge action loading conditions. <i>Medical Engineering and Physics</i> , <b>2010</b> , 32, 569-76	2.4	12
74	Local and regional mechanical characterisation of a collagen-glycosaminoglycan scaffold using high-resolution finite element analysis. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2010</b> , 3, 292-302	4.1	12
73	Webbing and Delamination of Drug Eluting Stent Coatings. <i>Annals of Biomedical Engineering</i> , <b>2016</b> , 44, 419-31	4.7	12
72	Computational micromechanics of bioabsorbable magnesium stents. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2014</b> , 34, 93-105	4.1	11

71	PulmoStent: In Vitro to In Vivo Evaluation of a Tissue Engineered Endobronchial Stent. <i>Annals of Biomedical Engineering</i> , <b>2017</b> , 45, 873-883	4.7	11
70	X-ray micro-tomography of a coronary stent deployed in a model artery. <i>Medical Engineering and Physics</i> , <b>2007</b> , 29, 1132-41	2.4	11
69	Computational Analysis of the Utilisation of the Shape Memory Effect and Balloon Expansion in Fully Polymeric Stent Deployment. <i>Cardiovascular Engineering and Technology</i> , <b>2018</b> , 9, 60-72	2.2	10
68	HUVEC ICAM-1 and VCAM-1 synthesis in response to potentially athero-prone and athero-protective mechanical and nicotine chemical stimuli. <i>Annals of Biomedical Engineering</i> , <b>2010</b> , 38, 1880-92	4.7	10
67	Computational modelling of the extrusion of an Al-SiC metal matrix composite using macroscale and microscale methods. <i>Journal of Strain Analysis for Engineering Design</i> , <b>2007</b> , 42, 237-252	1.3	10
66	Wear of a thin surface coating: modelling and experimental investigations. <i>Computational Materials Science</i> , <b>2002</b> , 25, 61-72	3.2	10
65	Fabrication and characterization of gefitinib-releasing polyurethane foam as a coating for drug-eluting stent in the treatment of bronchotracheal cancer. <i>International Journal of Pharmaceutics</i> , <b>2018</b> , 548, 803-811	6.5	9
64	A novel flow chamber for biodegradable alloy assessment in physiologically realistic environments. <i>Review of Scientific Instruments</i> , <b>2013</b> , 84, 094301	1.7	9
63	Experimental investigation into the size effect on the microscale fatigue behaviour of 316L stainless steel. <i>International Journal of Fatigue</i> , <b>2017</b> , 95, 1-7	5	9
62	Characterisation of a collagen membrane for its potential use in cardiovascular tissue engineering applications. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2006</b> , 17, 195-201	4.5	9
61	Computational modeling of metal matrix composite materialsIV. Thermal deformations. <i>Acta Metallurgica Et Materialia</i> , <b>1993</b> , 41, 1501-1510		9
60	Investigating the Mechanical Behavior of Clot Analogues Through Experimental and Computational Analysis. <i>Annals of Biomedical Engineering</i> , <b>2021</b> , 49, 420-431	4.7	9
59	Gefitinib/gefitinib microspheres loaded polyurethane constructs as drug-eluting stent coating. <i>European Journal of Pharmaceutical Sciences</i> , <b>2017</b> , 103, 94-103	5.1	8
58	Electrothermal Equivalent Three-Dimensional Finite-Element Model of a Single Neuron. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2018</b> , 65, 1373-1381	5	8
57	Selection and fabrication of a non-woven polycarbonate urethane cover for a tissue engineered airway stent. <i>International Journal of Pharmaceutics</i> , <b>2016</b> , 514, 255-262	6.5	8
56	Nanoindentation of solvent-cast and compression-moulded poly(lactic-co-glycolic acid) to determine elastic modulus and hardness. <i>Polymer Testing</i> , <b>2016</b> , 50, 111-118	4.5	8
55	Comparison of computational modelling techniques for braided stent analysis. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2019</b> , 22, 1334-1344	2.1	7
54	Effects of material thickness and processing method on poly(lactic-co-glycolic acid) degradation and mechanical performance. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2016</b> , 27, 154	4.5	7

53	A MULTISCALE APPROACH TO FAILURE ASSESSMENT IN DEPLOYMENT FOR CARDIOVASCULAR STENTS. <i>Journal of Multiscale Modeling</i> , <b>2010</b> , 02, 1-22	0.8	7
52	Computational Modeling of the Mechanical Performance of a Magnesium Stent Undergoing Uniform and Pitting Corrosion in a Remodeling Artery. <i>Journal of Medical Devices, Transactions of the ASME</i> , <b>2017</b> , 11,	1.3	6
51	Electro-mechanical response of a 3D nerve bundle model to mechanical loads leading to axonal injury. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2018</b> , 34, e2942	2.6	6
50	Mechanical and Corrosion Testing of Magnesium WE43 Specimens for Pitting Corrosion Model Calibration. <i>Advanced Engineering Materials</i> , <b>2018</b> , 20, 1800656	3.5	6
49	Computational modelling of ovine critical-sized tibial defects with implanted scaffolds and prediction of the safety of fixator removal. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2015</b> , 44, 133-46	4.1	6
48	Residual stress analysis in aerospace MMC materials by neutron diffraction. <i>Applied Physics A: Materials Science and Processing</i> , <b>2002</b> , 74, s1701-s1703	2.6	6
47	Crystal Plasticity Models <b>1993</b> , 139-157		6
46	Development of an in vitro model of calcified cerebral emboli in acute ischemic stroke for mechanical thrombectomy evaluation. <i>Journal of NeuroInterventional Surgery</i> , <b>2020</b> , 12, 1002-1007	7.8	6
45	Evaluation of a Multiscale Modelling Methodology to Predict the Mechanical Properties of PCL/βTCP Sintered Scaffold Materials. <i>Annals of Biomedical Engineering</i> , <b>2015</b> , 43, 1989-98	4.7	5
44	An experimental and computational investigation of the material behaviour of discrete homogenous iliofemoral and carotid atherosclerotic plaque constituents. <i>Journal of Biomechanics</i> , <b>2020</b> , 106, 109801	2.9	5
43	Effects of nerve bundle geometry on neurotrauma evaluation. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2018</b> , 34, e3118	2.6	5
42	Computational modelling of magnesium stent mechanical performance in a remodelling artery: Effects of multiple remodelling stimuli. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2019</b> , 35, e3247	2.6	5
41	Thermo-electrical equivalents for simulating the electro-mechanical behavior of biological tissue. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2015</b> , 2015, 3969-72	0.9	5
40	Laser sintering for the fabrication of tissue engineering scaffolds. <i>Methods in Molecular Biology</i> , <b>2012</b> , 868, 303-10	1.4	5
39	Vibrational testing of trabecular bone architectures using rapid prototype models. <i>Medical Engineering and Physics</i> , <b>2009</b> , 31, 108-15	2.4	5
38	Micromechanical Modeling of the Static Loading of an Al 359-SiC MMC. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , <b>2005</b> , 127, 106-118	1.8	5
37	Application of closure based fatigue modelling methodology to AlBiC MMCs. <i>International Journal of Fatigue</i> , <b>2003</b> , 25, 577-584	5	5
36	Modelling the thermo-mechanical behaviour of an Al alloy-SiCp composite effects of particle shape and microscale fracture. <i>Computational Materials Science</i> , <b>1994</b> , 3, 199-206	3.2	5

35	Effects of intervertebral disk degeneration on the flexibility of the human thoracolumbar spine. <i>Journal of Long-Term Effects of Medical Implants</i> , <b>2008</b> , 18, 269-88	0.2	5
34	Evaluating the interaction of a tracheobronchial stent in an ovine in-vivo model. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2018</b> , 17, 499-516	3.8	5
33	Modeling of Biodegradable Polyesters With Applications to Coronary Stents. <i>Journal of Medical Devices, Transactions of the ASME</i> , <b>2017</b> , 11,	1.3	4
32	Authors' response to "comments on 'measurement of the microstructural fracture toughness of cortical bone using indentation fracture'". <i>Journal of Biomechanics</i> , <b>2008</b> , 41, 2602-3	2.9	4
31	Manufacturing of small featured PCL scaffolds for bone tissue engineering using selective laser sintering. <i>Journal of Biomechanics</i> , <b>2006</b> , 39, S216	2.9	4
30	Accuracy of laser cutting and its influence on mechanical behavior of stents <b>2003</b> , 4876, 574		4
29	Quantification of the regional bioarchitecture in the human aorta. <i>Journal of Anatomy</i> , <b>2020</b> , 236, 142-155	5.9	4
28	Automated ex-situ detection of pitting corrosion and its effect on the mechanical integrity of rare earth magnesium alloy - WE43. <i>Bioactive Materials</i> , <b>2022</b> , 8, 545-558	16.7	4
27	An ovine in vivo framework for tracheobronchial stent analysis. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2017</b> , 16, 1535-1553	3.8	3
26	A comparison of two quasi-static computational models for assessment of intra-myocardial injection as a therapeutic strategy for heart failure. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , <b>2019</b> , 35, e3213	2.6	3
25	Multiscale Experimental and Computational Modeling Approaches to Characterize Therapy Delivery to the Heart from an Implantable Epicardial Biomaterial Reservoir. <i>Advanced Healthcare Materials</i> , <b>2019</b> , 8, e1900228	10.1	3
24	Computational Modeling for Analysis and Design of Metallic Biodegradable Stents1. <i>Journal of Medical Devices, Transactions of the ASME</i> , <b>2015</b> , 9,	1.3	3
23	Computational modelling of the cyclic deformation of aluminium and aluminium matrix composites. <i>Computational Materials Science</i> , <b>1996</b> , 5, 187-194	3.2	3
22	Early results and lessons learned using the streamliner multilayer flow modulator in the management of complex thoracoabdominal aortic aneurysms and chronic symptomatic aortic dissection. <i>Italian Journal of Vascular and Endovascular Surgery</i> , <b>2020</b> , 27,	1.4	3
21	New tool materials with a structural gradient for milling applications. <i>European Physical Journal Special Topics</i> , <b>1999</b> , 09, Pr9-147-Pr9-156		3
20	Endovascular versus open surgical repair for complicated chronic type B aortic dissection. <i>The Cochrane Library</i> , <b>2018</b> ,	5.2	2
19	Electro-mechanical response of a 3D nerve bundle model to mechanical loads leading to axonal injury. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2017</b> , 2017, 978-981	0.9	2
18	Neurotrauma evaluation in a 3D electro-mechanical model of a nerve bundle <b>2017</b> ,		2

17	Profiling the Shear Stress of Atherosclerosis; A Genomic View. <i>Current Genomics</i> , <b>2004</b> , 5, 287-297	2.6	2
16	Comparison of Covered Laser-cut and Braided Respiratory Stents: From Bench to Pre-Clinical Testing. <i>Annals of Biomedical Engineering</i> , <b>2019</b> , 47, 1738-1747	4.7	1
15	Endovascular versus conventional open surgical repair for thoracoabdominal aortic aneurysms. <i>The Cochrane Library</i> , <b>2018</b> ,	5.2	1
14	Arterial and Atherosclerotic Plaque Biomechanics with Application to Stent Angioplasty Modeling. <i>Studies in Mechanobiology, Tissue Engineering and Biomaterials</i> , <b>2017</b> , 193-231	0.5	1
13	A Phenomenological Model of Corrosion in Biodegradable Metallic Stents <b>2010</b> ,		1
12	Weber B Bilateral malleolus fracture and interfragmentary screw placement: a cadaveric study. <i>European Journal of Orthopaedic Surgery and Traumatology</i> , <b>2007</b> , 17, 461-464	2.2	1
11	Head-to-nerve analysis of electromechanical impairments of diffuse axonal injury. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2019</b> , 18, 361-374	3.8	1
10	Endovascular versus open surgical repair for complicated chronic Type B aortic dissection.. <i>The Cochrane Library</i> , <b>2021</b> , 12, CD012992	5.2	1
9	The role of plasticity in combined torsion and bending of elastic-plastic guidewires. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2021</b> , 151, 104405	5	0
8	Multiscale Computational Modeling: Multiscale Experimental and Computational Modeling Approaches to Characterize Therapy Delivery to the Heart from an Implantable Epicardial Biomaterial Reservoir (Adv. Healthcare Mater. 16/2019). <i>Advanced Healthcare Materials</i> , <b>2019</b> , 8, 1970068	10.1	
7	Development of a Discrete Finite Element Cell Model <b>2007</b> , 437		
6	Flexor tendon reconstruction using a FDP ðemi-tendonIrish Journal of Medical Science, <b>2002</b> , 171, 45-46.	1.9	
5	Predicting the Effects of Overloads on Fatigue Crack Growth in an Al-SiC MMC Using a Computational Model. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , <b>2004</b> , 126, 172-178	1.8	
4	Finite Element Simulation and Experimental Determination of Residual Stresses after Extrusion Process in Metal Matrix Composites. <i>Advanced Composites Letters</i> , <b>2005</b> , 14, 096369350501400	1.2	
3	Impact of Degradation and Material Crystallinity on the Mechanical Performance of a Bioresorbable Polymeric Stent. <i>Journal of Elasticity</i> , <b>2021</b> , 145, 243-264	1.5	
2	In Vitro Clot Modeling and Clinical Applications <b>2021</b> , 19-43		
1	Endovascular versus conventional open surgical repair for thoracoabdominal aortic aneurysms.. <i>The Cochrane Library</i> , <b>2022</b> , 4, CD012926	5.2	