

Caitriona Lally

List of Publications by Year in descending order

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Version: 2024-02-01

63
papers

2,086
citations

304368

22
h-index

243296

44
g-index

67
all docs

67
docs citations

67
times ranked

1947
citing authors

#	ARTICLE	IF	CITATIONS
1	Computational analysis of the role of mechanosensitive Notch signaling in arterial adaptation to hypertension. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 133, 105325.	1.5	1
2	Bovine Pericardium of High Fibre Dispersion Has High Fatigue Life and Increased Collagen Content; Potentially an Untapped Source of Heart Valve Leaflet Tissue. <i>Annals of Biomedical Engineering</i> , 2021, 49, 1022-1032.	1.3	12
3	An investigation into the critical role of fibre orientation in the ultimate tensile strength and stiffness of human carotid plaque caps. <i>Acta Biomaterialia</i> , 2021, 124, 291-300.	4.1	22
4	An in-silico Investigation Into the Role of Strain and Structure on Vascular Smooth Muscle Cell Growth. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 641794.	2.0	2
5	Quantitative susceptibility mapping of carotid arterial tissue ex vivo: Assessing sensitivity to vessel microstructural composition. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 2512-2527.	1.9	5
6	Collagen fibre-mediated mechanical damage increases calcification of bovine pericardium for use in bioprosthetic heart valves. <i>Acta Biomaterialia</i> , 2021, 128, 384-392.	4.1	14
7	Investigation into early stage fatigue-damage accumulation in glutaraldehyde-fixed bovine pericardium using a novel equibiaxial bulge inflation system. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 121, 104588.	1.5	2
8	Development of a Collagen Fibre Remodelling Rupture Risk Metric for Potentially Vulnerable Carotid Artery Atherosclerotic Plaques. <i>Frontiers in Physiology</i> , 2021, 12, 718470.	1.3	3
9	Exploring arterial tissue microstructural organization using non-Gaussian diffusion magnetic resonance schemes. <i>Scientific Reports</i> , 2021, 11, 22247.	1.6	4
10	Integrating finite element modelling and 3D printing to engineer biomimetic polymeric scaffolds for tissue engineering. <i>Connective Tissue Research</i> , 2020, 61, 174-189.	1.1	44
11	Resident multipotent vascular stem cells exhibit amplitude dependent strain avoidance similar to that of vascular smooth muscle cells. <i>Biochemical and Biophysical Research Communications</i> , 2020, 521, 762-768.	1.0	5
12	Assessment of mechanical indicators of carotid plaque vulnerability: Geometrical curvature metric, plaque stresses and damage in tissue fibres. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 103, 103573.	1.5	4
13	Mechanical Characterization and Modeling of the Porcine Cerebral Meninges. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 801.	2.0	8
14	Pressure-induced collagen degradation in arterial tissue as a potential mechanism for degenerative arterial disease progression. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 109, 103771.	1.5	7
15	Novel injectable gallium-based self-setting glass-alginate hydrogel composite for cardiovascular tissue engineering. <i>Carbohydrate Polymers</i> , 2019, 217, 152-159.	5.1	25
16	Collagen fibre orientation and dispersion govern ultimate tensile strength, stiffness and the fatigue performance of bovine pericardium. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 90, 54-60.	1.5	41
17	An investigation of damage mechanisms in mechanobiological models of in-stent restenosis. <i>Journal of Computational Science</i> , 2018, 24, 132-142.	1.5	40
18	The use of small angle light scattering in assessing strain induced collagen degradation in arterial tissue ex vivo. <i>Journal of Biomechanics</i> , 2018, 81, 155-160.	0.9	8

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19	Strain mediated enzymatic degradation of arterial tissue: Insights into the role of the non-collagenous tissue matrix and collagen crimp. <i>Acta Biomaterialia</i> , 2018, 77, 301-310.	4.1	17
20	An investigation into the role of different constituents in damage accumulation in arterial tissue and constitutive model development. <i>Biomechanics and Modeling in Mechanobiology</i> , 2018, 17, 1757-1769.	1.4	23
21	A strain-mediated corrosion model for bioabsorbable metallic stents. <i>Acta Biomaterialia</i> , 2017, 55, 505-517.	4.1	27
22	Plastic strains during stent deployment have a critical influence on the rate of corrosion in absorbable magnesium stents. <i>Medical and Biological Engineering and Computing</i> , 2017, 55, 1261-1275.	1.6	18
23	Quantifying the ultrastructure of carotid arteries using high-resolution micro-diffusion tensor imaging – comparison of intact versus open cut tissue. <i>Physics in Medicine and Biology</i> , 2017, 62, 8850-8868.	1.6	17
24	Collagen fibre characterisation in arterial tissue under load using SALS. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 75, 359-368.	1.5	39
25	Optimisation of a novel glass-alginate hydrogel for the treatment of intracranial aneurysms. <i>Carbohydrate Polymers</i> , 2017, 176, 227-235.	5.1	12
26	Surface modification of a novel glass to optimise strength and deliverability of an injectable alginate composite. <i>Journal of Materials Science</i> , 2017, 52, 13700-13710.	1.7	4
27	In Vitro Corrosion and Biological Assessment of Bioabsorbable WE43 Mg Alloy Specimens. <i>Journal of Manufacturing and Materials Processing</i> , 2017, 1, 8.	1.0	6
28	Compliance properties of a composite electrospun fibre – hydrogel blood vessel scaffold. <i>Materials Letters</i> , 2016, 178, 296-299.	1.3	13
29	Imaging and finite element analysis: A methodology for non-invasive characterization of aortic tissue. <i>Medical Engineering and Physics</i> , 2015, 37, 48-54.	0.8	17
30	A multi-scale mechanobiological model of in-stent restenosis: deciphering the role of matrix metalloproteinase and extracellular matrix changes. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2014, 17, 813-828.	0.9	47
31	Cyclic strain amplitude dictates the growth response of vascular smooth muscle cells in vitro: role in in-stent restenosis and inhibition with a sirolimus drug-eluting stent. <i>Biomechanics and Modeling in Mechanobiology</i> , 2013, 12, 671-683.	1.4	15
32	Fibre orientation of fresh and frozen porcine aorta determined non-invasively using diffusion tensor imaging. <i>Medical Engineering and Physics</i> , 2013, 35, 765-776.	0.8	30
33	Surface Modification of Absorbable Magnesium Stents by Reactive Ion Etching. <i>Plasma Chemistry and Plasma Processing</i> , 2013, 33, 1137-1152.	1.1	14
34	Multiscale Modeling in Vascular Disease and Tissue Engineering. <i>Studies in Mechanobiology, Tissue Engineering and Biomaterials</i> , 2013, , 241-258.	0.7	2
35	An anisotropic inelastic constitutive model to describe stress softening and permanent deformation in arterial tissue. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 12, 9-19.	1.5	60
36	Site specific inelasticity of arterial tissue. <i>Journal of Biomechanics</i> , 2012, 45, 1393-1399.	0.9	37

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37	Investigation of a small-diameter decellularised artery as a potential scaffold for vascular tissue engineering; biomechanical evaluation and preliminary cell seeding. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 14, 130-142.	1.5	36
38	Hemodynamic Control of Vascular Smooth Muscle Function. , 2012, , 1231-1242.		2
39	Non-linear microscopy of smooth muscle cells in artificial extracellular matrices made of cellulose. <i>Journal of Biophotonics</i> , 2012, 5, 404-414.	1.1	16
40	A multiscale mechanobiological modelling framework using agent-based models and finite element analysis: application to vascular tissue engineering. <i>Biomechanics and Modeling in Mechanobiology</i> , 2012, 11, 363-377.	1.4	53
41	A remodelling metric for angular fibre distributions and its application to diseased carotid bifurcations. <i>Biomechanics and Modeling in Mechanobiology</i> , 2012, 11, 869-882.	1.4	18
42	Patient Specific Computational Modeling in Cardiovascular Mechanics. <i>Lecture Notes in Computational Vision and Biomechanics</i> , 2012, , 61-79.	0.5	2
43	Glycogen synthase kinase 3 beta positively regulates Notch signaling in vascular smooth muscle cells: role in cell proliferation and survival. <i>Basic Research in Cardiology</i> , 2011, 106, 773-785.	2.5	45
44	Prediction of fibre architecture and adaptation in diseased carotid bifurcations. <i>Biomechanics and Modeling in Mechanobiology</i> , 2011, 10, 831-843.	1.4	22
45	Inelasticity of Human Carotid Atherosclerotic Plaque. <i>Annals of Biomedical Engineering</i> , 2011, 39, 2445-2455.	1.3	45
46	Imaging Arterial Fibres Using Diffusion Tensor Imaging – Feasibility Study and Preliminary Results. <i>Eurasip Journal on Advances in Signal Processing</i> , 2010, 2010, .	1.0	17
47	Simulation of a balloon expandable stent in a realistic coronary artery – Determination of the optimum modelling strategy. <i>Journal of Biomechanics</i> , 2010, 43, 2126-2132.	0.9	110
48	A method to develop mock arteries suitable for cell seeding and in-vitro cell culture experiments. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2010, 3, 470-477.	1.5	23
49	Finite element modelling of diseased carotid bifurcations generated from in vivo computerised tomographic angiography. <i>Computers in Biology and Medicine</i> , 2010, 40, 419-429.	3.9	35
50	Bacterial Cellulose: A Potential Vascular Graft and Tissue Engineering Scaffold. , 2009, , .		1
51	The influence of plaque composition on underlying arterial wall stress during stent expansion: The case for lesion-specific stents. <i>Medical Engineering and Physics</i> , 2009, 31, 428-433.	0.8	144
52	Determination of the influence of stent strut thickness using the finite element method: implications for vascular injury and in-stent restenosis. <i>Medical and Biological Engineering and Computing</i> , 2009, 47, 385-393.	1.6	117
53	Finite element modelling of medical devices. <i>Medical Engineering and Physics</i> , 2009, 31, 419.	0.8	2
54	Tensile and compressive properties of fresh human carotid atherosclerotic plaques. <i>Journal of Biomechanics</i> , 2009, 42, 2760-2767.	0.9	89

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55	Patient Specific Finite Element Modelling of the Carotid Bifurcation. , 2009, , .		0
56	Evaluation of a Validation Method for MR Imaging-Based Motion Tracking Using Image Simulation. Eurasip Journal on Advances in Signal Processing, 2009, 2010, .	1.0	5
57	An Anisotropic Structural Model of the Aortic Wall Based on Tensile Tests and Non-Invasive 3D Fibre Analysis Using Diffusion Tensor Imaging. , 2009, , .		0
58	Injury Driven Biological Model of Restenotic Lesion Development Predicts the Effects of Stent Geometry on Restenosis. , 2009, , .		0
59	Mechanical Characterization of Fresh Human Carotid Atherosclerotic Plaque. , 2009, , .		0
60	Cardiovascular stent design and vessel stresses: a finite element analysis. Journal of Biomechanics, 2005, 38, 1574-1581.	0.9	342
61	Elastic Behavior of Porcine Coronary Artery Tissue Under Uniaxial and Equibiaxial Tension. Annals of Biomedical Engineering, 2004, 32, 1355-1364.	1.3	153
62	Analysis of Prolapse in Cardiovascular Stents: A Constitutive Equation for Vascular Tissue and Finite-Element Modelling. Journal of Biomechanical Engineering, 2003, 125, 692-699.	0.6	152
63	A Biomechanical and Microstructural Analysis of Bovine and Porcine Pericardium for Use in Bioprosthetic Heart Valves. Structural Heart, 0, , 1-11.	0.2	9