

Rebecca J Shipley

List of Publications by Year in descending order

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Version: 2024-02-01

64
papers

1,570
citations

304368

22
h-index

329751

37
g-index

69
all docs

69
docs citations

69
times ranked

1980
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>In silico</i> framework to inform the design of repair constructs for peripheral nerve injury repair. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20210824.	1.5	4
2	Challenges and opportunities of integrating imaging and mathematical modelling to interrogate biological processes. <i>International Journal of Biochemistry and Cell Biology</i> , 2022, 146, 106195.	1.2	5
3	A combined experimental and computational framework to evaluate the behavior of therapeutic cells for peripheral nerve regeneration. <i>Biotechnology and Bioengineering</i> , 2022, 119, 1980-1996.	1.7	3
4	Mathematical Modeling for Nerve Repair Research. <i>Reference Series in Biomedical Engineering</i> , 2022, , 189-241.	0.1	1
5	Influence of asymptotically-limiting micromechanical properties on the effective behaviour of fibre-supported composite materials. <i>Journal of Engineering Mathematics</i> , 2022, 134, .	0.6	0
6	Lessons and risks of medical device deployment in a global pandemic. <i>The Lancet Global Health</i> , 2021, 9, e395-e396.	2.9	3
7	High oxygen flow rates with the UCL Ventura CPAP device – Authors' reply. <i>Lancet Respiratory Medicine</i> , 2021, 9, e36.	5.2	2
8	Selectively Cross-Linked Tetra-PEG Hydrogels Provide Control over Mechanical Strength with Minimal Impact on Diffusivity. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 4293-4304.	2.6	25
9	Modelling-informed cell-seeded nerve repair construct designs for treating peripheral nerve injuries. <i>PLoS Computational Biology</i> , 2021, 17, e1009142.	1.5	3
10	A mathematical investigation into the uptake kinetics of nanoparticles in vitro. <i>PLoS ONE</i> , 2021, 16, e0254208.	1.1	2
11	Multifluorescence High-Resolution Episcopic Microscopy for 3D Imaging of Adult Murine Organs. <i>Advanced Photonics Research</i> , 2021, 2, 2100110.	1.7	8
12	Feasibility of Noninvasive Positive Pressure Ventilation in the Treatment of Oxygen-Dependent COVID-19 Patients in Peru. <i>American Journal of Tropical Medicine and Hygiene</i> , 2021, 105, 727-730.	0.6	3
13	Design considerations for engineering 3D models to study vascular pathologies in vitro. <i>Acta Biomaterialia</i> , 2021, 132, 114-128.	4.1	5
14	A hybrid discrete-continuum approach for modelling microcirculatory blood flow. <i>Mathematical Medicine and Biology</i> , 2020, 37, 40-57.	0.8	17
15	Mechanical Response of Neural Cells to Physiologically Relevant Stiffness Gradients. <i>Advanced Healthcare Materials</i> , 2020, 9, e1901036.	3.9	41
16	Combining in silico and in vitro models to inform cell seeding strategies in tissue engineering. <i>Journal of the Royal Society Interface</i> , 2020, 17, 20190801.	1.5	15
17	Clinical Classification of Cold and Warm Shock: Is There a Signal in the Noise?*. <i>Pediatric Critical Care Medicine</i> , 2020, 21, 1085-1087.	0.2	1
18	The UCL Ventura CPAP device for COVID-19. <i>Lancet Respiratory Medicine</i> , 2020, 8, 1076-1078.	5.2	12

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19	A four-compartment multiscale model of fluid and drug distribution in vascular tumours. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2020, 36, e3315.	1.0	12
20	Asymmetric Point Spread Function Estimation and Deconvolution for Serial-Sectioning Block-Face Imaging. <i>Communications in Computer and Information Science</i> , 2020, , 235-249.	0.4	5
21	Insights into the design of spray systems for cell therapies for retinal disease using computational modelling. <i>Mathematical Biosciences and Engineering</i> , 2020, 17, 2741-2759.	1.0	2
22	Physical and mechanical properties of RAFT-stabilised collagen gels for tissue engineering applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 99, 216-224.	1.5	8
23	Modelling the transport of fluid through heterogeneous, whole tumours in silico. <i>PLoS Computational Biology</i> , 2019, 15, e1006751.	1.5	35
24	Mathematical modelling of a liver hollow fibre bioreactor. <i>Journal of Theoretical Biology</i> , 2019, 475, 25-33.	0.8	4
25	Mathematical and computational models for bone tissue engineering in bioreactor systems. <i>Journal of Tissue Engineering</i> , 2019, 10, 204173141982792.	2.3	29
26	Assessing behaviour of osteoblastic cells in dynamic culture conditions using titanium-doped phosphate glass microcarriers. <i>Journal of Tissue Engineering</i> , 2019, 10, 204173141982577.	2.3	10
27	A parameterised mathematical model to elucidate osteoblast cell growth in a phosphate-glass microcarrier culture. <i>Journal of Tissue Engineering</i> , 2019, 10, 204173141983026.	2.3	14
28	Reproducibility of an airway tapering measurement in computed tomography with application to bronchiectasis. <i>Journal of Medical Imaging</i> , 2019, 6, 1.	0.8	1
29	Insights into cerebral haemodynamics and oxygenation utilising in vivo mural cell imaging and mathematical modelling. <i>Scientific Reports</i> , 2018, 8, 1373.	1.6	36
30	An integrated theoretical-experimental approach to accelerate translational tissue engineering. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2018, 12, e53-e59.	1.3	16
31	Vascularization Strategies for Peripheral Nerve Tissue Engineering. <i>Anatomical Record</i> , 2018, 301, 1657-1667.	0.8	70
32	Computational fluid dynamics with imaging of cleared tissue and of in vivo perfusion predicts drug uptake and treatment responses in tumours. <i>Nature Biomedical Engineering</i> , 2018, 2, 773-787.	11.6	91
33	Developing an <i>In Vitro</i> Model to Screen Drugs for Nerve Regeneration. <i>Anatomical Record</i> , 2018, 301, 1628-1637.	0.8	25
34	Tapering analysis of airways with bronchiectasis. , 2018, , .		4
35	The Mechanics of Brow-Suspension Ptosis Repair: A Comparative Study of Fox Pentagon and Crawford Triangle Techniques. <i>Ophthalmic Plastic and Reconstructive Surgery</i> , 2017, 33, 22-26.	0.4	0
36	Mathematical modelling of cell layer growth in a hollow fibre bioreactor. <i>Journal of Theoretical Biology</i> , 2017, 418, 36-56.	0.8	11

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37	A Validated Multiscale In-Silico Model for Mechano-sensitive Tumour Angiogenesis and Growth. PLoS Computational Biology, 2017, 13, e1005259.	1.5	45
38	Hollow Fiber Bioreactors for &em>In Vivo&em>-like Mammalian Tissue Culture. Journal of Visualized Experiments, 2016, , .	0.2	19
39	Dispersion-enhanced solute transport in a cell-seeded hollow fibre membrane bioreactor. Journal of Engineering Mathematics, 2016, 99, 29-63.	0.6	5
40	A multiphase model for chemically- and mechanically- induced cell differentiation in a hollow fibre membrane bioreactor: minimising growth factor consumption. Biomechanics and Modeling in Mechanobiology, 2016, 15, 683-700.	1.4	3
41	Multiphase modelling of the effect of fluid shear stress on cell yield and distribution in a hollow fibre membrane bioreactor. Biomechanics and Modeling in Mechanobiology, 2015, 14, 387-402.	1.4	14
42	Structure–Based Algorithms for Microvessel Classification. Microcirculation, 2015, 22, 99-108.	1.0	14
43	Stress-relaxation and fatigue behaviour of synthetic brow-suspension materials. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 42, 116-128.	1.5	3
44	Multiphase modelling of the influence of fluid flow and chemical concentration on tissue growth in a hollow fibre membrane bioreactor. Mathematical Medicine and Biology, 2014, 31, 393-430.	0.8	21
45	Multi-modal pharmacokinetic modelling for DCE-MRI: using diffusion weighted imaging to constrain the local arterial input function. Proceedings of SPIE, 2014, , .	0.8	0
46	Quantifying the correlation between spatially defined oxygen gradients and cell fate in an engineered three-dimensional culture model. Journal of the Royal Society Interface, 2014, 11, 20140501.	1.5	24
47	Effective governing equations for poroelastic growing media. Quarterly Journal of Mechanics and Applied Mathematics, 2014, 67, 69-91.	0.5	86
48	Combined mathematical modelling and experimentation to predict polymersome uptake by oral cancer cells. Nanomedicine: Nanotechnology, Biology, and Medicine, 2014, 10, 339-348.	1.7	20
49	Regulation of O2 consumption by the PI3K and mTOR pathways contributes to tumor hypoxia. Radiotherapy and Oncology, 2014, 111, 72-80.	0.3	37
50	Microstructure and mechanical properties of synthetic brow-suspension materials. Materials Science and Engineering C, 2014, 35, 220-230.	3.8	17
51	Transmural Variation and Anisotropy of Microvascular Flow Conductivity in the Rat Myocardium. Annals of Biomedical Engineering, 2014, 42, 1966-1977.	1.3	16
52	Optimising Cell Aggregate Expansion in a Perfused Hollow Fibre Bioreactor via Mathematical Modelling. PLoS ONE, 2014, 9, e105813.	1.1	19
53	Novel in vitro and mathematical models for the prediction of chemical toxicity. Toxicology Research, 2013, 2, 40-59.	0.9	25
54	Homogenization via formal multiscale asymptotics and volume averaging: How do the two techniques compare?. Advances in Water Resources, 2013, 62, 178-206.	1.7	123

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55	High-speed camera characterization of voluntary eye blinking kinematics. <i>Journal of the Royal Society Interface</i> , 2013, 10, 20130227.	1.5	110
56	Fluid and mass transport modelling to drive the design of cell-packed hollow fibre bioreactors for tissue engineering applications. <i>Mathematical Medicine and Biology</i> , 2012, 29, 329-359.	0.8	29
57	Theoretical models for coronary vascular biomechanics: Progress & challenges. <i>Progress in Biophysics and Molecular Biology</i> , 2011, 104, 49-76.	1.4	62
58	A strategy to determine operating parameters in tissue engineering hollow fiber bioreactors. <i>Biotechnology and Bioengineering</i> , 2011, 108, 1450-1461.	1.7	37
59	Multiscale Modelling of Fluid and Drug Transport in Vascular Tumours. <i>Bulletin of Mathematical Biology</i> , 2010, 72, 1464-1491.	0.9	127
60	Definition and validation of operating equations for poly(vinyl alcohol)-poly(lactide-co-glycolide) microfiltration membrane-scaffold bioreactors. <i>Biotechnology and Bioengineering</i> , 2010, 107, 382-392.	1.7	28
61	Theoretical exploration of blastocyst morphogenesis. <i>International Journal of Developmental Biology</i> , 2009, 53, 447-457.	0.3	4
62	Design criteria for a printed tissue engineering construct: A mathematical homogenization approach. <i>Journal of Theoretical Biology</i> , 2009, 259, 489-502.	0.8	48
63	Medical imaging and physiological modelling: linking physics and biology. <i>BioMedical Engineering OnLine</i> , 2009, 8, 1.	1.3	39
64	Multiscale Modeling of Fluid Transport in Tumors. <i>Bulletin of Mathematical Biology</i> , 2008, 70, 2334-2357.	0.9	67