Paul N Watton

List of Publications by Year in Descending Order

40 papers	1,006 citations	19 h-index	31 g-index
49 ext. papers	1,125 ext. citations	3 avg, IF	4.32 L-index

#	Paper	IF	Citations
40	Modeling intracranial aneurysm stability and growth: an integrative mechanobiological framework for clinical cases. *Biomechanics and Modeling in Mechanobiology*, **2020**, 19, 2413-2431	3.8	2
39	Shear stress rosettes capture the complex flow physics in diseased arteries. *Journal of Biomechanics* , **2020**, 104, 109721	2.9	4
38	Optimization schemes for endovascular repair with parallel technique based on hemodynamic analyses. *International Journal for Numerical Methods in Biomedical Engineering*, **2019**, 35, e3197	2.6	5
37	The unexplained success of stentplasty vasospasm treatment : Insights using Mechanistic Mathematical Modeling. *Clinical Neuroradiology*, **2019**, 29, 763-774	2.7	6
36	A biomechanical model for fibril recruitment: Evaluation in tendons and arteries. *Journal of Biomechanics*, **2018**, 74, 192-196	2.9	6
35	Layer-dependent role of collagen recruitment during loading of the rat bladder wall. *Biomechanics and Modeling in Mechanobiology*, **2018**, 17, 403-417	3.8	19
34	Quantitative multiphoton microscopy of murine urinary bladder morphology during in situ uniaxial loading. *Acta Biomaterialia*, **2017**, 64, 59-66	10.8	8
33	Hemodynamic parameters that may predict false-lumen growth in type-B aortic dissection after endovascular repair: A preliminary study on long-term multiple follow-ups. *Medical Engineering and Physics*, **2017**, 50, 12-21	2.4	20
32	Growth Description for Vessel Wall Adaptation: A Thick-Walled Mixture Model of Abdominal Aortic Aneurysm Evolution. *Materials*, **2017**, 10,	3.5	24
31	A novel chemo-mechano-biological model of arterial tissue growth and remodelling. *Journal of Biomechanics*, **2016**, 49, 2321-30	2.9	23
30	Transitional flow in aneurysms and the computation of haemodynamic parameters. *Journal of the Royal Society Interface*, **2015**, 12,	4.1	40
29	A thick-walled fluid-solid-growth model of abdominal aortic aneurysm evolution: application to a patient-specific geometry. *Journal of Biomechanical Engineering*, **2015**, 137,	2.1	33
28	Modelling volumetric growth in a thick walled fibre reinforced artery. *Journal of the Mechanics and Physics of Solids*, **2014**, 73, 134-150	5	26
27	Modelling the Evolution of Cerebral Aneurysms: Biomechanics, Mechanobiology and Multiscale Modelling. *Procedia IUTAM*, **2014**, 10, 396-409		11
26	Intracranial Aneurysms: Modeling Inception and Enlargement **2013**, 161-173		
25	Investigating the influence of haemodynamic stimuli on intracranial aneurysm inception. *Annals of Biomedical Engineering*, **2013**, 41, 1492-504	4.7	34
24	Mechanobiology of the Arterial Wall **2013**, 275-347		15

23	Influence of differing material properties in media and adventitia on arterial adaptation--application to aneurysm formation and rupture. *Computer Methods in Biomechanics and Biomedical Engineering*, **2013**, 16, 33-53	2.1	17
22	Multi-Scale Modelling of Vascular Disease: Abdominal Aortic Aneurysm Evolution. *Studies in Mechanobiology, Tissue Engineering and Biomaterials*, **2012**, 309-339	0.5	2
21	Modelling Cerebral Aneurysm Evolution. *Studies in Mechanobiology, Tissue Engineering and Biomaterials*, **2011**, 373-399	0.5	4
20	Modelling evolution and the evolving mechanical environment of saccular cerebral aneurysms. *Biomechanics and Modeling in Mechanobiology*, **2011**, 10, 109-32	3.8	46
19	Multiscale modeling of intracranial aneurysms: cell signaling, hemodynamics, and remodeling. *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 2974-7	5	12
18	Multi-scale interaction of particulate flow and the artery wall. *Medical Engineering and Physics*, **2011** , 33, 840-8	2.4	6
17	Rest versus exercise hemodynamics for middle cerebral artery aneurysms: a computational study. *American Journal of Neuroradiology*, **2010**, 31, 317-23	4.4	24
16	Impact of transmural heterogeneities on arterial adaptation: application to aneurysm formation. *Biomechanics and Modeling in Mechanobiology*, **2010**, 9, 295-315	3.8	25
15	Effects of flow vortex on a chorded mitral valve in the left ventricle. *International Journal for Numerical Methods in Biomedical Engineering*, **2010**, 26, 381-404	2.6	16
14	A Computational Framework to Explore the Role of Pulsatile Haemodynamics on Cerebral Aneurysm Development for Patient-Specific Arterial Geometries. *IFMBE Proceedings*, **2010**, 759-762	0.2	2
13	Modelling the growth and stabilization of cerebral aneurysms. *Mathematical Medicine and Biology*, **2009**, 26, 133-64	1.3	49
12	Coupling the hemodynamic environment to the evolution of cerebral aneurysms: computational framework and numerical examples. *Journal of Biomechanical Engineering*, **2009**, 131, 101003	2.1	59
11	Risk evaluation and interventional planning for cerebral aneurysms: computational models for growth, coiling and thrombosis. *International Journal of Computational Fluid Dynamics*, **2009**, 23, 595-607	1.2	5
10	Modelling evolution of saccular cerebral aneurysms. *Journal of Strain Analysis for Engineering Design*, **2009**, 44, 375-389	1.3	18
9	Evolving mechanical properties of a model of abdominal aortic aneurysm. *Biomechanics and Modeling in Mechanobiology*, **2009**, 8, 25-42	3.8	95
8	3D modelling of arterial growth for adaptation to hypertension the influence of transmural changes in the mechanical environment. *Proceedings in Applied Mathematics and Mechanics*, **2009**, 9, 71-74	0.2	1
7	Modelling the mechanical response of elastin for arterial tissue. *Journal of Biomechanics*, **2009**, 42, 1320-5	2.9	63
6	Computational modelling for cerebral aneurysms: risk evaluation and interventional planning. *British Journal of Radiology*, **2009**, 82 Spec No 1, S62-71	3.4	16

5	Computational modeling of cerebral aneurysm formation framework for modeling the interaction between fluid dynamics, signal transduction pathways and arterial wall mechanics. *IFMBE Proceedings*, **2009**, 1894-1898	0.2	1
4	Modelling the interaction of haemodynamics and the artery wall: current status and future prospects. *Biomedicine and Pharmacotherapy*, **2008**, 62, 530-5	7.5	5
3	Effect of ventricle motion on the dynamic behaviour of chorded mitral valves. *Journal of Fluids and Structures*, **2008**, 24, 58-74	3.1	31
2	Dynamic modelling of prosthetic chorded mitral valves using the immersed boundary method. *Journal of Biomechanics*, **2007**, 40, 613-26	2.9	46
1	A mathematical model for the growth of the abdominal aortic aneurysm. *Biomechanics and Modeling in Mechanobiology*, **2004**, 3, 98-113	3.8	154