Wouter Huberts

List of Publications by Year
in descending order

48	946	471371 17	477173 29
papers	citations	h-index	g-index

50	50	50	935
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Complementing sparse vascular imaging data by physiological adaptation rules. Journal of Applied Physiology, 2021, 130, 571-588.	1.2	0
2	Haemodynamic optimisation of a dialysis graft design using a global optimisation approach. International Journal for Numerical Methods in Biomedical Engineering, 2021, 37, e3423.	1.0	4
3	An Automated Algorithm for Optic Nerve Sheath Diameter Assessment from Bâ€mode Ultrasound Images. Journal of Neuroimaging, 2021, 31, 724-732.	1.0	6
4	Computationally guided in-vitro vascular growth model reveals causal link between flow oscillations and disorganized neotissue. Communications Biology, 2021, 4, 546.	2.0	2
5	Intra-Operative Video-Based Measurement of Biaxial Strains of the Ascending Thoracic Aorta. Biomedicines, 2021, 9, 670.	1.4	7
6	Optic nerve sheath diameter assessment by neurosonology: A review of methodologic discrepancies. Journal of Neuroimaging, 2021, 31, 814-825.	1.0	29
7	The impact of shape uncertainty on aorticâ€valve pressureâ€drop computations. International Journal for Numerical Methods in Biomedical Engineering, 2021, 37, e3518.	1.0	7
8	Uncertainty Quantification of Regional Cardiac Tissue Properties in Arrhythmogenic Cardiomyopathy Using Adaptive Multiple Importance Sampling. Frontiers in Physiology, 2021, 12, 738926.	1.3	7
9	Improved Quantification of Cell Density in the Arterial Wallâ€”A Novel Nucleus Splitting Approach Applied to 3D Two-Photon Laser-Scanning Microscopy. Frontiers in Physiology, 2021, 12, 814434.	1.3	0
10	The Role of One-Dimensional Model-Generated Inter-Subject Variations in Systemic Properties on Wall Shear Stress Indices of Intracranial Aneurysms. IEEE Transactions on Biomedical Engineering, 2020, 67, 1030-1039.	2.5	0
11	Computational study on the haemodynamic and mechanical performance of electrospun polyurethane dialysis grafts. Biomechanics and Modeling in Mechanobiology, 2020, 19, 713-722.	1.4	9
12	Computational Modelling Based Recommendation on Optimal Dialysis Needle Positioning and Dialysis Flow in Patients With Arteriovenous Grafts. European Journal of Vascular and Endovascular Surgery, 2020, 59, 288-294.	0.8	5
13	Natural Vascular Remodelling After Arteriovenous Fistula Creation in Dialysis Patients With and Without Previous Ipsilateral Vascular Access. European Journal of Vascular and Endovascular Surgery, 2020, 59, 277-287.	0.8	12
14	Uncertainty in modelâ€based treatment decision support: Applied to aortic valve stenosis. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3388.	1.0	6
15	Pre-operative Patient Specific Flow Predictions to Improve Haemodialysis Arteriovenous Fistula Maturation (Shunt Simulation Study): A Randomised Controlled Trial. European Journal of Vascular and Endovascular Surgery, 2020, 60, 98-106.	0.8	10
16	Parameter subset reduction for patient-specific modelling of arrhythmogenic cardiomyopathy-related mutation carriers in the CircAdapt model. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190347.	1.6	10
17	A Metamodeling Approach for Instant Severity Assessment and Uncertainty Quantification of Iliac Artery Stenoses. Journal of Biomechanical Engineering, 2020, 142, .	0.6	1
18	Large vessels as a tree of transmission lines incorporated in the CircAdapt whole-heart model: A computational tool to examine heart-vessel interaction. PLoS Computational Biology, 2019, 15, e1007173.	1.5	11

#	Article	IF	Citations
19	Cardiovascular models for personalised medicine: Where now and where next?. Medical Engineering and Physics, 2019, 72, 38-48.	0.8	42
20	A geometry-based model for non-invasive estimation of pressure gradients over iliac artery stenoses. Journal of Biomechanics, 2019, 92, 67-75.	0.9	4
21	Augmentation index is not a proxy for wave reflection magnitude: mechanistic analysis using a computational model. Journal of Applied Physiology, 2019, 127, 491-500.	1.2	36
22	A comparative study of geometry-based methods and intra-arterial pressure measurements to assess the hemodynamic significance of equivocal iliac artery stenoses. Vascular, 2019, 27, 119-127.	0.4	1
23	Intima heterogeneity in stress assessment of atherosclerotic plaques. Interface Focus, 2018, 8, 20170008.	1.5	16
24	Modeling regulation of vascular tone following muscle contraction: Model development, validation and global sensitivity analysis. Journal of Computational Science, 2018, 24, 143-159.	1.5	4
25	Uncertainty quantification and sensitivity analysis of an arterial wall mechanics model for evaluation of vascular drug therapies. Biomechanics and Modeling in Mechanobiology, 2018, 17, 55-69.	1.4	13
26	What is needed to make cardiovascular models suitable for clinical decision support? A viewpoint paper. Journal of Computational Science, 2018, 24, 68-84.	1.5	39
27	Zeroâ€dimensional lumped approach to incorporate the dynamic part of the pressure at vessel junctions in a 1D wave propagation model. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e3116.	1.0	1
28	Pre-operative Duplex Ultrasonography in Arteriovenous Fistula Creation: Intra- and Inter-observer Agreement. European Journal of Vascular and Endovascular Surgery, 2017, 54, 613-619.	0.8	10
29	In Vivo Validation of Patientâ€Specific Pressure Gradient Calculations for Iliac Artery Stenosis Severity Assessment. Journal of the American Heart Association, 2017, 6, .	1.6	7
30	Hemodynamic significance assessment of equivocal iliac artery stenoses by comparing duplex ultrasonography with intra-arterial pressure measurements. Journal of Cardiovascular Surgery, 2017, 59, 37-44.	0.3	3
31	Preoperative computer simulation for planning of vascular access surgery in hemodialysis patients. Journal of Vascular Access, 2017, 18, S118-S124.	0.5	11
32	A guide to uncertainty quantification and sensitivity analysis for cardiovascular applications. International Journal for Numerical Methods in Biomedical Engineering, 2016, 32, e02755.	1.0	105
33	Application of an Adaptive Polynomial Chaos Expansion on Computationally Expensive Three-Dimensional Cardiovascular Models for Uncertainty Quantification and Sensitivity Analysis. Journal of Biomechanical Engineering, 2016, 138, .	0.6	26
34	Global sensitivity analysis of a model for venous valve dynamics. Journal of Biomechanics, 2016, 49, 2845-2853.	0.9	5
35	A 1D pulse wave propagation model of the hemodynamics of calf muscle pump function. International Journal for Numerical Methods in Biomedical Engineering, 2015, 31, e02716.	1.0	21
36	Personalization of models with many model parameters: an efficient sensitivity analysis approach. International Journal for Numerical Methods in Biomedical Engineering, 2015, 31, .	1.0	25

#	Article	IF	Citations
37	A benchmark study of numerical schemes for oneâ€dimensional arterial blood flow modelling. International Journal for Numerical Methods in Biomedical Engineering, 2015, 31, e02732.	1.0	144
38	Applicability of the polynomial chaos expansion method for personalization of a cardiovascular pulse wave propagation model. International Journal for Numerical Methods in Biomedical Engineering, 2014, 30, 1679-1704.	1.0	29
39	Assisting vascular access surgery planning for hemodialysis by using MR, image segmentation techniques, and computer simulations. Medical and Biological Engineering and Computing, 2013, 51, 879-889.	1.6	12
40	A sensitivity analysis of a personalized pulse wave propagation model for arteriovenous fistula surgery. Part B: Identification of possible generic model parameters. Medical Engineering and Physics, 2013, 35, 827-837.	0.8	14
41	A sensitivity analysis of a personalized pulse wave propagation model for arteriovenous fistula surgery. Part A: Identification of most influential model parameters. Medical Engineering and Physics, 2013, 35, 810-826.	0.8	27
42	A Numerical Method of Reduced Complexity for Simulating Vascular Hemodynamics Using Coupled 0D Lumped and 1D Wave Propagation Models. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-10.	0.7	33
43	Computational model for estimating the short- and long-term cardiac response to arteriovenous fistula creation for hemodialysis. Medical and Biological Engineering and Computing, 2012, 50, 1289-1298.	1.6	7
44	Patient-Specific Computational Modeling of Upper Extremity Arteriovenous Fistula Creation: Its Feasibility to Support Clinical Decision-Making. PLoS ONE, 2012, 7, e34491.	1.1	27
45	Experimental validation of a pulse wave propagation model for predicting hemodynamics after vascular access surgery. Journal of Biomechanics, 2012, 45, 1684-1691.	0.9	31
46	A pulse wave propagation model to support decision-making in vascular access planning in the clinic. Medical Engineering and Physics, 2012, 34, 233-248.	0.8	77
47	Clinical Study Protocol for the ARCH Project Computational Modeling for Improvement of Outcome after Vascular Access Creation. Journal of Vascular Access, 2011, 12, 369-376.	0.5	23
48	A lumped model for blood flow and pressure in the systemic arteries based on an approximate velocity profile function. Mathematical Biosciences and Engineering, 2009, 6, 27-40.	1.0	23