Raoul van Loon

List of Publications by Year in descending order

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32 papers	873 citations	567281 15 h-index	477307 29 g-index
34 all docs	34 docs citations	34 times ranked	856 citing authors

#	Article	IF	Citations
1	Comparison of various fluidâ€“structure interaction methods for deformable bodies. Computers and Structures, 2007, 85, 833-843.	4.4	124
2	A fluidâ€“structure interaction method with solid-rigid contact for heart valve dynamics. Journal of Computational Physics, 2006, 217, 806-823.	3.8	123
3	A combined fictitious domain/adaptive meshing method for fluidâ€“structure interaction in heart valves. International Journal for Numerical Methods in Fluids, 2004, 46, 533-544.	1.6	100
4	3D FE implementation of an incompressible quadriphasic mixture model. International Journal for Numerical Methods in Engineering, 2003, 57, 1243-1258.	2.8	63
5	A three-dimensional fluidâ€“structure interaction method for heart valve modelling. Comptes Rendus - Mecanique, 2005, 333, 856-866.	2.1	37
6	A comparison of fictitious domain methods appropriate for spectral/hp element discretisations. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 2275-2289.	6.6	36
7	Towards computational modelling of aortic stenosis. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 405-420.	2.1	34
8	Modelling pipeline for subjectâ€specific arterial blood flowâ€”A review. International Journal for Numerical Methods in Biomedical Engineering, 2011, 27, 1868-1910.	2.1	34
9	An improved baseline model for a human arterial network to study the impact of aneurysms on pressureâ€flow waveforms. International Journal for Numerical Methods in Biomedical Engineering, 2012, 28, 1224-1246.	2.1	30
10	Determining the combined effect of the lymphatic valve leaflets and sinus on resistance to forward flow. Journal of Biomechanics, 2015, 48, 3584-3590.	2.1	28
11	A novel method for non-invasively detecting the severity and location of aortic aneurysms. Biomechanics and Modeling in Mechanobiology, 2017, 16, 1225-1242.	2.8	28
12	An implicit solver for 1D arterial network models. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, e2837.	2.1	27
13	A comparative study of fractional step method in its quasi-implicit, semi-implicit and fully-explicit forms for incompressible flows. International Journal of Numerical Methods for Heat and Fluid Flow, 2016, 26, 595-623.	2.8	23
14	Application of a locally conservative Galerkin (LCG) method for modelling blood flow through a patientâ€specific carotid bifurcation. International Journal for Numerical Methods in Fluids, 2010, 64, 1274-1295.	1.6	21
15	Data-driven modelling of the FRC network for studying the fluid flow in the conduit system. Engineering Applications of Artificial Intelligence, 2017, 62, 341-349.	8.1	17
16	A data-driven model to study utero-ovarian blood flow physiology during pregnancy. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1155-1176.	2.8	15
17	Patient-specific blood flow simulation through an aneurysmal thoracic aorta with a folded proximal neck. International Journal for Numerical Methods in Biomedical Engineering, 2011, 27, 1167-1184.	2.1	14
18	Three-dimensional computational model of a blood oxygenator reconstructed from micro-CT scans. Medical Engineering and Physics, 2017, 47, 190-197.	1.7	14

#	Article	IF	Citations
19	Personalising cardiovascular network models in pregnancy: A twoâ€tiered parameter estimation approach. International Journal for Numerical Methods in Biomedical Engineering, 2020, 37, e3267.	2.1	13
20	Formulation of Generalized Mass Transfer Correlations for Blood Oxygenator Design. Journal of Biomechanical Engineering, 2017, 139, .	1.3	12
21	Investigation of Shape with Patients Suffering from Unilateral Lymphoedema. Annals of Biomedical Engineering, 2018, 46, 108-121.	2.5	12
22	Critical Issues in Modelling Lymph Node Physiology. Computation, 2017, 5, 3.	2.0	10
23	A fully coupled fluid-structure interaction model of the secondary lymphatic valve. Computer Methods in Biomechanics and Biomedical Engineering, 2018, 21, 813-823.	1.6	10
24	Influences of domain extensions to a moderately stenosed patientâ€specific carotid bifurcation. International Journal of Numerical Methods for Heat and Fluid Flow, 2011, 21, 952-979.	2.8	7
25	Pore-Scale Modeling of Non-Newtonian Shear-Thinning Fluids in Blood Oxygenator Design. Journal of Biomechanical Engineering, 2016, 138, 051001.	1.3	7
26	Computational investigation of the Laplace law in compression therapy. Journal of Biomechanics, 2019, 85, 6-17.	2.1	7
27	Integrated geometric and mechanical analysis of an image-based lymphatic valve. Journal of Biomechanics, 2017, 64, 172-179.	2.1	6
28	Hydrodynamic Evaluation of a Bioreactor for Tissue Engineering Heart Valves. Cardiovascular Engineering and Technology, 2010, 1, 10-17.	1.6	5
29	Mathematical Techniques for Circulatory Systems. , 2019, , 79-94.		2
30	Fluid-solid mixtures and electrochemomechanics: the simplicity of Lagrangian mixture theory. Computational and Applied Mathematics, 2004, 23, .	1.3	1
31	A fluid-structure interaction model of the aortic heart valve. Journal of Biomechanics, 2006, 39, S293.	2.1	0
32	DEVELOPING COMPUTATIONAL FLUID-STRUCTURE INTERACTION MODELS OF THE LYMPHATIC VALVE. , 0, , .		0