Joao Silva Soares

List of Publications by Year
in descending order

39 papers	1,201 citations	393982 19 h-index	395343 33 g-index
42 all docs	42 docs citations	42 times ranked	1716 citing authors

#	Article	IF	Citations
1	Patient-Specific Inverse Modeling of In Vivo Cardiovascular Mechanics with Medical Image-Derived Kinematics as Input Data: Concepts, Methods, and Applications. Applied Sciences (Switzerland), 2022, 12, 3954.	1.3	9
2	Quantification of the heterogeneous effect of static and dynamic perivascular structures on patient-specific local aortic wall mechanics using inverse finite element modeling and DENSE MRI. Journal of Biomechanics, 2022, 138, 111119.	0.9	8
3	The impact of myocardial compressibility on organ-level simulations of the normal and infarcted heart. Scientific Reports, 2021, 11, 13466.	1.6	7
4	On the in vivo systolic compressibility of left ventricular free wall myocardium in the normal and infarcted heart. Journal of Biomechanics, 2020, 107, 109767.	0.9	15
5	Assessing Patient-Specific Mechanical Properties of Aortic Wall and Peri-Aortic Structures From In Vivo DENSE Magnetic Resonance Imaging Using an Inverse Finite Element Method and Elastic Foundation Boundary Conditions. Journal of Biomechanical Engineering, 2020, 142, .	0.6	8
6	A Contemporary Look at Biomechanical Models of Myocardium. Annual Review of Biomedical Engineering, 2019, 21, 417-442.	5.7	50
7	A Computational Cardiac Model for the Adaptation to Pulmonary Arterial Hypertension in the Rat. Annals of Biomedical Engineering, 2019, 47, 138-153.	1.3	28
8	An integrated inverse model-experimental approach to determine soft tissue three-dimensional constitutive parameters: application to post-infarcted myocardium. Biomechanics and Modeling in Mechanobiology, 2018, 17, 31-53.	1.4	40
9	A mathematical model for the determination of forming tissue moduli in needled-nonwoven scaffolds. Acta Biomaterialia, 2017, 51, 220-236.	4.1	14
10	Modeling of Myocardium Compressibility and its Impact in Computational Simulations of the Healthy and Infarcted Heart. Lecture Notes in Computer Science, 2017, 10263, 493-501.	1.0	5
11	Biomechanical Behavior of Bioprosthetic Heart Valve Heterograft Tissues: Characterization, Simulation, and Performance. Cardiovascular Engineering and Technology, 2016, 7, 309-351.	0.7	61
12	Electromechanical cardioplasty using a wrapped elasto-conductive epicardial mesh. Science Translational Medicine, 2016, 8, 344ra86.	5.8	181
13	Large strain stimulation promotes extracellular matrix production and stiffness in an elastomeric scaffold model. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 62, 619-635.	1.5	19
14	A triphasic constrained mixture model of engineered tissue formation under in vitro dynamic mechanical conditioning. Biomechanics and Modeling in Mechanobiology, 2016, 15, 293-316.	1.4	25
15	Biomechanical Challenges to Polymeric Biodegradable Stents. Annals of Biomedical Engineering, 2016, 44, 560-579.	1.3	45
16	Thromboresistance Comparison of the HeartMate II Ventricular Assist Device With the Device Thrombogenicity Emulation-Optimized HeartAssist 5 VAD. Journal of Biomechanical Engineering, 2014, 136, 021014.	0.6	73
17	The Syncardiaâ„¢ total artificial heart: in vivo, in vitro, and computational modeling studies. Journal of Biomechanics, 2013, 46, 266-275.	0.9	71
18	A novel mathematical model of activation and sensitization of platelets subjected to dynamic stress histories. Biomechanics and Modeling in Mechanobiology, 2013, 12, 1127-1141.	1.4	57

#	Article	IF	Citations
19	Simulation of Platelets Suspension Flowing Through a Stenosis Model Using a Dissipative Particle Dynamics Approach. Annals of Biomedical Engineering, 2013, 41, 2318-2333.	1.3	31
20	Evaluation of Shear-Induced Platelet Activation Models Under Constant and Dynamic Shear Stress Loading Conditions Relevant to Devices. Annals of Biomedical Engineering, 2013, 41, 1279-1296.	1.3	96
21	Multiscale Modeling of Flow Induced Thrombogenicity Using Dissipative Particle Dynamics and Coarse Grained Molecular Dynamics. , 2013, , .		2
22	Modeling the Role of Oscillator Flow and Dynamic Mechanical Conditioning on Dense Connective Tissue Formation in Mesenchymal Stem Cellâ€"Derived Heart Valve Tissue Engineering. Journal of Medical Devices, Transactions of the ASME, 2013, 7, 0409271-409272.	0.4	1
23	Multiscale Modeling of Flow Induced Thrombogenicity Using Dissipative Particle Dynamics and Molecular Dynamics. , 2013, , .		0
24	Multiscale Modeling of Flow Induced Thrombogenicity With Dissipative Particle Dynamics and Molecular Dynamics. Journal of Medical Devices, Transactions of the ASME, 2013, 7, 0209541-209542.	0.4	5
25	Toward Optimization of a Novel Trileaflet Polymeric Prosthetic Heart Valve via Device Thrombogenicity Emulation. ASAIO Journal, 2013, 59, 275-283.	0.9	40
26	Multiscale Modeling of Flow Induced Thrombogenicity With Dissipative Particle Dynamics (DPD) and Molecular Dynamics (MD). , 2013, , .		0
27	Simulation of the Role of Oscillatory Shear Stress on Mesenchymal Stem Cell Proliferation and Extracellular Matrix Production in Engineered Heart Valve Tissue Formation. , 2013, , .		0
28	Modeling the Role of Oscillatory Flow and Dynamic Mechanical Conditioning on Dense Connective Tissue Formation in Mesenchymal Stem Cell Derived Heart Valve Tissue Engineering. , 2013, , .		0
29	A Mathematical Model for Shear-Induced Platelet Activation in Response to Time Dependent Shear Stress Histories. , 2012, , .		0
30	Multiscale computational analysis of degradable polymers. Modeling, Simulation and Applications, 2012, , 333-361.	1.3	1
31	Evaluation of Platelet Activation Models With Dynamic Shear Stress In Vitro Experiments. , 2012, , .		0
32	Deformation-induced hydrolysis of a degradable polymeric cylindrical annulus. Biomechanics and Modeling in Mechanobiology, 2010, 9, 177-186.	1.4	61
33	Biodegradable Stents: Biomechanical Modeling Challenges and Opportunities. Cardiovascular Engineering and Technology, 2010, 1, 52-65.	0.7	46
34	Modeling in cardiovascular biomechanics. International Journal of Engineering Science, 2010, 48, 1563-1575.	2.7	6
35	A mixture model for water uptake, degradation, erosion and drug release from polydisperse polymeric networks. Biomaterials, 2010, 31, 3032-3042.	5.7	64
36	Modeling of Deformation-Accelerated Breakdown of Polylactic Acid Biodegradable Stents. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.4	32

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37	Diffusion of a fluid through a spherical elastic solid undergoing large deformations. International Journal of Engineering Science, 2009, 47, 50-63.	2.7	10
38	Mechanics of Deformation-Induced Degradation of Poly(L-Lactic Acid) Endovascular Stents. , 2009, , .		1
39	Constitutive Framework for Biodegradable Polymers with Applications to Biodegradable Stents. ASAIO Journal, 2008, 54, 295-301.	0.9	86