Joao Silva Soares

List of Publications by Year
in descending order

39	1,201	393982	395343
papers	citations	19	33
		h-index	g-index

42	42	42	1716
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electromechanical cardioplasty using a wrapped elasto-conductive epicardial mesh. Science Translational Medicine, 2016, 8, 344ra86.	5.8	181
2	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
3	Constitutive Framework for Biodegradable Polymers with Applications to Biodegradable Stents. ASAIO Journal, 2008, 54, 295-301.	0.9	86
4	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
5	The Syncardiaâ„¢ total artificial heart: in vivo, in vitro, and computational modeling studies. Journal of Biomechanics, 2013, 46, 266-275.	0.9	71
6	A mixture model for water uptake, degradation, erosion and drug release from polydisperse polymeric networks. Biomaterials, 2010, 31, 3032-3042.	5.7	64
7	Deformation-induced hydrolysis of a degradable polymeric cylindrical annulus. Biomechanics and Modeling in Mechanobiology, 2010, 9, 177-186.	1.4	61
8	Biomechanical Behavior of Bioprosthetic Heart Valve Heterograft Tissues: Characterization, Simulation, and Performance. Cardiovascular Engineering and Technology, 2016, 7, 309-351.	0.7	61
9	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
10	A Contemporary Look at Biomechanical Models of Myocardium. Annual Review of Biomedical Engineering, 2019, 21, 417-442.	5.7	50
11	Biodegradable Stents: Biomechanical Modeling Challenges and Opportunities. Cardiovascular Engineering and Technology, 2010, 1, 52-65.	0.7	46
12	Biomechanical Challenges to Polymeric Biodegradable Stents. Annals of Biomedical Engineering, 2016, 44, 560-579.	1.3	45
13	Toward Optimization of a Novel Trileaflet Polymeric Prosthetic Heart Valve via Device Thrombogenicity Emulation. ASAIO Journal, 2013, 59, 275-283.	0.9	40
14	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
15	Modeling of Deformation-Accelerated Breakdown of Polylactic Acid Biodegradable Stents. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.4	32
16	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
17	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
18	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

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19	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
20	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
21	A mathematical model for the determination of forming tissue moduli in needled-nonwoven scaffolds. Acta Biomaterialia, 2017, 51, 220-236.	4.1	14
22	Diffusion of a fluid through a spherical elastic solid undergoing large deformations. International Journal of Engineering Science, 2009, 47, 50-63.	2.7	10
23	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
24	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
25	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
26	The impact of myocardial compressibility on organ-level simulations of the normal and infarcted heart. Scientific Reports, 2021, 11, 13466.	1.6	7
27	Modeling in cardiovascular biomechanics. International Journal of Engineering Science, 2010, 48, 1563-1575.	2.7	6
28	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
29	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
30	Multiscale Modeling of Flow Induced Thrombogenicity Using Dissipative Particle Dynamics and Coarse Grained Molecular Dynamics. , 2013, , .		2
31	Multiscale computational analysis of degradable polymers. Modeling, Simulation and Applications, 2012, , 333-361.	1.3	1
32	Modeling the Role of Oscillator Flow and Dynamic Mechanical Conditioning on Dense Connective Tissue Formation in Mesenchymal Cellâ€"Derived Heart Valve Tissue Engineering. Journal of Medical Devices, Transactions of the ASME, 2013, 7, 0409271-409272.	0.4	1
33	Mechanics of Deformation-Induced Degradation of Poly(L-Lactic Acid) Endovascular Stents. , 2009, , .		1
34	A Mathematical Model for Shear-Induced Platelet Activation in Response to Time Dependent Shear Stress Histories. , 2012, , .		0
35	Multiscale Modeling of Flow Induced Thrombogenicity Using Dissipative Particle Dynamics and Molecular Dynamics. , 2013, , .		0
36	Multiscale Modeling of Flow Induced Thrombogenicity With Dissipative Particle Dynamics (DPD) and Molecular Dynamics (MD). , 2013, , .		0

#	Article	IF	Citations
37	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
38	Evaluation of Platelet Activation Models With Dynamic Shear Stress In Vitro Experiments. , 2012, , .		0
39	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