Julius

List of Publications by Year
in descending order

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41 papers	1,040 citations	430874 18 h-index	434195 31 g-index
41 all docs	41 docs citations	41 times ranked	855 citing authors

#	Article	IF	Citations
1	MRI-based finite-element analysis of left ventricular aneurysm. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 289, H692-H700.	3.2	179
2	Distribution of normal human left ventricular myofiber stress at end diastole and end systole: a target for in silico design of heart failure treatments. Journal of Applied Physiology, 2014, 117, 142-152.	2.5	117
3	A Computationally Efficient Formal Optimization of Regional Myocardial Contractility in a Sheep With Left Ventricular Aneurysm. Journal of Biomechanical Engineering, 2009, 131, 111001.	1.3	73
4	Construction and Validation of Subject-Specific Biventricular Finite-Element Models of Healthy and Failing Swine Hearts From High-Resolution DT-MRI. Frontiers in Physiology, 2018, 9, 539.	2.8	56
5	Human Cardiac Function Simulator for the Optimal Design of a Novel Annuloplasty Ring with a Sub-valvular Element for Correction of Ischemic Mitral Regurgitation. Cardiovascular Engineering and Technology, 2015, 6, 105-116.	1.6	54
6	Myosplint decreases wall stress without depressing function in the failing heart: a finite element model study. Annals of Thoracic Surgery, 2003, 76, 1171-1180.	1.3	52
7	Investigating the Role of Interventricular Interdependence in Development of Right Heart Dysfunction During LVAD Support: A Patient-Specific Methods-Based Approach. Frontiers in Physiology, 2018, 9, 520.	2.8	40
8	Prediction of Left Ventricular Mechanics Using Machine Learning. Frontiers in Physics, 2019, 7, .	2.1	37
9	Partial LVAD Restores Ventricular Outputs and Normalizes LV but not RV Stress Distributions in the Acutely Failing Heart in Silico. International Journal of Artificial Organs, 2016, 39, 421-430.	1.4	32
10	Personalised computational cardiology: Patient-specific modelling in cardiac mechanics and biomaterial injection therapies for myocardial infarction. Heart Failure Reviews, 2016, 21, 815-826.	3.9	31
11	A Novel Method for Quantifying Smooth Regional Variations in Myocardial Contractility Within an Infarcted Human Left Ventricle Based on Delay-Enhanced Magnetic Resonance Imaging. Journal of Biomechanical Engineering, 2015, 137, 081009.	1.3	29
12	Efficacy of intramyocardial injection of Algisyl-LVR for the treatment of ischemic heart failure in swine. International Journal of Cardiology, 2018, 255, 129-135.	1.7	27
13	Bioinjection treatment: Effects of post-injection residual stress on left ventricular wall stress. Journal of Biomechanics, 2014, 47, 3115-3119.	2.1	23
14	The effect of anteroapical aneurysm plication on end-systolic three-dimensional strain in the sheep: A magnetic resonance imaging tagging study. Journal of Thoracic and Cardiovascular Surgery, 2006, 131, 579-586.e3.	0.8	22
15	Relationship of Transmural Variations in Myofiber Contractility to Left Ventricular Ejection Fraction: Implications for Modeling Heart Failure Phenotype With Preserved Ejection Fraction. Frontiers in Physiology, 2018, 9, 1003.	2.8	22
16	Intra-myocardial alginate hydrogel injection acts as a left ventricular mid-wall constraint in swine. Acta Biomaterialia, 2020, 111, 170-180.	8.3	22
17	Computational Modeling Studies of the Roles of Left Ventricular Geometry, Afterload, and Muscle Contractility on Myocardial Strains in Heart Failure with Preserved Ejection Fraction. Journal of Cardiovascular Translational Research, 2021, 14, 1131-1145.	2.4	20
18	Altered Left Ventricular Geometry Changes the Border Zone Temporal Distribution of Stress in an Experimental Model of Left Ventricular Aneurysm: A Finite Element Model Study. Circulation, 2002, 106, .	1.6	20

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19	Measurement of Mitral Leaflet and Annular Geometry and Stress After Repair of Posterior Leaflet Prolapse: Virtual Repair Using aÂPatient-Specific Finite Element Simulation. Annals of Thoracic Surgery, 2014, 97, 1496-1503.	1.3	19
20	Mechanical effects of MitraClip on leaflet stress and myocardial strain in functional mitral regurgitation â€“ A finite element modeling study. PLoS ONE, 2019, 14, e0223472.	2.5	19
21	Wall Stress Distribution in Bicuspid Aortic Valveâ€“Associated Ascending Thoracic Aortic Aneurysms. Annals of Thoracic Surgery, 2020, 110, 807-814.	1.3	19
22	Augmenting Surgery via Multi-scale Modeling and Translational Systems Biology in the Era of Precision Medicine: A Multidisciplinary Perspective. Annals of Biomedical Engineering, 2016, 44, 2611-2625.	2.5	16
23	Tricuspid valve regurgitation decreases after mitraclip implantation: Fluid structure interaction simulation. Mechanics Research Communications, 2019, 97, 96-100.	1.8	14
24	Impact of Aortic Stenosis on Myofiber Stress: Translational Application of Left Ventricle-Aortic Coupling Simulation. Frontiers in Physiology, 2020, 11, 574211.	2.8	13
25	Finite-element based optimization of left ventricular passive stiffness in normal volunteers and patients after myocardial infarction: Utility of an inverse deformation gradient calculation of regional diastolic strain. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 119, 104431.	3.1	12
26	Moderate Ischemic Mitral Regurgitation After Posterolateral Myocardial Infarction in Sheep Alters Left Ventricular Shear but Not Normal Strain in the Infarct and Infarct Borderzone. Annals of Thoracic Surgery, 2016, 101, 1691-1699.	1.3	10
27	In-silico study of the cardiac arrhythmogenic potential of biomaterial injection therapy. Scientific Reports, 2020, 10, 12990.	3.3	9
28	A Novel MRI-Based Finite Element Modeling Method for Calculation of Myocardial Ischemia Effect in Patients With Functional Mitral Regurgitation. Frontiers in Physiology, 2020, 11, 158.	2.8	9
29	Application of feed forward and recurrent neural networks in simulation of left ventricular mechanics. Scientific Reports, 2020, 10, 22298.	3.3	9
30	Posterior Papillary Muscle Anchoring Affects Remote Myofiber Stress and Pump Function: Finite Element Analysis. Annals of Thoracic Surgery, 2014, 98, 1355-1362.	1.3	7
31	Mitral Valve Atlas for Artificial Intelligence Predictions of MitraClip Intervention Outcomes. Frontiers in Cardiovascular Medicine, 2021, 8, 759675.	2.4	7
32	Patient-Specific Analysis of Ascending Thoracic Aortic Aneurysm with the Living Heart Human Model. Bioengineering, 2021, 8, 175.	3.5	6
33	Residual Stress Impairs Pump Function After Surgical Ventricular Remodeling: A Finite Element Analysis. Annals of Thoracic Surgery, 2015, 100, 2198-2205.	1.3	4
34	Intramyocardial Injections to De-Stiffen the Heart: A Subject-Specific in Silico Approach. MCB Molecular and Cellular Biomechanics, 2019, 16, 185-197.	0.7	4
35	Left Ventricle Biomechanics of Low-Flow, Low-Gradient Aortic Stenosis: A Patient-Specific Computational Model. Frontiers in Physiology, 2022, 13, 848011.	2.8	3
36	Diffusion and swelling in a bio-elastic cylinder. Mechanics Research Communications, 2019, 97, 123-128.	1.8	2

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37	Left Ventricular Pressure Gating in Ovine Cardiac Studies: A Software-Based Method. Journal of Biomechanical Engineering, 2013, 135, 34502.	1.3	1
38	Commentary: Fast and accurate surrogate of finite-element analysis: For bench to bedside, we need it now!. JTCVS Techniques, 2020, 4, 48-49.	0.4	1
39	A Biventricular Finite Element Model of Heart Failure for Predicting the Effects of Treatment Strategies. , 2011, , .		0
40	Invited Commentary. Annals of Thoracic Surgery, 2014, 98, 80.	1.3	0
41	Ventricular Wall Stress and Pump Function of Ventricular Septal Defect of Congenital Heart Defects. , 2009, , .		0