Christoph M Augustin

List of Publications by Year
in descending order

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32 papers	855 citations	516561 16 h-index	501076 28 g-index
34 all docs	34 docs citations	34 times ranked	662 citing authors

#	Article	IF	Citations
1	An Integrated Workflow for Building Digital Twins of Cardiac Electromechanicsâ€"A Multi-Fidelity Approach for Personalising Active Mechanics. Mathematics, 2022, 10, 823.	1.1	16
2	Impact of Intraventricular Septal Fiber Orientation on Cardiac Electromechanical Function. American Journal of Physiology - Heart and Circulatory Physiology, 2022, , .	1.5	5
3	An accurate, robust, and efficient finite element framework with applications to anisotropic, nearly and fully incompressible elasticity. Computer Methods in Applied Mechanics and Engineering, 2022, 394, 114887.	3.4	11
4	Robust and efficient fixed-point algorithm for the inverse elastostatic problem to identify myocardial passive material parameters and the unloaded reference configuration. Journal of Computational Physics, 2022, 463, 111266.	1.9	13
5	A coupling strategy for a first 3D-1D model of the cardiovascular system to study the effects of pulse wave propagation on cardiac function. Computational Mechanics, 2022, 70, 703-722.	2.2	4
6	Reconstructing vascular homeostasis by growth-based prestretch and optimal fiber deposition. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 114, 104161.	1.5	4
7	The Effect of Ventricular Myofibre Orientation on Atrial Dynamics. Lecture Notes in Computer Science, 2021, , 659-670.	1.0	3
8	Linking statistical shape models and simulated function in the healthy adult human heart. PLoS Computational Biology, 2021, 17, e1008851.	1.5	41
9	A Framework for the generation of digital twins of cardiac electrophysiology from clinical 12-leads ECGs. Medical Image Analysis, 2021, 71, 102080.	7.0	72
10	The openCARP simulation environment for cardiac electrophysiology. Computer Methods and Programs in Biomedicine, 2021, 208, 106223.	2.6	84
11	A computationally efficient physiologically comprehensive 3Dâ€"0D closed-loop model of the heart and circulation. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114092.	3.4	26
12	Versatile stabilized finite element formulations for nearly and fully incompressible solid mechanics. Computational Mechanics, 2020, 65, 193-215.	2.2	17
13	The impact of wall thickness and curvature on wall stress in patient-specific electromechanical models of the left atrium. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1015-1034.	1.4	23
14	Personalization of electro-mechanical models of the pressure-overloaded left ventricle: fitting of Windkessel-type afterload models. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190342.	1.6	23
15	A publicly available virtual cohort of four-chamber heart meshes for cardiac electro-mechanics simulations. PLoS ONE, 2020, 15, e0235145.	1.1	59
16	Computational modeling of cardiac growth and remodeling in pressure overloaded heartsâ€"Linking microstructure to organ phenotype. Acta Biomaterialia, 2020, 106, 34-53.	4.1	20
17	Simulating ventricular systolic motion in a four-chamber heart model with spatially varying robin boundary conditions to model the effect of the pericardium. Journal of Biomechanics, 2020, 101, 109645.	0.9	54
18	FEniCS mechanics: A package for continuum mechanics simulations. SoftwareX, 2019, 9, 107-111.	1.2	3

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19	Phosphorylation by the stress-activated MAPK Slt2 down-regulates the yeast TOR complex 2. Genes and Development, 2018, 32, 1576-1590.	2.7	20
20	Tracking yeast pheromone receptor Ste2 endocytosis using fluorogen-activating protein tagging. Molecular Biology of the Cell, 2018, 29, 2720-2736.	0.9	10
21	Assessment of wall stresses and mechanical heart power in the left ventricle: Finite element modeling versus Laplace analysis. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e3147.	1.0	23
22	Towards a Computational Framework for Modeling the Impact of Aortic Coarctations Upon Left Ventricular Load. Frontiers in Physiology, 2018, 9, 538.	1.3	24
23	Patient-specific modeling of left ventricular electromechanics as a driver for haemodynamic analysis. Europace, 2016, 18, iv121-iv129.	0.7	32
24	Image-Based Personalization of Cardiac Anatomy for Coupled Electromechanical Modeling. Annals of Biomedical Engineering, 2016, 44, 58-70.	1.3	48
25	Anatomically accurate high resolution modeling of human whole heart electromechanics: A strongly scalable algebraic multigrid solver method for nonlinear deformation. Journal of Computational Physics, 2016, 305, 622-646.	1.9	115
26	Verification of cardiac mechanics software: benchmark problems and solutions for testing active and passive material behaviour. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150641.	1.0	80
27	Classical and allâ€floating FETI methods for the simulation of arterial tissues. International Journal for Numerical Methods in Engineering, 2014, 99, 290-312.	1.5	17
28	Multiscale-Multiphysics Models of Ventricular Electromechanics - Computational Modeling, Parametrization and Experimental Validation. IFMBE Proceedings, 2014, , 1864-1867.	0.2	0
29	Computational Challenges in Building Multi-Scale and Multi-Physics Models of Cardiac Electro-Mechanics. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	1
30	Simulating the Mechanics of Myocardial Tissue Using Strongly Scalable Parallel Algorithms. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0
31	FETI Methods for the Simulation of Biological Tissues. Lecture Notes in Computational Science and Engineering, 2013, 91, 503-510.	0.1	3
32	His Bundle Pacing but not Left Bundle Pacing Corrects Septal Flash in Left Bundle Branch Block Patients. , 0, , .		2