# 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 | 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 |
| 2 | The openCARP simulation environment for cardiac electrophysiology. Computer Methods and Programs in Biomedicine, 2021, 208, 106223. | 2.6 | 84 |
| 3 | 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 |
| 4 | 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 |
| 5 | A publicly available virtual cohort of four-chamber heart meshes for cardiac electro-mechanics simulations. PLoS ONE, 2020, 15, e0235145. | 1.1 | 59 |
| 6 | 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 |
| 7 | Image-Based Personalization of Cardiac Anatomy for Coupled Electromechanical Modeling. Annals of Biomedical Engineering, 2016, 44, 58-70. | 1.3 | 48 |
| 8 | Linking statistical shape models and simulated function in the healthy adult human heart. PLoS Computational Biology, 2021, 17, e1008851. | 1.5 | 41 |
| 9 | Patient-specific modeling of left ventricular electromechanics as a driver for haemodynamic analysis. Europace, 2016, 18, iv121-iv129. | 0.7 | 32 |
| 10 | 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 |
| 11 | Towards a Computational Framework for Modeling the Impact of Aortic Coarctations Upon Left Ventricular Load. Frontiers in Physiology, 2018, 9, 538. | 1.3 | 24 |
| 12 | 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 |
| 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 | Phosphorylation by the stress-activated MAPK Slt2 down-regulates the yeast TOR complex 2. Genes and Development, 2018, 32, 1576-1590. | 2.7 | 20 |
| 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 | 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 |
| 18 | Versatile stabilized finite element formulations for nearly and fully incompressible solid mechanics. Computational Mechanics, 2020, 65, 193-215. | 2.2 | 17 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | 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 |
| 20 | 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 |
| 21 | 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 |
| 22 | Tracking yeast pheromone receptor Ste2 endocytosis using fluorogen-activating protein tagging. Molecular Biology of the Cell, 2018, 29, 2720-2736. | 0.9 | 10 |
| 23 | Impact of Intraventricular Septal Fiber Orientation on Cardiac Electromechanical Function. American Journal of Physiology - Heart and Circulatory Physiology, 2022, , . | 1.5 | 5 |
| 24 | 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 |
| 25 | 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 |
| 26 | FEniCS mechanics: A package for continuum mechanics simulations. SoftwareX, 2019, 9, 107-111. | 1.2 | 3 |
| 27 | The Effect of Ventricular Myofibre Orientation on Atrial Dynamics. Lecture Notes in Computer Science, 2021, , 659-670. | 1.0 | 3 |
| 28 | FETI Methods for the Simulation of Biological Tissues. Lecture Notes in Computational Science and Engineering, 2013, 91, 503-510. | 0.1 | 3 |
| 29 | His Bundle Pacing but not Left Bundle Pacing Corrects Septal Flash in Left Bundle Branch Block Patients. , 0, , . | | 2 |
| 30 | Computational Challenges in Building Multi-Scale and Multi-Physics Models of Cardiac Electro-Mechanics. Biomedizinische Technik, 2013, 58 Suppl 1, . | 0.9 | 1 |
| 31 | Simulating the Mechanics of Myocardial Tissue Using Strongly Scalable Parallel Algorithms. Biomedizinische Technik, 2013, 58 Suppl 1, . | 0.9 | 0 |
| 32 | Multiscale-Multiphysics Models of Ventricular Electromechanics - Computational Modeling, Parametrization and Experimental Validation. IFMBE Proceedings, 2014, , 1864-1867. | 0.2 | 0 |