

Steven Niederer

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

221
papers

4,366
citations

35
h-index

56
g-index

256
ext. papers

5,694
ext. citations

4.3
avg, IF

5.81
L-index

#	Paper	IF	Citations
221	Verification of cardiac tissue electrophysiology simulators using an N-version benchmark. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011 , 369, 4331-51	3	177
220	A quantitative analysis of cardiac myocyte relaxation: a simulation study. <i>Biophysical Journal</i> , 2006 , 90, 1697-722	2.9	150
219	The Digital Twin to enable the vision of precision cardiology. <i>European Heart Journal</i> , 2020 , 41, 4556-4564	4.5	136
218	Coupling multi-physics models to cardiac mechanics. <i>Progress in Biophysics and Molecular Biology</i> , 2011 , 104, 77-88	4.7	130
217	Cardiac cell modelling: observations from the heart of the cardiac physiome project. <i>Progress in Biophysics and Molecular Biology</i> , 2011 , 104, 2-21	4.7	122
216	Computational models in cardiology. <i>Nature Reviews Cardiology</i> , 2019 , 16, 100-111	14.8	121
215	Length-dependent tension in the failing heart and the efficacy of cardiac resynchronization therapy. <i>Cardiovascular Research</i> , 2011 , 89, 336-43	9.9	114
214	A meta-analysis of cardiac electrophysiology computational models. <i>Experimental Physiology</i> , 2009 , 94, 486-95	2.4	92
213	A mathematical model of the slow force response to stretch in rat ventricular myocytes. <i>Biophysical Journal</i> , 2007 , 92, 4030-44	2.9	85
212	Simulating human cardiac electrophysiology on clinical time-scales. <i>Frontiers in Physiology</i> , 2011 , 2, 14	4.6	82
211	An improved numerical method for strong coupling of excitation and contraction models in the heart. <i>Progress in Biophysics and Molecular Biology</i> , 2008 , 96, 90-111	4.7	80
210	Anatomically accurate high resolution modeling of human whole heart electromechanics: A strongly scalable algebraic multigrid solver method for nonlinear deformation. <i>Journal of Computational Physics</i> , 2016 , 305, 622-646	4.1	78
209	An accurate, fast and robust method to generate patient-specific cubic Hermite meshes. <i>Medical Image Analysis</i> , 2011 , 15, 801-13	15.4	78
208	The estimation of patient-specific cardiac diastolic functions from clinical measurements. <i>Medical Image Analysis</i> , 2013 , 17, 133-46	15.4	76
207	Factors influencing left ventricular outflow tract obstruction following a mitral valve-in-valve or valve-in-ring procedure, part 1. <i>Catheterization and Cardiovascular Interventions</i> , 2015 , 86, 747-60	2.7	68
206	Biophysical modeling to simulate the response to multisite left ventricular stimulation using a quadripolar pacing lead. <i>PACE - Pacing and Clinical Electrophysiology</i> , 2012 , 35, 204-14	1.6	68
205	A comparison of left ventricular endocardial, multisite, and multipolar epicardial cardiac resynchronization: an acute haemodynamic and electroanatomical study. <i>Europace</i> , 2014 , 16, 873-9	3.9	64

204	An analysis of deformation-dependent electromechanical coupling in the mouse heart. <i>Journal of Physiology</i> , 2012 , 590, 4553-69	3.9	64
203	Efficient computation of electrograms and ECGs in human whole heart simulations using a reaction-eikonal model. <i>Journal of Computational Physics</i> , 2017 , 346, 191-211	4.1	61
202	Verification of cardiac mechanics software: benchmark problems and solutions for testing active and passive material behaviour. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015 , 471, 20150641	2.4	61
201	A model of cardiac contraction based on novel measurements of tension development in human cardiomyocytes. <i>Journal of Molecular and Cellular Cardiology</i> , 2017 , 106, 68-83	5.8	55
200	The role of the Frank-Starling law in the transduction of cellular work to whole organ pump function: a computational modeling analysis. <i>PLoS Computational Biology</i> , 2009 , 5, e1000371	5	49
199	Efficient computational methods for strongly coupled cardiac electromechanics. <i>IEEE Transactions on Biomedical Engineering</i> , 2012 , 59, 1219-28	5	48
198	The role of myocardial wall thickness in atrial arrhythmogenesis. <i>Europace</i> , 2016 , 18, 1758-1772	3.9	45
197	Coupling contraction, excitation, ventricular and coronary blood flow across scale and physics in the heart. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2009 , 367, 2311-31	3	42
196	Computational biology of cardiac myocytes: proposed standards for the physiome. <i>Journal of Experimental Biology</i> , 2007 , 210, 1576-83	3	42
195	Image-Based Personalization of Cardiac Anatomy for Coupled Electromechanical Modeling. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 58-70	4.7	41
194	Three-dimensional atrial wall thickness maps to inform catheter ablation procedures for atrial fibrillation. <i>Europace</i> , 2016 , 18, 376-83	3.9	40
193	Modeling the Electrophysiological Properties of the Infarct Border Zone. <i>Frontiers in Physiology</i> , 2018 , 9, 356	4.6	39
192	An automatic service for the personalization of ventricular cardiac meshes. <i>Journal of the Royal Society Interface</i> , 2014 , 11, 20131023	4.1	39
191	High-throughput functional curation of cellular electrophysiology models. <i>Progress in Biophysics and Molecular Biology</i> , 2011 , 107, 11-20	4.7	39
190	A prospective evaluation of cardiovascular magnetic resonance measures of dyssynchrony in the prediction of response to cardiac resynchronization therapy. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2014 , 16, 58	6.9	38
189	Images as drivers of progress in cardiac computational modelling. <i>Progress in Biophysics and Molecular Biology</i> , 2014 , 115, 198-212	4.7	37
188	Beneficial Effect on Cardiac Resynchronization From Left Ventricular Endocardial Pacing Is Mediated by Early Access to High Conduction Velocity Tissue: Electrophysiological Simulation Study. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2015 , 8, 1164-72	6.4	36
187	Sodium accumulation in SERCA knockout-induced heart failure. <i>Biophysical Journal</i> , 2012 , 102, 2039-48	2.9	36

186	Using Physiome standards to couple cellular functions for rat cardiac excitation-contraction. <i>Experimental Physiology</i> , 2008 , 93, 919-29	2.4	35
185	Mechanistic insights into the benefits of multisite pacing in cardiac resynchronization therapy: The importance of electrical substrate and rate of left ventricular activation. <i>Heart Rhythm</i> , 2015 , 12, 2449-57	6.7	32
184	Hypokalaemia induces Ca ²⁺ overload and Ca ²⁺ waves in ventricular myocytes by reducing Na ⁺ ,K ⁺ -ATPase activity. <i>Journal of Physiology</i> , 2015 , 593, 1509-21	3.9	32
183	Optimized Left Ventricular Endocardial Stimulation Is Superior to Optimized Epicardial Stimulation in Ischemic Patients With Poor Response to Cardiac Resynchronization Therapy: A Combined Magnetic Resonance Imaging, Electroanatomic Contact Mapping, and Hemodynamic Study to Target Endocardial Lead Placement. <i>JACC: Clinical Electrophysiology</i> , 2016 , 2, 799-809	4.6	32
182	Comprehensive use of cardiac computed tomography to guide left ventricular lead placement in cardiac resynchronization therapy. <i>Heart Rhythm</i> , 2017 , 14, 1364-1372	6.7	30
181	Universal atrial coordinates applied to visualisation, registration and construction of patient specific meshes. <i>Medical Image Analysis</i> , 2019 , 55, 65-75	15.4	30
180	Scaling digital twins from the artisanal to the industrial. <i>Nature Computational Science</i> , 2021 , 1, 313-320		30
179	Personalized computational modeling of left atrial geometry and transmural myofiber architecture. <i>Medical Image Analysis</i> , 2018 , 47, 180-190	15.4	29
178	Computational Modeling for Cardiac Resynchronization Therapy. <i>Journal of Cardiovascular Translational Research</i> , 2018 , 11, 92-108	3.3	27
177	The relative role of patient physiology and device optimisation in cardiac resynchronisation therapy: A computational modelling study. <i>Journal of Molecular and Cellular Cardiology</i> , 2016 , 96, 93-100	5.8	27
176	Inter-model consistency and complementarity: learning from ex-vivo imaging and electrophysiological data towards an integrated understanding of cardiac physiology. <i>Progress in Biophysics and Molecular Biology</i> , 2011 , 107, 122-33	4.7	27
175	Rem-GTPase regulates cardiac myocyte L-type calcium current. <i>Channels</i> , 2012 , 6, 166-73	3	27
174	Restitution slope is principally determined by steady-state action potential duration. <i>Cardiovascular Research</i> , 2017 , 113, 817-828	9.9	26
173	A work flow to build and validate patient specific left atrium electrophysiology models from catheter measurements. <i>Medical Image Analysis</i> , 2018 , 47, 153-163	15.4	26
172	Simulating ventricular systolic motion in a four-chamber heart model with spatially varying robin boundary conditions to model the effect of the pericardium. <i>Journal of Biomechanics</i> , 2020 , 101, 109645	2.9	25
171	Transcatheter mitral valve replacement in mitral annulus calcification - "The art of computer simulation". <i>Journal of Cardiovascular Computed Tomography</i> , 2018 , 12, 153-157	2.8	25
170	A publicly available virtual cohort of four-chamber heart meshes for cardiac electro-mechanics simulations. <i>PLoS ONE</i> , 2020 , 15, e0235145	3.7	24
169	Calcium dynamics in the ventricular myocytes of SERCA2 knockout mice: A modeling study. <i>Biophysical Journal</i> , 2011 , 100, 322-31	2.9	24

168	The calcium-frequency response in the rat ventricular myocyte: an experimental and modelling study. <i>Journal of Physiology</i> , 2016 , 594, 4193-224	3.9	24
167	Pacing in proximity to scar during cardiac resynchronization therapy increases local dispersion of repolarization and susceptibility to ventricular arrhythmogenesis. <i>Heart Rhythm</i> , 2019 , 16, 1475-1483	6.7	23
166	Measuring and modeling chloride-hydroxyl exchange in the Guinea-pig ventricular myocyte. <i>Biophysical Journal</i> , 2008 , 94, 2385-403	2.9	23
165	Creation and application of virtual patient cohorts of heart models. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190558	3	23
164	A technique for measuring anisotropy in atrial conduction to estimate conduction velocity and atrial fibre direction. <i>Computers in Biology and Medicine</i> , 2019 , 104, 278-290	7	23
163	Mechanism of doxorubicin cardiotoxicity evaluated by integrating multiple molecular effects into a biophysical model. <i>British Journal of Pharmacology</i> , 2018 , 175, 763-781	8.6	23
162	Unraveling the Underlying Arrhythmia Mechanism in Persistent Atrial Fibrillation: Results From the STARLIGHT Study. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2018 , 11, e005897	6.4	23
161	A Spatially Detailed Model of Isometric Contraction Based on Competitive Binding of Troponin I Explains Cooperative Interactions between Tropomyosin and Crossbridges. <i>PLoS Computational Biology</i> , 2015 , 11, e1004376	5	22
160	Patient-specific simulations predict efficacy of ablation of interatrial connections for treatment of persistent atrial fibrillation. <i>Europace</i> , 2018 , 20, iii55-iii68	3.9	22
159	At the heart of computational modelling. <i>Journal of Physiology</i> , 2012 , 590, 1331-8	3.9	21
158	Personalized Models of Human Atrial Electrophysiology Derived From Endocardial Electrograms. <i>IEEE Transactions on Biomedical Engineering</i> , 2017 , 64, 735-742	5	20
157	Bringing in vitro analysis closer to in vivo: Studying doxorubicin toxicity and associated mechanisms in 3D human microtissues with PBPK-based dose modelling. <i>Toxicology Letters</i> , 2018 , 294, 184-192	4.4	20
156	Biophysical Modeling to Determine the Optimization of Left Ventricular Pacing Site and AV/VV Delays in the Acute and Chronic Phase of Cardiac Resynchronization Therapy. <i>Journal of Cardiovascular Electrophysiology</i> , 2017 , 28, 208-215	2.7	18
155	His-bundle and left bundle pacing with optimized atrioventricular delay achieve superior electrical synchrony over endocardial and epicardial pacing in left bundle branch block patients. <i>Heart Rhythm</i> , 2020 , 17, 1922-1929	6.7	18
154	A Biophysical Systems Approach to Identifying the Pathways of Acute and Chronic Doxorubicin Mitochondrial Cardiotoxicity. <i>PLoS Computational Biology</i> , 2016 , 12, e1005214	5	18
153	Analyses of the redistribution of work following cardiac resynchronisation therapy in a patient specific model. <i>PLoS ONE</i> , 2012 , 7, e43504	3.7	18
152	Hypokalemia Promotes Arrhythmia by Distinct Mechanisms in Atrial and Ventricular Myocytes. <i>Circulation Research</i> , 2020 , 126, 889-906	15.7	17
151	Influence of atrial contraction dynamics on cardiac function. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018 , 34, e2931	2.6	17

150	Improved identifiability of myocardial material parameters by an energy-based cost function. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017 , 16, 971-988	3.8	17
149	Computational modeling of Takotsubo cardiomyopathy: effect of spatially varying β -adrenergic stimulation in the rat left ventricle. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2014 , 307, H1487-96	5.2	17
148	Energetic consequences of mechanical loads. <i>Progress in Biophysics and Molecular Biology</i> , 2008 , 97, 348-466	4.6	17
147	Comparison of Left Atrial Ablation Techniques That Target the Anatomical, Structural, and Electrical Substrates of Atrial Fibrillation. <i>Frontiers in Physiology</i> , 2020 , 11, 1145	4.6	17
146	A model-based assay design to reproduce in vivo patterns of acute drug-induced toxicity. <i>Archives of Toxicology</i> , 2018 , 92, 553-555	5.8	17
145	Left ventricular outflow obstruction predicts increase in systolic pressure gradients and blood residence time after transcatheter mitral valve replacement. <i>Scientific Reports</i> , 2018 , 8, 15540	4.9	17
144	Beta-adrenergic stimulation maintains cardiac function in Serca2 knockout mice. <i>Biophysical Journal</i> , 2013 , 104, 1349-56	2.9	16
143	A short history of the development of mathematical models of cardiac mechanics. <i>Journal of Molecular and Cellular Cardiology</i> , 2019 , 127, 11-19	5.8	16
142	Constructing a Human Atrial Fibre Atlas. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 233-250	4.7	16
141	Analysis of a coupled fluid-structure interaction model of the left atrium and mitral valve. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2019 , 35, e3254	2.6	15
140	Share and enjoy: anatomical models database--generating and sharing cardiovascular model data using web services. <i>Medical and Biological Engineering and Computing</i> , 2013 , 51, 1181-90	3.1	15
139	Quality metrics for high order meshes: analysis of the mechanical simulation of the heart beat. <i>IEEE Transactions on Medical Imaging</i> , 2013 , 32, 130-8	11.7	15
138	Regulation of ion gradients across myocardial ischemic border zones: a biophysical modelling analysis. <i>PLoS ONE</i> , 2013 , 8, e60323	3.7	15
137	Genotype-Phenotype Map Characteristics of an In silico Heart Cell. <i>Frontiers in Physiology</i> , 2011 , 2, 106	4.6	15
136	Modelling and measuring electromechanical coupling in the rat heart. <i>Experimental Physiology</i> , 2009 , 94, 529-40	2.4	15
135	Quantifying atrial anatomy uncertainty from clinical data and its impact on electro-physiology simulation predictions. <i>Medical Image Analysis</i> , 2020 , 61, 101626	15.4	15
134	Intra-Atrial Conduction Delay Revealed by Multisite Incremental Atrial Pacing is an Independent Marker of Remodeling in Human Atrial Fibrillation. <i>JACC: Clinical Electrophysiology</i> , 2017 , 3, 1006-1017	4.6	14
133	Completely Leadless Cardiac Resynchronization Defibrillator System. <i>JACC: Clinical Electrophysiology</i> , 2020 , 6, 588-589	4.6	14

132	Gaussian process manifold interpolation for probabilistic atrial activation maps and uncertain conduction velocity. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190345	3	14
131	Normoxic cells remotely regulate the acid-base balance of cells at the hypoxic core of connexin-coupled tumor growths. <i>FASEB Journal</i> , 2018 , 32, 83-96	0.9	14
130	Reproducibility of Atrial Fibrosis Assessment Using CMR Imaging and an Open Source Platform. <i>JACC: Cardiovascular Imaging</i> , 2019 , 12, 2076-2077	8.4	14
129	The effect of activation rate on left atrial bipolar voltage in patients with paroxysmal atrial fibrillation. <i>Journal of Cardiovascular Electrophysiology</i> , 2017 , 28, 1028-1036	2.7	14
128	An Automatic Data Assimilation Framework for Patient-Specific Myocardial Mechanical Parameter Estimation. <i>Lecture Notes in Computer Science</i> , 2011 , 392-400	0.9	14
127	Predicting left ventricular contractile function via Gaussian process emulation in aortic-banded rats. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190334	2	14
126	A two-variable model robust to pacemaker behaviour for the dynamics of the cardiac action potential. <i>Mathematical Biosciences</i> , 2016 , 281, 46-54	3.9	14
125	Regional diastolic dysfunction in post-infarction heart failure: role of local mechanical load and SERCA expression. <i>Cardiovascular Research</i> , 2019 , 115, 752-764	9.9	14
124	Mean entropy predicts implantable cardioverter-defibrillator therapy using cardiac magnetic resonance texture analysis of scar heterogeneity. <i>Heart Rhythm</i> , 2019 , 16, 1242-1250	6.7	13
123	Personalization of cubic Hermite meshes for efficient biomechanical simulations. <i>Lecture Notes in Computer Science</i> , 2010 , 13, 380-7	0.9	13
122	The impact of wall thickness and curvature on wall stress in patient-specific electromechanical models of the left atrium. <i>Biomechanics and Modeling in Mechanobiology</i> , 2020 , 19, 1015-1034	3.8	13
121	Linking statistical shape models and simulated function in the healthy adult human heart. <i>PLoS Computational Biology</i> , 2021 , 17, e1008851	5	13
120	Probabilistic Interpolation of Uncertain Local Activation Times on Human Atrial Manifolds. <i>IEEE Transactions on Biomedical Engineering</i> , 2020 , 67, 99-109	5	13
119	Improving the stability of cardiac mechanical simulations. <i>IEEE Transactions on Biomedical Engineering</i> , 2015 , 62, 939-947	5	12
118	Using physiologically based models for clinical translation: predictive modelling, data interpretation or something in-between?. <i>Journal of Physiology</i> , 2016 , 594, 6849-6863	3.9	12
117	Analytical approaches for myocardial fibrillation signals. <i>Computers in Biology and Medicine</i> , 2018 , 102, 315-326	7	12
116	A comprehensive multi-index cardiac magnetic resonance-guided assessment of atrial fibrillation substrate prior to ablation: Prediction of long-term outcomes. <i>Journal of Cardiovascular Electrophysiology</i> , 2019 , 30, 1894-1903	2.7	12
115	CemrgApp: An interactive medical imaging application with image processing, computer vision, and machine learning toolkits for cardiovascular research. <i>SoftwareX</i> , 2020 , 12, 100570	2.7	12

114	Left ventricular endocardial pacing is less arrhythmogenic than conventional epicardial pacing when pacing in proximity to scar. <i>Heart Rhythm</i> , 2020 , 17, 1262-1270	6.7	11
113	Emerging role of cardiac computed tomography in heart failure. <i>ESC Heart Failure</i> , 2019 , 6, 909-920	3.7	11
112	A computational pipeline for quantification of mouse myocardial stiffness parameters. <i>Computers in Biology and Medicine</i> , 2014 , 53, 65-75	7	11
111	Delayed trans-septal activation results in comparable hemodynamic effect of left ventricular and biventricular endocardial pacing: insights from electroanatomical mapping. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2014 , 7, 251-8	6.4	11
110	Left atrial effective conducting size predicts atrial fibrillation vulnerability in persistent but not paroxysmal atrial fibrillation. <i>Journal of Cardiovascular Electrophysiology</i> , 2019 , 30, 1416-1427	2.7	10
109	Quantifying inter-species differences in contractile function through biophysical modelling. <i>Journal of Physiology</i> , 2015 , 593, 1083-111	3.9	10
108	Current concepts relating coronary flow, myocardial perfusion and metabolism in left bundle branch block and cardiac resynchronisation therapy. <i>International Journal of Cardiology</i> , 2015 , 181, 65-72 ^{3,2}		10
107	Species-dependent adaptation of the cardiac Na ⁺ /K ⁺ pump kinetics to the intracellular Na ⁺ concentration. <i>Journal of Physiology</i> , 2014 , 592, 5355-71	3.9	10
106	Standardised Framework for Quantitative Analysis of Fibrillation Dynamics. <i>Scientific Reports</i> , 2019 , 9, 16671	4.9	10
105	Machine Learned Cellular Phenotypes in Cardiomyopathy Predict Sudden Death. <i>Circulation Research</i> , 2021 , 128, 172-184	15.7	10
104	Determinants of new wavefront locations in cholinergic atrial fibrillation. <i>Europace</i> , 2018 , 20, iii3-iii15	3.9	10
103	Automated quantification of mitral valve geometry on multi-slice computed tomography in patients with dilated cardiomyopathy - Implications for transcatheter mitral valve replacement. <i>Journal of Cardiovascular Computed Tomography</i> , 2018 , 12, 329-337	2.8	10
102	Combined computed tomographic perfusion and mechanics with predicted activation pattern can successfully guide implantation of a wireless endocardial pacing system. <i>Europace</i> , 2020 , 22, 298	3.9	9
101	Generation of a cohort of whole-torso cardiac models for assessing the utility of a novel computed shock vector efficiency metric for ICD optimisation. <i>Computers in Biology and Medicine</i> , 2019 , 112, 103368	7	9
100	Integrating multi-scale data to create a virtual physiological mouse heart. <i>Interface Focus</i> , 2013 , 3, 20120076	3.7	9
99	A simulated single ventilator/dual patient ventilation strategy for acute respiratory distress syndrome during the COVID-19 pandemic. <i>Royal Society Open Science</i> , 2020 , 7, 200585	3.3	9
98	Compensatory and decompensatory alterations in cardiomyocyte Ca dynamics in hearts with diastolic dysfunction following aortic banding. <i>Journal of Physiology</i> , 2017 , 595, 3867-3889	3.9	8
97	Factors determining the magnitude of the pre-ejection leftward septal motion in left bundle branch block. <i>Europace</i> , 2016 , 18, 1905-1913	3.9	8

96	A computational model of cardiac electromechanics. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2006 , 2006, 5311-4		8
95	Leadless left ventricular endocardial pacing in nonresponders to conventional cardiac resynchronization therapy. <i>PACE - Pacing and Clinical Electrophysiology</i> , 2020 , 43, 966-973	1.6	7
94	Local activation time sampling density for atrial tachycardia contact mapping: how much is enough?. <i>Europace</i> , 2018 , 20, e11-e20	3.9	7
93	Improved co-registration of ex-vivo and in-vivo cardiovascular magnetic resonance images using heart-specific flexible 3D printed acrylic scaffold combined with non-rigid registration. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2019 , 21, 62	6.9	7
92	Vagal modulation of dispersion of repolarisation in the rabbit heart. <i>Journal of Molecular and Cellular Cardiology</i> , 2015 , 85, 89-101	5.8	7
91	The Importance of Model Parameters and Boundary Conditions in Whole Organ Models of Cardiac Contraction. <i>Lecture Notes in Computer Science</i> , 2009 , 348-356	0.9	7
90	Network integration and modelling of dynamic drug responses at multi-omics levels. <i>Communications Biology</i> , 2020 , 3, 573	6.7	7
89	Electrocardiographic imaging for cardiac arrhythmias and resynchronization therapy. <i>Europace</i> , 2020 ,	3.9	7
88	The fickle heart: uncertainty quantification in cardiac and cardiovascular modelling and simulation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20200119	1.9	7
87	Improvement of Right Ventricular Hemodynamics with Left Ventricular Endocardial Pacing during Cardiac Resynchronization Therapy. <i>PACE - Pacing and Clinical Electrophysiology</i> , 2016 , 39, 531-41	1.6	7
86	Cardiac CT assessment of tissue thickness at the ostium of the left atrial appendage predicts acute success of radiofrequency ablation. <i>PACE - Pacing and Clinical Electrophysiology</i> , 2017 , 40, 1218-1226	1.6	6
85	Sex-Dependent QRS Guidelines for Cardiac Resynchronization Therapy Using Computer Model Predictions. <i>Biophysical Journal</i> , 2019 , 117, 2375-2381	2.9	6
84	Non-invasive electrophysiological assessment of the optimal configuration of quadripolar lead vectors on ventricular activation times. <i>Journal of Electrocardiology</i> , 2018 , 51, 714-719	1.4	6
83	Fully Automatic Atrial Fibrosis Assessment Using a Multilabel Convolutional Neural Network. <i>Circulation: Cardiovascular Imaging</i> , 2020 , 13, e011512	3.9	5
82	Generic Conduction Parameters for Predicting Activation Waves in Customised Cardiac Electrophysiology Models. <i>Lecture Notes in Computer Science</i> , 2010 , 252-260	0.9	5
81	Electrocardiographic imaging of His bundle, left bundle branch, epicardial, and endocardial left ventricular pacing to achieve cardiac resynchronization therapy. <i>HeartRhythm Case Reports</i> , 2020 , 6, 460-463	1.6	5
80	Balance of Active, Passive, and Anatomical Cardiac Properties in Doxorubicin-Induced Heart Failure. <i>Biophysical Journal</i> , 2019 , 117, 2337-2348	2.9	4
79	Evaluation of a real-time magnetic resonance imaging-guided electrophysiology system for structural and electrophysiological ventricular tachycardia substrate assessment. <i>Europace</i> , 2019 , 21, 1432-1441	3.9	4

78	Pulmonary vein encirclement using an Ablation Index-guided point-by-point workflow: cardiovascular magnetic resonance assessment of left atrial scar formation. <i>Europace</i> , 2019 , 21, 1817-1823	3.9	4
77	Insight into model mechanisms through automatic parameter fitting: a new methodological framework for model development. <i>BMC Systems Biology</i> , 2014 , 8, 59	3.5	4
76	A comparison of the different features of quadripolar left ventricular pacing leads to deliver cardiac resynchronization therapy. <i>Expert Review of Medical Devices</i> , 2017 , 14, 697-706	3.5	4
75	Coupling contraction, excitation, ventricular and coronary blood flow across scale and physics in the heart. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2009 , 367, 3331-3331	3	4
74	Using machine learning to identify local cellular properties that support re-entrant activation in patient-specific models of atrial fibrillation. <i>Europace</i> , 2021 , 23, i12-i20	3.9	4
73	Feasibility of intraprocedural integration of cardiac CT to guide left ventricular lead implantation for CRT upgrades. <i>Journal of Cardiovascular Electrophysiology</i> , 2021 , 32, 802-812	2.7	4
72	Changes in contractility determine coronary haemodynamics in dyssynchronous left ventricular heart failure, not vice versa. <i>IJC Heart and Vasculature</i> , 2018 , 19, 8-13	2.4	3
71	Using cardiac ionic cell models to interpret clinical data. <i>WIREs Mechanisms of Disease</i> , 2021 , 13, e1508	0.3	3
70	Feasibility of the Estimation of Myocardial Stiffness with Reduced 2D Deformation Data. <i>Lecture Notes in Computer Science</i> , 2017 , 357-368	0.9	3
69	Automated Left Ventricle Ischemic Scar Detection in CT Using Deep Neural Networks. <i>Frontiers in Cardiovascular Medicine</i> , 2021 , 8, 655252	5.4	3
68	Leadless left ventricular endocardial pacing for CRT upgrades in previously failed and high-risk patients in comparison with coronary sinus CRT upgrades. <i>Europace</i> , 2021 , 23, 1577-1585	3.9	3
67	Noninvasive electrocardiographic assessment of ventricular activation and remodeling response to cardiac resynchronization therapy. <i>Heart Rhythm O2</i> , 2021 , 2, 12-18	1.5	3
66	OpenEP: A Cross-Platform Electroanatomic Mapping Data Format and Analysis Platform for Electrophysiology Research. <i>Frontiers in Physiology</i> , 2021 , 12, 646023	4.6	3
65	A multicenter prospective randomized controlled trial of cardiac resynchronization therapy guided by invasive dP/dt. <i>Heart Rhythm O2</i> , 2021 , 2, 19-27	1.5	3
64	Multipoint pacing for cardiac resynchronisation therapy in patients with heart failure: A systematic review and meta-analysis. <i>Journal of Cardiovascular Electrophysiology</i> , 2021 , 32, 2577-2589	2.7	3
63	Comparison of Echocardiographic and Electrocardiographic Mapping for Cardiac Resynchronisation Therapy Optimisation. <i>Cardiology Research and Practice</i> , 2019 , 2019, 4351693	1.9	2
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