

Steven Niederer

List of Publications by Year in Descending Order

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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	Effect of scar and pacing location on repolarization in a porcine myocardial infarction model.. <i>Heart Rhythm O2</i> , 2022 , 3, 186-195	1.5	
220	Predicting Atrial Fibrillation Recurrence by Combining Population Data and Virtual Cohorts of Patient-Specific Left Atrial Models.. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2022 , CIRCEP1210102531	6.4	1
219	Atrial CARDiac Magnetic resonance imaging in patients with embolic stroke of unknown source without documented Atrial Fibrillation (CARM-AF): Study design and clinical protocol.. <i>Heart Rhythm O2</i> , 2022 , 3, 196-203	1.5	
218	Increased atrial effectiveness of flecainide conferred by altered biophysical properties of sodium channels.. <i>Journal of Molecular and Cellular Cardiology</i> , 2022 , 166, 23-35	5.8	0
217	Reply to Usefulness of Multisite Ventricular Pacing in Nonresponders to Cardiac Resynchronization Therapy.. <i>American Journal of Cardiology</i> , 2022 ,	3	
216	A Quantitative Systems Pharmacology Perspective on the Importance of Parameter Identifiability.. <i>Bulletin of Mathematical Biology</i> , 2022 , 84, 39	2.1	0
215	Detection of focal source and arrhythmogenic substrate from body surface potentials to guide atrial fibrillation ablation.. <i>PLoS Computational Biology</i> , 2022 , 18, e1009893	5	0
214	Modelling the interaction between stem cells derived cardiomyocytes patches and host myocardium to aid non-arrhythmic engineered heart tissue design.. <i>PLoS Computational Biology</i> , 2022 , 18, e1010030	5	0
213	Dispersion of repolarization increases with cardiac resynchronization therapy and is associated with left ventricular reverse remodeling.. <i>Journal of Electrocardiology</i> , 2022 , 72, 120-127	1.4	0
212	An automated near-real time computational method for induction and treatment of scar-related ventricular tachycardias. <i>Medical Image Analysis</i> , 2022 , 102483	15.4	
211	Using cardiac ionic cell models to interpret clinical data. <i>WIREs Mechanisms of Disease</i> , 2021 , 13, e1508	0.3	3
210	Impact of anatomical reverse remodelling in the design of optimal quadripolar pacing leads: A computational study. <i>Computers in Biology and Medicine</i> , 2021 , 140, 105073	7	1
209	On the incorporation of obstacles in a fluid flow problem using a Navier-Stokes-Brinkman penalization approach. <i>Journal of Computational Science</i> , 2021 , 57, 101506	3.4	1
208	"Is multipoint pacing superior to optimized single-point pacing?"-Authors Reply. <i>Journal of Cardiovascular Electrophysiology</i> , 2021 , 32, 3280-3281	2.7	
207	Late Gadolinium Enhancement Cardiovascular Magnetic Resonance Assessment of Substrate for Ventricular Tachycardia With Hemodynamic Compromise. <i>Frontiers in Cardiovascular Medicine</i> , 2021 , 8, 744779	5.4	2
206	Endocardial left ventricular pacing. <i>Herz</i> , 2021 , 46, 526-532	2.6	1
205	Assessing long-term survival and hospitalization following transvenous lead extraction in patients with cardiac resynchronization therapy devices: A propensity score-matched analysis.. <i>Heart Rhythm O2</i> , 2021 , 2, 597-606	1.5	

204	Hyperparameter optimisation and validation of registration algorithms for measuring regional ventricular deformation using retrospective gated computed tomography images. <i>Scientific Reports</i> , 2021 , 11, 5718	4.9	2
203	Leadless Left Ventricular Endocardial Pacing and Left Bundle Branch Area Pacing for Cardiac Resynchronisation Therapy. <i>Arrhythmia and Electrophysiology Review</i> , 2021 , 10, 45-50	3.2	0
202	Linking statistical shape models and simulated function in the healthy adult human heart. <i>PLoS Computational Biology</i> , 2021 , 17, e1008851	5	13
201	Computational modeling identifies embolic stroke of undetermined source patients with potential arrhythmic substrate. <i>ELife</i> , 2021 , 10,	8.9	2
200	Scaling digital twins from the artisanal to the industrial. <i>Nature Computational Science</i> , 2021 , 1, 313-320		30
199	Clinical effectiveness of a dedicated cardiac resynchronization therapy pre-assessment clinic incorporating cardiac magnetic resonance imaging and cardiopulmonary exercise testing on patient selection and outcomes. <i>IJC Heart and Vasculature</i> , 2021 , 34, 100800	2.4	0
198	Automated Left Ventricle Ischemic Scar Detection in CT Using Deep Neural Networks. <i>Frontiers in Cardiovascular Medicine</i> , 2021 , 8, 655252	5.4	3
197	Bayesian Calibration of Electrophysiology Models Using Restitution Curve Emulators. <i>Frontiers in Physiology</i> , 2021 , 12, 693015	4.6	1
196	Constructing a Human Atrial Fibre Atlas. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 233-250	4.7	16
195	Machine Learned Cellular Phenotypes in Cardiomyopathy Predict Sudden Death. <i>Circulation Research</i> , 2021 , 128, 172-184	15.7	10
194	The Effect of Ventricular Myofibre Orientation on Atrial Dynamics. <i>Lecture Notes in Computer Science</i> , 2021 , 659-670	0.9	1
193	Optimisation of Left Atrial Feature Tracking Using Retrospective Gated Computed Tomography Images. <i>Lecture Notes in Computer Science</i> , 2021 , 71-83	0.9	
192	Building Models of Patient-Specific Anatomy and Scar Morphology from Clinical MRI Data 2021 , 453-461		
191	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
190	Whole Heart Anatomical Refinement from CCTA Using Extrapolation and Parcellation. <i>Lecture Notes in Computer Science</i> , 2021 , 63-70	0.9	1
189	Impact of Image Resolution and Resampling on Motion Tracking of the Left Chambers from Cardiac Scans. <i>Lecture Notes in Computer Science</i> , 2021 , 12-21	0.9	
188	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
187	Using the Universal Atrial Coordinate System for MRI and Electroanatomic Data Registration in Patient-Specific Left Atrial Model Construction and Simulation. <i>Lecture Notes in Computer Science</i> , 2021 , 629-638	0.9	0

186	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
185	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
184	Standardised computed tomographic assessment of left atrial morphology and tissue thickness in humans. <i>IJC Heart and Vasculature</i> , 2021 , 32, 100694	2.4	2
183	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
182	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
181	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
180	The physiological effects of cardiac resynchronization therapy on aortic and pulmonary flow and dynamic and static components of systemic impedance. <i>Heart Rhythm O2</i> , 2021 , 2, 365-373	1.5	
179	Comparison of electrical dyssynchrony parameters between electrocardiographic imaging and a simulated ECG belt. <i>Journal of Electrocardiology</i> , 2021 , 68, 117-123	1.4	1
178	Time-Averaged Wavefront Analysis Demonstrates Preferential Pathways of Atrial Fibrillation, Predicting Pulmonary Vein Isolation Acute Response. <i>Frontiers in Physiology</i> , 2021 , 12, 707189	4.6	0
177	Technical feasibility of leadless left bundle branch area pacing for cardiac resynchronization: a case series. <i>European Heart Journal - Case Reports</i> , 2021 , 5, ytab379	0.9	2
176	Cardiac MagnEtic resonance assessment of bi-Atrial fibrosis in secundum atrial septal defects patients: CAMERA-ASD study. <i>European Heart Journal Cardiovascular Imaging</i> , 2021 ,	4.1	1
175	Non-invasive simulated electrical and measured mechanical indices predict response to cardiac resynchronization therapy. <i>Computers in Biology and Medicine</i> , 2021 , 138, 104872	7	0
174	In Silico Mapping of the Omecamtiv Mecarbil Effects from the Sarcomere to the Whole-Heart and Back Again. <i>Lecture Notes in Computer Science</i> , 2021 , 406-415	0.9	1
173	In silico identification of potential calcium dynamics and sarcomere targets for recovering left ventricular function in rat heart failure with preserved ejection fraction. <i>PLoS Computational Biology</i> , 2021 , 17, e1009646	5	1
172	Atrial fibrillation in cardiac resynchronization therapy.. <i>Heart Rhythm O2</i> , 2021 , 2, 784-795	1.5	1
171	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
170	Fully Automatic Atrial Fibrosis Assessment Using a Multilabel Convolutional Neural Network. <i>Circulation: Cardiovascular Imaging</i> , 2020 , 13, e011512	3.9	5
169	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

168	Completely Leadless Cardiac Resynchronization Defibrillator System. <i>JACC: Clinical Electrophysiology</i> , 2020 , 6, 588-589	4.6	14
167	High mean entropy calculated from cardiac MRI texture analysis is associated with antitachycardia pacing failure. <i>PACE - Pacing and Clinical Electrophysiology</i> , 2020 , 43, 737-745	1.6	2
166	The Amplitude-Normalized Area of a Bipolar Electrogram as a Measure of Local Conduction Delay in the Heart. <i>Frontiers in Physiology</i> , 2020 , 11, 465	4.6	2
165	The Digital Twin To enable the vision of precision cardiology. <i>European Heart Journal</i> , 2020 , 41, 4556-4564	5.4	136
164	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
163	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
162	Tracking the motion of intracardiac structures aids the development of future leadless pacing systems. <i>Journal of Cardiovascular Electrophysiology</i> , 2020 , 31, 2431-2439	2.7	2
161	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
160	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
159	Hypokalemia Promotes Arrhythmia by Distinct Mechanisms in Atrial and Ventricular Myocytes. <i>Circulation Research</i> , 2020 , 126, 889-906	15.7	17
158	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
157	Direct Transcription for Dynamic Optimization: A Tutorial with a Case Study on Dual-Patient Ventilation During the COVID-19 Pandemic 2020 ,		2
156	KBTD13 and the ever-expanding sarcomeric universe. <i>Journal of Clinical Investigation</i> , 2020 , 130, 593-594	4.9	1
155	To the Editor - Multisite pacing strategies: Solutions looking for a problem?. <i>Heart Rhythm O2</i> , 2020 , 1, 315	1.5	
154	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	1.463	5
153	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
152	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
151	Evidence of reverse electrical remodelling by non-invasive electrocardiographic imaging to assess acute and chronic changes in bulk ventricular activation following cardiac resynchronisation therapy. <i>Journal of Electrocardiology</i> , 2020 , 58, 96-102	1.4	2

150	Network integration and modelling of dynamic drug responses at multi-omics levels. <i>Communications Biology</i> , 2020 , 3, 573	6.7	7
149	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
148	Electrocardiographic imaging for cardiac arrhythmias and resynchronization therapy. <i>Europace</i> , 2020 ,	3.9	7
147	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
146	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		7
145	Economic evaluation of a dedicated cardiac resynchronisation therapy preassessment clinic. <i>Open Heart</i> , 2020 , 7,	3	2
144	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
143	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		14
142	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
141	Probabilistic Interpolation of Uncertain Local Activation Times on Human Atrial Manifolds. <i>IEEE Transactions on Biomedical Engineering</i> , 2020 , 67, 99-109	5	13
140	Balance of Active, Passive, and Anatomical Cardiac Properties in Doxorubicin-Induced Heart Failure. <i>Biophysical Journal</i> , 2019 , 117, 2337-2348	2.9	4
139	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
138	Sex-Dependent QRS Guidelines for Cardiac Resynchronization Therapy Using Computer Model Predictions. <i>Biophysical Journal</i> , 2019 , 117, 2375-2381	2.9	6
137	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
136	Solution to the Unknown Boundary Traction in Myocardial Material Parameter Estimations. <i>Lecture Notes in Computer Science</i> , 2019 , 313-322	0.9	
135	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
134	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
133	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

132	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
131	Comparison of Echocardiographic and Electrocardiographic Mapping for Cardiac Resynchronisation Therapy Optimisation. <i>Cardiology Research and Practice</i> , 2019 , 2019, 4351693	1.9	2
130	Giant left atrium: Adaptive or maladaptive?. <i>Hellenic Journal of Cardiology</i> , 2019 , 60, 400-401	2.1	
129	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
128	Emerging role of cardiac computed tomography in heart failure. <i>ESC Heart Failure</i> , 2019 , 6, 909-920	3.7	11
127	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
126	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
125	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
124	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
123	Standardised Framework for Quantitative Analysis of Fibrillation Dynamics. <i>Scientific Reports</i> , 2019 , 9, 16671	4.9	10
122	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
121	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
120	Computational models in cardiology. <i>Nature Reviews Cardiology</i> , 2019 , 16, 100-111	14.8	121
119	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
118	Personalized computational modeling of left atrial geometry and transmural myofiber architecture. <i>Medical Image Analysis</i> , 2018 , 47, 180-190	15.4	29
117	Computational Modeling for Cardiac Resynchronization Therapy. <i>Journal of Cardiovascular Translational Research</i> , 2018 , 11, 92-108	3.3	27
116	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
115	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

114	Voltage and pace-capture mapping of linear ablation lesions overestimates chronic ablation gap size. <i>Europace</i> , 2018 , 20, 2028-2035	3.9	2
113	Local activation time sampling density for atrial tachycardia contact mapping: how much is enough?. <i>Europace</i> , 2018 , 20, e11-e20	3.9	7
112	Influence of atrial contraction dynamics on cardiac function. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2018 , 34, e2931	2.6	17
111	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
110	Decreasing Compensatory Ability of Concentric Ventricular Hypertrophy in Aortic-Banded Rat Hearts. <i>Frontiers in Physiology</i> , 2018 , 9, 37	4.6	2
109	Modeling the Electrophysiological Properties of the Infarct Border Zone. <i>Frontiers in Physiology</i> , 2018 , 9, 356	4.6	39
108	Analytical approaches for myocardial fibrillation signals. <i>Computers in Biology and Medicine</i> , 2018 , 102, 315-326	7	12
107	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
106	Computational fluid dynamic modelling to determine the hemodynamic effects of implanting a transcatheter mitral valve within the left ventricle. <i>International Journal of Cardiovascular Imaging</i> , 2018 , 34, 803-805	2.5	2
105	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
104	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
103	Determinants of new wavefront locations in cholinergic atrial fibrillation. <i>Europace</i> , 2018 , 20, iii3-iii15	3.9	10
102	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
101	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
100	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
99	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
98	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
97	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

96	Personalized Models of Human Atrial Electrophysiology Derived From Endocardial Electrograms. <i>IEEE Transactions on Biomedical Engineering</i> , 2017 , 64, 735-742	5	20
95	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
94	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
93	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
92	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
91	The opportunities and challenges for biophysical modelling of beneficial and adverse drug actions on the heart. <i>Current Opinion in Systems Biology</i> , 2017 , 4, 29-34	3.2	
90	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
89	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
88	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
87	Restitution slope is principally determined by steady-state action potential duration. <i>Cardiovascular Research</i> , 2017 , 113, 817-828	9.9	26
86	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
85	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
84	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
83	Simultaneous display of multiple three-dimensional electrophysiological datasets (dot mapping). <i>Europace</i> , 2017 , 19, 1743-1749	3.9	2
82	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
81	Three-dimensional atrial wall thickness maps to inform catheter ablation procedures for atrial fibrillation. <i>Europace</i> , 2016 , 18, 376-83	3.9	40
80	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
79	Analysis of lead placement optimization metrics in cardiac resynchronization therapy with computational modelling. <i>Europace</i> , 2016 , 18, iv113-iv120	3.9	2

78	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
77	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
76	The role of myocardial wall thickness in atrial arrhythmogenesis. <i>Europace</i> , 2016 , 18, 1758-1772	3.9 45
75	Image-Based Personalization of Cardiac Anatomy for Coupled Electromechanical Modeling. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 58-70	4.7 41
74	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
73	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
72	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
71	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
70	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
69	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
68	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
67	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
66	Quantifying inter-species differences in contractile function through biophysical modelling. <i>Journal of Physiology</i> , 2015 , 593, 1083-111	3.9 10
65	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
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