Steven Niederer

List of Publications by Year
in descending order

247 papers	6,729 citations	66343 42 h-index	98798 67 g-index
256 all docs	256 docs citations	256 times ranked	4764 citing authors

#	Article	IF	Citations
1	CArdiac MagnEtic resonance assessment of bi-Atrial fibrosis in secundum atrial septal defects patients: CAMERA-ASD study. European Heart Journal Cardiovascular Imaging, 2022, 23, 1231-1239.	1.2	8
2	Impact of anatomical reverse remodelling in the design of optimal quadripolar pacing leads: A computational study. Computers in Biology and Medicine, 2022, 140, 105073.	7.0	6
3	On the incorporation of obstacles in a fluid flow problem using a Navierâ€"Stokesâ€"Brinkman penalization approach. Journal of Computational Science, 2022, 57, 101506.	2.9	9
4	The effect of scar and pacing location on repolarization in a porcine myocardial infarction model. Heart Rhythm O2, 2022, 3, 186-195.	1.7	0
5	Predicting Atrial Fibrillation Recurrence by Combining Population Data and Virtual Cohorts of Patient-Specific Left Atrial Models. Circulation: Arrhythmia and Electrophysiology, 2022, 15, CIRCEP121010253.	4.8	32
6	Atrial CARdiac Magnetic resonance imaging in patients with embolic stroke of unknown source without documented Atrial Fibrillation (CARM-AF): Study design and clinical protocol. Heart Rhythm O2, 2022, 3, 196-203.	1.7	2
7	Functional and structural differences between skinned and intact muscle preparations. Journal of General Physiology, 2022, 154, .	1.9	4
8	Increased atrial effectiveness of flecainide conferred by altered biophysical properties of sodium channels. Journal of Molecular and Cellular Cardiology, 2022, 166, 23-35.	1.9	12
9	Reply to Usefulness of Multisite Ventricular Pacing in Nonresponders to Cardiac Resynchronization Therapy. American Journal of Cardiology, 2022, 169, 158.	1.6	1
10	A Quantitative Systems Pharmacology Perspective on the Importance of Parameter Identifiability. Bulletin of Mathematical Biology, 2022, 84, 39.	1.9	19
11	Global Sensitivity Analysis of Four Chamber Heart Hemodynamics Using Surrogate Models. IEEE Transactions on Biomedical Engineering, 2022, 69, 3216-3223.	4.2	13
12	Multi-lead pacing for cardiac resynchronization therapy in heart failure: a meta-analysis of randomized controlled trials. European Heart Journal Open, 2022, 2, .	2.3	2
13	Leadless left ventricular endocardial pacing for cardiac resynchronization therapy: A systematic review and meta-analysis. Heart Rhythm, 2022, 19, 1176-1183.	0.7	13
14	Detection of focal source and arrhythmogenic substrate from body surface potentials to guide atrial fibrillation ablation. PLoS Computational Biology, 2022, 18, e1009893.	3.2	3
15	Modelling the interaction between stem cells derived cardiomyocytes patches and host myocardium to aid non-arrhythmic engineered heart tissue design. PLoS Computational Biology, 2022, 18, e1010030.	3.2	8
16	Optimal Thinning of MCMC Output. Journal of the Royal Statistical Society Series B: Statistical Methodology, 2022, 84, 1059-1081.	2.2	9
17	Dispersion of repolarization increases with cardiac resynchronization therapy and is associated with left ventricular reverse remodeling. Journal of Electrocardiology, 2022, 72, 120-127.	0.9	2
18	Machine learningâ€"derived major adverse event prediction of patients undergoing transvenous lead extraction: Using the ESC EHRA EORP European lead extraction ConTRolled ELECTRa registry. Heart Rhythm, 2022, 19, 885-893.	0.7	5

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19	Radiomics and Machine Learning for Detecting Scar Tissue on CT Delayed Enhancement Imaging. Frontiers in Cardiovascular Medicine, 2022, 9, .	2.4	3
20	An automated near-real time computational method for induction and treatment of scar-related ventricular tachycardias. Medical Image Analysis, 2022, 80, 102483.	11.6	5
21	Quantitative mapping of forceâ€"pCa curves to wholeâ€heart contraction and relaxation. Journal of Physiology, 2022, 600, 3497-3516.	2.9	1
22	Constructing a Human Atrial Fibre Atlas. Annals of Biomedical Engineering, 2021, 49, 233-250.	2.5	45
23	Machine Learned Cellular Phenotypes in Cardiomyopathy Predict Sudden Death. Circulation Research, 2021, 128, 172-184.	4.5	35
24	The Effect of Ventricular Myofibre Orientation on Atrial Dynamics. Lecture Notes in Computer Science, 2021, , 659-670.	1.3	3
25	Optimisation of Left Atrial Feature Tracking Using Retrospective Gated Computed Tomography Images. Lecture Notes in Computer Science, 2021, , 71-83.	1.3	0
26	Applications of multimodality imaging for left atrial catheter ablation. European Heart Journal Cardiovascular Imaging, 2021, 23, 31-41.	1.2	7
27	Building Models of Patient-Specific Anatomy and Scar Morphology from Clinical MRI Data. , 2021, , 453-461.		0
28	Leadless left ventricular endocardial pacing for CRT upgrades in previously failed and high-risk patients in comparison with coronary sinus CRT upgrades. Europace, 2021, 23, 1577-1585.	1.7	13
29	Using machine learning to identify local cellular properties that support re-entrant activation in patient-specific models of atrial fibrillation. Europace, 2021, 23, i12-i20.	1.7	9
30	Using the Universal Atrial Coordinate System for MRI and Electroanatomic Data Registration in Patient-Specific Left Atrial Model Construction and Simulation. Lecture Notes in Computer Science, 2021, , 629-638.	1.3	4
31	Feasibility of intraprocedural integration of cardiac CT to guide left ventricular lead implantation for CRT upgrades. Journal of Cardiovascular Electrophysiology, 2021, 32, 802-812.	1.7	14
32	Noninvasive electrocardiographic assessment of ventricular activation and remodeling response to cardiac resynchronization therapy. Heart Rhythm O2, 2021, 2, 12-18.	1.7	6
33	Standardised computed tomographic assessment of left atrial morphology and tissue thickness in humans. IJC Heart and Vasculature, 2021, 32, 100694.	1.1	3
34	OpenEP: A Cross-Platform Electroanatomic Mapping Data Format and Analysis Platform for Electrophysiology Research. Frontiers in Physiology, 2021, 12, 646023.	2.8	13
35	A multicenter prospective randomized controlled trial of cardiac resynchronization therapy guided by invasive dP/dt. Heart Rhythm O2, 2021, 2, 19-27.	1.7	22
36	Hyperparameter optimisation and validation of registration algorithms for measuring regional ventricular deformation using retrospective gated computed tomography images. Scientific Reports, 2021, 11, 5718.	3.3	3

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37	Leadless Left Ventricular Endocardial Pacing and Left Bundle Branch Area Pacing for Cardiac Resynchronisation Therapy. Arrhythmia and Electrophysiology Review, 2021, 10, 45-50.	2.4	1
38	Linking statistical shape models and simulated function in the healthy adult human heart. PLoS Computational Biology, 2021, 17, e1008851.	3.2	41
39	Computational modeling identifies embolic stroke of undetermined source patients with potential arrhythmic substrate. ELife, 2021, 10, .	6.0	11
40	Scaling digital twins from the artisanal to the industrial. Nature Computational Science, 2021, 1, 313-320.	8.0	104
41	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. IJC Heart and Vasculature, 2021, 34, 100800.	1.1	1
42	Automated Left Ventricle Ischemic Scar Detection in CT Using Deep Neural Networks. Frontiers in Cardiovascular Medicine, 2021, 8, 655252.	2.4	12
43	Bayesian Calibration of Electrophysiology Models Using Restitution Curve Emulators. Frontiers in Physiology, 2021, 12, 693015.	2.8	6
44	B-PO05-012 PREDICTING ATRIAL FIBRILLATION RECURRENCE BY COMBINING POPULATION DATA & PATIENT-SPECIFIC MODELING. Heart Rhythm, 2021, 18, S375-S376.	0.7	2
45	B-PO02-137 OPEN-SOURCE PLATFORM FOR ANALYSIS OF FIBROSIS BEFORE AND AFTER A PULMONARY VEIN ISOLATION PROCEDURE. Heart Rhythm, 2021, 18, S153.	0.7	0
46	B-PO03-023 HIS BUNDLE PACING ACHIEVES BETTER VENTRICULAR SYNCHRONY THAN BIVENTRICULAR PACING IN PATIENTS WITH SCAR IN THE LEFT VENTRICULAR FREE WALL. Heart Rhythm, 2021, 18, S197-S198.	0.7	1
47	B-PO04-002 HIS-PURKINJE CONDUCTION SLOWING WORSENS RESPONSE TO HIS BUNDLE PACING. Heart Rhythm, 2021, 18, S280.	0.7	1
48	Multipoint pacing for cardiac resynchronisation therapy in patients with heart failure: A systematic review and metaâ€analysis. Journal of Cardiovascular Electrophysiology, 2021, 32, 2577-2589.	1.7	10
49	The physiological effects of cardiac resynchronization therapy on aortic and pulmonary flow and dynamic and static components of systemic impedance. Heart Rhythm O2, 2021, 2, 365-373.	1.7	0
50	B-PO03-022 INTEGRATING ATRIAL CARDIAC MAGNETIC RESONANCE IMAGING AND ELECTROANATOMIC MAPPING DATA USING UNIVERSAL ATRIAL CO-ORDINATES AND OPENEP (AN OPEN-SOURCE FRAMEWORK FOR) Tj ETQq0 0 0 rgBT /Ove	0.7	0
51	B-PO03-096 DIELECTRIC IMAGING ACCURATELY MEASURES REGIONAL CARDIAC CHAMBER WALL THICKNESS - AN IN VIVO STUDY. Heart Rhythm, 2021, 18, S227-S228.	0.7	3
52	Comparison of electrical dyssynchrony parameters between electrocardiographic imaging and a simulated ECG belt. Journal of Electrocardiology, 2021, 68, 117-123.	0.9	3
53	Time-Averaged Wavefront Analysis Demonstrates Preferential Pathways of Atrial Fibrillation, Predicting Pulmonary Vein Isolation Acute Response. Frontiers in Physiology, 2021, 12, 707189.	2.8	2
54	Technical feasibility of leadless left bundle branch area pacing for cardiac resynchronisation: a case series. European Heart Journal - Case Reports, 2021, 5, ytab379.	0.6	10

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55	Non-invasive simulated electrical and measured mechanical indices predict response to cardiac resynchronization therapy. Computers in Biology and Medicine, 2021, 138, 104872.	7.0	4
56	In Silico Mapping of the Omecamtiv Mecarbil Effects from the Sarcomere to the Whole-Heart and Back Again. Lecture Notes in Computer Science, 2021, , 406-415.	1.3	1
57	OUP accepted manuscript. Europace, 2021, , .	1.7	4
58	â€œIs multipoint pacing superior to optimized singleâ€point pacing?â€â€"Authors' reply. Journal of Cardiovascular Electrophysiology, 2021, 32, 3280-3281.	1.7	1
59	Late Gadolinium Enhancement Cardiovascular Magnetic Resonance Assessment of Substrate for Ventricular Tachycardia With Hemodynamic Compromise. Frontiers in Cardiovascular Medicine, 2021, 8, 744779.	2.4	7
60	Endocardial left ventricular pacing. Herz, 2021, 46, 526-532.	1.1	3
61	Assessing long-term survival and hospitalization following transvenous lead extraction in patients with cardiac resynchronization therapy devices: A propensity scoreâ€"matched analysis. Heart Rhythm O2, 2021, 2, 597-606.	1.7	1
62	Using cardiac ionic cell models to interpret clinical data. WIREs Mechanisms of Disease, 2021, 13, e1508.	3.3	6
63	In silico identification of potential calcium dynamics and sarcomere targets for recovering left ventricular function in rat heart failure with preserved ejection fraction. PLoS Computational Biology, 2021, 17, e1009646.	3.2	5
64	Atrial fibrillation in cardiac resynchronization therapy. Heart Rhythm O2, 2021, 2, 784-795.	1.7	5
65	Combined computed tomographic perfusion and mechanics with predicted activation pattern can successfully guide implantation of a wireless endocardial pacing system. Europace, 2020, 22, 298.	1.7	13
66	Probabilistic Interpolation of Uncertain Local Activation Times on Human Atrial Manifolds. IEEE Transactions on Biomedical Engineering, 2020, 67, 99-109.	4.2	18
67	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.	2.8	23
68	Quantifying atrial anatomy uncertainty from clinical data and its impact on electro-physiology simulation predictions. Medical Image Analysis, 2020, 61, 101626.	11.6	21
69	Evidence of reverse electrical remodelling by non-invasive electrocardiographic imaging to assess acute and chronic changes in bulk ventricular activation following cardiac resynchronisation therapy. Journal of Electrocardiology, 2020, 58, 96-102.	0.9	4
70	Network integration and modelling of dynamic drug responses at multi-omics levels. Communications Biology, 2020, 3, 573.	4.4	28
71	In silico Comparison of Left Atrial Ablation Techniques That Target the Anatomical, Structural, and Electrical Substrates of Atrial Fibrillation. Frontiers in Physiology, 2020, 11, 1145.	2.8	38
72	Electrocardiographic imaging for cardiac arrhythmias and resynchronization therapy. Europace, 2020, 22, 1447-1462.	1.7	20

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73	CemrgApp: An interactive medical imaging application with image processing, computer vision, and machine learning toolkits for cardiovascular research. SoftwareX, 2020, 12, 100570.	2.6	38
74	The fickle heart: uncertainty quantification in cardiac and cardiovascular modelling and simulation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200119.	3.4	17
75	Economic evaluation of a dedicated cardiac resynchronisation therapy preassessment clinic. Open Heart, 2020, 7, e001249.	2.3	6
76	A simulated single ventilator/dual patient ventilation strategy for acute respiratory distress syndrome during the COVID-19 pandemic. Royal Society Open Science, 2020, 7, 200585.	2.4	15
77	Predicting left ventricular contractile function via Gaussian process emulation in aortic-banded rats. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190334.	3.4	31
78	Creation and application of virtual patient cohorts of heart models. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190558.	3.4	50
79	Fully Automatic Atrial Fibrosis Assessment Using a Multilabel Convolutional Neural Network. Circulation: Cardiovascular Imaging, 2020, 13, e011512.	2.6	15
80	Leadless left ventricular endocardial pacing in nonresponders to conventional cardiac resynchronization therapy. PACE - Pacing and Clinical Electrophysiology, 2020, 43, 966-973.	1.2	17
81	Completely Leadless Cardiac Resynchronization Defibrillator System. JACC: Clinical Electrophysiology, 2020, 6, 588-589.	3.2	21
82	High mean entropy calculated from cardiac MRI texture analysis is associated with antitachycardia pacing failure. PACE - Pacing and Clinical Electrophysiology, 2020, 43, 737-745.	1.2	3
83	The Amplitude-Normalized Area of a Bipolar Electrogram as a Measure of Local Conduction Delay in the Heart. Frontiers in Physiology, 2020, 11, 465.	2.8	4
84	The â€˜Digital Twinâ€™ to enable the vision of precision cardiology. European Heart Journal, 2020, 41, 4556-4564.	2.2	319
85	Gaussian process manifold interpolation for probabilistic atrial activation maps and uncertain conduction velocity. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190345.	3.4	23
86	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. Heart Rhythm, 2020, 17, 1922-1929.	0.7	44
87	Tracking the motion of intracardiac structures aids the development of future leadless pacing systems. Journal of Cardiovascular Electrophysiology, 2020, 31, 2431-2439.	1.7	6
88	A publicly available virtual cohort of four-chamber heart meshes for cardiac electro-mechanics simulations. PLoS ONE, 2020, 15, e0235145.	2.5	59
89	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.	2.1	54
90	Hypokalemia Promotes Arrhythmia by Distinct Mechanisms in Atrial and Ventricular Myocytes. Circulation Research, 2020, 126, 889-906.	4.5	31

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91	Left ventricular endocardial pacing is less arrhythmogenic than conventional epicardial pacing when pacing in proximity to scar. Heart Rhythm, 2020, 17, 1262-1270.	0.7	16
92	Electrocardiographic imaging of His bundle, left bundle branch, epicardial, and endocardial left ventricular pacing to achieve cardiac resynchronization therapy. HeartRhythm Case Reports, 2020, 6, 460-463.	0.4	12
93	Direct Transcription for Dynamic Optimization: A Tutorial with a Case Study on Dual-Patient Ventilation During the COVID-19 Pandemic. , 2020, , .		3
94	KBTBD13 and the ever-expanding sarcomeric universe. Journal of Clinical Investigation, 2020, 130, 593-594.	8.2	1
95	To the Editor â€" Multisite pacing strategies: Solutions looking for a problem?. Heart Rhythm O2, 2020, 1, 315.	1.7	0
96	Abstract 14899: Personalized Computational Modeling Identifies Embolic Stroke of Undetermined Source Patients With Potential Arrhythmic Substrate. Circulation, 2020, 142, .	1.6	0
97	Giant left atrium: Adaptive or maladaptive?. Hellenic Journal of Cardiology, 2019, 60, 400-401.	1.0	0
98	A comprehensive multiâ€index cardiac magnetic resonanceâ€guided assessment of atrial fibrillation substrate prior to ablation: Prediction of longâ€term outcomes. Journal of Cardiovascular Electrophysiology, 2019, 30, 1894-1903.	1.7	17
99	Editorial: Recent Advances in Understanding the Basic Mechanisms of Atrial Fibrillation Using Novel Computational Approaches. Frontiers in Physiology, 2019, 10, 1065.	2.8	5
100	Emerging role of cardiac computed tomography in heart failure. ESC Heart Failure, 2019, 6, 909-920.	3.1	23
101	Reproducibility of Atrial Fibrosis Assessment Using CMR Imaging and an Open Source Platform. JACC: Cardiovascular Imaging, 2019, 12, 2076-2077.	5.3	25
102	Generation of a cohort of whole-torso cardiac models for assessing the utility of a novel computed shock vector efficiency metric for ICD optimisation. Computers in Biology and Medicine, 2019, 112, 103368.	7.0	13
103	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. Journal of Cardiovascular Magnetic Resonance, 2019, 21, 62.	3.3	10
104	Pulmonary vein encirclement using an Ablation Index-guided point-by-point workflow: cardiovascular magnetic resonance assessment of left atrial scar formation. Europace, 2019, 21, 1817-1823.	1.7	17
105	Balance of Active, Passive, and Anatomical Cardiac Properties in Doxorubicin-Induced Heart Failure. Biophysical Journal, 2019, 117, 2337-2348.	0.5	6
106	Analysis of a coupled fluidâ€structure interaction model of the left atrium and mitral valve. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3254.	2.1	38
107	Sex-Dependent QRS Guidelines for Cardiac Resynchronization Therapy Using Computer Model Predictions. Biophysical Journal, 2019, 117, 2375-2381.	0.5	14
108	Evaluation of a real-time magnetic resonance imaging-guided electrophysiology system for structural and electrophysiological ventricular tachycardia substrate assessment. Europace, 2019, 21, 1432-1441.	1.7	9

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109	Solution to the Unknown Boundary Tractions in Myocardial Material Parameter Estimations. Lecture Notes in Computer Science, 2019, , 313-322.	1.3	0
110	Left atrial effective conducting size predicts atrial fibrillation vulnerability in persistent but not paroxysmal atrial fibrillation. Journal of Cardiovascular Electrophysiology, 2019, 30, 1416-1427.	1.7	17
111	Universal atrial coordinates applied to visualisation, registration and construction of patient specific meshes. Medical Image Analysis, 2019, 55, 65-75.	11.6	59
112	Mean entropy predicts implantable cardioverter-defibrillator therapy using cardiac magnetic resonance texture analysis of scar heterogeneity. Heart Rhythm, 2019, 16, 1242-1250.	0.7	24
113	Pacing in proximity to scar during cardiac resynchronization therapy increases local dispersion of repolarization and susceptibility to ventricular arrhythmogenesis. Heart Rhythm, 2019, 16, 1475-1483.	0.7	42
114	Comparison of Echocardiographic and Electrocardiographic Mapping for Cardiac Resynchronisation Therapy Optimisation. Cardiology Research and Practice, 2019, 2019, 1-9.	1.1	7
115	Standardised Framework for Quantitative Analysis of Fibrillation Dynamics. Scientific Reports, 2019, 9, 16671.	3.3	25
116	A technique for measuring anisotropy in atrial conduction to estimate conduction velocity and atrial fibre direction. Computers in Biology and Medicine, 2019, 104, 278-290.	7.0	40
117	Regional diastolic dysfunction in post-infarction heart failure: role of local mechanical load and SERCA expression. Cardiovascular Research, 2019, 115, 752-764.	3.8	22
118	Computational models in cardiology. Nature Reviews Cardiology, 2019, 16, 100-111.	13.7	239
119	A short history of the development of mathematical models of cardiac mechanics. Journal of Molecular and Cellular Cardiology, 2019, 127, 11-19.	1.9	44
120	Personalized computational modeling of left atrial geometry and transmural myofiber architecture. Medical Image Analysis, 2018, 47, 180-190.	11.6	46
121	Computational Modeling for Cardiac Resynchronization Therapy. Journal of Cardiovascular Translational Research, 2018, 11, 92-108.	2.4	48
122	Transcatheter mitral valve replacement in mitral annulus calcification â€“ â€œThe art of computer simulationâ€. Journal of Cardiovascular Computed Tomography, 2018, 12, 153-157.	1.3	33
123	A work flow to build and validate patient specific left atrium electrophysiology models from catheter measurements. Medical Image Analysis, 2018, 47, 153-163.	11.6	36
124	Voltage and pace-capture mapping of linear ablation lesions overestimates chronic ablation gap size. Europace, 2018, 20, 2028-2035.	1.7	4
125	Local activation time sampling density for atrial tachycardia contact mapping: how much is enough?. Europace, 2018, 20, e11-e20.	1.7	13
126	Influence of atrial contraction dynamics on cardiac function. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2931.	2.1	31

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127	Normoxic cells remotely regulate the acidâ€base balance of cells at the hypoxic core of connexinâ€coupled tumor growths. FASEB Journal, 2018, 32, 83-96.	0.5	21
128	A model-based assay design to reproduce in vivo patterns of acute drug-induced toxicity. Archives of Toxicology, 2018, 92, 553-555.	4.2	23
129	Mechanism of doxorubicin cardiotoxicity evaluated by integrating multiple molecular effects into a biophysical model. British Journal of Pharmacology, 2018, 175, 763-781.	5.4	32
130	Determinants of new wavefront locations in cholinergic atrial fibrillation. Europace, 2018, 20, iii3-iii15.	1.7	27
131	Patient-specific simulations predict efficacy of ablation of interatrial connections for treatment of persistent atrial fibrillation. Europace, 2018, 20, iii55-iii68.	1.7	38
132	Left ventricular outflow obstruction predicts increase in systolic pressure gradients and blood residence time after transcatheter mitral valve replacement. Scientific Reports, 2018, 8, 15540.	3.3	24
133	Automated quantification of mitral valve geometry on multi-slice computed tomography in patients with dilated cardiomyopathy â€" Implications for transcatheter mitral valve replacement. Journal of Cardiovascular Computed Tomography, 2018, 12, 329-337.	1.3	12
134	Non-invasive electrophysiological assessment of the optimal configuration of quadripolar lead vectors on ventricular activation times. Journal of Electrocardiology, 2018, 51, 714-719.	0.9	7
135	Bringing in vitro analysis closer to in vivo: Studying doxorubicin toxicity and associated mechanisms in 3D human microtissues with PBPK-based dose modelling. Toxicology Letters, 2018, 294, 184-192.	0.8	28
136	Unraveling the Underlying Arrhythmia Mechanism in Persistent Atrial Fibrillation. Circulation: Arrhythmia and Electrophysiology, 2018, 11, e005897.	4.8	35
137	Decreasing Compensatory Ability of Concentric Ventricular Hypertrophy in Aortic-Banded Rat Hearts. Frontiers in Physiology, 2018, 9, 37.	2.8	4
138	Modeling the Electrophysiological Properties of the Infarct Border Zone. Frontiers in Physiology, 2018, 9, 356.	2.8	72
139	Is CRT response rate all about patient selection?. International Journal of Cardiology, 2018, 270, 183-184.	1.7	2
140	Analytical approaches for myocardial fibrillation signals. Computers in Biology and Medicine, 2018, 102, 315-326.	7.0	17
141	Changes in contractility determine coronary haemodynamics in dyssynchronous left ventricular heart failure, not vice versa. IJC Heart and Vasculature, 2018, 19, 8-13.	1.1	6
142	Personalized Models of Human Atrial Electrophysiology Derived From Endocardial Electrograms. IEEE Transactions on Biomedical Engineering, 2017, 64, 735-742.	4.2	28
143	A model of cardiac contraction based on novel measurements of tension development in human cardiomyocytes. Journal of Molecular and Cellular Cardiology, 2017, 106, 68-83.	1.9	94
144	Comprehensive use of cardiac computed tomography to guide left ventricular lead placement in cardiac resynchronization therapy. Heart Rhythm, 2017, 14, 1364-1372.	0.7	48

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145	Efficient computation of electrograms and ECGs in human whole heart simulations using a reaction-eikonal model. Journal of Computational Physics, 2017, 346, 191-211.	3.8	109
146	Intra-Atrial Conduction Delay Revealed by Multisite Incremental Atrial Pacing is an Independent Marker of Remodeling in Human Atrial Fibrillation. JACC: Clinical Electrophysiology, 2017, 3, 1006-1017.	3.2	19
147	The opportunities and challenges for biophysical modelling of beneficial and adverse drug actions on the heart. Current Opinion in Systems Biology, 2017, 4, 29-34.	2.6	0
148	Compensatory and decompensatory alterations in cardiomyocyte Ca²⁺ dynamics in hearts with diastolic dysfunction following aortic banding. Journal of Physiology, 2017, 595, 3867-3889.	2.9	11
149	Methodologies for Quantitative Systems Pharmacology (QSP) Models: Design and Estimation. CPT: Pharmacometrics and Systems Pharmacology, 2017, 6, 496-498.	2.5	29
150	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. Journal of Cardiovascular Electrophysiology, 2017, 28, 208-215.	1.7	25
151	Cardiac CT assessment of tissue thickness at the ostium of the left atrial appendage predicts acute success of radiofrequency ablation. PACE - Pacing and Clinical Electrophysiology, 2017, 40, 1218-1226.	1.2	10
152	A comparison of the different features of quadripolar left ventricular pacing leads to deliver cardiac resynchronization therapy. Expert Review of Medical Devices, 2017, 14, 697-706.	2.8	5
153	Computational fluid dynamic modelling to determine the hemodynamic effects of implanting a transcatheter mitral valve within the left ventricle. International Journal of Cardiovascular Imaging, 2017, 34, 803-805.	1.5	2
154	The effect of activation rate on left atrial bipolar voltage in patients with paroxysmal atrial fibrillation. Journal of Cardiovascular Electrophysiology, 2017, 28, 1028-1036.	1.7	19
155	Improved identifiability of myocardial material parameters by an energy-based cost function. Biomechanics and Modeling in Mechanobiology, 2017, 16, 971-988.	2.8	26
156	Simultaneous display of multiple three-dimensional electrophysiological datasets (dot mapping). Europace, 2017, 19, 1743-1749.	1.7	2
157	A Predictive Personalised Model for the Left Atrium. , 2017, , .		1
158	Restitution slope is principally determined by steady-state action potential duration. Cardiovascular Research, 2017, 113, 817-828.	3.8	45
159	Feasibility of the Estimation of Myocardial Stiffness with Reduced 2D Deformation Data. Lecture Notes in Computer Science, 2017, , 357-368.	1.3	3
160	The calciumâ€“frequency response in the rat ventricular myocyte: an experimental and modelling study. Journal of Physiology, 2016, 594, 4193-4224.	2.9	35
161	A two-variable model robust to pacemaker behaviour for the dynamics of the cardiac action potential. Mathematical Biosciences, 2016, 281, 46-54.	1.9	24
162	Improvement of Right Ventricular Hemodynamics with Left Ventricular Endocardial Pacing during Cardiac Resynchronization Therapy. PACE - Pacing and Clinical Electrophysiology, 2016, 39, 531-541.	1.2	11

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163	Optimized Left Ventricular Endocardial StimulationÂIs Superior to Optimized EpicardialÂStimulation in Ischemic Patients WithÂPoor Response to Cardiac ResynchronizationÂTherapy. JACC: Clinical Electrophysiology, 2016, 2, 799-809.	3.2	48
164	Analysis of lead placement optimization metrics in cardiac resynchronization therapy with computational modelling. Europace, 2016, 18, iv113-iv120.	1.7	7
165	The relative role of patient physiology and device optimisation in cardiac resynchronisation therapy: A computational modelling study. Journal of Molecular and Cellular Cardiology, 2016, 96, 93-100.	1.9	38
166	Is computational modeling adding value for understanding the Heart?. Journal of Molecular and Cellular Cardiology, 2016, 96, 1.	1.9	2
167	Using physiologically based models for clinical translation: predictive modelling, data interpretation or something inâ€between?. Journal of Physiology, 2016, 594, 6849-6863.	2.9	16
168	The role of myocardial wall thickness in atrial arrhythmogenesis. Europace, 2016, 18, euw014.	1.7	65
169	Image-Based Personalization of Cardiac Anatomy for Coupled Electromechanical Modeling. Annals of Biomedical Engineering, 2016, 44, 58-70.	2.5	48
170	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.	3.8	115
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