Henggui Zhang

List of Publications by Year in Descending Order

202 papers	4,321 citations	36 h-index	57 g-index
224 ext. papers	5,717 ext. citations	4.7 avg, IF	5.57 L-index

#	Paper	IF	Citations
202	Identification through action potential clamp of proarrhythmic consequences of the short QT syndrome T618I hERG RhotspotRmutation.. *Biochemical and Biophysical Research Communications*, **2022**, 596, 49-55	3.4	1
201	Generalizable Beat-by-Beat Arrhythmia Detection by Using Weakly Supervised Deep Learning.. *Frontiers in Physiology*, **2022**, 13, 850951	4.6	0
200	Inter-subject registration-based one-shot segmentation with alternating union network for cardiac MRI images.. *Medical Image Analysis*, **2022**, 79, 102455	15.4	0
199	Pro-Arrhythmic Effects of Discontinuous Conduction at the Purkinje Fiber-Ventricle Junction Arising From Heart Failure-Induced Ionic Remodeling - Insights From Computational Modelling.. *Frontiers in Physiology*, **2022**, 13, 877428	4.6	
198	Mechanisms of ventricular arrhythmias elicited by coexistence of multiple electrophysiological remodeling in ischemia: A simulation study.. *PLoS Computational Biology*, **2022**, 18, e1009388	5	0
197	Investigation of the Effects of the Short QT Syndrome D172N Kir2.1 Mutation on Ventricular Action Potential Profile Using Dynamic Clamp.. *Frontiers in Pharmacology*, **2021**, 12, 794620	5.6	1
196	Air Pollution and Cardiac Arrhythmias: From Epidemiological and Clinical Evidences to Cellular Electrophysiological Mechanisms. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 736151	5.4	4
195	Electrophysiological Mechanisms Underlying T-Wave Alternans and Their Role in Arrhythmogenesis. *Frontiers in Physiology*, **2021**, 12, 614946	4.6	5
194	Automatic Detection for Multi-Labeled Cardiac Arrhythmia Based on Frame Blocking Preprocessing and Residual Networks. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 616585	5.4	0
193	Reciprocal interaction between IK1 and If in biological pacemakers: A simulation study. *PLoS Computational Biology*, **2021**, 17, e1008177	5	0
192	Physiological Roles of the Rapidly Activated Delayed Rectifier K Current in Adult Mouse Heart Primary Pacemaker Activity. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	2
191	Regulation of sinus node pacemaking and atrioventricular node conduction by HCN channels in health and disease. *Progress in Biophysics and Molecular Biology*, **2021**, 166, 61-85	4.7	3
190	A circadian clock in the sinus node mediates day-night rhythms in Hcn4 and heart rate. *Heart Rhythm*, **2021**, 18, 801-810	6.7	16
189	Automatic Detection of QRS Complexes Using Dual Channels Based on U-Net and Bidirectional Long Short-Term Memory. *IEEE Journal of Biomedical and Health Informatics*, **2021**, 25, 1052-1061	7.2	8
188	In Silico Assessment of Class I Antiarrhythmic Drug Effects on -Induced Atrial Fibrillation: Insights from Populations of Electrophysiological Models of Human Atrial Cells and Tissues. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	3
187	The corrected left ventricular ejection fraction: a potential new measure of ventricular function. *International Journal of Cardiovascular Imaging*, **2021**, 37, 1987-1997	2.5	0
186	Arrhythmogenic Mechanisms in Hypokalaemia: Insights From Pre-clinical Models. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 620539	5.4	5

185	Effects of long-term fasting and confinement on the cardiovascular activity. *Medical and Biological Engineering and Computing*, **2021**, 59, 1901-1915	3.1	0
184	The Functional Role of Hyperpolarization Activated Current ( ) on Cardiac Pacemaking in Human vs. in the Rabbit Sinoatrial Node: A Simulation and Theoretical Study. *Frontiers in Physiology*, **2021**, 12, 582037	4.6	0
183	Electrophysiological and Proarrhythmic Effects of Hydroxychloroquine Challenge in Guinea-Pig Hearts. *ACS Pharmacology and Translational Science*, **2021**, 4, 1639-1653	5.9	0
182	investigation of pro-arrhythmic effects of azithromycin on the human ventricle. *Biochemistry and Biophysics Reports*, **2021**, 27, 101043	2.2	
181	cAMP-dependent regulation of HCN4 controls the tonic entrainment process in sinoatrial node pacemaker cells. *Nature Communications*, **2020**, 11, 5555	17.4	29
180	PITX2 upregulation increases the risk of chronic atrial fibrillation in a dose-dependent manner by modulating and -insights from human atrial modelling. *Annals of Translational Medicine*, **2020**, 8, 191	3.2	7
179	Role of Oxidation-Dependent CaMKII Activation in the Genesis of Abnormal Action Potentials in Atrial Cardiomyocytes: A Simulation Study. *BioMed Research International*, **2020**, 2020, 1597012	3	0
178	Deep Atlas Network for Efficient 3D Left Ventricle Segmentation on Echocardiography. *Medical Image Analysis*, **2020**, 61, 101638	15.4	21
177	In silico study of the effects of anti-arrhythmic drug treatment on sinoatrial node function for patients with atrial fibrillation. *Scientific Reports*, **2020**, 10, 305	4.9	8
176	Serine mutation of a conserved threonine in the hERG K channel S6-pore region leads to loss-of-function through trafficking impairment. *Biochemical and Biophysical Research Communications*, **2020**, 526, 1085-1091	3.4	3
175	Dynamically constructed network with error correction for accurate ventricle volume estimation. *Medical Image Analysis*, **2020**, 64, 101723	15.4	5
174	Generating electrocardiogram signals by deep learning. *Neurocomputing*, **2020**, 404, 122-136	5.4	15
173	Commensal correlation network between segmentation and direct area estimation for bi-ventricle quantification. *Medical Image Analysis*, **2020**, 59, 101591	15.4	12
172	FWAVina: A novel optimization algorithm for protein-ligand docking based on the fireworks algorithm. *Computational Biology and Chemistry*, **2020**, 88, 107363	3.6	2
171	Heart failure-induced atrial remodelling promotes electrical and conduction alternans. *PLoS Computational Biology*, **2020**, 16, e1008048	5	1
170	Populations of in silico myocytes and tissues reveal synergy of multiatrial-predominant K -current block in atrial fibrillation. *British Journal of Pharmacology*, **2020**, 177, 4497-4515	8.6	7
169	Biological pacemaker: from biological experiments to computational simulation. *Journal of Zhejiang University: Science B*, **2020**, 21, 524-536	4.5	1
168	Mechanistic Insights Into the Reduced Pacemaking Rate of the Rabbit Sinoatrial Node During Postnatal Development: A Simulation Study. *Frontiers in Physiology*, **2020**, 11, 547577	4.6	1

167	Alternans in Mouse Atrial Cardiomyocytes: A Computational Study on the Influence of Cell-Cell Coupling and □-Adrenergic Stimulation. *IEEE Access*, **2020**, 8, 84806-84820	3.5	1
166	A Mathematical Model of the Mouse Atrial Myocyte With Inter-Atrial Electrophysiological Heterogeneity. *Frontiers in Physiology*, **2020**, 11, 972	4.6	6
165	Cardiac Pacemaker Dysfunction Arising From Different Studies of Ion Channel Remodeling in the Aging Rat Heart. *Frontiers in Physiology*, **2020**, 11, 546508	4.6	5
164	The Role of CaMKII Overexpression and Oxidation in Atrial Fibrillation-A Simulation Study. *Frontiers in Physiology*, **2020**, 11, 607809	4.6	2
163	Learning from studying very rare cardiac conditions: the example of short QT syndrome. *Journal of Congenital Cardiology*, **2019**, 3,	1	3
162	ECG Imaging to Detect the Site of Ventricular Ischemia Using Torso Electrodes: A Computational Study. *Frontiers in Physiology*, **2019**, 10, 50	4.6	3
161	. *IEEE Access*, **2019**, 7, 102119-102135	3.5	53
160	Quantitative proteomics and single-nucleus transcriptomics of the sinus node elucidates the foundation of cardiac pacemaking. *Nature Communications*, **2019**, 10, 2889	17.4	51
159	Influence of the distribution of fibrosis within an area of myocardial infarction on wave propagation in ventricular tissue. *Scientific Reports*, **2019**, 9, 14151	4.9	5
158	Proarrhythmia in the p.Met207Val PITX2c-Linked Familial Atrial Fibrillation-Insights From Modeling. *Frontiers in Physiology*, **2019**, 10, 1314	4.6	8
157	Mechanistic insights from targeted molecular profiling of repolarization alternans in the intact human heart. *Europace*, **2019**, 21, 981-989	3.9	8
156	Pro-arrhythmic Effects of Hydrogen Sulfide in Healthy and Ischemic Cardiac Tissues: Insight From a Simulation Study. *Frontiers in Physiology*, **2019**, 10, 1482	4.6	4
155	Pharmacotherapeutic Effects of Quinidine on Short QT Syndrome by Using Purkinje-Ventricle Model: A Simulation Study. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2019**, 2019, 2856-2859	0.9	
154	Transient outward K current can strongly modulate action potential duration and initiate alternans in the human atrium. *American Journal of Physiology - Heart and Circulatory Physiology*, **2019**, 316, H527-H542	5.2	10
153	Assessment of Pharmacotherapy for Human Atrial Patho-Electrophysiology Associated With hERG-Linked Short QT Syndrome. *Frontiers in Physiology*, **2018**, 9, 1888	4.6	7
152	Multi-Views Fusion CNN for Left Ventricular Volumes Estimation on Cardiac MR Images. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 1924-1934	5	40
151	Emerging therapeutic targets in the short QT syndrome. *Expert Opinion on Therapeutic Targets*, **2018**, 22, 439-451	6.4	26
150	The end of the unique myocardial band: Part II. Clinical and functional considerations. *European Journal of Cardio-thoracic Surgery*, **2018**, 53, 120-128	3	13

149	A computational model of excitation and contraction in uterine myocytes from the pregnant rat. *Scientific Reports*, **2018**, 8, 9159	4.9	3
148	Investigation of hERG1b influence on hERG channel pharmacology at physiological temperature. *Journal of Pharmacology and Pharmacotherapeutics*, **2018**, 9, 92	0.2	4
147	Detecting atrial fibrillation by deep convolutional neural networks. *Computers in Biology and Medicine*, **2018**, 93, 84-92	7	152
146	Computational Analysis of the Action of Chloroquine on Short QT Syndrome Variant 1 and Variant 3 in Human Ventricles. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2018**, 2018, 5462-5465	0.9	4
145	Mechanistic insight into spontaneous transition from cellular alternans to arrhythmia-A simulation study. *PLoS Computational Biology*, **2018**, 14, e1006594	5	9
144	Automatic Detection of Atrial Fibrillation Based on Continuous Wavelet Transform and 2D Convolutional Neural Networks. *Frontiers in Physiology*, **2018**, 9, 1206	4.6	50
143	Human Atrial Arrhythmogenesis and Sinus Bradycardia in -Linked Short QT Syndrome: Insights From Computational Modelling. *Frontiers in Physiology*, **2018**, 9, 1402	4.6	16
142	A Combined Fully Convolutional Networks and Deformable Model for Automatic Left Ventricle Segmentation Based on 3D Echocardiography. *BioMed Research International*, **2018**, 2018, 5682365	3	14
141	Morphological Substrates for Atrial Arrhythmogenesis in a Heart With Atrioventricular Septal Defect. *Frontiers in Physiology*, **2018**, 9, 1071	4.6	2
140	Optogenetic Control of Heart Rhythm by Selective Stimulation of Cardiomyocytes Derived from Pnmt Cells in Murine Heart. *Scientific Reports*, **2017**, 7, 40687	4.9	32
139	An efficient and fast GPU-based algorithm for visualizing large volume of 4D data from virtual heart simulations. *Biomedical Signal Processing and Control*, **2017**, 35, 8-18	4.9	5
138	Stress-Activated Kinase Mitogen-Activated Kinase Kinase-7 Governs Epigenetics of Cardiac Repolarization for Arrhythmia Prevention. *Circulation*, **2017**, 135, 683-699	16.7	11
137	Effects of amiodarone on short QT syndrome variant 3 in human ventricles: a simulation study. *BioMedical Engineering OnLine*, **2017**, 16, 69	4.1	6
136	Mechanism underlying impaired cardiac pacemaking rhythm during ischemia: A simulation study. *Chaos*, **2017**, 27, 093934	3.3	5
135	Three-dimensional image reconstruction of distribution of Pnmt cell-derived cells in murine heart. *Scientific Data*, **2017**, 4, 170134	8.2	4
134	Modelling the effects of quinidine, disopyramide, and E-4031 on short QT syndrome variant 3 in the human ventricles. *Physiological Measurement*, **2017**, 38, 1859-1873	2.9	4
133	Novel non-invasive algorithm to identify the origins of re-entry and ectopic foci in the atria from 64-lead ECGs: A computational study. *PLoS Computational Biology*, **2017**, 13, e1005270	5	5
132	Atrial arrhythmogenicity of KCNJ2 mutations in short QT syndrome: Insights from virtual human atria. *PLoS Computational Biology*, **2017**, 13, e1005593	5	20

131	A computational model of spatio-temporal cardiac intracellular calcium handling with realistic structure and spatial flux distribution from sarcoplasmic reticulum and t-tubule reconstructions. *PLoS Computational Biology*, **2017**, 13, e1005714	5	31
130	In-silico investigations of the functional impact of KCNA5 mutations on atrial mechanical dynamics. *Journal of Molecular and Cellular Cardiology*, **2017**, 111, 86-95	5.8	9
129	In silico investigation of a KCNQ1 mutation associated with short QT syndrome. *Scientific Reports*, **2017**, 7, 8469	4.9	16
128	High resolution 3-Dimensional imaging of the human cardiac conduction system from microanatomy to mathematical modeling. *Scientific Reports*, **2017**, 7, 7188	4.9	57
127	A composite visualization method for electrophysiology-morphous merging of human heart. *BioMedical Engineering OnLine*, **2017**, 16, 70	4.1	2
126	Mechanisms Underlying the Emergence of Post-acidosis Arrhythmia at the Tissue Level: A Theoretical Study. *Frontiers in Physiology*, **2017**, 8, 195	4.6	11
125	Computational Analysis of the Mode of Action of Disopyramide and Quinidine on hERG-Linked Short QT Syndrome in Human Ventricles. *Frontiers in Physiology*, **2017**, 8, 759	4.6	20
124	Computational Cardiac Modeling Reveals Mechanisms of Ventricular Arrhythmogenesis in Long QT Syndrome Type 8: R858H Mutation Linked to Ventricular Fibrillation. *Frontiers in Physiology*, **2017**, 8, 771	4.6	16
123	Synergistic Anti-arrhythmic Effects in Human Atria with Combined Use of Sodium Blockers and Acacetin. *Frontiers in Physiology*, **2017**, 8, 946	4.6	24
122	In silico assessment of genetic variation in KCNA5 reveals multiple mechanisms of human atrial arrhythmogenesis. *PLoS Computational Biology*, **2017**, 13, e1005587	5	20
121	Electro-mechanical dynamics of spiral waves in a discrete 2D model of human atrial tissue. *PLoS ONE*, **2017**, 12, e0176607	3.7	6
120	In silico assessment of the effects of quinidine, disopyramide and E-4031 on short QT syndrome variant 1 in the human ventricles. *PLoS ONE*, **2017**, 12, e0179515	3.7	9
119	Modelling the effects of chloroquine on -linked short QT syndrome. *Oncotarget*, **2017**, 8, 106511-106526	5.3	7
118	Physiological mechanisms of pulmonary hypertension. *American Heart Journal*, **2016**, 180, 1-11	4.9	17
117	Insights from echocardiography, magnetic resonance imaging, and microcomputed tomography relative to the mid-myocardial left ventricular echogenic zone. *Echocardiography*, **2016**, 33, 1546-1556	1.5	11
116	Comparison of Electric- and Magnetic-Cardiograms Produced by Myocardial Ischemia in Models of the Human Ventricle and Torso. *PLoS ONE*, **2016**, 11, e0160999	3.7	10
115	Pacemaker Created in Human Ventricle by Depressing Inward-Rectifier K+ Current: A Simulation Study. *BioMed Research International*, **2016**, 2016, 3830682	3	3
114	Depth Attenuation Degree Based Visualization for Cardiac Ischemic Electrophysiological Feature Exploration. *BioMed Research International*, **2016**, 2016, 2979081	3	2

113	Altered Left Ventricular Ion Channel Transcriptome in a High-Fat-Fed Rat Model of Obesity: Insight into Obesity-Induced Arrhythmogenesis. *Journal of Obesity*, **2016**, 2016, 7127898	3.7	10
112	Inverse Correlation between Heart Rate Variability and Heart Rate Demonstrated by Linear and Nonlinear Analysis. *PLoS ONE*, **2016**, 11, e0157557	3.7	42
111	Synergistic effect of bioactive lipid and condition medium on cardiac differentiation of human mesenchymal stem cells from different tissues. *Cell Biochemistry and Function*, **2016**, 34, 163-72	4.2	2
110	Pro-arrhythmogenic effects of CACNA1C G1911R mutation in human ventricular tachycardia: insights from cardiac multi-scale models. *Scientific Reports*, **2016**, 6, 31262	4.9	11
109	Atrioventricular Node Dysfunction and Ion Channel Transcriptome in Pulmonary Hypertension. *Circulation: Arrhythmia and Electrophysiology*, **2016**, 9,	6.4	15
108	Cardiac left ventricular volumes prediction method based on atlas location and deep learning **2016**,		4
107	Novel ion channel targets in atrial fibrillation. *Expert Opinion on Therapeutic Targets*, **2016**, 20, 947-58	6.4	26
106	Characterization and influence of cardiac background sodium current in the atrioventricular node. *Journal of Molecular and Cellular Cardiology*, **2016**, 97, 114-24	5.8	7
105	To the Editor--Altered in vivo systolic function in the short QT syndrome anticipated in silico. *Heart Rhythm*, **2015**, 12, e115	6.7	2
104	Letter by Monfredi et al regarding article, "Physical activity and heart rate variability in older adults: the cardiovascular health study". *Circulation*, **2015**, 131, e348	16.7	2
103	EFFECTS OF ACUTE GLOBAL ISCHEMIA ON RE-ENTRANT ARRHYTHMOGENESIS: A SIMULATION STUDY. *Journal of Biological Systems*, **2015**, 23, 213-230	1.6	5
102	A new algorithm to diagnose atrial ectopic origin from multi lead ECG systems--insights from 3D virtual human atria and torso. *PLoS Computational Biology*, **2015**, 11, e1004026	5	11
101	A model model: a commentary on DiFrancesco and Noble (1985) ÞA model of cardiac electrical activity incorporating ionic pumps and concentration changesR *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2015**, 370,	5.8	3
100	Left ventricular ejection fraction is determined by both global myocardial strain and wall thickness. *IJC Heart and Vasculature*, **2015**, 7, 113-118	2.4	32
99	Investigation of the functional effects of KCNJ2-linked short QT syndrome on electrical conduction at purkinje-ventricle junction at low- and high- frequencies **2015**,		1
98	The virtual heart as a platform for screening drug cardiotoxicity. *British Journal of Pharmacology*, **2015**, 172, 5531-47	8.6	23
97	Effects of amiodarone on ventricular excitation associated with the KCNJ2-linked short QT syndrome: Insights from a modelling study **2015**,		1
96	In silico investigation of short QT syndrome-linked potassium channel mutations on electro-mechanical function of human atrial cells **2015**,		4

95	A 2D Electromechanical Model of Human Atrial Tissue Using the Discrete Element Method. *BioMed Research International*, **2015**, 2015, 854953	3	6
94	Effects of Persistent Atrial Fibrillation-Induced Electrical Remodeling on Atrial Electro-Mechanics - Insights from a 3D Model of the Human Atria. *PLoS ONE*, **2015**, 10, e0142397	3.7	20
93	Abnormal calcium homeostasis in heart failure with preserved ejection fraction is related to both reduced contractile function and incomplete relaxation: an electromechanically detailed biophysical modeling study. *Frontiers in Physiology*, **2015**, 6, 78	4.6	33
92	Parallel Optimization of 3D Cardiac Electrophysiological Model Using GPU. *Computational and Mathematical Methods in Medicine*, **2015**, 2015, 862735	2.8	12
91	A Computer Simulation Study of Anatomy Induced Drift of Spiral Waves in the Human Atrium. *BioMed Research International*, **2015**, 2015, 731386	3	18
90	**2015**,		1
89	Reducing false arrhythmia alarms in the ICU using novel signal quality indices assessment method **2015**,		9
88	Simulation of effects of TBX18 on the pacemaker activity of human ventricular cells **2015**,		1
87	Optimal iodine staining of cardiac tissue for X-ray computed tomography. *PLoS ONE*, **2014**, 9, e105552	3.7	8
86	Importance of gradients in membrane properties and electrical coupling in sinoatrial node pacing. *PLoS ONE*, **2014**, 9, e94565	3.7	22
85	Three-dimensional computer model of the right atrium including the sinoatrial and atrioventricular nodes predicts classical nodal behaviours. *PLoS ONE*, **2014**, 9, e112547	3.7	12
84	Multi-boundary cardiac data visualization based on multidimensional transfer function with ray distance. *Bio-Medical Materials and Engineering*, **2014**, 24, 3025-32	1	5
83	Recent progress in multi-scale models of the human atria. *Drug Discovery Today: Disease Models*, **2014**, 14, 23-32	1.3	7
82	Biophysical characterization of the underappreciated and important relationship between heart rate variability and heart rate. *Hypertension*, **2014**, 64, 1334-43	8.5	183
81	A novel genetic modifier for clarithromycin-related cardiac arrhythmia risk?. *Therapeutic Advances in Infectious Disease*, **2014**, 2, 71-2	2.8	1
80	Evolution and pharmacological modulation of the arrhythmogenic wave dynamics in canine pulmonary vein model. *Europace*, **2014**, 16, 416-23	3.9	30
79	Effects of human atrial ionic remodelling by □-blocker therapy on mechanisms of atrial fibrillation: a computer simulation. *Europace*, **2014**, 16, 1524-33	3.9	16
78	hERG inhibitors with similar potency but different binding kinetics do not pose the same proarrhythmic risk: implications for drug safety assessment. *Journal of Cardiovascular Electrophysiology*, **2014**, 25, 197-207	2.7	52

77	A multi-step method with signal quality assessment and fine-tuning procedure to locate maternal and fetal QRS complexes from abdominal ECG recordings. *Physiological Measurement*, **2014**, 35, 1665-83	2.9	29
76	Mkk4 is a negative regulator of the transforming growth factor beta 1 signaling associated with atrial remodeling and arrhythmogenesis with age. *Journal of the American Heart Association*, **2014**, 3, e000340	6	32
75	A pipeline for neuron reconstruction based on spatial sliding volume filter seeding. *Computational and Mathematical Methods in Medicine*, **2014**, 2014, 386974	2.8	4
74	Effects of maximal sodium and potassium conductance on the stability of Hodgkin-Huxley model. *Computational and Mathematical Methods in Medicine*, **2014**, 2014, 761907	2.8	7
73	Pak1 is required to maintain ventricular Ca□+ homeostasis and electrophysiological stability through SERCA2a regulation in mice. *Circulation: Arrhythmia and Electrophysiology*, **2014**, 7, 938-48	6.4	21
72	Theoretical investigation of the mechanism of heart failure using a canine ventricular cell model: especially the role of up-regulated CaMKII and SR Ca(2+) leak. *Journal of Molecular and Cellular Cardiology*, **2013**, 56, 34-43	5.8	17
71	Antenatal architecture and activity of the human heart. *Interface Focus*, **2013**, 3, 20120065	3.9	25
70	Image-based model of atrial anatomy and electrical activation: a computational platform for investigating atrial arrhythmia. *IEEE Transactions on Medical Imaging*, **2013**, 32, 18-27	11.7	34
69	Application of micro-computed tomography with iodine staining to cardiac imaging, segmentation, and computational model development. *IEEE Transactions on Medical Imaging*, **2013**, 32, 8-17	11.7	80
68	Viewpoint: is the resting bradycardia in athletes the result of remodeling of the sinoatrial node rather than high vagal tone?. *Journal of Applied Physiology*, **2013**, 114, 1351-5	3.7	50
67	In silico investigation of the short QT syndrome, using human ventricle models incorporating electromechanical coupling. *Frontiers in Physiology*, **2013**, 4, 166	4.6	31
66	Sick sinus syndrome in HCN1-deficient mice. *Circulation*, **2013**, 128, 2585-94	16.7	61
65	A novel computational sheep atria model for the study of atrial fibrillation. *Interface Focus*, **2013**, 3, 20120067	3.9	23
64	Heterogeneous and anisotropic integrative model of pulmonary veins: computational study of arrhythmogenic substrate for atrial fibrillation. *Interface Focus*, **2013**, 3, 20120069	3.9	30
63	Pro-arrhythmogenic effects of atrial fibrillation-induced electrical remodelling: insights from the three-dimensional virtual human atria. *Journal of Physiology*, **2013**, 591, 4249-72	3.9	87
62	Simulating the role of anisotropy in human atrial cardioversion. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2013**, 2013, 6838-41	0.9	1
61	Modification by KCNE1 variants of the hERG potassium channel response to premature stimulation and to pharmacological inhibition. *Physiological Reports*, **2013**, 1, e00175	2.6	16
60	Reply to Matelot, Schnell, Kervio, Thillaye du Boullay, and Carre. *Journal of Applied Physiology*, **2013**, 114, 1757	3.7	

59	Effect of cardiac ventricular mechanical contraction on the characteristics of the ECG: A simulation study. *Journal of Biomedical Science and Engineering*, **2013**, 06, 47-60	0.7	14
58	Virtual tissue engineering of the human atrium: modelling pharmacological actions on atrial arrhythmogenesis. *European Journal of Pharmaceutical Sciences*, **2012**, 46, 209-21	5.1	20
57	Development of biophysically detailed electrophysiological models for pacemaking and non-pacemaking human pulmonary vein cardiomyocytes. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 199-202	0.9	5
56	Postnatal development of transmural gradients in expression of ion channels and Ca□+-handling proteins in the ventricle. *Journal of Molecular and Cellular Cardiology*, **2012**, 53, 145-55	5.8	14
55	Pro-arrhythmogenic effects of the S140G KCNQ1 mutation in human atrial fibrillation - insights from modelling. *Journal of Physiology*, **2012**, 590, 4501-14	3.9	27
54	Mechanisms by which cytoplasmic calcium wave propagation and alternans are generated in cardiac atrial myocytes lacking T-tubules-insights from a simulation study. *Biophysical Journal*, **2012**, 102, 1471-82	3.9	27
53	Modeling the chronotropic effect of isoprenaline on rabbit sinoatrial node. *Frontiers in Physiology*, **2012**, 3, 241	4.6	13
52	Cyclical modulation of human ventricular repolarization by respiration. *Frontiers in Physiology*, **2012**, 3, 379	4.6	23
51	An image-based model of atrial muscular architecture: effects of structural anisotropy on electrical activation. *Circulation: Arrhythmia and Electrophysiology*, **2012**, 5, 361-70	6.4	79
50	Myofiber orientation and electrical activation in human and sheep atrial models. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 6365-8	0.9	4
49	Arrhythmogenic substrate for atrial fibrillation: insights from an integrative computational model of pulmonary veins. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 203-6	0.9	2
48	Integration of genetics into a systems model of electrocardiographic traits using HumanCVD BeadChip. *Circulation: Cardiovascular Genetics*, **2012**, 5, 630-8		12
47	Proarrhythmia in KCNJ2-linked short QT syndrome: insights from modelling. *Cardiovascular Research*, **2012**, 94, 66-76	9.9	37
46	Action potential clamp and pharmacology of the variant 1 Short QT Syndrome T618I hERG K+ channel. *PLoS ONE*, **2012**, 7, e52451	3.7	17
45	The Short QT Syndrome **2011**, 431-449		4
44	Anatomical and molecular mapping of the left and right ventricular His-Purkinje conduction networks. *Journal of Molecular and Cellular Cardiology*, **2011**, 51, 689-701	5.8	73
43	Cardiac cell modelling: observations from the heart of the cardiac physiome project. *Progress in Biophysics and Molecular Biology*, **2011**, 104, 2-21	4.7	122
42	3D virtual human atria: A computational platform for studying clinical atrial fibrillation. *Progress in Biophysics and Molecular Biology*, **2011**, 107, 156-68	4.7	112

41	Computer three-dimensional anatomical reconstruction of the human sinus node and a novel paranodal area. *Anatomical Record*, **2011**, 294, 970-9	2.1	63
40	Correlation between P-wave morphology and origin of atrial focal tachycardia--insights from realistic models of the human atria and torso. *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 2952-5	5	15
39	Effective transfer function for interactive visualization and multivariate volume data **2011**,		2
38	Electrophysiological models for the heterogeneous canine atria: computational platform for studying rapid atrial arrhythmias. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference* 2011, 2011, 1693-6	0.9	11
37	Mitogen-activated protein kinase kinase 4 deficiency in cardiomyocytes causes connexin 43 reduction and couples hypertrophic signals to ventricular arrhythmogenesis. *Journal of Biological Chemistry*, **2011**, 286, 17821-30	5.4	9
36	A mathematical model of action potentials of mouse sinoatrial node cells with molecular bases. *American Journal of Physiology - Heart and Circulatory Physiology*, **2011**, 301, H945-63	5.2	48
35	Increased vulnerability of human ventricle to re-entrant excitation in hERG-linked variant 1 short QT syndrome. *PLoS Computational Biology*, **2011**, 7, e1002313	5	48
34	TGF-□1-mediated fibrosis and ion channel remodeling are key mechanisms in producing the sinus node dysfunction associated with SCN5A deficiency and aging. *Circulation: Arrhythmia and Electrophysiology*, **2011**, 4, 397-406	6.4	77
33	A computational model of the ionic currents, Ca2+ dynamics and action potentials underlying contraction of isolated uterine smooth muscle. *PLoS ONE*, **2011**, 6, e18685	3.7	54
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