

Jose Maria Ferrero

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9192523/publications.pdf>

Version: 2024-02-01

116
papers

1,256
citations

393982

19
h-index

414034

32
g-index

118
all docs

118
docs citations

118
times ranked

993
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis of vulnerability to reentry in acute myocardial ischemia using a realistic human heart model. <i>Computers in Biology and Medicine</i> , 2022, 141, 105038.	3.9	3
2	Analysis of the response of human iPSC-derived cardiomyocyte tissue to ICaL block. A combined in vitro and in silico approach. <i>Computers in Biology and Medicine</i> , 2021, 137, 104796.	3.9	1
3	Understanding Ventricular Tachyarrhythmias Related to Acute Myocardial Ischemia: A Computational Modeling Approach. <i>IFMBE Proceedings</i> , 2020, , 769-776.	0.2	0
4	Personalized Cardiac Computational Models: From Clinical Data to Simulation of Infarct-Related Ventricular Tachycardia. <i>Frontiers in Physiology</i> , 2019, 10, 580.	1.3	61
5	Mechanistic investigation of Ca ²⁺ alternans in human heart failure and its modulation by fibroblasts. <i>PLoS ONE</i> , 2019, 14, e0217993.	1.1	4
6	Optimization of Lead Placement in the Right Ventricle During Cardiac Resynchronization Therapy. A Simulation Study. <i>Frontiers in Physiology</i> , 2019, 10, 74.	1.3	17
7	Vulnerability in regionally ischemic human heart. Effect of the extracellular potassium concentration. <i>Journal of Computational Science</i> , 2018, 24, 160-168.	1.5	4
8	Ca ²⁺ Cycling Impairment in Heart Failure Is Exacerbated by Fibrosis: Insights Gained From Mechanistic Simulations. <i>Frontiers in Physiology</i> , 2018, 9, 1194.	1.3	13
9	Intracellular Calcium Regulation in Canine Ventricular Myocytes: a Simulation Study. , 2017, , .		0
10	Sensitivity analysis revealing the effect of modulating ionic mechanisms on calcium dynamics in simulated human heart failure. <i>PLoS ONE</i> , 2017, 12, e0187739.	1.1	19
11	Comparison between Hodgkin-Huxley and Markov formulations of cardiac ion channels. <i>Journal of Theoretical Biology</i> , 2016, 399, 92-102.	0.8	16
12	Three-dimensional cardiac computational modelling: methods, features and applications. <i>BioMedical Engineering OnLine</i> , 2015, 14, 35.	1.3	126
13	Sustained reentry in a 3d regionally ischemic human heart. A simulation study. , 2015, , .		0
14	GPU accelerated solver for nonlinear reaction-diffusion systems. Application to the electrophysiology problem. <i>Computer Physics Communications</i> , 2015, 196, 280-289.	3.0	24
15	In silico ischaemia-induced reentry at the Purkinje-ventricle interface. <i>Europace</i> , 2014, 16, 444-451.	0.7	7
16	Multiscale computational analysis of the bioelectric consequences of myocardial ischaemia and infarction. <i>Europace</i> , 2014, 16, 405-415.	0.7	27
17	Electrophysiological and Structural Remodeling in Heart Failure Modulate Arrhythmogenesis. 1D Simulation Study. <i>PLoS ONE</i> , 2014, 9, e106602.	1.1	44
18	Modeling the different sections of the cardiac conduction system to obtain realistic electrocardiograms. , 2013, 2013, 6846-9.		3

#	ARTICLE	IF	CITATIONS
19	Non-Uniform Dispersion of the Source-Sink Relationship Alters Wavefront Curvature. PLoS ONE, 2013, 8, e78328.	1.1	7
20	Dominant frequency and organization index maps in a realistic three-dimensional computational model of atrial fibrillation. Europace, 2012, 14, v25-v32.	0.7	16
21	Simulation and Mechanistic Investigation of the Arrhythmogenic Role of the Late Sodium Current in Human Heart Failure. PLoS ONE, 2012, 7, e32659.	1.1	49
22	Interaction of Specialized Cardiac Conduction System With Antiarrhythmic Drugs: A Simulation Study. IEEE Transactions on Biomedical Engineering, 2011, 58, 3475-3478.	2.5	24
23	Analysis of the contribution of Ito to repolarization in canine ventricular myocardium. British Journal of Pharmacology, 2011, 164, 93-105.	2.7	22
24	Systematic characterization of the ionic basis of rabbit cellular electrophysiology using two ventricular models. Progress in Biophysics and Molecular Biology, 2011, 107, 60-73.	1.4	36
25	Effects of the Antiarrhythmic Drug Dofetilide on Transmural Dispersion of Repolarization in Ventriculum. A Computer Modeling Study. IEEE Transactions on Biomedical Engineering, 2011, 58, 43-53.	2.5	19
26	Adaptive Macro Finite Elements for the Numerical Solution of Monodomain Equations in Cardiac Electrophysiology. Annals of Biomedical Engineering, 2010, 38, 2331-2345.	1.3	109
27	Compact schemes for anisotropic reaction-diffusion equations with adaptive time step. International Journal for Numerical Methods in Engineering, 2010, 82, 1022-1043.	1.5	4
28	Human and rabbit inter-species comparison of ionic mechanisms of arrhythmic risk: A simulation study. , 2010, 2010, 3253-6.		5
29	Effects of late sodium current enhancement during LQT-related arrhythmias. A simulation study. , 2010, 2010, 3237-40.		6
30	Sex and age related differences in drug induced QT prolongation by dofetilide under reduced repolarization reserve in simulated ventricular cells. , 2010, 2010, 3245-8.		9
31	Exploring the role of pH in modulating the effects of lidocaine in virtual ischemic tissue. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 299, H1615-H1624.	1.5	9
32	Vulnerability for reentry in a three dimensional model of human atria: a simulation study. , 2010, 2010, 224-7.		7
33	Modeling Drug Effects on Personalized 3D Models of the Heart: A Simulation Study. Lecture Notes in Computer Science, 2010, , 222-231.	1.0	3
34	The Relative Role of Refractoriness and Source-Sink Relationship in Reentry Generation during Simulated Acute Ischemia. Annals of Biomedical Engineering, 2009, 37, 1560-1571.	1.3	24
35	Photoplethysmographic Augmentation Index as a Non Invasive Indicator for Vascular Assessments. IFMBE Proceedings, 2009, , 1167-1170.	0.2	4
36	A Grid Computing-Based Approach for the Acceleration of Simulations in Cardiology. IEEE Transactions on Information Technology in Biomedicine, 2008, 12, 138-144.	3.6	12

#	ARTICLE	IF	CITATIONS
37	Improved parametric estimation of time frequency representations for cardiac murmur discrimination. , 2008, , .		3
38	Post-repolarization refractoriness in human ventricular cardiac cells. , 2008, , .		5
39	Effect of lidocaine in acute ischemic situations: A computer modelling study. , 2008, , .		0
40	Safety in purkinje to ventricular conduction and reentrant activity under simulated 1B ischemia. , 2008, , .		0
41	Automatic brachial ankle pulse wave velocity measurements for vascular damage assessments. , 2008, , .		2
42	Reentrant activity in a virtual 3D ventricular slab preparation subject to regional simulated ischemia: Role of the ischemic zone size. , 2008, , .		0
43	Effect of ectopic focus frequency on fibrillatory conduction in atrial remodelling tissue. A simulation study. , 2007, , .		0
44	Improvement of an extended Kalman filter power line interference suppressor for ECG signals. , 2007, , .		18
45	The safety factor approach in the analysis of reentrant patterns of activation in the ischemic virtual heart. , 2007, , .		1
46	The pH dependence on the electrophysiological effect of lidocaine in ventricular myocardium. A computer modelling study. , 2007, , .		0
47	Influence of 1B ischemic ventricular tissue on the automaticity of Purkinje fibers: A simulation study. , 2007, , .		3
48	Dispersion of refractoriness in a simulated ischemic 2D tissue and implications in vulnerability to reentry. , 2007, , .		1
49	Vulnerability to reentry in a 3D regionally ischemic ventricular slab preparation: A simulation study. , 2007, , .		1
50	Vulnerability to Reentry in a Regionally Ischemic Tissue: A Simulation Study. Annals of Biomedical Engineering, 2007, 35, 1756-1770.	1.3	31
51	Improvement of power line model in ECG for interference reduction using EKF. IFMBE Proceedings, 2007, , 109-113.	0.2	1
52	Effects of Pinacidil on Reentrant Arrhythmias Generated During Acute Regional Ischemia: A Simulation Study. Annals of Biomedical Engineering, 2005, 33, 897-906.	1.3	24
53	Modulation of the regional dispersion of repolarization by the action of class III antiarrhythmic drug dofetilide. , 2005, , .		0
54	A sensitivity study of the safety factor for conduction in the myocardium. , 2005, , .		8

#	ARTICLE	IF	CITATIONS
55	Effects of antiarrhythmic drug lidocaine on ventricular electrical activity. a computer modelling study. , 2005, , .		0
56	A computer model of reflection induced by early afterdepolarizations in ventricular tissue. , 2005, , .		0
57	Effects of acute ischemia and its components on the safety factor of conduction: a simulation study. , 2005, , .		0
58	Effect of acute global ischemia on the upper limit of vulnerability: a simulation study. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 286, H2078-H2088.	1.5	46
59	Effects of the antiarrhythmic drug dofetilide on regional heterogeneity of action potential duration: a computer modelling study. , 2004, , .		1
60	Computer simulation of action potential propagation on cardiac tissues: An efficient and scalable parallel approach. Advances in Parallel Computing, 2004, 13, 339-346.	0.3	4
61	Effects of the antiarrhythmic drug dofetilide on myocardial electrical activity: a computer modelling study. , 2003, , .		1
62	Inhibition of atrial action potentials alternans by calcium-activated chloride current blockade - simulation study. , 2003, , .		2
63	ELECTRICAL ACTIVITY AND REENTRY DURING ACUTE REGIONAL MYOCARDIAL ISCHEMIA: INSIGHTS FROM SIMULATIONS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 3703-3715.	0.7	46
64	Vulnerability to reentry during the acute phase of myocardial ischemia: a simulation study. , 2003, , .		0
65	Mechanistic investigation of extracellular K^{+} accumulation during acute myocardial ischemia: a simulation study. American Journal of Physiology - Heart and Circulatory Physiology, 2002, 283, H490-H500.	1.5	34
66	Ectopic Activity in Ventricular Cells Induced by Early Afterdepolarizations Developed in Purkinje Cells. Annals of Biomedical Engineering, 2000, 28, 1343-1351.	1.3	15
67	Pinacidil-induced block of action potential propagation in ischaemic tissue: a simulation study. , 2000, , .		0
68	Influence of electrical coupling on early after depolarizations in ventricular myocytes. IEEE Transactions on Biomedical Engineering, 1999, 46, 138-147.	2.5	42
69	Electrophysiologic models of heart cells and cell networks. IEEE Engineering in Medicine and Biology Magazine, 1998, 17, 73-83.	1.1	39
70	Action potential duration inhomogeneities in acute myocardial ischemia: a simulation study. , 1998, , .		0
71	Role of the ATP-sensitive potassium current in extracellular potassium accumulation during myocardial ischemia: a simulation study. , 1998, , .		2
72	Simulation study of the effect of pinacidil on ATP-sensitive potassium current and action potential duration in myocardial tissue. , 1998, , .		3

#	ARTICLE	IF	CITATIONS
73	Propagation of action potentials in cardiac acute regional ischemia: a computer simulation study. , 1997, , .		1
74	Inhibitory effect of subthreshold high-frequency stimuli: a computer simulation study. , 1997, , .		0
75	Simulation of Action Potentials From Metabolically Impaired Cardiac Myocytes. Circulation Research, 1996, 79, 208-221.	2.0	144
76	Electrochemical assays based on enzyme-electrode systems to determine glycerol and propylene glycol in tobacco casing. Sensors and Actuators B: Chemical, 1993, 16, 429-434.	4.0	4
77	Action potential model based on the compression of the cell membrane. , 1988, , .		0
78	Obtention of blood pressure dependent heart synchronized evoked potentials. , 1988, , .		1
79	Integrated mechanisms of K^{+} loss in myocardial ischemia: a simulation study. , 0, , .		0
80	Multichannel Acquisition Of Bioelectric Signals Using The Flying Capacitor Technique. , 0, , .		0
81	Simulation study of action potentials from metabolically impaired cardiac myocytes. , 0, , .		2
82	Simulation of triggered activity and abnormal automaticity in ventricular myocytes. , 0, , .		5
83	Ectopic activity generated by early after-depolarizations in ventricular tissue: a computer simulation study. , 0, , .		0
84	Role of the ATP-sensitive potassium current in the development of reentry in a ring model of cardiac tissue: a computer simulation study. , 0, , .		1
85	Prolongation of refractoriness by trains of subthreshold high-frequency stimuli: a simulation study. , 0, , .		0
86	Role of early afterdepolarizations on ectopic activity in ventricular tissue. A computer modeling study. , 0, , .		0
87	Simulation study of epicardial action potential under normal and ischemic conditions. , 0, , .		0
88	Simulation study of action potentials during acute myocardial ischemia. , 0, , .		1
89	Influence of Purkinje-muscle coupling on EAD development: a simulation study. , 0, , .		1
90	Numerical model for radiofrequency thermokeratoplasty. , 0, , .		1

#	ARTICLE	IF	CITATIONS
91	Simulation of ectopic activity induced by EADs in Purkinje fibers. Influence of Purkinje-muscle coupling. , 0, , .		0
92	Simulation study of the contribution of the ATP-dependent potassium current to extracellular potassium accumulation during myocardial ischemia. , 0, , .		3
93	Computer model of the effects of pinacidil on ATP-sensitive potassium current. , 0, , .		0
94	Postrepolarization refractoriness in ventricular cardiac cells: a simulation study. , 0, , .		0
95	Effects of potassium channel openers nicorandil and pinacidil on electrical activity of cardiac cells and cardiac tissues: a simulation study. , 0, , .		3
96	Effect of sodium inward current on extracellular potassium accumulation during myocardial ischemia: a simulation study. , 0, , .		3
97	Simulation study of the ionic mechanisms involved in the all-or-none repolarization observed under ischemic conditions. , 0, , .		0
98	Simulation study of electrical alternans in epicardial myocytes under ischemic conditions. , 0, , .		0
99	Simulation of reentry during acute myocardial ischemia: role of ATP-sensitive potassium current and acidosis. , 0, , .		1
100	Effect of Na ⁺ /K ⁺ pump inhibition on extracellular potassium accumulation during myocardial ischemia: a simulation study. , 0, , .		2
101	Simulation study of the effects of flecainide on ventricular muscle cells. , 0, , .		0
102	Mechanistic investigation of the causes of cellular K ⁺ loss during acute myocardial ischemia: a simulation study. , 0, , .		0
103	Simulation of reentry induced by early afterdepolarizations during acute myocardial ischemia. , 0, , .		0
104	Simulation of action potential propagation block on a bidimensional ventricular tissue model during regional myocardial ischaemia. , 0, , .		0
105	The effects of ischemia on the ectopic activity induced by EADs computer simulation. , 0, , .		0
106	Simulation of figure-of-eight reentry during acute inhomogeneous myocardial ischemia: role of ATP-sensitive potassium current. , 0, , .		1
107	Pinacidil modifies the vulnerability to reentry during regional myocardial ischemia in a dose dependent manner: a simulation study. , 0, , .		0
108	Effect of calcium-activated chloride current blockade on alternans of atrial action potentials: simulation study. , 0, , .		0

#	ARTICLE	IF	CITATIONS
109	Effect of acute global ischemia on cardiac vulnerability to electrical shocks. , 0, , .		0
110	Electrical activity and reentry in acute regional ischemia: insights from simulations. , 0, , .		4
111	Effects of pinacidil on refractoriness in acutely ischemic tissue: insights from experiments and simulations. , 0, , .		0
112	Effects of acute ischemia on the restitution curves of myocardial tissue: a simulation study. , 0, , .		1
113	Multiscale Modeling of Myocardial Electrical Activity: From Cell to Organ. , 0, , .		4
114	The Effect of Mitochondria in Intracellular Calcium Dynamics in Cardiomyocytes: a Simulation Study. , 0, , .		0
115	Ionic Modulation of Calcium Dynamics in Simulated Human Heart Failure. , 0, , .		0
116	Fibroblasts Induce Calcium Alternans When Coupled to Cardiomyocytes: A Simulation Study. , 0, , .		0