

Javier F SaÃ-z

List of Publications by Year in descending order

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Version: 2024-02-01

111
papers

1,822
citations

257450

24
h-index

330143

37
g-index

117
all docs

117
docs citations

117
times ranked

1653
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of Lead Position and Polarity on Paresthesia Coverage in Spinal Cord Stimulation Therapy: A Computational Study. <i>Neuromodulation</i> , 2022, 25, 680-692.	0.8	1
2	Considering population variability of electrophysiological models improves the in silico assessment of drug-induced torsadogenic risk. <i>Computer Methods and Programs in Biomedicine</i> , 2022, 221, 106934.	4.7	6
3	Cardiac computational modelling. <i>Revista Espanola De Cardiologia (English Ed)</i> , 2021, 74, 65-71.	0.6	1
4	Spontaneous activation under atrial fibrosis: A model using complex order derivatives. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2021, 95, 105618.	3.3	5
5	What Is the Role of Frequency on Neural Activation in Tonic Stimulation in SCS Therapy? A Computational Study on Sensory AI^2 Nerve Fibers. <i>IEEE Access</i> , 2021, 9, 107446-107461.	4.2	4
6	3D patient-specific spinal cord computational model for SCS management: potential clinical applications. <i>Journal of Neural Engineering</i> , 2021, 18, 036017.	3.5	7
7	Immuno-Electrophysiological Mechanisms of Functional Electrical Connections Between Recipient and Donor Heart in Patients With Orthotopic Heart Transplantation Presenting With Atrial Arrhythmias. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2021, 14, e008751.	4.8	2
8	Arrhythmogenic Effects of Genetic Mutations Affecting Potassium Channels in Human Atrial Fibrillation: A Simulation Study. <i>Frontiers in Physiology</i> , 2021, 12, 681943.	2.8	3
9	Directed graph mapping exceeds phase mapping in discriminating true and false rotors detected with a basket catheter in a complex in-silico excitation pattern. <i>Computers in Biology and Medicine</i> , 2021, 133, 104381.	7.0	5
10	B-PO05-011 DIRECTED GRAPH INFORMATION FLOW MAPPING FOR CHARACTERIZING CARDIAC ELECTRICAL PROPAGATION FROM UNANNOTATED UNIPOLAR ELECTROGRAMS. <i>Heart Rhythm</i> , 2021, 18, S375.	0.7	0
11	Characterization of Atrial Propagation Patterns and Fibrotic Substrate With a Modified Omnipolar Electrogram Strategy in Multi-Electrode Arrays. <i>Frontiers in Physiology</i> , 2021, 12, 674223.	2.8	5
12	Atrial proarrhythmic effect of lead as one of the PM10 metal components of air pollution. An in-silico study. <i>PLoS ONE</i> , 2021, 16, e0258313.	2.5	1
13	Macrophage-Dependent Interleukin-6-Production and Inhibition of IK Contributes to Acquired QT Prolongation in Lipotoxic Guinea Pig Heart. <i>International Journal of Molecular Sciences</i> , 2021, 22, 11249.	4.1	3
14	The Effects of Fibrotic Cell Type and Its Density on Atrial Fibrillation Dynamics: An In Silico Study. <i>Cells</i> , 2021, 10, 2769.	4.1	5
15	Fibrotic Remodeling during Persistent Atrial Fibrillation: In Silico Investigation of the Role of Calcium for Human Atrial Myofibroblast Electrophysiology. <i>Cells</i> , 2021, 10, 2852.	4.1	11
16	Directed Network Mapping Approach to Rotor Localization in Atrial Fibrillation Simulation. , 2021, 2021, 730-733.		1
17	<i>In Silico</i> Classifiers for the Assessment of Drug Proarrhythmicity. <i>Journal of Chemical Information and Modeling</i> , 2020, 60, 5172-5187.	5.4	22
18	When Does the IC ₅₀ Accurately Assess the Blocking Potency of a Drug?. <i>Journal of Chemical Information and Modeling</i> , 2020, 60, 1779-1790.	5.4	27

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19	Ranolazine as an Alternative Therapy to Flecainide for SCN5A V411M Long QT Syndrome Type 3 Patients. <i>Frontiers in Pharmacology</i> , 2020, 11, 580481.	3.5	4
20	Genesis of Atrial Fibrillation Under Different Diffuse Fibrosis Density Related with Atmospheric Pollution. In-Silico Study. <i>Communications in Computer and Information Science</i> , 2020, , 291-301.	0.5	1
21	Fibrillatory conduction in a simulated two-dimensional model of human atrial tissue: effect of the interaction of two ectopic foci. <i>Simulation</i> , 2019, 95, 577-591.	1.8	0
22	Heterogeneous Effects of Fibroblast-Myocyte Coupling in Different Regions of the Human Atria Under Conditions of Atrial Fibrillation. <i>Frontiers in Physiology</i> , 2019, 10, 847.	2.8	31
23	Plasticizer Interaction With the Heart. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2019, 12, e007294.	4.8	37
24	Differential Modulation of IK and ICa,L Channels in High-Fat Diet-Induced Obese Guinea Pig Atria. <i>Frontiers in Physiology</i> , 2019, 10, 1212.	2.8	15
25	An Open-Circuit Indirect Calorimetry Head Hood System for Measuring Methane Emission and Energy Metabolism in Small Ruminants. <i>Animals</i> , 2019, 9, 380.	2.3	9
26	Far-field contributions in multi-electrodes atrial recordings blur distinction between anatomical and functional reentries and may cause imaginary phase singularities " A computational study. <i>Computers in Biology and Medicine</i> , 2019, 108, 276-287.	7.0	11
27	The Antimalarial Chloroquine Reduces the Burden of Persistent Atrial Fibrillation. <i>Frontiers in Pharmacology</i> , 2019, 10, 1392.	3.5	11
28	Computational Study of the Effect of Electrode Polarity on Neural Activation Related to Paresthesia Coverage in Spinal Cord Stimulation Therapy. <i>Neuromodulation</i> , 2019, 22, 269-279.	0.8	10
29	Pro-arrhythmic effects of low plasma [K +] in human ventricle: An illustrated review. <i>Trends in Cardiovascular Medicine</i> , 2018, 28, 233-242.	4.9	16
30	In Silico QT and APD Prolongation Assay for Early Screening of Drug-Induced Proarrhythmic Risk. <i>Journal of Chemical Information and Modeling</i> , 2018, 58, 867-878.	5.4	28
31	Atrial Fibrosis Hampers Non-invasive Localization of Atrial Ectopic Foci From Multi-Electrode Signals: A 3D Simulation Study. <i>Frontiers in Physiology</i> , 2018, 9, 404.	2.8	20
32	Factors affecting basket catheter detection of real and phantom rotors in the atria: A computational study. <i>PLoS Computational Biology</i> , 2018, 14, e1006017.	3.2	52
33	Legacy data sharing to improve drug safety assessment: the eTOX project. <i>Nature Reviews Drug Discovery</i> , 2017, 16, 811-812.	46.4	56
34	Cardiac action potential repolarization revisited: early repolarization shows all-or-none behaviour. <i>Journal of Physiology</i> , 2017, 595, 6599-6612.	2.9	23
35	Complexity of Atrial Fibrillation Electrograms Through Nonlinear Signal Analysis: In Silico Approach. , 2017, , .		2
36	Non-invasive localization of atrial ectopic beats by using simulated body surface P-wave integral maps. <i>PLoS ONE</i> , 2017, 12, e0181263.	2.5	30

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37	CO, Pb ⁺⁺ and SO ₂ effects on L-type calcium channel and action potential in human atrial myocytes. In silico study. <i>Tecno LÃ³gicas</i> , 2017, 20, 113-123.	0.3	1
38	Corrigendum to "In silico screening of the impact of hERG channel kinetic abnormalities on channel block and susceptibility to acquired long QT syndrome" [J. Mol. Cell. Cardiol. 2014 126-137]. <i>Journal of Molecular and Cellular Cardiology</i> , 2015, 87, 270.	1.9	0
39	Detailed Anatomical and Electrophysiological Models of Human Atria and Torso for the Simulation of Atrial Activation. <i>PLoS ONE</i> , 2015, 10, e0141573.	2.5	77
40	Are multi-electrode arrays able to differentiate anatomical from functional reentries in an excitable sheet?. , 2015, , .		1
41	In silico screening of the impact of hERG channel kinetic abnormalities on channel block and susceptibility to acquired long QT syndrome. <i>Journal of Molecular and Cellular Cardiology</i> , 2015, 87, 271-282.	1.9	28
42	Ventricular Tachycardia and Early Fibrillation in Patients With Brugada Syndrome and Ischemic Cardiomyopathy Show Predictable Frequency-Phase Properties on the Precordial ECG Consistent With the Respective Arrhythmogenic Substrate. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2015, 8, 1133-1143.	4.8	10
43	Supraventricular Arrhythmias in a Realistic 3D Model of the Human Atria. , 2014, , 351-359.		0
44	Electrophysiological and Structural Remodeling in Heart Failure Modulate Arrhythmogenesis. 2D Simulation Study. <i>PLoS ONE</i> , 2014, 9, e103273.	2.5	37
45	In silico ischaemia-induced reentry at the Purkinje-ventricle interface. <i>Europace</i> , 2014, 16, 444-451.	1.7	7
46	Fractionated electrograms and rotors detection in chronic atrial fibrillation using model-based clustering. , 2014, 2014, 1579-82.		2
47	Dynamic Approximate Entropy Electroanatomic Maps Detect Rotors in a Simulated Atrial Fibrillation Model. <i>PLoS ONE</i> , 2014, 9, e114577.	2.5	33
48	In silico screening of the impact of hERG channel kinetic abnormalities on channel block and susceptibility to acquired long QT syndrome. <i>Journal of Molecular and Cellular Cardiology</i> , 2014, 72, 126-137.	1.9	37
49	Cardiovascular fitness in youth: association with obesity and metabolic abnormalities. <i>Nutricion Hospitalaria</i> , 2014, 29, 1290-7.	0.3	14
50	Ubiquitous monitoring and assessment of childhood obesity. <i>Personal and Ubiquitous Computing</i> , 2013, 17, 1147-1157.	2.8	7
51	Computational assessment of drug-induced effects on the electrocardiogram: from ion channel to body surface potentials. <i>British Journal of Pharmacology</i> , 2013, 168, 718-733.	5.4	98
52	Carbon monoxide effects on human ventricle action potential assessed by mathematical simulations. <i>Frontiers in Physiology</i> , 2013, 4, 282.	2.8	7
53	In silico assessment of drug safety in human heart applied to late sodium current blockers. <i>Channels</i> , 2013, 7, 249-262.	2.8	27
54	A Three-Dimensional Human Atrial Model with Fiber Orientation. Electrograms and Arrhythmic Activation Patterns Relationship. <i>PLoS ONE</i> , 2013, 8, e50883.	2.5	73

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55	Dominant frequency and organization index maps in a realistic three-dimensional computational model of atrial fibrillation. <i>Europace</i> , 2012, 14, v25-v32.	1.7	16
56	Simulation and Mechanistic Investigation of the Arrhythmogenic Role of the Late Sodium Current in Human Heart Failure. <i>PLoS ONE</i> , 2012, 7, e32659.	2.5	49
57	Could Virtual Reality Be an Effective Tool to Combat Obesity and Sedentariness in Children? Results from Two Research Studies. <i>Lecture Notes in Computer Science</i> , 2012, , 143-150.	1.3	0
58	Interaction of Specialized Cardiac Conduction System With Antiarrhythmic Drugs: A Simulation Study. <i>IEEE Transactions on Biomedical Engineering</i> , 2011, 58, 3475-3478.	4.2	24
59	Arritmias potenciadas por isquemia sub-epicárdica en pared transmural heterogénea cardiaca: un estudio teórico de simulación. <i>Revista Colombiana De Cardiología</i> , 2011, 18, 37-51.	0.1	0
60	A Multiscale Simulation System for the Prediction of Drug-Induced Cardiotoxicity. <i>Journal of Chemical Information and Modeling</i> , 2011, 51, 483-492.	5.4	86
61	Systematic characterization of the ionic basis of rabbit cellular electrophysiology using two ventricular models. <i>Progress in Biophysics and Molecular Biology</i> , 2011, 107, 60-73.	2.9	36
62	Effects of the Antiarrhythmic Drug Dofetilide on Transmural Dispersion of Repolarization in Ventriculum. A Computer Modeling Study. <i>IEEE Transactions on Biomedical Engineering</i> , 2011, 58, 43-53.	4.2	19
63	Modeling Atrial Fiber Orientation in Patient-Specific Geometries: A Semi-automatic Rule-Based Approach. <i>Lecture Notes in Computer Science</i> , 2011, , 223-232.	1.3	59
64	Simulating Drug-Induced Effects on the Heart: From Ion Channel to Body Surface Electrocardiogram. <i>Lecture Notes in Computer Science</i> , 2011, , 259-266.	1.3	6
65	Human and rabbit inter-species comparison of ionic mechanisms of arrhythmic risk: A simulation study. , 2010, 2010, 3253-6.		5
66	Effects of late sodium current enhancement during LQT-related arrhythmias. A simulation study. , 2010, 2010, 3237-40.		6
67	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
68	Exploring the role of pH in modulating the effects of lidocaine in virtual ischemic tissue. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2010, 299, H1615-H1624.	3.2	9
69	Vulnerability for reentry in a three dimensional model of human atria: a simulation study. , 2010, 2010, 224-7.		7
70	Modeling Drug Effects on Personalized 3D Models of the Heart: A Simulation Study. <i>Lecture Notes in Computer Science</i> , 2010, , 222-231.	1.3	3
71	The Relative Role of Refractoriness and Source-Sink Relationship in Reentry Generation during Simulated Acute Ischemia. <i>Annals of Biomedical Engineering</i> , 2009, 37, 1560-1571.	2.5	24
72	Pulse Wave Velocity and Digital Volume Pulse as Indirect Estimators of Blood Pressure: Pilot Study on Healthy Volunteers. <i>Cardiovascular Engineering (Dordrecht, Netherlands)</i> , 2009, 9, 104-112.	1.0	20

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73	Photoplethysmographic Augmentation Index as a Non Invasive Indicator for Vascular Assessments. IFMBE Proceedings, 2009, , 1167-1170.	0.3	4
74	Role of Ca ²⁺ -Dependent Cl ⁻ Current on Delayed Afterdepolarizations. A Simulation Study. Annals of Biomedical Engineering, 2008, 36, 752-761.	2.5	5
75	A Grid Computing-Based Approach for the Acceleration of Simulations in Cardiology. IEEE Transactions on Information Technology in Biomedicine, 2008, 12, 138-144.	3.2	12
76	A computer based photoplethysmographic vascular analyzer through derivatives. , 2008, , .		11
77	Reentrant mechanisms triggered by ectopic activity in a three-dimensional realistic model of human atrium. a computer simulation study. , 2008, , .		0
78	Effect of lidocaine in acute ischemic situations: A computer modelling study. , 2008, , .		0
79	Automatic brachial ankle pulse wave velocity measurements for vascular damage assessments. , 2008, , .		2
80	Reentrant activity in a virtual 3D ventricular slab preparation subject to regional simulated ischemia: Role of the ischemic zone size. , 2008, , .		0
81	Effect of ectopic focus frequency on fibrillatory conduction in atrial remodelling tissue. A simulation study. , 2007, , .		0
82	The safety factor approach in the analysis of reentrant patterns of activation in the ischemic virtual heart. , 2007, , .		1
83	The pH dependence on the electrophysiological effect of lidocaine in ventricular myocardium. A computer modelling study. , 2007, , .		0
84	Dispersion of refractoriness in a simulated ischemic 2D tissue and implications in vulnerability to reentry. , 2007, , .		1
85	Vulnerability to reentry in a 3D regionally ischemic ventricular slab preparation: A simulation study. , 2007, , .		1
86	Vulnerability to Reentry in a Regionally Ischemic Tissue: A Simulation Study. Annals of Biomedical Engineering, 2007, 35, 1756-1770.	2.5	31
87	Modulation of the regional dispersion of repolarization by the action of class III antiarrhythmic drug dofetilide. , 2005, , .		0
88	A sensitivity study of the safety factor for conduction in the myocardium. , 2005, , .		8
89	Effects of antiarrhythmic drug lidocaine on ventricular electrical activity. a computer modelling study. , 2005, , .		0
90	A computer model of reflection induced by early afterdepolarizations in ventricular tissue. , 2005, , .		0

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91	Effects of acute ischemia and its components on the safety factor of conduction: a simulation study. , 2005, , .		0
92	Modeling for radio-frequency conductive keratoplasty: implications for the maximum temperature reached in the cornea. Physiological Measurement, 2005, 26, 157-172.	2.1	36
93	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
94	Dofetilide Effects on the Inhibition by Trains of Subthreshold Conditioning Stimuli. PACE - Pacing and Clinical Electrophysiology, 2004, 27, 327-332.	1.2	2
95	Ring electrode for radio-frequency heating of the cornea: Modelling and in vitro experiments. Medical and Biological Engineering and Computing, 2003, 41, 630-639.	2.8	17
96	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.	1.7	46
97	Radio-frequency heating of the cornea: theoretical model and in vitro experiments. IEEE Transactions on Biomedical Engineering, 2002, 49, 196-205.	4.2	21
98	Small bowel motility: relationship between smooth muscle contraction and electroenterogram signal. Medical Engineering and Physics, 2000, 22, 189-199.	1.7	39
99	Ectopic Activity in Ventricular Cells Induced by Early Afterdepolarizations Developed in Purkinje Cells. Annals of Biomedical Engineering, 2000, 28, 1343-1351.	2.5	15
100	Influence of electrical coupling on early after depolarizations in ventricular myocytes. IEEE Transactions on Biomedical Engineering, 1999, 46, 138-147.	4.2	42
101	Electrophysiologic models of heart cells and cell networks. IEEE Engineering in Medicine and Biology Magazine, 1998, 17, 73-83.	0.8	39
102	Simulation of Action Potentials From Metabolically Impaired Cardiac Myocytes. Circulation Research, 1996, 79, 208-221.	4.5	144
103	Relationship between intestinal motility indexes from internal and surface recordings of electroenterogram. , 0, , .		2
104	Lead and Carbon Monoxide Effects on Human Atrial Action Potential. In Silico Study. , 0, , .		0
105	Sulfur Dioxide Effects on Human Atrial Action Potential. In Silico Study. , 0, , .		0
106	In Silico Analysis of the Effects of Fibroblasts Coupling to Atrial Myocytes under Conditions of Atrial Fibrillation Remodeling. , 0, , .		1
107	Patient-Tailored In Silico 3D Simulations and Models From Electroanatomical Maps of the Left Atrium. , 0, , .		0
108	Fibroblasts Induce Calcium Alternans When Coupled to Cardiomyocytes: A Simulation Study. , 0, , .		0

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109	Proliferation of Fibroblast Modulates the Action Potential Duration Dispersion: An Atrial Fibrosis Model Using Fractional Diffusion. , 0, , .		0
110	Development and Validation of an In Silico Rabbit Purkinje Cell Action Potential Model: A Step Towards a Drug Safety Testing Tool. , 0, , .		0
111	Surface recording of small bowel electrical activity. , 0, , .		5