Joseph L Greenstein

List of Publications by Year
in descending order

49 papers	2,260 citations	218381 26 h-index	223531 46 g-index
56 all docs	56 docs citations	56 times ranked	2201 citing authors

#	Article	IF	Citations
1	Role of the Calcium-Independent Transient Outward Current <i>I</i> _{to1} in Shaping Action Potential Morphology and Duration. Circulation Research, 2000, 87, 1026-1033.	2.0	197
2	An Integrative Model of the Cardiac Ventricular Myocyte Incorporating Local Control of Ca2+ Release. Biophysical Journal, 2002, 83, 2918-2945.	0.2	173
3	The Role of Stochastic and Modal Gating of Cardiac L-Type Ca2+ Channels on Early After-Depolarizations. Biophysical Journal, 2005, 88, 85-95.	0.2	138
4	Mechanisms of Excitation-Contraction Coupling in an Integrative Model of the Cardiac Ventricular Myocyte. Biophysical Journal, 2006, 90, 77-91.	0.2	133
5	K⁺current changes account for the rate dependence of the action potential in the human atrial myocyte. American Journal of Physiology - Heart and Circulatory Physiology, 2009, 297, H1398-H1410.	1.5	129
6	From mitochondrial ion channels to arrhythmias in the heart: computational techniques to bridge the spatio-temporal scales. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 3381-3409.	1.6	126
7	Electrotonic Coupling between Human Atrial Myocytes and Fibroblasts Alters Myocyte Excitability and Repolarization. Biophysical Journal, 2009, 97, 2179-2190.	0.2	122
8	A Simplified Local Control Model of Calcium-Induced Calcium Release in Cardiac Ventricular Myocytes. Biophysical Journal, 2004, 87, 3723-3736.	0.2	119
9	Molecular Interactions Between Two Long-QT Syndrome Gene Products, HERG and KCNE2 , Rationalized by In Vitro and In Silico Analysis. Circulation Research, 2001, 89, 33-38.	2.0	104
10	Superresolution Modeling of Calcium Release in the Heart. Biophysical Journal, 2014, 107, 3018-3029.	0.2	96
11	Mathematical simulations of ligand-gated and cell-type specific effects on the action potential of human atrium. Progress in Biophysics and Molecular Biology, 2008, 98, 161-170.	1.4	59
12	Protein Geometry and Placement in the Cardiac Dyad Influence Macroscopic Properties of Calcium-Induced Calcium Release. Biophysical Journal, 2007, 92, 3379-3396.	0.2	57
13	Role of CaMKII in RyR leak, EC coupling and action potential duration: A computational model. Journal of Molecular and Cellular Cardiology, 2010, 49, 617-624.	0.9	57
14	Integrative Systems Models of Cardiac Excitationâ€“Contraction Coupling. Circulation Research, 2011, 108, 70-84.	2.0	56
15	Data-driven discovery of a novel sepsis pre-shock state predicts impending septic shock in the ICU. Scientific Reports, 2019, 9, 6145.	1.6	56
16	A Computational Model of Reactive Oxygen Species and Redox Balance in Cardiac Mitochondria. Biophysical Journal, 2013, 105, 1045-1056.	0.2	55
17	CaMKII-Induced Shift in Modal Gating Explains L-Type Ca2+ Current Facilitation: A Modeling Study. Biophysical Journal, 2009, 96, 1770-1785.	0.2	48
18	Multi-scale models of local control of calcium induced calcium release. Progress in Biophysics and Molecular Biology, 2006, 90, 136-150.	1.4	36

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19	An Integrated Mitochondrial ROS Production and Scavenging Model: Implications for Heart Failure. Biophysical Journal, 2013, 105, 2832-2842.	0.2	36
20	On the Adjacency Matrix of RyR2 Cluster Structures. PLoS Computational Biology, 2015, 11, e1004521.	1.5	33
21	Roles of phosphodiesterases in the regulation of the cardiac cyclic nucleotide cross-talk signaling network. Journal of Molecular and Cellular Cardiology, 2016, 91, 215-227.	0.9	33
22	Modeling calcium regulation of contraction, energetics, signaling, and transcription in the cardiac myocyte. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2016, 8, 37-67.	6.6	31
23	Integrative modeling of the cardiac ventricular myocyte. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2011, 3, 392-413.	6.6	30
24	Modeling the Actions of Î²-Adrenergic Signaling on Excitation-Contraction Coupling Processes. Annals of the New York Academy of Sciences, 2004, 1015, 16-27.	1.8	27
25	Cardiac Resynchronization Therapy Improves Altered Na Channel Gating in Canine Model of Dyssynchronous Heart Failure. Circulation: Arrhythmia and Electrophysiology, 2013, 6, 546-554.	2.1	27
26	Mechanistic Investigation of the Arrhythmogenic Role of Oxidized CaMKII in the Heart. Biophysical Journal, 2015, 109, 838-849.	0.2	27
27	Toward an Integrative Computational Model of the Guinea Pig Cardiac Myocyte. Frontiers in Physiology, 2012, 3, 244.	1.3	25
28	Interaction between phosphodiesterases in the regulation of the cardiac Î²-adrenergic pathway. Journal of Molecular and Cellular Cardiology, 2015, 88, 29-38.	0.9	22
29	Modeling Na + -Ca 2+ exchange in the heart: Allosteric activation, spatial localization, sparks and excitation-contraction coupling. Journal of Molecular and Cellular Cardiology, 2016, 99, 174-187.	0.9	20
30	Using models of the myocyte for functional interpretation of cardiac proteomic data. Journal of Physiology, 2005, 563, 73-81.	1.3	19
31	Multiscale Modeling of Calcium Signaling in the Cardiac Dyad. Annals of the New York Academy of Sciences, 2006, 1080, 362-375.	1.8	19
32	Cardiac myocytes and local signaling in nano-domains. Progress in Biophysics and Molecular Biology, 2011, 107, 48-59.	1.4	17
33	Estimating the probabilities of rare arrhythmic events in multiscale computational models of cardiac cells and tissue. PLoS Computational Biology, 2017, 13, e1005783.	1.5	16
34	Spectral clustering of risk score trajectories stratifies sepsis patients by clinical outcome and interventions received. ELife, 2020, 9, .	2.8	15
35	Modeling CaMKII-mediated regulation of L-type Ca2+ channels and ryanodine receptors in the heart. Frontiers in Pharmacology, 2014, 5, 60.	1.6	11
36	CaMKII-dependent activation of late I<inf>Na</inf> contributes to cellular arrhythmia in a model of the cardiac myocyte. , 2011, 2011, 4665-8.		10

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37	A bilobal model of Ca2+-dependent inactivation to probe the physiology of L-type Ca2+ channels. Journal of General Physiology, 2018, 150, 1688-1701.	0.9	10
38	Na+ microdomains and sparks: Role in cardiac excitation-contraction coupling and arrhythmias in ankyrin-B deficiency. Journal of Molecular and Cellular Cardiology, 2019, 128, 145-157.	0.9	10
39	Early Prediction of Multiple Organ Dysfunction in the Pediatric Intensive Care Unit. Frontiers in Pediatrics, 2021, 9, 711104.	0.9	10
40	Models and Simulations as a Service: Exploring the Use of Galaxy for Delivering Computational Models. Biophysical Journal, 2016, 110, 1038-1043.	0.2	9
41	Computational signatures for post-cardiac arrest trajectory prediction: Importance of early physiological time series. Anaesthesia, Critical Care & Pain Medicine, 2022, 41, 101015.	0.6	8
42	Mechanisms of the cyclic nucleotide cross-talk signaling network in cardiac L-type calcium channel regulation. Journal of Molecular and Cellular Cardiology, 2017, 106, 29-44.	0.9	7
43	Prediction of Impending Septic Shock in Children With Sepsis. , 2021, 3, e0442.		7
44	Extinguishing the Sparks. Biophysical Journal, 2013, 104, 2115-2117.	0.2	6
45	SWIFT: A deep learning approach to prediction of hypoxemic events in critically-Ill patients using SpO2 waveform prediction. PLoS Computational Biology, 2021, 17, e1009712.	1.5	5
46	The Ongoing Journey to Understand Heart Function Through Integrative Modeling. Circulation Research, 2004, 95, 1135-1136.	2.0	4
47	Predicting Flow Rate Escalation for Pediatric Patients on High Flow Nasal Cannula Using Machine Learning. Frontiers in Pediatrics, 2021, 9, 734753.	0.9	2
48	Estimating ectopic beat probability with simplified statistical models that account for experimental uncertainty. PLoS Computational Biology, 2021, 17, e1009536.	1.5	1
49	Local control model illustrates how action potential morphology affects Ca2+ release. FASEB Journal, 2012, 26, 1053.1.	0.2	0