Seth H Weinberg

List of Publications by Year
in descending order

66	1,498	516561 16	345118 36
papers	citations	h-index	g-index

74	74	74	1980
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Computational modeling of aberrant electrical activity following remuscularization with intramyocardially injected pluripotent stem cell-derived cardiomyocytes. Journal of Molecular and Cellular Cardiology, 2022, 162, 97-109.	0.9	12
2	A rapid electromechanical model to predict reverse remodeling following cardiac resynchronization therapy. Biomechanics and Modeling in Mechanobiology, 2022, 21, 231-247.	1.4	7
3	Ion Channel Modeling beyond State of the Art: A Comparison with a System Theory-Based Model of the Shaker-Related Voltage-Gated Potassium Channel Kv1.1. Cells, 2022, 11, 239.	1.8	5
4	Emerging therapeutic targets for cardiac hypertrophy. Expert Opinion on Therapeutic Targets, 2022, 26, 29-40.	1.5	14
5	Automaticity in ventricular myocyte cell pairs with ephaptic and gap junction coupling. Chaos, 2022, 32, 033123.	1.0	8
6	A data-assimilation approach to predict population dynamics during epithelial-mesenchymal transition. Biophysical Journal, 2022, 121, 3061-3080.	0.2	2
7	Cellular mitosis predicts vessel stability in a mechanochemical model of sprouting angiogenesis. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1195-1208.	1.4	1
8	Mechanisms underlying age-associated manifestation of cardiac sodium channel gain-of-function. Journal of Molecular and Cellular Cardiology, 2021, 153, 60-71.	0.9	18
9	Immunofluorescence Image Feature Analysis and Phenotype Scoring Pipeline for Distinguishing Epithelialâ€“Mesenchymal Transition. Microscopy and Microanalysis, 2021, 27, 849-859.	0.2	5
10	Statistical Approach to Incorporating Experimental Variability into a Mathematical Model of the Voltage-Gated Na+ Channel and Human Atrial Action Potential. Cells, 2021, 10, 1516.	1.8	0
11	Effects of substrate stiffness and actin velocity on in silico fibronectin fibril morphometry and mechanics. PLoS ONE, 2021, 16, e0248256.	1.1	0
12	Intercalated disk nanoscale structure regulates cardiac conduction. Journal of General Physiology, 2021, 153, .	0.9	31
13	Sodium channels and the intercalated disk â€“ it is all about location, location, location. Journal of Physiology, 2021, 599, 4735-4736.	1.3	0
14	Cellular Size, Gap Junctions, and Sodium Channel Properties Govern Developmental Changes in Cardiac Conduction. Frontiers in Physiology, 2021, 12, 731025.	1.3	20
15	Hypernatremia and intercalated disc edema synergistically exacerbate long-QT syndrome type 3 phenotype. American Journal of Physiology - Heart and Circulatory Physiology, 2021, 321, H1042-H1055.	1.5	9
16	Distributed synthesis of sarcolemmal and sarcoplasmic reticulum membrane proteins in cardiac myocytes. Basic Research in Cardiology, 2021, 116, 63.	2.5	19
17	Initiation and entrainment of multicellular automaticity via diffusion limited extracellular domains. Biophysical Journal, 2021, 120, 5279-5294.	0.2	4
18	Multicellular mechanochemical hybrid cellular Potts model of tissue formation during epithelialâ€mesenchymal transition. Computational and Systems Oncology, 2021, 1, .	1.1	4

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19	Dual regulation by subcellular calcium heterogeneity and heart rate variability on cardiac electromechanical dynamics. Chaos, 2020, 30, 093129.	1.0	3
20	Binucleate Cell Atlasing: An Intracellular Object Localization Tool for Single-Cell Fluorescence Microscopy. Microscopy and Microanalysis, 2020, 26, 602-604.	0.2	0
21	Intercellular Sodium Regulates Repolarization in Cardiac Tissue with Sodium Channel Gain of Function. Biophysical Journal, 2020, 118, 2829-2843.	0.2	23
22	Death Certification in Northern Alberta. American Journal of Forensic Medicine and Pathology, 2020, 41, 11-17.	0.4	7
23	Cell Fate Forecasting: A Data-Assimilation Approach to Predict Epithelial-Mesenchymal Transition. Biophysical Journal, 2020, 118, 1749-1768.	0.2	6
24	A hybrid model of intercellular tension and cellâ€“matrix mechanical interactions in a multicellular geometry. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1997-2013.	1.4	17
25	Memory in a fractional-order cardiomyocyte model alters voltage- and calcium-mediated instabilities. Communications in Nonlinear Science and Numerical Simulation, 2020, 89, 105340.	1.7	10
26	Mechanochemical Signaling of the Extracellular Matrix in Epithelial-Mesenchymal Transition. Frontiers in Cell and Developmental Biology, 2019, 7, 135.	1.8	91
27	Mechanochemical Coupling and Junctional Forces during Collective Cell Migration. Biophysical Journal, 2019, 117, 170-183.	0.2	26
28	Attitudes Towards Forensic Autopsy Standard B3.7 and the Use of Physician Extenders in Select Autopsy Cases. Academic Forensic Pathology, 2019, 9, 181-190.	0.3	0
29	Delayed afterdepolarizationâ€induced triggered activity in cardiac purkinje cells mediated through cytosolic calcium diffusion waves. Physiological Reports, 2019, 7, e14296.	0.7	3
30	How to Boost Efficacy of a SodiumÂChannel Blocker. JACC Basic To Translational Science, 2019, 4, 752-754.	1.9	0
31	Heart rate variability alters cardiac repolarization and electromechanical dynamics. Journal of Theoretical Biology, 2018, 442, 31-43.	0.8	12
32	Heart Rate Variability Alters Cardiac Alternans and Electromechanical Dynamics. Biophysical Journal, 2018, 114, 472a.	0.2	1
33	Analysis of heterogeneous cardiac pacemaker tissue models and traveling wave dynamics. Journal of Theoretical Biology, 2018, 459, 18-35.	0.8	6
34	Calcium Ion Fluctuations Alter Channel Gating in a Stochastic Luminal Calcium Release Site Model. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2017, 14, 611-619.	1.9	5
35	Revealing the Concealed Nature of Long-QT Type 3 Syndrome. Circulation: Arrhythmia and Electrophysiology, 2017, 10, e004400.	2.1	49
36	Mechanotransduction Dynamics at the Cell-Matrix Interface. Biophysical Journal, 2017, 112, 1962-1974.	0.2	37

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37	Memory in a fractional-order cardiomyocyte model alters properties of alternans and spontaneous activity. Chaos, 2017, 27, 093904.	1.0	12
38	Ephaptic coupling rescues conduction failure in weakly coupled cardiac tissue with voltage-gated gap junctions. Chaos, 2017, 27, 093908.	1.0	47
39	Multiple Cryptic Binding Sites are Necessary for Robust Fibronectin Assembly: An In Silico Study. Scientific Reports, 2017, 7, 18061.	1.6	15
40	Calcium Dynamics and Cardiac Arrhythmia. Clinical Medicine Insights: Cardiology, 2017, 11, 117954681773952.	0.6	11
41	Role of Cytosolic Calcium Diffusion in Murine Cardiac Purkinje Cells. Clinical Medicine Insights: Cardiology, 2016, 10s1, CMC.S39705.	0.6	3
42	Impaired Sarcoplasmic Reticulum Calcium Uptake and Release Promote Electromechanically and Spatially Discordant Alternans: A Computational Study. Clinical Medicine Insights: Cardiology, 2016, 10s1, CMC.S39709.	0.6	10
43	An Apache Spark Implementation of Block Power Method for Computing Dominant Eigenvalues and Eigenvectors of Large-Scale Matrices. , 2016, , .		3
44	Population Density and Moment-based Approaches to Modeling Domain Calcium-mediated Inactivation of L-type Calcium Channels. Acta Biotheoretica, 2016, 64, 11-32.	0.7	0
45	Microdomain [Ca²⁺] Fluctuations Alter Temporal Dynamics in Models of Ca²⁺-Dependent Signaling Cascades and Synaptic Vesicle Release. Neural Computation, 2016, 28, 493-524.	1.3	4
46	Spatial discordance and phase reversals during alternate pacing in discrete-time kinematic and cardiomyocyte ionic models. Chaos, 2015, 25, 103119.	1.0	7
47	Ca2+-activation kinetics modulate successive puff/spark amplitude, duration and inter-event-interval correlations in a Langevin model of stochastic Ca2+ release. Mathematical Biosciences, 2015, 264, 101-107.	0.9	8
48	Calcium homeostasis in a local/global whole cell model of permeabilized ventricular myocytes with a Langevin description of stochastic calcium release. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 308, H510-H523.	1.5	9
49	Membrane Capacitive Memory Alters Spiking in Neurons Described by the Fractional-Order Hodgkin-Huxley Model. PLoS ONE, 2015, 10, e0126629.	1.1	52
50	High frequency stimulation of cardiac myocytes: A theoretical and computational study. Chaos, 2014, 24, 043104.	1.0	6
51	The Influence of Ca2+ Buffers on Free [Ca2+] Fluctuations and the Effective Volume of Ca2+ Microdomains. Biophysical Journal, 2014, 106, 2693-2709.	0.2	28
52	Defibrillation success with high frequency electric fields is related to degree and location of conduction block. Heart Rhythm, 2013, 10, 740-748.	0.3	25
53	Characteristics of Medical Examiner/Coroner Offices Accredited by the National Association of Medical Examiners. Journal of Forensic Sciences, 2013, 58, 1193-1199.	0.9	10
54	High-Frequency Stimulation of Excitable Cells and Networks. PLoS ONE, 2013, 8, e81402.	1.1	13

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55	Discrete-State Stochastic Models of Calcium-Regulated Calcium Influx and Subspace Dynamics Are Not Well-Approximated by ODEs That Neglect Concentration Fluctuations. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-17.	0.7	14
56	Cardiomyocytes derived from human induced pluripotent stem cells as models for normal and diseased cardiac electrophysiology and contractility. Progress in Biophysics and Molecular Biology, 2012, 110, 166-177.	1.4	56
57	Electrophysiological and contractile function of cardiomyocytes derived from human embryonic stem cells. Progress in Biophysics and Molecular Biology, 2012, 110, 178-195.	1.4	79
58	Oscillation in Cycle Length Induces Transient Discordant and Steady-State Concordant Alternans in the Heart. PLoS ONE, 2012, 7, e40477.	1.1	14
59	A Universal System for Highly Efficient Cardiac Differentiation of Human Induced Pluripotent Stem Cells That Eliminates Interline Variability. PLoS ONE, 2011, 6, e18293.	1.1	363
60	Reversible Cardiac Conduction Block and Defibrillation with High-Frequency Electric Field. Science Translational Medicine, 2011, 3, 102ra96.	5.8	42
61	Vulnerable windows define susceptibility to alternans and spatial discordance. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 298, H1727-H1737.	1.5	11
62	In Vitro Electrophysiological Mapping of Stem Cells. Methods in Molecular Biology, 2010, 660, 215-237.	0.4	19
63	Phase-dependent stimulation effects on bursting activity in a neural network cortical simulation. Epilepsy Research, 2009, 84, 42-55.	0.8	32
64	Representation of Collective Electrical Behavior of Cardiac Cell Sheets. Biophysical Journal, 2008, 95, 1138-1150.	0.2	14
65	Full-field swept-source phase microscopy. Optics Letters, 2006, 31, 1462.	1.7	119
66	Full-field swept-source phase microscopy. , 2006, , .		9