Alan Garfinkel

List of Publications by Year
in descending order

44 papers	3,289 citations	257450 24 h-index	243625 44 g-index
45 all docs	45 docs citations	45 times ranked	2313 citing authors

#	Article	IF	Citations
1	From Pulsus to Pulseless. Circulation Research, 2006, 98, 1244-1253.	4.5	386
2	A Rabbit Ventricular Action Potential Model Replicating Cardiac Dynamics at Rapid Heart Rates. Biophysical Journal, 2008, 94, 392-410.	0.5	370
3	Mechanisms of Discordant Alternans and Induction of Reentry in Simulated Cardiac Tissue. Circulation, 2000, 102, 1664-1670.	1.6	355
4	Cardiac electrical restitution properties and stability of reentrant spiral waves: a simulation study. American Journal of Physiology - Heart and Circulatory Physiology, 1999, 276, H269-H283.	3.2	225
5	Spatiotemporal Heterogeneity in the Induction of Ventricular Fibrillation by Rapid Pacing. Circulation Research, 1999, 84, 1318-1331.	4.5	212
6	Nonlinear and stochastic dynamics in the heart. Physics Reports, 2014, 543, 61-162.	25.6	166
7	Origins of Spiral Wave Meander and Breakup in a Two-Dimensional Cardiac Tissue Model. Annals of Biomedical Engineering, 2000, 28, 755-771.	2.5	150
8	Spatially Discordant Alternans in Cardiac Tissue. Circulation Research, 2006, 99, 520-527.	4.5	146
9	Pattern formation by vascular mesenchymal cells. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 9247-9250.	7.1	127
10	Multi-scale modeling in biology: How to bridge the gaps between scales?. Progress in Biophysics and Molecular Biology, 2011, 107, 21-31.	2.9	111
11	Left-Right Symmetry Breaking in Tissue Morphogenesis via Cytoskeletal Mechanics. Circulation Research, 2012, 110, 551-559.	4.5	109
12	Dynamic Origin of Spatially Discordant Alternans in Cardiac Tissue. Biophysical Journal, 2007, 92, 448-460.	0.5	98
13	A simulation study of the effects of cardiac anatomy in ventricular fibrillation. Journal of Clinical Investigation, 2004, 113, 686-693.	8.2	87
14	Electrophysiological heterogeneity and stability of reentry in simulated cardiac tissue. American Journal of Physiology - Heart and Circulatory Physiology, 2001, 280, H535-H545.	3.2	79
15	Delayed afterdepolarizations generate both triggers and a vulnerable substrate promoting reentry in cardiac tissue. Heart Rhythm, 2015, 12, 2115-2124.	0.7	59
16	Local regulation of the threshold for calcium sparks in rat ventricular myocytes: role of sodium-calcium exchange. Journal of Physiology, 1999, 520, 431-438.	2.9	54
17	Acceleration of cardiac tissue simulation with graphic processing units. Medical and Biological Engineering and Computing, 2009, 47, 1011-1015.	2.8	54
18	Matrix GLA Protein, an Inhibitory Morphogen in Pulmonary Vascular Development. Journal of Biological Chemistry, 2007, 282, 30131-30142.	3.4	53

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19	Simulation Methods and Validation Criteria for Modeling Cardiac Ventricular Electrophysiology. PLoS ONE, 2014, 9, e114494.	2.5	48
20	Directing tissue morphogenesis via self-assembly of vascular mesenchymal cells. Biomaterials, 2012, 33, 9019-9026.	11.4	39
21	Branching patterns emerge in a mathematical model of the dynamics of lung development. Journal of Physiology, 2014, 592, 313-324.	2.9	36
22	Alternans and the onset of ventricular fibrillation. Physical Review E, 2000, 62, 4043-4048.	2.1	33
23	Inferring the Cellular Origin of Voltage and Calcium Alternans from the Spatial Scales of Phase Reversal during Discordant Alternans. Biophysical Journal, 2007, 92, L33-L35.	0.5	30
24	Spirals, Chaos, and New Mechanisms of Wave Propagation. PACE - Pacing and Clinical Electrophysiology, 1997, 20, 414-421.	1.2	29
25	Front motion and localized states in an asymmetric bistable activator-inhibitor system with saturation. Physical Review E, 2008, 77, 035204.	2.1	23
26	Microstructural Infarct Border Zone Remodeling in the Post-infarct Swine Heart Measured by Diffusion Tensor MRI. Frontiers in Physiology, 2018, 9, 826.	2.8	22
27	Eight (or more) kinds of alternans. Journal of Electrocardiology, 2007, 40, S70-S74.	0.9	19
28	Electrophysiology of Heart Failure Using a Rabbit Model: From the Failing Myocyte to Ventricular Fibrillation. PLoS Computational Biology, 2016, 12, e1004968.	3.2	19
29	Stochastic pacing reveals the propensity to cardiac action potential alternans and uncovers its underlying dynamics. Journal of Physiology, 2016, 594, 2537-2553.	2.9	17
30	Memory-Induced Chaos in Cardiac Excitation. Physical Review Letters, 2017, 118, 138101.	7.8	17
31	A Dynamical Threshold for Cardiac Delayed Afterdepolarization-Mediated Triggered Activity. Biophysical Journal, 2016, 111, 2523-2533.	0.5	16
32	Mechanisms of Side Branching and Tip Splitting in a Model of Branching Morphogenesis. PLoS ONE, 2014, 9, e102718.	2.5	16
33	Patterns of periodic holes created by increased cell motility. Interface Focus, 2012, 2, 457-464.	3.0	15
34	Redundancy and multifunctionality among spinal locomotor networks. Journal of Neurophysiology, 2020, 124, 1469-1479.	1.8	13
35	R-on-T and the initiation of reentry revisited: Integrating old and new concepts. Heart Rhythm, 2022, 19, 1369-1383.	0.7	12
36	Systems Biology of Vascular Calcification. Trends in Cardiovascular Medicine, 2009, 19, 118-123.	4.9	10

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37	Concise Review: Applying Stem Cell Biology to Vascular Structures. Stem Cells, 2012, 30, 386-391.	3.2	10
38	Model of Left Ventricular Contraction: Validation Criteria and Boundary Conditions. Lecture Notes in Computer Science, 2019, 11504, 294-303.	1.3	6
39	Shaping Waves of Bone Morphogenetic Protein Inhibition During Vascular Growth. Circulation Research, 2020, 127, 1288-1305.	4.5	6
40	Circadian and ultradian rhythms in normal mice and in a mouse model of Huntingtonâ€™s disease. Chronobiology International, 2022, 39, 513-524.	2.0	4
41	Focal High Cell Density Generates a Gradient of Patterns in Self-Organizing Vascular Mesenchymal Cells. Journal of Vascular Research, 2012, 49, 441-446.	1.4	3
42	A common pathway to cancer: Oncogenic mutations abolish p53 oscillations. Progress in Biophysics and Molecular Biology, 2022, , .	2.9	2
43	Reimagining the Introductory Math Curriculum for Life Sciences Students. CBE Life Sciences Education, 2021, 20, ar62.	2.3	1
44	Teaching Dynamics to Biology Undergraduates: the UCLA Experience. Bulletin of Mathematical Biology, 2022, 84, 43.	1.9	1