Shimon Marom

List of Publications by Year
in descending order

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Version: 2024-02-01

62 papers	3,110 citations	201385 27 h-index	161609 54 g-index
66 all docs	66 docs citations	66 times ranked	2214 citing authors

#	Article	IF	Citations
1	Lost knowledge. Current Biology, 2022, 32, R144-R145.	1.8	1
2	Dialogue Across Chasm: Are Psychology and Neurophysiology Incompatible?. Neuron, 2020, 107, 600-602.	3.8	3
3	Dynamic clamp constructed phase diagram for the Hodgkin and Huxley model of excitability. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3575-3582.	3.3	11
4	Visual detection of time-varying signals: Opposing biases and their timescales. PLoS ONE, 2019, 14, e0224256.	1.1	4
5	A Biohybrid Setup for Coupling Biological and Neuromorphic Neural Networks. Frontiers in Neuroscience, 2019, 13, 432.	1.4	24
6	Inhibition increases response variability and reduces stimulus discrimination in random networks of cortical neurons. Scientific Reports, 2019, 9, 4969.	1.6	8
7	Cellular function given parametric variation in the Hodgkin and Huxley model of excitability. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8211-E8218.	3.3	38
8	Long-range synchrony and emergence of neural reentry. Scientific Reports, 2016, 6, 36837.	1.6	18
9	Emergence and maintenance of excitability: kinetics over structure. Current Opinion in Neurobiology, 2016, 40, 66-71.	2.0	10
10	Closing Dewey's Circuit. , 2016, , 93-100.		4
11	Slow dynamics in features of synchronized neural network responses. Frontiers in Computational Neuroscience, 2015, 9, 40.	1.2	8
12	Universality, complexity and the praxis of biology: Two case studies. Studies in History and Philosophy of Science Part C:Studies in History and Philosophy of Biological and Biomedical Sciences, 2015, 53, 68-72.	0.8	10
13	Network Events on Multiple Space and Time Scales in Cultured Neural Networks and in a Stochastic Rate Model. PLoS Computational Biology, 2015, 11, e1004547.	1.5	29
14	Synaptic dynamics contribute to long-term single neuron response fluctuations. Frontiers in Neural Circuits, 2014, 8, 71.	1.4	25
15	Controlling neural network responsiveness: tradeoffs and constraints. Frontiers in Neuroengineering, 2014, 7, 11.	4.8	17
16	Inferring effective dynamics in large-scale networks of cortical neurons. BMC Neuroscience, 2013, 14, .	0.8	0
17	Entrainment of the Intrinsic Dynamics of Single Isolated Neurons by Natural-Like Input. Journal of Neuroscience, 2013, 33, 7912-7918.	1.7	37
18	Self-organized criticality in single-neuron excitability. Physical Review E, 2013, 88, 062717.	0.8	33

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19	Synchronization by elastic neuronal latencies. Physical Review E, 2013, 87, 012724.	0.8	9
20	Synthetic reverberating activity patterns embedded in networks of cortical neurons. Europhysics Letters, 2012, 97, 66002.	0.7	27
21	Synchronization with mismatched synaptic delays: A unique role of elastic neuronal latency. Europhysics Letters, 2012, 100, 48003.	0.7	15
22	Interactions between network synchrony and the dynamics of neuronal threshold. Journal of Neurophysiology, 2012, 107, 2926-2936.	0.9	17
23	Enhancement of neural representation capacity by modular architecture in networks of cortical neurons. European Journal of Neuroscience, 2012, 35, 1753-1760.	1.2	38
24	Relational dynamics in perception: impacts on trial-to-trial variation. Frontiers in Computational Neuroscience, 2011, 5, 16.	1.2	11
25	Neuronal Response Clamp. Frontiers in Neuroengineering, 2011, 4, 3.	4.8	45
26	Modulation of excessive neuronal activity by fibroblasts: Potential use in treatment of Parkinson's disease. Restorative Neurology and Neuroscience, 2010, 28, 803-815.	0.4	3
27	A Generic Framework for Real-Time Multi-Channel Neuronal Signal Analysis, Telemetry Control, and Sub-Millisecond Latency Feedback Generation. Frontiers in Neuroscience, 2010, 4, 173.	1.4	30
28	Tradeoffs and Constraints on Neural Representation in Networks of Cortical Neurons. Journal of Neuroscience, 2010, 30, 9588-9596.	1.7	37
29	Dynamics of Excitability over Extended Timescales in Cultured Cortical Neurons. Journal of Neuroscience, 2010, 30, 16332-16342.	1.7	94
30	Neural timescales or lack thereof. Progress in Neurobiology, 2010, 90, 16-28.	2.8	98
31	Adaptive transition rates in excitable membranes. Frontiers in Computational Neuroscience, 2009, 3, 2.	1.2	19
32	On the Precarious Path of Reverse Neuro-Engineering. Frontiers in Computational Neuroscience, 2009, 3, 5.	1.2	27
33	Long-Term Relationships between Synaptic Tenacity, Synaptic Remodeling, and Network Activity. PLoS Biology, 2009, 7, e1000136.	2.6	153
34	Learning Without Error. , 2009, , 49-54.		1
35	Leader neurons in population bursts of 2D living neural networks. New Journal of Physics, 2008, 10, 015011.	1.2	62
36	Order-Based Representation in Random Networks of Cortical Neurons. PLoS Computational Biology, 2008, 4, e1000228.	1.5	76

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37	Cell Therapy for Modification of the Myocardial Electrophysiological Substrate. Circulation, 2008, 117, 720-731.	1.6	51
38	Selective Adaptation in Networks of Heterogeneous Populations: Model, Simulation, and Experiment. PLoS Computational Biology, 2008, 4, e29.	1.5	11
39	A generic model for selective adaptation in networks of heterogeneous populations. BMC Neuroscience, 2007, 8, P183.	0.8	0
40	Dynamics and Effective Topology Underlying Synchronization in Networks of Cortical Neurons. Journal of Neuroscience, 2006, 26, 8465-8476.	1.7	348
41	Learning in ex-vivo developing networks of cortical neurons. Progress in Brain Research, 2005, 147, 189-199.	0.9	36
42	Dopamine-Induced Dispersion of Correlations Between Action Potentials in Networks of Cortical Neurons. Journal of Neurophysiology, 2004, 92, 1817-1824.	0.9	73
43	Cardiac Memory and Cortical Memory. Circulation, 2003, 108, 1784-1789.	1.6	12
44	Selective Adaptation in Networks of Cortical Neurons. Journal of Neuroscience, 2003, 23, 9349-9356.	1.7	205
45	Development, learning and memory in large random networks of cortical neurons: lessons beyond anatomy. Quarterly Reviews of Biophysics, 2002, 35, 63-87.	2.4	386
46	Electrophysiological Modulation of Cardiomyocytic Tissue by Transfected Fibroblasts Expressing Potassium Channels. Circulation, 2002, 105, 522-529.	1.6	105
47	Modeling the Process of Rate Selection in Neuronal Activity. Journal of Theoretical Biology, 2002, 216, 337-343.	0.8	5
48	Frequency tuning of input-output relation in a rat cortical neuron in-vitro. Neuroscience Letters, 2001, 300, 21-24.	1.0	29
49	Learning in Networks of Cortical Neurons. Journal of Neuroscience, 2001, 21, 8782-8788.	1.7	353
50	A global defect in scaling relationship between electrical activity and availability of muscle sodium channels in hyperkalemic periodic paralysis. Pflugers Archiv European Journal of Physiology, 1999, 438, 213-217.	1.3	13
51	Slow Changes in the Availability of Voltage-gated Ion Channels: Effects on the Dynamics of Excitable Membranes. Journal of Membrane Biology, 1998, 161, 105-113.	1.0	35
52	Interaction between Duration of Activity and Time Course of Recovery from Slow Inactivation in Mammalian Brain Na⁺Channels. Journal of Neuroscience, 1998, 18, 1893-1903.	1.7	142
53	Effects of Density and Gating of Delayed-Rectifier Potassium Channels on Resting Membrane Potential and its Fluctuations. Journal of Membrane Biology, 1996, 154, 267-274.	1.0	16
54	Intracellular and extracellular amino acids that influence C-type inactivation and its modulation in a voltage-dependent potassium channel. Pflugers Archiv European Journal of Physiology, 1995, 430, 1-11.	1.3	43

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55	Rich Dynamics in a Simplified Excitable System. Advances in Experimental Medicine and Biology, 1995, 382, 61-66.	0.8	3
56	State-dependent inactivation of the Kv3 potassium channel. Biophysical Journal, 1994, 67, 579-589.	0.2	105
57	Modeling state-dependent inactivation of membrane currents. Biophysical Journal, 1994, 67, 515-520.	0.2	48
58	A note on bistability in a simple synapseless â€˜point neuronâ€™ model. Network: Computation in Neural Systems, 1994, 5, 327-331.	2.2	4
59	Immunological rejection of heart transplant: how lytic granules from cytotoxic T lymphocytes damage guinea pig ventricular myocytes. Pflugers Archiv European Journal of Physiology, 1992, 420, 172-179.	1.3	20
60	A 3-D approach to voltage clamp data. Journal of Theoretical Biology, 1992, 154, 475-484.	0.8	0
61	Calcium current in growth balls from islatedHelix aspersa neuronal growth cones. Pflugers Archiv European Journal of Physiology, 1987, 409, 578-581.	1.3	13
62	How Are Nerve Cells And Artificial Intelligence Similar?. Frontiers for Young Minds, 0, 10, .	0.8	0