John A White

List of Publications by Year
in descending order

89 papers	6,229 citations	94381 37 h-index	74108 75 g-index
90 all docs	90 docs citations	90 times ranked	5091 citing authors

#	Article	IF	Citations
1	Channel noise in neurons. Trends in Neurosciences, 2000, 23, 131-137.	4.2	565
2	Hippocampal â€œTime Cellsâ€: Time versus Path Integration. Neuron, 2013, 78, 1090-1101.	3.8	414
3	Synchronization and oscillatory dynamics in heterogeneous, mutually inhibited neurons. Journal of Computational Neuroscience, 1998, 5, 5-16.	0.6	369
4	Sniffing controls an adaptive filter of sensory input to the olfactory bulb. Nature Neuroscience, 2007, 10, 631-639.	7.1	346
5	Epilepsy in Small-World Networks. Journal of Neuroscience, 2004, 24, 8075-8083.	1.7	285
6	Noise From Voltage-Gated Ion Channels May Influence Neuronal Dynamics in the Entorhinal Cortex. Journal of Neurophysiology, 1998, 80, 262-269.	0.9	200
7	Synchronization in Hybrid Neuronal Networks of the Hippocampal Formation. Journal of Neurophysiology, 2005, 93, 1197-1208.	0.9	188
8	Ion-Channel Noise Places Limits on the Miniaturization of the Brainâ€™s Wiring. Current Biology, 2005, 15, 1143-1149.	1.8	185
9	Phase-response curves and synchronized neural networks. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 2407-2422.	1.8	155
10	Synchronization of strongly coupled excitatory neurons: relating network behavior to biophysics. Journal of Computational Neuroscience, 2003, 15, 71-90.	0.6	152
11	Slow and Fast Inhibition and an H-Current Interact to Create a Theta Rhythm in a Model of CA1 Interneuron Network. Journal of Neurophysiology, 2005, 94, 1509-1518.	0.9	150
12	Real-Time Linux Dynamic Clamp: A Fast and Flexible Way to Construct Virtual Ion Channels in Living Cells. Annals of Biomedical Engineering, 2001, 29, 897-907.	1.3	144
13	Channel Noise is Essential for Perithreshold Oscillations in Entorhinal Stellate Neurons. Journal of Neuroscience, 2005, 25, 10025-10028.	1.7	121
14	Frequency Selectivity of Layer II Stellate Cells in the Medial Entorhinal Cortex. Journal of Neurophysiology, 2002, 88, 2422-2429.	0.9	120
15	Imaging Activity in Neurons and Glia with a Polr2a-Based and Cre-Dependent GCaMP5G-IRES-tdTomato Reporter Mouse. Neuron, 2014, 83, 1058-1072.	3.8	120
16	Optical Dissection of Odor Information ProcessingIn VivoUsing GCaMPs Expressed in Specified Cell Types of the Olfactory Bulb. Journal of Neuroscience, 2013, 33, 5285-5300.	1.7	119
17	Frequency control in synchronized networks of inhibitory neurons. Journal of Computational Neuroscience, 1998, 5, 407-420.	0.6	118
18	Interactions between Distinct GABAA Circuits in Hippocampus. Neuron, 2000, 25, 449-457.	3.8	117

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19	Pyramidal cells accumulate chloride at seizure onset. Neurobiology of Disease, 2012, 47, 358-366.	2.1	115
20	Comparison of Algorithms for the Simulation of Action Potentials with Stochastic Sodium Channels. Annals of Biomedical Engineering, 2002, 30, 578-587.	1.3	110
21	Fractal ion-channel behavior generates fractal firing patterns in neuronal models. Physical Review E, 1999, 59, 5970-5980.	0.8	96
22	Cultivation in Rotating Bioreactors Promotes Maintenance of Cardiac Myocyte Electrophysiology and Molecular Properties. Tissue Engineering, 2003, 9, 1243-1253.	4.9	96
23	The dynamic structure underlying subthreshold oscillatory activity and the onset of spikes in a model of medial entorhinal cortex stellate cells. Journal of Computational Neuroscience, 2006, 21, 271-292.	0.6	96
24	Resonant Interneurons Can Increase Robustness of Gamma Oscillations. Journal of Neuroscience, 2015, 35, 15682-15695.	1.7	94
25	Two-photon imaging of spatially extended neuronal network dynamics with high temporal resolution. Journal of Neuroscience Methods, 2008, 172, 178-184.	1.3	92
26	Beyond Two-Cell Networks: Experimental Measurement of Neuronal Responses to Multiple Synaptic Inputs. Journal of Computational Neuroscience, 2005, 18, 287-295.	0.6	82
27	Disambiguation of Overlapping Experiences by Neurons in the Medial Entorhinal Cortex. Journal of Neuroscience, 2007, 27, 5787-5795.	1.7	74
28	A heart-like Na+ current in the medial entorhinal cortex. Neuron, 1993, 11, 1037-1047.	3.8	73
29	Artificial Synaptic Conductances Reduce Subthreshold Oscillations and Periodic Firing in Stellate Cells of the Entorhinal Cortex. Journal of Neuroscience, 2008, 28, 3790-3803.	1.7	73
30	Spike Resonance Properties in Hippocampal O-LM Cells Are Dependent on Refractory Dynamics. Journal of Neuroscience, 2012, 32, 3637-3651.	1.7	59
31	Effects of imperfect dynamic clamp: Computational and experimental results. Journal of Neuroscience Methods, 2008, 169, 282-289.	1.3	57
32	Increasing Ca2+ transients by broadening postsynaptic action potentials enhances timing-dependent synaptic depression. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 19121-19125.	3.3	55
33	Hard real-time closed-loop electrophysiology with the Real-Time eXperiment Interface (RTXI). PLoS Computational Biology, 2017, 13, e1005430.	1.5	55
34	Membrane Voltage Fluctuations Reduce Spike Frequency Adaptation and Preserve Output Gain in CA1 Pyramidal Neurons in a High-Conductance State. Journal of Neuroscience, 2011, 31, 3880-3893.	1.7	47
35	Membrane Properties and the Balance between Excitation and Inhibition Control Gamma-Frequency Oscillations Arising from Feedback Inhibition. PLoS Computational Biology, 2012, 8, e1002354.	1.5	46
36	Gain Control in CA1 Pyramidal Cells Using Changes in Somatic Conductance. Journal of Neuroscience, 2010, 30, 230-241.	1.7	45

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37	Low-Dimensional Maps Encoding Dynamics in Entorhinal Cortex and Hippocampus. Neural Computation, 2006, 18, 2617-2650.	1.3	43
38	Spike Phase Locking in CA1 Pyramidal Neurons Depends on Background Conductance and Firing Rate. Journal of Neuroscience, 2012, 32, 14374-14388.	1.7	42
39	Effects of Inhibitory Feedback in a Network Model of Avian Brain Stem. Journal of Neurophysiology, 2005, 94, 400-414.	0.9	40
40	Conditional Knock-out of mGluR5 from Astrocytes during Epilepsy Development Impairs High-Frequency Glutamate Uptake. Journal of Neuroscience, 2019, 39, 727-742.	1.7	40
41	Contributions of I h to feature selectivity in layer II stellate cells of the entorhinal cortex. Journal of Computational Neuroscience, 2007, 22, 161-171.	0.6	37
42	Real-time Experiment Interface for biological control applications. , 2010, 2010, 4160-3.		37
43	Core Competencies for Undergraduates in Bioengineering and Biomedical Engineering: Findings, Consequences, and Recommendations. Annals of Biomedical Engineering, 2020, 48, 905-912.	1.3	37
44	Development of Theta Rhythmicity in Entorhinal Stellate Cells of the Juvenile Rat. Journal of Neurophysiology, 2008, 100, 3144-3157.	0.9	33
45	Repeated low-dose kainate administration in C57BL/6J mice produces temporal lobe epilepsy pathology but infrequent spontaneous seizures. Experimental Neurology, 2016, 279, 116-126.	2.0	33
46	Glycinergic Inhibition in the Hippocampus. Reviews in the Neurosciences, 2009, 20, 13-22.	1.4	31
47	Dynamic Clamp: Alteration of Response Properties and Creation of Virtual Realities in Neurophysiology. Journal of Neuroscience, 2010, 30, 2407-2413.	1.7	31
48	Imaging activity in astrocytes and neurons with genetically encoded calcium indicators following in utero electroporation. Frontiers in Molecular Neuroscience, 2015, 8, 10.	1.4	31
49	Short Conduction Delays Cause Inhibition Rather than Excitation to Favor Synchrony in Hybrid Neuronal Networks of the Entorhinal Cortex. PLoS Computational Biology, 2012, 8, e1002306.	1.5	29
50	Mathematical investigation of IP3-dependent calcium dynamics in astrocytes. Journal of Computational Neuroscience, 2017, 42, 257-273.	0.6	28
51	Place cell activation predicts subsequent memory. Behavioural Brain Research, 2013, 254, 65-72.	1.2	27
52	Diversity of Evoked Astrocyte Ca2+ Dynamics Quantified through Experimental Measurements and Mathematical Modeling. Frontiers in Systems Neuroscience, 2017, 11, 79.	1.2	27
53	Non-genetic photoacoustic stimulation of single neurons by a tapered fiber optoacoustic emitter. Light: Science and Applications, 2021, 10, 143.	7.7	27
54	Ultrastructural and functional changes at the tripartite synapse during epileptogenesis in a model of temporal lobe epilepsy. Experimental Neurology, 2020, 326, 113196.	2.0	24

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55	The Mechanism of Abrupt Transition between Theta and Hyper-Excitable Spiking Activity in Medial Entorhinal Cortex Layer II Stellate Cells. PLoS ONE, 2010, 5, e13697.	1.1	24
56	The parameter identification problem for the somatic shunt model. Biological Cybernetics, 1992, 66, 307-318.	0.6	23
57	Dynamic Clamp in Cardiac and Neuronal Systems Using RTXI. Methods in Molecular Biology, 2014, 1183, 327-354.	0.4	23
58	Altered structure and function of astrocytes following status epilepticus. Epilepsy and Behavior, 2015, 49, 17-19.	0.9	22
59	Anatomical and Electrophysiological Clustering of Superficial Medial Entorhinal Cortex Interneurons. ENeuro, 2017, 4, ENEURO.0263-16.2017.	0.9	22
60	Frequency-Dependent Glycinergic Inhibition Modulates Plasticity in Hippocampus. Journal of Neuroscience, 2008, 28, 7359-7369.	1.7	21
61	Differences in the Electrophysiological Properties of Mouse Somatosensory Layer 2/3 NeuronsIn Vivoand Slice Stem from Intrinsic Sources Rather than a Network-Generated High Conductance State. ENeuro, 2018, 5, ENEURO.0447-17.2018.	0.9	20
62	Simple Models Show the General Advantages of Dendrites in Coincidence Detection. Journal of Neurophysiology, 2007, 97, 3449-3459.	0.9	19
63	Analysis of dendritic arbors of native and regenerated ganglion cells in the goldfish retina. Visual Neuroscience, 1999, 16, 253-261.	0.5	18
64	Reduction of Spike Afterdepolarization by Increased Leak Conductance Alters Interspike Interval Variability. Journal of Neuroscience, 2009, 29, 973-986.	1.7	18
65	Entorhinal Stellate Cells Show Preferred Spike Phase-Locking to Theta Inputs That Is Enhanced by Correlations in Synaptic Activity. Journal of Neuroscience, 2013, 33, 6027-6040.	1.7	18
66	Kinetics and Connectivity Properties of Parvalbumin- and Somatostatin-Positive Inhibition in Layer 2/3 Medial Entorhinal Cortex. ENeuro, 2022, 9, ENEURO.0441-21.2022.	0.9	18
67	Control of Neuronal Persistent Activity by Voltage-Dependent Dendritic Properties. Journal of Neurophysiology, 2008, 100, 1278-1286.	0.9	16
68	CaMKIIÎ±-Positive Interneurons Identified via a microRNA-Based Viral Gene Targeting Strategy. Journal of Neuroscience, 2020, 40, 9576-9588.	1.7	15
69	GenNet: A Platform for Hybrid Network Experiments. Frontiers in Neuroinformatics, 2011, 5, 11.	1.3	14
70	Non-linear Membrane Properties in Entorhinal Cortical Stellate Cells Reduce Modulation of Input-Output Responses by Voltage Fluctuations. PLoS Computational Biology, 2015, 11, e1004188.	1.5	14
71	The voltage-dependent conductances of rat neocortical layer I neurons. European Journal of Neuroscience, 1998, 10, 2309-2321.	1.2	12
72	Dynamical Instability Determines the Effect of Ongoing Noise on Neural Firing. JARO - Journal of the Association for Research in Otolaryngology, 2009, 10, 251-267.	0.9	12

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73	Membrane potentialâ€dependent integration of synaptic inputs in entorhinal stellate neurons. Hippocampus, 2014, 24, 1493-1505.	0.9	11
74	Roles of IA and morphology in action potential propagation in CA1 pyramidal cell dendrites. Journal of Computational Neuroscience, 2007, 23, 201-216.	0.6	10
75	The Past, Present, and Future of Real-Time Control in Cellular Electrophysiology. IEEE Transactions on Biomedical Engineering, 2014, 61, 1448-1456.	2.5	8
76	A model of cholinergic suppression of hippocampal ripples through disruption of balanced excitation/inhibition. Hippocampus, 2019, 29, 773-786.	0.9	7
77	Voltage-Dependent Membrane Properties Shape the Size But Not the Frequency Content of Spontaneous Voltage Fluctuations in Layer 2/3 Somatosensory Cortex. Journal of Neuroscience, 2019, 39, 2221-2237.	1.7	7
78	Synaptic input statistics tune the variability and reproducibility of neuronal responses. Chaos, 2006, 16, 026105.	1.0	6
79	Gain Modulation of Cholinergic Neurons in the Medial Septumâ€Diagonal Band of Broca Through Hyperpolarization. Hippocampus, 2016, 26, 1525-1541.	0.9	5
80	Voltage Imaging of Cardiac Cells and Tissue Using the Genetically Encoded Voltage Sensor Archon1. IScience, 2020, 23, 100974.	1.9	5
81	Effects of Axonal Demyelination, Inflammatory Cytokines and Divalent Cation Chelators on Thalamic HCN Channels and Oscillatory Bursting. International Journal of Molecular Sciences, 2022, 23, 6285.	1.8	5
82	Response: Implementation Issues in Approximate Methods for Stochastic Hodgkin-Huxley models. Annals of Biomedical Engineering, 2007, 35, 319-319.	1.3	2
83	Balanced synaptic currents underlie lowâ€frequency oscillations in the subiculum. Hippocampus, 2019, 29, 1178-1189.	0.9	2
84	Using â€œHardâ€•Real-Time Dynamic Clamp to Study Cellular and Network Mechanisms of Synchronization in the Hippocampal Formation. , 2009, , 199-215.		1
85	Determining the optimal expression method for dual-color imaging. Journal of Neuroscience Methods, 2021, 351, 109064.	1.3	1
86	Mechanisms of coherent activity in hippocampus and entorhinal cortex. , 2009, 2009, 4226-7.		0
87	Nonlinear properties of medial entorhinal cortex neurons reveal frequency selectivity during multi-sinusoidal stimulation. Frontiers in Cellular Neuroscience, 2014, 8, 239.	1.8	0
88	Cover Image, Volume 26, Issue 12. Hippocampus, 2016, 26, C1-C1.	0.9	0
89	Editorial overview: high-resolution brain cell imaging. Current Opinion in Biomedical Engineering, 2019, 12, A4-A5.	1.8	0