John E Lewis

List of Publications by Year
in descending order

36 papers	1,187 citations	394421 19 h-index	395702 33 g-index
38 all docs	38 docs citations	38 times ranked	708 citing authors

#	Article	IF	Citations
1	A neuronal network for computing population vectors in the leech. Nature, 1998, 391, 76-79.	27.8	121
2	Electrocommunication signals in free swimming brown ghost knifefish, <i>Apteronotus leptorhynchus</i>. Journal of Experimental Biology, 2008, 211, 1657-1667.	1.7	106
3	Zebrafish (<i>Danio rerio</i>) gill neuroepithelial cells are sensitive chemoreceptors for environmental CO₂. Journal of Physiology, 2010, 588, 861-872.	2.9	90
4	Spatial Acuity and Prey Detection in Weakly Electric Fish. PLoS Computational Biology, 2007, 3, e38.	3.2	69
5	Modeling the electric field of weakly electric fish. Journal of Experimental Biology, 2006, 209, 3636-3651.	1.7	66
6	Broadband Coding with Dynamic Synapses. Journal of Neuroscience, 2009, 29, 2076-2087.	3.6	62
7	The energetics of electric organ discharge generation in gymnotiform weakly electric fish. Journal of Experimental Biology, 2013, 216, 2459-2468.	1.7	57
8	Burst-Induced Anti-Hebbian Depression Acts through Short-Term Synaptic Dynamics to Cancel Redundant Sensory Signals. Journal of Neuroscience, 2010, 30, 6152-6169.	3.6	52
9	Coding Conspecific Identity and Motion in the Electric Sense. PLoS Computational Biology, 2012, 8, e1002564.	3.2	49
10	Dynamics of Electrosensory Feedback: Short-Term Plasticity and Inhibition in a Parallel Fiber Pathway. Journal of Neurophysiology, 2002, 88, 1695-1706.	1.8	47
11	Neuronal Population Codes and the Perception of Object Distance in Weakly Electric Fish. Journal of Neuroscience, 2001, 21, 2842-2850.	3.6	44
12	Action Potential Energetics at the Organismal Level Reveal a Trade-Off in Efficiency at High Firing Rates. Journal of Neuroscience, 2014, 34, 197-201.	3.6	44
13	The effect of difference frequency on electrocommunication: Chirp production and encoding in a species of weakly electric fish, Apteronotus leptorhynchus. Journal of Physiology (Paris), 2008, 102, 164-172.	2.1	39
14	Electric field interactions in pairs of electric fish: modeling and mimicking naturalistic inputs. Biological Cybernetics, 2008, 98, 479-490.	1.3	38
15	The effects of superior laryngeal nerve stimulation on the respiratory rhythm: phase-resetting and aftereffects. Brain Research, 1990, 517, 44-50.	2.2	37
16	The neuroethology of electrocommunication: How signal background influences sensory encoding and behaviour in Apteronotus leptorhynchus. Journal of Physiology (Paris), 2013, 107, 13-25.	2.1	34
17	Synaptic Dynamics on Different Time Scales in a Parallel Fiber Feedback Pathway of the Weakly Electric Fish. Journal of Neurophysiology, 2004, 91, 1064-1070.	1.8	31
18	Motion parallax in electric sensing. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 573-577.	7.1	31

#	Article	IF	Citations
19	Blurring of the senses: common cues for distance perception in diverse sensory systems. Neuroscience, 2002, 114, 19-22.	2.3	25
20	Dynamically Interacting Processes Underlie Synaptic Plasticity in a Feedback Pathway. Journal of Neurophysiology, 2002, 87, 2450-2463.	1.8	21
21	Complex dynamics resulting from repeated stimulation of nonlinear oscillators at a fixed phase. Physics Letters, Section A: General, Atomic and Solid State Physics, 1987, 125, 119-122.	2.1	18
22	Phase resetting and fixed-delay stimulation of a simple model of respiratory rhythm generation. Journal of Theoretical Biology, 1992, 159, 491-506.	1.7	18
23	Electrosensory Contrast Signals for Interacting Weakly Electric Fish. Frontiers in Integrative Neuroscience, 2019, 13, 36.	2.1	12
24	Control of neuronal firing by dynamic parallel fiber feedback:implications for electrosensory reafference suppression. Journal of Experimental Biology, 2007, 210, 4437-4447.	1.7	11
25	ELFENN: A Generalized Platform for Modeling Ephaptic Coupling in Spiking Neuron Models. Frontiers in Neuroinformatics, 2019, 13, 35.	2.5	11
26	What does a butterfly hear? Physiological characterization of auditory afferents in Morpho peleides (Nymphalidae). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2018, 204, 791-799.	1.6	10
27	Neuronal Dynamics Underlying Communication Signals in a Weakly Electric Fish: Implications for Connectivity in a Pacemaker Network. Neuroscience, 2019, 401, 21-34.	2.3	10
28	Ultrafast traveling wave dominates the electric organ discharge of Apteronotus leptorhynchus: an inverse modelling study. Scientific Reports, 2015, 5, 15780.	3.3	9
29	The complexity of high-frequency electric fields degrades electrosensory inputs: implications for the jamming avoidance response in weakly electric fish. Journal of the Royal Society Interface, 2018, 15, 20170633.	3.4	8
30	In vitro studies of closed-loop feedback and electrosensory processing in Apteronotus leptorhynchus. Journal of Physiology (Paris), 2008, 102, 173-180.	2.1	3
31	Electrophysiological characterization of male goldfish (Carassius auratus) ventral preoptic area neurons receiving olfactory inputs. Frontiers in Neuroscience, 2014, 8, 185.	2.8	3
32	Short-term synaptic plasticity across topographic maps in the electrosensory system. Neuroscience, 2016, 318, 1-11.	2.3	3
33	Dynamics of a neuronal pacemaker in the weakly electric fish Apteronotus. Scientific Reports, 2020, 10, 16707.	3.3	3
34	A model for studying the energetics of sustained high frequency firing. PLoS ONE, 2018, 13, e0196508.	2.5	2
35	Spatiotemporal model for depth perception in electric sensing. Journal of Theoretical Biology, 2019, 461, 157-169.	1.7	2
36	The dynamics inside the box. Nature Neuroscience, 2000, 3, 309-309.	14.8	0