

Leonard Maler

List of Publications by Year in descending order

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93
papers

5,230
citations

61945
43
h-index

91828
69
g-index

258
all docs

258
docs citations

258
times ranked

1723
citing authors

#	ARTICLE	IF	CITATIONS
1	Mixed selectivity coding of sensory and motor social signals in the thalamus of a weakly electric fish. <i>Current Biology</i> , 2022, 32, 51-63.e3.	1.8	11
2	Distribution of the cholinergic nuclei in the brain of the weakly electric fish, <i>Apteronotus leptorhynchus</i> : Implications for sensory processing. <i>Journal of Comparative Neurology</i> , 2021, 529, 1810-1829.	0.9	3
3	Enhanced Signal Detection by Adaptive Decorrelation of Interspike Intervals. <i>Neural Computation</i> , 2021, 33, 341-375.	1.3	3
4	Linking active sensing and spatial learning in weakly electric fish. <i>Current Opinion in Neurobiology</i> , 2021, 71, 1-10.	2.0	11
5	Neural Networks: How a Multi-Layer Network Learns to Disentangle Exogenous from Self-Generated Signals. <i>Current Biology</i> , 2020, 30, R224-R226.	1.8	3
6	Cellular and Network Mechanisms May Generate Sparse Coding of Sequential Object Encounters in Hippocampal-Like Circuits. <i>ENeuro</i> , 2019, 6, ENEURO.0108-19.2019.	0.9	12
7	Neural activity in a hippocampus-like region of the teleost pallium is associated with active sensing and navigation. <i>ELife</i> , 2019, 8, .	2.8	53
8	Brain Evolution: Intelligence without a Cortex. <i>Current Biology</i> , 2018, 28, R213-R215.	1.8	6
9	Transparent <i>Danio rerio</i> as a genetically tractable vertebrate brain model. <i>Nature Methods</i> , 2018, 15, 977-983.	9.0	62
10	A time-stamp mechanism may provide temporal information necessary for egocentric to allocentric spatial transformations. <i>ELife</i> , 2018, 7, .	2.8	32
11	Hippocampal-like circuitry in the pallium of an electric fish: Possible substrates for recursive pattern separation and completion. <i>Journal of Comparative Neurology</i> , 2017, 525, 8-46.	0.9	57
12	Feedback Synthesizes Neural Codes for Motion. <i>Current Biology</i> , 2017, 27, 1356-1361.	1.8	49
13	Hippocampal-like circuitry in the pallium of an electric fish: Possible substrates for recursive pattern separation and completion. <i>Journal of Comparative Neurology</i> , 2017, 525, spc1-spc1.	0.9	0
14	Nonstationary Stochastic Dynamics Underlie Spontaneous Transitions between Active and Inactive Behavioral States. <i>ENeuro</i> , 2017, 4, ENEURO.0355-16.2017.	0.9	13
15	Active sensing associated with spatial learning reveals memory-based attention in an electric fish. <i>Journal of Neurophysiology</i> , 2016, 115, 2577-2592.	0.9	58
16	Weak signal amplification and detection by higher-order sensory neurons. <i>Journal of Neurophysiology</i> , 2016, 115, 2158-2175.	0.9	17
17	Balanced ionotropic receptor dynamics support signal estimation via voltage-dependent membrane noise. <i>Journal of Neurophysiology</i> , 2016, 115, 530-545.	0.9	12
18	Cryptic laminar and columnar organization in the dorsolateral pallium of a weakly electric fish. <i>Journal of Comparative Neurology</i> , 2016, 524, 408-428.	0.9	36

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19	Subsecond Sensory Modulation of Serotonin Levels in a Primary Sensory Area and Its Relation to Ongoing Communication Behavior in a Weakly Electric Fish. <i>ENeuro</i> , 2016, 3, ENEURO.0115-16.2016.	0.9	10
20	Oscillatorylike behavior in feedforward neuronal networks. <i>Physical Review E</i> , 2015, 92, 012703.	0.8	6
21	The neural dynamics of sensory focus. <i>Nature Communications</i> , 2015, 6, 8764.	5.8	24
22	Contrast coding in the electrosensory system: parallels with visual computation. <i>Nature Reviews Neuroscience</i> , 2015, 16, 733-744.	4.9	71
23	Stimulus-induced up states in the dorsal pallium of a weakly electric fish. <i>Journal of Neurophysiology</i> , 2015, 114, 2071-2076.	0.9	15
24	Subtractive, divisive and non-monotonic gain control in feedforward nets linearized by noise and delays. <i>Frontiers in Computational Neuroscience</i> , 2014, 8, 19.	1.2	15
25	Enhanced sensory sampling precedes self-initiated locomotion in an electric fish. <i>Journal of Experimental Biology</i> , 2014, 217, 3615-3628.	0.8	26
26	Neural maps in the electrosensory system of weakly electric fish. <i>Current Opinion in Neurobiology</i> , 2014, 24, 13-21.	2.0	105
27	Long-term Behavioral Tracking of Freely Swimming Weakly Electric Fish. <i>Journal of Visualized Experiments</i> , 2014, , .	0.2	13
28	Dendritic SK channels convert NMDA-R-dependent LTD to burst timing-dependent plasticity. <i>Journal of Neurophysiology</i> , 2013, 110, 2689-2703.	0.9	11
29	Expression of the cannabinoid CB1 receptor in the gymnotiform fish brain and its implications for the organization of the teleost pallium. <i>Journal of Comparative Neurology</i> , 2013, 521, 949-975.	0.9	30
30	Linear response theory for two neural populations applied to gamma oscillation generation. <i>Physical Review E</i> , 2013, 87, .	0.8	1
31	Signal cancellation in neural systems: encoding sensory input in the weakly electric fish. , 2012, , .		0
32	Precision measurement of electric organ discharge timing from freely moving weakly electric fish. <i>Journal of Neurophysiology</i> , 2012, 107, 1996-2007.	0.9	12
33	Organization of the gymnotiform fish pallium in relation to learning and memory: I. Cytoarchitectonics and cellular morphology. <i>Journal of Comparative Neurology</i> , 2012, 520, 3314-3337.	0.9	35
34	Organization of the gymnotiform fish pallium in relation to learning and memory: IV. Expression of conserved transcription factors and implications for the evolution of dorsal telencephalon. <i>Journal of Comparative Neurology</i> , 2012, 520, 3395-3413.	0.9	48
35	Organization of the gymnotiform fish pallium in relation to learning and memory: III. Intrinsic connections. <i>Journal of Comparative Neurology</i> , 2012, 520, 3369-3394.	0.9	39
36	Organization of the gymnotiform fish pallium in relation to learning and memory: II. Extrinsic connections. <i>Journal of Comparative Neurology</i> , 2012, 520, 3338-3368.	0.9	46

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37	Cellular and circuit properties supporting different sensory coding strategies in electric fish and other systems. <i>Current Opinion in Neurobiology</i> , 2012, 22, 686-692.	2.0	62
38	Efficient computation via sparse coding in electrosensory neural networks. <i>Current Opinion in Neurobiology</i> , 2011, 21, 752-760.	2.0	84
39	Glomerular nucleus of the weakly electric fish, <i>Gymnotus</i> sp.: Cytoarchitecture, histochemistry, and fiber connections—Insights from neuroanatomy to evolution and behavior. <i>Journal of Comparative Neurology</i> , 2011, 519, 1658-1676.	0.9	11
40	Long-term recognition memory of individual conspecifics is associated with telencephalic expression of <i>Egr1</i> in the electric fish <i>Apteronotus leptorhynchus</i> . <i>Journal of Comparative Neurology</i> , 2010, 518, 2666-2692.	0.9	46
41	Linear Versus Nonlinear Signal Transmission in Neuron Models With Adaptation Currents or Dynamic Thresholds. <i>Journal of Neurophysiology</i> , 2010, 104, 2806-2820.	0.9	93
42	Neural Heterogeneity and Efficient Population Codes for Communication Signals. <i>Journal of Neurophysiology</i> , 2010, 104, 2543-2555.	0.9	115
43	Receptive field organization across multiple electrosensory maps. I. Columnar organization and estimation of receptive field size. <i>Journal of Comparative Neurology</i> , 2009, 516, 376-393.	0.9	96
44	Receptive field organization across multiple electrosensory maps. II. Computational analysis of the effects of receptive field size on prey localization. <i>Journal of Comparative Neurology</i> , 2009, 516, 394-422.	0.9	62
45	Transient Signals Trigger Synchronous Bursts in an Identified Population of Neurons. <i>Journal of Neurophysiology</i> , 2009, 102, 714-723.	0.9	84
46	Differential distribution of SK channel subtypes in the brain of the weakly electric fish <i>Apteronotus leptorhynchus</i> . <i>Journal of Comparative Neurology</i> , 2008, 507, 1964-1978.	0.9	40
47	Intrinsic Frequency Tuning in ELL Pyramidal Cells Varies Across Electrosensory Maps. <i>Journal of Neurophysiology</i> , 2008, 99, 2641-2655.	0.9	45
48	Neural strategies for optimal processing of sensory signals. <i>Progress in Brain Research</i> , 2007, 165, 135-154.	0.9	28
49	SK Channels Provide a Novel Mechanism for the Control of Frequency Tuning in Electrosensory Neurons. <i>Journal of Neuroscience</i> , 2007, 27, 9491-9502.	1.7	67
50	A Synchronization-Desynchronization Code for Natural Communication Signals. <i>Neuron</i> , 2006, 52, 347-358.	3.8	98
51	The cellular basis for parallel neural transmission of a high-frequency stimulus and its low-frequency envelope. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 14596-14601.	3.3	93
52	Electroreceptor neuron dynamics shape information transmission. <i>Nature Neuroscience</i> , 2005, 8, 673-678.	7.1	110
53	The effects of spontaneous activity, background noise, and the stimulus ensemble on information transfer in neurons. <i>Network: Computation in Neural Systems</i> , 2003, 14, 803-824.	2.2	33
54	The effects of spontaneous activity, background noise, and the stimulus ensemble on information transfer in neurons. <i>Network: Computation in Neural Systems</i> , 2003, 14, 803-824.	2.2	19

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55	Function of NMDA Receptors and Persistent Sodium Channels in a Feedback Pathway of the Electrosensory System. Journal of Neurophysiology, 2001, 86, 1612-1621.	0.9	51
56	Subtractive and Divisive Inhibition: Effect of Voltage-Dependent Inhibitory Conductances and Noise. Neural Computation, 2001, 13, 227-248.	1.3	97
57	Differential expression of the PSD-95 gene family in electrosensory neurons. Journal of Comparative Neurology, 2000, 426, 429-440.	0.9	7
58	Distribution of protein kinase C in the brain of <i>Apteronotus leptorhynchus</i> as revealed by phorbol ester binding. , 1999, 408, 161-169.		12
59	Distribution of adenylate cyclase in the brain of <i>Apteronotus leptorhynchus</i> as revealed by forskolin binding. , 1999, 408, 170-176.		13
60	Distribution of calcium/calmodulin-dependent kinase 2 in the brain of <i>Apteronotus leptorhynchus</i> . Journal of Comparative Neurology, 1999, 408, 177-203.	0.9	22
61	Inhibition Evoked From Primary Afferents in the Electrosensory Lateral Line Lobe of the Weakly Electric Fish (<i>Apteronotus leptorhynchus</i>). Journal of Neurophysiology, 1998, 80, 3173-3196.	0.9	77
62	Excitatory Amino Acid Receptors at a Feedback Pathway in the Electrosensory System: Implications for the Searchlight Hypothesis. Journal of Neurophysiology, 1997, 78, 1869-1881.	0.9	54
63	N-methyl-D-aspartate receptor 1 mRNA distribution in the central nervous system of the weakly electric fish <i>Apteronotus leptorhynchus</i> . , 1997, 389, 65-80.		53
64	The distribution of Met-enkephalin like immunoreactivity in the brain of <i>Apteronotus leptorhynchus</i> , with emphasis on the electrosensory system. Journal of Chemical Neuroanatomy, 1996, 11, 173-190.	1.0	22
65	Inositol 1,4,5-trisphosphate receptor localization in the brain of a weakly electric fish (<i>Apteronotus</i>) Tj ETQq1 1 0.784314 rgBT /Overl 361, 512-524.	0.9	24
66	Correlating gamma-aminobutyric acidergic circuits and sensory function in the electrosensory lateral line lobe of a gymnotiform fish. Journal of Comparative Neurology, 1994, 345, 224-252.	0.9	112
67	Collateral sprouting in the electrosensory lateral line lobe of weakly electric teleosts (<i>Gymnotiformes</i>) following ricin ablation. Journal of Comparative Neurology, 1993, 333, 246-256.	0.9	5
68	Connections of the olfactory bulb in the gymnotiform fish, <i>Apteronotus leptorhynchus</i> . Journal of Comparative Neurology, 1993, 335, 486-507.	0.9	53
69	Evoked chirping in the weakly electric fish <i>Apteronotus leptorhynchus</i> : a quantitative biophysical analysis. Canadian Journal of Zoology, 1993, 71, 2301-2310.	0.4	136
70	Substance P-like immunoreactivity in the brain of the gymnotiform fish <i>Apteronotus leptorhynchus</i> : Presence of sex differences. Journal of Chemical Neuroanatomy, 1992, 5, 107-129.	1.0	79
71	Immunohistochemical localization of ryanodine binding proteins in the central nervous system of gymnotiform fish. Journal of Comparative Neurology, 1992, 325, 135-151.	0.9	37
72	Somatostatin-like immunoreactivity in the brain of an electric fish (<i>Apteronotus leptorhynchus</i>) identified with monoclonal antibodies. Journal of Chemical Neuroanatomy, 1991, 4, 155-186.	1.0	71

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73	The distribution of excitatory amino acid binding sites in the brain of an electric fish, <i>Apteronotus leptorhynchus</i> . <i>Journal of Chemical Neuroanatomy</i> , 1991, 4, 39-61.	1.0	43
74	Zebrin II immunoreactivity in the rat and in the weakly electric teleost <i>Eigenmannia</i> (gymnotiformes) reveals three modes of purkinje cell development. <i>Journal of Comparative Neurology</i> , 1991, 310, 215-233.	0.9	77
75	Zebrin II: A polypeptide antigen expressed selectively by purkinje cells reveals compartments in rat and fish cerebellum. <i>Journal of Comparative Neurology</i> , 1990, 291, 538-552.	0.9	471
76	Catecholaminergic systems in the brain of a gymnotiform teleost fish: An immunohistochemical study. <i>Journal of Comparative Neurology</i> , 1990, 292, 127-162.	0.9	128
77	Structural and functional organization of a diencephalic sensory-motor interface in the gymnotiform fish, <i>Eigenmannia</i> . <i>Journal of Comparative Neurology</i> , 1990, 293, 347-376.	0.9	88
78	Development of the electrosensory nervous system of <i>Eigenmannia</i> (gymnotiformes): II. The electrosensory lateral line lobe, midbrain, and cerebellum. <i>Journal of Comparative Neurology</i> , 1990, 294, 37-58.	0.9	27
79	Interspecific variation in the projection of primary afferents onto the electrosensory lateral line lobe of weakly electric teleosts: Different solutions to the same mapping problem. <i>Journal of Comparative Neurology</i> , 1990, 294, 153-160.	0.9	8
80	Ganglion cell arrangement and axonal trajectories in the anterior lateral line nerve of the weakly electric fish <i>Apteronotus leptorhynchus</i> (Gymnotiformes). <i>Journal of Comparative Neurology</i> , 1989, 280, 331-342.	0.9	28
81	Morphological and electrophysiological properties of a novel in vitro preparation: the electrosensory lateral line lobe brain slice. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1988, 163, 489-506.	0.7	100
82	Inter-male aggressive signals in weakly electric fish are modulated by monoamines. <i>Behavioural Brain Research</i> , 1987, 25, 75-81.	1.2	110
83	Cytology and immunocytochemistry of the nucleus extrolateralis anterior of the mormyrid brain: possible role of GABAergic synapses in temporal analysis. <i>Anatomy and Embryology</i> , 1987, 176, 313-336.	1.5	49
84	The organization of afferent input to the caudal lobe of the cerebellum of the gymnotid fish <i>Apteronotus leptorhynchus</i> . <i>Anatomy and Embryology</i> , 1987, 177, 55-79.	1.5	99
85	Cytology and immunocytochemistry of the nucleus of the lateral line lobe in the electric fish <i>Gnathonemus petersii</i> (mormyridae): Evidence suggesting that GABAergic synapses mediate an inhibitory corollary discharge. <i>Synapse</i> , 1987, 1, 32-56.	0.6	44
86	Ultrastructural studies of physiologically identified electrosensory afferent synapses in the gymnotiform fish, <i>Eigenmannia</i> . <i>Journal of Comparative Neurology</i> , 1987, 255, 526-537.	0.9	43
87	A Golgi study of the cell types of the dorsal torus semicircularis of the electric fish <i>Eigenmannia</i> : Functional and morphological diversity in the midbrain. <i>Journal of Comparative Neurology</i> , 1985, 235, 207-240.	0.9	62
88	The nucleus praeeminentialis: A Golgi study of a feedback center in the electrosensory system of gymnotid fish. <i>Journal of Comparative Neurology</i> , 1983, 221, 127-144.	0.9	83
89	Peripheral organization and central projections of the electrosensory nerves in gymnotiform fish. <i>Journal of Comparative Neurology</i> , 1982, 211, 139-153.	0.9	186
90	Efferent projections of the posterior lateral line lobe in gymnotiform fish. <i>Journal of Comparative Neurology</i> , 1982, 211, 154-164.	0.9	92

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91	The distribution of acetylcholinesterase and choline acetyl transferase in the cerebellum and posterior lateral line lobe of weakly electric fish (Gymnotidae). Brain Research, 1981, 226, 320-325.	1.1	30
92	The cytology of the posterior lateral line lobe of high-frequency weakly electric fish (gymnotidae): Dendritic differentiation and synaptic specificity in a simple cortex. Journal of Comparative Neurology, 1981, 195, 87-139.	0.9	206
93	The posterior lateral line lobe of certain gymnotoid fish: Quantitative light microscopy. Journal of Comparative Neurology, 1979, 183, 323-363.	0.9	187