Ronald L Calabrese

List of Publications by Year
in descending order

92 papers	3,421 citations	109321 35 h-index	155660 55 g-index
108 all docs	108 docs citations	108 times ranked	1419 citing authors

#	Article	IF	Citations
1	Keeping it simple: Zebrafish directly sense spinal cord stretch to regulate swimming. Neuron, 2021, 109, 1072-1074.	8.1	0
2	Contribution of the Na⁺/K⁺ Pump to Rhythmic Bursting, Explored with Modeling and Dynamic Clamp Analyses. Journal of Visualized Experiments, 2021, , .	0.3	0
3	Comodulation of h- and Na⁺/K⁺ Pump Currents Expands the Range of Functional Bursting in a Central Pattern Generator by Navigating between Dysfunctional Regimes. Journal of Neuroscience, 2021, 41, 6468-6483.	3.6	10
4	Neuronal networks: Degeneracy unleashed. Current Biology, 2021, 31, R1439-R1441.	3.9	7
5	The neuromuscular transform in a single segment of a segmented heart tube. Journal of Neurophysiology, 2020, 124, 914-929.	1.8	0
6	Synaptic Strengths Dominate Phasing of Motor Circuit: Intrinsic Conductances of Neuron Types Need Not Vary across Animals. ENeuro, 2019, 6, ENEURO.0417-18.2019.	1.9	3
7	Output variability across animals and levels in a motor system. ELife, 2018, 7, .	6.0	13
8	Inconvenient Truth to Principle of Neuroscience. Trends in Neurosciences, 2018, 41, 488-491.	8.6	4
9	Cider vinegar rules. ELife, 2018, 7, .	6.0	0
10	Neural Evolution: Homology in Neuronal Networks. Current Biology, 2017, 27, R718-R719.	3.9	0
11	The neural control of heartbeat in invertebrates. Current Opinion in Neurobiology, 2016, 41, 68-77.	4.2	30
12	Analysis of Family Structures Reveals Robustness or Sensitivity of Bursting Activity to Parameter Variations in a Half-Center Oscillator (HCO) Model. ENeuro, 2016, 3, ENEURO.0015-16.2016.	1.9	9
13	Na+/K+ pump interacts with the h-current to control bursting activity in central pattern generator neurons of leeches. ELife, 2016, 5, .	6.0	42
14	In search of lost scent. ELife, 2015, 4, .	6.0	3
15	Identifying Crucial Parameter Correlations Maintaining Bursting Activity. PLoS Computational Biology, 2014, 10, e1003678.	3.2	20
16	Variation in motor output and motor performance in a centrally generated motor pattern. Journal of Neurophysiology, 2014, 112, 95-109.	1.8	13
17	Motor Coordination: A Local Hub for Coordination. Current Biology, 2014, 24, R274-R275.	3.9	0
18	Channeling the Central Dogma. Neuron, 2014, 82, 725-727.	8.1	8

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19	Falling on deaf neurons. ELife, 2014, 3, e02289.	6.0	0
20	High Prevalence of Multistability of Rest States and Bursting in a Database of a Model Neuron. PLoS Computational Biology, 2013, 9, e1002930.	3.2	30
21	Correlated Conductance Parameters in Leech Heart Motor Neurons Contribute to Motor Pattern Formation. PLoS ONE, 2013, 8, e79267.	2.5	32
22	Fruit flies step out. ELife, 2013, 2, e00450.	6.0	0
23	Animal-to-animal variability of connection strength in the leech heartbeat central pattern generator. Journal of Neurophysiology, 2012, 107, 1681-1693.	1.8	83
24	Small is beautiful: models of small neuronal networks. Current Opinion in Neurobiology, 2012, 22, 670-675.	4.2	10
25	Neuronal Networks: Enhanced Feedback Feeds Forward. Current Biology, 2012, 22, R803-R804.	3.9	0
26	Contribution of motoneuron intrinsic properties to fictive motor pattern generation. Journal of Neurophysiology, 2011, 106, 538-553.	1.8	22
27	Constancy and Variability in the Output of a Central Pattern Generator. Journal of Neuroscience, 2011, 31, 4663-4674.	3.6	57
28	A database of computational models of a half-center oscillator for analyzing how neuronal parameters influence network activity. Journal of Biological Physics, 2011, 37, 263-283.	1.5	44
29	Patterns of Presynaptic Activity and Synaptic Strength Interact to Produce Motor Output. Journal of Neuroscience, 2011, 31, 17555-17571.	3.6	19
30	Coping with Variability in Small Neuronal Networks. Integrative and Comparative Biology, 2011, 51, 845-855.	2.0	46
31	Bringing up the rear: new premotor interneurons add regional complexity to a segmentally distributed motor pattern. Journal of Neurophysiology, 2011, 106, 2201-2215.	1.8	11
32	A role for compromise: synaptic inhibition and electrical coupling interact to control phasing in the leech heartbeat CPG. Frontiers in Behavioral Neuroscience, 2010, 4, .	2.0	23
33	The Heartbeat Neural Control System of the Leech. , 2010, , 450-456.		4
34	How Does Maintenance of Network Activity Depend on Endogenous Dynamics of Isolated Neurons?. Neural Computation, 2009, 21, 1665-1682.	2.2	9
35	Serotonergic Modulation of Locomotion in Zebrafishâ€"Endogenous Release and Synaptic Mechanisms. Journal of Neuroscience, 2009, 29, 10387-10395.	3.6	73
36	Locomotor Pattern in the Adult Zebrafish Spinal Cord In Vitro. Journal of Neurophysiology, 2008, 99, 37-48.	1.8	52

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37	Using a Model to Assess the Role of the Spatiotemporal Pattern of Inhibitory Input and Intrasegmental Electrical Coupling in the Intersegmental and Side-to-Side Coordination of Motor Neurons by the Leech Heartbeat Central Pattern Generator. Journal of Neurophysiology, 2008, 100, 1354-1371.	1.8	18
38	Using Constraints on Neuronal Activity to Reveal Compensatory Changes in Neuronal Parameters. Journal of Neurophysiology, 2007, 98, 3749-3758.	1.8	57
39	A Central Pattern Generator Producing Alternative Outputs: Phase Relations of Leech Heart Motor Neurons With Respect to Premotor Synaptic Input. Journal of Neurophysiology, 2007, 98, 2983-2991.	1.8	26
40	A Central Pattern Generator Producing Alternative Outputs: Pattern, Strength, and Dynamics of Premotor Synaptic Input to Leech Heart Motor Neurons. Journal of Neurophysiology, 2007, 98, 2992-3005.	1.8	31
41	Motor Networks: Shifting Coalitions. Current Biology, 2007, 17, R139-R141.	3.9	6
42	A Central Pattern Generator Producing Alternative Outputs: Temporal Pattern of Premotor Activity. Journal of Neurophysiology, 2006, 96, 309-326.	1.8	34
43	Creation and Reduction of a Morphologically Detailed Model of a Leech Heart Interneuron. Journal of Neurophysiology, 2006, 96, 2107-2120.	1.8	33
44	Hybrid Systems Analysis of the Control of Burst Duration by Low-Voltage-Activated Calcium Current in Leech Heart Interneurons. Journal of Neurophysiology, 2006, 96, 2857-2867.	1.8	38
45	Endogenous and Half-Center Bursting in Morphologically Inspired Models of Leech Heart Interneurons. Journal of Neurophysiology, 2006, 96, 2089-2106.	1.8	31
46	Spike-Mediated and Graded Inhibitory Synaptic Transmission Between Leech Interneurons: Evidence for Shared Release Sites. Journal of Neurophysiology, 2006, 96, 235-251.	1.8	17
47	Graded Inhibitory Synaptic Transmission Between Leech Interneurons: Assessing the Roles of Two Kinetically Distinct Low-Threshold Ca Currents. Journal of Neurophysiology, 2006, 96, 218-234.	1.8	17
48	Myomodulin Increases Ih and Inhibits the Na/K Pump to Modulate Bursting in Leech Heart Interneurons. Journal of Neurophysiology, 2005, 94, 3938-3950.	1.8	60
49	Neuronal control of leech behavior. Progress in Neurobiology, 2005, 76, 279-327.	5.7	336
50	Heartbeat Control in Leeches. II. Fictive Motor Pattern. Journal of Neurophysiology, 2004, 91, 397-409.	1.8	32
51	Detailed Model of Intersegmental Coordination in the Timing Network of the Leech Heartbeat Central Pattern Generator. Journal of Neurophysiology, 2004, 91, 958-977.	1.8	34
52	Using a Hybrid Neural System to Reveal Regulation of Neuronal Network Activity by an Intrinsic Current. Journal of Neuroscience, 2004, 24, 5427-5438.	3.6	73
53	A Multiconductance Silicon Neuron With Biologically Matched Dynamics. IEEE Transactions on Biomedical Engineering, 2004, 51, 342-354.	4.2	106
54	Heartbeat Control in Leeches. I. Constriction Pattern and Neural Modulation of Blood Pressure in Intact Animals. Journal of Neurophysiology, 2004, 91, 382-396.	1.8	36

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55	Neuronal networks: dissection one channel at a time. Current Biology, 2004, 14, R154-5.	3.9	0
56	Behavioral Choices: How Neuronal Networks Make Decisions. Current Biology, 2003, 13, R140-R142.	3.9	9
57	Intersegmental Coordination of Rhythmic Motor Patterns. Journal of Neurophysiology, 2003, 90, 531-538.	1.8	88
58	Modulation of Spike-Mediated Synaptic Transmission by Presynaptic Background Ca²⁺in Leech Heart Interneurons. Journal of Neuroscience, 2003, 23, 1206-1218.	3.6	35
59	A Functional Asymmetry in the Leech Heartbeat Timing Network Is Revealed by Driving the Network across Various Cycle Periods. Journal of Neuroscience, 2002, 22, 4418-4427.	3.6	16
60	Period Differences Between Segmental Oscillators Produce Intersegmental Phase Differences in the Leech Heartbeat Timing Network. Journal of Neurophysiology, 2002, 87, 1603-1615.	1.8	38
61	Phase Relationships Between Segmentally Organized Oscillators in the Leech Heartbeat Pattern Generating Network. Journal of Neurophysiology, 2002, 87, 1572-1585.	1.8	36
62	Model of Intersegmental Coordination in the Leech Heartbeat Neuronal Network. Journal of Neurophysiology, 2002, 87, 1586-1602.	1.8	32
63	Bursting in Leech Heart Interneurons: Cell-Autonomous and Network-Based Mechanisms. Journal of Neuroscience, 2002, 22, 10580-10592.	3.6	178
64	Indirectly Gated Clâ^'-Dependent Clâ^'Channels Sense Physiological Changes of Extracellular Chloride in the Leech. Journal of Neurophysiology, 2001, 86, 1826-1838.	1.8	4
65	Intracellular Ca²⁺Dynamics During Spontaneous and Evoked Activity of Leech Heart Interneurons: Low-Threshold Ca Currents and Graded Synaptic Transmission. Journal of Neuroscience, 2000, 20, 4930-4943.	3.6	52
66	Modeling Alternation to Synchrony with Inhibitory Coupling: A Neuromorphic VLSI Approach. Neural Computation, 2000, 12, 2259-2278.	2.2	23
67	Neural coordination: Taking the lead from a model. Current Biology, 1999, 9, R680-R683.	3.9	4
68	Cellular, synaptic, network, and modulatory mechanisms involved in rhythm generation. Current Opinion in Neurobiology, 1998, 8, 710-717.	4.2	87
69	Functional Role of Ca²⁺Currents in Graded and Spike-Mediated Synaptic Transmission Between Leech Heart Interneurons. Journal of Neurophysiology, 1997, 77, 1779-1794.	1.8	38
70	A Slow Outward Current Activated by FMRFamide in Heart Interneurons of the Medicinal Leech. Journal of Neuroscience, 1997, 17, 4461-4472.	3.6	29
71	Activation of Intrinsic and Synaptic Currents in Leech Heart Interneurons by Realistic Waveforms. Journal of Neuroscience, 1996, 16, 4958-4970.	3.6	52
72	Heartbeat control in the medicinal leech: A model system for understanding the origin, coordination, and modulation of rhythmic motor patterns. Journal of Neurobiology, 1995, 27, 390-402.	3.6	75

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73	Modeling the leech heartbeat elemental oscillator I. Interactions of intrinsic and synaptic currents. Journal of Computational Neuroscience, 1995, 2, 215-235.	1.0	111
74	Modeling the leech heartbeat elemental oscillator II. Exploring the parameter space. Journal of Computational Neuroscience, 1995, 2, 237-257.	1.0	53
75	Oscillation in motor pattern-generating networks. Current Opinion in Neurobiology, 1995, 5, 816-823.	4.2	51
76	Modeling a Neural Oscillator that Paces Heartbeat in the Medicinal Leech. American Zoologist, 1993, 33, 16-28.	0.7	3
77	Motor-pattern-generating networks in invertebrates: modeling our way toward understanding. Trends in Neurosciences, 1992, 15, 439-445.	8.6	42
78	Identification of RFamide neuropeptides in the medicinal leech. Peptides, 1991, 12, 897-908.	2.4	68
79	The center cannot hold. Current Biology, 1991, 1, 185-187.	3.9	0
80	RFamide Peptides in the Leech,Hirudo medicinalis. American Zoologist, 1989, 29, 1227-1239.	0.7	4
81	Distribution and partial characterization of FMRFamide-like peptides in the stomatogastric nervous systems of the rock crab,Cancer borealis, and the spiny lobster,Panulirus interruptus. Journal of Comparative Neurology, 1987, 259, 150-163.	1.6	163
82	Identification of motor neurons that contain a FMRFamidelike peptide and the effects of FMRFamide on longitudinal muscle in the medicinal leech,Hirudo medicinalis. Journal of Comparative Neurology, 1987, 266, 95-111.	1.6	56
83	Neural control of the hearts in the leech,Hirudo medicinalis. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1984, 154, 367-380.	1.6	50
84	Neural control of the hearts in the leech,Hirudo medicinalis. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1984, 154, 381-391.	1.6	46
85	Neural control of the hearts in the leech,Hirudo medicinalis. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1984, 154, 393-406.	1.6	43
86	Rate modification in the heartbeat central pattern generator of the medicinal leech. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1984, 155, 783-794.	1.6	49
87	Similarities and differences in the structure of segmentally homologous neurons that control the hearts in the leech, Hirudo medicinalis. Cell and Tissue Research, 1981, 214, 137-53.	2.9	41
88	Invertebrate central pattern generators: modeling and complexity. Behavioral and Brain Sciences, 1980, 3, 542-543.	0.7	2
89	Neural Generation of the Peristaltic and Non-Peristaltic Heartbeat Coordination Modes in the Leech,Hirudo Medicinalis. American Zoologist, 1979, 19, 87-102.	0.7	8
90	The neural control of alternate heartbeat coordination states in the leech,Hirudo medicinalis. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1977, 122, 111-143.	1.6	98

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91	Crayfish mechanoreceptive interneurons. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1976, 105, 103-114.	1.6	32
92	Multiple sites of spike initiation in a single dendritic system. Brain Research, 1974, 82, 316-321.	2.2	41