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	Neuronal control of leech behavior. Progress in Neurobiology, 2005, 76, 279-327.	5.7	336
2	Bursting in Leech Heart Interneurons: Cell-Autonomous and Network-Based Mechanisms. Journal of Neuroscience, 2002, 22, 10580-10592.	3.6	178
3	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
4	Modeling the leech heartbeat elemental oscillator I. Interactions of intrinsic and synaptic currents. Journal of Computational Neuroscience, 1995, 2, 215-235.	1.0	111
5	A Multiconductance Silicon Neuron With Biologically Matched Dynamics. IEEE Transactions on Biomedical Engineering, 2004, 51, 342-354.	4.2	106
6	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
7	Intersegmental Coordination of Rhythmic Motor Patterns. Journal of Neurophysiology, 2003, 90, 531-538.	1.8	88
8	Cellular, synaptic, network, and modulatory mechanisms involved in rhythm generation. Current Opinion in Neurobiology, 1998, 8, 710-717.	4.2	87
9	Animal-to-animal variability of connection strength in the leech heartbeat central pattern generator. Journal of Neurophysiology, 2012, 107, 1681-1693.	1.8	83
10	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
11	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
12	Serotonergic Modulation of Locomotion in Zebrafishâ€"Endogenous Release and Synaptic Mechanisms. Journal of Neuroscience, 2009, 29, 10387-10395.	3.6	73
13	Identification of RFamide neuropeptides in the medicinal leech. Peptides, 1991, 12, 897-908.	2.4	68
14	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
15	Using Constraints on Neuronal Activity to Reveal Compensatory Changes in Neuronal Parameters. Journal of Neurophysiology, 2007, 98, 3749-3758.	1.8	57
16	Constancy and Variability in the Output of a Central Pattern Generator. Journal of Neuroscience, 2011, 31, 4663-4674.	3.6	57
17	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
18	Modeling the leech heartbeat elemental oscillator II. Exploring the parameter space. Journal of Computational Neuroscience, 1995, 2, 237-257.	1.0	53

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19	Activation of Intrinsic and Synaptic Currents in Leech Heart Interneurons by Realistic Waveforms. Journal of Neuroscience, 1996, 16, 4958-4970.	3.6	52
20	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
21	Locomotor Pattern in the Adult Zebrafish Spinal Cord In Vitro. Journal of Neurophysiology, 2008, 99, 37-48.	1.8	52
22	Oscillation in motor pattern-generating networks. Current Opinion in Neurobiology, 1995, 5, 816-823.	4.2	51
23	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
24	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
25	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
26	Coping with Variability in Small Neuronal Networks. Integrative and Comparative Biology, 2011, 51, 845-855.	2.0	46
27	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
28	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
29	Motor-pattern-generating networks in invertebrates: modeling our way toward understanding. Trends in Neurosciences, 1992, 15, 439-445.	8.6	42
30	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
31	Multiple sites of spike initiation in a single dendritic system. Brain Research, 1974, 82, 316-321.	2.2	41
32	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
33	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
34	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
35	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
36	Phase Relationships Between Segmentally Organized Oscillators in the Leech Heartbeat Pattern Generating Network. Journal of Neurophysiology, 2002, 87, 1572-1585.	1.8	36

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37	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
38	Modulation of Spike-Mediated Synaptic Transmission by Presynaptic Background Ca²⁺in Leech Heart Interneurons. Journal of Neuroscience, 2003, 23, 1206-1218.	3.6	35
39	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
40	A Central Pattern Generator Producing Alternative Outputs: Temporal Pattern of Premotor Activity. Journal of Neurophysiology, 2006, 96, 309-326.	1.8	34
41	Creation and Reduction of a Morphologically Detailed Model of a Leech Heart Interneuron. Journal of Neurophysiology, 2006, 96, 2107-2120.	1.8	33
42	Crayfish mechanoreceptive interneurons. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1976, 105, 103-114.	1.6	32
43	Model of Intersegmental Coordination in the Leech Heartbeat Neuronal Network. Journal of Neurophysiology, 2002, 87, 1586-1602.	1.8	32
44	Heartbeat Control in Leeches. II. Fictive Motor Pattern. Journal of Neurophysiology, 2004, 91, 397-409.	1.8	32
45	Correlated Conductance Parameters in Leech Heart Motor Neurons Contribute to Motor Pattern Formation. PLoS ONE, 2013, 8, e79267.	2.5	32
46	Endogenous and Half-Center Bursting in Morphologically Inspired Models of Leech Heart Interneurons. Journal of Neurophysiology, 2006, 96, 2089-2106.	1.8	31
47	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
48	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
49	The neural control of heartbeat in invertebrates. Current Opinion in Neurobiology, 2016, 41, 68-77.	4.2	30
50	A Slow Outward Current Activated by FMRFamide in Heart Interneurons of the Medicinal Leech. Journal of Neuroscience, 1997, 17, 4461-4472.	3.6	29
51	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
52	Modeling Alternation to Synchrony with Inhibitory Coupling: A Neuromorphic VLSI Approach. Neural Computation, 2000, 12, 2259-2278.	2.2	23
53	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
54	Contribution of motoneuron intrinsic properties to fictive motor pattern generation. Journal of Neurophysiology, 2011, 106, 538-553.	1.8	22

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55	Identifying Crucial Parameter Correlations Maintaining Bursting Activity. PLoS Computational Biology, 2014, 10, e1003678.	3.2	20
56	Patterns of Presynaptic Activity and Synaptic Strength Interact to Produce Motor Output. Journal of Neuroscience, 2011, 31, 17555-17571.	3.6	19
57	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
58	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
59	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
60	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
61	Variation in motor output and motor performance in a centrally generated motor pattern. Journal of Neurophysiology, 2014, 112, 95-109.	1.8	13
62	Output variability across animals and levels in a motor system. ELife, 2018, 7, .	6.0	13
63	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
64	Small is beautiful: models of small neuronal networks. Current Opinion in Neurobiology, 2012, 22, 670-675.	4.2	10
65	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
66	Behavioral Choices: How Neuronal Networks Make Decisions. Current Biology, 2003, 13, R140-R142.	3.9	9
67	How Does Maintenance of Network Activity Depend on Endogenous Dynamics of Isolated Neurons?. Neural Computation, 2009, 21, 1665-1682.	2.2	9
68	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
69	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
70	Channeling the Central Dogma. Neuron, 2014, 82, 725-727.	8.1	8
71	Neuronal networks: Degeneracy unleashed. Current Biology, 2021, 31, R1439-R1441.	3.9	7
72	Motor Networks: Shifting Coalitions. Current Biology, 2007, 17, R139-R141.	3.9	6

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73	RFamide Peptides in the Leech,Hirudo medicinalis. American Zoologist, 1989, 29, 1227-1239.	0.7	4
74	Neural coordination: Taking the lead from a model. Current Biology, 1999, 9, R680-R683.	3.9	4
75	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
76	Inconvenient Truth to Principle of Neuroscience. Trends in Neurosciences, 2018, 41, 488-491.	8.6	4
77	The Heartbeat Neural Control System of the Leech. , 2010, , 450-456.		4
78	Modeling a Neural Oscillator that Paces Heartbeat in the Medicinal Leech. American Zoologist, 1993, 33, 16-28.	0.7	3
79	In search of lost scent. ELife, 2015, 4, .	6.0	3
80	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
81	Invertebrate central pattern generators: modeling and complexity. Behavioral and Brain Sciences, 1980, 3, 542-543.	0.7	2
82	The center cannot hold. Current Biology, 1991, 1, 185-187.	3.9	0
83	Neuronal Networks: Enhanced Feedback Feeds Forward. Current Biology, 2012, 22, R803-R804.	3.9	0
84	Motor Coordination: A Local Hub for Coordination. Current Biology, 2014, 24, R274-R275.	3.9	0
85	Neural Evolution: Homology in Neuronal Networks. Current Biology, 2017, 27, R718-R719.	3.9	0
86	The neuromuscular transform in a single segment of a segmented heart tube. Journal of Neurophysiology, 2020, 124, 914-929.	1.8	0
87	Keeping it simple: Zebrafish directly sense spinal cord stretch to regulate swimming. Neuron, 2021, 109, 1072-1074.	8.1	0
88	Contribution of the Na⁺/K⁺ Pump to Rhythmic Bursting, Explored with Modeling and Dynamic Clamp Analyses. Journal of Visualized Experiments, 2021, , .	0.3	0
89	Fruit flies step out. ELife, 2013, 2, e00450.	6.0	0
90	Falling on deaf neurons. ELife, 2014, 3, e02289.	6.0	0

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91	Cider vinegar rules. ELife, 2018, 7, .	6.0	0
92	Neuronal networks: dissection one channel at a time. Current Biology, 2004, 14, R154-5.	3.9	0