

# Ronald L Calabrese

## List of Publications by Year in descending order

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92  
papers

3,421  
citations

109137

35  
h-index

155451

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. <i>Neuron</i> , 2021, 109, 1072-1074.	3.8	0
2	Contribution of the Na <sup>+</sup> /K <sup>+</sup> Pump to Rhythmic Bursting, Explored with Modeling and Dynamic Clamp Analyses. <i>Journal of Visualized Experiments</i> , 2021, , .	0.2	0
3	Comodulation of h- and Na <sup>+</sup> /K <sup>+</sup> Pump Currents Expands the Range of Functional Bursting in a Central Pattern Generator by Navigating between Dysfunctional Regimes. <i>Journal of Neuroscience</i> , 2021, 41, 6468-6483.	1.7	10
4	Neuronal networks: Degeneracy unleashed. <i>Current Biology</i> , 2021, 31, R1439-R1441.	1.8	7
5	The neuromuscular transform in a single segment of a segmented heart tube. <i>Journal of Neurophysiology</i> , 2020, 124, 914-929.	0.9	0
6	Synaptic Strengths Dominate Phasing of Motor Circuit: Intrinsic Conductances of Neuron Types Need Not Vary across Animals. <i>ENeuro</i> , 2019, 6, ENEURO.0417-18.2019.	0.9	3
7	Output variability across animals and levels in a motor system. <i>ELife</i> , 2018, 7, .	2.8	13
8	Inconvenient Truth to Principle of Neuroscience. <i>Trends in Neurosciences</i> , 2018, 41, 488-491.	4.2	4
9	Cider vinegar rules. <i>ELife</i> , 2018, 7, .	2.8	0
10	Neural Evolution: Homology in Neuronal Networks. <i>Current Biology</i> , 2017, 27, R718-R719.	1.8	0
11	The neural control of heartbeat in invertebrates. <i>Current Opinion in Neurobiology</i> , 2016, 41, 68-77.	2.0	30
12	Analysis of Family Structures Reveals Robustness or Sensitivity of Bursting Activity to Parameter Variations in a Half-Center Oscillator (HCO) Model. <i>ENeuro</i> , 2016, 3, ENEURO.0015-16.2016.	0.9	9
13	Na <sup>+</sup> /K <sup>+</sup> pump interacts with the h-current to control bursting activity in central pattern generator neurons of leeches. <i>ELife</i> , 2016, 5, .	2.8	42
14	In search of lost scent. <i>ELife</i> , 2015, 4, .	2.8	3
15	Identifying Crucial Parameter Correlations Maintaining Bursting Activity. <i>PLoS Computational Biology</i> , 2014, 10, e1003678.	1.5	20
16	Variation in motor output and motor performance in a centrally generated motor pattern. <i>Journal of Neurophysiology</i> , 2014, 112, 95-109.	0.9	13
17	Motor Coordination: A Local Hub for Coordination. <i>Current Biology</i> , 2014, 24, R274-R275.	1.8	0
18	Channeling the Central Dogma. <i>Neuron</i> , 2014, 82, 725-727.	3.8	8

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19	Falling on deaf neurons. <i>ELife</i> , 2014, 3, e02289.	2.8	0
20	High Prevalence of Multistability of Rest States and Bursting in a Database of a Model Neuron. <i>PLoS Computational Biology</i> , 2013, 9, e1002930.	1.5	30
21	Correlated Conductance Parameters in Leech Heart Motor Neurons Contribute to Motor Pattern Formation. <i>PLoS ONE</i> , 2013, 8, e79267.	1.1	32
22	Fruit flies step out. <i>ELife</i> , 2013, 2, e00450.	2.8	0
23	Animal-to-animal variability of connection strength in the leech heartbeat central pattern generator. <i>Journal of Neurophysiology</i> , 2012, 107, 1681-1693.	0.9	83
24	Small is beautiful: models of small neuronal networks. <i>Current Opinion in Neurobiology</i> , 2012, 22, 670-675.	2.0	10
25	Neuronal Networks: Enhanced Feedback Feeds Forward. <i>Current Biology</i> , 2012, 22, R803-R804.	1.8	0
26	Contribution of motoneuron intrinsic properties to fictive motor pattern generation. <i>Journal of Neurophysiology</i> , 2011, 106, 538-553.	0.9	22
27	Constancy and Variability in the Output of a Central Pattern Generator. <i>Journal of Neuroscience</i> , 2011, 31, 4663-4674.	1.7	57
28	A database of computational models of a half-center oscillator for analyzing how neuronal parameters influence network activity. <i>Journal of Biological Physics</i> , 2011, 37, 263-283.	0.7	44
29	Patterns of Presynaptic Activity and Synaptic Strength Interact to Produce Motor Output. <i>Journal of Neuroscience</i> , 2011, 31, 17555-17571.	1.7	19
30	Coping with Variability in Small Neuronal Networks. <i>Integrative and Comparative Biology</i> , 2011, 51, 845-855.	0.9	46
31	Bringing up the rear: new premotor interneurons add regional complexity to a segmentally distributed motor pattern. <i>Journal of Neurophysiology</i> , 2011, 106, 2201-2215.	0.9	11
32	A role for compromise: synaptic inhibition and electrical coupling interact to control phasing in the leech heartbeat CPG. <i>Frontiers in Behavioral Neuroscience</i> , 2010, 4, .	1.0	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?. <i>Neural Computation</i> , 2009, 21, 1665-1682.	1.3	9
35	Serotonergic Modulation of Locomotion in Zebrafish—Endogenous Release and Synaptic Mechanisms. <i>Journal of Neuroscience</i> , 2009, 29, 10387-10395.	1.7	73
36	Locomotor Pattern in the Adult Zebrafish Spinal Cord In Vitro. <i>Journal of Neurophysiology</i> , 2008, 99, 37-48.	0.9	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. <i>Journal of Neurophysiology</i> , 2008, 100, 1354-1371.	0.9	18
38	Using Constraints on Neuronal Activity to Reveal Compensatory Changes in Neuronal Parameters. <i>Journal of Neurophysiology</i> , 2007, 98, 3749-3758.	0.9	57
39	A Central Pattern Generator Producing Alternative Outputs: Phase Relations of Leech Heart Motor Neurons With Respect to Premotor Synaptic Input. <i>Journal of Neurophysiology</i> , 2007, 98, 2983-2991.	0.9	26
40	A Central Pattern Generator Producing Alternative Outputs: Pattern, Strength, and Dynamics of Premotor Synaptic Input to Leech Heart Motor Neurons. <i>Journal of Neurophysiology</i> , 2007, 98, 2992-3005.	0.9	31
41	Motor Networks: Shifting Coalitions. <i>Current Biology</i> , 2007, 17, R139-R141.	1.8	6
42	A Central Pattern Generator Producing Alternative Outputs: Temporal Pattern of Premotor Activity. <i>Journal of Neurophysiology</i> , 2006, 96, 309-326.	0.9	34
43	Creation and Reduction of a Morphologically Detailed Model of a Leech Heart Interneuron. <i>Journal of Neurophysiology</i> , 2006, 96, 2107-2120.	0.9	33
44	Hybrid Systems Analysis of the Control of Burst Duration by Low-Voltage-Activated Calcium Current in Leech Heart Interneurons. <i>Journal of Neurophysiology</i> , 2006, 96, 2857-2867.	0.9	38
45	Endogenous and Half-Center Bursting in Morphologically Inspired Models of Leech Heart Interneurons. <i>Journal of Neurophysiology</i> , 2006, 96, 2089-2106.	0.9	31
46	Spike-Mediated and Graded Inhibitory Synaptic Transmission Between Leech Interneurons: Evidence for Shared Release Sites. <i>Journal of Neurophysiology</i> , 2006, 96, 235-251.	0.9	17
47	Graded Inhibitory Synaptic Transmission Between Leech Interneurons: Assessing the Roles of Two Kinetically Distinct Low-Threshold Ca Currents. <i>Journal of Neurophysiology</i> , 2006, 96, 218-234.	0.9	17
48	Myomodulin Increases I <sub>h</sub> and Inhibits the Na/K Pump to Modulate Bursting in Leech Heart Interneurons. <i>Journal of Neurophysiology</i> , 2005, 94, 3938-3950.	0.9	60
49	Neuronal control of leech behavior. <i>Progress in Neurobiology</i> , 2005, 76, 279-327.	2.8	336
50	Heartbeat Control in Leeches. II. Fictive Motor Pattern. <i>Journal of Neurophysiology</i> , 2004, 91, 397-409.	0.9	32
51	Detailed Model of Intersegmental Coordination in the Timing Network of the Leech Heartbeat Central Pattern Generator. <i>Journal of Neurophysiology</i> , 2004, 91, 958-977.	0.9	34
52	Using a Hybrid Neural System to Reveal Regulation of Neuronal Network Activity by an Intrinsic Current. <i>Journal of Neuroscience</i> , 2004, 24, 5427-5438.	1.7	73
53	A Multiconductance Silicon Neuron With Biologically Matched Dynamics. <i>IEEE Transactions on Biomedical Engineering</i> , 2004, 51, 342-354.	2.5	106
54	Heartbeat Control in Leeches. I. Constriction Pattern and Neural Modulation of Blood Pressure in Intact Animals. <i>Journal of Neurophysiology</i> , 2004, 91, 382-396.	0.9	36

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55	Neuronal networks: dissection one channel at a time. <i>Current Biology</i> , 2004, 14, R154-5.	1.8	0
56	Behavioral Choices: How Neuronal Networks Make Decisions. <i>Current Biology</i> , 2003, 13, R140-R142.	1.8	9
57	Intersegmental Coordination of Rhythmic Motor Patterns. <i>Journal of Neurophysiology</i> , 2003, 90, 531-538.	0.9	88
58	Modulation of Spike-Mediated Synaptic Transmission by Presynaptic Background $Ca^{2+}$ in Leech Heart Interneurons. <i>Journal of Neuroscience</i> , 2003, 23, 1206-1218.	1.7	35
59	A Functional Asymmetry in the Leech Heartbeat Timing Network Is Revealed by Driving the Network across Various Cycle Periods. <i>Journal of Neuroscience</i> , 2002, 22, 4418-4427.	1.7	16
60	Period Differences Between Segmental Oscillators Produce Intersegmental Phase Differences in the Leech Heartbeat Timing Network. <i>Journal of Neurophysiology</i> , 2002, 87, 1603-1615.	0.9	38
61	Phase Relationships Between Segmentally Organized Oscillators in the Leech Heartbeat Pattern Generating Network. <i>Journal of Neurophysiology</i> , 2002, 87, 1572-1585.	0.9	36
62	Model of Intersegmental Coordination in the Leech Heartbeat Neuronal Network. <i>Journal of Neurophysiology</i> , 2002, 87, 1586-1602.	0.9	32
63	Bursting in Leech Heart Interneurons: Cell-Autonomous and Network-Based Mechanisms. <i>Journal of Neuroscience</i> , 2002, 22, 10580-10592.	1.7	178
64	Indirectly Gated $Cl^{-}$ -Dependent $Cl^{-}$ Channels Sense Physiological Changes of Extracellular Chloride in the Leech. <i>Journal of Neurophysiology</i> , 2001, 86, 1826-1838.	0.9	4
65	Intracellular $Ca^{2+}$ Dynamics During Spontaneous and Evoked Activity of Leech Heart Interneurons: Low-Threshold $Ca$ Currents and Graded Synaptic Transmission. <i>Journal of Neuroscience</i> , 2000, 20, 4930-4943.	1.7	52
66	Modeling Alternation to Synchrony with Inhibitory Coupling: A Neuromorphic VLSI Approach. <i>Neural Computation</i> , 2000, 12, 2259-2278.	1.3	23
67	Neural coordination: Taking the lead from a model. <i>Current Biology</i> , 1999, 9, R680-R683.	1.8	4
68	Cellular, synaptic, network, and modulatory mechanisms involved in rhythm generation. <i>Current Opinion in Neurobiology</i> , 1998, 8, 710-717.	2.0	87
69	Functional Role of $Ca^{2+}$ Currents in Graded and Spike-Mediated Synaptic Transmission Between Leech Heart Interneurons. <i>Journal of Neurophysiology</i> , 1997, 77, 1779-1794.	0.9	38
70	A Slow Outward Current Activated by FMRFamide in Heart Interneurons of the Medicinal Leech. <i>Journal of Neuroscience</i> , 1997, 17, 4461-4472.	1.7	29
71	Activation of Intrinsic and Synaptic Currents in Leech Heart Interneurons by Realistic Waveforms. <i>Journal of Neuroscience</i> , 1996, 16, 4958-4970.	1.7	52
72	Heartbeat control in the medicinal leech: A model system for understanding the origin, coordination, and modulation of rhythmic motor patterns. <i>Journal of Neurobiology</i> , 1995, 27, 390-402.	3.7	75

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73	Modeling the leech heartbeat elemental oscillator I. Interactions of intrinsic and synaptic currents. <i>Journal of Computational Neuroscience</i> , 1995, 2, 215-235.	0.6	111
74	Modeling the leech heartbeat elemental oscillator II. Exploring the parameter space. <i>Journal of Computational Neuroscience</i> , 1995, 2, 237-257.	0.6	53
75	Oscillation in motor pattern-generating networks. <i>Current Opinion in Neurobiology</i> , 1995, 5, 816-823.	2.0	51
76	Modeling a Neural Oscillator that Paces Heartbeat in the Medicinal Leech. <i>American Zoologist</i> , 1993, 33, 16-28.	0.7	3
77	Motor-pattern-generating networks in invertebrates: modeling our way toward understanding. <i>Trends in Neurosciences</i> , 1992, 15, 439-445.	4.2	42
78	Identification of RFamide neuropeptides in the medicinal leech. <i>Peptides</i> , 1991, 12, 897-908.	1.2	68
79	The center cannot hold. <i>Current Biology</i> , 1991, 1, 185-187.	1.8	0
80	RFamide Peptides in the Leech, <i>Hirudo medicinalis</i> . <i>American Zoologist</i> , 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, <i>Cancer borealis</i> , and the spiny lobster, <i>Panulirus interruptus</i> . <i>Journal of Comparative Neurology</i> , 1987, 259, 150-163.	0.9	163
82	Identification of motor neurons that contain a FMRFamide-like peptide and the effects of FMRFamide on longitudinal muscle in the medicinal leech, <i>Hirudo medicinalis</i> . <i>Journal of Comparative Neurology</i> , 1987, 266, 95-111.	0.9	56
83	Neural control of the hearts in the leech, <i>Hirudo medicinalis</i> . <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1984, 154, 367-380.	0.7	50
84	Neural control of the hearts in the leech, <i>Hirudo medicinalis</i> . <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1984, 154, 381-391.	0.7	46
85	Neural control of the hearts in the leech, <i>Hirudo medicinalis</i> . <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1984, 154, 393-406.	0.7	43
86	Rate modification in the heartbeat central pattern generator of the medicinal leech. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1984, 155, 783-794.	0.7	49
87	Similarities and differences in the structure of segmentally homologous neurons that control the hearts in the leech, <i>Hirudo medicinalis</i> . <i>Cell and Tissue Research</i> , 1981, 214, 137-53.	1.5	41
88	Invertebrate central pattern generators: modeling and complexity. <i>Behavioral and Brain Sciences</i> , 1980, 3, 542-543.	0.4	2
89	Neural Generation of the Peristaltic and Non-Peristaltic Heartbeat Coordination Modes in the Leech, <i>Hirudo Medicinalis</i> . <i>American Zoologist</i> , 1979, 19, 87-102.	0.7	8
90	The neural control of alternate heartbeat coordination states in the leech, <i>Hirudo medicinalis</i> . <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1977, 122, 111-143.	0.7	98

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91	Crayfish mechanoreceptive interneurons. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1976, 105, 103-114.	0.7	32
92	Multiple sites of spike initiation in a single dendritic system. <i>Brain Research</i> , 1974, 82, 316-321.	1.1	41