Gennady S Cymbalyuk

List of Publications by Year
in descending order

56 papers	1,478 citations	304743 22 h-index	315739 38 g-index
60 all docs	60 docs citations	60 times ranked	873 citing authors

#	Article	IF	Citations
1	Emergence of Extreme Paw Accelerations During Cat Paw Shaking: Interactions of Spinal Central Pattern Generator, Hindlimb Mechanics and Muscle Length-Depended Feedback. Frontiers in Integrative Neuroscience, 2022, 16, 810139.	2.1	0
2	Bifurcation Analysis. , 2022, , 438-443.		0
3	Multistability in Neurodynamics: Overview. , 2022, , 83-85.		1
4	Multistability in Neurodynamics: Overview. , 2021, , 1-3.		0
5	Contribution of the Na⁺/K⁺ Pump to Rhythmic Bursting, Explored with Modeling and Dynamic Clamp Analyses. Journal of Visualized Experiments, 2021, , .	0.3	0
6	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
7	Contributions of h- and Na+/K+ Pump Currents to the Generation of Episodic and Continuous Rhythmic Activities. Frontiers in Cellular Neuroscience, 2021, 15, 715427.	3.7	4
8	Asymmetric and transient properties of reciprocal activity of antagonists during the paw-shake response in the cat. PLoS Computational Biology, 2021, 17, e1009677.	3.2	1
9	Asymmetric Control of Coexisting Slow and Fast Rhythms in a Multifunctional Central Pattern Generator: A Model Study. Neurophysiology, 2019, 51, 390-399.	0.3	6
10	Role of the Plasma Membrane Ca2+-ATPase Pump in the Regulation of Rhythm Generation by an Interstitial Cell of Cajal: A Computational Study. Neurophysiology, 2019, 51, 312-321.	0.3	2
11	Control of transitions between locomotor-like and paw shake-like rhythms in a model of a multistable central pattern generator. Journal of Neurophysiology, 2018, 120, 1074-1089.	1.8	16
12	Hypoxic Depression of Pacemaker Activity of Interstitial Cells of Cajal: A Threat of Gastrointestinal Dysmotility and Necrosis. A Simulation Study. Neurophysiology, 2018, 50, 76-82.	0.3	2
13	Propensity for Bistability of Bursting and Silence in the Leech Heart Interneuron. Frontiers in Computational Neuroscience, 2018, 12, 5.	2.1	8
14	Control of Cat Walking and Paw-Shake by a Multifunctional Central Pattern Generator. Springer Series in Computational Neuroscience, 2016, , 333-359.	0.3	7
15	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
16	A Codimension-2 Bifurcation Controlling Endogenous Bursting Activity and Pulse-Triggered Responses of a Neuron Model. PLoS ONE, 2014, 9, e85451.	2.5	18
17	Multifunctional central pattern generator controlling walking and paw shaking. BMC Neuroscience, 2014, 15, P181.	1.9	1
18	Cellular mechanisms generating bursting activity in neuronal networks. BMC Neuroscience, 2014, 15, .	1.9	1

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19	Bifurcation control of gait transition in insect locomotion. BMC Neuroscience, 2014, 15, .	1.9	1
20	Bifurcation Analysis. , 2014, , 1-6.		0
21	Multistability in Neurodynamics: Overview. , 2014, , 1-4.		0
22	Protective role of the half-center oscillator connectivity against external perturbations. BMC Neuroscience, 2013, 14, P77.	1.9	0
23	Bistability of silence and seizure-like bursting. Journal of Neuroscience Methods, 2013, 220, 179-189.	2.5	24
24	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
25	A Family of Mechanisms Controlling Bursting Activity and Pulse-triggered Responses of a Neuron Model. , 2013, , .		0
26	Paw-shake response and locomotion: can one CPG generate two different rhythmic behaviors?. BMC Neuroscience, 2012, 13, .	1.9	2
27	Bistability of bursting and silence regimes in a model of a leech heart interneuron. Physical Review E, 2011, 84, 041910.	2.1	29
28	Dynamics of neuronal bursting. Journal of Biological Physics, 2011, 37, 239-240.	1.5	0
29	Bringing rest into consideration: analyzing a database of computational models for multistability of oscillatory and stationary regimes. BMC Neuroscience, 2011, 12, .	1.9	1
30	Six Types of Multistability in a Neuronal Model Based on Slow Calcium Current. PLoS ONE, 2011, 6, e21782.	2.5	42
31	Coregulation of ionic currents maintaining the duty cycle of bursting. BMC Neuroscience, 2010, 11, .	1.9	1
32	AnimatLab: A 3D graphics environment for neuromechanical simulations. Journal of Neuroscience Methods, 2010, 187, 280-288.	2.5	104
33	Neuromechanical simulation of the locust jump. Journal of Experimental Biology, 2010, 213, 1060-1068.	1.7	36
34	Control of tumbling during the locust jump. Journal of Experimental Biology, 2010, 213, 3378-3387.	1.7	36
35	The anomalous effect of surface diffusion on the nuclear magnetic resonance signal in restricted geometry. Journal of Physics Condensed Matter, 2010, 22, 145304.	1.8	0
36	Control of bursting activity by modulation of ionic currents. BMC Neuroscience, 2009, 10, P27.	1.9	1

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37	Serotonin Transduction Cascades Mediate Variable Changes in Pyloric Network Cycle Frequency in Response to the Same Modulatory Challenge. Journal of Neurophysiology, 2008, 99, 2844-2863.	1.8	28
38	Origin of Bursting through Homoclinic Spike Adding in a Neuron Model. Physical Review Letters, 2007, 98, 134101.	7.8	90
39	Applications of the PoincarÃ© mapping technique to analysis of neuronal dynamics. Neurocomputing, 2007, 70, 2107-2111.	5.9	23
40	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
41	Grouping behavior of inter-pulse time intervals for triggered pulses in an AlGaAs/InGaAs multilayer structure. Physica D: Nonlinear Phenomena, 2006, 215, 159-165.	2.8	0
42	How a neuron model can demonstrate co-existence of tonic spiking and bursting. Neurocomputing, 2005, 65-66, 869-875.	5.9	21
43	Coexistence of Tonic Spiking Oscillations in a Leech Neuron Model. Journal of Computational Neuroscience, 2005, 18, 255-263.	1.0	79
44	Transition between Tonic Spiking and Bursting in a Neuron Model via the Blue-Sky Catastrophe. Physical Review Letters, 2005, 94, 048101.	7.8	141
45	Mechanism of bistability: Tonic spiking and bursting in a neuron model. Physical Review E, 2005, 71, 056214.	2.1	128
46	Bifurcation of synchronous oscillations into torus in a system of two reciprocally inhibitory silicon neurons: Experimental observation and modeling. Chaos, 2004, 14, 995-1003.	2.5	4
47	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
48	A Multiconductance Silicon Neuron With Biologically Matched Dynamics. IEEE Transactions on Biomedical Engineering, 2004, 51, 342-354.	4.2	106
49	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
50	Title is missing!. Regular and Chaotic Dynamics, 2004, 9, 281.	0.8	28
51	A bifurcation of a synchronous oscillations into a torus in a system of two mutually inhibitory aVLSI neurons: experimental observation. Neurocomputing, 2003, 52-54, 691-698.	5.9	3
52	Bursting in Leech Heart Interneurons: Cell-Autonomous and Network-Based Mechanisms. Journal of Neuroscience, 2002, 22, 10580-10592.	3.6	178
53	Control of bursting properties in a silicon neuron CPG. Neurocomputing, 2002, 44-46, 645-651.	5.9	2
54	Modeling Alternation to Synchrony with Inhibitory Coupling: A Neuromorphic VLSI Approach. Neural Computation, 2000, 12, 2259-2278.	2.2	23

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55	Oscillatory network controlling six-legged locomotion. Neural Networks, 1998, 11, 1449-1460.	5.9	11
56	In-phase and antiphase self-oscillations in a model of two electrically coupled pacemakers. Biological Cybernetics, 1994, 71, 153-160.	1.3	34