Dieter Jaeger

List of Publications by Year
in descending order

78 papers	4,387 citations	117625 34 h-index	114465 63 g-index
82 all docs	82 docs citations	82 times ranked	3952 citing authors

#	Article	IF	Citations
1	Modeling Single-Neuron Dynamics and Computations: A Balance of Detail and Abstraction. Science, 2006, 314, 80-85.	12.6	396
2	Membrane potential synchrony of simultaneously recorded striatal spiny neurons in vivo. Nature, 1998, 394, 475-478.	27.8	322
3	Resonant Antidromic Cortical Circuit Activation as a Consequence of High-Frequency Subthalamic Deep-Brain Stimulation. Journal of Neurophysiology, 2007, 98, 3525-3537.	1.8	251
4	Infraslow LFP correlates to resting-state fMRI BOLD signals. NeuroImage, 2013, 74, 288-297.	4.2	234
5	Surround inhibition among projection neurons is weak or nonexistent in the rat neostriatum. Journal of Neurophysiology, 1994, 72, 2555-2558.	1.8	210
6	The Control of Rate and Timing of Spikes in the Deep Cerebellar Nuclei by Inhibition. Journal of Neuroscience, 2000, 20, 3006-3016.	3.6	196
7	Quasi-periodic patterns (QPP): Large-scale dynamics in resting state fMRI that correlate with local infraslow electrical activity. NeuroImage, 2014, 84, 1018-1031.	4.2	148
8	The Role of Synaptic and Voltage-Gated Currents in the Control of Purkinje Cell Spiking: A Modeling Study. Journal of Neuroscience, 1997, 17, 91-106.	3.6	141
9	Prolonged responses in rat cerebellar Purkinje cells following activation of the granule cell layer: an intracellular in vitro and in vivo investigation. Experimental Brain Research, 1994, 100, 200-14.	1.5	118
10	Neural correlates of time-varying functional connectivity in the rat. NeuroImage, 2013, 83, 826-836.	4.2	114
11	Optogenetic stimulation of cortico-subthalamic projections is sufficient to ameliorate bradykinesia in 6-ohda lesioned mice. Neurobiology of Disease, 2016, 95, 225-237.	4.4	114
12	Channel Density Distributions Explain Spiking Variability in the Globus Pallidus: A Combined Physiology and Computer Simulation Database Approach. Journal of Neuroscience, 2008, 28, 7476-7491.	3.6	113
13	Synaptic Control of Spiking in Cerebellar Purkinje Cells: Dynamic Current Clamp Based on Model Conductances. Journal of Neuroscience, 1999, 19, 6090-6101.	3.6	104
14	Neuronal activity in the striatum and pallidum of primates related to the execution of externally cued reaching movements. Brain Research, 1995, 694, 111-127.	2.2	91
15	Broadband Local Field Potentials Correlate with Spontaneous Fluctuations in Functional Magnetic Resonance Imaging Signals in the Rat Somatosensory Cortex Under Isoflurane Anesthesia. Brain Connectivity, 2011, 1, 119-131.	1.7	91
16	The Roles of the Olivocerebellar Pathway in Motor Learning and Motor Control. A Consensus Paper. Cerebellum, 2017, 16, 230-252.	2.5	89
17	Primate basal ganglia activity in a precued reaching task: preparation for movement. Experimental Brain Research, 1993, 95, 51-64.	1.5	85
18	Functional connectivity and integrative properties of globus pallidus neurons. Neuroscience, 2011, 198, 44-53.	2.3	82

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19	Coding of Tactile Response Properties in the Rat Deep Cerebellar Nuclei. Journal of Neurophysiology, 2005, 94, 1236-1251.	1.8	75
20	Sodium Channels and Dendritic Spike Initiation at Excitatory Synapses in Globus Pallidus Neurons. Journal of Neuroscience, 2004, 24, 329-340.	3.6	69
21	The Neuronal Code(s) of the Cerebellum. Journal of Neuroscience, 2013, 33, 17603-17609.	3.6	64
22	The Contribution of NMDA and AMPA Conductances to the Control of Spiking in Neurons of the Deep Cerebellar Nuclei. Journal of Neuroscience, 2003, 23, 8109-8118.	3.6	62
23	Determinants of synaptic integration and heterogeneity in rebound firing explored with data-driven models of deep cerebellar nucleus cells. Journal of Computational Neuroscience, 2011, 30, 633-658.	1.0	61
24	Phase Response Curve Analysis of a Full Morphological Globus Pallidus Neuron Model Reveals Distinct Perisomatic and Dendritic Modes of Synaptic Integration. Journal of Neuroscience, 2010, 30, 2767-2782.	3.6	60
25	Short-Term Plasticity Shapes the Response to Simulated Normal and Parkinsonian Input Patterns in the Globus Pallidus. Journal of Neuroscience, 2002, 22, 5164-5172.	3.6	56
26	Responses to Tactile Stimulation in Deep Cerebellar Nucleus Neurons Result From Recurrent Activation in Multiple Pathways. Journal of Neurophysiology, 2008, 99, 704-717.	1.8	51
27	Behavior-Related Pauses in Simple-Spike Activity of Mouse Purkinje Cells Are Linked to Spike Rate Modulation. Journal of Neuroscience, 2012, 32, 8678-8685.	3.6	51
28	The capabilities and limitations of conductance-based compartmental neuron models with reduced branched or unbranched morphologies and active dendrites. Journal of Computational Neuroscience, 2011, 30, 301-321.	1.0	47
29	Globus Pallidus Discharge Is Coincident with Striatal Activity during Global Slow Wave Activity in the Rat. Journal of Neuroscience, 2003, 23, 10058-10063.	3.6	45
30	Cortico-cerebellar coherence and causal connectivity during slow-wave activity. Neuroscience, 2010, 166, 698-711.	2.3	45
31	Analysis of distinct short and prolonged components in rebound spiking of deep cerebellar nucleus neurons. European Journal of Neuroscience, 2010, 32, 1646-1657.	2.6	43
32	Phase-amplitude coupling and infraslow (<1 Hz) frequencies in the rat brain: relationship to resting state fMRI. Frontiers in Integrative Neuroscience, 2014, 8, 41.	2.1	43
33	Spatial Distribution of Low- and High-Voltage-Activated Calcium Currents in Neurons of the Deep Cerebellar Nuclei. Journal of Neuroscience, 2001, 21, RC158-RC158.	3.6	42
34	Simultaneous fMRI and Electrophysiology in the Rodent Brain. Journal of Visualized Experiments, 2010, , .	0.3	39
35	Database Analysis of Simulated and Recorded Electrophysiological Datasets with PANDORAâ€™s Toolbox. Neuroinformatics, 2009, 7, 93-111.	2.8	38
36	Reliable control of spike rate and spike timing by rapid input transients in cerebellar stellate cells. Neuroscience, 2004, 124, 305-317.	2.3	36

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37	Bursting activity of substantia nigra pars reticulata neurons in mouse parkinsonism in awake and anesthetized states. Neurobiology of Disease, 2015, 75, 177-185.	4.4	33
38	Cerebellar Nuclei Neurons Show Only Small Excitatory Responses to Optogenetic Olivary Stimulation in Transgenic Mice: In Vivo and In Vitro Studies. Frontiers in Neural Circuits, 2016, 10, 21.	2.8	33
39	Modulatory effects of parallel fiber and molecular layer interneuron synaptic activity on purkinje cell responses to ascending segment input: a modeling study. Journal of Computational Neuroscience, 2002, 13, 217-235.	1.0	32
40	No parallel fiber volleys in the cerebellar cortex: evidence from cross-correlation analysis between Purkinje cells in a computer model and in recordings from anesthetized rats. Journal of Computational Neuroscience, 2003, 14, 311-327.	1.0	31
41	A multiwire microelectrode for single unit recording in deep brain structures. Journal of Neuroscience Methods, 1990, 32, 143-148.	2.5	30
42	Modeling the generation of output by the cerebellar nuclei. Neural Networks, 2013, 47, 112-119.	5.9	30
43	Genetically expressed voltage sensor ArcLight for imaging large scale cortical activity in the anesthetized and awake mouse. Neurophotonics, 2017, 4, 031212.	3.3	29
44	Parallel pathways from whisker and visual sensory cortices to distinct frontal regions of mouse neocortex. Neurophotonics, 2016, 4, 1.	3.3	28
45	Mini-Review: Synaptic Integration in the Cerebellar Nucleiâ€"Perspectives From Dynamic Clamp and Computer Simulation Studies. Cerebellum, 2011, 10, 659-666.	2.5	23
46	Thalamic input to motor cortex facilitates goal-directed action initiation. Current Biology, 2021, 31, 4148-4155.e4.	3.9	23
47	Dendritic Sodium Channels Promote Active Decorrelation and Reduce Phase Locking to Parkinsonian Input Oscillations in Model Globus Pallidus Neurons. Journal of Neuroscience, 2011, 31, 10919-10936.	3.6	22
48	Premotor Ramping of Thalamic Neuronal Activity Is Modulated by Nigral Inputs and Contributes to Control the Timing of Action Release. Journal of Neuroscience, 2021, 41, 1878-1891.	3.6	22
49	Dendritic Sodium Channels Regulate Network Integration in Globus Pallidus Neurons: A Modeling Study. Journal of Neuroscience, 2010, 30, 15146-15159.	3.6	21
50	Optogenetic activation of nigral inhibitory inputs to motor thalamus in the mouse reveals classic inhibition with little potential for rebound activation. Frontiers in Cellular Neuroscience, 2014, 8, 36.	3.7	21
51	The use of automated parameter searches to improve ion channel kinetics for neural modeling. Journal of Computational Neuroscience, 2011, 31, 329-346.	1.0	20
52	The Role of SK Calcium-Dependent Potassium Currents in Regulating the Activity of Deep Cerebellar Nucleus Neurons: A Dynamic Clamp Study. Cerebellum, 2008, 7, 542-546.	2.5	18
53	In vivo electrophysiology of nigral and thalamic neurons in alpha-synuclein-overexpressing mice highlights differences from toxin-based models of parkinsonism. Journal of Neurophysiology, 2013, 110, 2792-2805.	1.8	16
54	Passive models of neurons in the deep cerebellar nuclei: the effect of reconstruction errors. Neurocomputing, 2004, 58-60, 563-568.	5.9	14

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55	Unilateral Optogenetic Inhibition and Excitation of Basal Ganglia Output Affect Directional Lick Choices and Movement Initiation in Mice. Neuroscience, 2019, 423, 55-65.	2.3	14
56	Thalamic bursting and the role of timing and synchrony in thalamocortical signaling in the awake mouse. Neuron, 2022, 110, 2836-2853.e8.	8.1	14
57	Synaptic shunting by a baseline of synaptic conductances modulates responses to inhibitory input volleys in cerebellar Purkinje cells. Cerebellum, 2004, 3, 112-125.	2.5	12
58	Robust transmission of rate coding in the inhibitory Purkinje cell to cerebellar nuclei pathway in awake mice. PLoS Computational Biology, 2017, 13, e1005578.	3.2	12
59	Gain Control of Synaptic Response Function in Cerebellar Nuclear Neurons by a Calcium-Activated Potassium Conductance. Cerebellum, 2013, 12, 692-706.	2.5	8
60	Cerebellar Purkinje Cells Generate Highly Correlated Spontaneous Slow-Rate Fluctuations. Frontiers in Neural Circuits, 2017, 11, 67.	2.8	8
61	Robustness, variability, phase dependence, and longevity of individual synaptic input effects on spike timing during fluctuating synaptic backgrounds: A modeling study of globus pallidus neuron phase response properties. Neuroscience, 2012, 219, 92-110.	2.3	7
62	Pauses as Neural Code in the Cerebellum. Neuron, 2007, 54, 9-10.	8.1	6
63	Changes in Excitability Properties of Ventromedial Motor Thalamic Neurons in 6-OHDA Lesioned Mice. ENeuro, 2021, 8, ENEURO.0436-20.2021.	1.9	6
64	Using computer simulations to determine the limitations of dynamic clamp stimuli applied at the soma in mimicking distributed conductance sources. Journal of Neurophysiology, 2011, 105, 2610-2624.	1.8	5
65	A general method to generate artificial spike train populations matching recorded neurons. Journal of Computational Neuroscience, 2020, 48, 47-63.	1.0	4
66	Computation in the Cerebellum. Neural Networks, 2013, 47, 1-2.	5.9	3
67	A new cell type identified in the external globus pallidus casts a â€˜Hunter's Netâ€™ of inhibition in striatum. Basal Ganglia, 2013, 3, 15-18.	0.3	2
68	Cerebellar Nuclei. , 2016, , 311-315.		2
69	Anatomical structure alone cannot predict function. Behavioral and Brain Sciences, 1997, 20, 252-253.	0.7	1
70	Globus Pallidus Cellular Models. , 2014, , 1-5.		1
71	Phase response analysis during in vivo-like high conductance states; dendritic SK determines the mean and variance of responses to dendritic excitation. BMC Neuroscience, 2010, 11, .	1.9	0
72	The Control of Spiking by Synaptic Input in Striatal and Pallidal Neurons. Advances in Behavioral Biology, 2002, , 209-216.	0.2	0

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73	Unraveling the Dynamics of Deep Cerebellar Nucleus Neurons with the Application of Artificial Conductances. , 2009, , 217-235.		0
74	Cerebellar Nuclei and Cerebellar Learning. , 2013, , 1111-1130.		0
75	Cerebellar Nuclei and Cerebellar Learning. , 2019, , 1-24.		0
76	Basal Ganglia: Globus Pallidus Cellular Models. , 2019, , 1-4.		0
77	Cerebellar Nuclei and Cerebellar Learning. , 2022, , 1251-1274.		0
78	Basal Ganglia: Globus Pallidus Cellular Models. , 2022, , 392-395.		0