Per Jesper SjÃ¶strÃ¶m

List of Publications by Year
in descending order

59 papers	7,841 citations	185998 28 h-index	161609 54 g-index
71 all docs	71 docs citations	71 times ranked	7909 citing authors

#	Article	IF	Citations
1	Highly Nonrandom Features of Synaptic Connectivity in Local Cortical Circuits. PLoS Biology, 2005, 3, e68.	2.6	1,222
2	Rate, Timing, and Cooperativity Jointly Determine Cortical Synaptic Plasticity. Neuron, 2001, 32, 1149-1164.	3.8	1,022
3	Functional specificity of local synaptic connections in neocortical networks. Nature, 2011, 473, 87-91.	13.7	719
4	Dendritic Excitability and Synaptic Plasticity. Physiological Reviews, 2008, 88, 769-840.	13.1	607
5	Neocortical LTD via Coincident Activation of Presynaptic NMDA and Cannabinoid Receptors. Neuron, 2003, 39, 641-654.	3.8	532
6	Neuronal morphometry directly from bitmap images. Nature Methods, 2014, 11, 982-984.	9.0	517
7	A Cooperative Switch Determines the Sign of Synaptic Plasticity in Distal Dendrites of Neocortical Pyramidal Neurons. Neuron, 2006, 51, 227-238.	3.8	366
8	A history of spike-timing-dependent plasticity. Frontiers in Synaptic Neuroscience, 2011, 3, 4.	1.3	311
9	Spike-Timing-Dependent Plasticity: A Comprehensive Overview. Frontiers in Synaptic Neuroscience, 2012, 4, 2.	1.3	228
10	Neurons diversify astrocytes in the adult brain through sonic hedgehog signaling. Science, 2016, 351, 849-854.	6.0	221
11	Spike timing, calcium signals and synaptic plasticity. Current Opinion in Neurobiology, 2002, 12, 305-314.	2.0	199
12	Traveling waves in developing cerebellar cortex mediated by asymmetrical Purkinje cell connectivity. Nature Neuroscience, 2009, 12, 463-473.	7.1	170
13	A proportional but slower NMDA potentiation follows AMPA potentiation in LTP. Nature Neuroscience, 2004, 7, 518-524.	7.1	139
14	Target-Specific Expression of Presynaptic NMDA Receptors in Neocortical Microcircuits. Neuron, 2012, 75, 451-466.	3.8	120
15	Novel presynaptic mechanisms for coincidence detection in synaptic plasticity. Current Opinion in Neurobiology, 2006, 16, 312-322.	2.0	104
16	Unconventional NMDA Receptor Signaling. Journal of Neuroscience, 2017, 37, 10800-10807.	1.7	99
17	Endocannabinoid-Dependent Neocortical Layer-5 LTD in the Absence of Postsynaptic Spiking. Journal of Neurophysiology, 2004, 92, 3338-3343.	0.9	85
18	Multiple forms of long-term plasticity at unitary neocortical layer 5 synapses. Neuropharmacology, 2007, 52, 176-184.	2.0	82

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19	Optimal Information Storage in Noisy Synapses under Resource Constraints. Neuron, 2006, 52, 409-423.	3.8	76
20	Synapse-type-specific plasticity in local circuits. Current Opinion in Neurobiology, 2015, 35, 127-135.	2.0	76
21	Differential Regulation of Evoked and Spontaneous Release by Presynaptic NMDA Receptors. Neuron, 2017, 96, 839-855.e5.	3.8	76
22	Target-cell-specific short-term plasticity in local circuits. Frontiers in Synaptic Neuroscience, 2013, 5, 11.	1.3	75
23	Probabilistic inference of short-term synaptic plasticity in neocortical microcircuits. Frontiers in Computational Neuroscience, 2013, 7, 75.	1.2	71
24	Towards resolving the presynaptic NMDA receptor debate. Current Opinion in Neurobiology, 2018, 51, 1-7.	2.0	68
25	Artificial neural network-aided image analysis system for cell counting. , 1999, 36, 18-26.		54
26	An Optogenetic Kindling Model of Neocortical Epilepsy. Scientific Reports, 2019, 9, 5236.	1.6	54
27	Functional consequences of pre- and postsynaptic expression of synaptic plasticity. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160153.	1.8	50
28	Unified pre- and postsynaptic long-term plasticity enables reliable and flexible learning. ELife, 2015, 4, .	2.8	44
29	Synapseâ€specific expression of calciumâ€permeable AMPA receptors in neocortical layer 5. Journal of Physiology, 2016, 594, 837-861.	1.3	41
30	ABLE: An Activity-Based Level Set Segmentation Algorithm for Two-Photon Calcium Imaging Data. ENeuro, 2017, 4, ENEURO.0012-17.2017.	0.9	35
31	Novel Optogenetic Approaches in Epilepsy Research. Frontiers in Neuroscience, 2019, 13, 947.	1.4	29
32	Rate and timing in cortical synaptic plasticity. Philosophical Transactions of the Royal Society B: Biological Sciences, 2002, 357, 1851-1857.	1.8	28
33	Synapse Type-Dependent Expression of Calcium-Permeable AMPA Receptors. Frontiers in Synaptic Neuroscience, 2018, 10, 34.	1.3	25
34	Methylene blue inhibits Caspase-6 activity, and reverses Caspase-6-induced cognitive impairment and neuroinflammation in aged mice. Acta Neuropathologica Communications, 2019, 7, 210.	2.4	25
35	A Practical Guide to Using CV Analysis for Determining the Locus of Synaptic Plasticity. Frontiers in Synaptic Neuroscience, 2020, 12, 11.	1.3	23
36	A comparison of manual neuronal reconstruction from biocytin histology or 2-photon imaging: morphometry and computer modeling. Frontiers in Neuroanatomy, 2014, 8, 65.	0.9	22

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37	NMDA receptors in axons: there's no coincidence. Journal of Physiology, 2021, 599, 367-387.	1.3	20
38	One cell to rule them all, and in the dendrites bind them. Frontiers in Synaptic Neuroscience, 2011, 3, 5.	1.3	19
39	Spike-timing dependent plasticity. Frontiers Research Topics, 0, , .	0.2	17
40	Long-Term Potentiation by Theta-Burst Stimulation Using Extracellular Field Potential Recordings in Acute Hippocampal Slices. Cold Spring Harbor Protocols, 2016, 2016, pdb.prot091298.	0.2	15
41	Using Multiple Whole-Cell Recordings to Study Spike-Timing-Dependent Plasticity in Acute Neocortical Slices. Cold Spring Harbor Protocols, 2016, 2016, pdb.prot091306.	0.2	14
42	Differential susceptibility of striatal, hippocampal and cortical neurons to Caspase-6. Cell Death and Differentiation, 2018, 25, 1319-1335.	5.0	14
43	In Vitro Investigation of Synaptic Plasticity. Cold Spring Harbor Protocols, 2016, 2016, pdb.top087262.	0.2	11
44	Neocortex: a lean mean memory storage machine. Nature Neuroscience, 2016, 19, 643-644.	7.1	9
45	Rare CASP6N73T variant associated with hippocampal volume exhibits decreased proteolytic activity, synaptic transmission defect, and neurodegeneration. Scientific Reports, 2021, 11, 12695.	1.6	8
46	Functional plasticity at dendritic synapses. , 2016, , 505-556.		7
47	A Step-by-Step Protocol for Optogenetic Kindling. Frontiers in Neural Circuits, 2020, 14, 3.	1.4	7
48	CosMIC: A Consistent Metric for Spike Inference from Calcium Imaging. Neural Computation, 2018, 30, 2726-2756.	1.3	6
49	A piece of the neocortical puzzle: the pyramidâ€Martinotti cell reciprocating principle. Journal of Physiology, 2009, 587, 5301-5302.	1.3	5
50	Grand Challenge at the Frontiers of Synaptic Neuroscience. Frontiers in Synaptic Neuroscience, 2021, 13, 748937.	1.3	4
51	Pre- and postsynaptically expressed spike-timing-dependent plasticity contribute differentially to neuronal learning. PLoS Computational Biology, 2022, 18, e1009409.	1.5	3
52	ISDN2014_0407: Optogenetic kindling of cortical circuits elicits epilepsy. International Journal of Developmental Neuroscience, 2015, 47, 122-122.	0.7	1
53	Editorial: Methods for Synaptic Interrogation. Frontiers in Synaptic Neuroscience, 2020, 12, 23.	1.3	1
54	Editorial: Latest Advances on Excitatory Synapse Biology. Frontiers in Synaptic Neuroscience, 2021, 13, 768651.	1.3	1

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55	Probabilistic inference of synaptic dynamics in neocortical microcircuits. BMC Neuroscience, 2013, 14, .	0.8	0
56	Editorial overview: Neurobiology of learning and plasticity. Current Opinion in Neurobiology, 2019, 54, iii-vi.	2.0	0
57	The secret life of memory receptors. ELife, 2021, 10, .	2.8	0
58	Frontiers. , 2010, , 197-203.		0
59	How to train a neuron. ELife, 2013, 2, e00491.	2.8	0