Arjen Van Ooyen

List of Publications by Year
in descending order

64 papers	2,952 citations	201674 27 h-index	175258 52 g-index
68 all docs	68 docs citations	68 times ranked	3132 citing authors

#	Article	IF	Citations
1	Homeostatic Structural Plasticity Can Build Critical Networks. Springer Series on Bio- and Neurosystems, 2019, , 117-137.	0.2	6
2	Dynamic Hebbian Cross-Correlation Learning Resolves the Spike Timing Dependent Plasticity Conundrum. Frontiers in Computational Neuroscience, 2018, 11, 119.	2.1	4
3	Is Lesion-Induced Synaptic Rewiring Driven by Activity Homeostasis?. , 2017, , 71-92.		16
4	Network Formation Through Activity-Dependent Neurite Outgrowth. , 2017, , 95-121.		4
5	A Detailed Model of Homeostatic Structural Plasticity Based on Dendritic Spine and Axonal Bouton Dynamics. , 2017, , 155-176.		0
6	Adult Neurogenesis and Synaptic Rewiring in the Hippocampal Dentate Gyrus. , 2017, , 389-408.		0
7	Editorial: Anatomy and Plasticity in Large-Scale Brain Models. Frontiers in Neuroanatomy, 2016, 10, 108.	1.7	0
8	H-Channels Affect Frequency, Power and Amplitude Fluctuations of Neuronal Network Oscillations. Frontiers in Computational Neuroscience, 2015, 9, 141.	2.1	8
9	Axonal and dendritic density field estimation from incomplete single-slice neuronal reconstructions. Frontiers in Neuroanatomy, 2014, 8, 54.	1.7	14
10	Homeostatic structural plasticity can account for topology changes following deafferentation and focal stroke. Frontiers in Neuroanatomy, 2014, 8, 115.	1.7	25
11	Homeostatic structural plasticity increases the efficiency of small-world networks. Frontiers in Synaptic Neuroscience, 2014, 6, 7.	2.5	44
12	Competitive Dynamics during Resource-Driven Neurite Outgrowth. PLoS ONE, 2014, 9, e86741.	2.5	20
13	Dendritic Size and Topology Influence Burst Firing in Pyramidal Cells. Springer Series in Computational Neuroscience, 2014, , 381-395.	0.3	4
14	Neuronal Arborizations, Spatial Innervation, and Emergent Network Connectivity. Springer Series in Computational Neuroscience, 2014, , 61-78.	0.3	1
15	Development of dendritic tonic GABAergic inhibition regulates excitability and plasticity in CA1 pyramidal neurons. Journal of Neurophysiology, 2014, 112, 287-299.	1.8	46
16	Homeostatic structural plasticity â€“ a key to neuronal network formation and repair. BMC Neuroscience, 2014, 15, .	1.9	3
17	Independently Outgrowing Neurons and Geometry-Based Synapse Formation Produce Networks with Realistic Synaptic Connectivity. PLoS ONE, 2014, 9, e85858.	2.5	25
18	A Morpho-Density Approach to Estimating Neural Connectivity. PLoS ONE, 2014, 9, e86526.	2.5	13

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19	Inter-Network Interactions: Impact of Connections between Oscillatory Neuronal Networks on Oscillation Frequency and Pattern. PLoS ONE, 2014, 9, e100899.	2.5	9
20	A Simple Rule for Dendritic Spine and Axonal Bouton Formation Can Account for Cortical Reorganization after Focal Retinal Lesions. PLoS Computational Biology, 2013, 9, e1003259.	3.2	65
21	Estimating neuronal connectivity from axonal and dendritic density fields. Frontiers in Computational Neuroscience, 2013, 7, 160.	2.1	32
22	Spine Calcium Transients Induced by Synaptically-Evoked Action Potentials Can Predict Synapse Location and Establish Synaptic Democracy. PLoS Computational Biology, 2012, 8, e1002545.	3.2	14
23	External Drive to Inhibitory Cells Induces Alternating Episodes of High- and Low-Amplitude Oscillations. PLoS Computational Biology, 2012, 8, e1002666.	3.2	11
24	Biologically Plausible Multi-dimensional Reinforcement Learning in Neural Networks. Lecture Notes in Computer Science, 2012, , 443-450.	1.3	3
25	Using theoretical models to analyse neural development. Nature Reviews Neuroscience, 2011, 12, 311-326.	10.2	104
26	Independently outgrowing neurons with a geometric synapse formation model develop realistic network connectivity patterns with small-world properties. BMC Neuroscience, 2011, 12, .	1.9	0
27	Small-world topology is most efficient for homeostatic neuronal network repair. BMC Neuroscience, 2011, 12, .	1.9	1
28	Novel Candidate Genes Associated with Hippocampal Oscillations. PLoS ONE, 2011, 6, e26586.	2.5	10
29	Stimulation Induced Transitions in Spontaneous Firing Rates in Cultured Neuronal Networks also Occur in the Presence of Synaptic Plasticity Blocker KN93. , 2011, , 151-155.		0
30	An Algorithm for Finding Candidate Synaptic Sites in Computer Generated Networks of Neurons with Realistic Morphologies. Frontiers in Computational Neuroscience, 2010, 4, 148.	2.1	13
31	Impact of Dendritic Size and Dendritic Topology on Burst Firing in Pyramidal Cells. PLoS Computational Biology, 2010, 6, e1000781.	3.2	146
32	Perceptual learning rules based on reinforcers and attention. Trends in Cognitive Sciences, 2010, 14, 64-71.	7.8	241
33	A model for cortical rewiring following deafferentation and focal stroke. Frontiers in Computational Neuroscience, 2009, 3, 10.	2.1	54
34	A Simple Rule for Axon Outgrowth and Synaptic Competition Generates Realistic Connection Lengths and Filling Fractions. Cerebral Cortex, 2009, 19, 3001-3010.	2.9	94
35	The attention-gated reinforcement learning model can explain experimentally observed changes in tuning curves that follow category learning. BMC Neuroscience, 2009, 10, .	1.9	0
36	A model for cortical remapping and structural plasticity following focal retinal lesions. BMC Neuroscience, 2009, 10, .	1.9	1

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37	Activity-dependent structural plasticity. Brain Research Reviews, 2009, 60, 287-305.	9.0	265
38	NETMORPH: A Framework for the Stochastic Generation of Large Scale Neuronal Networks With Realistic Neuron Morphologies. Neuroinformatics, 2009, 7, 195-210.	2.8	154
39	Altered temporal correlations in parietal alpha and prefrontal theta oscillations in early-stage Alzheimer disease. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1614-1619.	7.1	256
40	Avalanche dynamics of human brain oscillations: Relation to critical branching processes and temporal correlations. Human Brain Mapping, 2008, 29, 770-777.	3.6	96
41	Inverse relationship between adult hippocampal cell proliferation and synaptic rewiring in the dentate gyrus. Hippocampus, 2008, 18, 879-898.	1.9	44
42	Low-Frequency Stimulation Induces Stable Transitions in Stereotypical Activity in Cortical Networks. Biophysical Journal, 2008, 94, 5028-5039.	0.5	59
43	Genetic Contributions to Long-Range Temporal Correlations in Ongoing Oscillations. Journal of Neuroscience, 2007, 27, 13882-13889.	3.6	119
44	A Mathematical Framework for Modeling Axon Guidance. Bulletin of Mathematical Biology, 2007, 69, 3-31.	1.9	55
45	Compartment Volume Influences Microtubule Dynamic Instability: A Model Study. Biophysical Journal, 2006, 90, 788-798.	0.5	42
46	Envisioning the Reward. Neuron, 2006, 50, 188-190.	8.1	1
47	Mathematical modelling and numerical simulation of the morphological development of neurons. BMC Neuroscience, 2006, 7, S9.	1.9	52
48	Attention-Gated Reinforcement Learning of Internal Representations for Classification. Neural Computation, 2005, 17, 2176-2214.	2.2	226
49	Competition in neurite outgrowth and the development of nerve connections. Progress in Brain Research, 2005, 147, 81-99.	1.4	13
50	Biologically plausible models of neurite outgrowth. Progress in Brain Research, 2005, 147, 67-80.	1.4	51
51	Does a dendritic democracy need a ruler?. Neurocomputing, 2004, 58-60, 437-442.	5.9	2
52	A new measure for bursting. Neurocomputing, 2004, 58-60, 497-502.	5.9	13
53	Continuum model for tubulin-driven neurite elongation. Neurocomputing, 2004, 58-60, 511-516.	5.9	25
54	Transport limited effects in a model of dendritic branching. Journal of Theoretical Biology, 2004, 230, 421-432.	1.7	18

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55	The effect of dendritic topology on firing patterns in model neurons. Network: Computation in Neural Systems, 2002, 13, 311-325.	3.6	93
56	The effect of dendritic topology on firing patterns in model neurons. Network: Computation in Neural Systems, 2002, 13, 311-325.	3.6	73
57	The need for integrating neuronal morphology databases and computational environments in exploring neuronal structure and function. Anatomy and Embryology, 2001, 204, 255-265.	1.5	45
58	A Computational Model of Dendrite Elongation and Branching Based on MAP2 Phosphorylation. Journal of Theoretical Biology, 2001, 210, 375-384.	1.7	52
59	Compartmental models of growing neurites. Neurocomputing, 2001, 38-40, 31-36.	5.9	18
60	Competition for tubulin between growing neurites during development. Neurocomputing, 2001, 38-40, 73-78.	5.9	44
61	Lateral cell movement driven by dendritic interactions is sufficient to form retinal mosaics. Network: Computation in Neural Systems, 2000, 11, 103-118.	3.6	40
62	Development of Nerve Connections under the Control of Neurotrophic Factors: Parallels with Consumerâ€“Resource Systems in Population Biology. Journal of Theoretical Biology, 2000, 206, 195-210.	1.7	12
63	Competition for neurotrophic factor in the development of nerve connections. Proceedings of the Royal Society B: Biological Sciences, 1999, 266, 883-892.	2.6	34
64	Poly- and Mononeuronal Innervation in a Model for the Development of Neuromuscular Connections. Journal of Theoretical Biology, 1999, 196, 495-511.	1.7	13