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	Activity-dependent structural plasticity. Brain Research Reviews, 2009, 60, 287-305.	9.0	265
2	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
3	Perceptual learning rules based on reinforcers and attention. Trends in Cognitive Sciences, 2010, 14, 64-71.	7.8	241
4	Attention-Gated Reinforcement Learning of Internal Representations for Classification. Neural Computation, 2005, 17, 2176-2214.	2.2	226
5	NETMORPH: A Framework for the Stochastic Generation of Large Scale Neuronal Networks With Realistic Neuron Morphologies. Neuroinformatics, 2009, 7, 195-210.	2.8	154
6	Impact of Dendritic Size and Dendritic Topology on Burst Firing in Pyramidal Cells. PLoS Computational Biology, 2010, 6, e1000781.	3.2	146
7	Genetic Contributions to Long-Range Temporal Correlations in Ongoing Oscillations. Journal of Neuroscience, 2007, 27, 13882-13889.	3.6	119
8	Using theoretical models to analyse neural development. Nature Reviews Neuroscience, 2011, 12, 311-326.	10.2	104
9	Avalanche dynamics of human brain oscillations: Relation to critical branching processes and temporal correlations. Human Brain Mapping, 2008, 29, 770-777.	3.6	96
10	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
11	The effect of dendritic topology on firing patterns in model neurons. Network: Computation in Neural Systems, 2002, 13, 311-325.	3.6	93
12	The effect of dendritic topology on firing patterns in model neurons. Network: Computation in Neural Systems, 2002, 13, 311-325.	3.6	73
13	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
14	Low-Frequency Stimulation Induces Stable Transitions in Stereotypical Activity in Cortical Networks. Biophysical Journal, 2008, 94, 5028-5039.	0.5	59
15	A Mathematical Framework for Modeling Axon Guidance. Bulletin of Mathematical Biology, 2007, 69, 3-31.	1.9	55
16	A model for cortical rewiring following deafferentation and focal stroke. Frontiers in Computational Neuroscience, 2009, 3, 10.	2.1	54
17	A Computational Model of Dendrite Elongation and Branching Based on MAP2 Phosphorylation. Journal of Theoretical Biology, 2001, 210, 375-384.	1.7	52
18	Mathematical modelling and numerical simulation of the morphological development of neurons. BMC Neuroscience, 2006, 7, S9.	1.9	52

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19	Biologically plausible models of neurite outgrowth. Progress in Brain Research, 2005, 147, 67-80.	1.4	51
20	Development of dendritic tonic GABAergic inhibition regulates excitability and plasticity in CA1 pyramidal neurons. Journal of Neurophysiology, 2014, 112, 287-299.	1.8	46
21	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
22	Competition for tubulin between growing neurites during development. Neurocomputing, 2001, 38-40, 73-78.	5.9	44
23	Inverse relationship between adult hippocampal cell proliferation and synaptic rewiring in the dentate gyrus. Hippocampus, 2008, 18, 879-898.	1.9	44
24	Homeostatic structural plasticity increases the efficiency of small-world networks. Frontiers in Synaptic Neuroscience, 2014, 6, 7.	2.5	44
25	Compartment Volume Influences Microtubule Dynamic Instability: A Model Study. Biophysical Journal, 2006, 90, 788-798.	0.5	42
26	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
27	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
28	Estimating neuronal connectivity from axonal and dendritic density fields. Frontiers in Computational Neuroscience, 2013, 7, 160.	2.1	32
29	Continuum model for tubulin-driven neurite elongation. Neurocomputing, 2004, 58-60, 511-516.	5.9	25
30	Homeostatic structural plasticity can account for topology changes following deafferentation and focal stroke. Frontiers in Neuroanatomy, 2014, 8, 115.	1.7	25
31	Independently Outgrowing Neurons and Geometry-Based Synapse Formation Produce Networks with Realistic Synaptic Connectivity. PLoS ONE, 2014, 9, e85858.	2.5	25
32	Competitive Dynamics during Resource-Driven Neurite Outgrowth. PLoS ONE, 2014, 9, e86741.	2.5	20
33	Compartmental models of growing neurites. Neurocomputing, 2001, 38-40, 31-36.	5.9	18
34	Transport limited effects in a model of dendritic branching. Journal of Theoretical Biology, 2004, 230, 421-432.	1.7	18
35	Is Lesion-Induced Synaptic Rewiring Driven by Activity Homeostasis?. , 2017, , 71-92.		16
36	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

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37	Axonal and dendritic density field estimation from incomplete single-slice neuronal reconstructions. Frontiers in Neuroanatomy, 2014, 8, 54.	1.7	14
38	Poly- and Mononeuronal Innervation in a Model for the Development of Neuromuscular Connections. Journal of Theoretical Biology, 1999, 196, 495-511.	1.7	13
39	A new measure for bursting. Neurocomputing, 2004, 58-60, 497-502.	5.9	13
40	Competition in neurite outgrowth and the development of nerve connections. Progress in Brain Research, 2005, 147, 81-99.	1.4	13
41	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
42	A Morpho-Density Approach to Estimating Neural Connectivity. PLoS ONE, 2014, 9, e86526.	2.5	13
43	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
44	External Drive to Inhibitory Cells Induces Alternating Episodes of High- and Low-Amplitude Oscillations. PLoS Computational Biology, 2012, 8, e1002666.	3.2	11
45	Novel Candidate Genes Associated with Hippocampal Oscillations. PLoS ONE, 2011, 6, e26586.	2.5	10
46	Inter-Network Interactions: Impact of Connections between Oscillatory Neuronal Networks on Oscillation Frequency and Pattern. PLoS ONE, 2014, 9, e100899.	2.5	9
47	H-Channels Affect Frequency, Power and Amplitude Fluctuations of Neuronal Network Oscillations. Frontiers in Computational Neuroscience, 2015, 9, 141.	2.1	8
48	Homeostatic Structural Plasticity Can Build Critical Networks. Springer Series on Bio- and Neurosystems, 2019, , 117-137.	0.2	6
49	Dendritic Size and Topology Influence Burst Firing in Pyramidal Cells. Springer Series in Computational Neuroscience, 2014, , 381-395.	0.3	4
50	Network Formation Through Activity-Dependent Neurite Outgrowth. , 2017, , 95-121.		4
51	Dynamic Hebbian Cross-Correlation Learning Resolves the Spike Timing Dependent Plasticity Conundrum. Frontiers in Computational Neuroscience, 2018, 11, 119.	2.1	4
52	Homeostatic structural plasticity â€" a key to neuronal network formation and repair. BMC Neuroscience, 2014, 15, .	1.9	3
53	Biologically Plausible Multi-dimensional Reinforcement Learning in Neural Networks. Lecture Notes in Computer Science, 2012, , 443-450.	1.3	3
54	Does a dendritic democracy need a ruler?. Neurocomputing, 2004, 58-60, 437-442.	5.9	2

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55	Envisioning the Reward. Neuron, 2006, 50, 188-190.	8.1	1
56	A model for cortical remapping and structural plasticity following focal retinal lesions. BMC Neuroscience, 2009, 10, .	1.9	1
57	Small-world topology is most efficient for homeostatic neuronal network repair. BMC Neuroscience, 2011, 12, .	1.9	1
58	Neuronal Arborizations, Spatial Innervation, and Emergent Network Connectivity. Springer Series in Computational Neuroscience, 2014, , 61-78.	0.3	1
59	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
60	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
61	Editorial: Anatomy and Plasticity in Large-Scale Brain Models. Frontiers in Neuroanatomy, 2016, 10, 108.	1.7	0
62	A Detailed Model of Homeostatic Structural Plasticity Based on Dendritic Spine and Axonal Bouton Dynamics. , 2017, , 155-176.		0
63	Adult Neurogenesis and Synaptic Rewiring in the Hippocampal Dentate Gyrus. , 2017, , 389-408.		0
64	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