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List of Publications by Year
in descending order

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122 papers	7,500 citations	81743 39 h-index	58464 82 g-index
132 all docs	132 docs citations	132 times ranked	8436 citing authors

#	Article	IF	Citations
1	Organization, development and function of complex brain networks. Trends in Cognitive Sciences, 2004, 8, 418-425.	4.0	1,864
2	Nonoptimal Component Placement, but Short Processing Paths, due to Long-Distance Projections in Neural Systems. PLoS Computational Biology, 2006, 2, e95.	1.5	568
3	Perisaccadic Mislocalization Orthogonal to Saccade Direction. Neuron, 2004, 41, 293-300.	3.8	347
4	A tutorial in connectome analysis: Topological and spatial features of brain networks. NeuroImage, 2011, 57, 892-907.	2.1	307
5	Clustered Organization of Cortical Connectivity. Neuroinformatics, 2004, 2, 353-360.	1.5	229
6	Simulation of robustness against lesions of cortical networks. European Journal of Neuroscience, 2007, 25, 3185-3192.	1.2	213
7	Predicting neurosurgical outcomes in focal epilepsy patients using computational modelling. Brain, 2017, 140, 319-332.	3.7	210
8	Spatial growth of real-world networks. Physical Review E, 2004, 69, 036103.	0.8	168
9	Temporal interactions between cortical rhythms. Frontiers in Neuroscience, 2008, 2, 145-154.	1.4	157
10	Modelling the development of cortical systems networks. Neurocomputing, 2004, 58-60, 297-302.	3.5	122
11	concatenation underlies interactions between gamma and beta rhythms in neocortex. Frontiers in Cellular Neuroscience, 2008, 2, 1.	1.8	118
12	Criticality of spreading dynamics in hierarchical cluster networks without inhibition. New Journal of Physics, 2007, 9, 110-110.	1.2	112
13	Hierarchy and dynamics of neural networks. Frontiers in Neuroinformatics, 2010, 4, .	1.3	111
14	Preferential Detachment During Human Brain Development: Age- and Sex-Specific Structural Connectivity in Diffusion Tensor Imaging (DTI) Data. Cerebral Cortex, 2015, 25, 1477-1489.	1.6	110
15	Adolescent Brain Maturation and Cortical Folding: Evidence for Reductions in Gyrification. PLoS ONE, 2014, 9, e84914.	1.1	97
16	A Simple Rule for Axon Outgrowth and Synaptic Competition Generates Realistic Connection Lengths and Filling Fractions. Cerebral Cortex, 2009, 19, 3001-3010.	1.6	94
17	Dysfunctional brain dynamics and their origin in Lewy body dementia. Brain, 2019, 142, 1767-1782.	3.7	94
18	fMRI resting state networks and their association with cognitive fluctuations in dementia with Lewy bodies. NeuroImage: Clinical, 2014, 4, 558-565.	1.4	93

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19	Edge vulnerability in neural and metabolic networks. Biological Cybernetics, 2004, 90, 311-7.	0.6	90
20	Dynamic functional connectivity changes in dementia with Lewy bodies and Alzheimer's disease. NeuroImage: Clinical, 2019, 22, 101812.	1.4	88
21	A nonsynaptic mechanism underlying interictal discharges in human epileptic neocortex. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 338-343.	3.3	87
22	Optimal hierarchical modular topologies for producing limited sustained activation of neural networks. Frontiers in Neuroinformatics, 2010, 4, 8.	1.3	86
23	Mechanisms of Connectome Development. Trends in Cognitive Sciences, 2017, 21, 703-717.	4.0	84
24	Predicting Surgery Targets in Temporal Lobe Epilepsy through Structural Connectome Based Simulations. PLoS Computational Biology, 2015, 11, e1004642.	1.5	80
25	Resting-State Functional Connectivity in Late-Life Depression: Higher Global Connectivity and More Long Distance Connections. Frontiers in Psychiatry, 2012, 3, 116.	1.3	78
26	Neural Development Features: Spatio-Temporal Development of the Caenorhabditis elegans Neuronal Network. PLoS Computational Biology, 2011, 7, e1001044.	1.5	70
27	Optimal control based seizure abatement using patient derived connectivity. Frontiers in Neuroscience, 2015, 9, 202.	1.4	68
28	Mean clustering coefficients: the role of isolated nodes and leafs on clustering measures for small-world networks. New Journal of Physics, 2008, 10, 083042.	1.2	66
29	Predicting the connectivity of primate cortical networks from topological and spatial node properties. BMC Systems Biology, 2007, 1, 16.	3.0	65
30	Within brain area tractography suggests local modularity using high resolution connectomics. Scientific Reports, 2017, 7, 39859.	1.6	65
31	Divergent brain functional network alterations in dementia with Lewy bodies and Alzheimer's disease. Neurobiology of Aging, 2015, 36, 2458-2467.	1.5	64
32	Mechanisms underlying different onset patterns of focal seizures. PLoS Computational Biology, 2017, 13, e1005475.	1.5	60
33	Structural connectivity based whole brain modelling in epilepsy. Journal of Neuroscience Methods, 2014, 236, 51-57.	1.3	58
34	Functional connectivity in dementia with Lewy bodies: A withinâ€•and betweenâ€•network analysis. Human Brain Mapping, 2018, 39, 1118-1129.	1.9	55
35	Brain architecture: a design for natural computation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2007, 365, 3033-3045.	1.6	51
36	Intraâ€•and interâ€•network functional alterations in <scp>P</scp>arkinson's disease with mild cognitive impairment. Human Brain Mapping, 2017, 38, 1702-1715.	1.9	49

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37	Structural connectivity changes in temporal lobe epilepsy: Spatial features contribute more than topological measures. NeuroImage: Clinical, 2015, 8, 322-328.	1.4	47
38	Development of multi-cluster cortical networks by time windows for spatial growth. Neurocomputing, 2007, 70, 1829-1832.	3.5	46
39	Evolution and development of Brain Networks: From Caenorhabditis elegans to Homo sapiens. Network: Computation in Neural Systems, 2011, 22, 143-147.	2.2	44
40	A Network Flow-based Analysis of Cognitive Reserve in Normal Ageing and Alzheimerâ€™s Disease. Scientific Reports, 2015, 5, 10057.	1.6	43
41	Resting state in Parkinson's disease dementia and dementia with Lewy bodies: commonalities and differences. International Journal of Geriatric Psychiatry, 2015, 30, 1135-1146.	1.3	42
42	Perspective: network-guided pattern formation of neural dynamics. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130522.	1.8	41
43	Virtual Electrode Recording Tool for EXtracellular potentials (VERTEX): comparing multi-electrode recordings from simulated and biological mammalian cortical tissue. Brain Structure and Function, 2015, 220, 2333-2353.	1.2	40
44	Reliability and comparability of human brain structural covariance networks. NeuroImage, 2020, 220, 117104.	2.1	37
45	From Caenorhabditis elegans to the human connectome: a specific modular organization increases metabolic, functional and developmental efficiency. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130529.	1.8	36
46	Strategies for Network Motifs Discovery. , 2009, , .		35
47	The potential of the human connectome as a biomarker of brain disease. Frontiers in Human Neuroscience, 2013, 7, 484.	1.0	35
48	Critical paths in a metapopulation model of H1N1: Efficiently delaying influenza spreading through flight cancellation. PLOS Currents, 2012, 4, e4f8c9a2e1fca8.	1.4	32
49	Developmental time windows for spatial growth generate multiple-cluster small-world networks. European Physical Journal B, 2007, 58, 185-191.	0.6	31
50	Universality in human cortical folding in health and disease. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12820-12825.	3.3	31
51	Computational modeling of neurostimulation in brain diseases. Progress in Brain Research, 2015, 222, 191-228.	0.9	30
52	A Scalable Test Suite for Continuous Dynamic Multiobjective Optimization. IEEE Transactions on Cybernetics, 2020, 50, 2814-2826.	6.2	30
53	Beyond the average: Detecting global singular nodes from local features in complex networks. Europhysics Letters, 2009, 87, 18008.	0.7	28
54	Spreading dynamics on spatially constrained complex brain networks. Journal of the Royal Society Interface, 2013, 10, 20130016.	1.5	28

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55	Neuroanatomy: Connectome Connects Fly and Mammalian Brain Networks. Current Biology, 2015, 25, R416-R418.	1.8	28
56	Regional functional synchronizations in dementia with Lewy bodies and Alzheimer's disease. International Psychogeriatrics, 2016, 28, 1143-1151.	0.6	27
57	Weighted network measures reveal differences between dementia types: An EEG study. Human Brain Mapping, 2020, 41, 1573-1590.	1.9	25
58	Integrating Temporal and Spatial Scales: Human Structural Network Motifs Across Age and Region of Interest Size. Frontiers in Neuroinformatics, 2011, 5, 10.	1.3	22
59	Developmental time windows for axon growth influence neuronal network topology. Biological Cybernetics, 2015, 109, 275-286.	0.6	20
60	Computer modelling of connectivity change suggests epileptogenesis mechanisms in idiopathic generalised epilepsy. NeuroImage: Clinical, 2019, 21, 101655.	1.4	20
61	Nonlinear growth: an origin of hub organization in complex networks. Royal Society Open Science, 2017, 4, 160691.	1.1	18
62	Establishing,versusMaintaining, Brain Function: A Neuro-computational Model of Cortical Reorganization after Injury to the Immature Brain. Journal of the International Neuropsychological Society, 2011, 17, 1030-1038.	1.2	17
63	Is the clustering coefficient a measure for fault tolerance in wireless sensor networks?. , 2012, , .		17
64	Structural connectivity centrality changes mark the path toward Alzheimer's disease. Alzheimer's and Dementia: Diagnosis, Assessment and Disease Monitoring, 2019, 11, 98-107.	1.2	17
65	Reducing Influenza Spreading Over the Airline Network. PLOS Currents, 2009, 1, RRN1005.	1.4	17
66	The fate of object features during perisaccadic mislocalization. Journal of Vision, 2006, 6, 11-11.	0.1	16
67	AREA: An adaptive reference-set based evolutionary algorithm for multiobjective optimisation. Information Sciences, 2020, 515, 365-387.	4.0	16
68	Gain control through divisive inhibition prevents abrupt transition to chaos in a neural mass model. Physical Review E, 2015, 92, 032723.	0.8	15
69	GABA _B receptor-mediated, layer-specific synaptic plasticity reorganizes gamma-frequency neocortical response to stimulation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2721-9.	3.3	15
70	Structural correlates of attention dysfunction in Lewy body dementia and Alzheimerâ€™s disease: an ex-Gaussian analysis. Journal of Neurology, 2019, 266, 1716-1726.	1.8	14
71	Connectivity within regions characterizes epilepsy duration and treatment outcome. Human Brain Mapping, 2021, 42, 3777-3791.	1.9	14
72	Automatic Network Fingerprinting through Single-Node Motifs. PLoS ONE, 2011, 6, e15765.	1.1	14

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73	Functional and structural brain network correlates of visual hallucinations in Lewy body dementia. Brain, 2022, 145, 2190-2205.	3.7	14
74	Understanding neural flexibility from a multifaceted definition. NeuroImage, 2021, 235, 118027.	2.1	13
75	Predicting age across human lifespan based on structural connectivity from diffusion tensor imaging. , 2014, , .		12
76	A geometric network model of intrinsic grey-matter connectivity of the human brain. Scientific Reports, 2015, 5, 15397.	1.6	12
77	Structural Brain Correlates of Attention Dysfunction in Lewy Body Dementias and Alzheimerâ€™s Disease. Frontiers in Aging Neuroscience, 2018, 10, 347.	1.7	12
78	A Computational Model Incorporating Neural Stem Cell Dynamics Reproduces Glioma Incidence across the Lifespan in the Human Population. PLoS ONE, 2014, 9, e111219.	1.1	10
79	The BioDynaMo Project. Advances in Computational Intelligence and Robotics Book Series, 0, , 117-125.	0.4	10
80	Morphological Homogeneity of Neurons: Searching for Outlier Neuronal Cells. Neuroinformatics, 2012, 10, 379-389.	1.5	9
81	An optimization approach for agent-based computational models of biological development. Advances in Engineering Software, 2018, 121, 262-275.	1.8	9
82	Less detectable environmental changes in dynamic multiobjective optimisation. , 2018, , .		9
83	Computational modelling of the long-term effects of brain stimulation on the local and global structural connectivity of epileptic patients. PLoS ONE, 2020, 15, e0221380.	1.1	9
84	The functional brain favours segregated modular connectivity at old age unless affected by neurodegeneration. Communications Biology, 2021, 4, 973.	2.0	8
85	NIHBA: a network interdiction approach for metabolic engineering design. Bioinformatics, 2020, 36, 3482-3492.	1.8	7
86	Creative Destruction: A Basic Computational Model of Cortical Layer Formation. Cerebral Cortex, 2021, 31, 3237-3253.	1.6	6
87	Functional Connectivity Change in Response to Stroke Is Comparable Across Species: From Mouse to Man. Stroke, 2021, 52, 2961-2963.	1.0	6
88	OptDesign: Identifying Optimum Design Strategies in Strain Engineering for Biochemical Production. ACS Synthetic Biology, 2022, 11, 1531-1541.	1.9	6
89	Near-field electromagnetic holography for high-resolution analysis of network interactions in neuronal tissue. Journal of Neuroscience Methods, 2015, 253, 1-9.	1.3	5
90	Abnormal Connectional Fingerprint in Schizophrenia: A Novel Network Analysis of Diffusion Tensor Imaging Data. Frontiers in Psychiatry, 2016, 7, 114.	1.3	5

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91	Towards simulations of long-term behavior of neural networks: Modeling synaptic plasticity of connections within and between human brain regions. Neurocomputing, 2020, 416, 38-44.	3.5	5
92	Dynamic reconfiguration of macaque brain networks during natural vision. NeuroImage, 2021, 244, 118615.	2.1	5
93	A Closed-Loop Optogenetic Platform. Frontiers in Neuroscience, 2021, 15, 718311.	1.4	4
94	Time-limited self-sustaining rhythms and state transitions in brain networks. Physical Review Research, 2022, 4, .	1.3	4
95	An Empirical Study of Dynamic Triobjective Optimisation Problems. , 2018, , .		3
96	Brain network analysis reveals that amyloidopathy affects comorbid cognitive dysfunction in older adults with depression. Scientific Reports, 2021, 11, 4299.	1.6	3
97	Organization and Function of Complex Cortical Networks. , 2007, , 107-133.		3
98	Parallel calculation of multi-electrode array correlation networks. Journal of Neuroscience Methods, 2009, 184, 357-364.	1.3	2
99	STRUCTURE AND DYNAMICS: THE TRANSITION FROM NONEQUILIBRIUM TO EQUILIBRIUM IN INTEGRATE-AND-FIRE DYNAMICS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250174.	0.7	2
100	Reply: Computer models to inform epilepsy surgery strategies: prediction of postoperative outcome. Brain, 2017, 140, e31-e31.	3.7	2
101	Divisive gain modulation enables flexible and rapid entrainment in a neocortical microcircuit model. Journal of Neurophysiology, 2020, 123, 1133-1143.	0.9	2
102	Non-Optimal Component Placement, but Short Processing Paths, due to Long-Distance Projections in Neural Systems. PLoS Computational Biology, 2005, preprint, e95.	1.5	2
103	Random axon outgrowth and synaptic competition generate realistic connection lengths and filling fractions. BMC Neuroscience, 2009, 10, .	0.8	1
104	Modelling spatially realistic local field potentials in spiking neural networks using the VERTEX simulation tool. BMC Neuroscience, 2014, 15, .	0.8	1
105	Organisational Principles of Connectomes: Changes During Evolution and Development. Diversity and Commonality in Animals, 2017, , 387-401.	0.7	1
106	Modeling the Impact of Lesions in the Brain. , 2017, , 465-484.		1
107	Computational models and fundamental constraints can inform the design of synthetic connectomes. Physics of Life Reviews, 2020, 33, 16-18.	1.5	1
108	Strain Design as Multiobjective Network Interdiction Problem: A Preliminary Approach. Lecture Notes in Computer Science, 2018, , 273-282.	1.0	1

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109	Multiple-Scale Hierarchical Connectivity of Cortical Networks Limits the Spread of Activity. , 2008, , 132-140.		1
110	Perisaccadic compression of space orthogonal to saccade direction. Journal of Vision, 2010, 2, 173-173.	0.1	1
111	Wiring Principles, Optimization. , 2014, , 1-7.		1
112	Feedback loops and oscillations in modular hierarchical brain networks: the topological origin of brain rhythms. BMC Neuroscience, 2009, 10, .	0.8	0
113	Modelling human connectome development: precursors to neural circuits. BMC Neuroscience, 2011, 12, .	0.8	0
114	Network properties of control and epileptic human slice recordings. BMC Neuroscience, 2011, 12, .	0.8	0
115	The visual ventral network is disconnected in Lewy body dementia with visual hallucinations. Alzheimer's and Dementia, 2020, 16, e040350.	0.4	0
116	Wiring Principles, Optimization. , 2013, , 1-7.		0
117	Neuropathologies and Networks. , 2014, , 1-6.		0
118	Wiring Principles, Optimization. , 2015, , 3172-3177.		0
119	Neuropathologies and Networks. , 2015, , 2068-2072.		0
120	The Virtual Electrode Recording Tool for EXtracellular Potentials (VERTEX) Version 2.0: Modelling in vitro electrical stimulation of brain tissue. Wellcome Open Research, 2019, 4, 20.	0.9	0
121	Neuropathologies and Networks. , 2022, , 2441-2445.		0
122	Wiring Principles, Optimization. , 2022, , 3656-3661.		0