Matthieu Gilson

List of Publications by Year
in descending order

40 papers	980 citations	471371 17 h-index	501076 28 g-index
57 all docs	57 docs citations	57 times ranked	941 citing authors

#	Article	IF	Citations
1	Estimation of Directed Effective Connectivity from fMRI Functional Connectivity Hints at Asymmetries of Cortical Connectome. PLoS Computational Biology, 2016, 12, e1004762.	1.5	137
2	Emergence of network structure due to spike-timing-dependent plasticity in recurrent neuronal networks. I. Input selectivityâ€"strengthening correlated input pathways. Biological Cybernetics, 2009, 101, 81-102.	0.6	66
3	STDP in recurrent neuronal networks. Frontiers in Computational Neuroscience, 2010, 4, .	1.2	64
4	Effective connectivity inferred from fMRI transition dynamics during movie viewing points to a balanced reconfiguration of cortical interactions. NeuroImage, 2018, 180, 534-546.	2.1	57
5	Emergence of network structure due to spike-timing-dependent plasticity in recurrent neuronal networks IV. Biological Cybernetics, 2009, 101, 427-444.	0.6	53
6	Effective Connectivity in Depression. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2018, 3, 187-197.	1.1	42
7	Extracting orthogonal subject- and condition-specific signatures from fMRI data using whole-brain effective connectivity. NeuroImage, 2018, 178, 238-254.	2.1	41
8	Emergence of network structure due to spike-timing-dependent plasticity in recurrent neuronal networks. II. Input selectivityâ€"symmetry breaking. Biological Cybernetics, 2009, 101, 103-114.	0.6	40
9	Emergence of network structure due to spike-timing-dependent plasticity in recurrent neuronal networks III: Partially connected neurons driven by spontaneous activity. Biological Cybernetics, 2009, 101, 411-426.	0.6	40
10	Model-based whole-brain effective connectivity to study distributed cognition in health and disease. Network Neuroscience, 2020, 4, 338-373.	1.4	40
11	Network analysis of whole-brain fMRI dynamics: A new framework based on dynamic communicability. NeuroImage, 2019, 201, 116007.	2.1	36
12	Effective connectivity in autism. Autism Research, 2020, 13, 32-44.	2.1	34
13	STDP Allows Fast Rate-Modulated Coding with Poisson-Like Spike Trains. PLoS Computational Biology, 2011, 7, e1002231.	1.5	33
14	Resting state networks in empirical and simulated dynamic functional connectivity. NeuroImage, 2017, 159, 388-402.	2.1	33
15	Taskâ€related effective connectivity reveals that the cortical rich club gates cortexâ€wide communication. Human Brain Mapping, 2018, 39, 1246-1262.	1.9	31
16	Emergence of network structure due to spike-timing-dependent plasticity in recurrent neuronal networks V: self-organization schemes and weight dependence. Biological Cybernetics, 2010, 103, 365-386.	0.6	27
17	Beyond the disconnectivity hypothesis of schizophrenia. Cerebral Cortex, 2020, 30, 1213-1233.	1.6	27
18	Distinct modes of functional connectivity induced by movie-watching. NeuroImage, 2019, 184, 335-348.	2.1	23

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19	Frequency Selectivity Emerging from Spike-Timing-Dependent Plasticity. Neural Computation, 2012, 24, 2251-2279.	1.3	17
20	Nonparametric test for connectivity detection in multivariate autoregressive networks and application to multiunit activity data. Network Neuroscience, 2017, 1, 357-380.	1.4	17
21	Effective connectivity extracts clinically relevant prognostic information from resting state activity in stroke. Brain Communications, 2021, 3, fcab233.	1.5	15
22	Stereotypical modulations in dynamic functional connectivity explained by changes in BOLD variance. NeuroImage, 2018, 171, 40-54.	2.1	14
23	Spectral Analysis of Input Spike Trains by Spike-Timing-Dependent Plasticity. PLoS Computational Biology, 2012, 8, e1002584.	1.5	13
24	Representation of input structure in synaptic weights by spike-timing-dependent plasticity. Physical Review E, 2010, 82, 021912.	0.8	8
25	Capacity of the covariance perceptron. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 354002.	0.7	7
26	Propagation of BOLD Activity Reveals Task-dependent Directed Interactions Across Human Visual Cortex. Cerebral Cortex, 2020, 30, 5899-5914.	1.6	6
27	Editorial: Emergent Neural Computation from the Interaction of Different Forms of Plasticity. Frontiers in Computational Neuroscience, 2015, 9, 145.	1.2	5
28	Analysis of fMRI data using noise-diffusion network models: a new covariance-coding perspective. Biological Cybernetics, 2018, 112, 153-161.	0.6	5
29	The covariance perceptron: A new paradigm for classification and processing of time series in recurrent neuronal networks. PLoS Computational Biology, 2020, 16, e1008127.	1.5	5
30	Coexistence of Reward and Unsupervised Learning During the Operant Conditioning of Neural Firing Rates. PLoS ONE, 2014, 9, e87123.	1.1	4
31	Goal-directed control with cortical units that are gated by both top-down feedback and oscillatory coherence. Frontiers in Neural Circuits, 2014, 8, 94.	1.4	3
32	Meditation-induced effects on whole-brain structural and effective connectivity. Brain Structure and Function, 2022, 227, 2087-2102.	1.2	3
33	Propagation of Spiking Moments in Linear Hawkes Networks. SIAM Journal on Applied Dynamical Systems, 2020, 19, 828-859.	0.7	1
34	Imaging Connectomics and the Understanding of Brain Diseases. Advances in Experimental Medicine and Biology, 2019, 1192, 139-158.	0.8	0
35	Title is missing!. , 2020, 16, e1008127.		0
36	Title is missing!. , 2020, 16, e1008127.		0

#	Article	IF	Citations
37	Title is missing!. , 2020, 16, e1008127.		0
38	Title is missing!. , 2020, 16, e1008127.		0
39	Title is missing!. , 2020, 16, e1008127.		0
40	Title is missing!. , 2020, 16, e1008127.		0