Biswa Sengupta

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3055013/publications.pdf

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25 papers	1,399 citations	394421 19 h-index	580821 25 g-index
25 all docs	25 docs citations	25 times ranked	1585 citing authors

#	Article	IF	Citations
1	Action Potential Energy Efficiency Varies Among Neuron Types in Vertebrates and Invertebrates. PLoS Computational Biology, 2010, 6, e1000840.	3.2	216
2	Information and Efficiency in the Nervous Systemâ€"A Synthesis. PLoS Computational Biology, 2013, 9, e1003157.	3.2	163
3	Knowing one's place: a free-energy approach to pattern regulation. Journal of the Royal Society Interface, 2015, 12, 20141383.	3.4	153
4	Towards a Neuronal Gauge Theory. PLoS Biology, 2016, 14, e1002400.	5.6	86
5	The Effect of Cell Size and Channel Density on Neuronal Information Encoding and Energy Efficiency. Journal of Cerebral Blood Flow and Metabolism, 2013, 33, 1465-1473.	4.3	80
6	Balanced Excitatory and Inhibitory Synaptic Currents Promote Efficient Coding and Metabolic Efficiency. PLoS Computational Biology, 2013, 9, e1003263.	3.2	77
7	Cognitive Dynamics: From Attractors to Active Inference. Proceedings of the IEEE, 2014, 102, 427-445.	21.3	66
8	Power Consumption During Neuronal Computation. Proceedings of the IEEE, 2014, 102, 738-750.	21.3	65
9	Efficient gradient computation for dynamical models. NeuroImage, 2014, 98, 521-527.	4.2	48
10	Ten Simple Rules for Effective Computational Research. PLoS Computational Biology, 2014, 10, e1003506.	3.2	47
11	Gradient-based MCMC samplers for dynamic causal modelling. NeuroImage, 2016, 125, 1107-1118.	4.2	43
12	Consequences of Converting Graded to Action Potentials upon Neural Information Coding and Energy Efficiency. PLoS Computational Biology, 2014, 10, e1003439.	3.2	41
13	Dynamic causal modelling of electrographic seizure activity using Bayesian belief updating. NeuroImage, 2016, 125, 1142-1154.	4.2	41
14	Characterising seizures in anti-NMDA-receptor encephalitis with dynamic causal modelling. NeuroImage, 2015, 118, 508-519.	4.2	39
15	Gradient-free MCMC methods for dynamic causal modelling. NeuroImage, 2015, 112, 375-381.	4.2	38
16	Functional analysis of ultra high information rates conveyed by rat vibrissal primary afferents. Frontiers in Neural Circuits, 2013, 7, 190.	2.8	35
17	mpdcm: A toolbox for massively parallel dynamic causal modeling. Journal of Neuroscience Methods, 2016, 257, 7-16.	2.5	35
18	Hemispheric brain asymmetry differences in youths with attention-deficit/hyperactivity disorder. NeuroImage: Clinical, 2018, 18, 744-752.	2.7	35

#	Article	IF	Citations
19	Comparison of Langevin and Markov channel noise models for neuronal signal generation. Physical Review E, 2010, 81, 011918.	2.1	34
20	Neural Dynamics under Active Inference: Plausibility and Efficiency of Information Processing. Entropy, 2021, 23, 454.	2.2	22
21	Annealed Importance Sampling for Neural Mass Models. PLoS Computational Biology, 2016, 12, e1004797.	3.2	13
22	Editorial: Self-Organization in the Nervous System. Frontiers in Systems Neuroscience, 2017, 11, 69.	2.5	8
23	Gauge Fields in the Central Nervous System. Springer Series in Cognitive and Neural Systems, 2017, , 193-212.	0.1	7
24	A naturally occurring amino acid substitution in the voltage-dependent sodium channel selectivity filter affects channel gating. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2013, 199, 829-842.	1.6	5
25	Pillar Networks: Combining parametric with non-parametric methods for action recognition. Robotics and Autonomous Systems, 2019, 118, 47-54.	5.1	2