Arvind Kumar

List of Publications by Year
in descending order

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65	2,135	361413	276875
papers	citations	20 h-index	41 g-index

91	91	91	2352
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Transient Response of Basal Ganglia Network in Healthy and Low-Dopamine State. ENeuro, 2022, 9, ENEURO.0376-21.2022.	1.9	8
2	Recommendations for repositories and scientific gateways from a neuroscience perspective. Scientific Data, 2022, 9, 212.	5.3	3
3	Short-Term Synaptic Plasticity Makes Neurons Sensitive to the Distribution of Presynaptic Population Firing Rates. ENeuro, 2021, 8, ENEURO.0297-20.2021.	1.9	12
4	Correlated inputs to striatal population drive subthalamic nucleus hyper-synchronization. , 2021, , .		2
5	CA2 beyond social memory: Evidence for a fundamental role in hippocampal information processing. Neuroscience and Biobehavioral Reviews, 2021, 126, 398-412.	6.1	27
6	Differential Coding Strategies in Glutamatergic and GABAergic Neurons in the Medial Cerebellar Nucleus. Journal of Neuroscience, 2020, 40, 159-170.	3.6	26
7	Facilitating the propagation of spiking activity in feedforward networks by including feedback. PLoS Computational Biology, 2020, 16, e1008033.	3.2	18
8	Dynamics of multiple interacting excitatory and inhibitory populations with delays. Physical Review E, 2020, 102, 022308.	2.1	2
9	Selective neuromodulation and mutual inhibition within the ‹scp›CA3â€“CA2‹/scp› system can prioritize sequences for replay. Hippocampus, 2020, 30, 1228-1238.	1.9	16
10	Abundance Compensates Kinetics: Similar Effect of Dopamine Signals on D1 and D2 Receptor Populations. Journal of Neuroscience, 2020, 40, 2868-2881.	3.6	28
11	Uncoupling the roles of firing rates and spike bursts in shaping the STN-GPe beta band oscillations. PLoS Computational Biology, 2020, 16, e1007748.	3.2	16
12	Facilitating the propagation of spiking activity in feedforward networks by including feedback. , 2020, 16, e1008033.		0
13	Facilitating the propagation of spiking activity in feedforward networks by including feedback. , 2020, 16, e1008033.		0
14	Facilitating the propagation of spiking activity in feedforward networks by including feedback. , 2020, 16, e1008033.		0
15	Facilitating the propagation of spiking activity in feedforward networks by including feedback. , 2020, 16, e1008033.		0
16	Uncoupling the roles of firing rates and spike bursts in shaping the STN-GPe beta band oscillations. , 2020, 16, e1007748.		0
17	Uncoupling the roles of firing rates and spike bursts in shaping the STN-GPe beta band oscillations. , 2020, 16, e1007748.		0
18	Uncoupling the roles of firing rates and spike bursts in shaping the STN-GPe beta band oscillations. , 2020, 16, e1007748.		0

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19	Uncoupling the roles of firing rates and spike bursts in shaping the STN-GPe beta band oscillations. , 2020, 16, e1007748.		0
20	Uncoupling the roles of firing rates and spike bursts in shaping the STN-GPe beta band oscillations. , 2020, 16, e1007748.		0
21	Uncoupling the roles of firing rates and spike bursts in shaping the STN-GPe beta band oscillations. , 2020, 16, e1007748.		0
22	From space to time: Spatial inhomogeneities lead to the emergence of spatiotemporal sequences in spiking neuronal networks. PLoS Computational Biology, 2019, 15, e1007432.	3.2	20
23	Direct pathway neurons in mouse dorsolateral striatum in vivo receive stronger synaptic input than indirect pathway neurons. Journal of Neurophysiology, 2019, 122, 2294-2303.	1.8	14
24	Perturbing low dimensional activity manifolds in spiking neuronal networks. PLoS Computational Biology, 2019, 15, e1007074.	3.2	24
25	Portraits of communication in neuronal networks. Nature Reviews Neuroscience, 2019, 20, 117-127.	10.2	126
26	Bursts with High and Low Load of Epileptiform Spikes Show Context-Dependent Correlations in Epileptic Mice. ENeuro, 2019, 6, ENEURO.0299-18.2019.	1.9	13
27	Title is missing!. , 2019, 15, e1007432.		0
28	Title is missing!. , 2019, 15, e1007432.		0
29	Title is missing!. , 2019, 15, e1007432.		0
30	Title is missing!. , 2019, 15, e1007432.		0
31	Short-Term Plasticity Combines with Excitationâ€“Inhibition Balance to Expand Cerebellar Purkinje Cell Dynamic Range. Journal of Neuroscience, 2018, 38, 5153-5167.	3.6	22
32	Basal Ganglia Neuromodulation Over Multiple Temporal and Structural Scalesâ€”Simulations of Direct Pathway MSNs Investigate the Fast Onset of Dopaminergic Effects and Predict the Role of Kv4.2. Frontiers in Neural Circuits, 2018, 12, 3.	2.8	34
33	Electrophysiological properties and projections of lateral hypothalamic parvalbumin positive neurons. PLoS ONE, 2018, 13, e0198991.	2.5	10
34	Sensorimotor Processing in the Basal Ganglia Leads to Transient Beta Oscillations during Behavior. Journal of Neuroscience, 2017, 37, 11220-11232.	3.6	40
35	Homologous Basal Ganglia Network Models in Physiological and Parkinsonian Conditions. Frontiers in Computational Neuroscience, 2017, 11, 79.	2.1	14
36	Interplay between periodic stimulation and GABAergic inhibition in striatal network oscillations. PLoS ONE, 2017, 12, e0175135.	2.5	10

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37	Spontaneous cortical activity is transiently poised close to criticality. PLoS Computational Biology, 2017, 13, e1005543.	3.2	88
38	Activity Dynamics and Signal Representation in a Striatal Network Model with Distance-Dependent Connectivity. ENeuro, 2017, 4, ENEURO.0348-16.2017.	1.9	15
39	Dynamical state of the network determines the efficacy of single neuron properties in shaping the network activity. Scientific Reports, 2016, 6, 26029.	3.3	22
40	Recovery of Dynamics and Function in Spiking Neural Networks with Closed-Loop Control. PLoS Computational Biology, 2016, 12, e1004720.	3.2	10
41	Effect of edge pruning on structural controllability and observability of complex networks. Scientific Reports, 2015, 5, 18145.	3.3	21
42	Role of Input Correlations in Shaping the Variability and Noise Correlations of Evoked Activity in the Neocortex. Journal of Neuroscience, 2015, 35, 8611-8625.	3.6	25
43	Physiology and Impact of Horizontal Connections in Rat Neocortex. Cerebral Cortex, 2015, 25, 3818-3835.	2.9	46
44	Existence and Control of Go/No-Go Decision Transition Threshold in the Striatum. PLoS Computational Biology, 2015, 11, e1004233.	3.2	42
45	Intraglomerular Lateral Inhibition Promotes Spike Timing Variability in Principal Neurons of the Olfactory Bulb. Journal of Neuroscience, 2015, 35, 4319-4331.	3.6	52
46	Communication through Resonance in Spiking Neuronal Networks. PLoS Computational Biology, 2014, 10, e1003811.	3.2	78
47	Impact of correlated inputs to neurons: modeling observations from in vivo intracellular recordings. Journal of Computational Neuroscience, 2014, 37, 293-304.	1.0	10
48	Challenges of understanding brain function by selective modulation of neuronal subpopulations. Trends in Neurosciences, 2013, 36, 579-586.	8.6	41
49	Synfire chains and gamma oscillations: two complementary modes of information transmission in cortical networks. BMC Neuroscience, 2013, 14, P226.	1.9	1
50	Neural system prediction and identification challenge. Frontiers in Neuroinformatics, 2013, 7, 43.	2.5	6
51	Altered theta coupling between medial entorhinal cortex and dentate gyrus in temporal lobe epilepsy. Epilepsia, 2012, 53, 1937-1947.	5.1	29
52	Beyond Statistical Significance: Implications of Network Structure on Neuronal Activity. PLoS Computational Biology, 2012, 8, e1002311.	3.2	23
53	Information homeostasis as a fundamental principle governing the cell division and death. Medical Hypotheses, 2011, 77, 318-322.	1.5	1
54	Information homeostasis as a fundamental principle governing the cell division and death. Nature Precedings, 2011, , .	0.1	1

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55	The Role of Inhibition in Generating and Controlling Parkinson?s Disease Oscillations in the Basal Ganglia. Frontiers in Systems Neuroscience, 2011, 5, 86.	2.5	116
56	Significance of Input Correlations in Striatal Function. PLoS Computational Biology, 2011, 7, e1002254.	3.2	34
57	Frequency-Dependent Changes in NMDAR-Dependent Synaptic Plasticity. Frontiers in Computational Neuroscience, 2011, 5, 38.	2.1	43
58	Context-Dependent Encoding of Fear and Extinction Memories in a Large-Scale Network Model of the Basal Amygdala. PLoS Computational Biology, 2011, 7, e1001104.	3.2	50
59	Spiking activity propagation in neuronal networks: reconciling different perspectives on neural coding. Nature Reviews Neuroscience, 2010, 11, 615-627.	10.2	395
60	Design and simulation of D-latch and multiplexer using vMOS. , 2010, , .		0
61	Gating of Signal Propagation in Spiking Neural Networks by Balanced and Correlated Excitation and Inhibition. Journal of Neuroscience, 2010, 30, 15760-15768.	3.6	109
62	Reactivation in Ventral Striatum during Hippocampal Ripples: Evidence for the Binding of Reward and Spatial Memories?. Journal of Neuroscience, 2008, 28, 9895-9897.	3.6	3
63	The High-Conductance State of Cortical Networks. Neural Computation, 2008, 20, 1-43.	2.2	180
64	Conditions for Propagating Synchronous Spiking and Asynchronous Firing Rates in a Cortical Network Model. Journal of Neuroscience, 2008, 28, 5268-5280.	3.6	182
65	Emergence of population synchrony in a layered network of the cat visual cortex. Neurocomputing, 2007, 70, 2069-2073.	5.9	14