Lubomir Kostal

List of Publications by Year
in descending order

44	491	759233 12	752698 20
papers	citations	h-index	g-index

45	45	45	349
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Regular spiking in high-conductance states: The essential role of inhibition. Physical Review E, 2021, 103, 022408.	2.1	5
2	Variability and Randomness of the Instantaneous Firing Rate. Frontiers in Computational Neuroscience, 2021, 15, 620410.	2.1	0
3	Editorial. BioSystems, 2020, 187, 104049.	2.0	0
4	An optimal Gaussâ€"Markov approximation for a process with stochastic drift and applications. Stochastic Processes and Their Applications, 2020, 130, 6481-6514.	0.9	3
5	Fano Factor: A Potentially Useful Information. Frontiers in Computational Neuroscience, 2020, 14, 569049.	2.1	16
6	Adaptive integrate-and-fire model reproduces the dynamics of olfactory receptor neuron responses in a moth. Journal of the Royal Society Interface, 2019, 16, 20190246.	3.4	11
7	Critical size of neural population for reliable information transmission. Physical Review E, 2019, 100, 050401.	2.1	1
8	The effect of inhibition on rate code efficiency indicators. PLoS Computational Biology, 2019, 15, e1007545.	3.2	10
9	Coordinate invariance as a fundamental constraint on the form of stimulus-specific information measures. Biological Cybernetics, 2018, 112, 13-23.	1.3	2
10	Moth olfactory receptor neurons adjust their encoding efficiency to temporal statistics of pheromone fluctuations. PLoS Computational Biology, 2018, 14, e1006586.	3.2	13
11	Statistics of inverse interspike intervals: The instantaneous firing rate revisited. Chaos, 2018, 28, 106305.	2.5	15
12	Accuracy of rate coding: When shorter time window and higher spontaneous activity help. Physical Review E, 2017, 95, 022310.	2.1	6
13	Editorial. BioSystems, 2017, 161, 1-2.	2.0	0
14	Entropy factor for randomness quantification in neuronal data. Neural Networks, 2017, 95, 57-65.	5.9	13
15	Coding accuracy on the psychophysical scale. Scientific Reports, 2016, 6, 23810.	3.3	1
16	Stimulus reference frame and neural coding precision. Journal of Mathematical Psychology, 2016, 71, 22-27.	1.8	5
17	Presynaptic Spontaneous Activity Enhances the Accuracy of Latency Coding. Neural Computation, 2016, 28, 2162-2180.	2.2	5
18	Efficient information transfer by Poisson neurons. Mathematical Biosciences and Engineering, 2016, 13, 509-520.	1.9	8

#	Article	IF	Citations
19	Nonparametric estimation of characteristics of the interspike interval distribution. BMC Neuroscience, 2015, 16, .	1.9	0
20	Optimal decoding and information transmission in Hodgkinâ€“Huxley neurons under metabolic cost constraints. BioSystems, 2015, 136, 3-10.	2.0	17
21	Coding Accuracy Is Not Fully Determined by the Neuronal Model. Neural Computation, 2015, 27, 1051-1057.	2.2	6
22	Performance breakdown in optimal stimulus decoding. Journal of Neural Engineering, 2015, 12, 036012.	3.5	8
23	The effect of interspike interval statistics on the information gainunder the rate coding hypothesis. Mathematical Biosciences and Engineering, 2014, 11, 63-80.	1.9	16
24	Maximum penalized likelihood estimation of interspike interval distribution. BMC Neuroscience, 2013, 14, .	1.9	0
25	Measures of statistical dispersion based on Shannon and Fisher information concepts. Information Sciences, 2013, 235, 214-223.	6.9	29
26	Information capacity and its approximations under metabolic cost in a simple homogeneous population of neurons. BioSystems, 2013, 112, 265-275.	2.0	13
27	Metabolic cost of neuronal information in an empirical stimulus-response model. Biological Cybernetics, 2013, 107, 355-365.	1.3	25
28	Nonparametric Estimation of Information-Based Measures of Statistical Dispersion. Entropy, 2012, 14, 1221-1233.	2.2	9
29	Approximate information capacity of the perfect integrate-and-fire neuron using the temporal code. Brain Research, 2012, 1434, 136-141.	2.2	9
30	Variability Measures of Positive Random Variables. PLoS ONE, 2011, 6, e21998.	2.5	12
31	Measures of statistical dispersion based on Entropy and Fisher information. BMC Neuroscience, 2011, 12, .	1.9	0
32	Information transfer for small-amplitude signals. Physical Review E, 2010, 81, 050901.	2.1	8
33	Information capacity in the weak-signal approximation. Physical Review E, 2010, 82, 026115.	2.1	19
34	Neuronal Jitter: Can We Measure the Spike Timing Dispersion Differently?. Chinese Journal of Physiology, 2010, 53, 454-464.	1.0	8
35	Neuronal jitter: can we measure the spike timing dispersion differently?. BMC Neuroscience, 2009, 10, .	1.9	1
36	Efficient Olfactory Coding in the Pheromone Receptor Neuron of a Moth. PLoS Computational Biology, 2008, 4, e1000053.	3.2	40

#	Article	IF	Citations
37	The Adaptation of the Moth Pheromone Receptor Neuron to its Natural Stimulus. AIP Conference Proceedings, 2008, , .	0.4	0
38	Randomness and variability of the neuronal activity described by the Ornsteinâ€“Uhlenbeck model. Network: Computation in Neural Systems, 2007, 18, 63-75.	3.6	11
39	Variability and randomness in stationary neuronal activity. BioSystems, 2007, 89, 44-49.	2.0	5
40	REVIEW ARTICLE: Neuronal coding and spiking randomness. European Journal of Neuroscience, 2007, 26, 2693-2701.	2.6	66
41	Encoding of pheromone intensity by dynamic activation of pheromone receptors. Neurocomputing, 2007, 70, 1759-1763.	5.9	2
42	Similarity of interspike interval distributions and information gain in a stationary neuronal firing. Biological Cybernetics, 2006, 94, 157-167.	1.3	19
43	Classification of stationary neuronal activity according to its information rate. Network: Computation in Neural Systems, 2006, 17, 193-210.	3.6	15
44	Patterns of spontaneous activity in single rat olfactory receptor neurons are different in normally breathing and tracheotomized animals. Journal of Neurobiology, 2005, 65, 97-114.	3.6	39