Pulin Gong

List of Publications by Year
in descending order

40 papers	909 citations	586496 16 h-index	591227 27 g-index
41 all docs	41 docs citations	41 times ranked	1035 citing authors

#	Article	IF	Citations
1	Anomalous diffusion dynamics of learning in deep neural networks. Neural Networks, 2022, 149, 18-28.	3.3	9
2	A spatiotemporal mechanism of visual attention: Superdiffusive motion and theta oscillations of neural population activity patterns. Science Advances, 2022, 8, eabl4995.	4.7	10
3	Fractional diffusion theory of balanced heterogeneous neural networks. Physical Review Research, 2021, 3, .	1.3	13
4	Cortex-Wide Dynamics of Intrinsic Electrical Activities: Propagating Waves and Their Interactions. Journal of Neuroscience, 2021, 41, 3665-3678.	1.7	33
5	LÃ©vy walk dynamics explain gamma burst patterns in primate cerebral cortex. Communications Biology, 2021, 4, 739.	2.0	11
6	Fractal spike dynamics and neuronal coupling in the primate visual system. Journal of Physiology, 2020, 598, 1551-1571.	1.3	8
7	Complex Dynamics of Propagating Waves in a Two-Dimensional Neural Field. Frontiers in Computational Neuroscience, 2019, 13, 50.	1.2	5
8	Computing by modulating spontaneous cortical activity patterns as a mechanism of active visual processing. Nature Communications, 2019, 10, 4915.	5.8	24
9	Rich-club connectivity, diverse population coupling, and dynamical activity patterns emerging from local cortical circuits. PLoS Computational Biology, 2019, 15, e1006902.	1.5	19
10	Maintenance of postsynaptic neuronal excitability by a positive feedback loop of postsynaptic BDNF expression. Cognitive Neurodynamics, 2018, 12, 403-416.	2.3	7
11	Dynamical patterns underlying response properties of cortical circuits. Journal of the Royal Society Interface, 2018, 15, 20170960.	1.5	6
12	Functional mechanisms underlie the emergence of a diverse range of plasticity phenomena. PLoS Computational Biology, 2018, 14, e1006590.	1.5	5
13	Detection and analysis of spatiotemporal patterns in brain activity. PLoS Computational Biology, 2018, 14, e1006643.	1.5	64
14	Critical Dynamics of Natural Time-Varying Images. Physical Review Letters, 2018, 121, 058101.	2.9	10
15	Relationship between cortical state and spiking activity in the lateral geniculate nucleus of marmosets. Journal of Physiology, 2017, 595, 4475-4492.	1.3	14
16	Visual Motion Discrimination by Propagating Patterns in Primate Cerebral Cortex. Journal of Neuroscience, 2017, 37, 10074-10084.	1.7	22
17	Learning and executing goal-directed choices by internally generated sequences in spiking neural circuits. PLoS Computational Biology, 2017, 13, e1005669.	1.5	3
18	The dynamics of memory retrieval in hierarchical networks. Journal of Computational Neuroscience, 2016, 40, 247-268.	0.6	5

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19	Dynamic patterns in a two-dimensional neural field with refractoriness. Physical Review E, 2015, 92, 022702.	0.8	9
20	Propagating Waves Can Explain Irregular Neural Dynamics. Journal of Neuroscience, 2015, 35, 1591-1605.	1.7	60
21	Subdiffusive Dynamics of Bump Attractors: Mechanisms and Functional Roles. Neural Computation, 2015, 27, 255-280.	1.3	5
22	Emergence of Complex Wave Patterns in Primate Cerebral Cortex. Journal of Neuroscience, 2015, 35, 4657-4662.	1.7	70
23	The rhythms of steady posture: Motor commands as spatially organized oscillation patterns. Neurocomputing, 2015, 170, 3-14.	3.5	9
24	Associative learning of classical conditioning as an emergent property of spatially extended spiking neural circuits with synaptic plasticity. Frontiers in Computational Neuroscience, 2014, 8, 79.	1.2	21
25	Formation and Regulation of Dynamic Patterns in Two-Dimensional Spiking Neural Circuits with Spike-Timing-Dependent Plasticity. Neural Computation, 2013, 25, 2833-2857.	1.3	4
26	Dynamic patterns and their interactions in networks of excitable elements. Physical Review E, 2013, 88, 042821.	0.8	3
27	Spatiotemporal pattern formation in two-dimensional neural circuits: roles of refractoriness and noise. Biological Cybernetics, 2013, 107, 1-13.	0.6	6
28	A computational role for bistability and traveling waves in motor cortex. Frontiers in Computational Neuroscience, 2012, 6, 67.	1.2	25
29	Fragmentation: loss of global coherence or breakdown of modularity in functional brain architecture?. Frontiers in Systems Neuroscience, 2012, 6, 20.	1.2	32
30	Human Cortical Traveling Waves: Dynamical Properties and Correlations with Responses. PLoS ONE, 2012, 7, e38392.	1.1	61
31	Dynamic pattern formation and collisions in networks of excitable elements. Physical Review E, 2012, 85, 055101.	0.8	12
32	Duration of Coherence Intervals in Electrical Brain Activity in Perceptual Organization. Cerebral Cortex, 2010, 20, 365-382.	1.6	22
33	Distributed Dynamical Computation in Neural Circuits with Propagating Coherent Activity Patterns. PLoS Computational Biology, 2009, 5, e1000611.	1.5	58
34	Intermittent dynamics underlying the intrinsic fluctuations of the collective synchronization patterns in electrocortical activity. Physical Review E, 2007, 76, 011904.	0.8	55
35	Dynamically Maintained Spike Timing Sequences in Networks of Pulse-Coupled Oscillators with Delays. Physical Review Letters, 2007, 98, 048104.	2.9	37
36	Evoked phase synchronization between adjacent high-density electrodes in human scalp EEG: Duration and time course related to behavior. Clinical Neurophysiology, 2005, 116, 2403-2419.	0.7	10

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37	Phase Synchronization Analysis of EEG during Attentional Blink. Journal of Cognitive Neuroscience, 2005, 17, 1969-1979.	1.1	37
38	Emergence of scale-free network with chaotic units. Physica A: Statistical Mechanics and Its Applications, 2003, 321, 679-688.	1.2	35
39	Scale-invariant fluctuations of the dynamical synchronization in human brain electrical activity. Neuroscience Letters, 2003, 336, 33-36.	1.0	70
40	Fractional Neural Sampling: A Theory of Spatiotemporal Probabilistic Computations in Neural Circuits. SSRN Electronic Journal, 0, , .	0.4	0