David Hansel

List of Publications by Year
in descending order

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35 papers	3,492 citations	257450 24 h-index	377865 34 g-index
43 all docs	43 docs citations	43 times ranked	3194 citing authors

#	Article	IF	Citations
1	How Spike Generation Mechanisms Determine the Neuronal Response to Fluctuating Inputs. Journal of Neuroscience, 2003, 23, 11628-11640.	3.6	485
2	Subthalamic high frequency stimulation resets subthalamic firing and reduces abnormal oscillations. Brain, 2005, 128, 2372-2382.	7.6	327
3	Competition between Feedback Loops Underlies Normal and Pathological Dynamics in the Basal Ganglia. Journal of Neuroscience, 2006, 26, 3567-3583.	3.6	289
4	Role of Delays in Shaping Spatiotemporal Dynamics of Neuronal Activity in Large Networks. Physical Review Letters, 2005, 94, 238103.	7.8	261
5	On the Distribution of Firing Rates in Networks of Cortical Neurons. Journal of Neuroscience, 2011, 31, 16217-16226.	3.6	192
6	Rate Models for Conductance-Based Cortical Neuronal Networks. Neural Computation, 2003, 15, 1809-1841.	2.2	190
7	Electrical Synapses and Synchrony: The Role of Intrinsic Currents. Journal of Neuroscience, 2003, 23, 6280-6294.	3.6	152
8	Spatiotemporal constraints on optogenetic inactivation in cortical circuits. ELife, 2019, 8, .	6.0	150
9	Late emergence of synchronized oscillatory activity in the pallidum during progressive parkinsonism. European Journal of Neuroscience, 2007, 26, 1701-1713.	2.6	139
10	The Mechanism of Orientation Selectivity in Primary Visual Cortex without a Functional Map. Journal of Neuroscience, 2012, 32, 4049-4064.	3.6	118
11	Mechanisms of Firing Patterns in Fast-Spiking Cortical Interneurons. PLoS Computational Biology, 2007, 3, e156.	3.2	108
12	Short-Term Plasticity Explains Irregular Persistent Activity in Working Memory Tasks. Journal of Neuroscience, 2013, 33, 133-149.	3.6	106
13	The Combined Effects of Inhibitory and Electrical Synapses in Synchrony. Neural Computation, 2005, 17, 633-670.	2.2	98
14	Short-Term Facilitation may Stabilize Parametric Working Memory Trace. Frontiers in Computational Neuroscience, 2011, 5, 40.	2.1	94
15	Traveling waves and the processing of weakly tuned inputs in a cortical network module. Journal of Computational Neuroscience, 1997, 4, 57-77.	1.0	84
16	Asynchronous Rate Chaos in Spiking Neuronal Circuits. PLoS Computational Biology, 2015, 11, e1004266.	3.2	76
17	How Noise Affects the Synchronization Properties of Recurrent Networks of Inhibitory Neurons. Neural Computation, 2006, 18, 1066-1110.	2.2	75
18	Bistability and Spatiotemporal Irregularity in Neuronal Networks with Nonlinear Synaptic Transmission. Physical Review Letters, 2012, 108, 158101.	7.8	69

#	Article	IF	Citations
19	Temporal Decorrelation of Collective Oscillations in Neural Networks with Local Inhibition and Long-Range Excitation. Physical Review Letters, 2007, 99, 238106.	7.8	67
20	Very long transients, irregular firing, and chaotic dynamics in networks of randomly connected inhibitory integrate-and-fire neurons. Physical Review E, 2009, 79, 031909.	2.1	66
21	Synchronous Chaos and Broad Band Gamma Rhythm in a Minimal Multi-Layer Model of Primary Visual Cortex. PLoS Computational Biology, 2011, 7, e1002176.	3.2	53
22	Mechanisms underlying the response of mouse cortical networks to optogenetic manipulation. ELife, 2020, 9, .	6.0	47
23	A canonical neural mechanism for behavioral variability. Nature Communications, 2017, 8, 15415.	12.8	38
24	Emergent Orientation Selectivity from Random Networks in Mouse Visual Cortex. Cell Reports, 2018, 24, 2042-2050.e6.	6.4	37
25	The Role of Striatal Feedforward Inhibition in the Maintenance of Absence Seizures. Journal of Neuroscience, 2016, 36, 9618-9632.	3.6	33
26	Power-Law Input-Output Transfer Functions Explain the Contrast-Response and Tuning Properties of Neurons in Visual Cortex. PLoS Computational Biology, 2011, 7, e1001078.	3.2	30
27	Strength of Correlations in Strongly Recurrent Neuronal Networks. Physical Review X, 2018, 8, .	8.9	23
28	Rate Models with Delays and the Dynamics of Large Networks of Spiking Neurons. Progress of Theoretical Physics Supplement, 2006, 161, 68-85.	0.1	22
29	Interference and Shaping in Sensorimotor Adaptations with Rewards. PLoS Computational Biology, 2014, 10, e1003377.	3.2	16
30	A reanalysis of â€œTwo types of asynchronous activity in networks of excitatory and inhibitory spiking neuronsâ€• F1000Research, 2016, 5, 2043.	1.6	15
31	Idiosyncratic choice bias naturally emerges from intrinsic stochasticity in neuronal dynamics. Nature Human Behaviour, 2019, 3, 1190-1202.	12.0	12
32	Dynamics and orientation selectivity in a cortical model of rodent V1 with excess bidirectional connections. Scientific Reports, 2019, 9, 3334.	3.3	3
33	Computing with a difference neuron. Network: Computation in Neural Systems, 1992, 3, 187-204.	3.6	2
34	Mechanisms of Firing Patterns in Fast-Spiking Cortical Interneurons. PLoS Computational Biology, 2005, preprint, e156.	3.2	1
35	Teaching assistants. Les Houches Summer School Proceedings, 2005, 80, x.	0.2	0