

Miguel Maravall

List of Publications by Year in descending order

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Version: 2024-02-01

41
papers

2,103
citations

394421

19
h-index

361022

35
g-index

50
all docs

50
docs citations

50
times ranked

2492
citing authors

#	ARTICLE	IF	CITATIONS
1	Estimating Intracellular Calcium Concentrations and Buffering without Wavelength Ratioing. Biophysical Journal, 2000, 78, 2655-2667.	0.5	362
2	Ca2+ signaling in dendritic spines. Current Opinion in Neurobiology, 2001, 11, 349-356.	4.2	266
3	Rapid Development and Plasticity of Layer 2/3 Maps in Rat Barrel Cortex In Vivo. Neuron, 2001, 31, 305-315.	8.1	241
4	Shifts in Coding Properties and Maintenance of Information Transmission during Adaptation in Barrel Cortex. PLoS Biology, 2007, 5, e19.	5.6	207
5	Lineage-specific laminar organization of cortical GABAergic interneurons. Nature Neuroscience, 2013, 16, 1199-1210.	14.8	113
6	Intrinsic Mechanisms for Adaptive Gain Rescaling in Barrel Cortex. Journal of Neuroscience, 2008, 28, 696-710.	3.6	91
7	Diverse and Temporally Precise Kinetic Feature Selectivity in the VPM Thalamic Nucleus. Neuron, 2008, 60, 890-903.	8.1	87
8	A stochastic framework of neurogenesis underlies the assembly of neocortical cytoarchitecture. ELife, 2019, 8, .	6.0	79
9	Development of Intrinsic Properties and Excitability of Layer 2/3 Pyramidal Neurons During a Critical Period for Sensory Maps in Rat Barrel Cortex. Journal of Neurophysiology, 2004, 92, 144-156.	1.8	77
10	Role of Precise Spike Timing in Coding of Dynamic Vibrissa Stimuli in Somatosensory Thalamus. Journal of Neurophysiology, 2007, 98, 1871-1882.	1.8	76
11	Multiple Timescale Encoding of Slowly Varying Whisker Stimulus Envelope in Cortical and Thalamic Neurons <i>In Vivo</i> . Journal of Neuroscience, 2010, 30, 5071-5077.	3.6	71
12	Experience-dependent Changes in Basal Dendritic Branching of Layer 2/3 Pyramidal Neurons During a Critical Period for Developmental Plasticity in Rat Barrel Cortex. Cerebral Cortex, 2004, 14, 655-664.	2.9	66
13	Coordinated Population Activity Underlying Texture Discrimination in Rat Barrel Cortex. Journal of Neuroscience, 2013, 33, 5843-5855.	3.6	59
14	Neural coding and contextual influences in the whisker system. Biological Cybernetics, 2009, 100, 427-446.	1.3	36
15	Algorithms of whisker-mediated touch perception. Current Opinion in Neurobiology, 2014, 25, 176-186.	4.2	32
16	Diverse Thalamocortical Short-Term Plasticity Elicited by Ongoing Stimulation. Journal of Neuroscience, 2014, 34, 515-526.	3.6	31
17	Transformation of Adaptation and Gain Rescaling along the Whisker Sensory Pathway. PLoS ONE, 2013, 8, e82418.	2.5	29
18	Organization of Sensory Feature Selectivity in the Whisker System. Neuroscience, 2018, 368, 70-80.	2.3	26

#	ARTICLE	IF	CITATIONS
19	The Barrel Cortex as a Model to Study Dynamic Neuroglial Interaction. <i>Neuroscientist</i> , 2009, 15, 351-366.	3.5	25
20	Stimulus Dependence of Barrel Cortex Directional Selectivity. <i>PLoS ONE</i> , 2006, 1, e137.	2.5	19
21	Variable Temporal Integration of Stimulus Patterns in the Mouse Barrel Cortex. <i>Cerebral Cortex</i> , 2017, 27, bhv006.	2.9	19
22	Sensory Input Drives Multiple Intracellular Information Streams in Somatosensory Cortex. <i>Journal of Neuroscience</i> , 2010, 30, 10872-10884.	3.6	15
23	Learning and recognition of tactile temporal sequences by mice and humans. <i>ELife</i> , 2017, 6, .	6.0	14
24	Interspersed Distribution of Selectivity to Kinematic Stimulus Features in Supragranular Layers of Mouse Barrel Cortex. <i>Cerebral Cortex</i> , 2017, 27, 3782-3789.	2.9	8
25	Sequence Learning Induces Selectivity to Multiple Task Parameters in Mouse Somatosensory Cortex. <i>Current Biology</i> , 2021, 31, 473-485.e5.	3.9	6
26	Spikeling: A low-cost hardware implementation of a spiking neuron for neuroscience teaching and outreach. <i>PLoS Biology</i> , 2018, 16, e2006760.	5.6	4
27	Barrel Cortex Function Special Issue Editorial. <i>Neuroscience</i> , 2018, 368, 1-2.	2.3	4
28	Non-telecentric two-photon microscopy for 3D random access mesoscale imaging. <i>Nature Communications</i> , 2022, 13, 544.	12.8	4
29	Electron emission in the neutralization of multiply-charged ions at low velocities on metal surfaces: the effect of secondary-electron cascades. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1995, 100, 290-295.	1.4	3
30	Presynaptic Adenosine Receptor-Mediated Regulation of Diverse Thalamocortical Short-Term Plasticity in the Mouse Whisker Pathway. <i>Frontiers in Neural Circuits</i> , 2016, 10, 9.	2.8	3
31	More than the Sum of its Parts: Perception and Neuronal Underpinnings of Sequence Processing. <i>Neuroscience</i> , 2018, 389, 1-3.	2.3	3
32	Numerical simulation of a binary communication channel: Comparison between a replica calculation and an exact solution. <i>Europhysics Letters</i> , 1999, 45, 739-744.	2.0	2
33	Sparsification from dilute connectivity in a neural network model of memory. <i>Network: Computation in Neural Systems</i> , 1999, 10, 15-39.	3.6	2
34	Cortical Lifelogging: The Posterior Parietal Cortex as Sensory History Buffer. <i>Neuron</i> , 2018, 98, 249-252.	8.1	2
35	Functional Principles of Whisker-Mediated Touch Perception. , 2015, , 169-193.		1
36	Sparsification from dilute connectivity in a neural network model of memory. <i>Network: Computation in Neural Systems</i> , 1999, 10, 15-39.	3.6	1

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37	2-Photon Excitation Laser Scanning Microscopy for High Resolution Imaging In Scattering Biological Tissues: Applications to Neuroscience. <i>Microscopy and Microanalysis</i> , 1999, 5, 1058-1059.	0.4	0
38	An analysis of connectivity and function in hippocampal associative memory. <i>Neurocomputing</i> , 1999, 26-27, 427-434.	5.9	0
39	Hierarchical flow of sensory information in rat somatosensory cortex. <i>BMC Neuroscience</i> , 2014, 15, .	1.9	0
40	Sensory Decision-Making: Rats Sleuth Evidence through Active Sensing. <i>Current Biology</i> , 2019, 29, R317-R319.	3.9	0
41	Sparsification from dilute connectivity in a neural network model of memory. <i>Network: Computation in Neural Systems</i> , 1999, 10, 15-39.	3.6	0