Cornelius Schwarz

List of Publications by Year
in descending order

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Version: 2024-02-01

76 papers	3,141 citations	186254 28 h-index	168376 53 g-index
82 all docs	82 docs citations	82 times ranked	2809 citing authors

#	Article	IF	Citations
1	Local Neuronal Responses to Intracortical Microstimulation in Rats' Barrel Cortex Are Dependent on Behavioral Context. Frontiers in Behavioral Neuroscience, 2022, 16, 805178.	2.0	3
2	Temporally Local Tactile Codes Can Be Stored in Working Memory. Frontiers in Human Neuroscience, 2022, 16, .	2.0	1
3	Functional analysis of information rates conveyed by rat whisker-related trigeminal nuclei neurons. Journal of Neurophysiology, 2021, 125, 1517-1531.	1.8	8
4	Conveyance of texture signals along a rat whisker. Scientific Reports, 2021, 11, 13570.	3.3	5
5	Humans Use a Temporally Local Code for Vibrotactile Perception. ENeuro, 2021, 8, ENEURO.0263-21.2021.	1.9	2
6	Adaptive Whisking in Mice. Frontiers in Systems Neuroscience, 2021, 15, 813311.	2.5	1
7	Propofol Affects Cortico-Hippocampal Interactions via Î²3 Subunit-Containing GABAA Receptors. International Journal of Molecular Sciences, 2020, 21, 5844.	4.1	3
8	Mapping the Brain-Wide Network Effects by Optogenetic Activation of the Corpus Callosum. Cerebral Cortex, 2020, 30, 5885-5898.	2.9	21
9	A Tactile Virtual Reality for the Study of Active Somatosensation. Frontiers in Integrative Neuroscience, 2020, 14, 5.	2.1	3
10	Effects of Diazepam on Low-Frequency and High-Frequency Electrocortical Î³-Power Mediated by Î±1- and Î±2-GABAA Receptors. International Journal of Molecular Sciences, 2019, 20, 3486.	4.1	10
11	Primary Tactile Thalamus Spiking Reflects Cognitive Signals. Journal of Neuroscience, 2018, 38, 4870-4885.	3.6	15
12	Global Tactile Coding in Rat Barrel Cortex in the Absence of Local Cues. Cerebral Cortex, 2018, 28, 2015-2027.	2.9	6
13	Barrel Cortex: What is it Good for?. Neuroscience, 2018, 368, 3-16.	2.3	38
14	Cortical modulation of sensory flow during active touch in the rat whisker system. Nature Communications, 2018, 9, 3907.	12.8	38
15	Biomechanical Texture Coding in Rat Whiskers. Scientific Reports, 2018, 8, 11139.	3.3	13
16	Lifting the veil on the dynamics of neuronal activities evoked by transcranial magnetic stimulation. ELife, 2017, 6, .	6.0	51
17	The Slip Hypothesis: Tactile Perception and its Neuronal Bases. Trends in Neurosciences, 2016, 39, 449-462.	8.6	50
18	Information Coding through Adaptive Gating of Synchronized Thalamic Bursting. Cell Reports, 2016, 14, 795-807.	6.4	59

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19	Whisking Control by Motor Cortex. , 2016, , 751-769.		0
20	Corticofugal projection patterns of whisker sensorimotor cortex to the sensory trigeminal nuclei. Frontiers in Neural Circuits, 2015, 9, 53.	2.8	20
21	Support for the slip hypothesis from whisker-related tactile perception of rats in a noisy environment. Frontiers in Integrative Neuroscience, 2015, 9, 53.	2.1	29
22	Vibrotactile Discrimination in the Rat Whisker System is Based on Neuronal Coding of Instantaneous Kinematic Cues. Cerebral Cortex, 2015, 25, 1093-1106.	2.9	35
23	Monosynaptic retrograde tracing starts to close the gaps in our understanding of complex premotor networks (Commentary on Sreenivasan etÂal.). European Journal of Neuroscience, 2015, 41, 352-353.	2.6	0
24	Spine Loss in Primary Somatosensory Cortex during Trace Eyeblink Conditioning. Journal of Neuroscience, 2015, 35, 3772-3781.	3.6	21
25	The Rodent Vibrissal System as a Model to Study Motor Cortex Function. , 2015, , 129-148.		2
26	Whisking control by motor cortex. Scholarpedia Journal, 2015, 10, 7466.	0.3	5
27	Are spatial frequency cues used for whisker-based active discrimination?. Frontiers in Behavioral Neuroscience, 2014, 8, 379.	2.0	7
28	Das Vibrissen-System der Nager als Modell zur Erforschung der Funktion des Motorkortex. E-Neuroforum, 2014, 20, 186-193.	0.1	0
29	Studying motor cortex function using the rodent vibrissal system. E-Neuroforum, 2014, 5, 20-27.	0.1	1
30	Rhythmic Whisking Area (RW) in Rat Primary Motor Cortex: An Internal Monitor of Movement-Related Signals?. Journal of Neuroscience, 2013, 33, 14193-14204.	3.6	27
31	Barrel cortex function. Progress in Neurobiology, 2013, 103, 3-27.	5.7	304
32	Beyond GLMs: A Generative Mixture Modeling Approach to Neural System Identification. PLoS Computational Biology, 2013, 9, e1003356.	3.2	36
33	Functional analysis of ultra high information rates conveyed by rat vibrissal primary afferents. Frontiers in Neural Circuits, 2013, 7, 190.	2.8	35
34	Mapping spikes to sensations. Frontiers in Neuroscience, 2011, 5, 125.	2.8	43
35	Mislocalization of nearâ€threshold tactile stimuli in humans: a central or peripheral phenomenon?. European Journal of Neuroscience, 2011, 33, 499-508.	2.6	6
36	Real-Time Adaptive Microstimulation Increases Reliability of Electrically Evoked Cortical Potentials. IEEE Transactions on Biomedical Engineering, 2011, 58, 1483-1491.	4.2	18

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37	The Fate of Spontaneous Synchronous Rhythms on the Cerebrocerebellar Loop. Cerebellum, 2010, 9, 77-87.	2.5	13
38	Cross-approximate entropy of cortical local field potentials quantifies effects of anesthesia - a pilot study in rats. BMC Neuroscience, 2010, 11, 122.	1.9	28
39	A miniaturized chronic microelectrode drive for awake behaving head restrained mice and rats. Journal of Neuroscience Methods, 2010, 187, 67-72.	2.5	37
40	The head-fixed behaving ratâ€"Procedures and pitfalls. Somatosensory & Motor Research, 2010, 27, 131-148.	0.9	123
41	Integration of Vibrotactile Signals for Whisker-Related Perception in Rats Is Governed by Short Time Constants: Comparison of Neurometric and Psychometric Detection Performance. Journal of Neuroscience, 2010, 30, 2060-2069.	3.6	60
42	Discrimination of Vibrotactile Stimuli in the Rat Whisker System: Behavior and Neurometrics. Neuron, 2010, 65, 530-540.	8.1	65
43	Activity Patterns in the Prefrontal Cortex and Hippocampus during and after Awakening from Etomidate Anesthesia. Anesthesiology, 2010, 113, 48-57.	2.5	14
44	Psychophysical and neurometric detection performance under stimulus uncertainty. Nature Neuroscience, 2008, 11, 1091-1099.	14.8	109
45	Responses of Rat Trigeminal Ganglion Neurons to Longitudinal Whisker Stimulation. Journal of Neurophysiology, 2008, 100, 1879-1884.	1.8	40
46	Detection psychophysics of intracortical microstimulation in rat primary somatosensory cortex. European Journal of Neuroscience, 2007, 25, 2161-2169.	2.6	67
47	Effects of Electrically Coupled Inhibitory Networks on Local Neuronal Responses to Intracortical Microstimulation. Journal of Neurophysiology, 2006, 96, 1227-1236.	1.8	76
48	Functional Unity of the Ponto-Cerebellum: Evidence That Intrapontine Communication Is Mediated by a Reciprocal Loop With the Cerebellar Nuclei. Journal of Neurophysiology, 2006, 95, 3414-3425.	1.8	20
49	Transient change in GABAA receptor subunit mRNA expression in Lurchercerebellar nuclei during Purkinje cell degeneration. BMC Neuroscience, 2006, 7, 59.	1.9	4
50	Central Signals Rapidly Switch Tactile Processing in Rat Barrel Cortex during Whisker Movements. Cerebral Cortex, 2006, 16, 1142-1156.	2.9	90
51	Two Psychophysical Channels of Whisker Deflection in Rats Align with Two Neuronal Classes of Primary Afferents. Journal of Neuroscience, 2006, 26, 7933-7941.	3.6	99
52	Neocortex is the major target of sedative concentrations of volatile anaesthetics: strong depression of firing rates and increase of GABAAreceptor-mediated inhibition. European Journal of Neuroscience, 2005, 21, 93-102.	2.6	174
53	Organization of tectopontine terminals within the pontine nuclei of the rat and their spatial relationship to terminals from the visual and somatosensory cortex. Journal of Comparative Neurology, 2005, 484, 283-298.	1.6	10
54	Spatial Segregation of Different Modes of Movement Control in the Whisker Representation of Rat Primary Motor Cortex. Journal of Neuroscience, 2005, 25, 1579-1587.	3.6	121

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55	ANN-Based System for Sorting Spike Waveforms Employing Refractory Periods. Lecture Notes in Computer Science, 2005, , 121-126.	1.3	1
56	Lurcher Mice Exhibit Potentiation of GABAA-Receptorâ€“Mediated Conductance in Cerebellar Nuclei Neurons in Close Temporal Relationship to Purkinje Cell Death. Journal of Neurophysiology, 2004, 91, 1102-1107.	1.8	19
57	Employing ICA and SOM for spike sorting of multielectrode recordings from CNS. Journal of Physiology (Paris), 2004, 98, 349-356.	2.1	22
58	Efficacy and Short-Term Plasticity at GABAergic Synapses Between Purkinje and Cerebellar Nuclei Neurons. Journal of Neurophysiology, 2003, 89, 704-715.	1.8	89
59	Spatiotemporal Effects of Microstimulation in Rat Neocortex: A Parametric Study Using Multielectrode Recordings. Journal of Neurophysiology, 2003, 90, 3024-3039.	1.8	215
60	Serotonergic Control of Cerebellar Mossy Fiber Activity by Modulation of Signal Transfer by Rat Pontine Nuclei Neurons. Journal of Neurophysiology, 2002, 88, 549-564.	1.8	6
61	MEA-Tools: an open source toolbox for the analysis of multi-electrode data with matlab. Journal of Neuroscience Methods, 2002, 117, 33-42.	2.5	120
62	Two Types of Neurons in the Rat Cerebellar Nuclei as Distinguished by Membrane Potentials and Intracellular Fillings. Journal of Neurophysiology, 2001, 85, 2017-2029.	1.8	75
63	Dynamic Modulation of Mossy Fiber System Throughput by Inferior Olive Synchrony: A Multielectrode Study of Cerebellar Cortex Activated by Motor Cortex. Journal of Neurophysiology, 2001, 86, 2489-2504.	1.8	42
64	Chapter 19 The cerebellum as a neuronal prosthesis machine. Progress in Brain Research, 2001, 130, 297-315.	1.4	4
65	Spatial arrangement of cerebroâ€pontine terminals. Journal of Comparative Neurology, 2001, 435, 418-432.	1.6	25
66	Serotonin suppresses subthreshold and suprathreshold oscillatory activity of rat inferior olivary neurones in vitro. Journal of Physiology, 2000, 524, 833-851.	2.9	42
67	Reply. Trends in Neurosciences, 2000, 23, 152-153.	8.6	11
68	GABAergic inhibition in the rat pontine nuclei is exclusively extrinsic: evidence from an in situ hybridization study for GAD 67 mRNA. Experimental Brain Research, 1999, 124, 529-532.	1.5	7
69	Binding of signals relevant for action: towards a hypothesis of the functional role of the pontine nuclei. Trends in Neurosciences, 1999, 22, 443-451.	8.6	168
70	Electrophysiological Properties of Rat Pontine Nuclei Neurons In Vitro II. Postsynaptic Potentials. Journal of Neurophysiology, 1997, 78, 3338-3350.	1.8	15
71	Spatio-temporal constraints of the tidal wave theory. Behavioral and Brain Sciences, 1997, 20, 264-265.	0.7	0
72	Electrophysiological Properties of Rat Pontine Nuclei Neurons In Vitro. I. Membrane Potentials and Firing Patterns. Journal of Neurophysiology, 1997, 78, 3323-3337.	1.8	15

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73	Projection from the cerebellar lateral nucleus to precerebellar nuclei in the mossy fiber pathway is glutamatergic: A study combining anterograde tracing with immunogold labeling in the rat. , 1997, 381, 320-334.		56
74	Comparison of projection neurons in the pontine nuclei and the nucleus reticularis tegmenti pontis of the rat. , 1996, 376, 403-419.		15
75	Microcircuitry of Cat Visual Cortex. , 1992, , 367-384.		0
76	Morphological types of projection neurons in layer 5 of cat visual cortex. Journal of Comparative Neurology, 1990, 301, 655-674.	1.6	121