

Kenneth D Harris

List of Publications by Year in descending order

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Version: 2024-02-01

88
papers

21,237
citations

34105

52
h-index

48315

88
g-index

124
all docs

124
docs citations

124
times ranked

18378
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular Architecture of the Mouse Nervous System. <i>Cell</i> , 2018, 174, 999-1014.e22.	28.9	2,002
2	Fully integrated silicon probes for high-density recording of neural activity. <i>Nature</i> , 2017, 551, 232-236.	27.8	1,531
3	Spontaneous behaviors drive multidimensional, brainwide activity. <i>Science</i> , 2019, 364, 255.	12.6	1,013
4	The Asynchronous State in Cortical Circuits. <i>Science</i> , 2010, 327, 587-590.	12.6	955
5	The neocortical circuit: themes and variations. <i>Nature Neuroscience</i> , 2015, 18, 170-181.	14.8	880
6	Organization of cell assemblies in the hippocampus. <i>Nature</i> , 2003, 424, 552-556.	27.8	788
7	Cortical state and attention. <i>Nature Reviews Neuroscience</i> , 2011, 12, 509-523.	10.2	749
8	Characterization of Neocortical Principal Cells and Interneurons by Network Interactions and Extracellular Features. <i>Journal of Neurophysiology</i> , 2004, 92, 600-608.	1.8	734
9	Laminar Structure of Spontaneous and Sensory-Evoked Population Activity in Auditory Cortex. <i>Neuron</i> , 2009, 64, 404-418.	8.1	544
10	Cortical connectivity and sensory coding. <i>Nature</i> , 2013, 503, 51-58.	27.8	536
11	Spontaneous Events Outline the Realm of Possible Sensory Responses in Neocortical Populations. <i>Neuron</i> , 2009, 62, 413-425.	8.1	499
12	Sequential structure of neocortical spontaneous activity in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 347-352.	7.1	477
13	Neuropixels 2.0: A miniaturized high-density probe for stable, long-term brain recordings. <i>Science</i> , 2021, 372, .	12.6	467
14	Distributed coding of choice, action and engagement across the mouse brain. <i>Nature</i> , 2019, 576, 266-273.	27.8	452
15	Diverse coupling of neurons to populations in sensory cortex. <i>Nature</i> , 2015, 521, 511-515.	27.8	393
16	Massively Parallel Recording of Unit and Local Field Potentials With Silicon-Based Electrodes. <i>Journal of Neurophysiology</i> , 2003, 90, 1314-1323.	1.8	371
17	High-dimensional geometry of population responses in visual cortex. <i>Nature</i> , 2019, 571, 361-365.	27.8	370
18	Integration of visual motion and locomotion in mouse visual cortex. <i>Nature Neuroscience</i> , 2013, 16, 1864-1869.	14.8	353

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19	Spike train dynamics predicts theta-related phase precession in hippocampal pyramidal cells. <i>Nature</i> , 2002, 417, 738-741.	27.8	343
20	Temporal Interaction between Single Spikes and Complex Spike Bursts in Hippocampal Pyramidal Cells. <i>Neuron</i> , 2001, 32, 141-149.	8.1	339
21	High-Dimensional Cluster Analysis with the Masked EM Algorithm. <i>Neural Computation</i> , 2014, 26, 2379-2394.	2.2	271
22	Sleep and the single neuron: the role of global slow oscillations in individual cell rest. <i>Nature Reviews Neuroscience</i> , 2013, 14, 443-451.	10.2	244
23	Classes and continua of hippocampal CA1 inhibitory neurons revealed by single-cell transcriptomics. <i>PLoS Biology</i> , 2018, 16, e2006387.	5.6	226
24	Aberrant Cortical Activity in Multiple GCaMP6-Expressing Transgenic Mouse Lines. <i>ENeuro</i> , 2017, 4, ENEURO.0207-17.2017.	1.9	221
25	Improving data quality in neuronal population recordings. <i>Nature Neuroscience</i> , 2016, 19, 1165-1174.	14.8	210
26	The Nature of Shared Cortical Variability. <i>Neuron</i> , 2015, 87, 644-656.	8.1	208
27	Cortical State Determines Global Variability and Correlations in Visual Cortex. <i>Journal of Neuroscience</i> , 2015, 35, 170-178.	3.6	207
28	Vision and Locomotion Shape the Interactions between Neuron Types in Mouse Visual Cortex. <i>Neuron</i> , 2018, 98, 602-615.e8.	8.1	204
29	Coherent encoding of subjective spatial position in visual cortex and hippocampus. <i>Nature</i> , 2018, 562, 124-127.	27.8	197
30	Probabilistic cell typing enables fine mapping of closely related cell types in situ. <i>Nature Methods</i> , 2020, 17, 101-106.	19.0	187
31	Towards reliable spike-train recordings from thousands of neurons with multielectrodes. <i>Current Opinion in Neurobiology</i> , 2012, 22, 11-17.	4.2	184
32	Diversity of Interneurons in the Dorsal Striatum Revealed by Single-Cell RNA Sequencing and PatchSeq. <i>Cell Reports</i> , 2018, 24, 2179-2190.e7.	6.4	178
33	Place Representation within Hippocampal Networks Is Modified by Long-Term Potentiation. <i>Neuron</i> , 2003, 39, 843-853.	8.1	176
34	Early cognitive and language skills are linked to resting frontal gamma power across the first 3 years. <i>Behavioural Brain Research</i> , 2008, 195, 215-222.	2.2	174
35	Neurodata Without Borders: Creating a Common Data Format for Neurophysiology. <i>Neuron</i> , 2015, 88, 629-634.	8.1	171
36	Gating of Sensory Input by Spontaneous Cortical Activity. <i>Journal of Neuroscience</i> , 2013, 33, 1684-1695.	3.6	168

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37	Packet-based communication in the cortex. <i>Nature Reviews Neuroscience</i> , 2015, 16, 745-755.	10.2	160
38	High-Yield Methods for Accurate Two-Alternative Visual Psychophysics in Head-Fixed Mice. <i>Cell Reports</i> , 2017, 20, 2513-2524.	6.4	152
39	A Simple Model of Cortical Dynamics Explains Variability and State Dependence of Sensory Responses in Urethane-Anesthetized Auditory Cortex. <i>Journal of Neuroscience</i> , 2009, 29, 10600-10612.	3.6	151
40	Robustness of Spike Deconvolution for Neuronal Calcium Imaging. <i>Journal of Neuroscience</i> , 2018, 38, 7976-7985.	3.6	143
41	Subcortical Source and Modulation of the Narrowband Gamma Oscillation in Mouse Visual Cortex. <i>Neuron</i> , 2017, 93, 315-322.	8.1	140
42	Striatal activity topographically reflects cortical activity. <i>Nature</i> , 2021, 591, 420-425.	27.8	139
43	Community-based benchmarking improves spike rate inference from two-photon calcium imaging data. <i>PLoS Computational Biology</i> , 2018, 14, e1006157.	3.2	118
44	A genuine layer 4 in motor cortex with prototypical synaptic circuit connectivity. <i>ELife</i> , 2014, 3, e05422.	6.0	114
45	Ongoing Network State Controls the Length of Sleep Spindles via Inhibitory Activity. <i>Neuron</i> , 2014, 82, 1367-1379.	8.1	109
46	Dopaminergic and Prefrontal Basis of Learning from Sensory Confidence and Reward Value. <i>Neuron</i> , 2020, 105, 700-711.e6.	8.1	109
47	State-Dependent Representation of Amplitude-Modulated Noise Stimuli in Rat Auditory Cortex. <i>Journal of Neuroscience</i> , 2011, 31, 6414-6420.	3.6	95
48	Arousal Modulates Retinal Output. <i>Neuron</i> , 2020, 107, 487-495.e9.	8.1	90
49	Spatial connectivity matches direction selectivity in visual cortex. <i>Nature</i> , 2020, 588, 648-652.	27.8	87
50	Stability of the fittest: organizing learning through retroaxonal signals. <i>Trends in Neurosciences</i> , 2008, 31, 130-136.	8.6	85
51	Inhibitory control of correlated intrinsic variability in cortical networks. <i>ELife</i> , 2016, 5, .	6.0	83
52	Decision and navigation in mouse parietal cortex. <i>ELife</i> , 2018, 7, .	6.0	74
53	Long Term Recordings with Immobile Silicon Probes in the Mouse Cortex. <i>PLoS ONE</i> , 2016, 11, e0151180.	2.5	72
54	Effects of Arousal on Mouse Sensory Cortex Depend on Modality. <i>Cell Reports</i> , 2018, 22, 3160-3167.	6.4	71

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55	A Computational Model of Cholinergic Disruption of Septohippocampal Activity in Classical Eyeblink Conditioning. <i>Neurobiology of Learning and Memory</i> , 1996, 66, 51-66.	1.9	67
56	Stochastic transitions into silence cause noise correlations in cortical circuits. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 3529-3534.	7.1	64
57	Sensory coding and the causal impact of mouse cortex in a visual decision. <i>ELife</i> , 2021, 10, .	6.0	63
58	Methods for predicting cortical UP and DOWN states from the phase of deep layer local field potentials. <i>Journal of Computational Neuroscience</i> , 2010, 29, 49-62.	1.0	61
59	Memory for places: A navigational model in support of Marr's theory of hippocampal function. , 1996, 6, 735-748.		60
60	The Upshot of Up States in the Neocortex: From Slow Oscillations to Memory Formation. <i>Journal of Neuroscience</i> , 2007, 27, 11838-11841.	3.6	59
61	Population Rate Dynamics and Multineuron Firing Patterns in Sensory Cortex. <i>Journal of Neuroscience</i> , 2012, 32, 17108-17119.	3.6	57
62	Laminar-dependent effects of cortical state on auditory cortical spontaneous activity. <i>Frontiers in Neural Circuits</i> , 2012, 6, 109.	2.8	56
63	Theta-Mediated Dynamics of Spatial Information in Hippocampus. <i>Journal of Neuroscience</i> , 2008, 28, 5959-5964.	3.6	54
64	The impact of bilateral ongoing activity on evoked responses in mouse cortex. <i>ELife</i> , 2019, 8, .	6.0	53
65	How do neurons work together? Lessons from auditory cortex. <i>Hearing Research</i> , 2011, 271, 37-53.	2.0	51
66	Distinct Structure of Cortical Population Activity on Fast and Infralow Timescales. <i>Cerebral Cortex</i> , 2019, 29, 2196-2210.	2.9	50
67	Cortical State Fluctuations during Sensory Decision Making. <i>Current Biology</i> , 2020, 30, 4944-4955.e7.	3.9	48
68	Mouse Visual Cortex Is Modulated by Distance Traveled and by Theta Oscillations. <i>Current Biology</i> , 2020, 30, 3811-3817.e6.	3.9	47
69	Population coding of tone stimuli in auditory cortex: dynamic rate vector analysis. <i>European Journal of Neuroscience</i> , 2009, 30, 1767-1778.	2.6	44
70	Hardware-accelerated interactive data visualization for neuroscience in Python. <i>Frontiers in Neuroinformatics</i> , 2013, 7, 36.	2.5	40
71	Neural correlates of blood flow measured by ultrasound. <i>Neuron</i> , 2022, 110, 1631-1640.e4.	8.1	40
72	Spatial modulation of visual responses arises in cortex with active navigation. <i>ELife</i> , 2021, 10, .	6.0	32

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73	Firing rate modulation: A simple statistical view of memory trace reactivation. <i>Neural Networks</i> , 2005, 18, 1280-1291.	5.9	31
74	Experimental modelling of time-of-flight sonar. <i>Robotics and Autonomous Systems</i> , 1998, 24, 33-42.	5.1	24
75	Dopamine Axons in Dorsal Striatum Encode Contralateral Visual Stimuli and Choices. <i>Journal of Neuroscience</i> , 2021, 41, 7197-7205.	3.6	24
76	Rigbox: An Open-Source Toolbox for Probing Neurons and Behavior. <i>ENeuro</i> , 2020, 7, ENEURO.0406-19.2020.	1.9	19
77	The Convallis Rule for Unsupervised Learning in Cortical Networks. <i>PLoS Computational Biology</i> , 2013, 9, e1003272.	3.2	17
78	Hippocampal CA1 Somatostatin Interneurons Originate in the Embryonic MGE/POA. <i>Stem Cell Reports</i> , 2019, 13, 793-802.	4.8	15
79	Cortical computation in mammals and birds. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 3184-3185.	7.1	14
80	Valuations for Spike Train Prediction. <i>Neural Computation</i> , 2008, 20, 644-667.	2.2	12
81	Cell Assemblies of the Superficial Cortex. <i>Neuron</i> , 2012, 76, 263-265.	8.1	11
82	Top-Down Control of Cortical State. <i>Neuron</i> , 2013, 79, 408-410.	8.1	11
83	Synaptic scaling in sleep. <i>Science</i> , 2017, 355, 457-457.	12.6	8
84	Disruption of VGLUT1 in Cholinergic Medial Habenula Projections Increases Nicotine Self-Administration. <i>ENeuro</i> , 2022, 9, ENEURO.0481-21.2021.	1.9	7
85	Absolute localization for a mobile robot using place cells. <i>Robotics and Autonomous Systems</i> , 1997, 22, 393-406.	5.1	3
86	Hallucinations and nonsensory correlates of neural activity. <i>Behavioral and Brain Sciences</i> , 2004, 27, 796-796.	0.7	3
87	Sleep replay meets brain-machine interface. <i>Nature Neuroscience</i> , 2014, 17, 1019-1021.	14.8	3
88	Supervised learning with decision margins in pools of spiking neurons. <i>Journal of Computational Neuroscience</i> , 2014, 37, 333-344.	1.0	3