

John Cunningham

List of Publications by Year in descending order

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38
papers

4,919
citations

304743

22
h-index

414414

32
g-index

44
all docs

44
docs citations

44
times ranked

3474
citing authors

#	ARTICLE	IF	CITATIONS
1	The Posterior Predictive Null. Bayesian Analysis, 2023, 18, .	3.0	2
2	Interrogating theoretical models of neural computation with emergent property inference. ELife, 2021, 10, .	6.0	16
3	Predicting post-operative right ventricular failure using video-based deep learning. Nature Communications, 2021, 12, 5192.	12.8	32
4	Partitioning variability in animal behavioral videos using semi-supervised variational autoencoders. PLoS Computational Biology, 2021, 17, e1009439.	3.2	21
5	Learning sparse log-ratios for high-throughput sequencing data. Bioinformatics, 2021, 38, 157-163.	4.1	16
6	Designing clinically translatable artificial intelligence systems for high-dimensional medical imaging. Nature Machine Intelligence, 2021, 3, 929-935.	16.0	29
7	Value and choice as separable and stable representations in orbitofrontal cortex. Nature Communications, 2020, 11, 3466.	12.8	17
8	Neural Trajectories in the Supplementary Motor Area and Motor Cortex Exhibit Distinct Geometries, Compatible with Different Classes of Computation. Neuron, 2020, 107, 745-758.e6.	8.1	90
9	Localized semi-nonnegative matrix factorization (LocaNMF) of widefield calcium imaging data. , 2020, 16, e1007791.		0
10	Localized semi-nonnegative matrix factorization (LocaNMF) of widefield calcium imaging data. , 2020, 16, e1007791.		0
11	Localized semi-nonnegative matrix factorization (LocaNMF) of widefield calcium imaging data. , 2020, 16, e1007791.		0
12	Localized semi-nonnegative matrix factorization (LocaNMF) of widefield calcium imaging data. , 2020, 16, e1007791.		0
13	Towards the neural population doctrine. Current Opinion in Neurobiology, 2019, 55, 103-111.	4.2	186
14	Motor Cortex Embeds Muscle-like Commands in an Untangled Population Response. Neuron, 2018, 97, 953-966.e8.	8.1	216
15	Neural data science: accelerating the experiment-analysis-theory cycle in large-scale neuroscience. Current Opinion in Neurobiology, 2018, 50, 232-241.	4.2	68
16	Different population dynamics in the supplementary motor area and motor cortex during reaching. Nature Communications, 2018, 9, 2754.	12.8	77
17	Conservation of preparatory neural events in monkey motor cortex regardless of how movement is initiated. ELife, 2018, 7, .	6.0	80
18	Behaviorally Selective Engagement of Short-Latency Effector Pathways by Motor Cortex. Neuron, 2017, 95, 683-696.e11.	8.1	123

#	ARTICLE	IF	CITATIONS
19	Structure in neural population recordings: an expected byproduct of simpler phenomena?. <i>Nature Neuroscience</i> , 2017, 20, 1310-1318.	14.8	134
20	Sparse probit linear mixed model. <i>Machine Learning</i> , 2017, 106, 1621-1642.	5.4	4
21	Electrical stimulus artifact cancellation and neural spike detection on large multi-electrode arrays. <i>PLoS Computational Biology</i> , 2017, 13, e1005842.	3.2	44
22	Reorganization between preparatory and movement population responses in motor cortex. <i>Nature Communications</i> , 2016, 7, 13239.	12.8	273
23	Tensor Analysis Reveals Distinct Population Structure that Parallels the Different Computational Roles of Areas M1 and V1. <i>PLoS Computational Biology</i> , 2016, 12, e1005164.	3.2	46
24	Scaling Multidimensional Inference for Structured Gaussian Processes. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2015, 37, 424-436.	13.9	20
25	Single-trial dynamics of motor cortex and their applications to brain-machine interfaces. <i>Nature Communications</i> , 2015, 6, 7759.	12.8	148
26	Encoder-Decoder Optimization for Brain-Computer Interfaces. <i>PLoS Computational Biology</i> , 2015, 11, e1004288.	3.2	23
27	Dimensionality reduction for large-scale neural recordings. <i>Nature Neuroscience</i> , 2014, 17, 1500-1509.	14.8	860
28	Analyzing neural data at huge scale. <i>Nature Methods</i> , 2014, 11, 911-912.	19.0	4
29	A Dynamical Basis Set for Generating Reaches. <i>Cold Spring Harbor Symposia on Quantitative Biology</i> , 2014, 79, 67-80.	1.1	26
30	A Novel Method for Curvefitting the Stretched Exponential Function to Experimental Data. <i>Biomedical Engineering Research</i> , 2013, 2, 153-158.	0.2	8
31	Neural population dynamics during reaching. <i>Nature</i> , 2012, 487, 51-56.	27.8	1,195
32	A closed-loop human simulator for investigating the role of feedback control in brain-machine interfaces. <i>Journal of Neurophysiology</i> , 2011, 105, 1932-1949.	1.8	141
33	Cortical Preparatory Activity: Representation of Movement or First Cog in a Dynamical Machine?. <i>Neuron</i> , 2010, 68, 387-400.	8.1	406
34	Gaussian-Process Factor Analysis for Low-Dimensional Single-Trial Analysis of Neural Population Activity. <i>Journal of Neurophysiology</i> , 2009, 102, 614-635.	1.8	461
35	Methods for estimating neural firing rates, and their application to brain-machine interfaces. <i>Neural Networks</i> , 2009, 22, 1235-1246.	5.9	74
36	Toward Optimal Target Placement for Neural Prosthetic Devices. <i>Journal of Neurophysiology</i> , 2008, 100, 3445-3457.	1.8	24

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37	Optimal Target Placement for Neural Communication Prostheses. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
38	Motor cortex activity across movement speeds is predicted by network-level strategies for generating muscle activity. ELife, 0, 11, .	6.0	27