Andreas Savas Tolias

List of Publications by Year
in descending order

77 papers	11,123 citations	57752 44 h-index	74160 75 g-index
109 all docs	109 docs citations	109 times ranked	10231 citing authors

#	Article	IF	Citations
1	A CRISPR toolbox for generating intersectional genetic mouse models for functional, molecular, and anatomical circuit mapping. BMC Biology, 2022, 20, 28.	3.8	8
2	Reconstruction of neocortex: Organelles, compartments, cells, circuits, and activity. Cell, 2022, 185, 1082-1100.e24.	28.9	84
3	Biological underpinnings for lifelong learning machines. Nature Machine Intelligence, 2022, 4, 196-210.	16.0	62
4	Phenotypic variation of transcriptomic cell types in mouse motor cortex. Nature, 2021, 598, 144-150.	27.8	196
5	Sparse Reduced-Rank Regression for Exploratory Visualisation of Paired Multivariate Data. Journal of the Royal Statistical Society Series C: Applied Statistics, 2021, 70, 980-1000.	1.0	18
6	Learning divisive normalization in primary visual cortex. PLoS Computational Biology, 2021, 17, e1009028.	3.2	21
7	Class-Incremental Learning with Generative Classifiers. , 2021, , .		16
8	Avalanche: an End-to-End Library for Continual Learning. , 2021, , .		42
9	A multimodal cell census and atlas of the mammalian primary motor cortex. Nature, 2021, 598, 86-102.	27.8	316
10	Revealing nonlinear neural decoding by analyzing choices. Nature Communications, 2021, 12, 6557.	12.8	5
11	Structure and function of axo-axonic inhibition. ELife, 2021, 10, .	6.0	49
12	A neural basis of probabilistic computation in visual cortex. Nature Neuroscience, 2020, 23, 122-129.	14.8	78
13	Integrated Neurophotonics: Toward Dense Volumetric Interrogation of Brain Circuit Activityâ€"at Depth and in Real Time. Neuron, 2020, 108, 66-92.	8.1	40
14	Brain-inspired replay for continual learning with artificial neural networks. Nature Communications, 2020, 11, 4069.	12.8	178
15	A community-based transcriptomics classification and nomenclature of neocortical cell types. Nature Neuroscience, 2020, 23, 1456-1468.	14.8	183
16	Inference of synaptic connectivity and external variability in neural microcircuits. Journal of Computational Neuroscience, 2020, 48, 123-147.	1.0	5
17	Precision Calcium Imaging of Dense Neural Populations via a Cell-Body-Targeted Calcium Indicator. Neuron, 2020, 107, 470-486.e11.	8.1	87
18	Cell type composition and circuit organization of clonally related excitatory neurons in the juvenile mouse neocortex. ELife, 2020, 9, .	6.0	37

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19	Target specific functions of EPL interneurons in olfactory circuits. Nature Communications, 2019, 10, 3369.	12.8	15
20	The Visual Cortex in Context. Annual Review of Vision Science, 2019, 5, 317-339.	4.4	45
21	Layer 4 of mouse neocortex differs in cell types and circuit organization between sensory areas. Nature Communications, 2019, 10, 4174.	12.8	101
22	Engineering a Less Artificial Intelligence. Neuron, 2019, 103, 967-979.	8.1	113
23	Follicle-stimulating hormone and luteinizing hormone increase Ca2+ in the granulosa cells of mouse ovarian folliclesâ€. Biology of Reproduction, 2019, 101, 433-444.	2.7	14
24	Deep convolutional models improve predictions of macaque V1 responses to natural images. PLoS Computational Biology, 2019, 15, e1006897.	3.2	179
25	Inception loops discover what excites neurons most using deep predictive models. Nature Neuroscience, 2019, 22, 2060-2065.	14.8	104
26	Neural Likelihood. , 2019, , .		0
27	Learning Divisive Normalization in Primary Visual Cortex. , 2019, , .		1
28	Faster processing of moving compared with flashed bars in awake macaque V1 provides a neural correlate of the flash lag illusion. Journal of Neurophysiology, 2018, 120, 2430-2452.	1.8	25
29	Community-based benchmarking improves spike rate inference from two-photon calcium imaging data. PLoS Computational Biology, 2018, 14, e1006157.	3.2	118
30	Attentional fluctuations induce shared variability in macaque primary visual cortex. Nature Communications, 2018, 9, 2654.	12.8	58
31	In vivo three-photon imaging of activity of GCaMP6-labeled neurons deep in intact mouse brain. Nature Methods, 2017, 14, 388-390.	19.0	434
32	Developmental broadening of inhibitory sensory maps. Nature Neuroscience, 2017, 20, 189-199.	14.8	36
33	Multimodal profiling of single-cell morphology, electrophysiology, and gene expression using Patch-seq. Nature Protocols, 2017, 12, 2531-2553.	12.0	126
34	Q&A: using Patch-seq to profile single cells. BMC Biology, 2017, 15, 58.	3.8	16
35	Patterned photostimulation via visible-wavelength photonic probes for deep brain optogenetics. Neurophotonics, 2016, 4, 1.	3.3	66
36	Benchmarking Spike Rate Inference in Population Calcium Imaging. Neuron, 2016, 90, 471-482.	8.1	154

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37	Response to Comment on â€œPrinciples of connectivity among morphologically defined cell types in adult neocortexâ€. Science, 2016, 353, 1108-1108.	12.6	13
38	Investigating the Limits of Neurovascular Coupling. Neuron, 2016, 91, 954-956.	8.1	3
39	Pupil fluctuations track rapid changes in adrenergic and cholinergic activity in cortex. Nature Communications, 2016, 7, 13289.	12.8	618
40	Spike sorting for large, dense electrode arrays. Nature Neuroscience, 2016, 19, 634-641.	14.8	671
41	On the Structure of Neuronal Population Activity under Fluctuations in Attentional State. Journal of Neuroscience, 2016, 36, 1775-1789.	3.6	90
42	Electrophysiological, transcriptomic and morphologic profiling of single neurons using Patch-seq. Nature Biotechnology, 2016, 34, 199-203.	17.5	478
43	Improved Estimation and Interpretation of Correlations in Neural Circuits. PLoS Computational Biology, 2015, 11, e1004083.	3.2	58
44	Waking State: Rapid Variations Modulate Neural and Behavioral Responses. Neuron, 2015, 87, 1143-1161.	8.1	648
45	Principles of connectivity among morphologically defined cell types in adult neocortex. Science, 2015, 350, aac9462.	12.6	736
46	Population code in mouse V1 facilitates readout of natural scenes through increased sparseness. Nature Neuroscience, 2014, 17, 851-857.	14.8	167
47	Is there signal in the noise?. Nature Neuroscience, 2014, 17, 750-751.	14.8	14
48	Pupil Fluctuations Track Fast Switching of Cortical States during Quiet Wakefulness. Neuron, 2014, 84, 355-362.	8.1	610
49	State Dependence of Noise Correlations in Macaque Primary Visual Cortex. Neuron, 2014, 82, 235-248.	8.1	307
50	Trial-to-trial, uncertainty-based adjustment of decision boundaries in visual categorization. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20332-20337.	7.1	63
51	Three-dimensional mapping of microcircuit correlation structure. Frontiers in Neural Circuits, 2013, 7, 151.	2.8	55
52	Macaque Monkeys Perceive the Flash Lag Illusion. PLoS ONE, 2013, 8, e58788.	2.5	12
53	A Fast and Simple Population Code for Orientation in Primate V1. Journal of Neuroscience, 2012, 32, 10618-10626.	3.6	103
54	Electrocorticography links human temporoparietal junction to visual perception. Nature Neuroscience, 2012, 15, 957-959.	14.8	58

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55	fMRI of the Face-Processing Network in the Ventral Temporal Lobe of Awake and Anesthetized Macaques. Neuron, 2011, 70, 352-362.	8.1	121
56	Optimal Population Coding, Revisited. Nature Precedings, 2011, , .	0.1	0
57	esfMRI of the upper STS: further evidence for the lack of electrically induced polysynaptic propagation of activity in the neocortex. Magnetic Resonance Imaging, 2011, 29, 1374-1381.	1.8	13
58	The Effect of Noise Correlations in Populations of Diversely Tuned Neurons. Journal of Neuroscience, 2011, 31, 14272-14283.	3.6	240
59	Reassessing optimal neural population codes with neurometric functions. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4423-4428.	7.1	52
60	Local field potentials, BOLD and spiking activity â€“ relationships and physiological mechanisms. Nature Precedings, 2010, , .	0.1	11
61	The Role of the Primary Visual Cortex in Perceptual Suppression of Salient Visual Stimuli. Journal of Neuroscience, 2010, 30, 12353-12365.	3.6	50
62	Decorrelated Neuronal Firing in Cortical Microcircuits. Science, 2010, 327, 584-587.	12.6	562
63	Generating Spike Trains with Specified Correlation Coefficients. Neural Computation, 2009, 21, 397-423.	2.2	167
64	Microstimulation of visual cortex to restore vision. Progress in Brain Research, 2009, 175, 347-375.	1.4	58
65	fMRI of the temporal lobe of the awake monkey at 7ÂT. NeuroImage, 2008, 39, 1081-1093.	4.2	33
66	Comparing the feature selectivity of the gamma-band of the local field potential and the underlying spiking activity in primate visual cortex. Frontiers in Systems Neuroscience, 2008, 2, 2.	2.5	141
67	Recording Chronically From the Same Neurons in Awake, Behaving Primates. Journal of Neurophysiology, 2007, 98, 3780-3790.	1.8	151
68	Spatial Specificity of BOLD versus Cerebral Blood Volume fMRI for Mapping Cortical Organization. Journal of Cerebral Blood Flow and Metabolism, 2007, 27, 1248-1261.	4.3	70
69	Reply to "Motion processing in macaque V4". Nature Neuroscience, 2005, 8, 1125-1125.	14.8	1
70	Neurons in macaque area V4 acquire directional tuning after adaptation to motion stimuli. Nature Neuroscience, 2005, 8, 591-593.	14.8	126
71	Lack of long-term cortical reorganization after macaque retinal lesions. Nature, 2005, 435, 300-307.	27.8	205
72	Rewiring the adult brain (Reply). Nature, 2005, 438, E3-E4.	27.8	14

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73	Mapping Cortical Activity Elicited with Electrical Microstimulation Using fMRI in the Macaque. Neuron, 2005, 48, 901-911.	8.1	234
74	Are express saccades generated under natural viewing conditions?. European Journal of Neuroscience, 2004, 20, 2467-2473.	2.6	17
75	Integration of Local Features into Global Shapes. Neuron, 2003, 37, 333-346.	8.1	260
76	Eye Movements Modulate Visual Receptive Fields of V4 Neurons. Neuron, 2001, 29, 757-767.	8.1	263
77	Motion Processing in the Macaque: Revisited with Functional Magnetic Resonance Imaging. Journal of Neuroscience, 2001, 21, 8594-8601.	3.6	99