Eftychios A Pnevmatikakis

List of Publications by Year
in descending order

35 papers	4,257 citations	361413 20 h-index	501196 28 g-index
49 all docs	49 docs citations	49 times ranked	4380 citing authors

#	Article	IF	Citations
1	Simultaneous Denoising, Deconvolution, and Demixing of Calcium Imaging Data. Neuron, 2016, 89, 285-299.	8.1	843
2	NoRMCorre: An online algorithm for piecewise rigid motion correction of calcium imaging data. Journal of Neuroscience Methods, 2017, 291, 83-94.	2.5	650
3	CaImAn an open source tool for scalable calcium imaging data analysis. ELife, 2019, 8, .	6.0	551
4	Efficient and accurate extraction of in vivo calcium signals from microendoscopic video data. ELife, 2018, 7, .	6.0	489
5	A robotic multidimensional directed evolution approach applied to fluorescent voltage reporters. Nature Chemical Biology, 2018, 14, 352-360.	8.0	264
6	Simultaneous Multi-plane Imaging of Neural Circuits. Neuron, 2016, 89, 269-284.	8.1	209
7	Cerebellar granule cells acquire a widespread predictive feedback signal during motor learning. Nature Neuroscience, 2017, 20, 727-734.	14.8	182
8	Population-Level Representation of a Temporal Sequence Underlying Song Production in the Zebra Finch. Neuron, 2016, 90, 866-876.	8.1	109
9	Video Time Encoding Machines. IEEE Transactions on Neural Networks, 2011, 22, 461-473.	4.2	95
10	Excitatory and Inhibitory Subnetworks Are Equally Selective during Decision-Making and Emerge Simultaneously during Learning. Neuron, 2020, 105, 165-179.e8.	8.1	82
11	Spatiotemporal receptive fields of barrel cortex revealed by reverse correlation of synaptic input. Nature Neuroscience, 2014, 17, 866-875.	14.8	80
12	Differential Emergence and Stability of Sensory and Temporal Representations in Context-Specific Hippocampal Sequences. Neuron, 2020, 108, 984-998.e9.	8.1	73
13	Analysis pipelines for calcium imaging data. Current Opinion in Neurobiology, 2019, 55, 15-21.	4.2	71
14	Reinforcement Learning Recruits Somata and Apical Dendrites across Layers of Primary Sensory Cortex. Cell Reports, 2019, 26, 2000-2008.e2.	6.4	59
15	Faithful Representation of Stimuli with a Population of Integrate-and-Fire Neurons. Neural Computation, 2008, 20, 2715-2744.	2.2	57
16	Primacy of Flexor Locomotor Pattern Revealed by Ancestral Reversion of Motor Neuron Identity. Cell, 2015, 162, 338-350.	28.9	54
17	Bayesian spike inference from calcium imaging data. , 2013, , .		44
18	Auditory activity is diverse and widespread throughout the central brain of Drosophila. Nature Neuroscience, 2021, 24, 93-104.	14.8	37

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19	Age-Related Homeostatic Midchannel Proteolysis of Neuronal L-type Voltage-Gated Ca2+ Channels. Neuron, 2014, 82, 1045-1057.	8.1	30
20	Online analysis of microendoscopic 1-photon calcium imaging data streams. PLoS Computational Biology, 2021, 17, e1008565.	3.2	27
21	Phases of two-dimensional spinless lattice fermions with first-quantized deep neural-network quantum states. Physical Review B, 2020, 102, .	3.2	25
22	VolPy: Automated and scalable analysis pipelines for voltage imaging datasets. PLoS Computational Biology, 2021, 17, e1008806.	3.2	23
23	Encoding natural scenes with neural circuits with random thresholds. Vision Research, 2010, 50, 2200-2212.	1.4	22
24	Fast Kalman Filtering and Forwardâ€“Backward Smoothing via a Low-Rank Perturbative Approach. Journal of Computational and Graphical Statistics, 2014, 23, 316-339.	1.7	21
25	Reconstruction of Sensory Stimuli Encoded with Integrate-and-Fire Neurons with Random Thresholds. Eurasip Journal on Advances in Signal Processing, 2009, 2009, 682930.	1.7	15
26	An inpainting system for automatic image structure - texture restoration with text removal. , 2008, , .		12
27	Fast Spatiotemporal Smoothing of Calcium Measurements in Dendritic Trees. PLoS Computational Biology, 2012, 8, e1002569.	3.2	10
28	Consistent Recovery of Sensory Stimuli Encoded with MIMO Neural Circuits. Computational Intelligence and Neuroscience, 2010, 2010, 1-13.	1.7	9
29	A video Time Encoding Machine. , 2008, , .		5
30	The power of connectivity: Identity preserving transformations on visual streams in the spike domain. Neural Networks, 2013, 44, 22-35.	5.9	3
31	Anscombe Meets Hough: Noise Variance Stablization Via Parametric Model Estimation. , 2018, , .		2
32	Consistent recovery of stimuli encoded with a neural ensemble. , 2009, , .		0
33	Reconstruction and classification of stimuli encoded with neural circuits with feedback. BMC Neuroscience, 2009, 10, .	1.9	0
34	Encoding of multivariate stimuli with MIMO neural circuits. , 2011, , .		0
35	Compressed sensing and optimal denoising of monotone signals. , 2017, , .		0