Alexander Mathis

List of Publications by Year
in descending order

22 papers	5,579 citations	430442 18 h-index	752256 20 g-index
32 all docs	32 docs citations	32 times ranked	4684 citing authors

#	Article	IF	Citations
1	DeepLabCut: markerless pose estimation of user-defined body parts with deep learning. Nature Neuroscience, 2018, 21, 1281-1289.	7.1	2,710
2	Using DeepLabCut for 3D markerless pose estimation across species and behaviors. Nature Protocols, 2019, 14, 2152-2176.	5.5	792
3	Deep learning tools for the measurement of animal behavior in neuroscience. Current Opinion in Neurobiology, 2020, 60, 1-11.	2.0	271
4	Neuronal Representation of Social Information in the Medial Amygdala of Awake Behaving Mice. Cell, 2017, 171, 1176-1190.e17.	13.5	197
5	Optimal Population Codes for Space: Grid Cells Outperform Place Cells. Neural Computation, 2012, 24, 2280-2317.	1.3	179
6	Perspectives in machine learning for wildlife conservation. Nature Communications, 2022, 13, 792.	5.8	176
7	Multi-animal pose estimation, identification and tracking with DeepLabCut. Nature Methods, 2022, 19, 496-504.	9.0	165
8	Tumor-specific cytolytic CD4 T cells mediate immunity against human cancer. Science Advances, 2021, 7, .	4.7	157
9	Somatosensory Cortex Plays an Essential Role in Forelimb Motor Adaptation in Mice. Neuron, 2017, 93, 1493-1503.e6.	3.8	144
10	A Primer on Motion Capture with Deep Learning: Principles, Pitfalls, and Perspectives. Neuron, 2020, 108, 44-65.	3.8	131
11	Connecting multiple spatial scales to decode the population activity of grid cells. Science Advances, 2015, 1, e1500816.	4.7	117
12	Real-time, low-latency closed-loop feedback using markerless posture tracking. ELife, 2020, 9, .	2.8	93
13	Pretraining boosts out-of-domain robustness for pose estimation. , 2021, , .		53
14	Resolution of Nested Neuronal Representations Can Be Exponential in the Number of Neurons. Physical Review Letters, 2012, 109, 018103.	2.9	44
15	Measuring and modeling the motor system with machine learning. Current Opinion in Neurobiology, 2021, 70, 11-23.	2.0	44
16	Probable nature of higher-dimensional symmetries underlying mammalian grid-cell activity patterns. ELife, 2015, 4, .	2.8	43
17	Reading Out Olfactory Receptors: Feedforward Circuits Detect Odors in Mixtures without Demixing. Neuron, 2016, 91, 1110-1123.	3.8	42
18	Perspectives on Individual Animal Identification from Biology and Computer Vision. Integrative and Comparative Biology, 2021, 61, 900-916.	0.9	30

#	Article	IF	Citations
19	Multiscale codes in the nervous system: The problem of noise correlations and the ambiguity of periodic scales. Physical Review E, 2013, 88, 022713.	0.8	25
20	AcinoSet: A 3D Pose Estimation Dataset and Baseline Models for Cheetahs in the Wild. , 2021, , .		23
21	Periodic population codes: From a single circular variable to higher dimensions, multiple nested scales, and conceptual spaces. Current Opinion in Neurobiology, 2017, 46, 99-108.	2.0	13
22	Highlights from the 29th Annual Meeting of the Society for the Neural Control of Movement. Journal of Neurophysiology, 2019, 122, 1777-1783.	0.9	7