H Sebastian Seung

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6506973/publications.pdf

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40	7,168	304743 22	434195 31
papers	citations	h-index	g-index

54	54	54	9163
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Trainable Weka Segmentation: a machine learning tool for microscopy pixel classification. Bioinformatics, 2017, 33, 2424-2426.	4.1	1,505
2	Connectomic reconstruction of the inner plexiform layer in the mouse retina. Nature, 2013, 500, 168-174.	27.8	897
3	Saturated Reconstruction of a Volume of Neocortex. Cell, 2015, 162, 648-661.	28.9	870
4	Spaceâ€“time wiring specificity supports direction selectivity in the retina. Nature, 2014, 509, 331-336.	27.8	419
5	Simple, Scalable Proteomic Imaging for High-Dimensional Profiling of Intact Systems. Cell, 2015, 163, 1500-1514.	28.9	391
6	Convolutional Networks Can Learn to Generate Affinity Graphs for Image Segmentation. Neural Computation, 2010, 22, 511-538.	2.2	319
7	Learning in Spiking Neural Networks by Reinforcement of Stochastic Synaptic Transmission. Neuron, 2003, 40, 1063-1073.	8.1	278
8	Crowdsourcing the creation of image segmentation algorithms for connectomics. Frontiers in Neuroanatomy, 2015, 9, 142.	1.7	248
9	Digital Museum of Retinal Ganglion Cells with Dense Anatomy and Physiology. Cell, 2018, 173, 1293-1306.e19.	28.9	197
10	A solution to the single-question crowd wisdom problem. Nature, 2017, 541, 532-535.	27.8	173
11	A genetic and computational approach to structurally classify neuronal types. Nature Communications, 2014, 5, 3512.	12.8	164
12	Reading the Book of Memory: Sparse Sampling versus Dense Mapping of Connectomes. Neuron, 2009, 62, 17-29.	8.1	136
13	VAST (Volume Annotation and Segmentation Tool): Efficient Manual and Semi-Automatic Labeling of Large 3D Image Stacks. Frontiers in Neural Circuits, 2018, 12, 88.	2.8	135
14	Machines that learn to segment images: a crucial technology for connectomics. Current Opinion in Neurobiology, 2010, 20, 653-666.	4.2	133
15	The Mind of a Mouse. Cell, 2020, 182, 1372-1376.	28.9	127
16	Neuronal Cell Types and Connectivity: Lessons from the Retina. Neuron, 2014, 83, 1262-1272.	8.1	115
17	FlyWire: online community for whole-brain connectomics. Nature Methods, 2022, 19, 119-128.	19.0	112
18	Analogous Convergence of Sustained and Transient Inputs in Parallel On and Off Pathways for Retinal Motion Computation. Cell Reports, 2016, 14, 1892-1900.	6.4	106

#	Article	IF	Citations
19	Reconstruction of neocortex: Organelles, compartments, cells, circuits, and activity. Cell, 2022, 185, 1082-1100.e24.	28.9	84
20	Electron Microscopic Reconstruction of Functionally Identified Cells in a Neural Integrator. Current Biology, 2017, 27, 2137-2147.e3.	3.9	74
21	The neural basis for a persistent internal state in Drosophila females. ELife, 2020, 9, .	6.0	53
22	Structure and function of axo-axonic inhibition. ELife, 2021, 10, .	6.0	49
23	Correlated Discharge among Cell Pairs within the Oculomotor Horizontal Velocity-to-Position Integrator. Journal of Neuroscience, 2003, 23, 10852-10858.	3.6	43
24	Convolutional nets for reconstructing neural circuits from brain images acquired by serial section electron microscopy. Current Opinion in Neurobiology, 2019, 55, 188-198.	4.2	38
25	ZNN -- A Fast and Scalable Algorithm for Training 3D Convolutional Networks on Multi-core and Many-Core Shared Memory Machines. , 2016, , .		27
26	Automated computation of arbor densities: a step toward identifying neuronal cell types. Frontiers in Neuroanatomy, 2014, 8, 139.	1.7	26
27	Synaptic Partner Assignment Using Attentional Voxel Association Networks. , 2020, , .		23
28	Chunkflow: hybrid cloud processing of large 3D images by convolutional nets. Nature Methods, 2021, 18, 328-330.	19.0	22
29	Half a century of Hebb. Nature Neuroscience, 2000, 3, 1166-1166.	14.8	20
30	Learning and Segmenting Dense Voxel Embeddings for 3D Neuron Reconstruction. IEEE Transactions on Medical Imaging, 2021, 40, 3801-3811.	8.9	15
31	ZNNi: Maximizing the Inference Throughput of 3D Convolutional Networks on CPUs and GPUs. , 2016, , .		11
32	Compile-time optimized and statically scheduled N-D convnet primitives for multi-core and many-core (Xeon Phi) CPUs. , 2017, , .		8
33	Scalable training of 3D convolutional networks on multi- and many-cores. Journal of Parallel and Distributed Computing, 2017, 106, 195-204.	4.1	7
34	Learning Metric Graphs for Neuron Segmentation in Electron Microscopy Images. , 2019, , .		6
35	PZnet: Efficient 3D ConvNet Inference on Manycore CPUs. Advances in Intelligent Systems and Computing, 2020, , 369-383.	0.6	5
36	RealNeuralNetworks.jl: An Integrated Julia Package for Skeletonization, Morphological Analysis, and Synaptic Connectivity Analysis of Terabyte-Scale 3D Neural Segmentations. Frontiers in Neuroinformatics, 2022, 16, 828169.	2.5	3

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37	Multi-order Scaling of High-throughput Transmission Electron Microscopy. Microscopy and Microanalysis, 2019, 25, 1040-1041.	0.4	1
38	Unsupervised learning by a "softened" correlation game: duality and convergence. , 2019, , .		0
39	Reexamining the principle of mean-variance preservation for neural network initialization. Physical Review Research, 2020, 2, .	3.6	0
40	Sensitivity of Sparse Codes to Image Distortions. Neural Computation, 2022, 34, 1616-1635.	2.2	0