H Sebastian Seung

List of Publications by Year
in descending order

40 papers	7,168 citations	304743 22 h-index	434195 31 g-index
54 all docs	54 docs citations	54 times ranked	9163 citing authors

#	Article	IF	Citations
1	FlyWire: online community for whole-brain connectomics. Nature Methods, 2022, 19, 119-128.	19.0	112
2	Reconstruction of neocortex: Organelles, compartments, cells, circuits, and activity. Cell, 2022, 185, 1082-1100.e24.	28.9	84
3	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
4	Sensitivity of Sparse Codes to Image Distortions. Neural Computation, 2022, 34, 1616-1635.	2.2	0
5	Chunkflow: hybrid cloud processing of large 3D images by convolutional nets. Nature Methods, 2021, 18, 328-330.	19.0	22
6	Learning and Segmenting Dense Voxel Embeddings for 3D Neuron Reconstruction. IEEE Transactions on Medical Imaging, 2021, 40, 3801-3811.	8.9	15
7	Structure and function of axo-axonic inhibition. ELife, 2021, 10, .	6.0	49
8	Synaptic Partner Assignment Using Attentional Voxel Association Networks. , 2020, , .		23
9	The Mind of a Mouse. Cell, 2020, 182, 1372-1376.	28.9	127
10	PZnet: Efficient 3D ConvNet Inference on Manycore CPUs. Advances in Intelligent Systems and Computing, 2020, , 369-383.	0.6	5
11	The neural basis for a persistent internal state in Drosophila females. ELife, 2020, 9, .	6.0	53
12	Reexamining the principle of mean-variance preservation for neural network initialization. Physical Review Research, 2020, 2, .	3.6	0
13	Multi-order Scaling of High-throughput Transmission Electron Microscopy. Microscopy and Microanalysis, 2019, 25, 1040-1041.	0.4	1
14	Learning Metric Graphs for Neuron Segmentation in Electron Microscopy Images. , 2019, , .		6
15	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
16	Unsupervised learning by a "softened" correlation game: duality and convergence. , 2019, , .		0
17	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
18	Digital Museum of Retinal Ganglion Cells with Dense Anatomy and Physiology. Cell, 2018, 173, 1293-1306.e19.	28.9	197

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19	A solution to the single-question crowd wisdom problem. Nature, 2017, 541, 532-535.	27.8	173
20	Scalable training of 3D convolutional networks on multi- and many-cores. Journal of Parallel and Distributed Computing, 2017, 106, 195-204.	4.1	7
21	Trainable Weka Segmentation: a machine learning tool for microscopy pixel classification. Bioinformatics, 2017, 33, 2424-2426.	4.1	1,505
22	Compile-time optimized and statically scheduled N-D convnet primitives for multi-core and many-core (Xeon Phi) CPUs. , 2017, , .		8
23	Electron Microscopic Reconstruction of Functionally Identified Cells in a Neural Integrator. Current Biology, 2017, 27, 2137-2147.e3.	3.9	74
24	ZNNi: Maximizing the Inference Throughput of 3D Convolutional Networks on CPUs and GPUs. , 2016, , .		11
25	ZNN -- A Fast and Scalable Algorithm for Training 3D Convolutional Networks on Multi-core and Many-Core Shared Memory Machines. , 2016, , .		27
26	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
27	Crowdsourcing the creation of image segmentation algorithms for connectomics. Frontiers in Neuroanatomy, 2015, 9, 142.	1.7	248
28	Simple, Scalable Proteomic Imaging for High-Dimensional Profiling of Intact Systems. Cell, 2015, 163, 1500-1514.	28.9	391
29	Saturated Reconstruction of a Volume of Neocortex. Cell, 2015, 162, 648-661.	28.9	870
30	Automated computation of arbor densities: a step toward identifying neuronal cell types. Frontiers in Neuroanatomy, 2014, 8, 139.	1.7	26
31	A genetic and computational approach to structurally classify neuronal types. Nature Communications, 2014, 5, 3512.	12.8	164
32	Space–time wiring specificity supports direction selectivity in the retina. Nature, 2014, 509, 331-336.	27.8	419
33	Neuronal Cell Types and Connectivity: Lessons from the Retina. Neuron, 2014, 83, 1262-1272.	8.1	115
34	Connectomic reconstruction of the inner plexiform layer in the mouse retina. Nature, 2013, 500, 168-174.	27.8	897
35	Machines that learn to segment images: a crucial technology for connectomics. Current Opinion in Neurobiology, 2010, 20, 653-666.	4.2	133
36	Convolutional Networks Can Learn to Generate Affinity Graphs for Image Segmentation. Neural Computation, 2010, 22, 511-538.	2.2	319

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37	Reading the Book of Memory: Sparse Sampling versus Dense Mapping of Connectomes. Neuron, 2009, 62, 17-29.	8.1	136
38	Learning in Spiking Neural Networks by Reinforcement of Stochastic Synaptic Transmission. Neuron, 2003, 40, 1063-1073.	8.1	278
39	Correlated Discharge among Cell Pairs within the Oculomotor Horizontal Velocity-to-Position Integrator. Journal of Neuroscience, 2003, 23, 10852-10858.	3.6	43
40	Half a century of Hebb. Nature Neuroscience, 2000, 3, 1166-1166.	14.8	20