Yoonsuck Choe

List of Publications by Year
in descending order

116 papers	794 citations	687363 13 h-index	610901 24 g-index
120 all docs	120 docs citations	120 times ranked	784 citing authors

#	Article	IF	Citations
1	A Digital Liquid State Machine With Biologically Inspired Learning and Its Application to Speech Recognition. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 2635-2649.	11.3	130
2	25th Annual Computational Neuroscience Meeting: CNS-2016. BMC Neuroscience, 2016, 17, 54.	1.9	81
3	A microchip for quantitative analysis of CNS axon growth under localized biomolecular treatments. Journal of Neuroscience Methods, 2014, 221, 166-174.	2.5	58
4	Self-organization and segmentation in a laterally connected orientation map of spiking neurons. Neurocomputing, 1998, 21, 139-158.	5.9	41
5	Fast macro-scale transmission imaging of microvascular networks using KESM. Biomedical Optics Express, 2011, 2, 2888.	2.9	34
6	Contour integration and segmentation with self-organized lateral connections. Biological Cybernetics, 2004, 90, 75-88.	1.3	28
7	Attention augmentation with multi-residual in bidirectional LSTM. Neurocomputing, 2020, 385, 340-347.	5.9	27
8	Multiscale Exploration of Mouse Brain Microstructures Using the Knife-Edge Scanning Microscope Brain Atlas. Frontiers in Neuroinformatics, 2011, 5, 29.	2.5	26
9	AUTONOMOUS LEARNING OF THE SEMANTICS OF INTERNAL SENSORY STATES BASED ON MOTOR EXPLORATION. International Journal of Humanoid Robotics, 2007, 04, 211-243.	1.1	19
10	Evolution of recollection and prediction in neural networks. , 2009, , .		17
11	An Attention-aware Bidirectional Multi-residual Recurrent Neural Network (Abmrnn): A Study about Better Short-term Text Classification. , 2019, , .		16
12	Extrapolative Delay Compensation Through Facilitating Synapses and Its Relation to the Flash-Lag Effect. IEEE Transactions on Neural Networks, 2008, 19, 1678-1688.	4.2	14
13	Parameter Learning for Alpha Integration. Neural Computation, 2013, 25, 1585-1604.	2.2	14
14	Emergence of Memory in Reactive Agents Equipped With Environmental Markers. IEEE Transactions on Autonomous Mental Development, 2011, 3, 257-271.	1.6	13
15	TIME, CONSCIOUSNESS, AND MIND UPLOADING. International Journal of Machine Consciousness, 2012, 04, 257-274.	1.0	13
16	Predictable internal brain dynamics in EEG and its relation to conscious states. Frontiers in Neurorobotics, 2014, 8, 18.	2.8	13
17	A Neural Model of the Scintillating Grid Illusion: Disinhibition and Self-Inhibition in Early Vision. Neural Computation, 2006, 18, 521-544.	2.2	11
18	Specimen Preparation, Imaging, and Analysis Protocols for Knife-edge Scanning Microscopy. Journal of Visualized Experiments, 2011, , .	0.3	11

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19	The Role of Temporal Parameters in a Thalamocortical Model of Analogy. IEEE Transactions on Neural Networks, 2004, 15, 1071-1082.	4.2	10
20	Cell tracking and segmentation in electron microscopy images using graph cuts. , 2009, , .		10
21	Fast cell detection in high-throughput imagery using GPU-accelerated machine learning. , 2011, , .		10
22	Plug-in, Trainable Gate for Streamlining Arbitrary Neural Networks. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 4452-4459.	4.9	10
23	Emergence of Memory-like Behavior in Reactive Agents Using External Markers. , 2009, , .		9
24	Facilitating neural dynamics for delay compensation: A road to predictive neural dynamics?. Neural Networks, 2009, 22, 267-276.	5.9	8
25	Knife-edge scanning microscopy for connectomics research. , 2011, , .		7
26	Autonomous and Interactive Improvement of Binocular Visual Depth Estimation through Sensorimotor Interaction. IEEE Transactions on Autonomous Mental Development, 2013, 5, 74-84.	1.6	7
27	Facilitating neural dynamics for delay compensation and prediction in evolutionary neural networks. , 2006, , .		6
28	Internal state predictability as an evolutionary precursor of self-awareness and agency. , 2008, , .		6
29	Extracting Clinical Relations in Electronic Health Records Using Enriched Parse Trees. Procedia Computer Science, 2015, 53, 274-283.	2.0	6
30	Data-Driven Sales Leads Prediction for Everything-as-a-Service in the Cloud. , 2016, , .		6
31	Analogical cascade: a theory on the role of the thalamo-cortical loop in brain function. Neurocomputing, 2003, 52-54, 713-719.	5.9	5
32	Segmentation of textures defined on flat vs. layered surfaces using neural networks: Comparison of 2D vs. 3D representations. Neurocomputing, 2007, 70, 2245-2255.	5.9	5
33	Motor system&#x2019;s role in grounding, receptive field development, and shape recognition. , 2008, , .		5
34	Fast and accurate retinal vasculature tracing and kernel-Isomap-based feature selection. , 2009, , .		5
35	Charting out the octopus connectome at submicron resolution using the knife-edge scanning microscope. BMC Neuroscience, 2010, 11, .	1.9	5
36	Emergence of tool use in an articulated limb controlled by evolved neural circuits. , 2015, , .		5

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37	Facilitatory neural activity compensating for neural delays as a potential cause of the flash-lag effect. , 0, , .		4
38	3D volume extraction of densely packed cells in EM data stack by forward and backward graph cuts. , 2009, , .		4
39	Prenatal to postnatal transfer of motor skills through motor-compatible sensory representations. , 2010, , .		4
40	Hebbian Learning. , 2014, , 1-5.		4
41	Manifold Alpha-Integration. Lecture Notes in Computer Science, 2010, , 397-408.	1.3	4
42	Enhanced Facilitatory Neuronal Dynamics for Delay Compensation. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	3
43	Alpha-integration of multiple evidence. , 2010, , .		3
44	Scalable, incremental learning with MapReduce parallelization for cell detection in high-resolution 3D microscopy data. , 2013, , .		3
45	Emergence of tool construction in an articulated limb controlled by evolved neural circuits. , 2017, , .		3
46	Speeding Up Affordance Learning for Tool Use, Using Proprioceptive and Kinesthetic Inputs. , 2019, , .		3
47	Online Virtual Training in Soft Actor-Critic for Autonomous Driving. , 2021, , .		3
48	Anti-Hebbian Learning. , 2014, , 1-4.		3
49	An Interactive Editing Framework for Electron Microscopy Image Segmentation. Lecture Notes in Computer Science, 2011, , 400-409.	1.3	3
50	Hebbian Learning. , 2015, , 1305-1309.		3
51	Second Order Isomorphism: A Reinterpretation and Its Implications in Brain and Cognitive Sciences. , 2019, , 190-195.		3
52	Effects of presynaptic and postsynaptic resource redistribution in Hebbian weight adaptation. Neurocomputing, 2000, 32-33, 77-82.	5.9	2
53	Relative advantage of touch over vision in the exploration of texture. , 2008, , .		2
54	Tactile or visual?: Stimulus characteristics determine receptive field type in a self-organizing map model of cortical development. , 2009, , .		2

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55	Neural conduction delay forces the emergence of predictive function in simulated evolution. BMC Neuroscience, 2010, 11, .	1.9	2
56	Automated cropping and artifact removal for knife-edge scanning microscopy. , 2011, , .		2
57	Random-forest-based automated cell detection in Knife-Edge Scanning Microscope rat Nissl data. , 2015, , .		2
58	Analysis of tool use strategies in evolved neural circuits controlling an articulated limb. , 2016, , .		2
59	Dynamical analysis of recurrent neural circuits in articulated limb controllers for tool use. , 2016, , .		2
60	Automated neurovascular tracing and analysis of the knife-edge scanning microscope Rat Nissl data set using a computing cluster. , 2016, 2016, 6445-6448.		2
61	Mapping the full vascular network in the mouse brain at submicrometer resolution. , 2017, 2017, 3309-3312.		2
62	Towards An Open-Source Framework For The Analysis Of Cerebrovasculature Structure. , 2018, 2018, 570-573.		2
63	Recognizing creative visual design. , 2021, , .		2
64	Action Recognition and State Change Prediction in a Recipe Understanding Task Using a Lightweight Neural Network Model (Student Abstract). Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 13945-13946.	4.9	2
65	Toward embodied artificial cognition: TIME is on my side. Frontiers in Neurorobotics, 2014, 8, 25.	2.8	2
66	Electron Microscopy Image Segmentation with Graph Cuts Utilizing Estimated Symmetric Three-Dimensional Shape Prior. Lecture Notes in Computer Science, 2010, , 322-331.	1.3	2
67	Physical Sectioning Microscopy. , 2014, , 1-4.		2
68	AdjointBackMap: Reconstructing effective decision hypersurfaces from CNN layers using adjoint operators. Neural Networks, 2022, 154, 78-98.	5.9	2
69	Delay Compensation Through Facilitating Synapses and STDP: A Neural Basis for Orientation Flash-Lag Effect. , 2006, , .		1
70	Effects of varying the delay distribution in random, scale-free, and small-world networks. , 2008, , .		1
71	A local maximum intensity projection tracing of vasculature in Knife-Edge Scanning Microscope volume data. , 2009, , .		1
72	Predictive internal neural dynamics for delay compensation. , 2010, , .		1

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73	Anti-Hebbian Learning. , 2015, , 191-193.		1
74	Knife-edge scanning microscopy for in silico study of cerebral blood flow: From biological imaging data to flow simulations. , 2016, 2016, 5957-5960.		1
75	Dynamic control using feedforward networks with adaptive delay and facilitating neural dynamics. , 2017, , .		1
76	Biologically grounded synthetic cerebrovasculature models for validation of segmentation algorithms. , 2017, , .		1
77	Evaluating deep learning in chum prediction for everything-as-a-service in the cloud. , 2017, , .		1
78	Comparing Sample-Wise Learnability across Deep Neural Network Models. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 9961-9962.	4.9	1
79	Evolution of Time in Neural Networks: From the Present to the Past, and Forward to the Future. , 2012, , 99-115.		1
80	Ground Truth Estimation by Maximizing Topological Agreements in Electron Microscopy Data. Lecture Notes in Computer Science, 2011, , 371-380.	1.3	1
81	Connectome, General. , 2014, , 1-11.		1
82	How neural is the neural blackboard architecture?. Behavioral and Brain Sciences, 2006, 29, 72-73.	0.7	0
83	Delay Compensation Through Facilitating Synapses and STDP: A Neural Basis for Orientation Flash-Lag Effect. , 0, , .		0
84	Kernel oriented discriminant analysis for speaker-independent phoneme spaces. , 2008, , .		0
85	Simultaneous grounding and receptive field learning in visuomotor agents. BMC Neuroscience, 2010, 11, .	1.9	0
86	Grounding the meaning of non-prototypical smiles on motor behavior. Behavioral and Brain Sciences, 2010, 33, 453-454.	0.7	0
87	Reconstruction of neuronal morphologies from electron microscopy images using graph cuts. BMC Neuroscience, 2010, 11, .	1.9	0
88	Context-sensitive intra-class clustering. Pattern Recognition Letters, 2014, 37, 85-93.	4.2	0
89	Real-time detection of imaging errors in the Knife-Edge Scanning Microscope through change detection. , 2015, , .		0
90	Motor-based autonomous grounding in a model of the fly optic flow system. , 2016, , .		0

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91	Fast submicrometer-scale imaging of whole zebrafish using the knife-edge scanning microscope. , 2016, 2016, 5901-5904.		0
92	Learning to distinguish cerebral vasculature data from mechanical chatter in India-ink images acquired using knife-edge scanning microscopy. , 2016, 2016, 3989-3992.		0
93	Conference Report on 2015 International Joint Conference on Neural Networks (IJCNN 2015) [Conference Reports]. IEEE Computational Intelligence Magazine, 2016, 11, 8-10.	3.2	0
94	Explanation of the perceptual oblique effect based on the fidelity of oculomotor control during saccades. , 2017, , .		0
95	Tracing and analysis of the whole mouse brain vasculature with systematic cleaning to remove and consolidate erroneous images. , 2018, 2018, 143-146.		0
96	Data-Driven Synthetic Cerebrovascular Models For Validation Of Segmentation Algorithms. , 2018, 2018, 5154-5157.		0
97	A Queryable Graph Representation of Vascular Connectivity in the Whole Mouse Brain. , 2019, 2019, 256-260.		0
98	English Out-of-Vocabulary Lexical Evaluation Task. , 2019, , .		0
99	Meaning Versus Information, Prediction Versus Memory, and Question Versus Answer. , 2019, , 281-292.		0
100	Emergence of Different Modes of Tool Use in a Reaching and Dragging Task. , 2021, , .		0
101	Self-Organization of Tactile Receptive Fields: Exploring Their Textural Origin and Their Representational Properties. Lecture Notes in Computer Science, 2009, , 228-236.	1.3	0
102	Reconstruction, Techniques, and Validation. , 2014, , 1-3.		0
103	Connectome, Mouse. , 2014, , 1-4.		0
104	Development of Target Reaching Gesture Map in the Cortex and Its Relation to the Motor Map: A Simulation Study. Advances in Intelligent Systems and Computing, 2014, , 187-197.	0.6	0
105	Computational Neuroanatomy: Overview. , 2014, , 1-3.		0
106	Modeling Self-Organization in the Visual Cortex. , 1999, , 243-252.		0
107	Reconstruction, Techniques and Validation. , 2015, , 2591-2593.		0
108	Brain Atlases. , 2015, , 434-434.		0

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109	Physical Sectioning Microscopy. , 2015, , 2376-2379.		0
110	Connectome, Mouse. , 2015, , 807-810.		0
111	Computational Neuroanatomy: Overview. , 2015, , 24-26.		0
112	Connectome, General. , 2015, , 798-806.		0
113	Computational Neuroanatomy: Overview. , 2021, , 1-3.		0
114	Connectome, Mouse. , 2022, , 976-979.		0
115	Physical Sectioning Microscopy. , 2022, , 2776-2779.		0
116	Connectome, General. , 2022, , 967-976.		0