

# Huajin Tang

## List of Publications by Year in descending order

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83  
papers

2,124  
citations

257450

24  
h-index

265206

42  
g-index

84  
all docs

84  
docs citations

84  
times ranked

1680  
citing authors

#	ARTICLE	IF	CITATIONS
1	Spiking Deep Residual Networks. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 5200-5205.	11.3	34
2	Toward Efficient Processing and Learning With Spikes: New Approaches for Multispikes Learning. IEEE Transactions on Cybernetics, 2022, 52, 1364-1376.	9.5	11
3	An Efficient Learning Algorithm for Direct Training Deep Spiking Neural Networks. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 847-856.	3.8	2
4	Effective Transfer Learning Algorithm in Spiking Neural Networks. IEEE Transactions on Cybernetics, 2022, 52, 13323-13335.	9.5	12
5	Robust Transcoding Sensory Information With Neural Spikes. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 1935-1946.	11.3	13
6	A Hybrid Loop Closure Detection Method Based on Brain-Inspired Models. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 1532-1543.	3.8	2
7	Training Deep Convolutional Spiking Neural Networks With Spike Probabilistic Global Pooling. Neural Computation, 2022, 34, 1170-1188.	2.2	3
8	Editorial IEEE Transactions on Cognitive and Developmental Systems. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 2-3.	3.8	0
9	Event-Based Multimodal Spiking Neural Network with Attention Mechanism. , 2022, , .		2
10	Learning Local Event-based Descriptor for Patch-based Stereo Matching. , 2022, , .		0
11	Multi-Level Firing with Spiking DS-ResNet: Enabling Better and Deeper Directly-Trained Spiking Neural Networks. , 2022, , .		5
12	Deep Spiking Neural Networks With Binary Weights for Object Recognition. IEEE Transactions on Cognitive and Developmental Systems, 2021, 13, 514-523.	3.8	22
13	Robust Environmental Sound Recognition With Sparse Key-Point Encoding and Efficient Multispikes Learning. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 625-638.	11.3	15
14	NeuroAED: Towards Efficient Abnormal Event Detection in Visual Surveillance With Neuromorphic Vision Sensor. IEEE Transactions on Information Forensics and Security, 2021, 16, 923-936.	6.9	15
15	Editorial: Cognitive Multitasking – Towards Augmented Intelligence. Frontiers in Neuroscience, 2021, 15, 619090.	2.8	0
16	Editorial: Understanding and Bridging the Gap Between Neuromorphic Computing and Machine Learning. Frontiers in Computational Neuroscience, 2021, 15, 665662.	2.1	9
17	A Novel Illumination-Robust Hand Gesture Recognition System With Event-Based Neuromorphic Vision Sensor. IEEE Transactions on Automation Science and Engineering, 2021, 18, 508-520.	5.2	19
18	Few-Shot Learning in Spiking Neural Networks by Multi-Timescale Optimization. Neural Computation, 2021, 33, 2439-2472.	2.2	9

#	ARTICLE	IF	CITATIONS
19	Editorial: Explainable Artificial Intelligence and Neuroscience: Cross-Disciplinary Perspectives. <i>Frontiers in Neurobotics</i> , 2021, 15, 731733.	2.8	3
20	Event-based Action Recognition Using Motion Information and Spiking Neural Networks. , 2021, , .		17
21	Why grid cells function as a metric for space. <i>Neural Networks</i> , 2021, 142, 128-137.	5.9	10
22	Indoor Lighting Estimation using an Event Camera. , 2021, , .		6
23	Deep CovDenseSNN: A hierarchical event-driven dynamic framework with spiking neurons in noisy environment. <i>Neural Networks</i> , 2020, 121, 512-519.	5.9	29
24	An FPGA Implementation of Deep Spiking Neural Networks for Low-Power and Fast Classification. <i>Neural Computation</i> , 2020, 32, 182-204.	2.2	46
25	An Event-Driven Categorization Model for AER Image Sensors Using Multispikes Encoding and Learning. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2020, 31, 3649-3657.	11.3	28
26	Effective AER Object Classification Using Segmented Probability-Maximization Learning in Spiking Neural Networks. <i>Proceedings of the AAAI Conference on Artificial Intelligence</i> , 2020, 34, 1308-1315.	4.9	29
27	An Event-based Categorization Model Using Spatio-temporal Features in a Spiking Neural Network. , 2020, , .		3
28	Event-Based Neuromorphic Vision for Autonomous Driving: A Paradigm Shift for Bio-Inspired Visual Sensing and Perception. <i>IEEE Signal Processing Magazine</i> , 2020, 37, 34-49.	5.6	147
29	Unsupervised AER Object Recognition Based on Multiscale Spatio-Temporal Features and Spiking Neurons. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2020, 31, 5300-5311.	11.3	20
30	Multi-Scale Extension in an Entorhinal-Hippocampal Model for Cognitive Map Building. <i>Frontiers in Neurobotics</i> , 2020, 14, 592057.	2.8	3
31	An Event-Driven Object Recognition Model Using Activated Connected Domain Detection. , 2020, , .		2
32	An improved hash function inspired by the fly hashing for near duplicate detections. , 2020, , .		0
33	Automatic Object Searching and Behavior Learning for Mobile Robots in Unstructured Environment by Deep Belief Networks. <i>IEEE Transactions on Cognitive and Developmental Systems</i> , 2019, 11, 395-404.	3.8	15
34	A Hardware Implementation of SNN-Based Spatio-Temporal Memory Model. <i>Frontiers in Neuroscience</i> , 2019, 13, 835.	2.8	8
35	Reinforcement Learning in Spiking Neural Networks with Stochastic and Deterministic Synapses. <i>Neural Computation</i> , 2019, 31, 2368-2389.	2.2	9
36	A Multi-spike Approach for Robust Sound Recognition. , 2019, , .		4

#	ARTICLE	IF	CITATIONS
37	Guest Editorial Special Section on Emerging Information Sharing and Design Technologies on Robotics and Mechatronics Systems for Intelligent Manufacturing. IEEE Transactions on Industrial Informatics, 2019, 15, 1643-1646.	11.3	2
38	A structure-aware time parallel implementation of spike-based deep learning. Neural Networks, 2019, 113, 72-78.	5.9	10
39	Robust Multipitch Estimation of Piano Sounds Using Deep Spiking Neural Networks. , 2019, , .		1
40	A temporal encoding method based on expansion representation. , 2019, , .		0
41	STCA: Spatio-Temporal Credit Assignment with Delayed Feedback in Deep Spiking Neural Networks. , 2019, , .		41
42	Fast and Accurate Classification with a Multi-Spike Learning Algorithm for Spiking Neurons. , 2019, , .		10
43	Cognitive Navigation by Neuro-Inspired Localization, Mapping, and Episodic Memory. IEEE Transactions on Cognitive and Developmental Systems, 2018, 10, 751-761.	3.8	39
44	Sparse Temporal Encoding of Visual Features for Robust Object Recognition by Spiking Neurons. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 5823-5833.	11.3	24
45	Connections Between Nuclear-Norm and Frobenius-Norm-Based Representations. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 218-224.	11.3	141
46	A Supervised Multi-Spike Learning Algorithm for Spiking Neural Networks. , 2018, , .		8
47	Corrections to "Cognitive Navigation by Neuro-Inspired Localization, Mapping, and Episodic Memory" [Sep 18 751-761]. IEEE Transactions on Cognitive and Developmental Systems, 2018, 10, 1165-1165.	3.8	0
48	Guest Editorial Special Issue on Neuromorphic Computing and Cognitive Systems. IEEE Transactions on Cognitive and Developmental Systems, 2018, 10, 122-125.	3.8	2
49	Spike-based encoding and learning of spectrum features for robust sound recognition. Neurocomputing, 2018, 313, 65-73.	5.9	13
50	Jointly Learning Network Connections and Link Weights in Spiking Neural Networks. , 2018, , .		11
51	CSNN: An Augmented Spiking based Framework with Perceptron-Inception. , 2018, , .		38
52	Bag of Events: An Efficient Probability-Based Feature Extraction Method for AER Image Sensors. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 791-803.	11.3	40
53	Neuromorphic Cognitive Systems. Intelligent Systems Reference Library, 2017, , .	1.2	13
54	Cognitive memory and mapping in a brain-like system for robotic navigation. Neural Networks, 2017, 87, 27-37.	5.9	27

#	ARTICLE	IF	CITATIONS
55	A brain-inspired SLAM system based on ORB features. International Journal of Automation and Computing, 2017, 14, 564-575.	4.5	25
56	Spike trains encoding and threshold rescaling method for deep spiking neural networks. , 2017, , .		18
57	Robot-to-human handover with obstacle avoidance via continuous time Recurrent Neural Network. , 2016, , .		0
58	Hebbian learning analysis of a grid cell based cognitive mapping system. , 2016, , .		2
59	How the Brain Formulates Memory: A Spatio-Temporal Model Research Frontier. IEEE Computational Intelligence Magazine, 2016, 11, 56-68.	3.2	55
60	A Spiking Neural Network System for Robust Sequence Recognition. IEEE Transactions on Neural Networks and Learning Systems, 2016, 27, 621-635.	11.3	70
61	A Simplified Cerebellar Model with Priority-based Delayed Eligibility Trace Learning for Motor Control. IEEE Transactions on Autonomous Mental Development, 2015, 7, 26-38.	1.6	5
62	Feedforward Categorization on AER Motion Events Using Cortex-Like Features in a Spiking Neural Network. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 1963-1978.	11.3	160
63	Fast low rank representation based spatial pyramid matching for image classification. Knowledge-Based Systems, 2015, 90, 14-22.	7.1	20
64	A brain-inspired spiking neural network model with temporal encoding and learning. Neurocomputing, 2014, 138, 3-13.	5.9	106
65	Real-Time Keypoint Recognition Using Restricted Boltzmann Machine. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 2119-2126.	11.3	13
66	Direction-driven navigation using cognitive map for mobile robots. , 2014, , .		15
67	Vision enhanced neuro-cognitive structure for robotic spatial cognition. Neurocomputing, 2014, 129, 49-58.	5.9	6
68	Temporal coding of local spectrogram features for robust sound recognition. , 2013, , .		42
69	A Spike-Timing-Based Integrated Model for Pattern Recognition. Neural Computation, 2013, 25, 450-472.	2.2	70
70	Rapid Feedforward Computation by Temporal Encoding and Learning With Spiking Neurons. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 1539-1552.	11.3	120
71	Precise-Spike-Driven Synaptic Plasticity: Learning Hetero-Association of Spatiotemporal Spike Patterns. PLoS ONE, 2013, 8, e78318.	2.5	137
72	Synaptic conditions for auto-associative memory storage and pattern completion in Jensen et al.'s model of hippocampal area CA3. Journal of Computational Neuroscience, 2012, 33, 435-447.	1.0	11

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73	Gesture Recognition Based on Localist Attractor Networks with Application to Robot Control [Application Notes]. IEEE Computational Intelligence Magazine, 2012, 7, 64-74.	3.2	19
74	Engine control design using globally linearizing control and sliding mode. Transactions of the Institute of Measurement and Control, 2010, 32, 225-247.	1.7	13
75	Memory Dynamics in Attractor Networks with Saliency Weights. Neural Computation, 2010, 22, 1899-1926.	2.2	26
76	A Discrete-Time Neural Network for Optimization Problems With Hybrid Constraints. IEEE Transactions on Neural Networks, 2010, 21, 1184-1189.	4.2	13
77	Nontrivial Global Attractors in 2-D Multistable Attractor Neural Networks. IEEE Transactions on Neural Networks, 2009, 20, 1842-1851.	4.2	10
78	Natural scene statistics and the structure of orientation maps in the visual cortex. NeuroImage, 2009, 47, 157-172.	4.2	10
79	Adaptive and Learning Control for SI Engine Model With Uncertainties. IEEE/ASME Transactions on Mechatronics, 2009, 14, 93-104.	5.8	40
80	A columnar competitive model for solving multi-traveling salesman problem. Chaos, Solitons and Fractals, 2007, 31, 1009-1019.	5.1	22
81	Dynamics Analysis and Analog Associative Memory of Networks With LT Neurons. IEEE Transactions on Neural Networks, 2006, 17, 409-418.	4.2	27
82	A Columnar Competitive Model for Solving Combinatorial Optimization Problems. IEEE Transactions on Neural Networks, 2004, 15, 1568-1573.	4.2	37
83	Grid cell modeling with mapping representation of self-motion for path integration. Neural Computing and Applications, 0, , 1.	5.6	0