Priyadarshini Panda

List of Publications by Year
in descending order

49 papers	2,671 citations	304743 22 h-index	361022 35 g-index
49 all docs	49 docs citations	49 times ranked	2350 citing authors

#	Article	IF	Citations
1	Towards spike-based machine intelligence with neuromorphic computing. Nature, 2019, 575, 607-617.	27.8	869
2	Enabling Spike-Based Backpropagation for Training Deep Neural Network Architectures. Frontiers in Neuroscience, 2020, 14, 119.	2.8	196
3	Tree-CNN: A hierarchical Deep Convolutional Neural Network for incremental learning. Neural Networks, 2020, 121, 148-160.	5.9	138
4	Magnetic Tunnel Junction Mimics Stochastic Cortical Spiking Neurons. Scientific Reports, 2016, 6, 30039.	3.3	125
5	Training Deep Spiking Convolutional Neural Networks With STDP-Based Unsupervised Pre-training Followed by Supervised Fine-Tuning. Frontiers in Neuroscience, 2018, 12, 435.	2.8	121
6	Habituation based synaptic plasticity and organismic learning in a quantum perovskite. Nature Communications, 2017, 8, 240.	12.8	84
7	Conditional Deep Learning for Energy-Efficient and Enhanced Pattern Recognition. , 2016, , .		80
8	STDP-Based Pruning of Connections and Weight Quantization in Spiking Neural Networks for Energy-Efficient Recognition. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2019, 38, 668-677.	2.7	65
9	Deep Spiking Convolutional Neural Network Trained With Unsupervised Spike-Timing-Dependent Plasticity. IEEE Transactions on Cognitive and Developmental Systems, 2019, 11, 384-394.	3.8	65
10	Unsupervised regenerative learning of hierarchical features in Spiking Deep Networks for object recognition. , 2016, , .		63
11	Gabor filter assisted energy efficient fast learning Convolutional Neural Networks. , 2017, , .		62
12	RESPARC. , 2017, , .		60
13	Toward Scalable, Efficient, and Accurate Deep Spiking Neural Networks With Backward Residual Connections, Stochastic Softmax, and Hybridization. Frontiers in Neuroscience, 2020, 14, 653.	2.8	58
14	Domain Adaptation Without Source Data. IEEE Transactions on Artificial Intelligence, 2021, 2, 508-518.	4.7	56
15	Revisiting Batch Normalization for Training Low-Latency Deep Spiking Neural Networks From Scratch. Frontiers in Neuroscience, 2021, 15, 773954.	2.8	46
16	Inherent Adversarial Robustness of Deep Spiking Neural Networks: Effects of Discrete Input Encoding and Non-linear Activations. Lecture Notes in Computer Science, 2020, , 399-414.	1.3	40
17	Optimizing Deeper Spiking Neural Networks for Dynamic Vision Sensing. Neural Networks, 2021, 144, 686-698.	5.9	39
18	ASP: Learning to Forget With Adaptive Synaptic Plasticity in Spiking Neural Networks. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 51-64.	3.6	37

#	Article	IF	Citations
19	Analysis of Liquid Ensembles for Enhancing the Performance and Accuracy of Liquid State Machines. Frontiers in Neuroscience, 2019, 13, 504.	2.8	34
20	Energy Efficient Neural Computing: A Study of Cross-Layer Approximations. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 796-809.	3.6	32
21	A Low Effort Approach to Structured CNN Design Using PCA. IEEE Access, 2020, 8, 1347-1360.	4.2	32
22	Learning to Generate Sequences with Combination of Hebbian and Non-hebbian Plasticity in Recurrent Spiking Neural Networks. Frontiers in Neuroscience, 2017, 11, 693.	2.8	30
23	A Comprehensive Analysis on Adversarial Robustness of Spiking Neural Networks. , 2019, , .		30
24	Discretization Based Solutions for Secure Machine Learning Against Adversarial Attacks. IEEE Access, 2019, 7, 70157-70168.	4.2	30
25	Organismic materials for beyond von Neumann machines. Applied Physics Reviews, 2020, 7, .	11.3	30
26	High-Density and Robust STT-MRAM Array Through Device/Circuit/Architecture Interactions. IEEE Nanotechnology Magazine, 2015, 14, 1024-1034.	2.0	25
27	STDP-based Unsupervised Feature Learning using Convolution-over-time in Spiking Neural Networks for Energy-Efficient Neuromorphic Computing. ACM Journal on Emerging Technologies in Computing Systems, 2018, 14, 1-12.	2.3	24
28	SpiLinC: Spiking Liquid-Ensemble Computing for Unsupervised Speech and Image Recognition. Frontiers in Neuroscience, 2018, 12, 524.	2.8	23
29	Learning to Recognize Actions From Limited Training Examples Using a Recurrent Spiking Neural Model. Frontiers in Neuroscience, 2018, 12, 126.	2.8	21
30	Federated Learning With Spiking Neural Networks. IEEE Transactions on Signal Processing, 2021, 69, 6183-6194.	5.3	21
31	Rate Coding Or Direct Coding: Which One Is Better For Accurate, Robust, And Energy-Efficient Spiking Neural Networks?. , 2022, , .		17
32	FALCON: Feature Driven Selective Classification for Energy-Efficient Image Recognition. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2017, 36, 2017-2029.	2.7	15
33	Visual explanations from spiking neural networks using inter-spike intervals. Scientific Reports, 2021, 11, 19037.	3.3	15
34	QUANOS. , 2020, , .		14
35	Synthesizing Images From Spatio-Temporal Representations Using Spike-Based Backpropagation. Frontiers in Neuroscience, 2019, 13, 621.	2.8	12
36	Exploiting Inherent Error Resiliency of Deep Neural Networks to Achieve Extreme Energy Efficiency Through Mixed-Signal Neurons. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2019, 27, 1365-1377.	3.1	10

#	Article	IF	Citations
37	Implicit adversarial data augmentation and robustness with Noise-based Learning. Neural Networks, 2021, 141, 120-132.	5.9	9
38	NEAT: Nonlinearity Aware Training for Accurate, Energy-Efficient, and Robust Implementation of Neural Networks on 1T-1R Crossbars. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 2625-2637.	2.7	8
39	Neural Computing With Magnetoelectric Domain-Wall-Based Neurosynaptic Devices. IEEE Transactions on Magnetics, 2021, 57, 1-9.	2.1	7
40	Efficiency-driven Hardware Optimization for Adversarially Robust Neural Networks. , 2021, , .		7
41	Energy-Efficient Object Detection Using Semantic Decomposition. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2017, 25, 2673-2677.	3.1	5
42	Noise Sensitivity-Based Energy Efficient and Robust Adversary Detection in Neural Networks. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 1423-1435.	2.7	5
43	EnsembleSNN: Distributed assistive STDP learning for energy-efficient recognition in spiking neural networks. , 2017, , .		3
44	An Energy-Efficient Mixed-Signal Neuron for Inherently Error-Resilient Neuromorphic Systems. , 2017, , .		3
45	DetectXâ€”Adversarial Input Detection Using Current Signatures in Memristive XBar Arrays. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4482-4494.	5.4	3
46	Energy-efficient and Robust Cumulative Training with Net2Net Transformation. , 2020, , .		1
47	Semantic driven hierarchical learning for energy-efficient image classification. , 2017, , .		1
48	Structured Learning for Action Recognition in Videos. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2019, 9, 475-484.	3.6	0
49	Evaluating the Stability of Recurrent Neural Models during Training with Eigenvalue Spectra Analysis. , 2019, , .		0