

Tarek M Taha

List of Publications by Year in descending order

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91
papers

3,782
citations

516710

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91
all docs

91
docs citations

91
times ranked

3375
citing authors

#	ARTICLE	IF	CITATIONS
1	A State-of-the-Art Survey on Deep Learning Theory and Architectures. Electronics (Switzerland), 2019, 8, 292.	3.1	954
2	Nuclei Segmentation with Recurrent Residual Convolutional Neural Networks based U-Net (R2U-Net). , 2018, , .		475
3	Recurrent residual U-Net for medical image segmentation. Journal of Medical Imaging, 2019, 6, 1.	1.5	449
4	A Memristor Device Model. IEEE Electron Device Letters, 2011, 32, 1436-1438.	3.9	247
5	Breast Cancer Classification from Histopathological Images with Inception Recurrent Residual Convolutional Neural Network. Journal of Digital Imaging, 2019, 32, 605-617.	2.9	207
6	Intrusion detection using deep belief networks. , 2015, , .		144
7	Improved inception-residual convolutional neural network for object recognition. Neural Computing and Applications, 2020, 32, 279-293.	5.6	81
8	Memristor crossbar deep network implementation based on a Convolutional neural network. , 2016, , .		74
9	On-chip training of memristor crossbar based multi-layer neural networks. Microelectronics Journal, 2017, 66, 31-40.	2.0	72
10	Memristor SPICE model and crossbar simulation based on devices with nanosecond switching time. , 2013, , .		69
11	Handwritten Bangla Character Recognition Using the State-of-the-Art Deep Convolutional Neural Networks. Computational Intelligence and Neuroscience, 2018, 2018, 1-13.	1.7	67
12	Extremely parallel memristor crossbar architecture for convolutional neural network implementation. , 2017, , .		62
13	Exploring the design space of specialized multicore neural processors. , 2013, , .		42
14	Memristor SPICE Modeling. , 2012, , 211-244.		37
15	Memristor crossbar based multicore neuromorphic processors. , 2014, , .		36
16	Experimental study of LiNbO3 memristors for use in neuromorphic computing. Microelectronic Engineering, 2017, 168, 37-40.	2.4	34
17	On-chip training of memristor based deep neural networks. , 2017, , .		33
18	Microscopic Blood Cell Classification Using Inception Recurrent Residual Convolutional Neural Networks. , 2018, , .		30

#	ARTICLE	IF	CITATIONS
19	Network intrusion detection for cyber security on neuromorphic computing system. , 2017, , .		28
20	An Instruction Throughput Model of Superscalar Processors. IEEE Transactions on Computers, 2008, 57, 389-403.	3.4	23
21	Flexible memristor based neuromorphic system for implementing multi-layer neural network algorithms. International Journal of Parallel, Emergent and Distributed Systems, 2018, 33, 408-429.	1.0	23
22	Inception recurrent convolutional neural network for object recognition. Machine Vision and Applications, 2021, 32, 1.	2.7	23
23	A fast training method for memristor crossbar based multi-layer neural networks. Analog Integrated Circuits and Signal Processing, 2017, 93, 443-454.	1.4	22
24	Effective Quantization Approaches for Recurrent Neural Networks. , 2018, , .		22
25	Ex-situ training of dense memristor crossbar for neuromorphic applications. , 2015, , .		21
26	Hybrid crossbar architecture for a memristor based memory. , 2014, , .		20
27	Medical Image Denoising with Recurrent Residual U-Net (R2U-Net) base Auto-Encoder. , 2019, , .		20
28	Fast implementation of matched-filter-based automatic alignment image processing. Optics and Laser Technology, 2009, 41, 193-197.	4.6	19
29	Intrusion Detection Using Deep Belief Network and Extreme Learning Machine. International Journal of Monitoring and Surveillance Technologies Research, 2015, 3, 35-56.	0.3	19
30	Memristor Model Optimization Based on Parameter Extraction From Device Characterization Data. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 1084-1095.	2.7	19
31	Quadratic Unconstrained Binary Optimization (QUBO) on neuromorphic computing system. , 2017, , .		18
32	Scaling analysis of a neocortex inspired cognitive model on the Cray XD1. Journal of Supercomputing, 2009, 47, 21-43.	3.6	17
33	Efficacy of memristive crossbars for neuromorphic processors. , 2014, , .		17
34	Deep Versus Wide Convolutional Neural Networks for Object Recognition on Neuromorphic System. , 2018, , .		17
35	Filament formation in lithium niobate memristors supports neuromorphic programming capability. Neural Computing and Applications, 2018, 30, 3773-3779.	5.6	15
36	Solving Constraint Satisfaction Problems Using the Loihi Spiking Neuromorphic Processor. , 2020, , .		15

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37	Character recognition with two spiking neural network models on multicore architectures. , 2009, , .		14
38	Hardware Accelerated Cognitively Enhanced Complex Event Processing Architecture. , 2013, , .		12
39	SPICE analysis of dense memristor crossbars for low power neuromorphic processor designs. , 2015, , .		12
40	Object recognition using cellular simultaneous recurrent networks and convolutional neural network. , 2017, , .		12
41	State Preserving Extreme Learning Machine for face recognition. , 2015, , .		11
42	Ex-situ training of large memristor crossbars for neural network applications. Analog Integrated Circuits and Signal Processing, 2019, 99, 1-10.	1.4	11
43	Methods for reducing memristor crossbar simulation time. , 2015, , .		10
44	High throughput neural network based embedded streaming multicore processors. , 2016, , .		10
45	Hardware acceleration of image recognition through a visual cortex model. Optics and Laser Technology, 2008, 40, 795-802.	4.6	9
46	Neuromorphic models on a GPGPU cluster. , 2010, , .		9
47	Tolerance to defective memristors in a neuromorphic learning circuit. , 2014, , .		9
48	Lithium based memristive device. , 2015, , .		9
49	Memristor Based Autoencoder for Unsupervised Real-Time Network Intrusion and Anomaly Detection. , 2019, , .		9
50	High Speed Cognitive Domain Ontologies for Asset Allocation Using Loihi Spiking Neurons. , 2019, , .		9
51	Hardware accelerated optical alignment of lasers using beam-specific matched filters. Applied Optics, 2009, 48, 5190.	2.1	8
52	Impact of memristor switching noise in a neuromorphic crossbar. , 2015, , .		8
53	Memristor-based pattern recognition for image processing: an adaptive coded aperture imaging and sensing opportunity. Proceedings of SPIE, 2010, , .	0.8	7
54	Fabrication, characterization, and modeling of memristor devices. , 2014, , .		7

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55	A communication reduction approach to iteratively solve large sparse linear systems on a GPGPU cluster. Cluster Computing, 2014, 17, 327-337.	5.0	7
56	Efficient Memristor-Based Architecture for Intrusion Detection and High-Speed Packet Classification. ACM Journal on Emerging Technologies in Computing Systems, 2018, 14, 1-27.	2.3	7
57	Parallelizing two classes of neuromorphic models on the Cell multicore architecture. , 2009, , .		6
58	Ex-situ programming in a neuromorphic memristor based crossbar circuit. , 2015, , .		6
59	Multilayer perceptron algorithms for cyberattack detection. , 2016, , .		6
60	Cognitive Domain Ontologies in lookup tables stored in a memristor string matching architecture. , 2017, , .		6
61	Cognitive domain ontologies in a memristor crossbar architecture. , 2017, , .		6
62	Task Allocation Performance Comparison for Low Power Devices. , 2018, , .		6
63	Accelerating Inference In Long Short-Term Memory Neural Networks. , 2018, , .		6
64	High Speed Approximate Cognitive Domain Ontologies for Asset Allocation based on Isolated Spiking Neurons. , 2018, , .		6
65	3D Memristor Crossbar Architecture for a Multicore Neuromorphic System. , 2020, , .		6
66	GPGPU acceleration of a novel calibration method for industrial robots. , 2011, , .		5
67	Power efficient architecture for network intrusion detection system. , 2014, , .		5
68	Parallelized mining of domain knowledge on GPGPU and Xeon Phi clusters. Journal of Supercomputing, 2016, 72, 2132-2156.	3.6	5
69	A preliminary investigation of a neocortex model implementation on the Cray XD1. , 2007, , .		4
70	TiO ₂ memristor devices. , 2011, , .		4
71	Memristor devices for use in neuromorphic systems. , 2016, , .		4
72	Experimental Study of Memristors for use in Neuromorphic Computing. , 2018, , .		4

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73	Microscopic nuclei classification, segmentation, and detection with improved deep convolutional neural networks (DCNN). Diagnostic Pathology, 2022, 17, 38.	2.0	4
74	A neocortex model implementation on reconfigurable logic with streaming memory. Parallel and Distributed Processing Symposium (IPDPS), Proceedings of the International Conference on, 2008, , .	1.0	3
75	Methods for high resolution programming in lithium niobate memristors for neuromorphic hardware. , 2017, , .		3
76	Low Power Memristor Crossbar Based Winner Takes All Circuit. , 2018, , .		3
77	Towards Improved Inertial Navigation by Reducing Errors Using Deep Learning Methodology. Applied Sciences (Switzerland), 2022, 12, 3645.	2.5	3
78	Higher accuracy template for corner cube reflected image. Proceedings of SPIE, 2008, , .	0.8	2
79	FPGA design of a multicore neuromorphic processing system. , 2014, , .		2
80	Memristor Crossbar Based Programmable Interconnects. , 2014, , .		2
81	Memristor crossbar based unsupervised training. , 2015, , .		2
82	Convolutional sparse coding on neurosynaptic cognitive system. , 2017, , .		2
83	High Speed Approximate Cognitive Domain Ontologies for Constrained Asset Allocation based on Spiking Neurons. , 2019, , .		2
84	Analysis of Lithium Niobate Memristor Devices for Neuromorphic Programability. , 2019, , .		2
85	Parallelized path-based search for constraint satisfaction in autonomous cognitive agents. Journal of Supercomputing, 2021, 77, 1667-1692.	3.6	2
86	On-chip static vs. dynamic routing for feed forward neural networks on multicore neuromorphic architectures. , 2013, , .		1
87	Design Space Evaluation of a Memristor Crossbar Based Multilayer Perceptron for Image Processing. , 2019, , .		1
88	Leveraging the Manycore Architecture of the Loihi Spiking Processor to Perform Quasi-Complete Constraint Satisfaction. , 2020, , .		1
89	Cognitive Domain Ontologies. , 2020, , .		1
90	Multicore cluster implementations of hierarchical Bayesian cortical models. , 2009, , .		0

#	ARTICLE	IF	CITATIONS
91	Socrates-D 2.0: A Low Power High Throughput Architecture for Deep Network Training., 2018, , .		0