

Lei Deng

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4872180/publications.pdf>

Version: 2024-02-01

69
papers

3,292
citations

361045

20
h-index

182168

51
g-index

70
all docs

70
docs citations

70
times ranked

2263
citing authors

#	ARTICLE	IF	CITATIONS
1	Kronecker CP Decomposition With Fast Multiplication for Compressing RNNs. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 2205-2219.	7.2	3
2	Comprehensive SNN Compression Using ADMM Optimization and Activity Regularization. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 2791-2805.	7.2	12
3	A Comprehensive and Modularized Statistical Framework for Gradient Norm Equality in Deep Neural Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 13-31.	9.7	13
4	Hardware-Enabled Efficient Data Processing With Tensor-Train Decomposition. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 372-385.	1.9	3
5	Efficient Processing of Sparse Tensor Decomposition via Unified Abstraction and PE-Interactive Architecture. IEEE Transactions on Computers, 2022, 71, 266-281.	2.4	0
6	STPAcc: Structural TI-Based Pruning for Accelerating Distance-Related Algorithms on CPU-FPGA Platforms. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 1358-1370.	1.9	3
7	Rubik: A Hierarchical Architecture for Efficient Graph Neural Network Training. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 936-949.	1.9	21
8	Brain-inspired global-local learning incorporated with neuromorphic computing. Nature Communications, 2022, 13, 65.	5.8	33
9	Accelerating Spatiotemporal Supervised Training of Large-Scale Spiking Neural Networks on GPU. , 2022, , .		2
10	Spiking Neural Network Integrated Circuits: A Review of Trends and Future Directions. , 2022, , .		28
11	Effective and Efficient Batch Normalization Using a Few Uncorrelated Data for Statistics Estimation. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 348-362.	7.2	10
12	Practical Attacks on Deep Neural Networks by Memory Trojaning. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 1230-1243.	1.9	16
13	Target Controllability of Two-Layer Multiplex Networks Based on Network Flow Theory. IEEE Transactions on Cybernetics, 2021, 51, 2699-2711.	6.2	10
14	Hardware Acceleration for GCNs via Bidirectional Fusion. IEEE Computer Architecture Letters, 2021, 20, 66-4.	1.0	3
15	Core Placement Optimization for Multi-chip Many-core Neural Network Systems with Reinforcement Learning. ACM Transactions on Design Automation of Electronic Systems, 2021, 26, 1-27.	1.9	10
16	PLSAV: Parallel loop searching and verifying for loop closure detection. IET Intelligent Transport Systems, 2021, 15, 683-698.	1.7	1
17	Editorial: Understanding and Bridging the Gap Between Neuromorphic Computing and Machine Learning. Frontiers in Computational Neuroscience, 2021, 15, 665662.	1.2	9
18	Fast Search of the Optimal Contraction Sequence in Tensor Networks. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 574-586.	7.3	5

#	ARTICLE	IF	CITATIONS
19	QTTNet: Quantized tensor train neural networks for 3D object and video recognition. Neural Networks, 2021, 141, 420-432.	3.3	16
20	Training and inference for integer-based semantic segmentation network. Neurocomputing, 2021, 454, 101-112.	3.5	1
21	Nonlinear tensor train format for deep neural network compression. Neural Networks, 2021, 144, 320-333.	3.3	14
22	ES-ImageNet: A Million Event-Stream Classification Dataset for Spiking Neural Networks. Frontiers in Neuroscience, 2021, 15, 726582.	1.4	10
23	Rethinking the performance comparison between SNNS and ANNS. Neural Networks, 2020, 121, 294-307.	3.3	131
24	SemiMap: A Semi-Folded Convolution Mapping for Speed-Overhead Balance on Crossbars. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 117-130.	1.9	15
25	Hybrid tensor decomposition in neural network compression. Neural Networks, 2020, 132, 309-320.	3.3	25
26	Compressing 3DCNNs based on tensor train decomposition. Neural Networks, 2020, 131, 215-230.	3.3	18
27	Comparing SNNs and RNNs on neuromorphic vision datasets: Similarities and differences. Neural Networks, 2020, 132, 108-120.	3.3	62
28	Transfer Learning in General Lensless Imaging through Scattering Media. , 2020, , .		3
29	Model Compression and Hardware Acceleration for Neural Networks: A Comprehensive Survey. Proceedings of the IEEE, 2020, 108, 485-532.	16.4	441
30	Power-efficient neural network with artificial dendrites. Nature Nanotechnology, 2020, 15, 776-782.	15.6	141
31	Tianjic: A Unified and Scalable Chip Bridging Spike-Based and Continuous Neural Computation. IEEE Journal of Solid-State Circuits, 2020, 55, 2228-2246.	3.5	78
32	Training high-performance and large-scale deep neural networks with full 8-bit integers. Neural Networks, 2020, 125, 70-82.	3.3	64
33	Characterizing and Understanding GCNs on GPU. IEEE Computer Architecture Letters, 2020, 19, 22-25.	1.0	35
34	Editorial: Spiking Neural Network Learning, Benchmarking, Programming and Executing. Frontiers in Neuroscience, 2020, 14, 276.	1.4	3
35	A deadlock-free physical mapping method on the many-core neural network chip. Neurocomputing, 2020, 401, 327-337.	3.5	8
36	HyGCN: A GCN Accelerator with Hybrid Architecture. , 2020, , .		160

#	ARTICLE	IF	CITATIONS
37	DUET: Boosting Deep Neural Network Efficiency on Dual-Module Architecture. , 2020, , .		16
38	DeepSniffer. , 2020, , .		51
39	fuseGNN. , 2020, , .		9
40	Towards artificial general intelligence with hybrid Tianjic chip architecture. Nature, 2019, 572, 106-111.	13.7	517
41	Alleviating Irregularity in Graph Analytics Acceleration. , 2019, , .		53
42	Memory Trojan Attack on Neural Network Accelerators. , 2019, , .		24
43	KPynq: A Work-Efficient Triangle-Inequality Based K-Means on FPGA. , 2019, , .		0
44	Direct Training for Spiking Neural Networks: Faster, Larger, Better. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 1311-1318.	3.6	257
45	CNNWire. , 2019, , .		4
46	Containment control of directed networks with time-varying nonlinear multi-agents using minimum number of leaders. Physica A: Statistical Mechanics and Its Applications, 2019, 526, 120859.	1.2	3
47	Efficient Mapping without Deadlock on the Many-core Neural Network Chip. , 2019, , .		0
48	Balancing Memory Accesses for Energy-Efficient Graph Analytics Accelerators. , 2019, , .		2
49	Towards a polynomial algorithm for optimal contraction sequence of tensor networks from trees. Physical Review E, 2019, 100, 043309.	0.8	3
50	L_1 -Norm Batch Normalization for Efficient Training of Deep Neural Networks. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 2043-2051.	7.2	90
51	GXNOR-Net: Training deep neural networks with ternary weights and activations without full-precision memory under a unified discretization framework. Neural Networks, 2018, 100, 49-58.	3.3	105
52	Enabling Controlling Complex Networks with Local Topological Information. Scientific Reports, 2018, 8, 4593.	1.6	19
53	Training deep neural networks with discrete state transition. Neurocomputing, 2018, 272, 154-162.	3.5	12
54	Fast Object Tracking on a Many-Core Neural Network Chip. Frontiers in Neuroscience, 2018, 12, 841.	1.4	9

#	ARTICLE	IF	CITATIONS
55	Correlation between the Dzyaloshinskii-Moriya interaction and spin-mixing conductance at an antiferromagnet/ferromagnet interface. <i>Physical Review B</i> , 2018, 98, .	1.1	13
56	Crossbar-Aware Neural Network Pruning. <i>IEEE Access</i> , 2018, 6, 58324-58337.	2.6	43
57	Towards a Unified Framework of Matrix Derivatives. <i>IEEE Access</i> , 2018, 6, 47922-47934.	2.6	0
58	Towards the minimum-cost control of target nodes in directed networks with linear dynamics. <i>Journal of the Franklin Institute</i> , 2018, 355, 8141-8157.	1.9	4
59	L0 norm constraint based external control source allocation for the minimum cost control of directed networks. <i>ISA Transactions</i> , 2018, 76, 88-96.	3.1	5
60	Spatio-Temporal Backpropagation for Training High-Performance Spiking Neural Networks. <i>Frontiers in Neuroscience</i> , 2018, 12, 331.	1.4	471
61	Hierarchical Chunking of Sequential Memory on Neuromorphic Architecture with Reduced Synaptic Plasticity. <i>Frontiers in Computational Neuroscience</i> , 2016, 10, 136.	1.2	6
62	Temperature based Restricted Boltzmann Machines. <i>Scientific Reports</i> , 2016, 6, 19133.	1.6	20
63	Minimum-cost control of complex networks. <i>New Journal of Physics</i> , 2016, 18, 013012.	1.2	53
64	Energy consumption analysis for various memristive networks under different learning strategies. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 903-909.	0.9	29
65	Development of a neuromorphic computing system. , 2015, , .		28
66	FPGA-based neuromorphic computing system with a scalable routing network. , 2015, , .		1
67	A new computing rule for neuromorphic engineering. , 2015, , .		0
68	Complex Learning in Bio-plausible Memristive Networks. <i>Scientific Reports</i> , 2015, 5, 10684.	1.6	37
69	Ultra low power of artificial cognitive memory for brain-like computation. , 2014, , .		0