Johannes Partzsch

List of Publications by Year
in descending order

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42	769	686830 13	642321 23
papers	citations	h-index	g-index

42	42	42	830
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Neuromorphic hardware in the loop: Training a deep spiking network on the BrainScaleS wafer-scale system. , 2017, , .		99
2	A Biological-Realtime Neuromorphic System in 28 nm CMOS Using Low-Leakage Switched Capacitor Circuits. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 243-254.	2.7	77
3	A comprehensive workflow for general-purpose neural modeling with highly configurable neuromorphic hardware systems. Biological Cybernetics, 2011, 104, 263-296.	0.6	72
4	Live demonstration: A scaled-down version of the BrainScaleS wafer-scale neuromorphic system. , 2012, , .		41
5	Analyzing the Scaling of Connectivity in Neuromorphic Hardware and in Models of Neural Networks. IEEE Transactions on Neural Networks, 2011, 22, 919-935.	4.8	39
6	Memory-Efficient Deep Learning on a SpiNNaker 2 Prototype. Frontiers in Neuroscience, 2018, 12, 840.	1.4	38
7	VLSI implementation of a 2.8 Gevent/s packet-based AER interface with routing and event sorting functionality. Frontiers in Neuroscience, 2011, 5, 117.	1.4	36
8	Rate and pulse based plasticity governed by local synaptic state variables. Frontiers in Synaptic Neuroscience, 2010, 2, 33.	1.3	35
9	A 32 GBit/s communication SoC for a waferscale neuromorphic system. The Integration VLSI Journal, 2012, 45, 61-75.	1.3	30
10	Switched-capacitor realization of presynaptic short-term-plasticity and stop-learning synapses in 28 nm CMOS. Frontiers in Neuroscience, 2015, 9, 10.	1.4	27
11	Plasticity and Adaptation in Neuromorphic Biohybrid Systems. IScience, 2020, 23, 101589.	1.9	26
12	Comparing Loihi with a SpiNNaker 2 prototype on low-latency keyword spotting and adaptive robotic control. Neuromorphic Computing and Engineering, 2021, 1, 014002.	2.8	26
13	A Biohybrid Setup for Coupling Biological and Neuromorphic Neural Networks. Frontiers in Neuroscience, 2019, 13, 432.	1.4	24
14	A fixed point exponential function accelerator for a neuromorphic many-core system. , 2017, , .		21
15	Efficient Reward-Based Structural Plasticity on a SpiNNaker 2 Prototype. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 579-591.	2.7	20
16	Replicating experimental spike and rate based neural learning in CMOS. , 2010, , .		18
17	Accuracy evaluation of numerical methods used in state-of-the-art simulators for spiking neural networks. Journal of Computational Neuroscience, 2012, 32, 309-326.	0.6	17
18	VLSI implementation of a conductance-based multi-synapse using switched-capacitor circuits. , 2014, , .		17

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19	A location-independent direct link neuromorphic interface. , 2013, , .		13
20	Reducing the computational footprint for real-time BCPNN learning. Frontiers in Neuroscience, 2015, 9, 2.	1.4	13
21	Dynamic Power Management for Neuromorphic Many-Core Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 2973-2986.	3.5	12
22	Configurable analog-digital conversion using the neural engineering framework. Frontiers in Neuroscience, 2014, 8, 201.	1.4	10
23	Synapse dynamics in CMOS derived from a model of neurotransmitter release. , 2011, , .		7
24	Developing structural constraints on connectivity for biologically embedded neural networks. Biological Cybernetics, 2012, 106, 191-200.	0.6	6
25	Event-based Neural Network for ECG Classification with Delta Encoding and Early Stopping. , 2020, , .		6
26	A Calibration Technique for Bang-Bang ADPLLs Using Jitter Distribution Monitoring. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2016, 24, 3548-3552.	2.1	5
27	The operating system of the neuromorphic BrainScaleS-1 system. Neurocomputing, 2022, 501, 790-810.	3.5	5
28	Network-driven design principles for neuromorphic systems. Frontiers in Neuroscience, 2015, 9, 386.	1.4	4
29	Flexible and stretchable redistribution layer with embedded chips for human-machine interface. , 2020, , .		4
30	A pulse communication flow ready for accelerated neuromorphic experiments. , 2014, , .		3
31	Dynamic voltage and frequency scaling for neuromorphic many-core systems. , 2017, , .		3
32	BCM and Membrane Potential: Alternative Ways to Timing Dependent Plasticity. Lecture Notes in Computer Science, 2009, , 137-144.	1.0	3
33	Mapping Deep Neural Networks on SpiNNaker2. , 2020, , .		3
34	On the Relation between Bursts and Dynamic Synapse Properties: A Modulation-Based Ansatz. Computational Intelligence and Neuroscience, 2009, 2009, 1-13.	1.1	2
35	Mean Field Approach for Configuring Population Dynamics on a Biohybrid Neuromorphic System. Journal of Signal Processing Systems, 2020, 92, 1303-1321.	1.4	2
36	Real-time Hardware Implementation of ARM CoreSight Trace Decoder. IEEE Design and Test, 2021, 38, 69-77.	1.1	2

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37	Transient responses of activity-dependent synapses to modulated pulse trains. Neurocomputing, 2009, 73, 99-105.	3.5	1
38	Live demonstration: Dynamic voltage and frequency scaling for neuromorphic many-core systems. , 2017, , .		1
39	Analyzing ARM CoreSight ETMv4.x Data Trace Stream with a Real-time Hardware Accelerator. , 2021, , .		1
40	Configurable pulse routing architecture for accelerated multi-node neuromorphic systems. , 2014, , .		0
41	Exploration of FPGA architectures for tight coupled accelerators in a 22nm FDSOI technology. , 2017, , .		0
42	Delay-Based Neural Computation: Pulse Routing Architecture and Benchmark Application in FPGA. , 2021, , .		0