

Johannes Partzsch

List of Publications by Year in descending order

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Version: 2024-02-01

42
papers

769
citations

687363

13
h-index

642732

23
g-index

42
all docs

42
docs citations

42
times ranked

830
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. | 4.0 | 77 |
| 3 | A comprehensive workflow for general-purpose neural modeling with highly configurable neuromorphic hardware systems. Biological Cybernetics, 2011, 104, 263-296. | 1.3 | 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. | 4.2 | 39 |
| 6 | Memory-Efficient Deep Learning on a SpiNNaker 2 Prototype. Frontiers in Neuroscience, 2018, 12, 840. | 2.8 | 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. | 2.8 | 36 |
| 8 | Rate and pulse based plasticity governed by local synaptic state variables. Frontiers in Synaptic Neuroscience, 2010, 2, 33. | 2.5 | 35 |
| 9 | A 32 GBit/s communication SoC for a waferscale neuromorphic system. The Integration VLSI Journal, 2012, 45, 61-75. | 2.1 | 30 |
| 10 | Switched-capacitor realization of presynaptic short-term-plasticity and stop-learning synapses in 28 nm CMOS. Frontiers in Neuroscience, 2015, 9, 10. | 2.8 | 27 |
| 11 | Plasticity and Adaptation in Neuromorphic Biohybrid Systems. IScience, 2020, 23, 101589. | 4.1 | 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. | 5.9 | 26 |
| 13 | A Biohybrid Setup for Coupling Biological and Neuromorphic Neural Networks. Frontiers in Neuroscience, 2019, 13, 432. | 2.8 | 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. | 4.0 | 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. | 1.0 | 17 |
| 18 | VLSI implementation of a conductance-based multi-synapse using switched-capacitor circuits. , 2014, , . | | 17 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 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. | 2.8 | 13 |
| 21 | Dynamic Power Management for Neuromorphic Many-Core Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 2973-2986. | 5.4 | 12 |
| 22 | Configurable analog-digital conversion using the neural engineering framework. Frontiers in Neuroscience, 2014, 8, 201. | 2.8 | 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. | 1.3 | 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. | 3.1 | 5 |
| 27 | The operating system of the neuromorphic BrainScaleS-1 system. Neurocomputing, 2022, 501, 790-810. | 5.9 | 5 |
| 28 | Network-driven design principles for neuromorphic systems. Frontiers in Neuroscience, 2015, 9, 386. | 2.8 | 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. | 1.3 | 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. | 1.7 | 2 |
| 35 | Mean Field Approach for Configuring Population Dynamics on a Biohybrid Neuromorphic System. Journal of Signal Processing Systems, 2020, 92, 1303-1321. | 2.1 | 2 |
| 36 | Real-time Hardware Implementation of ARM CoreSight Trace Decoder. IEEE Design and Test, 2021, 38, 69-77. | 1.2 | 2 |

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|----|---|-----|-----------|
| 37 | Transient responses of activity-dependent synapses to modulated pulse trains. Neurocomputing, 2009, 73, 99-105. | 5.9 | 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 |