

Damien Querlioz

List of Publications by Year in descending order

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Version: 2024-02-01

33
papers

3,762
citations

471061

17
h-index

552369

26
g-index

34
all docs

34
docs citations

34
times ranked

3715
citing authors

#	ARTICLE	IF	CITATIONS
1	Neuromorphic computing with nanoscale spintronic oscillators. Nature, 2017, 547, 428-431.	13.7	893
2	Neuromorphic spintronics. Nature Electronics, 2020, 3, 360-370.	13.1	516
3	Physics for neuromorphic computing. Nature Reviews Physics, 2020, 2, 499-510.	11.9	422
4	Vowel recognition with four coupled spin-torque nano-oscillators. Nature, 2018, 563, 230-234.	13.7	356
5	Immunity to Device Variations in a Spiking Neural Network With Memristive Nanodevices. IEEE Nanotechnology Magazine, 2013, 12, 288-295.	1.1	321
6	Phase change memory as synapse for ultra-dense neuromorphic systems: Application to complex visual pattern extraction. , 2011, , .		185
7	Skyrmion Gas Manipulation for Probabilistic Computing. Physical Review Applied, 2018, 9, .	1.5	148
8	Neural-like computing with populations of superparamagnetic basis functions. Nature Communications, 2018, 9, 1533.	5.8	139
9	Bioinspired Programming of Memory Devices for Implementing an Inference Engine. Proceedings of the IEEE, 2015, 103, 1398-1416.	16.4	116
10	Low-Energy Truly Random Number Generation with Superparamagnetic Tunnel Junctions for Unconventional Computing. Physical Review Applied, 2017, 8, .	1.5	106
11	In situ learning using intrinsic memristor variability via Markov chain Monte Carlo sampling. Nature Electronics, 2021, 4, 151-161.	13.1	93
12	Synchronous Non-Volatile Logic Gate Design Based on Resistive Switching Memories. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 443-454.	3.5	90
13	In-Memory and Error-Immune Differential RRAM Implementation of Binarized Deep Neural Networks. , 2018, , .		62
14	Digital Biologically Plausible Implementation of Binarized Neural Networks With Differential Hafnium Oxide Resistive Memory Arrays. Frontiers in Neuroscience, 2019, 13, 1383.	1.4	51
15	Controlling the phase locking of stochastic magnetic bits for ultra-low power computation. Scientific Reports, 2016, 6, 30535.	1.6	32
16	Outstanding Bit Error Tolerance of Resistive RAM-Based Binarized Neural Networks. , 2019, , .		31
17	Synaptic metaplasticity in binarized neural networks. Nature Communications, 2021, 12, 2549.	5.8	30
18	Interplay of multiple synaptic plasticity features in filamentary memristive devices for neuromorphic computing. Scientific Reports, 2016, 6, 39216.	1.6	25

#	ARTICLE	IF	CITATIONS
19	Using Memristors for Robust Local Learning of Hardware Restricted Boltzmann Machines. Scientific Reports, 2019, 9, 1851.	1.6	21
20	Radio-Frequency Multiply-and-Accumulate Operations with Spintronic Synapses. Physical Review Applied, 2021, 15, .	1.5	21
21	Binding events through the mutual synchronization of spintronic nano-neurons. Nature Communications, 2022, 13, 883.	5.8	18
22	Forecasting the outcome of spintronic experiments with Neural Ordinary Differential Equations. Nature Communications, 2022, 13, 1016.	5.8	17
23	Ex Situ Transfer of Bayesian Neural Networks to Resistive Memory-Based Inference Hardware. Advanced Intelligent Systems, 2021, 3, 2000103.	3.3	15
24	Designing Large Arrays of Interacting Spin-Torque Nano-Oscillators for Microwave Information Processing. Physical Review Applied, 2020, 13, .	1.5	9
25	Hybrid Analog-Digital Learning with Differential RRAM Synapses. , 2019, , .		7
26	Tunable Stochasticity in an Artificial Spin Network. Advanced Materials, 2021, 33, e2008135.	11.1	7
27	Training Dynamical Binary Neural Networks with Equilibrium Propagation. , 2021, , .		6
28	In-Memory Resistive RAM Implementation of Binarized Neural Networks for Medical Applications. , 2020, , .		5
29	Implementation of Ternary Weights With Resistive RAM Using a Single Sense Operation Per Synapse. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 138-147.	3.5	5
30	Hardware-Efficient Stochastic Binary CNN Architectures for Near-Sensor Computing. Frontiers in Neuroscience, 2021, 15, 781786.	1.4	4
31	Model of the Weak Reset Process in HfO _x Resistive Memory for Deep Learning Frameworks. IEEE Transactions on Electron Devices, 2021, 68, 4925-4932.	1.6	3
32	Harnessing intrinsic memristor randomness with Bayesian neural networks. , 2021, , .		2
33	(Invited) Memory-Centric Artificial Intelligence with Nanodevices. ECS Meeting Abstracts, 2020, MA2020-01, 1387-1387.	0.0	0