

# Irem Boybat

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4433526/publications.pdf>

Version: 2024-02-01

28  
papers

3,333  
citations

932766

10  
h-index

1281420

11  
g-index

28  
all docs

28  
docs citations

28  
times ranked

3096  
citing authors

#	ARTICLE	IF	CITATIONS
1	Equivalent-accuracy accelerated neural-network training using analogue memory. <i>Nature</i> , 2018, 558, 60-67.	13.7	755
2	Experimental Demonstration and Tolerancing of a Large-Scale Neural Network (165 000 Synapses) Using Phase-Change Memory as the Synaptic Weight Element. <i>IEEE Transactions on Electron Devices</i> , 2015, 62, 3498-3507.	1.6	705
3	Neuromorphic computing using non-volatile memory. <i>Advances in Physics: X</i> , 2017, 2, 89-124.	1.5	629
4	Neuromorphic computing with multi-memristive synapses. <i>Nature Communications</i> , 2018, 9, 2514.	5.8	566
5	Accurate deep neural network inference using computational phase-change memory. <i>Nature Communications</i> , 2020, 11, 2473.	5.8	263
6	A phase-change memory model for neuromorphic computing. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	96
7	Mixed-Precision Deep Learning Based on Computational Memory. <i>Frontiers in Neuroscience</i> , 2020, 14, 406.	1.4	61
8	Experimental Demonstration of Supervised Learning in Spiking Neural Networks with Phase-Change Memory Synapses. <i>Scientific Reports</i> , 2020, 10, 8080.	1.6	48
9	Mixed-precision architecture based on computational memory for training deep neural networks. , 2018, , .		42
10	Large-scale neural networks implemented with Non-Volatile Memory as the synaptic weight element: Impact of conductance response. , 2016, , .		31
11	Precision of bit slicing with in-memory computing based on analog phase-change memory crossbars. <i>Neuromorphic Computing and Engineering</i> , 2022, 2, 014009.	2.8	18
12	A Heterogeneous In-Memory Computing Cluster for Flexible End-to-End Inference of Real-World Deep Neural Networks. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2022, 12, 422-435.	2.7	18
13	Precision of synaptic weights programmed in phase-change memory devices for deep learning inference. , 2020, , .		17
14	Stochastic weight updates in phase-change memory-based synapses and their influence on artificial neural networks. , 2017, , .		14
15	Non-volatile memory as hardware synapse in neuromorphic computing: A first look at reliability issues. , 2015, , .		12
16	Phase-Change Memory Models for Deep Learning Training and Inference. , 2019, , .		11
17	Improved Deep Neural Network Hardware-Accelerators Based on Non-Volatile-Memory: The Local Gains Technique. , 2017, , .		10
18	Supervised learning in spiking neural networks with MLC PCM synapses. , 2017, , .		8

#	ARTICLE	IF	CITATIONS
19	Multi-ReRAM Synapses for Artificial Neural Network Training. , 2019, , .		8
20	A hardware-oriented dynamically adaptive disparity estimation algorithm and its real-time hardware. , 2013, , .		7
21	Fatiguing STDP: Learning from spike-timing codes in the presence of rate codes. , 2017, , .		7
22	End-to-end 100-TOPS/W Inference With Analog In-Memory Computing: Are We There Yet?. , 2021, , .		4
23	Nonvolatile Memory Crossbar Arrays for Non-von Neumann Computing. Cognitive Systems Monographs, 2017, , 129-149.	0.1	1
24	Multilayer Perceptron Algorithm: Impact of Nonideal Conductance and Area-Efficient Peripheral Circuits. , 2017, , 209-231.		1
25	Accurate Weight Mapping in a Multi-Memristive Synaptic Unit. , 2021, , .		1
26	An efficient synaptic architecture for artificial neural networks. , 2017, , .		0
27	Accurate Emulation of Memristive Crossbar Arrays for In-Memory Computing. , 2020, , .		0
28	ESSOP: Efficient and Scalable Stochastic Outer Product Architecture for Deep Learning. , 2020, , .		0