Chul-Heung Kim

List of Publications by Year
in descending order

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21 papers	356 citations	1039406 9 h-index	940134 16 g-index
21 all docs	21 docs citations	21 times ranked	330 citing authors

#	Article	IF	Citations
1	Analog synaptic devices applied to spiking neural networks for reinforcement learning applications. Semiconductor Science and Technology, 2022, 37, 075002.	1.0	1
2	Hardware-based spiking neural network architecture using simplified backpropagation algorithm and homeostasis functionality. Neurocomputing, 2021, 428, 153-165.	3.5	12
3	On-chip trainable hardware-based deep Q-networks approximating a backpropagation algorithm. Neural Computing and Applications, 2021, 33, 9391-9402.	3.2	4
4	Initial synaptic weight distribution for fast learning speed and high recognition rate in STDP-based spiking neural network. Solid-State Electronics, 2020, 165, 107742.	0.8	4
5	Implementation of homeostasis functionality in neuron circuit using double-gate device for spiking neural network. Solid-State Electronics, 2020, 165, 107741.	0.8	12
6	Adaptive learning rule for hardware-based deep neural networks using electronic synapse devices. Neural Computing and Applications, 2019, 31, 8101-8116.	3.2	47
7	Unsupervised online learning of temporal information in spiking neural network using thin-film transistor-type NOR flash memory devices. Nanotechnology, 2019, 30, 435206.	1.3	13
8	Grayscale Image Recognition Using Spike-Rate-Based Online Learning and Threshold Adjustment of Neurons in a Thin-Film Transistor-Type NOR Flash Memory Array. Journal of Nanoscience and Nanotechnology, 2019, 19, 6055-6060.	0.9	2
9	Unsupervised Online Learning With Multiple Postsynaptic Neurons Based on Spike-Timing-Dependent Plasticity Using a Thin-Film Transistor-Type NOR Flash Memory Array. Journal of Nanoscience and Nanotechnology, 2019, 19, 6050-6054.	0.9	7
10	A Spiking Neural Network with a Global Self-Controller for Unsupervised Learning Based on Spike-Timing-Dependent Plasticity Using Flash Memory Synaptic Devices. , 2019, , .		9
11	Analyzation of Positive Feedback device with Steep Subthreshold Swing Characteristics in 14 nm FinFET Technology. , 2019, , .		0
12	Si-Based FET-Type Synaptic Device With Short-Term and Long-Term Plasticity Using High-<inline-formula> <tex-math notation="LaTeX">$kappa$ </tex-math> </inline-formula> Gate-Stack. IEEE Transactions on Electron Devices, 2019, 66, 917-923.	1.6	22
13	Highly Reliable Inference System of Neural Networks Using Gated Schottky Diodes. IEEE Journal of the Electron Devices Society, 2019, 7, 522-528.	1.2	15
14	Synaptic device using a floating fin-body MOSFET with memory functionality for neural network. Solid-State Electronics, 2019, 156, 23-27.	0.8	5
15	Emerging memory technologies for neuromorphic computing. Nanotechnology, 2019, 30, 032001.	1.3	62
16	Adaptive Weight Quantization Method for Nonlinear Synaptic Devices. IEEE Transactions on Electron Devices, 2019, 66, 395-401.	1.6	31
17	Demonstration of Unsupervised Learning With Spike-Timing-Dependent Plasticity Using a TFT-Type NOR Flash Memory Array. IEEE Transactions on Electron Devices, 2018, 65, 1774-1780.	1.6	54
18	A Split-Gate Positive Feedback Device With an Integrate-and-Fire Capability for a High-Density Low-Power Neuron Circuit. Frontiers in Neuroscience, 2018, 12, 704.	1.4	24

#	Article	IF	Citations
19	Neuromorphic Technology Based on Charge Storage Memory Devices. , 2018, , .		18
20	Hardware-based Neural Networks using a Gated Schottky Diode as a Synapse Device. , 2018, , .		10
21	GIDL Characteristics in Gated-Diode Memory String and Its Application to Current-Steering Digital-to-Analog Conversion. IEEE Transactions on Electron Devices, 2015, 62, 3272-3277.	1.6	4