Donghyeon Han

List of Publications by Year
in descending order

34 papers	566 citations	1040056 9 h-index	839539 18 g-index
34 all docs	34 docs citations	34 times ranked	434 citing authors

#	Article	IF	Citations
1	A Pipelined Point Cloud Based Neural Network Processor for 3-D Vision With Large-Scale Max Pooling Layer Prediction. IEEE Journal of Solid-State Circuits, 2022, 57, 661-670.	5.4	2
2	A Mobile DNN Training Processor With Automatic Bit Precision Search and Fine-Grained Sparsity Exploitation. IEEE Micro, 2022, 42, 16-25.	1.8	2
3	OmniDRL: An Energy-Efficient Deep Reinforcement Learning Processor With Dual-Mode Weight Compression and Sparse Weight Transposer. IEEE Journal of Solid-State Circuits, 2022, 57, 999-1012.	5.4	0
4	TSUNAMI: Triple Sparsity-Aware Ultra Energy-Efficient Neural Network Training Accelerator With Multi-Modal Iterative Pruning. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1494-1506.	5.4	5
5	A 49.5 mW Multi-Scale Linear Quantized Online Learning Processor for Real-Time Adaptive Object Detection. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 2443-2447.	3.0	2
6	A 36.2 dB High SNR and PVT/Leakage-Robust eDRAM Computing-In-Memory Macro With Segmented BL and Reference Cell Array. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 2433-2437.	3.0	9
7	DSPU: A 281.6mW Real-Time Depth Signal Processing Unit for Deep Learning-Based Dense RGB-D Data Acquisition with Depth Fusion and 3D Bounding Box Extraction in Mobile Platforms. , 2022, , .		6
8	A Low-power and Real-time 3D Object Recognition Processor with Dense RGB-D Data Acquisition in Mobile Platforms. , 2022, , .		0
9	An 0.92 mJ/frame High-quality FHD Super-resolution Mobile Accelerator SoC with Hybrid-precision and Energy-efficient Cache. , 2022, , .		4
10	An Energy-Efficient Deep Neural Network Training Processor with Bit-Slice-Level Reconfigurability and Sparsity Exploitation. , 2021, , .		0
11	DF-LNPU: A Pipelined Direct Feedback Alignment-Based Deep Neural Network Learning Processor for Fast Online Learning. IEEE Journal of Solid-State Circuits, 2021, 56, 1630-1640.	5.4	15
12	A 64.1mW Accurate Real-Time Visual Object Tracking Processor With Spatial Early Stopping on Siamese Network. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 1675-1679.	3.0	6
13	Energy-Efficient Deep Reinforcement Learning Accelerator Designs for Mobile Autonomous Systems. , 2021, , .		2
14	GANPU: An Energy-Efficient Multi-DNN Training Processor for GANs With Speculative Dual-Sparsity Exploitation. IEEE Journal of Solid-State Circuits, 2021, 56, 2845-2857.	5.4	18
15	HNPU: An Adaptive DNN Training Processor Utilizing Stochastic Dynamic Fixed-Point and Active Bit-Precision Searching. IEEE Journal of Solid-State Circuits, 2021, 56, 2858-2869.	5.4	36
16	An Energy-Efficient GAN Accelerator With On-Chip Training for Domain-Specific Optimization. IEEE Journal of Solid-State Circuits, 2021, 56, 2968-2980.	5.4	4
17	An Overview of Sparsity Exploitation in CNNs for On-Device Intelligence With Software-Hardware Cross-Layer Optimizations. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2021, 11, 634-648.	3.6	11
18	A 4.45 ms Low-Latency 3D Point-Cloud-Based Neural Network Processor for Hand Pose Estimation in Immersive Wearable Devices. , 2020, , .		8

#	Article	IF	Citations
19	A 1.02-μW STT-MRAM-Based DNN ECG Arrhythmia Monitoring SoC With Leakage-Based Delay MAC Unit. IEEE Solid-State Circuits Letters, 2020, 3, 390-393.	2.0	13
20	The Hardware and Algorithm Co-Design for Energy-Efficient DNN Processor on Edge/Mobile Devices. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 3458-3470.	5.4	25
21	DT-CNN: An Energy-Efficient Dilated and Transposed Convolutional Neural Network Processor for Region of Interest Based Image Segmentation. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 3471-3483.	5.4	24
22	A 1.15 TOPS/W Energy-Efficient Capsule Network Accelerator for Real-Time 3D Point Cloud Segmentation in Mobile Environment. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 1594-1598.	3.0	7
23	A 0.22â€"0.89 mW Low-Power and Highly-Secure Always-On Face Recognition Processor With Adversarial Attack Prevention. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 846-850.	3.0	10
24	7.4 GANPU: A 135TFLOPS/W Multi-DNN Training Processor for GANs with Speculative Dual-Sparsity Exploitation. , 2020, , .		51
25	An Energy-Efficient GAN Accelerator with On-chip Training for Domain Specific Optimization. , 2020, , .		2
26	CNNP-v2:An Energy Efficient Memory-Centric Convolutional Neural Network Processor Architecture. , 2019, , .		8
27	A 1.32 TOPS/W Energy Efficient Deep Neural Network Learning Processor with Direct Feedback Alignment based Heterogeneous Core Architecture. , 2019, , .		28
28	DT-CNN: Dilated and Transposed Convolution Neural Network Accelerator for Real-Time Image Segmentation on Mobile Devices. , 2019, , .		26
29	7.7 LNPU: A 25.3TFLOPS/W Sparse Deep-Neural-Network Learning Processor with Fine-Grained Mixed Precision of FP8-FP16. , 2019, , .		111
30	Direct Feedback Alignment Based Convolutional Neural Network Training for Low-Power Online Learning Processor. , 2019, , .		4
31	CNNP-v2: A Memory-Centric Architecture for Low-Power CNN Processor on Domain-Specific Mobile Devices. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2019, 9, 598-611.	3.6	3
32	A Low-Power Deep Neural Network Online Learning Processor for Real-Time Object Tracking Application. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 1794-1804.	5.4	37
33	A Low-Power Convolutional Neural Network Face Recognition Processor and a CIS Integrated With Always-on Face Detector. IEEE Journal of Solid-State Circuits, 2018, 53, 115-123.	5.4	76
34	A 141.4 mW Low-Power Online Deep Neural Network Training Processor for Real-time Object Tracking in Mobile Devices. , 2018, , .		11