

Bernabe Linares-Barranco

List of Publications by Year in descending order

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162
papers

8,242
citations

76326

40
h-index

54911

84
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164
all docs

164
docs citations

164
times ranked

4944
citing authors

#	ARTICLE	IF	CITATIONS
1	Neuromorphic Silicon Neuron Circuits. <i>Frontiers in Neuroscience</i> , 2011, 5, 73.	2.8	1,004
2	Integration of nanoscale memristor synapses in neuromorphic computing architectures. <i>Nanotechnology</i> , 2013, 24, 384010.	2.6	469
3	STDP and STDP variations with memristors for spiking neuromorphic learning systems. <i>Frontiers in Neuroscience</i> , 2013, 7, 2.	2.8	368
4	On Spike-Timing-Dependent-Plasticity, Memristive Devices, and Building a Self-Learning Visual Cortex. <i>Frontiers in Neuroscience</i> , 2011, 5, 26.	2.8	364
5	CAVIAR: A 45k Neuron, 5M Synapse, 12G Connects/s AER Hardware Sensory“Processing” Learning“Actuating System for High-Speed Visual Object Recognition and Tracking. <i>IEEE Transactions on Neural Networks</i> , 2009, 20, 1417-1438.	4.2	285
6	Retinomorphic Event-Based Vision Sensors: Bioinspired Cameras With Spiking Output. <i>Proceedings of the IEEE</i> , 2014, 102, 1470-1484.	21.3	270
7	A 128,imes\$128 1.5% Contrast Sensitivity 0.9% FPN 3 Åµs Latency 4 mW Asynchronous Frame-Free Dynamic Vision Sensor Using Transimpedance Preamplifiers. <i>IEEE Journal of Solid-State Circuits</i> , 2013, 48, 827-838.	5.4	268
8	Mapping from Frame-Driven to Frame-Free Event-Driven Vision Systems by Low-Rate Rate Coding and Coincidence Processing–Application to Feedforward ConvNets. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2013, 35, 2706-2719.	13.9	230
9	2022 roadmap on neuromorphic computing and engineering. <i>Neuromorphic Computing and Engineering</i> , 2022, 2, 022501.	5.9	217
10	A 3.6 \$µµs Latency Asynchronous Frame-Free Event-Driven Dynamic-Vision-Sensor. <i>IEEE Journal of Solid-State Circuits</i> , 2011, 46, 1443-1455.	5.4	196
11	Plasticity in memristive devices for spiking neural networks. <i>Frontiers in Neuroscience</i> , 2015, 9, 51.	2.8	188
12	A Memristive Nanoparticle/Organic Hybrid Synapstor for Neuroinspired Computing. <i>Advanced Functional Materials</i> , 2012, 22, 609-616.	14.9	163
13	On the design and characterization of femtoampere current-mode circuits. <i>IEEE Journal of Solid-State Circuits</i> , 2003, 38, 1353-1363.	5.4	161
14	Feedforward Categorization on AER Motion Events Using Cortex-Like Features in a Spiking Neural Network. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2015, 26, 1963-1978.	11.3	160
15	Activity-driven, event-based vision sensors. , 2010, , .		157
16	Operational transconductance amplifier-based nonlinear function syntheses. <i>IEEE Journal of Solid-State Circuits</i> , 1989, 24, 1576-1586.	5.4	138
17	Memristance can explain Spike-Time-Dependent-Plasticity in Neural Synapses. <i>Nature Precedings</i> , 0, , .	0.1	128
18	A CMOS implementation of FitzHugh-Nagumo neuron model. <i>IEEE Journal of Solid-State Circuits</i> , 1991, 26, 956-965.	5.4	114

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19	On the design of voltage-controlled sinusoidal oscillators using OTAs. IEEE Transactions on Circuits and Systems, 1990, 37, 198-211.	0.9	111
20	A Hybrid CMOS-Memristor Neuromorphic Synapse. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 434-445.	4.0	108
21	Neuromorphic Context-Dependent Learning Framework With Fault-Tolerant Spike Routing. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 7126-7140.	11.3	101
22	Efficient Feedforward Categorization of Objects and Human Postures with Address-Event Image Sensors. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 302-314.	13.9	93
23	Hardware Implementation of Deep Network Accelerators Towards Healthcare and Biomedical Applications. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 1138-1159.	4.0	93
24	An Event-Driven Multi-Kernel Convolution Processor Module for Event-Driven Vision Sensors. IEEE Journal of Solid-State Circuits, 2012, 47, 504-517.	5.4	92
25	A Spatial Contrast Retina With On-Chip Calibration for Neuromorphic Spike-Based AER Vision Systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2007, 54, 1444-1458.	0.1	90
26	A Neuromorphic Cortical-Layer Microchip for Spike-Based Event Processing Vision Systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2006, 53, 2548-2566.	0.1	88
27	Poker-DVS and MNIST-DVS. Their History, How They Were Made, and Other Details. Frontiers in Neuroscience, 2015, 9, 481.	2.8	88
28	Multicasting Mesh AER: A Scalable Assembly Approach for Reconfigurable Neuromorphic Structured AER Systems. Application to ConvNets. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 82-102.	4.0	83
29	AER image filtering architecture for vision-processing systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1999, 46, 1064-1071.	0.1	80
30	An Event-Driven Classifier for Spiking Neural Networks Fed with Synthetic or Dynamic Vision Sensor Data. Frontiers in Neuroscience, 2017, 11, 350.	2.8	78
31	The active-input regulated-cascode current mirror. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1994, 41, 464-467.	0.1	76
32	Heterogeneous Ensemble-Based Spike-Driven Few-Shot Online Learning. Frontiers in Neuroscience, 2022, 16, .	2.8	72
33	Neuromorphic Spiking Neural Networks and Their Memristor-CMOS Hardware Implementations. Materials, 2019, 12, 2745.	2.9	71
34	A general translinear principle for subthreshold MOS transistors. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1999, 46, 607-616.	0.1	69
35	On Real-Time AER 2-D Convolutions Hardware for Neuromorphic Spike-Based Cortical Processing. IEEE Transactions on Neural Networks, 2008, 19, 1196-1219.	4.2	65
36	On algorithmic rate-coded AER generation. IEEE Transactions on Neural Networks, 2006, 17, 771-788.	4.2	60

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37	A Proposal for Hybrid Memristor-CMOS Spiking Neuromorphic Learning Systems. IEEE Circuits and Systems Magazine, 2013, 13, 74-88.	2.3	56
38	CMOS OTA-C high-frequency sinusoidal oscillators. IEEE Journal of Solid-State Circuits, 1991, 26, 160-165.	5.4	55
39	Comparison between Frame-Constrained Fix-Pixel-Value and Frame-Free Spiking-Dynamic-Pixel ConvNets for Visual Processing. Frontiers in Neuroscience, 2012, 6, 32.	2.8	54
40	Modeling and Experimental Demonstration of a Hopfield Network Analog-to-Digital Converter with Hybrid CMOS/Memristor Circuits. Frontiers in Neuroscience, 2015, 9, 488.	2.8	52
41	A CMOS analog adaptive BAM with on-chip learning and weight refreshing. IEEE Transactions on Neural Networks, 1993, 4, 445-455.	4.2	49
42	On Practical Issues for Stochastic STDP Hardware With 1-bit Synaptic Weights. Frontiers in Neuroscience, 2018, 12, 665.	2.8	49
43	A 32x32 Pixel Convolution Processor Chip for Address Event Vision Sensors With 155 ns Event Latency and 20 Meps Throughput. IEEE Transactions on Circuits and Systems I: Regular Papers, 2011, 58, 777-790.	5.4	47
44	SAM: A Unified Self-Adaptive Multicompartmental Spiking Neuron Model for Learning With Working Memory. Frontiers in Neuroscience, 2022, 16, 850945.	2.8	47
45	On neuromorphic spiking architectures for asynchronous STDP memristive systems. , 2010, , .		46
46	A high-precision current-mode WTA-MAX circuit with multichip capability. IEEE Journal of Solid-State Circuits, 1998, 33, 280-286.	5.4	44
47	Compact low-power calibration mini-DACs for neural arrays with programmable weights. IEEE Transactions on Neural Networks, 2003, 14, 1207-1216.	4.2	44
48	A modular current-mode high-precision winner-take-all circuit. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 1995, 42, 132-134.	2.2	42
49	Systematic Width-and-Length Dependent CMOS Transistor Mismatch Characterization and Simulation. Analog Integrated Circuits and Signal Processing, 1999, 21, 271-296.	1.4	42
50	Very wide range tunable CMOS/bipolar current mirrors with voltage clamped input. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1999, 46, 1398-1407.	0.1	41
51	Log-domain implementation of complex dynamics reaction-diffusion neural networks. IEEE Transactions on Neural Networks, 2003, 14, 1337-1355.	4.2	40
52	A Five-Decade Dynamic-Range Ambient-Light-Independent Calibrated Signed-Spatial-Contrast AER Retina With 0.1-ms Latency and Optional Time-to-First-Spike Mode. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 2632-2643.	5.4	34
53	Event-Driven Stereo Visual Tracking Algorithm to Solve Object Occlusion. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 4223-4237.	11.3	34
54	A modular T-mode design approach for analog neural network hardware implementations. IEEE Journal of Solid-State Circuits, 1992, 27, 701-713.	5.4	32

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55	A Precise 90° Quadrature OTA-C Oscillator Tunable in the 50–130-MHz Range. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2004, 51, 649-663.	0.1	32
56	Fast Vision Through Frameless Event-Based Sensing and Convolutional Processing: Application to Texture Recognition. IEEE Transactions on Neural Networks, 2010, 21, 609-620.	4.2	32
57	Adaptive Resonance Theory Microchips. , 1998, , .		31
58	Current Mode Techniques for Sub-pico-Ampere Circuit Design. Analog Integrated Circuits and Signal Processing, 2004, 38, 103-119.	1.4	30
59	On Multiple AER Handshaking Channels Over High-Speed Bit-Serial Bidirectional LVDS Links With Flow-Control and Clock-Correction on Commercial FPGAs for Scalable Neuromorphic Systems. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 1133-1147.	4.0	30
60	MemTorch: An Open-source Simulation Framework for Memristive Deep Learning Systems. Neurocomputing, 2022, 485, 124-133.	5.9	27
61	A Modified ART 1 Algorithm more Suitable for VLSI Implementations. Neural Networks, 1996, 9, 1025-1043.	5.9	26
62	On the use of orientation filters for 3D reconstruction in event-driven stereo vision. Frontiers in Neuroscience, 2014, 8, 48.	2.8	25
63	A new five-parameter MOS transistor mismatch model. IEEE Electron Device Letters, 2000, 21, 37-39.	3.9	24
64	A real-time clustering microchip neural engine. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 1996, 4, 195-209.	3.1	23
65	CMOS transistor mismatch model valid from weak to strong inversion. , 0, , .		23
66	An AER handshake-less modular infrastructure PCB with x8 2.5Gbps LVDS serial links. , 2014, , .		23
67	A Configurable Event-Driven Convolutional Node with Rate Saturation Mechanism for Modular ConvNet Systems Implementation. Frontiers in Neuroscience, 2018, 12, 63.	2.8	23
68	A programmable neural oscillator cell. IEEE Transactions on Circuits and Systems, 1989, 36, 756-761.	0.9	22
69	How Frequency Injection Locking Can Train Oscillatory Neural Networks to Compute in Phase. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 1996-2009.	11.3	21
70	Neuron Fault Tolerance in Spiking Neural Networks. , 2021, , .		21
71	The Stochastic I-Pot: A Circuit Block for Programming Bias Currents. IEEE Transactions on Circuits and Systems II: Express Briefs, 2007, 54, 760-764.	3.0	20
72	Sound Source Localization in Wide-Range Outdoor Environment Using Distributed Sensor Network. IEEE Sensors Journal, 2020, 20, 2234-2246.	4.7	20

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73	Hardware Implementation of Differential Oscillatory Neural Networks Using VO 2-Based Oscillators and Memristor-Bridge Circuits. <i>Frontiers in Neuroscience</i> , 2021, 15, 674567.	2.8	20
74	Digital Implementation of the Two-Compartmental Pinsky-Rinzel Pyramidal Neuron Model. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2018, 12, 47-57.	4.0	19
75	An ART1 microchip and its use in multi-ART1 systems. <i>IEEE Transactions on Neural Networks</i> , 1997, 8, 1184-1194.	4.2	17
76	Guest editorial - Special issue on neural networks hardware implementations. <i>IEEE Transactions on Neural Networks</i> , 2003, 14, 976-979.	4.2	17
77	An Instant-Startup Jitter-Tolerant Manchester-Encoding Serializer/Deserializer Scheme for Event-Driven Bit-Serial LVDS Interchip AER Links. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2011, 58, 2647-2660.	5.4	17
78	A Real-Time, Event-Driven Neuromorphic System for Goal-Directed Attentional Selection. <i>Lecture Notes in Computer Science</i> , 2012, , 226-233.	1.3	17
79	7-decade tuning range CMOS OTA-C sinusoidal VCO. <i>Electronics Letters</i> , 1998, 34, 1621.	1.0	16
80	A Calibration Technique for Very Low Current and Compact Tunable Neuromorphic Cells: Application to 5-bit 20-nA DACs. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2008, 55, 522-526.	3.0	16
81	Active Perception With Dynamic Vision Sensors. Minimum Saccades With Optimum Recognition. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2018, 12, 927-939.	4.0	16
82	Event-driven implementation of deep spiking convolutional neural networks for supervised classification using the SpiNNaker neuromorphic platform. <i>Neural Networks</i> , 2020, 121, 319-328.	5.9	16
83	Inter-spike-intervals analysis of AER Poisson-like generator hardware. <i>Neurocomputing</i> , 2007, 70, 2692-2700.	5.9	15
84	Asynchronous Spiking Neurons, the Natural Key to Exploit Temporal Sparsity. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2019, 9, 668-678.	3.6	15
85	Digital Implementation of Oscillatory Neural Network for Image Recognition Applications. <i>Frontiers in Neuroscience</i> , 2021, 15, 713054.	2.8	15
86	Current-mode fully-programmable piece-wise-linear block for neuro-fuzzy applications. <i>Electronics Letters</i> , 2002, 38, 1165.	1.0	14
87	A $0.35\text{-}\mu\text{m}$ Wake-up Time ON-OFF Switchable LVDS Driver-Receiver Chip I/O Pad Pair for Rate-Dependent Power Saving in AER Bit-Serial Links. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2012, 6, 486-497.	4.0	14
88	Bio-Inspired Evolutionary Model of Spiking Neural Networks in Ionic Liquid Space. <i>Frontiers in Neuroscience</i> , 2019, 13, 1085.	2.8	14
89	Spike-Based Convolutional Network for Real-Time Processing. , 2010, , .		13
90	MOSFET mismatch in weak/moderate inversion: model needs and implications for analog design. , 0, , .		12

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91	Design of adaptive nano/CMOS neural architectures. , 2012, , .		12
92	Memristors fire away. Nature Electronics, 2018, 1, 100-101.	26.0	12
93	A Neuromorphic Digital Circuit for Neuronal Information Encoding Using Astrocytic Calcium Oscillations. Frontiers in Neuroscience, 2019, 13, 998.	2.8	12
94	Introduction and Analysis of an Event-Based Sign Language Dataset. , 2020, , .		12
95	Reliability Analysis of a Spiking Neural Network Hardware Accelerator. , 2022, , .		12
96	Event-driven sensing and processing for high-speed robotic vision. , 2014, , .		11
97	Hybrid Neural Network, An Efficient Low-Power Digital Hardware Implementation of Event-based Artificial Neural Network. , 2018, , .		11
98	Neuromorphic Low-Power Inference on Memristive Crossbars With On-Chip Offset Calibration. IEEE Access, 2021, 9, 38043-38061.	4.2	11
99	Fully digital AER convolution chip for vision processing. , 2008, , .		9
100	Improved contrast sensitivity DVS and its application to event-driven stereo vision. , 2013, , .		9
101	Spiking neuro-fuzzy clustering system and its memristor crossbar based implementation. Microelectronics Journal, 2014, 45, 1450-1462.	2.0	9
102	Fast Predictive Handshaking in Synchronous FPGAs for Fully Asynchronous Multisymbol Chip Links: Application to SpiNNaker 2-of-7 Links. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016, 63, 763-767.	3.0	9
103	Self-Testing Analog Spiking Neuron Circuit. , 2019, , .		9
104	Neutron-Induced, Single-Event Effects on Neuromorphic Event-Based Vision Sensor: A First Step and Tools to Space Applications. IEEE Access, 2021, 9, 85748-85763.	4.2	9
105	On an Efficient CAD Implementation of the Distance Term in Pelgrom's Mismatch Model. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2007, 26, 1534-1538.	2.7	8
106	Adaptive resonance theory microchips. Lecture Notes in Computer Science, 1999, , 737-746.	1.3	8
107	A Neuromorphic CMOS Circuit With Self-Repairing Capability. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 2246-2258.	11.3	7
108	A Low-Power Current Mode Fuzzy-ART Cell. IEEE Transactions on Neural Networks, 2006, 17, 1666-1673.	4.2	6

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109	LVDS interface for AER links with burst mode operation capability. , 2008, , .		6
110	On scalable spiking convnet hardware for cortex-like visual sensory processing systems. , 2010, , .		6
111	Enhanced Linearity in FD-SOI CMOS Body-Input Analog Circuits â€” Application to Voltage-Controlled Ring Oscillators and Frequency-Based Î” ADCs. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 3297-3308.	5.4	6
112	A CMOSâ€”memristor hybrid system for implementing stochastic binary spike timing-dependent plasticity. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, .	3.4	6
113	A signed spatial contrast event spike retina chip. , 2010, , .		5
114	Calibration of offset via bulk for low-power HfO ₂ based 1T1R memristive crossbar read-out system. Microelectronic Engineering, 2018, 198, 35-47.	2.4	5
115	Low-power hardware implementation of SNN with decision block for recognition tasks. , 2019, , .		5
116	SL-Animals-DVS: event-driven sign language animals dataset. Pattern Analysis and Applications, 0, , 1.	4.6	5
117	A Programmable VLSI Filter Architecture for Application in Real-Time Vision Processing Systems. International Journal of Neural Systems, 2000, 10, 179-190.	5.2	4
118	Event generators for address event representation transmitters. , 2005, 5839, 148.		4
119	High-speed character recognition system based on a complex hierarchical AER architecture. , 2008, , .		4
120	Voltage mode driver for low power transmission of high speed serial AER Links. , 2011, , .		4
121	An Address Event Representation-Based Processing System for a Biped Robot. International Journal of Advanced Robotic Systems, 2016, 13, 39.	2.1	4
122	Real-Time Temporal Frequency Detection in FPGA Using Event-Based Vision Sensor. , 2018, , .		4
123	Advanced Vision Processing Systems: Spike-Based Simulation and Processing. Lecture Notes in Computer Science, 2009, , 640-651.	1.3	4
124	A weak-to-strong inversion mismatch model for analog circuit design. Analog Integrated Circuits and Signal Processing, 2009, 59, 325-340.	1.4	3
125	A 1.5 ns OFF/ON Switching-Time Voltage-Mode LVDS Driver/Receiver Pair for Asynchronous AER Bit-Serial Chip Grid Links With Up to 40 Times Event-Rate Dependent Power Savings. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 722-731.	4.0	3
126	Event-driven stereo vision with orientation filters. , 2014, , .		3

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127	Generalized reconfigurable memristive dynamical system (MDS) for neuromorphic applications. <i>Frontiers in Neuroscience</i> , 2015, 9, 409.	2.8	3
128	Bipolar/CMOS current-source flip-flop for application in neuro-fuzzy systems. <i>Electronics Letters</i> , 1999, 35, 1326.	1.0	2
129	A digital pixel cell for address event representation image convolution processing. , 2005, , .		2
130	OTA-C oscillator with low frequency variations for on-chip clock generation in serial LVDS-AER links. , 2009, , .		2
131	A mismatch calibrated bipolar spatial contrast AER retina with adjustable contrast threshold. , 2009, , .		2
132	Confession session: Learning from others mistakes. , 2011, , .		2
133	Scene Context Classification with Event-Driven Spiking Deep Neural Networks. , 2018, , .		2
134	Performance Comparison of Time-Step-Driven versus Event-Driven Neural State Update Approaches in SpiNNaker. , 2018, , .		2
135	Digital-Signal-Processor Realization of Izhikevich Neural Network for Real-Time Interaction with Electrophysiology Experiments. , 2019, , .		2
136	Implementation of a tunable spiking neuron for STDP with memristors in FDSOI 28nm. , 2020, , .		2
137	Insights Into the Dynamics of Coupled VO ₂ Oscillators for ONNs. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2021, 68, 3356-3360.	3.0	2
138	Performance Study of Software AER-Based Convolutions on a Parallel Supercomputer. <i>Lecture Notes in Computer Science</i> , 2011, , 141-148.	1.3	2
139	Spike-Timing-Dependent-Plasticity with Memristors. , 2019, , 429-467.		2
140	CMOS Analog Neural Network Systems Based on Oscillatory Neurons. , 1994, , 199-247.		1
141	Event based vision sensing and processing. , 2008, , .		1
142	Spike-Timing-Dependent-Plasticity in Hybrid Memristive-CMOS Spiking Neuromorphic Systems. , 2014, , 353-377.		1
143	Spiking Hough for Shape Recognition. <i>Lecture Notes in Computer Science</i> , 2018, , 425-432.	1.3	1
144	Experimental Body-Input Three-Stage DC Offset Calibration Scheme for Memristive Crossbar. , 2020, , .		1

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145	System-level integration in neuromorphic co-processors. , 2020, , 479-497.		1
146	Novel programmable single pulse generator for producing pulse widths in different time scales. , 2021, , .		1
147	<title>A mismatch characterization and simulation environment for weak-to-strong inversion CMOS transistors</title>. , 2005, , .		1
148	Auxiliary Pulse-Extender and Current-Attenuator Circuits for Flexible Interaction with Memristive Crossbars in SNNs. , 2020, , .		1
149	Precise 90° quadrature current-controlled oscillator tunable between 50â€“130â€“MHz. Electronics Letters, 2003, 39, 823.	1.0	0
150	A calibration scheme for subthreshold current mode circuits. , 2005, , .		0
151	AER synthetic generation in hardware for bio-inspired spiking systems. , 2005, , .		0
152	A Bio-inspired Event-Based Real-Time Image Processor. , 0, , .		0
153	Compact calibration circuit for large neuromorphic arrays. , 2008, , .		0
154	Neocortical frame-free vision sensing and processing through scalable Spiking ConvNet hardware. , 2010, , .		0
155	Live demonstration: Event-driven sensing and processing for high-speed robotic vision. , 2014, , .		0
156	Bulk-based DC offset calibration for low-power memristor array read-out system. , 2017, , .		0
157	Learning weights with STDP to build prototype images for classification. , 2019, , .		0
158	Lessons Learned the Hard Way. , 2020, , .		0
159	A Real-Time DSP-Based Biohybrid MEA System for Seizure Detection In Vitro. , 2021, , .		0
160	Baseline Features Extraction from Microelectrode Array Recordings in an in vitro model of Acute Seizures using Digital Signal Processing for Electronic Implementation. , 2021, , .		0
161	A Current-Attenuator for Performing Read Operation in Memristor-Based Spiking Neural Networks. , 2020, , .		0
162	Neuromorphic Sensors, Vision. , 2022, , 2340-2344.		0