Angel Jimenez-Fernandez

List of Publications by Year
in descending order

71 papers	**877** citations	759055 **12** h-index	580701 **25** g-index
76 all docs	**76** docs citations	**76** times ranked	**775** citing authors

#	Article	IF	Citations
1	Deep Neural Networks for the Recognition and Classification of Heart Murmurs Using Neuromorphic Auditory Sensors. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 24-34.	2.7	115
2	A Neuro-Inspired Spike-Based PID Motor Controller for Multi-Motor Robots with Low Cost FPGAs. Sensors, 2012, 12, 3831-3856.	2.1	70
3	A Binaural Neuromorphic Auditory Sensor for FPGA: A Spike Signal Processing Approach. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 804-818.	7.2	63
4	Neuro-Inspired Spike-Based Motion: From Dynamic Vision Sensor to Robot Motor Open-Loop Control through Spike-VITE. Sensors, 2013, 13, 15805-15832.	2.1	51
5	Wireless Sensor Network for Wildlife Tracking and Behavior Classification of Animals in DoÃ±ana. IEEE Communications Letters, 2016, 20, 2534-2537.	2.5	51
6	Embedded neural network for real-time animal behavior classification. Neurocomputing, 2018, 272, 17-26.	3.5	40
7	Deep Spiking Neural Network model for time-variant signals classification: a real-time speech recognition approach. , 2018, , .		35
8	Neuropod: A real-time neuromorphic spiking CPG applied to robotics. Neurocomputing, 2020, 381, 10-19.	3.5	35
9	An AER handshake-less modular infrastructure PCB with x8 2.5Gbps LVDS serial links. , 2014, , .		23
10	Building blocks for spikes signals processing. , 2010, , .		21
11	Using FPGA for visuo-motor control with a silicon retina and a humanoid robot. , 2007, , .		20
12	Bio-Inspired Stereo Vision Calibration for Dynamic Vision Sensors. IEEE Access, 2019, 7, 138415-138425.	2.6	20
13	Wildlife Monitoring on the Edge: A Performance Evaluation of Embedded Neural Networks on Microcontrollers for Animal Behavior Classification. Sensors, 2021, 21, 2975.	2.1	16
14	Multilayer Spiking Neural Network for Audio Samples Classification Using SpiNNaker. Lecture Notes in Computer Science, 2016, , 45-53.	1.0	16
15	Real-time neuro-inspired sound source localization and tracking architecture applied to a robotic platform. Neurocomputing, 2018, 283, 129-139.	3.5	15
16	Neuromorphic Sensory Integration for Combining Sound Source Localization and Collision Avoidance. , 2019, , .		14
17	Performance Evaluation of Deep Learning-Based Prostate Cancer Screening Methods in Histopathological Images: Measuring the Impact of the Modelâ€™s Complexity on Its Processing Speed. Sensors, 2021, 21, 1122.	2.1	13
18	Case study: Bio-inspired self-adaptive strategy for spike-based PID controller. , 2015, , .		12

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19	ED-BioRob: A Neuromorphic Robotic Arm With FPGA-Based Infrastructure for Bio-Inspired Spiking Motor Controllers. Frontiers in Neurorobotics, 2020, 14, 590163.	1.6	12
20	A spiking neural network for real-time Spanish vowel phonemes recognition. Neurocomputing, 2017, 226, 249-261.	3.5	11
21	Stereo Matching in Address-Event-Representation (AER) Bio-Inspired Binocular Systems in a Field-Programmable Gate Array (FPGA). Electronics (Switzerland), 2019, 8, 410.	1.8	11
22	Event-Based Gesture Recognition through a Hierarchy of Time-Surfaces for FPGA. Sensors, 2020, 20, 3404.	2.1	11
23	NAVIS: Neuromorphic Auditory VISualizer Tool. Neurocomputing, 2017, 237, 418-422.	3.5	10
24	Neuromorphic LIF Row-by-Row Multi-convolution Processor for FPGA. IEEE Transactions on Biomedical Circuits and Systems, 2018, 13, 1-1.	2.7	10
25	AER-based robotic closed-loop control system. , 2008, , .		9
26	Wide & Deep neural network model for patch aggregation in CNN-based prostate cancer detection systems. Computers in Biology and Medicine, 2021, 136, 104743.	3.9	9
27	Synthetic retina for AER systems development. , 2009, , .		8
28	A SpiNNaker Application: Design, Implementation and Validation of SCPGs. Lecture Notes in Computer Science, 2017, , 548-559.	1.0	8
29	An Approach to Distance Estimation with Stereo Vision Using Address-Event-Representation. Lecture Notes in Computer Science, 2011, , 190-198.	1.0	8
30	AER and dynamic systems co-simulation over Simulink with Xilinx System Generator. , 2008, , .		7
31	Neuro-inspired system for real-time vision sensor tilt correction. , 2010, , .		7
32	Performance evaluation over HW/SW co-design SoC memory transfers for a CNN accelerator. , 2018, , .		7
33	Musical notes classification with neuromorphic auditory system using FPGA and a convolutional spiking network. , 2015, , .		6
34	System based on inertial sensors for behavioral monitoring of wildlife. , 2015, , .		6
35	On the Designing of Spikes Band-Pass Filters for FPGA. Lecture Notes in Computer Science, 2011, , 389-396.	1.0	6
36	Live demonstration: On the distance estimation of moving targets with a Stereo-Vision AER system. , 2012, , .		5

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37	Spike-based VITE control with dynamic vision sensor applied to an arm robot. , 2014, , .		5
38	Live Demonstration: Neuromorphic Sensory Integration for Combining Sound Source Localization and Collision Avoidance. , 2020, , .		5
39	An Event-Based Digital Time Difference Encoder Model Implementation for Neuromorphic Systems. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 1959-1973.	7.2	5
40	Spike-based control monitoring and analysis with Address Event Representation. , 2009, , .		4
41	Live demonstration: Real-time motor rotation frequency detection by spike-based visual and auditory AER sensory integration for FPGA. , 2015, , .		4
42	Sound Recognition System Using Spiking and MLP Neural Networks. Lecture Notes in Computer Science, 2016, , 363-371.	1.0	4
43	A 20Mevps/32Mev event-based USB framework for neuromorphic systems debugging. , 2016, , .		4
44	Real-time detection of bursts in neuronal cultures using a neuromorphic auditory sensor and spiking neural networks. Neurocomputing, 2021, 449, 422-434.	3.5	4
45	Simulating Building Blocks for Spikes Signals Processing. Lecture Notes in Computer Science, 2011, , 548-556.	1.0	4
46	Towards AER VITE: Building spike gate signal. , 2012, , .		3
47	Real-time motor rotation frequency detection with event-based visual and spike-based auditory AER sensory integration for FPGA. , 2015, , .		3
48	ED-Scorbot: A robotic test-bed framework for FPGA-based neuromorphic systems. , 2016, , .		3
49	Live Demonstration: Neuromorphic Robotics, from Audio to Locomotion Through Spiking CPG on SpiNNaker. , 2019, , .		3
50	LVDS Serial AER Link performance. , 2007, , .		2
51	Image convolution using a probabilistic mapper on USB-AER board. , 2008, , .		2
52	From Vision Sensor to Actuators, Spike Based Robot Control through Address-Event-Representation. Lecture Notes in Computer Science, 2009, , 797-804.	1.0	2
53	Live demonstration: Neuro-inspired system for realtime vision tilt correction. , 2010, , .		2
54	Semi-wildlife gait patterns classification using statistical methods and Artificial Neural Networks. , 2017, , .		2

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55	Event-based Row-by-Row Multi-convolution engine for Dynamic-Vision Feature Extraction on FPGA. , 2018, , .		2
56	On the AER Stereo-Vision Processing: A Spike Approach to Epipolar Matching. Lecture Notes in Computer Science, 2013, , 267-275.	1.0	2
57	Performance Study of Software AER-Based Convolutions on a Parallel Supercomputer. Lecture Notes in Computer Science, 2011, , 141-148.	1.0	2
58	An AER-Based Actuator Interface for Controlling an Anthropomorphic Robotic Hand. Lecture Notes in Computer Science, 2007, , 479-489.	1.0	2
59	Towards the Neuromorphic Implementation of the Auditory Perception in the iCub Robotic Platform. , 2022, , .		2
60	Spike Processing on an Embedded Multi-task Computer: Image Reconstruction. , 2007, , .		1
61	Address-event-based platform for bioinspired spiking systems. , 2007, , .		1
62	Live demonstration â€" Multilayer spiking neural network for audio samples classification using SpiNNaker. , 2017, , .		1
63	Live Demonstration: Neuromorphic Row-by-Row Multi-Convolution FPGA Processor-SpiNNaker Architecture for Dynamic-Vision Feature Extraction. , 2019, , .		1
64	Neuronal Specialization for Fine-Grained Distance Estimation Using a Real-Time Bio-Inspired Stereo Vision System. Electronics (Switzerland), 2019, 8, 1502.	1.8	1
65	SVITE: A Spike-Based VITE Neuro-Inspired Robot Controller. Lecture Notes in Computer Science, 2013, , 276-283.	1.0	1
66	A FPGA Spike-Based Robot Controlled with Neuro-inspired VITE. Lecture Notes in Computer Science, 2013, , 299-308.	1.0	1
67	A neuromorphic approach of the sound source localization task in real-time embedded systems. , 2019, , .		1
68	Live Demonstration: Real-time neuro-inspired sound source localization and tracking architecture applied to a robotic platform. , 2018, , .		0
69	Accuracy Improvement of Neural Networks Through Self-Organizing-Maps over Training Datasets. Lecture Notes in Computer Science, 2017, , 520-531.	1.0	0
70	A Protocol Generator Tool for Automatic In-Vitro HPV Robotic Analysis. Advances in Intelligent Systems and Computing, 2018, , 580-591.	0.5	0
71	Multi-task Implementation for Image Reconstruction of an AER Communication. , 2007, , 717-724.		0