Sio-HoÃ¯ Ieng

List of Publications by Year
in descending order

48 papers	1,743 citations	304368 22 h-index	276539 41 g-index
49 all docs	49 docs citations	49 times ranked	1260 citing authors

#	Article	IF	Citations
1	Real-time high speed motion prediction using fast aperture-robust event-driven visual flow. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 44, 1-1.	9.7	19
2	A homeostatic gain control mechanism to improve event-driven object recognition. , 2021, , .		4
3	Optical flow estimation using the Fisherâ€“Rao metric. Neuromorphic Computing and Engineering, 2021, 1, 024004.	2.8	1
4	Event-Based Face Detection and Tracking Using the Dynamics of Eye Blinks. Frontiers in Neuroscience, 2020, 14, 587.	1.4	18
5	Event-Based Gesture Recognition With Dynamic Background Suppression Using Smartphone Computational Capabilities. Frontiers in Neuroscience, 2020, 14, 275.	1.4	24
6	A Theory for Sparse Event-Based Closed Loop Control. Frontiers in Neuroscience, 2019, 13, 827.	1.4	2
7	Cortical astrocytes develop in a plastic manner at both clonal and cellular levels. Nature Communications, 2019, 10, 4884.	5.8	87
8	Asynchronous Event-Based Motion Processing: From Visual Events to Probabilistic Sensory Representation. Neural Computation, 2019, 31, 1114-1138.	1.3	5
9	A Spiking Neural Network Model of Depth from Defocus for Event-based Neuromorphic Vision. Scientific Reports, 2019, 9, 3744.	1.6	27
10	Event-Based Line Fitting and Segment Detection Using a Neuromorphic Visual Sensor. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 1218-1230.	7.2	12
11	Sepia, Tarsier, and Chameleon: A Modular C++ Framework for Event-Based Computer Vision. Frontiers in Neuroscience, 2019, 13, 1338.	1.4	2
12	Event-Driven Stereo Visual Tracking Algorithm to Solve Object Occlusion. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 4223-4237.	7.2	34
13	Effects of Cooling on the SNR and Contrast Detection of a Low-Light Event-Based Camera. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 1467-1474.	2.7	7
14	Neuromorphic Event-Based Generalized Time-Based Stereovision. Frontiers in Neuroscience, 2018, 12, 442.	1.4	19
15	Event-Based Color Segmentation With a High Dynamic Range Sensor. Frontiers in Neuroscience, 2018, 12, 135.	1.4	9
16	Complexity Analysis of Iterative Basis Transformations Applied to Event-Based Signals. Frontiers in Neuroscience, 2018, 12, 373.	1.4	2
17	A spiking neural network model of 3D perception for event-based neuromorphic stereo vision systems. Scientific Reports, 2017, 7, 40703.	1.6	45
18	Asynchronous Event-Based Fourier Analysis. IEEE Transactions on Image Processing, 2017, 26, 2192-2202.	6.0	12

#	Article	IF	Citations
19	An Event-Based Solution to the Perspective-n-Point Problem. Frontiers in Neuroscience, 2016, 10, 208.	1.4	5
20	Event-Based Tone Mapping for Asynchronous Time-Based Image Sensor. Frontiers in Neuroscience, 2016, 10, 391.	1.4	7
21	Event-Based 3D Motion Flow Estimation Using 4D Spatio Temporal Subspaces Properties. Frontiers in Neuroscience, 2016, 10, 596.	1.4	5
22	Spatiotemporal features for asynchronous event-based data. Frontiers in Neuroscience, 2015, 9, 46.	1.4	34
23	Asynchronous Event-Based Multikernel Algorithm for High-Speed Visual Features Tracking. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 1710-1720.	7.2	113
24	Asynchronous event-based corner detection and matching. Neural Networks, 2015, 66, 91-106.	3.3	79
25	Visual Tracking Using Neuromorphic Asynchronous Event-Based Cameras. Neural Computation, 2015, 27, 925-953.	1.3	50
26	An Asynchronous Neuromorphic Event-Driven Visual Part-Based Shape Tracking. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 3045-3059.	7.2	42
27	Toward an Autonomous Sailing Boat. IEEE Journal of Oceanic Engineering, 2015, 40, 397-407.	2.1	44
28	Neuromorphic Event-Based 3D Pose Estimation. Frontiers in Neuroscience, 2015, 9, 522.	1.4	17
29	Asynchronous visual event-based time-to-contact. Frontiers in Neuroscience, 2014, 8, 9.	1.4	31
30	Live demonstration: Neuromorphic event-based multi-kernel algorithm for high speed visual features tracking. , 2014, , .		0
31	Asynchronous Neuromorphic Event-Driven Image Filtering. Proceedings of the IEEE, 2014, 102, 1485-1499.	16.4	24
32	Event-Based Visual Flow. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 407-417.	7.2	248
33	Multiplex Cell and Lineage Tracking with Combinatorial Labels. Neuron, 2014, 81, 505-520.	3.8	142
34	Plenoptic cameras in real-time robotics. International Journal of Robotics Research, 2013, 32, 206-217.	5.8	55
35	Event-based 3D reconstruction from neuromorphic retinas. Neural Networks, 2013, 45, 27-38.	3.3	47
36	Event-based features for robotic vision. , 2013, , .		5

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37	Artificial retina: the multichannel processing of the mammalian retina achieved with a neuromorphic asynchronous light acquisition device. Journal of Neural Engineering, 2012, 9, 066004.	1.8	46
38	A Fisher-Rao Metric for Paracatadioptric Images of Lines. International Journal of Computer Vision, 2012, 99, 147-165.	10.9	8
39	Asynchronous eventâ€based high speed vision for microparticle tracking. Journal of Microscopy, 2012, 245, 236-244.	0.8	76
40	Asynchronous frameless event-based optical flow. Neural Networks, 2012, 27, 32-37.	3.3	160
41	Asynchronous Event-Based Binocular Stereo Matching. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 347-353.	7.2	126
42	Asynchronous Event-Based Hebbian Epipolar Geometry. IEEE Transactions on Neural Networks, 2011, 22, 1723-1734.	4.8	42
43	OBSTACLE DETECTION USING INTEGRATION OF OMNI-DIRECTIONAL CAMERA AND INERTIAL SENSOR. , 2011, , .		0
44	Auto-organized visual perception using distributed camera network. Robotics and Autonomous Systems, 2009, 57, 1075-1082.	3.0	1
45	Using structures to synchronize cameras of robots swarms. , 2008, , .		1
46	Shapes to synchronize camera networks. , 2008, , .		2
47	Designing non constant resolution vision sensors via photosites rearrangement. , 2008, , .		0
48	Geometric construction of the caustic curves for catadioptric sensors. , 0, , .		0