

# Piotr Dudek

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

49  
papers

569  
citations

10  
h-index

22  
g-index

60  
ext. papers

761  
ext. citations

4.3  
avg, IF

4.17  
L-index

#	Paper	IF	Citations
49	Compact silicon neuron circuit with spiking and bursting behaviour. <i>Neural Networks</i> , <b>2008</b> , 21, 524-34	9.1	201
48	A Fast Self-Tuning Background Subtraction Algorithm <b>2014</b> ,		52
47	A SIMD Cellular Processor Array Vision Chip With Asynchronous Processing Capabilities. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2011</b> , 58, 2420-2431	3.9	45
46	VLSI circuits implementing computational models of neocortical circuits. <i>Journal of Neuroscience Methods</i> , <b>2012</b> , 210, 93-109	3	25
45	Gradient-descent-based learning in memristive crossbar arrays <b>2015</b> ,		15
44	Integrated circuit implementation of a cortical neuron <b>2008</b> ,		15
43	Asynchronous cellular logic network as a co-processor for a general-purpose massively parallel array. <i>International Journal of Circuit Theory and Applications</i> , <b>2011</b> , 39, 963-972	2	14
42	Tunable CMOS Delay Gate With Improved Matching Properties. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2014</b> , 61, 2586-2595	3.9	13
41	A CMOS circuit implementation of a spiking neuron with bursting and adaptation on a biological timescale <b>2009</b> ,		12
40	Mixed signal SIMD processor array vision chip for real-time image processing. <i>Analog Integrated Circuits and Signal Processing</i> , <b>2013</b> , 77, 385-399	1.2	11
39	Tracking control of a UAV with a parallel visual processor <b>2017</b> ,		10
38	ASPA: Focal Plane digital processor array with asynchronous processing capabilities <b>2008</b> ,		9
37	Simple Analogue VLSI Circuit of a Cortical Neuron <b>2006</b> ,		9
36	Visual Odometry for Pixel Processor Arrays <b>2017</b> ,		8
35	Hardware Implementation of Skeletonization Algorithm for Parallel Asynchronous Image Processing. <i>Journal of Signal Processing Systems</i> , <b>2009</b> , 56, 91-103	1.4	8
34	A pixel-parallel cellular processor array in a stacked three-layer 3D silicon-on-insulator technology <b>2009</b> ,		8
33	Real-Time Depth From Focus on a Programmable Focal Plane Processor. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2018</b> , 65, 925-934	3.9	7

32	Parallel HDR tone mapping and auto-focus on a cellular processor array vision chip <b>2016,</b>	7
31	A Cellular Active Contours Algorithm Based on Region Evolution <b>2006,</b>	7
30	Global operations in SIMD cellular processor arrays employing functional asynchronism <b>2006,</b>	7
29	The accuracy and scalability of continuous-time Bayesian inference in analogue CMOS circuits <b>2014,</b>	6
28	An 8080 general-purpose digital vision chip in 0.18 $\mu$ m CMOS technology <b>2010,</b>	6
27	Evolution of Pixel Level Snakes towards an efficient hardware implementation <b>2007,</b>	6
26	Autonomous long distance transfer on SIMD cellular processor arrays <b>2010,</b>	5
25	A processor element for a mixed signal cellular processor array vision chip <b>2011,</b>	5
24	Trigger-wave collision detecting asynchronous cellular logic array for fast image skeletonization <b>2012,</b>	5
23	High-speed depth from focus on a programmable vision chip using a focus tunable lens <b>2017,</b>	4
22	AMBER: Adapting multi-resolution background extractor <b>2013,</b>	4
21	Toward joint approximate inference of visual quantities on cellular processor arrays <b>2015,</b>	4
20	A new method for fast skeletonization of binary images on cellular processor arrays <b>2014,</b>	3
19	A compact FPGA implementation of a bit-serial SIMD cellular processor array <b>2012,</b>	3
18	Demonstration of real-time image processing on the SCAMP-3 vision system <b>2006,</b>	3
17	Perspective Correcting Visual Odometry for Agile MAVs using a Pixel Processor Array <b>2018,</b>	3
16	A Demonstration of Tracking using Dynamic Neural Fields on a Programmable Vision Chip <b>2016,</b>	2
15	A general-purpose vision processor with 16080 pixel-parallel SIMD processor array <b>2013,</b>	2

14	Mixed signal SIMD cellular processor array vision chip operating at 30,000 fps <b>2012</b> ,		2
13	Architecture and design of a programmable 3D-integrated cellular processor array for image processing <b>2011</b> ,		2
12	Implementing the grayscale wave metric on a cellular array processor chip <b>2008</b> ,		2
11	Proximity Estimation Using Vision Features Computed On Sensor <b>2020</b> ,		2
10	Visual Odometry Using Pixel Processor Arrays for Unmanned Aerial Systems in GPS Denied Environments. <i>Frontiers in Robotics and AI</i> , <b>2020</b> , 7, 126	2.8	2
9	An event-driven massively parallel fine-grained processor array <b>2015</b> ,		1
8	Practical gradient-descent for memristive crossbars <b>2015</b> ,		1
7	Trigger-Wave Asynchronous Cellular Logic Array for Fast Binary Image Processing. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2015</b> , 62, 497-506	3.9	1
6	Characterization of processing errors on analog fully-programmable cellular sensor-processor arrays <b>2014</b> ,		1
5	Low power multiple object tracking and counting using a SCAMP cellular processor array <b>2012</b> ,		1
4	Coarse grain mapping method for image processing on fine grain cellular processor arrays <b>2012</b> ,		1
3	Analogue CMOS circuit implementation of a dopamine modulated synapse <b>2011</b> ,		1
2	Heterogeneous neurons and plastic synapses in a reconfigurable cortical neural network IC <b>2012</b> ,		1
1	Agile reactive navigation for a non-holonomic mobile robot using a pixel processor array. <i>IET Image Processing</i> , <b>2021</b> , 15, 1883-1892	1.7	0