

Piotr Dudek

List of Publications by Year in Descending Order

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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 | Agile reactive navigation for a non-holonomic mobile robot using a pixel processor array. <i>IET Image Processing</i> , 2021 , 15, 1883-1892 | 1.7 | 0 |
| 48 | Proximity Estimation Using Vision Features Computed On Sensor 2020 , | | 2 |
| 47 | Visual Odometry Using Pixel Processor Arrays for Unmanned Aerial Systems in GPS Denied Environments. <i>Frontiers in Robotics and AI</i> , 2020 , 7, 126 | 2.8 | 2 |
| 46 | Real-Time Depth From Focus on a Programmable Focal Plane Processor. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2018 , 65, 925-934 | 3.9 | 7 |
| 45 | Perspective Correcting Visual Odometry for Agile MAVs using a Pixel Processor Array 2018 , | | 3 |
| 44 | High-speed depth from focus on a programmable vision chip using a focus tunable lens 2017 , | | 4 |
| 43 | Visual Odometry for Pixel Processor Arrays 2017 , | | 8 |
| 42 | Tracking control of a UAV with a parallel visual processor 2017 , | | 10 |
| 41 | A Demonstration of Tracking using Dynamic Neural Fields on a Programmable Vision Chip 2016 , | | 2 |
| 40 | Parallel HDR tone mapping and auto-focus on a cellular processor array vision chip 2016 , | | 7 |
| 39 | Gradient-descent-based learning in memristive crossbar arrays 2015 , | | 15 |
| 38 | An event-driven massively parallel fine-grained processor array 2015 , | | 1 |
| 37 | Toward joint approximate inference of visual quantities on cellular processor arrays 2015 , | | 4 |
| 36 | Practical gradient-descent for memristive crossbars 2015 , | | 1 |
| 35 | Trigger-Wave Asynchronous Cellular Logic Array for Fast Binary Image Processing. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2015 , 62, 497-506 | 3.9 | 1 |
| 34 | A new method for fast skeletonization of binary images on cellular processor arrays 2014 , | | 3 |
| 33 | A Fast Self-Tuning Background Subtraction Algorithm 2014 , | | 52 |

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|----|---|-----|----|
| 32 | Tunable CMOS Delay Gate With Improved Matching Properties. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2014 , 61, 2586-2595 | 3.9 | 13 |
| 31 | The accuracy and scalability of continuous-time Bayesian inference in analogue CMOS circuits 2014 , | | 6 |
| 30 | Characterization of processing errors on analog fully-programmable cellular sensor-processor arrays 2014 , | | 1 |
| 29 | Mixed signal SIMD processor array vision chip for real-time image processing. <i>Analog Integrated Circuits and Signal Processing</i> , 2013 , 77, 385-399 | 1.2 | 11 |
| 28 | A general-purpose vision processor with 16080 pixel-parallel SIMD processor array 2013 , | | 2 |
| 27 | AMBER: Adapting multi-resolution background extractor 2013 , | | 4 |
| 26 | Mixed signal SIMD cellular processor array vision chip operating at 30,000 fps 2012 , | | 2 |
| 25 | VLSI circuits implementing computational models of neocortical circuits. <i>Journal of Neuroscience Methods</i> , 2012 , 210, 93-109 | 3 | 25 |
| 24 | A compact FPGA implementation of a bit-serial SIMD cellular processor array 2012 , | | 3 |
| 23 | Low power multiple object tracking and counting using a SCAMP cellular processor array 2012 , | | 1 |
| 22 | Coarse grain mapping method for image processing on fine grain cellular processor arrays 2012 , | | 1 |
| 21 | Trigger-wave collision detecting asynchronous cellular logic array for fast image skeletonization 2012 , | | 5 |
| 20 | Heterogeneous neurons and plastic synapses in a reconfigurable cortical neural network IC 2012 , | | 1 |
| 19 | A SIMD Cellular Processor Array Vision Chip With Asynchronous Processing Capabilities. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2011 , 58, 2420-2431 | 3.9 | 45 |
| 18 | Asynchronous cellular logic network as a co-processor for a general-purpose massively parallel array. <i>International Journal of Circuit Theory and Applications</i> , 2011 , 39, 963-972 | 2 | 14 |
| 17 | Architecture and design of a programmable 3D-integrated cellular processor array for image processing 2011 , | | 2 |
| 16 | Analogue CMOS circuit implementation of a dopamine modulated synapse 2011 , | | 1 |
| 15 | A processor element for a mixed signal cellular processor array vision chip 2011 , | | 5 |

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|----|---|-----|-----|
| 14 | An 8080 general-purpose digital vision chip in 0.18 μ m CMOS technology 2010 , | | 6 |
| 13 | Autonomous long distance transfer on SIMD cellular processor arrays 2010 , | | 5 |
| 12 | Hardware Implementation of Skeletonization Algorithm for Parallel Asynchronous Image Processing. <i>Journal of Signal Processing Systems</i> , 2009 , 56, 91-103 | 1.4 | 8 |
| 11 | A CMOS circuit implementation of a spiking neuron with bursting and adaptation on a biological timescale 2009 , | | 12 |
| 10 | A pixel-parallel cellular processor array in a stacked three-layer 3D silicon-on-insulator technology 2009 , | | 8 |
| 9 | ASPA: Focal Plane digital processor array with asynchronous processing capabilities 2008 , | | 9 |
| 8 | Implementing the grayscale wave metric on a cellular array processor chip 2008 , | | 2 |
| 7 | Integrated circuit implementation of a cortical neuron 2008 , | | 15 |
| 6 | Compact silicon neuron circuit with spiking and bursting behaviour. <i>Neural Networks</i> , 2008 , 21, 524-34 | 9.1 | 201 |
| 5 | Evolution of Pixel Level Snakes towards an efficient hardware implementation 2007 , | | 6 |
| 4 | Simple Analogue VLSI Circuit of a Cortical Neuron 2006 , | | 9 |
| 3 | A Cellular Active Contours Algorithm Based on Region Evolution 2006 , | | 7 |
| 2 | Demonstration of real-time image processing on the SCAMP-3 vision system 2006 , | | 3 |
| 1 | Global operations in SIMD cellular processor arrays employing functional asynchronism 2006 , | | 7 |