Guillermo Gallego

List of Publications by Year
in descending order

56 papers	3,459 citations	394421 19 h-index	477307 29 g-index
58 all docs	58 docs citations	58 times ranked	1476 citing authors

#	Article	IF	Citations
1	Event-Based Motion Segmentation With Spatio-Temporal Graph Cuts. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 4868-4880.	11.3	21
2	Event-Based Vision: A Survey. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 154-180.	13.9	671
3	Event Collapse in Contrast Maximization Frameworks. Sensors, 2022, 22, 5190.	3.8	14
4	A Scheme for Optical Reservoir Computers with Atomic Memory. , 2021, , .		0
5	Event-Based Stereo Visual Odometry. IEEE Transactions on Robotics, 2021, 37, 1433-1450.	10.3	82
6	The Spatio-Temporal Poisson Point Process: A Simple Model for the Alignment of Event Camera Data. , 2021, , .		11
7	ESL: Event-based Structured Light. , 2021, , .		13
8	EKLT: Asynchronous Photometric Feature Tracking Using Events and Frames. International Journal of Computer Vision, 2020, 128, 601-618.	15.6	86
9	Event-based, Direct Camera Tracking from a Photometric 3D Map using Nonlinear Optimization. , 2019, , .		42
10	Event-Based Motion Segmentation by Motion Compensation. , 2019, , .		84
11	Focus Is All You Need: Loss Functions for Event-Based Vision. , 2019, , .		69
12	Event-Based, 6-DOF Camera Tracking from Photometric Depth Maps. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 2402-2412.	13.9	109
13	EMVS: Event-Based Multi-View Stereo—3D Reconstruction with an Event Camera in Real-Time. International Journal of Computer Vision, 2018, 126, 1394-1414.	15.6	134
14	A Unifying Contrast Maximization Framework for Event Cameras, with Applications to Motion, Depth, and Optical Flow Estimation. , 2018, , .		180
15	Event-Based Vision Meets Deep Learning on Steering Prediction for Self-Driving Cars. , 2018, , .		285
16	On the Comparison of Gauge Freedom Handling in Optimization-Based Visual-Inertial State Estimation. IEEE Robotics and Automation Letters, 2018, 3, 2710-2717.	5.1	10
17	Continuous-Time Visual-Inertial Odometry for Event Cameras. IEEE Transactions on Robotics, 2018, 34, 1425-1440.	10.3	91
18	Semi-dense 3D Reconstruction with a Stereo Event Camera. Lecture Notes in Computer Science, 2018, , 242-258.	1.3	69

#	Article	IF	Citations
19	Asynchronous, Photometric Feature Tracking Using Events and Frames. Lecture Notes in Computer Science, 2018, , 766-781.	1.3	69
20	EVO: A Geometric Approach to Event-Based 6-DOF Parallel Tracking and Mapping in Real Time. IEEE Robotics and Automation Letters, 2017, 2, 593-600.	5.1	210
21	The event-camera dataset and simulator: Event-based data for pose estimation, visual odometry, and SLAM. International Journal of Robotics Research, 2017, 36, 142-149.	8.5	357
22	Accurate Angular Velocity Estimation With an Event Camera. IEEE Robotics and Automation Letters, 2017, 2, 632-639.	5.1	96
23	Augmented Reality Tool for the Situational Awareness Improvement of UAV Operators. Sensors, 2017, 17, 297.	3.8	26
24	Low-latency visual odometry using event-based feature tracks. , 2016, , .		107
25	Feature detection and tracking with the dynamic and active-pixel vision sensor (DAVIS). , 2016, , .		60
26	Optimal Piecewise Linear Function Approximation for GPU-Based Applications. IEEE Transactions on Cybernetics, 2016, 46, 2584-2595.	9.5	16
27	EMVS: Event-based Multi-View Stereo. , 2016, , .		25
28	Real-time surveillance application by multiple detectors and compressive trackers. , 2015, , .		0
29	Lifetime estimation of events from Dynamic Vision Sensors. , 2015, , .		70
30	Robust image registration with global intensity transformation. , 2015, , .		2
31	A Compact Formula for the Derivative of a 3-D Rotation in Exponential Coordinates. Journal of Mathematical Imaging and Vision, 2015, 51, 378-384.	1.3	57
32	Joint 4-D Variational Stereo Reconstruction and Camera Calibration Refinement for Oceanic Sea State Measurements. , 2014, , .		0
33	Aerial video georegistration using terrain models from dense and coherent stereo matching. , 2014, , .		3
34	Autocalibration with the Minimum Number of Cameras with Known Pixel Shape. Journal of Mathematical Imaging and Vision, 2014, 50, 179-198.	1.3	0
35	Optimal Polygonal <formula formulatype="inline"> <tex Notation="TeX">L_{1}</tex></formula> Linearization and Fast Interpolation of Nonlinear Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 3225-3234.	5.4	4
36	A Case Study of Geometric Modelling via 3-D Point Interpolation for the Bathymetry of the Rabasa Lakes (Alicante, Spain). Lecture Notes in Earth System Sciences, 2014, , 503-506.	0.6	1

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37	Variational Stereo Imaging of Oceanic Waves With Statistical Constraints. IEEE Transactions on Image Processing, 2013, 22, 4211-4223.	9.8	6
38	Space–time measurements of oceanic sea states. Ocean Modelling, 2013, 70, 103-115.	2.4	71
39	On the Mahalanobis Distance Classification Criterion for Multidimensional Normal Distributions. IEEE Transactions on Signal Processing, 2013, 61, 4387-4396.	5.3	54
40	Two Variational Stereo Methods for Space-Time Measurements of Ocean Waves. , 2013, , .		0
41	Improving 3-D Variational Stereo Reconstruction of Oceanic Sea States by Camera Calibration Refinement. , 2013, , .		0
42	Directional geodesic active contours. , 2012, , .		3
43	Offshore stereo measurements of gravity waves. Coastal Engineering, 2012, 64, 127-138.	4.0	102
44	Euler characteristics of oceanic sea states. Mathematics and Computers in Simulation, 2012, 82, 1102-1111.	4.4	19
45	Weak Statistical Constraints for Variational Stereo Imaging of Oceanic Waves. Lecture Notes in Computer Science, 2012, , 520-531.	1.3	2
46	A Variational Wave Acquisition Stereo System for the 3-D Reconstruction of Oceanic Sea States. , 2011, , .		1
47	A Variational Stereo Method for the Three-Dimensional Reconstruction of Ocean Waves. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 4445-4457.	6.3	46
48	In-loop feature tracking for structure and motion with out-of-core optimization. , 2010, , .		0
49	Beyond Waves and Spectra: Euler Characteristics of Oceanic Sea States. , 2009, , .		2
50	Line Geometry and Camera Autocalibration. Journal of Mathematical Imaging and Vision, 2008, 32, 193-214.	1.3	17
51	Wave Statistics and Spectra via a Variational Wave Acquisition Stereo System. , 2008, , .		13
52	Recursive Camera Autocalibration with the Kalman Filter. , 2007, , .		2
53	The Absolute Line Quadric and Camera Autocalibration. International Journal of Computer Vision, 2006, 66, 283-303.	15.6	16
54	Camera autocalibration using Plucker coordinates. , 2005, , .		3

#	Article	IF	Citations
55	Linear camera autocalibration with varying parameters. , 0, , .		2
56	Continuous-Time Trajectory Estimation for Event-based Vision Sensors. , 0, , .		25