JosÃ© MarÃ-a MartÃ-nez Montiel

List of Publications by Year
in descending order

63	10,666	279701	330025
papers	citations	23 h-index	37 g-index

65	65	65	5910
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	ORB-SLAM: A Versatile and Accurate Monocular SLAM System. IEEE Transactions on Robotics, 2015, 31, 1147-1163.	7.3	4,585
2	ORB-SLAM3: An Accurate Open-Source Library for Visual, Visualâ€“Inertial, and Multimap SLAM. IEEE Transactions on Robotics, 2021, 37, 1874-1890.	7.3	1,265
3	Inverse Depth Parametrization for Monocular SLAM. IEEE Transactions on Robotics, 2008, 24, 932-945.	7.3	577
4	RoboEarth. IEEE Robotics and Automation Magazine, 2011, 18, 69-82.	2.2	381
5	Visual SLAM: Why filter?. Image and Vision Computing, 2012, 30, 65-77.	2.7	335
6	Real-time monocular SLAM: Why filter?. , 2010, , .		324
7	Unified Inverse Depth Parametrization for Monocular SLAM. , 0, , .		254
8	C2TAM: A Cloud framework for cooperative tracking and mapping. Robotics and Autonomous Systems, 2014, 62, 401-413.	3.0	249
9	The SPmap: a probabilistic framework for simultaneous localization and map building. IEEE Transactions on Automation Science and Engineering, 1999, 15, 948-952.	2.4	228
10	1â€Point RANSAC for extended Kalman filtering: Application to realâ€time structure from motion and visual odometry. Journal of Field Robotics, 2010, 27, 609-631.	3.2	226
11	Scale Drift-Aware Large Scale Monocular SLAM. , 0, , .		221
12	Double window optimisation for constant time visual SLAM. , 2011, , .		193
13	Towards semantic SLAM using a monocular camera. , 2011, , .		114
14	Impact of Landmark Parametrization on Monocular EKF-SLAM with Points and Lines. International Journal of Computer Vision, 2012, 97, 339-368.	10.9	113
15	Real-time monocular object SLAM. Robotics and Autonomous Systems, 2016, 75, 435-449.	3.0	99
16	Visual SLAM for Handheld Monocular Endoscope. IEEE Transactions on Medical Imaging, 2014, 33, 135-146.	5.4	96
17	Live Tracking and Dense Reconstruction for Handheld Monocular Endoscopy. IEEE Transactions on Medical Imaging, 2019, 38, 79-89.	5.4	90
18	RoboEarth Semantic Mapping: A Cloud Enabled Knowledge-Based Approach. IEEE Transactions on Automation Science and Engineering, 2015, 12, 432-443.	3.4	84

#	Article	IF	Citations
19	1-point RANSAC for EKF-based Structure from Motion. , 2009, , .		75
20	Indoor robot motion based on monocular images. Robotica, 2001, 19, 331-342.	1.3	72
21	Direct Sparse Mapping. IEEE Transactions on Robotics, 2020, 36, 1363-1370.	7.3	64
22	Sequential Non-Rigid Structure from Motion Using Physical Priors. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 979-994.	9.7	62
23	Inverse Depth to Depth Conversion for Monocular SLAM. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	60
24	Simultaneous map building and localization for mobile robots: a multisensor fusion approach. , 0, , .		58
25	Good Vibrations: A Modal Analysis Approach for Sequential Non-rigid Structure from Motion. , 2014, , .		52
26	DefSLAM: Tracking and Mapping of Deforming Scenes From Monocular Sequences. IEEE Transactions on Robotics, 2021, 37, 291-303.	7.3	51
27	EKF monocular SLAM with relocalization for laparoscopic sequences. , 2011, , .		48
28	ORBSLAM-Based Endoscope Tracking and 3D Reconstruction. Lecture Notes in Computer Science, 2017, , 72-83.	1.0	46
29	Endo-Depth-and-Motion: Reconstruction and Tracking in Endoscopic Videos Using Depth Networks and Photometric Constraints. IEEE Robotics and Automation Letters, 2021, 6, 7225-7232.	3.3	42
30	On-patient see-through augmented reality based on visual SLAM. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1-11.	1.7	39
31	Camera self-calibration for sequential Bayesian structure from motion. , 2009, , .		37
32	ORBSLAM-Atlas: a robust and accurate multi-map system. , 2019, , .		33
33	Drift-Free Real-Time Sequential Mosaicing. International Journal of Computer Vision, 2009, 81, 128-137.	10.9	32
34	Finite Element based sequential Bayesian Non-Rigid Structure from Motion. , 2012, , .		30
35	Sensor influence in the performance of simultaneous mobile robot localization and map building. , 2000, , 287-296.		27
36	Online Dense Non-Rigid 3D Shape and Camera Motion Recovery. , 2014, , .		26

#	Article	IF	Citations
37	A visual compass based on SLAM. , 0, , .		25
38	Dimensionless Monocular SLAM. Lecture Notes in Computer Science, 2007, , 412-419.	1.0	23
39	Real-time 3D reconstruction of non-rigid shapes with a single moving camera. Computer Vision and Image Understanding, 2016, 153, 37-54.	3.0	22
40	Adapting a real-time monocular visual SLAM from conventional to omnidirectional cameras. , 2011, , .		21
41	3D Hand Pose Detection in Egocentric RGB-D Images. Lecture Notes in Computer Science, 2015, , 356-371.	1.0	21
42	Interacting multiple model monocular SLAM. , 2008, , .		20
43	Fast and Robust Initialization for Visual-Inertial SLAM. , 2019, , .		20
44	Developing a new methodology to characterize in vivo the passive mechanical behavior of abdominal wall on an animal model. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 51, 40-49.	1.5	19
45	Semantic visual SLAM in populated environments. , 2017, , .		19
46	Relocation using laser and vision. , 2004, , .		16
47	Modal Space: A Physics-Based Model for Sequential Estimation of Time-Varying Shape from Monocular Video. Journal of Mathematical Imaging and Vision, 2017, 57, 75-98.	0.8	16
48	Towards semantic SLAM using a monocular camera. , 2011, , .		14
49	Mode-shape interpretation: Re-thinking modal space for recovering deformable shapes. , 2016, , .		13
50	FEM models to code non-rigid EKF monocular SLAM. , 2011, , .		12
51	Creating and using RoboEarth object models. , 2012, , .		12
52	Structure and motion from straight line segments. Pattern Recognition, 2000, 33, 1295-1307.	5.1	11
53	Layout aware visual tracking and mapping. , 2015, , .		11
54	Experiments in Multisensor Mobile Robot Localization and Map Building. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 369-374.	0.4	10

#	Article	IF	Citations
55	Automated architectural acquisition from a camera undergoing planar motion. , 2001, , 207-218.		10
56	3D Reconstruction of Non-Rigid Surfaces in Real-Time Using Wedge Elements. Lecture Notes in Computer Science, 2012, , 113-122.	1.0	9
57	Efficient validation of matching hypotheses using Mahalanobis distance. Engineering Applications of Artificial Intelligence, 1998, 11, 439-448.	4.3	7
58	Segment-based structure from an imprecisely located moving camera. , 0, , .		6
59	Fast powerâ€“frequency function estimation for induction heating appliances. Electronics Letters, 2017, 53, 498-500.	0.5	6
60	Adaptive Scale Robust Segmentation for 2D Laser Scanner. , 2006, , .		5
61	Camera Tracking for SLAM in Deformable Maps. Lecture Notes in Computer Science, 2019, , 730-737.	1.0	5
62	Computer vision distance measurement from endoscopic sequences: prospective evaluation in laparoscopic ventral hernia repair. Surgical Endoscopy and Other Interventional Techniques, 2014, 28, 3506-3512.	1.3	4
63	Probabilistic structure from camera location using straight segments. Image and Vision Computing, 1999, 17, 263-279.	2.7	3