Laurent Kneip

List of Publications by Year
in descending order

54 papers	2,192 citations	933447 10 h-index	839539 18 g-index
54 all docs	54 docs citations	54 times ranked	1711 citing authors

#	Article	IF	Citations
1	A novel parametrization of the perspective-three-point problem for a direct computation of absolute camera position and orientation. , 2011, , .		346
2	Vision-Controlled Micro Flying Robots: From System Design to Autonomous Navigation and Mapping in GPS-Denied Environments. IEEE Robotics and Automation Magazine, 2014, 21, 26-40.	2.0	219
3	Monocular Vision for Long‐term Micro Aerial Vehicle State Estimation: A Compendium. Journal of Field Robotics, 2013, 30, 803-831.	6.0	198
4	Collaborative monocular SLAM with multiple Micro Aerial Vehicles. , 2013, , .		139
5	UPnP: An Optimal O(n) Solution to the Absolute Pose Problem with Universal Applicability. Lecture Notes in Computer Science, 2014, , 127-142.	1.3	103
6	Robust Real-Time Visual Odometry with a Single Camera and an IMU. , 2011, , .		103
7	OpenGV: A unified and generalized approach to real-time calibrated geometric vision. , 2014, , .		95
8	Rolling Shutter Camera Calibration. , 2013, , .		91
9	Characterization of the compact Hokuyo URG-04LX 2D laser range scanner. , 2009, , .		87
10	Canny-VO: Visual Odometry With RGB-D Cameras Based on Geometric 3-D–2-D Edge Alignment. IEEE Transactions on Robotics, 2019, 35, 184-199.	10.3	55
11	Using multi-camera systems in robotics: Efficient solutions to the NPnP problem. , 2013, , .		53
12	Intuitive 3D Maps for MAV Terrain Exploration and Obstacle Avoidance. Journal of Intelligent and Robotic Systems: Theory and Applications, 2011, 61, 473-493.	3.4	52
13	Finding the Exact Rotation between Two Images Independently of the Translation. Lecture Notes in Computer Science, 2012, , 696-709.	1.3	51
14	Direct Optimization of Frame-to-Frame Rotation. , 2013, , .		46
15	Globally-Optimal Inlier Set Maximisation for Simultaneous Camera Pose and Feature Correspondence. , 2017, , .		43
16	Efficient Computation of Relative Pose for Multi-camera Systems. , 2014, , .		40
17	Visual-inertial SLAM for a small helicopter in large outdoor environments. , 2012, , .		39
18	A Certifiably Globally Optimal Solution to the Non-minimal Relative Pose Problem. , 2018, , .		38

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19	Closed-form solution for absolute scale velocity determination combining inertial measurements and a single feature correspondence. , 2011, , .		35
20	Deterministic initialization of metric state estimation filters for loosely-coupled monocular vision-inertial systems. , 2011, , .		34
21	Real-time 6D stereo Visual Odometry with non-overlapping fields of view. , 2012, , .		34
22	Robust embedded egomotion estimation. , 2011, , .		25
23	Globally-Optimal Inlier Set Maximisation for Camera Pose and Correspondence Estimation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 328-342.	13.9	24
24	Binaural model for artificial spatial sound localization based on interaural time delays and movements of the interaural axis. Journal of the Acoustical Society of America, 2008, 124, 3108-3119.	1.1	21
25	A monocular vision-based system for 6D relative robot localization. , 2011, , .		21
26	A monocular vision-based system for 6D relative robot localization. , 2011, , .		21
27	SFly: Swarm of micro flying robots. , 2012, , .		21
28	Computing similarity transformations from only image correspondences. , 2015, , .		15
29	Minimal Case Relative Pose Computation using Ray-Point-Ray Features. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 42, 1-1.	13.9	15
30	An Algebraic-Geometric Approach for Linear Regression Without Correspondences. IEEE Transactions on Information Theory, 2020, 66, 5130-5144.	2.4	14
31	Globally-Optimal Contrast Maximisation for Event Cameras. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, PP, 1-1.	13.9	14
32	DEVO: Depth-Event Camera Visual Odometry in Challenging Conditions. , 2022, , .		12
33	Delay and Dropout Tolerant State Estimation for MAVs. Springer Tracts in Advanced Robotics, 2014, , 571-584.	0.4	10
34	Hybrid Rotation Averaging: A Fast and Robust Rotation Averaging Approach. , 2021, , .		10
35	Algebraically-initialized Expectation Maximization for Header-free Communication. , 2019, , .		9
36	VECtor: A Versatile Event-Centric Benchmark for Multi-Sensor SLAM. IEEE Robotics and Automation Letters, 2022, 7, 8217-8224.	5.1	9

#	Article	IF	Citations
37	Efficient Globally-Optimal Correspondence-Less Visual Odometry for Planar Ground Vehicles. , 2020, , .		7
38	Robust Homography Estimation via Dual Principal Component Pursuit. , 2020, , .		6
39	Articulated Multi-Perspective Cameras and Their Application to Truck Motion Estimation. , 2019, , .		5
40	Rethinking the Fourier-Mellin Transform: Multiple Depths in the Camera's View. Remote Sensing, 2021, 13, 1000.	4.0	4
41	B-splines for Purely Vision-based Localization and Mapping on Non-holonomic Ground Vehicles. , 2021, , .		4
42	Accurate Calibration of Multi-Perspective Cameras from a Generalization of the Hand-Eye Constraint. , 2022, , .		4
43	Simplified mirror-based camera pose computation via rotation averaging. , 2015, , .		3
44	Globally Optimal Point Set Registration by Joint Symmetry Plane Fitting. Journal of Mathematical Imaging and Vision, 2021, 63, 689-707.	1.3	3
45	FP-Loc: Lightweight and Drift-free Floor Plan-assisted LiDAR Localization. , 2022, , .		3
46	Deterministic initialization of metric state estimation filters for loosely-coupled monocular vision-inertial systems. , 2011, , .		2
47	Robust embedded egomotion estimation. , 2011, , .		2
48	Representations and Benchmarking of Modern Visual SLAM Systems. Sensors, 2020, 20, 2572.	3.8	2
49	Dynamic Event Camera Calibration. , 2021, , .		2
50	On the initialization of statistical optimum filters with application to motion estimation. , 2010, , .		1
51	On Scale Initialization in Non-overlapping Multi-perspective Visual Odometry. Lecture Notes in Computer Science, 2017, , 144-157.	1.3	1
52	Accurate Line-Based Relative Pose Estimation With Camera Matrices. IEEE Access, 2020, 8, 88294-88307.	4.2	1
53	Online Stability Improvement of Gröbner Basis Solvers using Deep Learning. , 2019, , .		0
54	Towards Space Carving with a Hand-Held Camera. Lecture Notes in Computer Science, 2017, , 47-61.	1.3	0