Sören Schwertfeger

List of Publications by Year
in descending order

52 papers	799 citations	840776 11 h-index	794594 19 g-index
52 all docs	52 docs citations	52 times ranked	688 citing authors

#	Article	IF	Citations
1	Matching maps based on the Area Graph. Intelligent Service Robotics, 2022, 15, 69-94.	2.6	5
2	Cluster on Wheels. , 2022, , .		1
3	Accurate Calibration of Multi-Perspective Cameras from a Generalization of the Hand-Eye Constraint. , 2022, , .		4
4	Rethinking the Fourier-Mellin Transform: Multiple Depths in the Camera's View. Remote Sensing, 2021, 13, 1000.	4.0	4
5	Hierarchical topometric representation of 3D robotic maps. Autonomous Robots, 2021, 45, 755-771.	4.8	9
6	Underwater Depth Estimation for Spherical Images. Journal of Robotics, 2021, 2021, 1-12.	0.9	5
7	Rotation Estimation for Omni-directional Cameras Using Sinusoid Fitting. Journal of Intelligent and Robotic Systems: Theory and Applications, 2021, 103, 1.	3.4	2
8	Self-Supervised Point Set Local Descriptors for Point Cloud Registration. Sensors, 2021, 21, 486.	3.8	20
9	Advanced mapping robot and high-resolution dataset. Robotics and Autonomous Systems, 2020, 131, 103559.	5.1	15
10	Mapping with Reflection - Detection and Utilization of Reflection in 3D Lidar Scans. , 2020, , .		14
11	Improved Visual-Inertial Localization for Low-cost Rescue Robots. IFAC-PapersOnLine, 2020, 53, 9709-9715.	0.9	0
12	Improving CNN-based Planar Object Detection with Geometric Prior Knowledge. , 2020, , .		2
13	Configuration-Space Flipper Planning on 3D Terrain. , 2020, , .		3
14	Improved Fourier Mellin Invariant for Robust Rotation Estimation with Omni-Cameras. , 2019, , .		7
15	Configuration-Space Flipper Planning for Rescue Robots. , 2019, , .		3
16	Editorial: Special Issue on Safety, Security, and Rescue Robotics (SSRR). Journal of Field Robotics, 2019, 36, 639-640.	6.0	0
17	RGBD-Inertial Trajectory Estimation and Mapping for Ground Robots. Sensors, 2019, 19, 2251.	3.8	44
18	Fast 2D Map Matching Based on Area Graphs. , 2019, , .		4

#	Article	IF	Citations
19	Pose Estimation for Omni-directional Cameras using Sinusoid Fitting. , 2019, , .		5
20	Area Graph: Generation of Topological Maps using the Voronoi Diagram. , 2019, , .		7
21	Heterogeneous Multi-sensor Calibration based on Graph Optimization. , 2019, , .		7
22	Incrementally Building Topology Graphs via Distance Maps. , 2019, , .		5
23	Furniture Free Mapping using 3D Lidars. , 2019, , .		8
24	Fast Gaussian Process Occupancy Maps. , 2018, , .		6
25	Simultaneous hand-eye calibration and reconstruction. , 2017, , .		16
26	Matching Paths in Topological Maps. IFAC-PapersOnLine, 2016, 49, 224-229.	0.9	5
27	No More Heavy Lifting: Robotic Solutions to the Container Unloading Problem. IEEE Robotics and Automation Magazine, 2016, 23, 94-106.	2.0	31
28	16 Years of RoboCup Rescue. KI - Kunstliche Intelligenz, 2016, 30, 267-277.	3.2	34
29	Map evaluation using matched topology graphs. Autonomous Robots, 2016, 40, 761-787.	4.8	25
30	Using fiducials in 3D map evaluation. , 2015, , .		1
31	Advancing the State of Urban Search and Rescue Robotics Through the RoboCupRescue Robot League Competition. Springer Tracts in Advanced Robotics, 2014, , 127-142.	0.4	12
32	Evaluation of map quality by matching and scoring high-level, topological map structures. , 2013, , .		21
33	Using competitions to advance the development of standard test methods for response robots. , 2012, , .		13
34	A short overview of recent advances in map evaluation. , 2012, , .		5
35	Using a fiducial map metric for assessing map quality in the context of RoboCup Rescue. , 2011, , .		9
36	The RoboCupRescue robot league: Guiding robots towards fieldable capabilities. , 2011, , .		6

#	Article	IF	Citations
37	Using iFMI spectral registration for video stabilization and motion detection by an Unmanned Aerial Vehicle (UAV). , 2011, , .		4
38	Safety, Security, and Rescue Missions with an Unmanned Aerial Vehicle (UAV). Journal of Intelligent and Robotic Systems: Theory and Applications, 2011, 64, 57-76.	3.4	98
39	On the effects of Sampling Resolution in Improved Fourier Mellin based Registration for Underwater Mapping. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 617-622.	0.4	5
40	Surface Representations for 3D Mapping. KI - Kunstliche Intelligenz, 2010, 24, 249-254.	3.2	10
41	Online three‐dimensional SLAM by registration of large planar surface segments and closed‐form pose‐graph relaxation. Journal of Field Robotics, 2010, 27, 52-84.	6.0	99
42	Efficient Representation in Three-Dimensional Environment Modeling for Planetary Robotic Exploration. Advanced Robotics, 2010, 24, 1169-1197.	1.8	38
43	Maximum likelihood mapping with spectral image registration. , 2010, , .		27
44	Evaluation of maps using fixed shapes. , 2010, , .		13
45	Fast 3D mapping by matching planes extracted from range sensor point-clouds. , 2009, , .		38
46	3D data collection at Disaster City at the 2008 NIST Response Robot Evaluation Exercise (RREE). , 2009, , .		7
47	A networking framework for teleoperation in safety, security, and rescue robotics. IEEE Wireless Communications, 2009, 16, 6-13.	9.0	48
48	Reconnaissance and camp security missions with an Unmanned Aerial Vehicle (UAV) at the 2009 European Land Robots Trials (ELROB). , 2009, , .		3
49	Towards Object Classification Using 3D Sensor Data. , 2008, , .		1
50	3D forward sensor modeling and application to occupancy grid based sensor fusion. , 2007, , .		42
51	Fully Autonomous Operations of a Jacobs Rugbot in the RoboCup Rescue Robot League 2006. , 2007, , .		4
52	Optimized Octtree Datastructure and Access Methods for 3D Mapping. , 2007, , .		4