Peter Protzel

List of Publications by Year
in descending order

44 papers	1,183 citations	1307594 7 h-index	1125743 13 g-index
44 all docs	44 docs citations	44 times ranked	839 citing authors

#	Article	IF	Citations
1	Switchable constraints for robust pose graph SLAM. , 2012, , .		211
2	BRIEF-Gist - closing the loop by simple means. , 2011, , .		136
3	Towards a robust back-end for pose graph SLAM. , 2012, , .		133
4	Compact Watershed and Preemptive SLIC: On Improving Trade-offs of Superpixel Segmentation Algorithms. , 2014, , .		102
5	Appearance change prediction for long-term navigation across seasons. , 2013, , .		71
6	An Introduction to Hyperdimensional Computing for Robotics. KI - Kunstliche Intelligenz, 2019, 33, 319-330.	3.2	45
7	Switchable constraints vs. max-mixture models vs. RRR - A comparison of three approaches to robust pose graph SLAM. , 2013, , .		41
8	Using the Unscented Kalman Filter in Mono-SLAM with Inverse Depth Parametrization for Autonomous Airship Control. , 2007, , .		37
9	Beyond Holistic Descriptors, Keypoints, and Fixed Patches: Multiscale Superpixel Grids for Place Recognition in Changing Environments. IEEE Robotics and Automation Letters, 2016, 1, 484-491.	5.1	36
10	Multipath mitigation in GNSS-based localization using robust optimization. , 2012, , .		32
11	Expectation-Maximization for Adaptive Mixture Models in Graph Optimization. , 2019, , .		31
12	A Neurologically Inspired Sequence Processing Model for Mobile Robot Place Recognition. IEEE Robotics and Automation Letters, 2019, 4, 3200-3207.	5.1	31
13	A comparison of vector symbolic architectures. Artificial Intelligence Review, 2022, 55, 4523-4555.	15.7	28
14	Robust Sensor Fusion with Self-Tuning Mixture Models. , 2018, , .		22
15	Towards robust graphical models for GNSS-based localization in urban environments. , 2012, , .		19
16	Local region detector + CNN based landmarks for practical place recognition in changing environments. , 2015, , .		18
17	Sampling-based methods for visual navigation in 3D maps by synthesizing depth images. , 2017, , .		18
18	Incremental smoothing vs. filtering for sensor fusion on an indoor UAV. , 2013, , .		16

#	Article	IF	Citations
19	Unsupervised Learning Methods for Visual Place Recognition in Discretely and Continuously Changing Environments. , 2020, , .		16
20	Multivariate Time Series Analysis for Driving Style Classification using Neural Networks and Hyperdimensional Computing. , 2021, , .		15
21	Switchable constraints and incremental smoothing for online mitigation of non-line-of-sight and multipath effects. , 2013, , .		13
22	Vector Semantic Representations as Descriptors for Visual Place Recognition. , 0, , .		13
23	BRIEF-Gist - Closing the loop by simple means. , 2011, , .		11
24	Learning from Nature: Biologically Inspired Robot Navigation and SLAMâ€"AÂReview. KI - Kunstliche Intelligenz, 2010, 24, 215-221.	3.2	8
25	Beyond RatSLAM: Improvements to a biologically inspired SLAM system. , 2010, , .		8
26	Advancing Mixture Models for Least Squares Optimization. IEEE Robotics and Automation Letters, 2021, 6, 3941-3948.	5.1	7
27	Graph-Based Non-Linear Least Squares Optimization for Visual Place Recognition in Changing Environments. IEEE Robotics and Automation Letters, 2021, 6, 811-818.	5.1	7
28	Cost-efficient mono-camera tracking system for a multirotor UAV aimed for hardware-in-the-loop experiments. , 2012, , .		6
29	Incrementally learned Mixture Models for GNSS Localization. , 2019, , .		6
30	Synthesized semantic views for mobile robot localization. , 2017, , .		5
31	Resolving Place Recognition Inconsistencies Using Intra-Set Similarities. IEEE Robotics and Automation Letters, 2021, 6, 2084-2090.	5.1	5
32	SoftMP: Attentive feature pooling for joint local feature detection and description for place recognition in changing environments. , 2021, , .		5
33	A Credible and Robust Approach to Ego-Motion Estimation Using an Automotive Radar. IEEE Robotics and Automation Letters, 2022, 7, 6020-6027.	5.1	5
34	How to Build and Customize a High-Resolution 3D Laserscanner Using Off-the-shelf Components. Lecture Notes in Computer Science, 2016, , 314-326.	1.3	4
35	A Sequence-Based Neuronal Model for Mobile Robot Localization. Lecture Notes in Computer Science, 2018, , 117-130.	1.3	4
36	Motion estimation for autonomous quadrocopter indoor flight. , 2012, , .		3

#	Article	IF	Citations
37	Beyond ANN: Exploiting Structural Knowledge for Efficient Place Recognition. , 2021, , .		3
38	A blind-spot-aware optimization-based planner for safe robot navigation. , 2021, , .		3
39	The causal update filter &#x2014; A novel biologically inspired filter paradigm for appearance-based SLAM. , 2010, , .		2
40	Towards combining a neocortex model with entorhinal grid cells for mobile robot localization. , 2019, , .		2
41	Building a Navigation System for a Shopping Assistant Robot from Off-the-Shelf Components. Lecture Notes in Computer Science, 2020, , 103-115.	1.3	2
42	LocalSPED: A Classification Pipeline that Can Learn Local Features for Place Recognition Using a Small Training Set. Lecture Notes in Computer Science, 2020, , 209-213.	1.3	2
43	Optimization based 3D Multi-Object Tracking using Camera and Radar Data. , 2021, , .		1
44	`Predicting time-varying functions with local models. Intelligent Data Analysis, 2002, 6, 257-265.	0.9	0