

Wolfram Burgard

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5115057/publications.pdf>

Version: 2024-02-01

403
papers

29,340
citations

57758

44
h-index

18647

119
g-index

417
all docs

417
docs citations

417
times ranked

15201
citing authors

#	ARTICLE	IF	CITATIONS
1	A benchmark for the evaluation of RGB-D SLAM systems. , 2012, , .		2,188
2	OctoMap: an efficient probabilistic 3D mapping framework based on octrees. Autonomous Robots, 2013, 34, 189-206.	4.8	1,932
3	Improved Techniques for Grid Mapping With Rao-Blackwellized Particle Filters. , 2007, 23, 34-46.		1,766
4	Deep learning with convolutional neural networks for EEG decoding and visualization. Human Brain Mapping, 2017, 38, 5391-5420.	3.6	1,656
5	Robust Monte Carlo localization for mobile robots. Artificial Intelligence, 2001, 128, 99-141.	5.8	1,359
6	G<sup>2</sup>o: A general framework for graph optimization. , 2011, , .		1,240
7	A Tutorial on Graph-Based SLAM. IEEE Intelligent Transportation Systems Magazine, 2010, 2, 31-43.	3.8	897
8	3-D Mapping With an RGB-D Camera. IEEE Transactions on Robotics, 2014, 30, 177-187.	10.3	662
9	Experiences with an interactive museum tour-guide robot. Artificial Intelligence, 1999, 114, 3-55.	5.8	605
10	A Probabilistic Approach to Collaborative Multi-Robot Localization. Autonomous Robots, 2000, 8, 325-344.	4.8	507
11	An evaluation of the RGB-D SLAM system. , 2012, , .		493
12	A Probabilistic Approach to Concurrent Mapping and Localization for Mobile Robots. Machine Learning, 1998, 31, 29-53.	5.4	467
13	Multimodal deep learning for robust RGB-D object recognition. , 2015, , .		391
14	A Fully Autonomous Indoor Quadrotor. IEEE Transactions on Robotics, 2012, 28, 90-100.	10.3	358
15	Active Markov localization for mobile robots. Robotics and Autonomous Systems, 1998, 25, 195-207.	5.1	330
16	The limits and potentials of deep learning for robotics. International Journal of Robotics Research, 2018, 37, 405-420.	8.5	320
17	Information Gain-based Exploration Using Rao-Blackwellized Particle Filters. , 0, , .		307
18	Socially compliant mobile robot navigation via inverse reinforcement learning. International Journal of Robotics Research, 2016, 35, 1289-1307.	8.5	292

#	ARTICLE	IF	CITATIONS
19	Learning driving styles for autonomous vehicles from demonstration. , 2015, , .		270
20	Efficient Sparse Pose Adjustment for 2D mapping. , 2010, , .		251
21	Multi-Level Surface Maps for Outdoor Terrain Mapping and Loop Closing. , 2006, , .		246
22	Using Boosted Features for the Detection of People in 2D Range Data. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	235
23	Conceptual spatial representations for indoor mobile robots. Robotics and Autonomous Systems, 2008, 56, 493-502.	5.1	232
24	Learning compact 3D models of indoor and outdoor environments with a mobile robot. Robotics and Autonomous Systems, 2003, 44, 15-27.	5.1	226
25	Agricultural robot dataset for plant classification, localization and mapping on sugar beet fields. International Journal of Robotics Research, 2017, 36, 1045-1052.	8.5	195
26	Point feature extraction on 3D range scans taking into account object boundaries. , 2011, , .		193
27	Towards a navigation system for autonomous indoor flying. , 2009, , .		186
28	Nonlinear Constraint Network Optimization for Efficient Map Learning. IEEE Transactions on Intelligent Transportation Systems, 2009, 10, 428-439.	8.0	186
29	Finding and optimizing solvable priority schemes for decoupled path planning techniques for teams of mobile robots. Robotics and Autonomous Systems, 2002, 41, 89-99.	5.1	179
30	Robust map optimization using dynamic covariance scaling. , 2013, , .		175
31	Most likely heteroscedastic Gaussian process regression. , 2007, , .		163
32	Coordinated multi-robot exploration using a segmentation of the environment. , 2008, , .		161
33	Deep reinforcement learning with successor features for navigation across similar environments. , 2017, , .		161
34	Object identification with tactile sensors using bag-of-features. , 2009, , .		156
35	VLocNet++: Deep Multitask Learning for Semantic Visual Localization and Odometry. IEEE Robotics and Automation Letters, 2018, 3, 4407-4414.	5.1	154
36	Deep Auxiliary Learning for Visual Localization and Odometry. , 2018, , .		150

#	ARTICLE	IF	CITATIONS
37	Efficient deep models for monocular road segmentation. , 2016, , .		146
38	Fast and accurate SLAM with Rao’s Blackwellized particle filters. Robotics and Autonomous Systems, 2007, 55, 30-38.	5.1	137
39	Self-Supervised Model Adaptation for Multimodal Semantic Segmentation. International Journal of Computer Vision, 2020, 128, 1239-1285.	15.6	133
40	Supervised semantic labeling of places using information extracted from sensor data. Robotics and Autonomous Systems, 2007, 55, 391-402.	5.1	132
41	An Efficient Extension to Elevation Maps for Outdoor Terrain Mapping and Loop Closing. International Journal of Robotics Research, 2007, 26, 217-230.	8.5	127
42	Feature-Based Prediction of Trajectories for Socially Compliant Navigation. , 0, , .		125
43	AdapNet: Adaptive semantic segmentation in adverse environmental conditions. , 2017, , .		120
44	Efficient people tracking in laser range data using a multi-hypothesis leg-tracker with adaptive occlusion probabilities. , 2008, , .		110
45	Motion-based detection and tracking in 3D LiDAR scans. , 2016, , .		109
46	Efficient estimation of accurate maximum likelihood maps in 3D. , 2007, , .		105
47	Large scale graph-based SLAM using aerial images as prior information. Autonomous Robots, 2011, 30, 25-39.	4.8	105
48	Socially Compliant Navigation Through Raw Depth Inputs with Generative Adversarial Imitation Learning. , 2018, , .		102
49	Robust Visual Localization Across Seasons. IEEE Transactions on Robotics, 2018, 34, 289-302.	10.3	101
50	Efficient grid-based spatial representations for robot navigation in dynamic environments. Robotics and Autonomous Systems, 2013, 61, 1116-1130.	5.1	99
51	Monocular camera localization in 3D LiDAR maps. , 2016, , .		97
52	3D Human Pose Estimation in RGBD Images for Robotic Task Learning. , 2018, , .		97
53	Kinodynamic motion planning for mobile robots using splines. , 2009, , .		95
54	Tactile Sensing for Mobile Manipulation. IEEE Transactions on Robotics, 2011, 27, 558-568.	10.3	93

#	ARTICLE	IF	CITATIONS
55	Modeling RFID signal strength and tag detection for localization and mapping. , 2009, , .		91
56	Robust place recognition for 3D range data based on point features. , 2010, , .		90
57	Lifelong localization in changing environments. International Journal of Robotics Research, 2013, 32, 1662-1678.	8.5	90
58	A comparison of SLAM algorithms based on a graph of relations. , 2009, , .		87
59	A Wireless Micro Inertial Measurement Unit (IMU). IEEE Transactions on Instrumentation and Measurement, 2013, 62, 2583-2595.	4.7	87
60	On the position accuracy of mobile robot localization based on particle filters combined with scan matching. , 2012, , .		85
61	Autonomous Robot Navigation in Highly Populated Pedestrian Zones. Journal of Field Robotics, 2015, 32, 565-589.	6.0	83
62	Semantics-aware visual localization under challenging perceptual conditions. , 2017, , .		82
63	Deep regression for monocular camera-based 6-DoF global localization in outdoor environments. , 2017, , .		77
64	Fully distributed scalable smoothing and mapping with robust multi-robot data association. , 2012, , .		74
65	Crop Row Detection on Tiny Plants With the Pattern Hough Transform. IEEE Robotics and Automation Letters, 2018, 3, 3394-3401.	5.1	74
66	Autonomous driving in a multi-level parking structure. , 2009, , .		71
67	Place recognition in 3D scans using a combination of bag of words and point feature based relative pose estimation. , 2011, , .		71
68	Monte Carlo localization in outdoor terrains using multilevel surface maps. Journal of Field Robotics, 2008, 25, 346-359.	6.0	67
69	Choosing smartly: Adaptive multimodal fusion for object detection in changing environments. , 2016, , .		67
70	Rigid scene flow for 3D LiDAR scans. , 2016, , .		66
71	Mobile robot mapping in populated environments. Advanced Robotics, 2003, 17, 579-597.	1.8	65
72	Visual SLAM for Flying Vehicles. IEEE Transactions on Robotics, 2008, 24, 1088-1093.	10.3	63

#	ARTICLE	IF	CITATIONS
73	Improving robot navigation in structured outdoor environments by identifying vegetation from laser data. , 2009, , .		62
74	Traversability analysis for mobile robots in outdoor environments: A semi-supervised learning approach based on 3D-lidar data. , 2015, , .		61
75	Localization on OpenStreetMap data using a 3D laser scanner. , 2015, , .		57
76	Deep learning for human part discovery in images. , 2016, , .		57
77	VR-Goggles for Robots: Real-to-Sim Domain Adaptation for Visual Control. IEEE Robotics and Automation Letters, 2019, 4, 1148-1155.	5.1	57
78	A visual odometry framework robust to motion blur. , 2009, , .		56
79	Multi-model Hypothesis Group Tracking and Group Size Estimation. International Journal of Social Robotics, 2010, 2, 19-30.	4.6	56
80	Deep Multispectral Semantic Scene Understanding of Forested Environments Using Multimodal Fusion. Springer Proceedings in Advanced Robotics, 2017, , 465-477.	1.3	56
81	Robust visual SLAM across seasons. , 2015, , .		55
82	Speeding-Up Robot Exploration by Exploiting Background Information. IEEE Robotics and Automation Letters, 2016, 1, 716-723.	5.1	55
83	An accurate and efficient navigation system for omnidirectional robots in industrial environments. Autonomous Robots, 2017, 41, 473-493.	4.8	54
84	Nonstationary Gaussian Process Regression Using Point Estimates of Local Smoothness. Lecture Notes in Computer Science, 2008, , 204-219.	1.3	53
85	Learning to predict trajectories of cooperatively navigating agents. , 2014, , .		53
86	Improved updating of Euclidean distance maps and Voronoi diagrams. , 2010, , .		52
87	Efficient exploration of unknown indoor environments using a team of mobile robots. Annals of Mathematics and Artificial Intelligence, 2008, 52, 205-227.	1.3	51
88	Time dependent planning on a layered social cost map for human-aware robot navigation. , 2015, , .		51
89	Cooperative robot localization and target tracking based on least squares minimization. , 2013, , .		50
90	Recursive decentralized localization for multi-robot systems with asynchronous pairwise communication. International Journal of Robotics Research, 2018, 37, 1152-1167.	8.5	50

#	ARTICLE	IF	CITATIONS
91	Online constraint network optimization for efficient maximum likelihood map learning. , 2008, , .		49
92	Learning predictive terrain models for legged robot locomotion. , 2008, , .		48
93	Learning the elasticity parameters of deformable objects with a manipulation robot. , 2010, , .		48
94	Probabilistic situation recognition for vehicular traffic scenarios. , 2009, , .		47
95	Temporary maps for robust localization in semi-static environments. , 2010, , .		47
96	A navigation system for robots operating in crowded urban environments. , 2013, , .		47
97	W-RGB-D: Floor-plan-based indoor global localization using a depth camera and WiFi. , 2014, , .		47
98	Navigating blind people with walking impairments using a smart walker. Autonomous Robots, 2017, 41, 555-573.	4.8	47
99	Long-Term Urban Vehicle Localization Using Pole Landmarks Extracted from 3-D Lidar Scans. , 2019, , .		46
100	Collaborative Exploration of Unknown Environments with Teams of Mobile Robots. Lecture Notes in Computer Science, 2002, , 52-70.	1.3	46
101	On actively closing loops in grid-based FastSLAM. Advanced Robotics, 2005, 19, 1059-1079.	1.8	45
102	Building an Aerialâ€œGround Robotics System for Precision Farming: An Adaptable Solution. IEEE Robotics and Automation Magazine, 2021, 28, 29-49.	2.0	45
103	Accurate indoor localization for RGB-D smartphones and tablets given 2D floor plans. , 2015, , .		44
104	Deep spatiotemporal models for robust proprioceptive terrain classification. International Journal of Robotics Research, 2017, 36, 1521-1539.	8.5	44
105	Body schema learning for robotic manipulators from visual self-perception. Journal of Physiology (Paris), 2009, 103, 220-231.	2.1	43
106	Metric localization using Google Street View. , 2015, , .		42
107	An autonomous robotic assistant for drinking. , 2015, , .		42
108	Bl ² RRT*: An efficient sampling-based path planning framework for task-constrained mobile manipulation. , 2016, , .		42

#	ARTICLE	IF	CITATIONS
109	Self-Supervised Visual Terrain Classification From Unsupervised Acoustic Feature Learning. IEEE Transactions on Robotics, 2021, 37, 466-481.	10.3	42
110	SMSnet: Semantic motion segmentation using deep convolutional neural networks. , 2017, , .		41
111	Deep semantic classification for 3D LiDAR data. , 2017, , .		41
112	Localization for precision navigation in agricultural fieldsâ€”Beyond crop row following. Journal of Field Robotics, 2021, 38, 429-451.	6.0	41
113	Robust Monte-Carlo Localization Using Adaptive Likelihood Models. , 0, , 181-194.		41
114	Improving RFID-based indoor positioning accuracy using Gaussian processes. , 2010, , .		39
115	Teaching mobile robots to cooperatively navigate in populated environments. , 2013, , .		39
116	Nonlinear factor recovery for long-term SLAM. International Journal of Robotics Research, 2016, 35, 50-72.	8.5	39
117	Robot, organize my shelves! Tidying up objects by predicting user preferences. , 2015, , .		38
118	A service assistant combining autonomous robotics, flexible goal formulation, and deep-learning-based brainâ€”computer interfacing. Robotics and Autonomous Systems, 2019, 116, 98-113.	5.1	38
119	Learning to Singulate Objects Using a Push Proposal Network. Springer Proceedings in Advanced Robotics, 2020, , 405-419.	1.3	38
120	Multiple Hypothesis Tracking of Clusters of People. , 2006, , .		37
121	Null space optimization for effective coverage of 3D surfaces using redundant manipulators. , 2012, , .		37
122	Geometrical FLIRT phrases for large scale place recognition in 2D range data. , 2013, , .		37
123	How to Keep HD Maps for Automated Driving Up To Date. , 2020, , .		36
124	Deep Feature Learning for Acoustics-Based Terrain Classification. Springer Proceedings in Advanced Robotics, 2018, , 21-37.	1.3	35
125	Collaborative Multi-Robot Localization. Informatik Aktuell, 1999, , 15-26.	0.6	35
126	Towards Lazy Data Association in SLAM. Springer Tracts in Advanced Robotics, 2005, , 421-431.	0.4	34

#	ARTICLE	IF	CITATIONS
127	Online generation of kinodynamic trajectories for non-circular omnidirectional robots. , 2011, , .		34
128	Simultaneous calibration, localization, and mapping. , 2011, , .		34
129	Simultaneous Parameter Calibration, Localization, and Mapping. Advanced Robotics, 2012, 26, 2021-2041.	1.8	34
130	A comparison of methods for line extraction from range data. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 728-733.	0.4	33
131	Which landmark is useful? Learning selection policies for navigation in unknown environments. , 2009, , .		33
132	Effective landmark placement for accurate and reliable mobile robot navigation. Robotics and Autonomous Systems, 2013, 61, 1060-1069.	5.1	33
133	Optimal, sampling-based manipulation planning. , 2017, , .		33
134	A pose graph-based localization system for long-term navigation in CAD floor plans. Robotics and Autonomous Systems, 2019, 112, 84-97.	5.1	33
135	Improving Data Association in Vision-based SLAM. , 2006, , .		32
136	Self-Calibration of Accelerometer Arrays. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1913-1925.	4.7	31
137	Robust LiDAR-based localization in architectural floor plans. , 2017, , .		31
138	The dynamics of error processing in the human brain as reflected by high-gamma activity in noninvasive and intracranial EEG. NeuroImage, 2018, 173, 564-579.	4.2	31
139	Metric Localization with Scale-Invariant Visual Features Using a Single Perspective Camera. , 0, , 195-209.		31
140	Probabilistic state estimation of dynamic objects with a moving mobile robot. Robotics and Autonomous Systems, 2001, 34, 107-115.	5.1	30
141	Operating articulated objects based on experience. , 2010, , .		30
142	Activity-Based Estimation of Human Trajectories. IEEE Transactions on Robotics, 2012, 28, 234-245.	10.3	30
143	Autonomous indoor robot navigation using a sketch interface for drawing maps and routes. , 2016, , .		30
144	EfficientLPS: Efficient LiDAR Panoptic Segmentation. IEEE Transactions on Robotics, 2022, 38, 1894-1914.	10.3	30

#	ARTICLE	IF	CITATIONS
145	Analyzing gaussian proposal distributions for mapping with rao-blackwellized particle filters. , 2007, , .		29
146	A probabilistic approach to liquid level detection in cups using an RGB-D camera. , 2016, , .		29
147	HeatNet: Bridging the Day-Night Domain Gap in Semantic Segmentation with Thermal Images. , 2020, , .		29
148	Supervised Learning of Topological Maps using Semantic Information Extracted from Range Data. , 2006, , .		28
149	Towards Mapping of Cities. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	28
150	Robust on-line model-based object detection from range images. , 2009, , .		28
151	Deep transfer learning for error decoding from non-invasive EEG. , 2018, , .		28
152	The signature of robot action success in EEG signals of a human observer: Decoding and visualization using deep convolutional neural networks. , 2018, , .		28
153	Autonomous blimp control using model-free reinforcement learning in a continuous state and action space. , 2007, , .		27
154	Coordinating heterogeneous teams of robots using temporal symbolic planning. Autonomous Robots, 2013, 34, 277-294.	4.8	27
155	Identifying vegetation from laser data in structured outdoor environments. Robotics and Autonomous Systems, 2014, 62, 675-684.	5.1	27
156	Learning object deformation models for robot motion planning. Robotics and Autonomous Systems, 2014, 62, 1153-1174.	5.1	27
157	Efficient and effective matching of image sequences under substantial appearance changes exploiting GPS priors. , 2015, , .		27
158	World Modeling. , 2008, , 853-869.		26
159	A Bayesian regression approach to terrain mapping and an application to legged robot locomotion. Journal of Field Robotics, 2009, 26, 789-811.	6.0	26
160	Recursive Decentralized Collaborative Localization for Sparsely Communicating Robots. , 0, , .		26
161	Imitation learning with generalized task descriptions. , 2009, , .		25
162	Highly accurate 3D surface models by sparse surface adjustment. , 2012, , .		25

#	ARTICLE	IF	CITATIONS
163	Lidar-based teach-and-repeat of mobile robot trajectories. , 2013, , .		25
164	Online marker labeling for fully automatic skeleton tracking in optical motion capture. , 2014, , .		25
165	Navigating blind people with a smart walker. , 2015, , .		25
166	HD Map Change Detection with a Boosted Particle Filter. , 2019, , .		25
167	Robot Localization in Floor Plans Using a Room Layout Edge Extraction Network. , 2019, , .		25
168	Tracking groups of people with a multi-model hypothesis tracker. , 2009, , .		24
169	Vision-based detection for learning articulation models of cabinet doors and drawers in household environments. , 2010, , .		24
170	Online generation of homotopically distinct navigation paths. , 2014, , .		24
171	Learning mobile manipulation actions from human demonstrations. , 2017, , .		24
172	Modeling and Planning Manipulation in Dynamic Environments. , 2019, , .		24
173	Deep 3D perception of people and their mobility aids. Robotics and Autonomous Systems, 2019, 114, 29-40.	5.1	24
174	MINERVA: A Tour-Guide Robot that Learns. Lecture Notes in Computer Science, 1999, , 14-26.	1.3	24
175	Autonomous Exploration for 3D Map Learning. Informatik Aktuell, 2007, , 22-28.	0.6	24
176	Nonlinear Graph Sparsification for SLAM. , 0, , .		24
177	Unsupervised body scheme learning through self-perception. , 2008, , .		23
178	Efficient motion planning for manipulation robots in environments with deformable objects. , 2011, , .		23
179	New Perspectives on Neuroengineering and Neurotechnologies: NSF-DFG Workshop Report. IEEE Transactions on Biomedical Engineering, 2016, 63, 1354-1367.	4.2	23
180	Using an Image Retrieval System for Vision-Based Mobile Robot Localization. Lecture Notes in Computer Science, 2002, , 108-119.	1.3	23

#	ARTICLE	IF	CITATIONS
181	Mobile Robot Map Learning from Range Data in Dynamic Environments. , 2007, , 3-28.		22
182	Accurate human motion capture in large areas by combining IMU- and laser-based people tracking. , 2011, , .		22
183	Using artificial landmarks to reduce the ambiguity in the environment of a mobile robot. , 2011, , .		22
184	Acting thoughts: Towards a mobile robotic service assistant for users with limited communication skills. , 2017, , .		22
185	The Museum Tour-Guide Robot RHINO. Informatik Aktuell, 1999, , 245-254.	0.6	22
186	Unsupervised learning of 3D object models from partial views. , 2009, , .		21
187	A probabilistic approach to high-confidence cleaning guarantees for low-cost cleaning robots. , 2014, , .		21
188	Inverse reinforcement learning of behavioral models for online-adapting navigation strategies. , 2015, , .		21
189	Range-Based People Detection and Tracking for Socially Enabled Service Robots. Springer Tracts in Advanced Robotics, 2012, , 235-280.	0.4	21
190	Learning search heuristics for finding objects in structured environments. Robotics and Autonomous Systems, 2011, 59, 319-328.	5.1	20
191	An Experimental Protocol for Benchmarking Robotic Indoor Navigation. Springer Tracts in Advanced Robotics, 2016, , 487-504.	0.4	20
192	Deep Detection of People and their Mobility Aids for a Hospital Robot. , 2017, , .		20
193	Correlations between Motor Symptoms across Different Motor Tasks, Quantified via Random Forest Feature Classification in Parkinsonâ€™s Disease. Frontiers in Neurology, 2017, 8, 607.	2.4	20
194	Mapping with Dynamic-Object Probabilities Calculated from Single 3D Range Scans. , 2018, , .		20
195	Learning maps in 3D using attitude and noisy vision sensors. , 2007, , .		19
196	Mapping indoor environments based on human activity. , 2010, , .		19
197	An approach to solving large-scale SLAM problems with a small memory footprint. , 2014, , .		19
198	A statistical measure for map consistency in SLAM. , 2014, , .		19

#	ARTICLE	IF	CITATIONS
199	Robot navigation in hand-drawn sketched maps. , 2015, , .		19
200	Attitude stabilization control of an aerial manipulator using a quaternion-based backstepping approach. , 2015, , .		19
201	Automatic initialization for skeleton tracking in optical motion capture. , 2015, , .		19
202	An Analytical Lidar Sensor Model Based on Ray Path Information. IEEE Robotics and Automation Letters, 2017, 2, 1405-1412.	5.1	19
203	Efficient and robust deep networks for semantic segmentation. International Journal of Robotics Research, 2018, 37, 472-491.	8.5	19
204	A probabilistic sonar sensor model for robust localization of a small-size blimp in indoor environments using a particle filter. , 2009, , .		18
205	Do you see the bakery? Leveraging geo-referenced texts for global localization in public maps. , 2016, , .		18
206	Metric learning for generalizing spatial relations to new objects. , 2017, , .		18
207	Global outer-urban navigation with OpenStreetMap. , 2017, , .		18
208	Experimental analysis of dynamic covariance scaling for robust map optimization under bad initial estimates. , 2014, , .		17
209	Multimodal interaction-aware motion prediction for autonomous street crossing. International Journal of Robotics Research, 2020, 39, 1567-1598.	8.5	17
210	Integrating active localization into high-level robot control systems. Robotics and Autonomous Systems, 1998, 23, 205-220.	5.1	16
211	Wireless communications in networked robotics [Guest editorial. IEEE Wireless Communications, 2009, 16, 4-5.	9.0	16
212	Classifying dynamic objects. Autonomous Robots, 2009, 26, 141-151.	4.8	16
213	Robust tracking of a mobile beacon using time differences of arrival with simultaneous calibration of receiver positions. , 2012, , .		16
214	Learning a Local Feature Descriptor for 3D LiDAR Scans. , 2018, , .		16
215	Long-term vehicle localization in urban environments based on pole landmarks extracted from 3-D lidar scans. Robotics and Autonomous Systems, 2021, 136, 103709.	5.1	16
216	Learning Human-Aware Robot Navigation from Physical Interaction via Inverse Reinforcement Learning. , 2020, , .		16

#	ARTICLE	IF	CITATIONS
217	CALVIN: A Benchmark for Language-Conditioned Policy Learning for Long-Horizon Robot Manipulation Tasks. IEEE Robotics and Automation Letters, 2022, 7, 7327-7334.	5.1	16
218	Gaussian mixture models for probabilistic localization. , 2008, , .		15
219	Unsupervised learning of compact 3D models based on the detection of recurrent structures. , 2010, , .		15
220	Near-optimal landmark selection for mobile robot navigation. , 2011, , .		15
221	Efficient probabilistic localization for autonomous indoor airships using sonar, air flow, and IMU sensors. Advanced Robotics, 2013, 27, 711-724.	1.8	15
222	Survey of Geodetic Mapping Methods: Geodetic Approaches to Mapping and the Relationship to Graph-Based SLAM. IEEE Robotics and Automation Magazine, 2014, 21, 63-80.	2.0	15
223	Monte Carlo localization in hand-drawn maps. , 2015, , .		15
224	Vision-based Markov localization for long-term autonomy. Robotics and Autonomous Systems, 2017, 89, 147-157.	5.1	15
225	Adversarial Skill Networks: Unsupervised Robot Skill Learning from Video. , 2020, , .		15
226	Topometric Localization with Deep Learning. Springer Proceedings in Advanced Robotics, 2020, , 505-520.	1.3	15
227	Consistent mapping of multistory buildings by introducing global constraints to graph-based SLAM. , 2010, , .		14
228	Searching for objects: Combining multiple cues to object locations using a maximum entropy model. , 2010, , .		14
229	Learning manipulation actions from human demonstrations. , 2016, , .		14
230	Robust, Compliant Assembly via Optimal Belief Space Planning. , 2018, , .		14
231	Planning Reactive Manipulation in Dynamic Environments. , 2019, , .		14
232	PillarFlow: End-to-end Birds-eye-view Flow Estimation for Autonomous Driving. , 2020, , .		14
233	Vision-Based Autonomous UAV Navigation and Landing for Urban Search and Rescue. Springer Proceedings in Advanced Robotics, 2022, , 575-592.	1.3	14
234	Tele-Presence in Populated Exhibitions Through Web-Operated Mobile Robots. Autonomous Robots, 2003, 15, 299-316.	4.8	13

#	ARTICLE	IF	CITATIONS
235	Learning Relational Navigation Policies. , 2006, , .		13
236	How to learn accurate grid maps with a humanoid. , 2008, , .		13
237	Look-ahead Proposals for Robust Grid-based SLAM with Rao-Blackwellized Particle Filters. International Journal of Robotics Research, 2009, 28, 191-200.	8.5	13
238	Highly accurate maximum likelihood laser mapping by jointly optimizing laser points and robot poses. , 2011, , .		13
239	Robust landmark selection for mobile robot navigation. , 2013, , .		13
240	Learning to Pour using Deep Deterministic Policy Gradients. , 2018, , .		13
241	State Estimation in Contact-Rich Manipulation. , 2019, , .		13
242	Collaborative Multi-robot Localization. Lecture Notes in Computer Science, 1999, , 255-266.	1.3	13
243	Adaptive Body Scheme Models for Robust Robotic Manipulation. , 0, , .		13
244	Monocular range sensing: A non-parametric learning approach. , 2008, , .		12
245	Coordinated exploration with marsupial teams of robots using temporal symbolic planning. , 2010, , .		12
246	Towards Palm-Size Autonomous Helicopters. Journal of Intelligent and Robotic Systems: Theory and Applications, 2011, 61, 445-471.	3.4	12
247	An Approach to Socially Compliant Leader Following for Mobile Robots. Lecture Notes in Computer Science, 2014, , 239-248.	1.3	12
248	Self-supervised 3D Shape and Viewpoint Estimation from Single Images for Robotics. , 2019, , .		12
249	Self-supervised Transfer Learning for Instance Segmentation through Physical Interaction. , 2019, , .		12
250	Lane Graph Estimation for Scene Understanding in Urban Driving. IEEE Robotics and Automation Letters, 2021, 6, 8615-8622.	5.1	12
251	Recognizing complex, parameterized gestures from monocular image sequences. , 2008, , .		11
252	Learning the dynamics of doors for robotic manipulation. , 2013, , .		11

#	ARTICLE	IF	CITATIONS
253	Automatic bone parameter estimation for skeleton tracking in optical motion capture. , 2016, , .		11
254	Terrain-adaptive obstacle detection. , 2016, , .		11
255	Predicting Occupancy Distributions of Walking Humans With Convolutional Neural Networks. IEEE Robotics and Automation Letters, 2018, 3, 1522-1528.	5.1	11
256	Coupling Mobile Base and End-Effector Motion in Task Space. , 2018, , .		11
257	Holistic Filter Pruning for Efficient Deep Neural Networks. , 2021, , .		11
258	Courteous Behavior of Automated Vehicles at Unsignalized Intersections Via Reinforcement Learning. IEEE Robotics and Automation Letters, 2022, 7, 191-198.	5.1	11
259	Improved likelihood models for probabilistic localization based on range scans. , 2007, , .		10
260	Adaptive autonomous control using online value iteration with gaussian processes. , 2009, , .		10
261	A catadioptric extension for RGB-D cameras. , 2014, , .		10
262	Vision-based Markov localization across large perceptual changes. , 2015, , .		10
263	A Probabilistic Relational Model for Characterizing Situations in Dynamic Multi-Agent Systems. Studies in Classification, Data Analysis, and Knowledge Organization, 2008, , 269-276.	0.2	10
264	Semantic Modelling of Space. Cognitive Systems Monographs, 2010, , 165-221.	0.1	10
265	Efficient path planning for mobile robots in environments with deformable objects. , 2008, , .		9
266	Utilizing reflection properties of surfaces to improve mobile robot localization. , 2009, , .		9
267	Maximum-likelihood sample-based maps for mobile robots. Robotics and Autonomous Systems, 2010, 58, 133-139.	5.1	9
268	Probabilistic Rule Set Joint State Update as approximation to the full joint state estimation applied to multi object scene analysis. , 2010, , .		9
269	Where to park? minimizing the expected time to find a parking space. , 2015, , .		9
270	World Modeling. Springer Handbooks, 2016, , 1135-1152.	0.6	9

#	ARTICLE	IF	CITATIONS
271	Guess What I Attend: Interface-Free Object Selection Using Brain Signals. , 2018, , .		9
272	A Maximum Likelihood Approach to Extract Polylines from 2-D Laser Range Scans. , 2018, , .		9
273	Optimization Beyond the Convolution: Generalizing Spatial Relations with End-to-End Metric Learning. , 2018, , .		9
274	Accurate Pouring with an Autonomous Robot Using an RGB-D Camera. Advances in Intelligent Systems and Computing, 2019, , 210-221.	0.6	9
275	Combined Task and Action Learning from Human Demonstrations for Mobile Manipulation Applications. , 2019, , .		9
276	Learning Non-stationary System Dynamics Online Using Gaussian Processes. Lecture Notes in Computer Science, 2010, , 192-201.	1.3	9
277	Hindsight for Foresight: Unsupervised Structured Dynamics Models from Physical Interaction. , 2020, , .		9
278	Correct Me If I am Wrong: Interactive Learning for Robotic Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 3695-3702.	5.1	9
279	Affordance Learning from Play for Sample-Efficient Policy Learning. , 2022, , .		9
280	Approximate Covariance Estimation in Graphical Approaches to SLAM. , 2007, , .		8
281	Improved non-linear spline fitting for teaching trajectories to mobile robots. , 2012, , .		8
282	Poisson-driven dirt maps for efficient robot cleaning. , 2013, , .		8
283	Deploying artificial landmarks to foster data association in simultaneous localization and mapping. , 2013, , .		8
284	Learning to give route directions from human demonstrations. , 2014, , .		8
285	Closed-loop interaction with the cerebral cortex using a novel micro-ECoG-based implant: the impact of beta vs. gamma stimulation frequencies on cortico-cortical spectral responses. Brain-Computer Interfaces, 2017, 4, 214-224.	1.8	8
286	Lane Marking Learning based on Crowdsourced Data. , 2019, , .		8
287	DeepTemporalSeg: Temporally Consistent Semantic Segmentation of 3D LiDAR Scans. , 2020, , .		8
288	Composing Pick-and-Place Tasks by Grounding Language. Springer Proceedings in Advanced Robotics, 2021, , 491-501.	1.3	8

#	ARTICLE	IF	CITATIONS
289	Robust Monocular Localization in Sparse HD Maps Leveraging Multi-Task Uncertainty Estimation. , 2022, , .		8
290	Using AdaBoost for Place Labeling and Topological Map Building. , 2007, , 453-472.		7
291	A comparative study of contact models for contact-aware state estimation. , 2015, , .		7
292	Maneuver planning for highly automated vehicles. , 2017, , .		7
293	Detecting Changes in the Environment Based on Full Posterior Distributions Over Real-Valued Grid Maps. IEEE Robotics and Automation Letters, 2018, 3, 1299-1305.	5.1	7
294	Cross-Paradigm Pretraining of Convolutional Networks Improves Intracranial EEG Decoding. , 2018, , .		7
295	Courtesy Behavior for Highly Automated Vehicles on Highway Interchanges. , 2018, , .		7
296	Whole-Body Sensory Concept for Compliant Mobile Robots. , 2018, , .		7
297	Editorial: Shared Autonomyâ€™ Learning of Joint Action and Human-Robot Collaboration. Frontiers in Neurobotics, 2019, 13, 16.	2.8	7
298	Efficient Failure Detection for Mobile Robots Using Mixed-Abstraction Particle Filters. , 0, , 93-107.		7
299	Active Monte Carlo Localization in Outdoor Terrains Using Multi-level Surface Maps. Informatik Aktuell, 2007, , 29-35.	0.6	7
300	Markov Localization for Reliable Robot Navigation and People Detection. Lecture Notes in Computer Science, 1999, , 1-20.	1.3	7
301	Regression-based online situation recognition for vehicular traffic scenarios. , 2009, , .		6
302	Real-world robot navigation amongst deformable obstacles. , 2009, , .		6
303	Improved Monte Carlo localization of autonomous robots through simultaneous estimation of motion model parameters. , 2010, , .		6
304	Autonomous miniature blimp navigation with online motion planning and re-planning. , 2011, , .		6
305	Onlineâ€™6D-SLAM fÃ¼r RGB-D-Sensoren. Automatisierungstechnik, 2012, 60, 270-278.	0.8	6
306	Organizing objects by predicting user preferences through collaborative filtering. International Journal of Robotics Research, 2016, 35, 1587-1608.	8.5	6

#	ARTICLE	IF	CITATIONS
307	Efficient path planning for mobile robots with adjustable wheel positions. , 2017, , .		6
308	Closed-form full map posteriors for robot localization with lidar sensors. , 2017, , .		6
309	Robot localization with sparse scan-based maps. , 2017, , .		6
310	Towards efficient and scalable visual homing. International Journal of Robotics Research, 2018, 37, 225-248.	8.5	6
311	DCT Maps: Compact Differentiable Lidar Maps Based on the Cosine Transform. IEEE Robotics and Automation Letters, 2018, 3, 1002-1009.	5.1	6
312	Kooperativ interagierende Automobile. Automatisierungstechnik, 2018, 66, 81-99.	0.8	6
313	Monte Carlo Localization in Outdoor Terrains Using Multi-Level Surface Maps. Springer Tracts in Advanced Robotics, 2008, , 213-222.	0.4	6
314	Improving Unimodal Object Recognition with Multimodal Contrastive Learning. , 2020, , .		6
315	Kineverse: A Symbolic Articulation Model Framework for Model-Agnostic Mobile Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 3372-3379.	5.1	6
316	First steps towards a robotic system for flexible volumetric mapping of indoor environments. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 651-656.	0.4	5
317	Learning to transfer optimal navigation policies. Advanced Robotics, 2007, 21, 1565-1582.	1.8	5
318	Efficiently learning high-dimensional observation models for Monte-Carlo localization using Gaussian mixtures. , 2008, , .		5
319	Learning efficient policies for vision-based navigation. , 2009, , .		5
320	Gaussian process based state estimation for a gyroscope-free IMU. , 2010, , .		5
321	Learning to guide random tree planners in high dimensional spaces. , 2013, , .		5
322	Efficient navigation for anyshape holonomic mobile robots in dynamic environments. , 2013, , .		5
323	Automatic extrinsic calibration of multiple laser range sensors with little overlap. , 2015, , .		5
324	Why did the robot cross the road? â€” Learning from multi-modal sensor data for autonomous road crossing. , 2017, , .		5

#	ARTICLE	IF	CITATIONS
325	Relative Topometric Localization in Globally Inconsistent Maps. Springer Proceedings in Advanced Robotics, 2018, , 435-451.	1.3	5
326	Intracranial Error Detection via Deep Learning. , 2018, , .		5
327	Building Dense Reflectance Maps of Indoor Environments Using an RGB-D Camera. , 2018, , .		5
328	A Maximum Likelihood Approach to Extract Finite Planes from 3-D Laser Scans. , 2019, , .		5
329	Motion Biomarkers Showing Maximum Contrast Between Healthy Subjects and Parkinson's Disease Patients Treated With Deep Brain Stimulation of the Subthalamic Nucleus. A Pilot Study. Frontiers in Neuroscience, 2020, 13, 1450.	2.8	5
330	SYMOC: Learning symmetric mixture of Gaussian modes for improved fixed-point quantization. Neurocomputing, 2020, 416, 310-315.	5.9	5
331	Efficient Multi-Robot Localization Based on Monte Carlo Approximation. , 2000, , 153-160.		5
332	Accurate human motion capture in large areas by combining IMU- and laser-based people tracking. , 2011, , .		5
333	Perspectives on Deep Multimodel Robot Learning. Springer Proceedings in Advanced Robotics, 2020, , 17-24.	1.3	5
334	Estimating landmark locations from geo-referenced photographs. , 2008, , .		4
335	Probabilistic velocity estimation for autonomous miniature airships using thermal air flow sensors. , 2012, , .		4
336	Reconstruction of rigid body models from motion distorted laser range data using optical flow. , 2014, , .		4
337	Hierarchical sparse coded surface models. , 2014, , .		4
338	Maximum likelihood remission calibration for groups of heterogeneous laser scanners. , 2015, , .		4
339	Accurate localization with respect to moving objects via multiple-body registration. , 2015, , .		4
340	An online system for tracking the performance of Parkinson's patients. , 2017, , .		4
341	Erzeugung von Verfahrensflietildebildern mit Expertensystemen. Chemie-Ingenieur-Technik, 1987, 59, 650-652.	0.8	3
342	Learning Kinematics from Direct Self-Observation Using Nearest-Neighbor Methods. , 2009, , 11-20.		3

#	ARTICLE	IF	CITATIONS
343	Range sensor based model construction by sparse surface adjustment. , 2011, , .		3
344	Identification of critical variables using an FPGA-based fault injection framework. , 2013, , .		3
345	LexTOR: Lexicographic teach optimize and repeat based on user preferences. , 2015, , .		3
346	Learning motor control parameters for motion strategy analysis of Parkinson's disease patients. , 2015, , .		3
347	A probabilistic approach based on Random Forests to estimating similarity of human motion in the context of Parkinson's Disease. , 2016, , .		3
348	Shakey 2016 - How Much Does it Take to Redo Shakey the Robot?. IEEE Robotics and Automation Letters, 2017, , 1-1.	5.1	3
349	Decoding Perceived Hazardousness from User's Brain States to Shape Human-Robot Interaction. , 2017, , .		3
350	Hybrid Brain-Computer-Interfacing for Human-Compliant Robots: Inferring Continuous Subjective Ratings With Deep Regression. Frontiers in Neurorobotics, 2019, 13, 76.	2.8	3
351	Vision-Based 3D Object Localization Using Probabilistic Models of Appearance. Lecture Notes in Computer Science, 2005, , 184-191.	1.3	3
352	A Real-time Algorithm for Acquiring Multi-Planar Volumetric Models with Mobile Robots. , 0, , 21-35.		3
353	Transregional Collaborative Research Center SFB/TR 8 Spatial Cognition: Reasoning, Action, Interaction (Sonderforschungsbereich/Transregio SFB/TR 8 Raumkognition: Schlieÿen, Handeln,) Tj ETQq1 1 0.784814 rgBT /Overlock		3
354	Efficiently Learning Metric and Topological Maps with Autonomous Service Robots (Effizientes Lernen) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.9	2
355	Editorial: Three-dimensional mapping, part 1. Journal of Field Robotics, 2009, 26, 757-758.	6.0	2
356	Editorial: Three-dimensional mapping, part 3. Journal of Field Robotics, 2010, 27, 1-1.	6.0	2
357	Inferring what to imitate in manipulation actions by using a recommender system. , 2014, , .		2
358	Helmert's and Bowie's geodetic mapping methods and their relation to graph-based SLAM. , 2014, , .		2
359	Automatic channel selection and neural signal estimation across channels of neural probes. , 2014, , .		2
360	DPDB-Net: Exploiting Dense Connections for Convolutional Encoders. , 2018, , .		2

#	ARTICLE	IF	CITATIONS
361	Augmenting Action Model Learning by Non-Geometric Features. , 2019, , .		2
362	Robust, Compliant Assembly with Elastic Parts and Model Uncertainty. , 2019, , .		2
363	Predicting Obstacle Footprints from 2D Occupancy Maps by Learning from Physical Interactions. , 2020, , .		2
364	Recovering the Shape of Objects in 3D Point Clouds with Partial Occlusions. Springer Tracts in Advanced Robotics, 2008, , 13-22.	0.4	2
365	Collective Classification for Labeling of Places and Objects in 2D and 3D Range Data. Studies in Classification, Data Analysis, and Knowledge Organization, 2008, , 293-300.	0.2	2
366	Self-Supervised Moving Vehicle Detection From Audio-Visual Cues. IEEE Robotics and Automation Letters, 2022, 7, 7415-7422.	5.1	2
367	Probabilistic Approaches to Robot Navigation [Position]. IEEE Robotics and Automation Magazine, 2008, 15, 8-13.	2.0	1
368	Recognizing people based on their footsteps using a wearable accelerometer. , 2010, , .		1
369	Probabilistic State Estimation Techniques for Autonomous and Decision Support Systems. Informatik-Spektrum, 2011, 34, 455-461.	1.3	1
370	3D-reconstruction of indoor environments from human activity. , 2015, , .		1
371	Trail-Map-based homing under the presence of sensor noise. , 2015, , .		1
372	New Challenges for the IEEE Robotics and Automation Society [President's Message]. IEEE Robotics and Automation Magazine, 2018, 25, 6-6.	2.0	1
373	On the Bayes Filter for Shared Autonomy. IEEE Robotics and Automation Letters, 2019, 4, 3286-3293.	5.1	1
374	Influence of User Tasks on EEG-based Classification Performance in a Hazard Detection Paradigm. , 2019, 2019, 6758-6761.		1
375	A Robust Screen-Free Brain-Computer Interface for Robotic Object Selection. Frontiers in Robotics and AI, 2020, 7, 38.	3.2	1
376	Real-Time Outdoor Illumination Estimation for Camera Tracking in Indoor Environments. IEEE Robotics and Automation Letters, 2021, 6, 6084-6091.	5.1	1
377	Efficient information-theoretic graph pruning for graph-based SLAM with laser range finders. , 2011, , .		1
378	Simultaneous calibration, localization, and mapping. , 2011, , .		1

#	ARTICLE	IF	CITATIONS
379	Towards Palm-Size Autonomous Helicopters. , 2010, , 445-471.		1
380	Learning High-Level Navigation Strategies via Inverse Reinforcement Learning: A Comparative Analysis. Lecture Notes in Computer Science, 2016, , 525-534.	1.3	1
381	Robot Skill Adaptation via Soft Actor-Critic Gaussian Mixture Models. , 2022, , .		1
382	Knowledge-based design of ergonomic lighting for underground scenarios. , 1992, , 491-494.		0
383	Guest Editorial: Special Issue on Internet and Online Robots. Autonomous Robots, 2003, 15, 211-212.	4.8	0
384	Look-Ahead Proposals for Robust Grid-Based SLAM. Springer Tracts in Advanced Robotics, 2008, , 329-338.	0.4	0
385	Editorial: Three-dimensional mapping, part 2. Journal of Field Robotics, 2009, 26, 863-864.	6.0	0
386	Automatic channel selection in neural microprobes: A combinatorial multi-armed bandit approach. , 2016, , .		0
387	Sensor fusion in the epistemic situation calculus. Journal of Experimental and Theoretical Artificial Intelligence, 2016, 28, 871-887.	2.8	0
388	A Great New RAS Team Taking the Next Step in Exciting Times [President's Message]. IEEE Robotics and Automation Magazine, 2018, 25, 6-8.	2.0	0
389	The IEEE Robotics and Automation Society Is Working Well Even in Difficult Times [President's Message]. IEEE Robotics and Automation Magazine, 2018, 25, 6-6.	2.0	0
390	25th Anniversary of IEEE Robotics and Automation Magazine: From a Small Seed to a Great Plant [President's Message]. IEEE Robotics and Automation Magazine, 2019, 26, 6-6.	2.0	0
391	Diversity, Inclusiveness, and Respect [President's Message]. IEEE Robotics and Automation Magazine, 2019, 26, 6-6.	2.0	0
392	Today's Youth Are Our Future Leaders [President's Message]. IEEE Robotics and Automation Magazine, 2019, 26, 6-130.	2.0	0
393	Open Access: How Best to Prepare to Master This Challenge [President's Message]. IEEE Robotics and Automation Magazine, 2019, 26, 6-6.	2.0	0
394	Planning and Failure Detection. Cognitive Systems Monographs, 2010, , 223-264.	0.1	0
395	Learning Landmark Selection Policies for Mapping Unknown Environments. Springer Tracts in Advanced Robotics, 2011, , 483-499.	0.4	0
396	Rule Set Based Joint State Update. Springer Tracts in Advanced Robotics, 2012, , 301-326.	0.4	0

#	ARTICLE	IF	CITATIONS
397	The Role of Robot Design in Decoding Error-related Information from EEG Signals of a Human Observer. , 2018, , .		0
398	Underwater Multi-modal Sensing for Environmental Mapping and Vehicle Navigation. Intelligent Systems, Control and Automation: Science and Engineering, 2020, , 137-144.	0.5	0
399	Novel Directions for Autonomous Underwater Vehicle Navigation in Confined Spaces. Intelligent Systems, Control and Automation: Science and Engineering, 2020, , 157-168.	0.5	0
400	Maneuver Planning and Learning: a Lane Selection Approach for Highly Automated Vehicles in Highway Scenarios.. , 2020, , .		0
401	Autonomous miniature blimp navigation with online motion planning and re-planning. , 2011, , .		0
402	Pitch and roll control using independent movable floats for small underwater robots. , 2011, , .		0
403	An Efficient Extension of Elevation Maps for Outdoor Terrain Mapping. , 2006, , 195-206.		0