

# John J Leonard

## List of Publications by Year in descending order

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Version: 2024-02-01

60  
papers

3,765  
citations

516710

16  
h-index

677142

22  
g-index

60  
all docs

60  
docs citations

60  
times ranked

2882  
citing authors

#	ARTICLE	IF	CITATIONS
1	iSAM2: Incremental smoothing and mapping using the Bayes tree. International Journal of Robotics Research, 2012, 31, 216-235.	8.5	820
2	Visual Place Recognition: A Survey. IEEE Transactions on Robotics, 2016, 32, 1-19.	10.3	729
3	Cooperative AUV Navigation using a Single Maneuvering Surface Craft. International Journal of Robotics Research, 2010, 29, 1461-1474.	8.5	179
4	Nested autonomy for unmanned marine vehicles with MOOSâ€wP. Journal of Field Robotics, 2010, 27, 834-875.	6.0	176
5	Robust Range-Only Beacon Localization. IEEE Journal of Oceanic Engineering, 2006, 31, 949-958.	3.8	171
6	SE-Sync: A certifiably correct algorithm for synchronization over the special Euclidean group. International Journal of Robotics Research, 2019, 38, 95-125.	8.5	139
7	iSAM2: Incremental smoothing and mapping with fluid relinearization and incremental variable reordering. , 2011, , .		135
8	Autonomous Underwater Vehicle Navigation. , 2016, , 341-358.		93
9	Relocating Underwater Features Autonomously Using Sonar-Based SLAM. IEEE Journal of Oceanic Engineering, 2013, 38, 500-513.	3.8	82
10	The MITâ€“Cornell collision and why it happened. Journal of Field Robotics, 2008, 25, 775-807.	6.0	73
11	Efficient AUV navigation fusing acoustic ranging and side-scan sonar. , 2011, , .		73
12	Temporally scalable visual SLAM using a reduced pose graph. , 2013, , .		72
13	Deformation-based loop closure for large scale dense RGB-D SLAM. , 2013, , .		69
14	Communication-constrained multi-AUV cooperative SLAM. , 2015, , .		67
15	Towards consistent visual-inertial navigation. , 2014, , .		59
16	SLAM with objects using a nonparametric pose graph. , 2016, , .		57
17	Toward lifelong object segmentation from change detection in dense RGB-D maps. , 2013, , .		53
18	Quantifying protocol evaluation for autonomous collision avoidance. Autonomous Robots, 2019, 43, 967-991.	4.8	51

#	ARTICLE	IF	CITATIONS
19	Efficient scene simulation for robust monte carlo localization using an RGB-D camera. , 2012, , .		49
20	RISE: An Incremental Trust-Region Method for Robust Online Sparse Least-Squares Estimation. IEEE Transactions on Robotics, 2014, 30, 1091-1108.	10.3	49
21	DiversityGAN: Diversity-Aware Vehicle Motion Prediction via Latent Semantic Sampling. IEEE Robotics and Automation Letters, 2020, 5, 5089-5096.	5.1	41
22	A measurement distribution framework for cooperative navigation using multiple AUVs. , 2010, , .		40
23	Advances in Inference and Representation for Simultaneous Localization and Mapping. Annual Review of Control, Robotics, and Autonomous Systems, 2021, 4, 215-242.	11.8	37
24	Guest Editorial Special Issue on Visual SLAM. IEEE Transactions on Robotics, 2008, 24, 929-931.	10.3	36
25	Sensor fusion for flexible human-portable building-scale mapping. , 2012, , .		34
26	A convex relaxation for approximate global optimization in simultaneous localization and mapping. , 2015, , .		34
27	Towards visual ego-motion learning in robots. , 2017, , .		27
28	Multiple relative pose graphs for robust cooperative mapping. , 2010, , .		25
29	Information-based Active SLAM via topological feature graphs. , 2016, , .		25
30	Probabilistic cooperative mobile robot area coverage and its application to autonomous seabed mapping. International Journal of Robotics Research, 2018, 37, 21-45.	8.5	24
31	Probabilistic Risk Metrics for Navigating Occluded Intersections. IEEE Robotics and Automation Letters, 2019, 4, 4322-4329.	5.1	23
32	An Online Sparsity-Cognizant Loop-Closure Algorithm for Visual Navigation. , 0, , .		21
33	High-performance and tunable stereo reconstruction. , 2016, , .		20
34	Concurrent filtering and smoothing: A parallel architecture for real-time navigation and full smoothing. International Journal of Robotics Research, 2014, 33, 1544-1568.	8.5	17
35	Bridging text spotting and SLAM with junction features. , 2015, , .		14
36	Optimized visibility motion planning for target tracking and localization. , 2014, , .		13

#	ARTICLE	IF	CITATIONS
37	A unified resource-constrained framework for graph SLAM. , 2016, , .		13
38	Efficient incremental map segmentation in dense RGB-D maps. , 2014, , .		11
39	Collision avoidance road test for COLREGS-constrained autonomous vehicles. , 2016, , .		11
40	HYPER: Learned Hybrid Trajectory Prediction via Factored Inference and Adaptive Sampling. , 2022, , .		11
41	Two-Stage Focused Inference for Resource-Constrained Minimal Collision Navigation. IEEE Transactions on Robotics, 2017, 33, 124-140.	10.3	10
42	Sparse optimization for robust and efficient loop closing. Robotics and Autonomous Systems, 2017, 93, 13-26.	5.1	9
43	Dense, Sonar-based Reconstruction of Underwater Scenes. , 2019, , .		9
44	Challenges for Autonomous Mobile Robots. , 2007, , .		8
45	Unscented iSAM: A consistent incremental solution to cooperative localization and target tracking. , 2013, , .		6
46	Consensus-Informed Optimization Over Mixtures for Ambiguity-Aware Object SLAM. , 2021, , .		6
47	Analytically-selected multi-hypothesis incremental MAP estimation. , 2013, , .		5
48	CARPAL: Confidence-Aware Intent Recognition for Parallel Autonomy. IEEE Robotics and Automation Letters, 2021, 6, 4433-4440.	5.1	5
49	Trajectory Prediction with Linguistic Representations. , 2022, , .		5
50	Using prioritized relaxations to locate objects in points clouds for manipulation. , 2011, , .		4
51	Non-parametric Mixed-Manifold Products using Multiscale Kernel Densities. , 2019, , .		4
52	Bootstrapped Self-Supervised Training with Monocular Video for Semantic Segmentation and Depth Estimation. , 2021, , .		4
53	AUV-Assisted Diver Navigation. IEEE Robotics and Automation Letters, 2022, 7, 10208-10215.	5.1	4
54	Nested Sampling for Non-Gaussian Inference in SLAM Factor Graphs. IEEE Robotics and Automation Letters, 2022, 7, 9232-9239.	5.1	4

#	ARTICLE	IF	CITATIONS
55	Network Localization Based Planning for Autonomous Underwater Vehicles with Inter-Vehicle Ranging. , 2020, , .		3
56	Simultaneous Localization and Mapping in Marine Environments. , 2013, , 329-372.		2
57	Human-Centric Intelligent Driving: Collaborating with the Driver to Improve Safety. Lecture Notes in Mobility, 2023, , 85-109.	0.2	2
58	A Front-End for Dense Monocular SLAM using a Learned Outlier Mask Prior. , 2021, , .		1
59	Proxy Platform for Underwater Inspection, Maintenance, and Repair. , 2020, , .		1
60	Appearance-based SLAM in a network space. , 2015, , .		0