John J Leonard

List of Publications by Year
in descending order

60	3,765	516710 16	677142 22
papers	citations	h-index	g-index

60	60	60	2882
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Human-Centric Intelligent Driving: Collaborating with the Driver to Improve Safety. Lecture Notes in Mobility, 2023, , 85-109.	0.2	2
2	AUV-Assisted Diver Navigation. IEEE Robotics and Automation Letters, 2022, 7, 10208-10215.	5.1	4
3	Nested Sampling for Non-Gaussian Inference in SLAM Factor Graphs. IEEE Robotics and Automation Letters, 2022, 7, 9232-9239.	5.1	4
4	Trajectory Prediction with Linguistic Representations. , 2022, , .		5
5	HYPER: Learned Hybrid Trajectory Prediction via Factored Inference and Adaptive Sampling. , 2022, , .		11
6	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
7	CARPAL: Confidence-Aware Intent Recognition for Parallel Autonomy. IEEE Robotics and Automation Letters, 2021, 6, 4433-4440.	5.1	5
8	A Front-End for Dense Monocular SLAM using a Learned Outlier Mask Prior. , 2021, , .		1
9	Bootstrapped Self-Supervised Training with Monocular Video for Semantic Segmentation and Depth Estimation. , 2021, , .		4
10	Consensus-Informed Optimization Over Mixtures for Ambiguity-Aware Object SLAM. , 2021, , .		6
11	DiversityGAN: Diversity-Aware Vehicle Motion Prediction via Latent Semantic Sampling. IEEE Robotics and Automation Letters, 2020, 5, 5089-5096.	5.1	41
12	Network Localization Based Planning for Autonomous Underwater Vehicles with Inter-Vehicle Ranging. , 2020, , .		3
13	Proxy Platform for Underwater Inspection, Maintenance, and Repair. , 2020, , .		1
14	Quantifying protocol evaluation for autonomous collision avoidance. Autonomous Robots, 2019, 43, 967-991.	4.8	51
15	Probabilistic Risk Metrics for Navigating Occluded Intersections. IEEE Robotics and Automation Letters, 2019, 4, 4322-4329.	5.1	23
16	Dense, Sonar-based Reconstruction of Underwater Scenes. , 2019, , .		9
17	Non-parametric Mixed-Manifold Products using Multiscale Kernel Densities. , 2019, , .		4
18	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

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19	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
20	Two-Stage Focused Inference for Resource-Constrained Minimal Collision Navigation. IEEE Transactions on Robotics, 2017, 33, 124-140.	10.3	10
21	Sparse optimization for robust and efficient loop closing. Robotics and Autonomous Systems, 2017, 93, 13-26.	5.1	9
22	Towards visual ego-motion learning in robots. , 2017, , .		27
23	High-performance and tunable stereo reconstruction. , 2016, , .		20
24	Information-based Active SLAM via topological feature graphs. , 2016, , .		25
25	Collision avoidance road test for COLREGS-constrained autonomous vehicles. , 2016, , .		11
26	SLAM with objects using a nonparametric pose graph. , 2016, , .		57
27	A unified resource-constrained framework for graph SLAM. , 2016, , .		13
28	Visual Place Recognition: A Survey. IEEE Transactions on Robotics, 2016, 32, 1-19.	10.3	729
29	Autonomous Underwater Vehicle Navigation. , 2016, , 341-358.		93
30	Bridging text spotting and SLAM with junction features. , 2015, , .		14
31	Appearance-based SLAM in a network space. , 2015, , .		0
32	Communication-constrained multi-AUV cooperative SLAM. , 2015, , .		67
33	A convex relaxation for approximate global optimization in simultaneous localization and mapping. , 2015, , .		34
34	Optimized visibility motion planning for target tracking and localization. , 2014, , .		13
35	Towards consistent visual-inertial navigation. , 2014, , .		59
36	Efficient incremental map segmentation in dense RGB-D maps. , 2014, , .		11

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37	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
38	RISE: An Incremental Trust-Region Method for Robust Online Sparse Least-Squares Estimation. IEEE Transactions on Robotics, 2014, 30, 1091-1108.	10.3	49
39	Relocating Underwater Features Autonomously Using Sonar-Based SLAM. IEEE Journal of Oceanic Engineering, 2013, 38, 500-513.	3.8	82
40	Deformation-based loop closure for large scale dense RGB-D SLAM. , 2013, , .		69
41	Simultaneous Localization and Mapping in Marine Environments. , 2013, , 329-372.		2
42	Temporally scalable visual SLAM using a reduced pose graph. , 2013, , .		72
43	Unscented iSAM: A consistent incremental solution to cooperative localization and target tracking. , 2013, , .		6
44	Analytically-selected multi-hypothesis incremental MAP estimation. , 2013, , .		5
45	Toward lifelong object segmentation from change detection in dense RGB-D maps. , 2013, , .		53
46	Sensor fusion for flexible human-portable building-scale mapping. , 2012, , .		34
47	Efficient scene simulation for robust monte carlo localization using an RGB-D camera. , 2012, , .		49
48	iSAM2: Incremental smoothing and mapping using the Bayes tree. International Journal of Robotics Research, 2012, 31, 216-235.	8.5	820
49	Efficient AUV navigation fusing acoustic ranging and side-scan sonar. , 2011, , .		73
50	iSAM2: Incremental smoothing and mapping with fluid relinearization and incremental variable reordering. , 2011, , .		135
51	Using prioritized relaxations to locate objects in points clouds for manipulation. , 2011, , .		4
52	Nested autonomy for unmanned marine vehicles with MOOSâ€ŀvP. Journal of Field Robotics, 2010, 27, 834-875.	6.0	176
53	Cooperative AUV Navigation using a Single Maneuvering Surface Craft. International Journal of Robotics Research, 2010, 29, 1461-1474.	8.5	179
54	Multiple relative pose graphs for robust cooperative mapping. , 2010, , .		25

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55	A measurement distribution framework for cooperative navigation using multiple AUVs. , 2010, , .		40
56	The MITâ€“Cornell collision and why it happened. Journal of Field Robotics, 2008, 25, 775-807.	6.0	73
57	Guest Editorial Special Issue on Visual SLAM. IEEE Transactions on Robotics, 2008, 24, 929-931.	10.3	36
58	Challenges for Autonomous Mobile Robots. , 2007, , .		8
59	Robust Range-Only Beacon Localization. IEEE Journal of Oceanic Engineering, 2006, 31, 949-958.	3.8	171
60	An Online Sparsity-Cognizant Loop-Closure Algorithm for Visual Navigation. , 0, , .		21