Juan Antonio Fernandez Madrigal

List of Publications by Year
in descending order

50 papers	1,416 citations	430874 18 h-index	361022 35 g-index
51 all docs	51 docs citations	51 times ranked	1239 citing authors

#	Article	IF	Citations
1	Robot task planning using semantic maps. Robotics and Autonomous Systems, 2008, 56, 955-966.	5.1	222
2	Mobile robot localization based on Ultra-Wide-Band ranging: A particle filter approach. Robotics and Autonomous Systems, 2009, 57, 496-507.	5.1	153
3	Toward a Unified Bayesian Approach to Hybrid Metric--Topological SLAM. IEEE Transactions on Robotics, 2008, 24, 259-270.	10.3	123
4	A LEGO Mindstorms NXT approach for teaching at Data Acquisition, Control Systems Engineering and Real-Time Systems undergraduate courses. Computers and Education, 2012, 59, 974-988.	8.3	88
5	Efficient probabilistic Range-Only SLAM. , 2008, , .		63
6	Control Architecture for Humanâ€“Robot Integration: Application to a Robotic Wheelchair. IEEE Transactions on Systems, Man, and Cybernetics, 2006, 36, 1053-1067.	5.0	60
7	A Novel Measure of Uncertainty for Mobile Robot SLAM with Raoâ€”Blackwellized Particle Filters. International Journal of Robotics Research, 2008, 27, 73-89.	8.5	52
8	A pure probabilistic approach to range-only SLAM. , 2008, , .		52
9	Subjective local maps for hybrid metric-topological SLAM. Robotics and Autonomous Systems, 2009, 57, 64-74.	5.1	49
10	Monitoring harness use in construction with BLE beacons. Measurement: Journal of the International Measurement Confederation, 2019, 131, 329-340.	5.0	42
11	A robust, multi-hypothesis approach to matching occupancy grid maps. Robotica, 2013, 31, 687-701.	1.9	41
12	Optimal Filtering for Non-parametric Observation Models: Applications to Localization and SLAM. International Journal of Robotics Research, 2010, 29, 1726-1742.	8.5	37
13	Extending obstacle avoidance methods through multiple parameter-space transformations. Autonomous Robots, 2008, 24, 29-48.	4.8	34
14	The NEXUS open system for integrating robotic software. Robotics and Computer-Integrated Manufacturing, 1999, 15, 431-440.	9.9	33
15	A New Approach for Large-Scale Localization and Mapping: Hybrid Metric-Topological SLAM. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	29
16	Towards a common implementation of reinforcement learning for multiple robotic tasks. Expert Systems With Applications, 2018, 100, 246-259.	7.6	29
17	Assistive navigation of a robotic wheelchair using a multihierarchical model of the environment1. Integrated Computer-Aided Engineering, 2004, 11, 309-322.	4.6	26
18	Multihierarchical Interactive Task Planning: Application to Mobile Robotics. IEEE Transactions on Systems, Man, and Cybernetics, 2008, 38, 785-798.	5.0	26

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19	Improving the prevention of fall from height on construction sites through the combination of technologies. International Journal of Occupational Safety and Ergonomics, 2022, 28, 590-599.	1.9	22
20	A software engineering approach for the development of heterogeneous robotic applications. Robotics and Computer-Integrated Manufacturing, 2008, 24, 150-166.	9.9	17
21	An Alternative to the Mahalanobis Distance for Determining Optimal Correspondences in Data Association. IEEE Transactions on Robotics, 2012, 28, 980-986.	10.3	17
22	Mobile robot path planning: a multicriteria approach. Engineering Applications of Artificial Intelligence, 1999, 12, 543-554.	8.1	16
23	Teaching machine learning in robotics interactively: the case of reinforcement learning with Lego^{Â®}Mindstorms. Interactive Learning Environments, 2019, 27, 293-306.	6.4	16
24	An Entropy-Based Measurement of Certainty in Rao-Blackwellized Particle Filter Mapping. , 2006, , .		13
25	Log-Logistic Modeling of Sensory Flow Delays in Networked Telerobots. IEEE Sensors Journal, 2013, 13, 2944-2953.	4.7	11
26	Sparser Relative Bundle Adjustment (SRBA): Constant-time maintenance and local optimization of arbitrarily large maps. , 2013, , .		11
27	Virtual Fence System Based on IoT Paradigm to Prevent Occupational Accidents in the Construction Sector. International Journal of Environmental Research and Public Health, 2021, 18, 6839.	2.6	11
28	A New Method for Robust and Efficient Occupancy Grid-Map Matching. Lecture Notes in Computer Science, 2007, , 194-201.	1.3	11
29	Life-Long Optimization of the Symbolic Model of Indoor Environments for a Mobile Robot. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 1290-1304.	5.0	10
30	Efficiency and productivity for decision making on low-power heterogeneous CPU+GPU SoCs. Journal of Supercomputing, 2021, 77, 44-65.	3.6	10
31	Improving Bayesian inference efficiency for sensory anomaly detection and recovery in mobile robots. Expert Systems With Applications, 2021, 163, 113755.	7.6	10
32	An optimal filtering algorithm for non-parametric observation models in robot localization. , 2008, , .		9
33	A Consensus-based Approach for Estimating the Observation Likelihood of Accurate Range Sensors. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	5
34	Marginal Probabilistic Modeling of the Delays in the Sensory Data Transmission of Networked Telerobots. Sensors, 2014, 14, 2305-2349.	3.8	5
35	The Trajectory Parameter Space (TP-Space): A New Space Representation for Non-Holonomic Mobile Robot Reactive Navigation. , 2006, , .		4
36	Mobile robot ego-motion estimation by proprioceptive sensor fusion. , 2007, , .		4

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37	A Multi-Agent Control Architecture for a Robotic Wheelchair. Applied Bionics and Biomechanics, 2006, 3, 179-189.	1.1	4
38	A heterogeneity-enabled development system for educational mechatronics. , 2009, , .		3
39	Log-logistic modeling of sensory flow delays in networked telerobots. , 2012, , .		2
40	Smoothly adjustable autonomy for the low-level remote control of mobile robots that is independent of the navigation algorithm. , 2015, , .		2
41	Integrating Multiple Sources ofÂKnowledge for the Intelligent Detection of Anomalous Sensory Data in a Mobile Robot. Advances in Intelligent Systems and Computing, 2020, , 159-170.	0.6	2
42	A software framework for coping with heterogeneity in the shopfloor. Assembly Automation, 2007, 27, 333-342.	1.7	1
43	Hierarchical regulation of sensor data transmission for networked telerobots. , 2014, , .		1
44	Grounding Concepts and Methods of Real-Time Scheduling in Reality Using Arduino. IEEE Transactions on Education, 2020, 63, 224-231.	2.4	1
45	Efficient Geometrical Clock Synchronization for Pairwise Sensor Systems. IEEE Sensors Journal, 2021, 21, 838-846.	4.7	1
46	SELF-ADAPTATION OF THE SYMBOLIC WORLD MODEL OF A MOBILE ROBOT: AN EVOLUTION-BASED APPROACH. , 2004, , .		1
47	H: A component-based specification language for heterogeneous applications. Computer Standards and Interfaces, 2013, 35, 30-49.	5.4	0
48	Performance evaluation of decision making under uncertainty for low power heterogeneous platforms. Journal of Parallel and Distributed Computing, 2020, 137, 119-133.	4.1	0
49	Characterization, Statistical Analysis and Method Selection in the Two-Clocks Synchronization Problem for Pairwise Interconnected Sensors. Sensors, 2020, 20, 4808.	3.8	0
50	Statistical Study of the Performance of Recursive Bayesian Filters with Abnormal Observations from Range Sensors. Sensors, 2020, 20, 4159.	3.8	0