Marc Carreras

List of Publications by Year
in descending order

87 papers	3,411 citations	249298 26 h-index	206121 51 g-index
90 all docs	90 docs citations	90 times ranked	2681 citing authors

#	Article	IF	Citations
1	Automatic Target Recognition for Mine Countermeasure Missions Using Forward-Looking Sonar Data. IEEE Journal of Oceanic Engineering, 2022, 47, 141-161.	2.1	22
2	Online Mapping and Motion Planning Under Uncertainty for Safe Navigation in Unknown Environments. IEEE Transactions on Automation Science and Engineering, 2022, 19, 3356-3378.	3.4	10
3	Involving fishers in scaling up the restoration of cold-water coral gardens on the Mediterranean continental shelf. Biological Conservation, 2021, 262, 109301.	1.9	8
4	Differential Pressure Sensor Speedometer for Autonomous Underwater Vehicle Velocity Estimation. IEEE Journal of Oceanic Engineering, 2020, 45, 946-978.	2.1	18
5	Mobile robotic platforms for the acoustic tracking of deep-sea demersal fishery resources. Science Robotics, 2020, 5, .	9.9	33
6	Multisensor online 3D view planning for autonomous underwater exploration. Journal of Field Robotics, 2020, 37, 1123-1147.	3.2	28
7	Online Multilayered Motion Planning with Dynamic Constraints for Autonomous Underwater Vehicles. , 2019, , .		17
8	First attempts towards the restoration of gorgonian populations on the Mediterranean continental shelf. Aquatic Conservation: Marine and Freshwater Ecosystems, 2019, 29, 1278-1284.	0.9	20
9	Two-Dimensional Frontier-Based Viewpoint Generation for Exploring and Mapping Underwater Environments. Sensors, 2019, 19, 1460.	2.1	17
10	Autonomous Exploration of Complex Underwater Environments Using a Probabilistic Next-Best-View Planner. IEEE Robotics and Automation Letters, 2019, 4, 1619-1625.	3.3	31
11	Active SLAM for Autonomous Underwater Exploration. Remote Sensing, 2019, 11, 2827.	1.8	26
12	Online motion planning for unexplored underwater environments using autonomous underwater vehicles. Journal of Field Robotics, 2019, 36, 370-396.	3.2	42
13	Autonomous Mapping of Underwater 3-D Structures: From View Planning To Execution. IEEE Robotics and Automation Letters, 2018, 3, 1965-1971.	3.3	32
14	Sparus II AUV—A Hovering Vehicle for Seabed Inspection. IEEE Journal of Oceanic Engineering, 2018, 43, 344-355.	2.1	127
15	Online Robotic Exploration for Autonomous Underwater Vehicles in Unstructured Environments. , 2018, , .		4
16	Online 3D Underwater Exploration and Coverage. , 2018, , .		4
17	Vision for the Marine Environment. , 2018, , 1-9.		0
18	Autonomous detection, following and mapping of an underwater chain using sonar. Ocean Engineering, 2017, 130, 336-350.	1.9	35

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19	Online View Planning for Inspecting Unexplored Underwater Structures. IEEE Robotics and Automation Letters, 2017, 2, 1436-1443.	3.3	21
20	LOON-DOCK: AUV homing and docking for high-bandwidth data transmission. , 2017, , .		6
21	Autonomous Underwater Navigation and Optical Mapping in Unknown Natural Environments. Sensors, 2016, 16, 1174.	2.1	50
22	Toward Autonomous Exploration in Confined Underwater Environments. Journal of Field Robotics, 2016, 33, 994-1012.	3.2	71
23	Planning feasible and safe paths online for autonomous underwater vehicles in unknown environments. , 2016, , .		14
24	Online motion planning for underwater inspection. , 2016, , .		7
25	Guest editorial: special issue on long-term autonomy in marine robotics. Autonomous Robots, 2016, 40, 1111-1112.	3.2	2
26	Toward persistent autonomous intervention in a subsea panel. Autonomous Robots, 2016, 40, 1279-1306.	3.2	33
27	Coverage Path Planning with Real-time Replanning and Surface Reconstruction for Inspection of Three-dimensional Underwater Structures using Autonomous Underwater Vehicles. Journal of Field Robotics, 2015, 32, 952-983.	3.2	87
28	Learning multiple strategies to perform a valve turning with underwater currents using an I-AUV. , 2015, , .		12
29	Intervention AUVs: The next challenge. Annual Reviews in Control, 2015, 40, 227-241.	4.4	84
30	Cognitive system for autonomous underwater intervention. Pattern Recognition Letters, 2015, 67, 91-99.	2.6	8
31	Underwater robot-object contact perception using machine learning on force/torque sensor feedback. , 2015, , .		4
32	Online path planning for autonomous underwater vehicles in unknown environments. , 2015, , .		31
33	Simultaneous mapping and planning for autonomous underwater vehicles in unknown environments. , 2015, , .		0
34	Adaptive frequency filtering for forward-looking sonar imagery spectral registration. , 2015, , .		0
35	A comparison of homotopic path planning algorithms for robotic applications. Robotics and Autonomous Systems, 2015, 64, 44-58.	3.0	36
36	Sonar-based chain following using an autonomous underwater vehicle. , 2014, , .		6

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37	An Intervention-AUV learns how to perform an underwater valve turning. , 2014, , .		7
38	Motion control for autonomous underwater vehicles: A robust model — Free approach. , 2014, , .		6
39	Online discovery of AUV control policies to overcome thruster failures. , 2014, , .		12
40	Coverage path planning with realtime replanning for inspection of 3D underwater structures. , 2014, , .		31
41	Intervention AUVs: The Next Challenge. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 12146-12159.	0.4	52
42	A survey on coverage path planning for robotics. Robotics and Autonomous Systems, 2013, 61, 1258-1276.	3.0	1,034
43	Two-step gradient-based reinforcement learning for underwater robotics behavior learning. Robotics and Autonomous Systems, 2013, 61, 271-282.	3.0	44
44	Estimating lifetime healthcare costs with morbidity data. BMC Health Services Research, 2013, 13, 440.	0.9	23
45	A robust visual servo control scheme with prescribed performance for an autonomous underwater vehicle. , 2013, , .		12
46	Uncertainty-driven survey path planning for bathymetric mapping. , 2013, , .		16
47	Planning coverage paths on bathymetric maps for in-detail inspection of the ocean floor. , 2013, , .		33
48	Vision-based localization and mapping system for AUV intervention. , 2013, , .		21
49	Mapping the Moon: Using a lightweight AUV to survey the site of the 17th century ship â€˜La Luneâ€™. , 2013, , .		42
50	Towards valve turning with an AUV using Learning by Demonstration. , 2013, , .		5
51	Complex structure profile estimation and following with the GIRONA500 AUV. , 2013, , .		1
52	Profile Following for Inspection of Underwater Structures. Paladyn, 2013, 4, .	1.9	0
53	A Real-time Underwater Object Detection Algorithm for Multi-beam Forward Looking Sonar. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 306-311.	0.4	54
54	Persistent autonomy: the challenges of the PANDORA project. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 268-273.	0.4	26

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55	Efficient seabed coverage path planning for ASVs and AUVs. , 2012, , .		39
56	Coverage path planning for marine habitat mapping. , 2012, , .		6
57	COLA2: A Control Architecture for AUVs. IEEE Journal of Oceanic Engineering, 2012, 37, 695-716.	2.1	67
58	Girona 500 AUV: From Survey to Intervention. IEEE/ASME Transactions on Mechatronics, 2012, 17, 46-53.	3.7	222
59	Reconfigurable AUV for intervention missions: a case study on underwater object recovery. Intelligent Service Robotics, 2012, 5, 19-31.	1.6	82
60	Path planning with homotopy class constraints on bathymetric maps. , 2011, , .		4
61	Feature extraction for underwater visual SLAM. , 2011, , .		33
62	The Girona 500, a multipurpose autonomous underwater vehicle. , 2011, , .		26
63	A Search-based Path Planning Algorithm with Topological Constraints. Application to an AUV*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 13654-13659.	0.4	8
64	Estimates of patient costs related with population morbidity: can indirect costs affect the results?. European Journal of Health Economics, 2011, 12, 289-295.	1.4	17
65	A topologically guided path planner for an AUV using homotopy classes. , 2011, , .		16
66	Visual inspection of hydroelectric dams using an autonomous underwater vehicle. Journal of Field Robotics, 2010, 27, 759-778.	3.2	111
67	Two steps natural actor critic learning for underwater cable tracking. , 2010, , .		6
68	Using petri nets to specify and execute missions for autonomous underwater vehicles. , 2009, , .		15
69	Mission Control System for an Autonomous Vehicle: Application Study of a Dam Inspection using an AUV. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 66-71.	0.4	2
70	Occupancy Grid Mapping in an Underwater Structured Environment. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 286-291.	0.4	13
71	Policy gradient based Reinforcement Learning for real autonomous underwater cable tracking. , 2008, , .		17
72	Towards a Mission Control Language for AUVs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 15028-15033.	0.4	5

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73	ICTINEUAUV Wins the First SAUC-E Competition. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	26
74	Underwater Telerobotics for Collaborative Research. , 2007, , 347-359.		14
75	Design of a mission control system for an AUV. International Journal of Control, 2007, 80, 993-1007.	1.2	6
76	Application of SONQL for real-time learning of robot behaviors. Robotics and Autonomous Systems, 2007, 55, 628-642.	3.0	14
77	Mission control system for dam inspection with an AUV. , 2006, , .		17
78	Towards Direct Policy Search Reinforcement Learning for Robot Control. , 2006, , .		10
79	Autonomous underwater vehicle control using reinforcement learning policy search methods. , 2005, , .		8
80	A Behavior-Based Scheme Using Reinforcement Learning for Autonomous Underwater Vehicles. IEEE Journal of Oceanic Engineering, 2005, 30, 416-427.	2.1	60
81	On the identification of non-linear models of unmanned underwater vehicles. Control Engineering Practice, 2004, 12, 1483-1499.	3.2	87
82	ROV-Aided Dam Inspection: Practical Results. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 271-274.	0.4	7
83	O2CA2, a new object oriented control architecture for autonomy: the reactive layer. Control Engineering Practice, 2002, 10, 857-873.	3.2	13
84	O 2 CA 2 : A New Hybrid Control Architecture for a Low Cost AUV. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 311-316.	0.4	6
85	Model Identification of a Low-Speed UUV. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 395-400.	0.4	23
86	An Overview on Behaviour-Based Methods for AUV Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 141-146.	0.4	13
87	Estimating the motion of an underwater robot from a monocular image sequence. , 0, , .		7