Pere Ridao Rodriguez

List of Publications by Citations

152 papers	2,480 citations	27 h-index	42 g-index
167 ext. papers	3,320 ext. citations	3 avg, IF	5.23 L-index

#	Paper	IF	Citations
152	Girona 500 AUV: From Survey to Intervention. *IEEE/ASME Transactions on Mechatronics*, **2012**, 17, 46-53	5.5	170
151	Underwater SLAM in man-made structured environments. *Journal of Field Robotics*, **2008**, 25, 898-921	6.7	136
150	On the identification of non-linear models of unmanned underwater vehicles. *Control Engineering Practice*, **2004**, 12, 1483-1499	3.9	78
149	Visual inspection of hydroelectric dams using an autonomous underwater vehicle. *Journal of Field Robotics*, **2010**, 27, 759-778	6.7	77
148	Sparus II AUV A Hovering Vehicle for Seabed Inspection. *IEEE Journal of Oceanic Engineering*, **2018**, 43, 344-355	3.3	67
147	Reconfigurable AUV for intervention missions: a case study on underwater object recovery. *Intelligent Service Robotics*, **2012**, 5, 19-31	2.6	64
146	Challenges and future trends in marine robotics. *Annual Reviews in Control*, **2018**, 46, 350-368	10.3	61
145	. *IEEE/ASME Transactions on Mechatronics*, **2015**, 20, 2583-2592	5.5	60
144	**2006**,		55
143	Grasping for the Seabed: Developing a New Underwater Robot Arm for Shallow-Water Intervention. *IEEE Robotics and Automation Magazine*, **2013**, 20, 121-130	3.4	53
142	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	6.7	52
141	COLA2: A Control Architecture for AUVs. *IEEE Journal of Oceanic Engineering*, **2012**, 37, 695-716	3.3	48
140	Intervention AUVs: The next challenge. *Annual Reviews in Control*, **2015**, 40, 227-241	10.3	47
139	Designing a Fuzzy-like PD controller for an underwater robot. *Control Engineering Practice*, **2003**, 11, 471-480	3.9	44
138	AUV homing and docking for remote operations. *Ocean Engineering*, **2018**, 154, 106-120	3.9	43
137	Autonomous underwater panel operation by GIRONA500 UVMS: A practical approach to autonomous underwater manipulation **2015**,		43
136	A New FPGA/DSP-Based Parallel Architecture for Real-Time Image Processing. *Real Time Imaging*, **2002**, 8, 345-356		41

135	Scan matching SLAM in underwater environments. *Autonomous Robots*, **2014**, 36, 181-198	3	40
134	A behavior-based scheme using reinforcement learning for autonomous underwater vehicles. *IEEE Journal of Oceanic Engineering*, **2005**, 30, 416-427	3.3	39
133	Toward Autonomous Exploration in Confined Underwater Environments. *Journal of Field Robotics*, **2016**, 33, 994-1012	6.7	39
132	Recent trends in control architectures for autonomous underwater vehicles. *International Journal of Systems Science*, **1999**, 30, 1033-1056	2.3	35
131	Multibeam 3D Underwater SLAM with Probabilistic Registration. *Sensors*, **2016**, 16,	3.8	35
130	A survey on Terrain Based Navigation for AUVs **2010**,		33
129	Intervention AUVs: The Next Challenge. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 12146-12159		31
128	I-AUV docking and intervention in a subsea panel **2014**,		30
127	Mapping the Moon: Using a lightweight AUV to survey the site of the 17th century ship □a Lune□ **2013**,		28
126	Underwater SLAM for Structured Environments Using an Imaging Sonar. *Springer Tracts in Advanced Robotics*, **2010**,	0.5	28
125	. *IEEE Robotics and Automation Magazine*, **2017**, 24, 41-51	3.4	27
124	EKF-SLAM for AUV navigation under probabilistic sonar scan-matching **2010**,		27
123	Motion planning survey for autonomous mobile manipulators underwater manipulator case study. *Robotics and Autonomous Systems*, **2018**, 107, 20-44	3.5	25
122	3D Laser Scanner for Underwater Manipulation. *Sensors*, **2018**, 18,	3.8	24
121	Underwater Laser Scanner: Ray-Based Model and Calibration. *IEEE/ASME Transactions on Mechatronics*, **2019**, 24, 1986-1997	5.5	24
120	Multipurpose autonomous underwater intervention: A systems integration perspective **2012**,		24
119	Pose-based SLAM with probabilistic scan matching algorithm using a mechanical scanned imaging sonar **2009**,		24
118	Underwater SLAM in a marina environment **2007**,		24

117	Underwater Multi-Vehicle Trajectory Alignment and Mapping Using Acoustic and Optical Constraints. *Sensors*, **2016**, 16,	3.8	24
116	ICTINEUAUV Wins the First SAUC-E Competition. *Proceedings - IEEE International Conference on Robotics and Automation*, **2007**,		23
115	Omnidirectional underwater camera design and calibration. *Sensors*, **2015**, 15, 6033-65	3.8	21
114	Inspection of an underwater structure using point-cloud SLAM with an AUV and a laser scanner. *Journal of Field Robotics*, **2019**, 36, 1333-1344	6.7	21
113	TRIDENT: A Framework for Autonomous Underwater Intervention Missions with Dexterous Manipulation Capabilities. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 187-192		21
112	State of the Art of Underwater Active Optical 3D Scanners. *Sensors*, **2019**, 19,	3.8	21
111	Coverage path planning with realtime replanning for inspection of 3D underwater structures **2014**,		20
110	A comparison of homotopic path planning algorithms for robotic applications. *Robotics and Autonomous Systems*, **2015**, 64, 44-58	3.5	19
109	Close-Range Tracking of Underwater Vehicles Using Light Beacons. *Sensors*, **2016**, 16, 429	3.8	18
108	I-AUV Docking and Panel Intervention at Sea. *Sensors*, **2016**, 16,	3.8	18
107	Vision-based localization and mapping system for AUV intervention **2013**,		17
106	Autonomous Mapping of Underwater 3-D Structures: From View Planning To Execution. *IEEE Robotics and Automation Letters*, **2018**, 3, 1965-1971	4.2	16
105	Active Range-Only beacon localization for AUV homing **2014**,		16
104	Autonomous I-AUV Docking for Fixed-base Manipulation. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 12160-12165		16
103	Autonomous homing and docking for AUVs using Range-Only Localization and Light Beacons. *IFAC-PapersOnLine*, **2016**, 49, 54-60	0.7	15
102	The Girona 500, a multipurpose autonomous underwater vehicle **2011**,		14
101	Sum of gaussian single beacon range-only localization for AUV homing. *Annual Reviews in Control*, **2016**, 42, 177-187	10.3	14
100	The Kallisti Limnes, carbon dioxide-accumulating subsea pools. *Scientific Reports*, **2015**, 5, 12152	4.9	13

99	Acoustic-Based Techniques for Autonomous Underwater Vehicle Localization. *Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment*, **2010**, 224, 293-307	0.4	13
98	TRIDENT: Recent Improvements about Autonomous Underwater Intervention Missions. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 355-360		13
97	Vision based localization system for AUV docking on subsea intervention panels **2009**,		13
96	H-SLAM: Rao-Blackwellized Particle Filter SLAM Using Hilbert Maps. *Sensors*, **2018**, 18,	3.8	13
95	Underwater 3D Laser Scanners: The Deformation of the Plane. *Lecture Notes in Control and Information Sciences*, **2017**, 73-88	0.5	12
94	Probabilistic sonar scan matching for an AUV **2009**,		11
93	Application of SONQL for real-time learning of robot behaviors. *Robotics and Autonomous Systems*, **2007**, 55, 628-642	3.5	11
92	Mission control system for dam inspection with an AUV **2006**,		11
91	The MORPH concept and its application in marine research **2013**,		10
90	Uncertainty-driven survey path planning for bathymetric mapping **2013**,		10
89	Multiple vehicles mission coordination using Petri nets **2010**,		10
88	Sonar-based AUV localization using an improved particle filter approach **2009**,		10
87	The European Project MORPH: Distributed UUV Systems for Multimodal, 3D Underwater Surveys. *Marine Technology Society Journal*, **2016**, 50, 26-41	0.5	10
86	Delayed state information filter for USBL-Aided AUV navigation **2012**,		9
85	Using petri nets to specify and execute missions for autonomous underwater vehicles **2009**,		9
84	Underwater Telerobotics for Collaborative Research **2007**, 347-359		9
83	O2CA2, a new object oriented control architecture for autonomy: the reactive layer. *Control Engineering Practice*, **2002**, 10, 857-873	3.9	9
82	Semantic SLAM for an AUV using object recognition from point clouds. *IFAC-PapersOnLine*, **2018**, 51, 360-365	0.7	9

81	Probabilistic sonar scan matching SLAM for underwater environment **2010**,		8
80	A topologically guided path planner for an AUV using homotopy classes **2011**,		8
79	Line Extraction from Mechanically Scanned Imaging Sonar. *Lecture Notes in Computer Science*, **2007**, 322-329		8
78	Design and Construction of a Robot Hand Prototype for Underwater Applications. *IFAC-PapersOnLine*, **2015**, 48, 294-299	0.7	7
77	Multirepresentation, Multiheuristic A* search-based motion planning for a free-floating underwater vehicle-manipulator system in unknown environment. *Journal of Field Robotics*, **2020**, 37, 925-950	6.7	6
76	On-line 3D Path Planning for Close-proximity Surveying with AUVs?. *IFAC-PapersOnLine*, **2015**, 48, 50-55	0.7	6
75	Probabilistic surface matching for bathymetry based SLAM **2013**,		6
74	AUV Single Beacon Range-Only SLAM with a SOG Filter?. *IFAC-PapersOnLine*, **2015**, 48, 26-31	0.7	6
73	An Intervention-AUV learns how to perform an underwater valve turning **2014**,		6
72	New approach for a Reconfigurable Autonomous Underwater Vehicle for Intervention. *IEEE Aerospace and Electronic Systems Magazine*, **2010**, 25, 32-36	2.4	6
71	Dam wall detection and tracking using a Mechanically Scanned Imaging Sonar **2009**,		6
70	USBL/DVL navigation through delayed position fixes **2011**,		6
69	Attracting talent to increase interest for engineering among secondary school students **2011**,		6
68	Occupancy Grid Mapping in an Underwater Structured Environment. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 286-291		6
67	Towards Direct Policy Search Reinforcement Learning for Robot Control **2006**,		6
66	Fault Detection and Accommodation for ROVs. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 127-132		6
65	MSISpIC: a probabilistic scan matching algorithm using a mechanical scanned imaging sonar. *Journal of Physical Agents*, **2009**, 3, 3-11		6
64	EU project MORPH: Current Status After 3 Years of Cooperation Under and Above Water. *IFAC-PapersOnLine*, **2015**, 48, 119-124	0.7	5

63	Global Alignment of a Multiple-Robot Photomosaic using Opto-Acoustic Constraints?. *IFAC-PapersOnLine*, **2015**, 48, 20-25	0.7	5
62	Navigating and mapping with the SPARUS AUV in a natural and unstructured underwater environment **2011**,		5
61	A distributed architecture for enabling autonomous underwater Intervention Missions **2010**,		5
60	Simultaneous Sonar Beacon Localization & AUV Navigation. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 200-205		5
59	A new approach for a Reconfigurable Autonomous Underwater Vehicle for Intervention **2009**,		5
58	Particle Filter Based AUV Localization using Imaging Sonar. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 52-57		5
57	Autonomous underwater vehicle control using reinforcement learning policy search methods **2005**,		5
56	TWINBOT: Autonomous Underwater Cooperative Transportation. *IEEE Access*, **2021**, 9, 37668-37684	3.5	5
55	Underwater 3D scanner model using a biaxial MEMS mirror. *IEEE Access*, **2021**, 1-1	3.5	5
54	Creating 360° underwater virtual tours using an omnidirectional camera integrated in an AUV **2015**,		4
53	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		4
52	AUV Based Multi-vehicle Collaboration: Salinity Studies in Mar Menor Coastal Lagoon. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 287-292		4
51	The European R&D-Project MORPH: Marine robotic systems of self-organizing, logically linked physical nodes. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 226-231		4
50	Towards a Mission Control Language for AUVs. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 15028-15033		4
49	Identification of Non Linear Models of Unmanned Underwater Vehicles: Comparison Between Two Identification Methods. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 13-18		4
48	Practical formulation of obstacle avoidance in the Task-Priority framework for use in robotic inspection and intervention scenarios. *Robotics and Autonomous Systems*, **2020**, 124, 103396	3.5	4
47	Online motion planning for underwater inspection **2016**,		4
46	Motion Planning for an Underwater Mobile Manipulator by Exploiting Loose Coupling **2018**,		4

45	ATLANTIS - The Atlantic Testing Platform for Maritime Robotics **2021**,		4
44	3D Object Recognition Based on Point Clouds in Underwater Environment with Global Descriptors: A Survey. *Sensors*, **2019**, 19,	3.8	3
43	Wireless HROV control with compressed visual feedback over an acoustic link **2017**,		3
42	LOON-DOCK: AUV homing and docking for high-bandwidth data transmission **2017**,		3
41	Inspecci□n visual subacu□tica mediante rob□tica submarina. *RIAI - Revista Iberoamericana De Automatica E Informatica Industrial*, **2012**, 9, 34-45	1.5	3
40	Bathymetry-based SLAM with difference of normals point-cloud subsampling and probabilistic ICP registration **2013**,		3
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38	Speeding-up Particle Convergence with Probabilistic Active Localisation for AUV. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 521-526		3
37	Design of a mission control system for an AUV. *International Journal of Control*, **2007**, 80, 993-1007	1.5	3
36	Underwater Object Recognition Using Point-Features, Bayesian Estimation and Semantic Information. *Sensors*, **2021**, 21,	3.8	3
35	Multi-Representation Multi-Heuristic A* Motion Planning for a Dual-Arm Underwater Vehicle Manipulation System. *IFAC-PapersOnLine*, **2019**, 52, 205-210	0.7	3
34	Omnidirectional Multicamera Video Stitching Using Depth Maps. *IEEE Journal of Oceanic Engineering*, **2020**, 45, 1337-1352	3.3	3
33	Underwater 3D Scanner to Counteract Refraction: Calibration and Experimental Results. *IEEE/ASME Transactions on Mechatronics*, **2022**, 1-9	5.5	3
32	Behavior Adaptation by Means of Reinforcement Learning **2013**, 287-328		2
31	Multi-beam terrain/object classification for underwater navigation correction **2015**,		2
30	A Comparison of G2o Graph SLAM and EKF Pose Based SLAM with Bathymetry Grids. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2013**, 46, 286-291		2
29	Template Tracking and Visual Servoing for Alignment Tasks with Autonomous Underwater Vehicles. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 256-261		2
28	MBpIC-SLAM: Probabilistic Surface Matching for Bathymetry Based SLAM. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 126-131		2

27	Homotopic Path Planning for an AUV on Maps Improved with Scan Matching. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 204-209		2
26	On the Identification of Non Linear Models of Unmanned Underwater Vehicles. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 55-60		2
25	High-Accuracy Localization of an Underwater Robot in a~Structured Environment Using Computer Vision. *Lecture Notes in Computer Science*, **2003**, 150-157	0.9	2
24	Understanding Mechanically Scanned Imaging Sonars. *Springer Tracts in Advanced Robotics*, **2010**, 37-46	0.5	2
23	Simultaneous Localization and Mapping. *Springer Tracts in Advanced Robotics*, **2010**, 77-112	0.5	2
22	Implementation of Nonlinear Adaptive U-Model Control Synthesis Using a Robot Operating System for an Unmanned Underwater Vehicle. *IEEE Access*, **2020**, 8, 205685-205695	3.5	2
21	Object Recognition and Pose Estimation using Laser scans For Advanced Underwater Manipulation **2018**,		2
20	Extrinsic Visual□hertial Calibration for Motion Distortion Correction of Underwater 3D Scans. *IEEE Access*, **2021**, 9, 93384-93398	3.5	2
19	Direct Gradient-Based Reinforcement Learning for Robot Behavior Learning **2007**, 175-182		2
18	Realtime AUV Terrain Based Navigation with Octomap in a Natural Environment. *Advances in Intelligent Systems and Computing*, **2014**, 41-53	0.4	1
17	Complex structure profile estimation and following with the GIRONA500 AUV **2013**,		1
16	Kornati bathymetry survey data-set for navigation and mapping **2011**,		1
15	An EKF vision-based navigation of an UUV in a structured environment. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 287-292		1
14	Sparus II AUV as a Sensor Suite for Underwater Archaeology: Falconera Cave Experiments **2020**,		1
13	IMPACT: a strategic partnership for sustainable development in marine systems and robotics **2020**,		1
12	Intervention Payload for Valve Turning with an AUV. *Lecture Notes in Computer Science*, **2015**, 877-884	0.9	1
11	Autonomous Seabed Inspection for Environmental Monitoring. *Advances in Intelligent Systems and Computing*, **2016**, 27-39	0.4	1
10	Docking of Non-Holonomic AUVs in Presence of Ocean Currents: A Comparative Survey. *IEEE Access* , **2021**, 9, 86607-86631	3.5	1

9	Immersive Touring for Marine Archaeology. Application of a New Compact Omnidirectional Camera to Mapping the Gnalić Shipwreck with an AUV. *Advances in Intelligent Systems and Computing*, **2018**, 183-195	94	1
8	Sonar-based simultaneous localization and mapping for autonomous underwater vehicles149-170		
7	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		
6	Towards a Deliberative Mission Control System for an AUV. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 509-514		
5	A GLOBAL LOCALIZATION SYSTEM FOR STRUCTURED ENVIRONMENTS USING AN IMAGING SONAR. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2007**, 40, 187-192		
4	A METHOD FOR EXTRACTING LINES AND THEIR UNCERTAINTY FROM ACOUSTIC UNDERWATER IMAGES FOR SLAM. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2007**, 40, 61-66		
3	Sensorial and Navigation Systems for a Mobile Robot (Roger). *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **1998**, 31, 279-284		
2	Model-Validation and Implementation of a Path-Following Algorithm in an Autonomous Underwater Vehicle. *Applied Sciences (Switzerland)*, **2021**, 11, 11891	2.6	
1	Linewise Non-Rigid Point Cloud Registration. *IEEE Robotics and Automation Letters*, **2022**, 1-1	4.2	