Alessandro Ridolfi

List of Publications by Year
in descending order

130	1,962	279487 23	344852 36
papers	citations	h-index	g-index

135	135	135	1480
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Topology-Optimization-Based Design Methodology for Wearable Robots: Implementation and Application. Biosystems and Biorobotics, 2022, , 493-497.	0.2	0
2	sEMG-Based Classification Strategy ofÂHand Gestures for Wearable Robotics inÂClinical Practice. Biosystems and Biorobotics, 2022, , 183-187.	0.2	0
3	Simultaneous and Proportional Myocontrol of a Hand Exoskeleton for Spinal Muscular Atrophy: A Preliminary Evaluation. Biosystems and Biorobotics, 2022, , 655-659.	0.2	0
4	Comparison of feature detection and outlier removal strategies in a mono visual odometry algorithm for underwater navigation. Applied Ocean Research, 2022, 118, 102961.	1.8	12
5	Sensorâ€driven autonomous underwater inspections: A recedingâ€horizon RRTâ€based view planning solution for AUVs. Journal of Field Robotics, 2022, 39, 499-527.	3.2	18
6	Model-based mechanical design of a passive lower-limb exoskeleton for assisting workers in shotcrete projection. Meccanica, 2021, 56, 195-210.	1.2	14
7	Underwater navigation with 2D forward looking SONAR: An adaptive unscented Kalman filterâ€based strategy for AUVs. Journal of Field Robotics, 2021, 38, 355-385.	3.2	19
8	Design of an automatic optical system to measure anthropometric hand parameters. International Journal on Interactive Design and Manufacturing, 2021, 15, 73-75.	1.3	0
9	Needs and Gaps in Optical Underwater Technologies and Methods for the Investigation of Marine Animal Forest 3D-Structural Complexity. Frontiers in Marine Science, 2021, 8, .	1.2	24
10	Marine Robotics for Recurrent Morphological Investigations of Micro-Tidal Marine-Coastal Environments. A Point of View. Journal of Marine Science and Engineering, 2021, 9, 1111.	1.2	2
11	Wearable Robots: An Original Mechatronic Design of a Hand Exoskeleton for Assistive and Rehabilitative Purposes. Frontiers in Neurorobotics, 2021, 15, 750385.	1.6	13
12	Rehabilitative Hand Exoskeleton System: A New Modular Mechanical Design for a Remote Actuated Device. Mechanisms and Machine Science, 2021, , 128-136.	0.3	0
13	Maximum A Posteriori estimation for AUV localization with USBL measurements. IFAC-PapersOnLine, 2021, 54, 307-313.	0.5	1
14	3D-Printing-Oriented Mechanical Redesign of a Hand Exoskeleton System for Rehabilitative Tasks. , 2021, , .		2
15	Underwater acoustic source localization using a multi-robot system: the DAMPS project. , 2021, , .		1
16	Variable Admittance Control of a Hand Exoskeleton for Virtual Reality-Based Rehabilitation Tasks. Frontiers in Neurorobotics, 2021, 15, 789743.	1.6	17
17	Covariance and Gain-based Federated Unscented Kalman Filter for Acoustic-Visual-Inertial Underwater Navigation. , 2021, , .		1
18	Randomized MPC for view planning in AUV seabed inspections. , 2021, , .		1

#	Article	IF	Citations
19	Localisation Approaches for Underwater Autonomy within the EUMarineRobots H2020 project: experimental activity at SEALab. , 2021, , .		2
20	Modeling and experimental study of power losses in a rolling bearing. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2020, 234, 1332-1351.	1.0	3
21	A forward-looking SONAR and dynamic model-based AUV navigation strategy: Preliminary validation with FeelHippo AUV. Ocean Engineering, 2020, 196, 106770.	1.9	29
22	A Portable Tailor-Made Exoskeleton for Hand Disabilities. , 2020, , 177-191.		1
23	Forward-Looking Sonar CNN-based Automatic Target Recognition: an experimental campaign with FeelHippo AUV. , 2020, , .		12
24	Novel Noncontinuous Carouseling Approaches for MEMS-Based North Seeking Using Kalman Filter: Theory, Simulations, and Preliminary Experimental Evaluation. IEEE/ASME Transactions on Mechatronics, 2020, 25, 2437-2448.	3.7	17
25	A General Framework for Designing 3D Impellers Using Topology Optimization and Additive Manufacturing. IEEE Access, 2020, 8, 60259-60269.	2.6	12
26	Underwater Robotics Competitions: The European Robotics League Emergency Robots Experience With FeelHippo AUV. Frontiers in Robotics and AI, 2020, 7, 3.	2.0	4
27	A Novel Point-in-Polygon-Based sEMG Classifier for Hand Exoskeleton Systems. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 3158-3166.	2.7	13
28	Deep Learning for on-board AUV Automatic Target Recognition for Optical and Acoustic imagery. IFAC-PapersOnLine, 2020, 53, 14589-14594.	0.5	13
29	2D Forward Looking SONAR in Underwater Navigation Aiding: an AUKF-based strategy for AUVs. IFAC-PapersOnLine, 2020, 53, 14570-14575.	0.5	3
30	A Probabilistic 3D Map Representation for Forward-Looking SONAR Reconstructions. , 2020, , .		5
31	Receding-horizon sampling-based sensor-driven coverage planning strategy for AUV seabed inspections. , 2020, , .		9
32	Underwater Acoustic Image Enhancement by Using Fast Super-Resolution with Generative Adversarial Networks. , 2020, , .		2
33	LSTM-based Dead Reckoning Navigation for Autonomous Underwater Vehicles. , 2020, , .		16
34	UKF-Based Navigation System for AUVs: Online Experimental Validation. IEEE Journal of Oceanic Engineering, 2019, 44, 633-641.	2.1	37
35	Toward the integration of lattice structure-based topology optimization and additive manufacturing for the design of turbomachinery components. Advances in Mechanical Engineering, 2019, 11, 168781401985978.	0.8	14
36	Design and Production of Innovative Turbomachinery Components via Topology Optimization and Additive Manufacturing. International Journal of Rotating Machinery, 2019, 2019, 1-12.	0.8	12

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37	Pressure Hull Design Methods for Unmanned Underwater Vehicles. Journal of Marine Science and Engineering, 2019, 7, 382.	1.2	11
38	Experimental Evaluation of a Forward-Looking Sonar-Based System for Acoustic Odometry. , 2019, , .		5
39	Mono visual odometry for Autonomous Underwater Vehicles navigation. , 2019, , .		9
40	Development of an ultra short baselineâ€“aided buoy for underwater targets localization. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2019, 233, 1212-1225.	0.3	3
41	Tailor-Made Hand Exoskeletons at the University of Florence: From Kinematics to Mechatronic Design. Machines, 2019, 7, 22.	1.2	19
42	Development and Experimental Validation of Auxiliary Rolling Bearing Models for Active Magnetic Bearings (AMBs) Applications. International Journal of Rotating Machinery, 2019, 2019, 1-19.	0.8	5
43	Development and testing of an efficient and cost-effective underwater propulsion system. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2019, 233, 1309-1328.	0.7	1
44	A novel application of a surface ElectroMyoGraphy-based control strategy for a hand exoskeleton system: A single-case study. International Journal of Advanced Robotic Systems, 2019, 16, 172988141982819.	1.3	24
45	Design of a Self-moving Autonomous Buoy for the Localization of Underwater Targets. , 2019, , .		2
46	An Efficient Iterative Coupled Model for the Study of the Insurgence of the Morton Effect in Tilting Pad Journal Bearings. Journal of Engineering for Gas Turbines and Power, 2019, 141, .	0.5	2
47	Lowâ€cost solution in international robotic challenge: Lessons learned by Tuscany Robotics Team at ERL Emergency Robots 2017. Journal of Field Robotics, 2019, 36, 587-601.	3.2	4
48	Assistive Hand Exoskeletons: The Prototypes Evolution at the University of Florence. Mechanisms and Machine Science, 2019, , 307-315.	0.3	6
49	Kinematics-Based Strategy for the Design of a Pediatric Hand Exoskeleton Prototype. Mechanisms and Machine Science, 2019, , 501-508.	0.3	8
50	Model-Based Approach in Developing a Hand Exoskeleton for Children: A Preliminary Study. Biosystems and Biorobotics, 2019, , 490-494.	0.2	2
51	Design of a Series Elastic Transmission for hand exoskeletons. Mechatronics, 2018, 51, 8-18.	2.0	34
52	Marine Robots in Environmental Surveys:ÂCurrent Developments atÂISMEâ€”Localisation and Navigation. Ocean Engineering & Oceanography, 2018, , 69-86.	0.1	1
53	Identification of the main hydrodynamic parameters of Typhoon AUV from a reduced experimental dataset. Ocean Engineering, 2018, 147, 77-88.	1.9	54
54	The ARROWS Project: robotic technologies for underwater archaeology. IOP Conference Series: Materials Science and Engineering, 2018, 364, 012088.	0.3	9

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55	A Forward-Looking Sonar-Based System for Underwater Mosaicing and Acoustic Odometry. , 2018, , .		18
56	Design of a Reconfigurable Autonomous Underwater Vehicle for Offshore Platform Monitoring and Intervention. , 2018, , .		4
57	Design and Testing of a Compact Autonomous Underwater Vehicle for Archaeological Surveying and Monitoring. , 2018, , .		5
58	Development and Design of a Compact Autonomous Underwater Vehicle: Zeno AUV. IFAC-PapersOnLine, 2018, 51, 20-25.	0.5	26
59	An autonomous underwater vehicle and SUNSET to bridge underwater networks composed of multi-vendor modems. Annual Reviews in Control, 2018, 46, 295-303.	4.4	5
60	Optimization-based scaling procedure for the design of fully portable hand exoskeletons. Meccanica, 2018, 53, 3157-3175.	1.2	16
61	AirExGlove â€" A novel pneumatic exoskeleton glove for adaptive hand rehabilitation in post-stroke patients. , 2018, , .		41
62	Development of Nemo remotely operated underwater vehicle for the inspection of the Costa Concordia wreck. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2017, 231, 3-18.	0.3	4
63	Kinematic synthesis and testing of a new portable hand exoskeleton. Meccanica, 2017, 52, 2873-2897.	1.2	28
64	Development, design and validation of an assistive device for hand disabilities based on an innovative mechanism. Robotica, 2017, 35, 892-906.	1.3	19
65	A low cost autonomous underwater vehicle for patrolling and monitoring. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2017, 231, 740-749.	0.3	27
66	An Efficient Iterative Approach for the Analysis of Thermal Instabilities in Rotating Machines. Journal of Vibration and Acoustics, Transactions of the ASME, 2017, 139, .	1.0	2
67	Kinematic Constraints and ns-3 Mobility Models. , 2017, , .		1
68	A free floating manipulation strategy for Autonomous Underwater Vehicles. Robotics and Autonomous Systems, 2017, 87, 133-146.	3.0	12
69	Employment of an Autonomous Underwater Vehicle as mobile bridge among heterogeneous acoustic nodes. IFAC-PapersOnLine, 2017, 50, 12380-12385.	0.5	3
70	Sea currents estimation during AUV navigation using Unscented Kalman Filter. IFAC-PapersOnLine, 2017, 50, 13668-13673.	0.5	34
71	On field experience on underwater acoustic localization through USBL modems. , 2017, , .		15
72	Enabling cooperation and networking in heterogeneous underwater networks composed of multi-vendor vehicles and modems. , 2017, , .		3

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73	Magnetometers independent heading estimation strategy for UUV based on position and speed observations. , 2017, , .		1
74	Optimization of potential field method parameters through networks for swarm cooperative manipulation tasks. International Journal of Advanced Robotic Systems, 2016, 13, 172988141665793.	1.3	10
75	Archaeology oriented optical acquisitions through MARTA AUV during ARROWS European project demonstration. , 2016, , .		4
76	Simultaneous navigation state and sea current estimation through augmented state Unscented Kalman Filter. , 2016, , .		4
77	Intervention-Autonomous Underwater Vehicle Multibody Models for Dynamic Manipulation Tasks. Computational Methods in Applied Sciences (Springer), 2016, , 193-211.	0.1	0
78	A novel kinematic architecture for portable hand exoskeletons. Mechatronics, 2016, 35, 192-207.	2.0	44
79	A full-scale roller-rig for railway vehicles: multibody modelling and Hardware In the Loop architecture. Multibody System Dynamics, 2016, 37, 69-93.	1.7	7
80	Development and Online Validation of an UKF-based Navigation Algorithm for AUVs. IFAC-PapersOnLine, 2016, 49, 69-74.	0.5	14
81	FeelHippo: A low-cost autonomous underwater vehicle for subsea monitoring and inspection. , 2016, , .		4
82	Cooperative navigation of AUVs via acoustic communication networking: field experience with the Typhoon vehicles. Autonomous Robots, 2016, 40, 1229-1244.	3.2	31
83	Generic Path Planning Algorithm for Mobile Robots Based on BÃ©zier Curves. IFAC-PapersOnLine, 2016, 49, 145-150.	0.5	12
84	An automatic scaling procedure for a wearable and portable hand exoskeleton. , 2016, , .		9
85	An unscented Kalman filter based navigation algorithm for autonomous underwater vehicles. Mechatronics, 2016, 39, 185-195.	2.0	70
86	Design and testing of an innovative cleaning tool for underwater applications. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2016, 230, 579-590.	0.3	0
87	An Attitude Estimation Algorithm for Mobile Robots Under Unknown Magnetic Disturbances. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1900-1911.	3.7	93
88	Underwater Vehicles attitude estimation in presence of magnetic disturbances. , 2016, , .		9
89	A new AUV navigation system exploiting unscented Kalman filter. Ocean Engineering, 2016, 113, 121-132.	1.9	177
90	Design of a modular Autonomous Underwater Vehicle for archaeological investigations. , 2015, , .		19

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91	An Innovative Navigation Strategy for Autonomous Underwater Vehicles: An Unscented Kalman Filter Based Approach. , 2015, , .		1
92	Development and Testing of a Low Cost Wearable and Portable Hand Exoskeleton Based on a Parallel Mechanism. , 2015, , .		2
93	The ARROWS project: adapting and developing robotics technologies for underwater archaeology. IFAC-PapersOnLine, 2015, 48, 194-199.	0.5	46
94	Typhoon at CommsNet13: Experimental experience on AUV navigation and localization. Annual Reviews in Control, 2015, 40, 157-171.	4.4	26
95	Piecewise planar underwater mosaicing. , 2015, , .		1
96	Design of a modular propulsion system for MARTA AUV. , 2015, , .		11
97	Development of a Navigation Algorithm for Autonomous Underwater Vehicles. IFAC-PapersOnLine, 2015, 48, 64-69.	0.5	12
98	Development and experimental testing of a portable hand exoskeleton. , 2015, , .		16
99	A localization algorithm for railway vehicles. , 2015, , .		15
100	Acoustic data analysis for underwater archaeological sites detection and mapping by means of autonomous underwater vehicles. , 2015, , .		4
101	Preliminary design and fast prototyping of an Autonomous Underwater Vehicle propulsion system. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2015, 229, 248-272.	0.3	42
102	An innovative decentralized strategy for I-AUVs cooperative manipulation tasks. Robotics and Autonomous Systems, 2015, 72, 261-276.	3.0	40
103	Single axis FOG aided attitude estimation algorithm for mobile robots. Mechatronics, 2015, 30, 158-173.	2.0	37
104	Towards a Robust System Helping Underwater Archaeologists Through the Acquisition of Geo-referenced Optical and Acoustic Data. Lecture Notes in Computer Science, 2015, , 253-262.	1.0	1
105	An innovative cleaning tool for underwater soft cleaning operations. , 2015, , .		4
106	A comparison between EKF-based and UKF-based navigation algorithms for AUVs localization. , 2015, , .		34
107	Development of new HIL architecture to study high speed trains dynamics on full-scale test-rigs. , 2015, , .		1
108	An innovative wheelâ€“rail contact model for railway vehicles under degraded adhesion conditions. Multibody System Dynamics, 2015, 33, 285-313.	1.7	32

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109	Modeling and Control of a Full-Scale Roller-Rig for the Analysis of Railway Braking Under Degraded Adhesion Conditions. IEEE Transactions on Control Systems Technology, 2015, 23, 186-196.	3.2	16
110	An anti-capsize strategy for industrial vehicles: Preliminary testing on a scaled AGV. , 2014, , .		1
111	Fusing acoustic ranges and inertial measurements in AUV navigation: The Typhoon AUV at CommsNet13 sea trial. , 2014, , .		7
112	A localization algorithm for railway vehicles based on sensor fusion between tachometers and inertial measurement units. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2014, 228, 431-448.	1.3	29
113	Thesaurus: AUV teams for archaeological search. Field results on acoustic communication and localization with the Typhoon. , 2014, , .		5
114	Toward underwater acoustic-based simultaneous localization and mapping. Experimental results with the Typhoon AUV at CommsNet13 sea trial. , 2014, , .		6
115	An innovative localisation algorithm for railway vehicles. Vehicle System Dynamics, 2014, 52, 1443-1469.	2.2	6
116	An innovative degraded adhesion model for railway vehicles: development and experimental validation. Meccanica, 2014, 49, 919-937.	1.2	10
117	Performance and robustness analysis of a Hardware In the Loop full-scale roller-rig for railway braking and traction testing. Meccanica, 2014, 49, 615-644.	1.2	4
118	An innovative degraded adhesion model for multibody applications in the railway field. Multibody System Dynamics, 2014, 32, 133-157.	1.7	33
119	Development of an innovative wheelâ€“rail contact model for the analysis of degraded adhesion in railway systems. Tribology International, 2014, 69, 128-140.	3.0	47
120	Development of a full-scale roller-rig to test high speed trains under degraded adhesion conditions. , 2014, , .		3
121	Fast prototyping of a scaled AGV for the testing of stability control for industrial vehicles. , 2014, , .		1
122	Cooperative localization of a team of AUVs by a tetrahedral configuration. Robotics and Autonomous Systems, 2014, 62, 1228-1237.	3.0	51
123	An innovative hardware in the loop architecture for the analysis of railway braking under degraded adhesion conditions through roller-rigs. Mechatronics, 2014, 24, 139-150.	2.0	21
124	Typhoon at CommsNet 2013: experimental experience on AUV navigation and localization. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 3370-3375.	0.4	9
125	Experimental results with a mixed USBL/LBL system for AUV navigation. , 2014, , .		26
126	Development of a HIL railway roller rig model for the traction and braking testing activities under degraded adhesion conditions. International Journal of Non-Linear Mechanics, 2013, 57, 50-64.	1.4	12

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127	Design and implementation of dynamic simulators for the testing of inertial sensors. , 2012, , .		2
128	Evaluation of odometry algorithm performances using a railway vehicle dynamic model. Vehicle System Dynamics, 2012, 50, 699-724.	2.2	30
129	SEARCH & INSPECTION ARCHAEOLOGICAL UNDERWATER CAMPAIGNS IN THE FRAMEWORK OF THE EUROPEAN ARROWS PROJECT. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLII-2/W15, 63-70.	0.2	1
130	DEVELOPING AFFORDABLE BATHYMETRIC ANALYSIS TECHNIQUES USING NON-CONVENTIONAL PAYLOAD FOR CULTURAL HERITAGE INSPECTIONS. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLII-2/W15, 807-811.	0.2	3