Benedetto Allotta

List of Publications by Year
in descending order

80 papers	1,089 citations	471477 17 h-index	501174 28 g-index
82 all docs	82 docs citations	82 times ranked	970 citing authors

#	ARTICLE	IF	CITATIONS
1	An Attitude Estimation Algorithm for Mobile Robots Under Unknown Magnetic Disturbances. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1900-1911.	5.8	93
2	Identification of the main hydrodynamic parameters of Typhoon AUV from a reduced experimental dataset. Ocean Engineering, 2018, 147, 77-88.	4.3	54
3	Design and Experimental Results of an Active Suspension System for a High-Speed Pantograph. IEEE/ASME Transactions on Mechatronics, 2008, 13, 548-557.	5.8	49
4	A scaled roller test rig for high-speed vehicles. Vehicle System Dynamics, 2010, 48, 3-18.	3.7	46
5	The ARROWS project: adapting and developing robotics technologies for underwater archaeology. IFAC-PapersOnLine, 2015, 48, 194-199.	0.9	46
6	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.	0.5	42
7	AirExGlove â€" A novel pneumatic exoskeleton glove for adaptive hand rehabilitation in post-stroke patients. , 2018, , .		41
8	A comparison between EKF-based and UKF-based navigation algorithms for AUVs localization. , 2015, , .		34
9	Sea currents estimation during AUV navigation using Unscented Kalman Filter. IFAC-PapersOnLine, 2017, 50, 13668-13673.	0.9	34
10	Design of a Series Elastic Transmission for hand exoskeletons. Mechatronics, 2018, 51, 8-18.	3.3	34
11	Cooperative navigation of AUVs via acoustic communication networking: field experience with the Typhoon vehicles. Autonomous Robots, 2016, 40, 1229-1244.	4.8	31
12	Odometric estimation for automatic train protection and control systems. Vehicle System Dynamics, 2011, 49, 723-739.	3.7	29
13	Kinematic synthesis and testing of a new portable hand exoskeleton. Meccanica, 2017, 52, 2873-2897.	2.0	28
14	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.	0.5	27
15	Experimental results with a mixed USBL/LBL system for AUV navigation. , 2014, , .		26
16	Image based visual servoing for robot positioning tasks. Meccanica, 2008, 43, 291-305.	2.0	19
17	Design of a modular Autonomous Underwater Vehicle for archaeological investigations. , 2015, , .		19
18	A New Strategy for Dynamic Weighing in Motion of Railway Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 3520-3533.	8.0	19

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19	Development, design and validation of an assistive device for hand disabilities based on an innovative mechanism. Robotica, 2017, 35, 892-906.	1.9	19
20	Tailor-Made Hand Exoskeletons at the University of Florence: From Kinematics to Mechatronic Design. Machines, 2019, 7, 22.	2.2	19
21	Underwater navigation with 2D forward looking SONAR: An adaptive unscented Kalman filter‑based strategy for AUVs. Journal of Field Robotics, 2021, 38, 355-385.	6.0	19
22	Design and optimization of a semi-active suspension system for railway applications. Journal of Modern Transportation, 2011, 19, 223-232.	2.5	17
23	Variable Admittance Control of a Hand Exoskeleton for Virtual Reality-Based Rehabilitation Tasks. Frontiers in Neurorobotics, 2021, 15, 789743.	2.8	17
24	Development and experimental testing of a portable hand exoskeleton. , 2015, , .		16
25	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.	5.2	16
26	Optimization-based scaling procedure for the design of fully portable hand exoskeletons. Meccanica, 2018, 53, 3157-3175.	2.0	16
27	A localization algorithm for railway vehicles. , 2015, , .		15
28	Wireless power recharge for underwater robotics. , 2017, , .		15
29	Development and Online Validation of an UKF-based Navigation Algorithm for AUVs. IFAC-PapersOnLine, 2016, 49, 69-74.	0.9	14
30	A robust propulsion layout for underwater vehicles with enhanced manoeuvrability and reliability features. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2018, 232, 358-376.	0.5	14
31	A Novel Point-in-Polygon-Based sEMG Classifier for Hand Exoskeleton Systems. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 3158-3166.	4.9	13
32	A numerical model of a HIL scaled roller rig for simulation of wheel‑rail degraded adhesion condition. Vehicle System Dynamics, 2012, 50, 775-804.	3.7	12
33	Generic Path Planning Algorithm for Mobile Robots Based on Bézier Curves. IFAC-PapersOnLine, 2016, 49, 145-150.	0.9	12
34	Comparison of feature detection and outlier removal strategies in a mono visual odometry algorithm for underwater navigation. Applied Ocean Research, 2022, 118, 102961.	4.1	12
35	Design of a modular propulsion system for MARTA AUV. , 2015, , .		11
36	Design and calibration of an innovative ultrasonic, arduino based anemometer. , 2017, , .		11

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37	Hybrid visual servoing: A combination of nonlinear control and linear vision. Robotics and Autonomous Systems, 1999, 29, 243-256.	5.1	10
38	An innovative method of train integrity monitoring through wireless sensor network. , 2015, , .		10
39	Localization algorithm for a fleet of three AUVs by INS, DVL and range measurements. , 2011, , .		9
40	An automatic scaling procedure for a wearable and portable hand exoskeleton. , 2016, , .		9
41	Underwater Vehicles attitude estimation in presence of magnetic disturbances. , 2016, , .		9
42	Novel scheduling policies in real-time multithread control system design. Control Engineering Practice, 2002, 10, 1091-1110.	5.5	7
43	Fusing acoustic ranges and inertial measurements in AUV navigation: The Typhoon AUV at CommsNet13 sea trial. , 2014, , .		7
44	Hardware-In-the-Loop Testing of On-Board Subsystems. , 2012, , 249-280.		7
45	Assistive Hand Exoskeletons: The Prototypes Evolution at the University of Florence. Mechanisms and Machine Science, 2019, , 307-315.	0.5	6
46	Comparison of different control approaches aiming at enhancing the comfort of a railway vehicle. , 2010, , .		5
47	An innovative algorithm for train detection. , 2015, , .		5
48	An autonomous underwater vehicle and SUNSET to bridge underwater networks composed of multi-vendor modems. Annual Reviews in Control, 2018, 46, 295-303.	7.9	5
49	Experimental Evaluation of a Forward-Looking Sonar-Based System for Acoustic Odometry. , 2019, , .		5
50	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.	2.0	4
51	An innovative cleaning tool for underwater soft cleaning operations. , 2015, , .		4
52	Simultaneous navigation state and sea current estimation through augmented state Unscented Kalman Filter. , 2016, , .		4
53	Design and Modelling of Innovative Propulsion Layouts with Pivoted Thrusters For Underwater Vehicles. IFAC-PapersOnLine, 2016, 49, 454-459.	0.9	4
54	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.	0.5	4

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55	Low–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.	6.0	4
56	Underwater Robotics Competitions: The European Robotics League Emergency Robots Experience With FeelHippo AUV. Frontiers in Robotics and AI, 2020, 7, 3.	3.2	4
57	Dynamic Maneuverability Analysis: A Preliminary Application on an Autonomous Underwater Reconfigurable Vehicle. Applied Sciences (Switzerland), 2021, 11, 4469.	2.5	4
58	Reinforcement Neural Network for the Stabilization of a Furuta Pendulum. , 2009, , 287-294.		4
59	Self-calibrated visual servoing with respect to axial-symmetric 3D objects. Robotics and Autonomous Systems, 2009, 57, 451-459.	5.1	3
60	Psycho-physiological tele-monitoring of human operators in commercial diving: The Life Support System in the SUONO project. , 2015, 2015, 194-7.		3
61	Design and implementation of dynamic simulators for the testing of inertial sensors. , 2012, , .		2
62	Image-Based Visual Servoing with Extra Task Related Constraints in a General Framework for Sensor-Based Robot Systems. Lecture Notes in Electrical Engineering, 2008, , 187-204.	0.4	2
63	3D-Printing-Oriented Mechanical Redesign of a Hand Exoskeleton System for Rehabilitative Tasks. , 2021, , .		2
64	An anti-capsize strategy for industrial vehicles: Preliminary testing on a scaled AGV. , 2014, , .		1
65	Fast prototyping of a scaled AGV for the testing of stability control for industrial vehicles. , 2014, , .		1
66	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.	1.3	1
67	Kinematic Constraints and ns-3 Mobility Models. , 2017, , .		1
68	Marine Robots in Environmental Surveys:ÂCurrent Developments atÂISMEâ€"Localisation and Navigation. Ocean Engineering & Oceanography, 2018, , 69-86.	0.2	1
69	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.	1.0	1
70	A Portable Tailor-Made Exoskeleton for Hand Disabilities. , 2020, , 177-191.		1
71	A device for simulating hand grips. , 2008, , .		0
72	Passivity control of a haptic device for the simulation of knobs. International Journal of Advanced Mechatronic Systems, 2011, 3, 304.	0.2	0

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73	Experimental tuning campaign of control strategies for active pantograph under emulated catenary. , 2012, , .		0
74	Modelling and control of a galvanometer for the application to a laser engraving system. , 2016, , .		0
75	Next Generation of Smart Sensorless Drives for Sustainable Underwater Vehicles. IFAC-PapersOnLine, 2016, 49, 481-486.	0.9	0
76	Intervention-Autonomous Underwater Vehicle Multibody Models for Dynamic Manipulation Tasks. Computational Methods in Applied Sciences (Springer), 2016, , 193-211.	0.3	0
77	Integrated design of an hydraulic servo-system fed by vehicle regenerative braking. , 2016, , .		0
78	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.	0.5	0
79	Hardware-in-the-Loop Testing of On-Board Subsystems. , 0, , 754-784.		0
80	Design of an Actuation System for a Fatigue Test RIG. , 2009, , 201-208.		0