

Gianluca Antonelli

List of Publications by Year in descending order

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153
papers

4,665
citations

168829

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156644

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docs citations

158
times ranked

3191
citing authors

#	ARTICLE	IF	CITATIONS
1	Merging Global and Local Planners: Real-Time Replanning Algorithm of Redundant Robots Within a Task-Priority Framework. IEEE Transactions on Automation Science and Engineering, 2023, 20, 1180-1193.	3.4	0
2	Underwater Intervention With Remote Supervision via Satellite Communication: Developed Control Architecture and Experimental Results Within the Dexrov Project. IEEE Transactions on Control Systems Technology, 2021, 29, 108-123.	3.2	17
3	BCI-Controlled Assistive Manipulator: Developed Architecture and Experimental Results. IEEE Transactions on Cognitive and Developmental Systems, 2021, 13, 91-104.	2.6	12
4	A framework for set-based kinematic control of multi-robot systems. Control Engineering Practice, 2021, 106, 104669.	3.2	7
5	Robot Dynamics Identification: A Reproducible Comparison With Experiments on the Kinova Jaco. IEEE Robotics and Automation Magazine, 2021, 28, 128-140.	2.2	12
6	Experimental validation of the modeling and control of a multibody underwater vehicle manipulator system for sea mining exploration. Journal of Field Robotics, 2021, 38, 171-191.	3.2	16
7	Mathematical Models of Marine Vehicle-Manipulator Systems. , 2021, , 1181-1185.		0
8	Making an Opportunity Out of a Crisis: The Inclusive Approach of the Italian Robotics Community. IEEE Robotics and Automation Magazine, 2021, , 2-14.	2.2	1
9	Task-motion Planning via Tree-based Q-learning Approach for Robotic Object Displacement in Cluttered Spaces. , 2021, , .		2
10	Effects of Dynamic Model Errors in Task-Priority Operational Space Control. Robotica, 2021, 39, 1642-1653.	1.3	5
11	Guest Editorial Focused Section on Mechatronics in Unmanned Systems. IEEE/ASME Transactions on Mechatronics, 2021, 26, 595-599.	3.7	0
12	Sea Mining Exploration With an UVMS: Experimental Validation of the Control and Perception Framework. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1635-1645.	3.7	19
13	Task-motion Planning via Tree-based Q-learning Approach for Robotic Object Displacement in Cluttered Spaces. , 2021, , .		0
14	Robotic Weight-based Object Relocation in Clutter via Tree-based Q-learning Approach using Breadth and Depth Search Techniques. , 2021, , .		3
15	Dynamic planning of redundant robots within a set-based task-priority inverse kinematics framework. , 2020, , .		4
16	Experiments on whole-body control of a dual-arm mobile robot with the Set-Based Task-Priority Inverse Kinematics algorithm. , 2020, , .		3
17	Mathematical Models of Marine Vehicle-Manipulator Systems. , 2020, , 1-5.		0
18	6D interaction control with aerial robots: The flying end-effector paradigm. International Journal of Robotics Research, 2019, 38, 1045-1062.	5.8	99

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19	Handling robot constraints within a Set-Based Multi-Task Priority Inverse Kinematics Framework. , 2019, , .		9
20	Underwater Robots: From Remotely Operated Vehicles to Intervention-Autonomous Underwater Vehicles. IEEE Robotics and Automation Magazine, 2019, 26, 94-101.	2.2	97
21	Modelling of Underwater Robots. Springer Tracts in Advanced Robotics, 2018, , 33-110.	0.3	1
22	Control of UVMSs. Springer Tracts in Advanced Robotics, 2018, , 175-329.	0.3	1
23	Dynamic Control of 6-DOF AUVs and Fault Detection/Tolerance Strategies. Springer Tracts in Advanced Robotics, 2018, , 111-173.	0.3	2
24	Adaptive Trajectory Tracking for Quadrotor MAVs in Presence of Parameter Uncertainties and External Disturbances. IEEE Transactions on Control Systems Technology, 2018, 26, 248-254.	3.2	87
25	Coordinated Control of Aerial Robotic Manipulators: Theory and Experiments. IEEE Transactions on Control Systems Technology, 2018, 26, 1406-1413.	3.2	36
26	Satellite-Based Tele-Operation of an Underwater Vehicle-Manipulator System. Preliminary Experimental Results. , 2018, , .		7
27	Modeling Errors Analysis in Inverse Dynamics Approaches Within a Task-Priority Framework. , 2018, , .		2
28	Set-Based Inverse Kinematics control of an UVMS within the DexROV project. , 2018, , .		1
29	Safety-Related Tasks Within the Set-Based Task-Priority Inverse Kinematics Framework. , 2018, , .		8
30	Vehicle Adaptive Control for Underwater Intervention Including Thrusters Dynamics. , 2018, , .		5
31	Dexterous Underwater Manipulation from Onshore Locations: Streamlining Efficiencies for Remotely Operated Underwater Vehicles. IEEE Robotics and Automation Magazine, 2018, 25, 24-33.	2.2	44
32	Localization of an Array of Hydrophones Towed by an Autonomous Underwater Vehicle. , 2018, , .		0
33	Assistive Control Framework for Remotely Operated Vehicles. , 2018, , .		1
34	Control-Aware Motion Planning for Task-Constrained Aerial Manipulation. IEEE Robotics and Automation Letters, 2018, 3, 2478-2484.	3.3	27
35	Cooperative Object Transportation by Two Underwater Vehicle-Manipulator Systems. , 2018, , .		2
36	The AEROARMS Project: Aerial Robots with Advanced Manipulation Capabilities for Inspection and Maintenance. IEEE Robotics and Automation Magazine, 2018, 25, 12-23.	2.2	157

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37	Dynamic Modelling of a Streamer of Hydrophones Towed with an Autonomous Underwater Vehicle. Lecture Notes in Computer Science, 2018, , 179-192.	1.0	1
38	Assistive robot operated via P300-based brain computer interface. , 2017, , .		32
39	Behavioral control of unmanned aerial vehicle manipulator systems. Autonomous Robots, 2017, 41, 1203-1220.	3.2	59
40	A Comparison of Damped Least Squares Algorithms for Inverse Kinematics of Robot Manipulators * *This work was supported by the European Community through the projects ROBUST (H2020-690416), EuRoC (FP7-608849), DexROV (H2020-635491) and AEROARMS (H2020-644271).. IFAC-PapersOnLine, 2017, 50, 6869-6874.	0.5	23
41	6D physical interaction with a fully actuated aerial robot. , 2017, , .		118
42	Advanced ROV Autonomy for Efficient Remote Control in the DexROV Project. Marine Technology Society Journal, 2016, 50, 67-80.	0.3	25
43	Set-Based Tasks within the Singularity-Robust Multiple Task-Priority Inverse Kinematics Framework: General Formulation, Stability Analysis, and Experimental Results. Frontiers in Robotics and AI, 2016, 3, .	2.0	76
44	Widely Scalable Mobile Underwater Sonar Technology: An Overview of the H2020 WiMUST Project. Marine Technology Society Journal, 2016, 50, 42-53.	0.3	25
45	Dexterous Undersea Interventions with Far Distance Onshore Supervision: the DexROV Project. IFAC-PapersOnLine, 2016, 49, 414-419.	0.5	18
46	Underwater Intervention Robotics: An Outline of the Italian National Project MARIS. Marine Technology Society Journal, 2016, 50, 98-107.	0.3	28
47	Modeling and Control of Underwater Robots. Springer Handbooks, 2016, , 1285-1306.	0.3	17
48	ISME research trends: Marine robotics for emergencies at sea. , 2016, , .		2
49	DexROV: Dexterous Undersea Inspection and Maintenance in Presence of Communication Latencies. IFAC-PapersOnLine, 2015, 48, 218-223.	0.5	25
50	Experimental results for set-based control within the singularity-robust multiple task-priority inverse kinematics framework. , 2015, , .		6
51	Stability analysis for set-based control within the singularity-robust multiple task-priority inverse kinematics framework. , 2015, , .		19
52	Navigation, Guidance and Control of Underwater Vehicles within the Widely scalable Mobile Underwater Sonar Technology Project: an overviewâˆ™.... IFAC-PapersOnLine, 2015, 48, 189-193.	0.5	14
53	Experiments on behavioral coordinated control of an Unmanned Aerial Vehicle manipulator system. , 2015, , .		26
54	A Decentralized Strategy for Multirobot Sampling/Patrolling: Theory and Experiments. IEEE Transactions on Control Systems Technology, 2015, 23, 313-322.	3.2	19

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55	Incorporating set-based control within the singularity-robust multiple task-priority inverse kinematics. , 2015, , .		9
56	Basic interaction operations for an underwater vehicle-manipulator system. , 2015, , .		15
57	Experiments on sampling/patrolling with two Autonomous Underwater Vehicles. Robotics and Autonomous Systems, 2015, 67, 61-71.	3.0	14
58	Recursive adaptive control for an underwater vehicle carrying a manipulator. , 2014, , .		12
59	MARIS: A national project on marine robotics for interventions. , 2014, , .		22
60	Null-space-based behavior guidance of planar dual-arm UVMS. , 2014, , .		6
61	Adaptive control of arm-equipped quadrotors. Theory and simulations. , 2014, , .		14
62	Underwater Robots. Springer Tracts in Advanced Robotics, 2014, , .	0.3	132
63	Decentralized time-varying formation control for multi-robot systems. International Journal of Robotics Research, 2014, 33, 1029-1043.	5.8	185
64	Fault Detection/Tolerance Strategies for AUVs and ROVs. Springer Tracts in Advanced Robotics, 2014, , 101-116.	0.3	4
65	Dynamic Control of 6-DOF AUVs. Springer Tracts in Advanced Robotics, 2014, , 65-100.	0.3	2
66	Kinematic Control of UVMSs. Springer Tracts in Advanced Robotics, 2014, , 127-167.	0.3	1
67	Dynamic Control of UVMSs. Springer Tracts in Advanced Robotics, 2014, , 169-231.	0.3	0
68	Interaction Control of UVMSs. Springer Tracts in Advanced Robotics, 2014, , 233-255.	0.3	1
69	A Decentralized Architecture for Multi-Robot Systems Based on the Null-Space-Behavioral Control with Application to Multi-Robot Border Patrolling. Journal of Intelligent and Robotic Systems: Theory and Applications, 2013, 71, 423-444.	2.0	55
70	Adaptive trajectory tracking for quadrotor MAVs in presence of parameter uncertainties and external disturbances. , 2013, , .		30
71	A Decentralized Controller-Observer Scheme for Multi-Agent Weighted Centroid Tracking. IEEE Transactions on Automatic Control, 2013, 58, 1310-1316.	3.6	47
72	An Observability Metric for Underwater Vehicle Localization Using Range Measurements. Sensors, 2013, 13, 16191-16215.	2.1	42

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73	Decentralized centroid and formation control for multi-robot systems. , 2013, , .		20
74	Experimental results of coordinated sampling/patrolling by autonomous underwater vehicles. , 2013, , .		4
75	Experimental validation of a new adaptive control scheme for quadrotors MAVs. , 2013, , .		20
76	A new approach to multi-robot harbour patrolling: Theory and experiments. , 2012, , .		13
77	A decentralized observer-controller scheme for centroid and formation control with bounded control input*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 252-257.	0.4	5
78	A coordination strategy for multi-robot sampling of dynamic fields. , 2012, , .		10
79	Italian Robotics Community [Regional]. IEEE Robotics and Automation Magazine, 2012, 19, 106-107.	2.2	1
80	The CO<sup>3</sup>AUVs (Cooperative Cognitive Control for Autonomous Underwater) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5		20
81	Observability metric for the relative localization of AUVs based on range and depth measurements: Theory and experiments. , 2011, , .		1
82	A decentralized controller-observer scheme for multi-robot weighted centroid tracking. , 2011, , .		0
83	Decentralized deployment with obstacle avoidance for AUVs*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 12807-12812.	0.4	3
84	Editorial: special issue on marine robotics. Intelligent Service Robotics, 2011, 4, 219-220.	1.6	0
85	Observability metric for the relative localization of AUVs based on range and depth measurements: Theory and experiments. , 2011, , .		27
86	Constrained motion planning for open-chain industrial robots. Robotica, 2011, 29, 403-420.	1.3	7
87	Smooth 3-Dimensional Path Generation with Guaranteed Maximum Distance from Via-Points. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 300-305.	0.4	0
88	The NSB control: a behavior-based approach for multi-robot systems. Paladyn, 2010, 1, 48-56.	1.9	47
89	A non-iterative and effective procedure for simultaneous odometry and camera calibration for a differential drive mobile robot based on the singular value decomposition. Intelligent Service Robotics, 2010, 3, 163-173.	1.6	11
90	Flocking for multi-robot systems viaÂtheÂNull-Space-based Behavioral control. Swarm Intelligence, 2010, 4, 37-56.	1.3	63

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91	Marine Robotic Systems [From the Guest Editors. IEEE Robotics and Automation Magazine, 2010, 17, 18-18.	2.2	2
92	Designing behaviors to improve observability for relative localization of AUVs. , 2010, , .		9
93	Simultaneous calibration of odometry and camera for a differential drive mobile robot. , 2010, , .		22
94	Observability analysis of relative localization for AUVs based on ranging and depth measurements. , 2010, , .		29
95	Prioritized closed-loop inverse kinematic algorithms for redundant robotic systems with velocity saturations. , 2009, , .		27
96	Swarm of robots flocking via the null-space-based behavioral control. , 2009, , .		2
97	Behavioral control for multi-robot perimeter patrol: A Finite State Automata approach. , 2009, , .		67
98	Experiments of Formation Control With Multirobot Systems Using the Null-Space-Based Behavioral Control. IEEE Transactions on Control Systems Technology, 2009, 17, 1173-1182.	3.2	118
99	Constrained motion planning for industrial robots. , 2009, , .		5
100	Stability Analysis for Prioritized Closed-Loop Inverse Kinematic Algorithms for Redundant Robotic Systems. IEEE Transactions on Robotics, 2009, 25, 985-994.	7.3	202
101	A fault-tolerant modular control approach to multi-robot perimeter patrol. , 2009, , .		15
102	Fuzzy behavioral control for multi-robot border patrol. , 2009, , .		13
103	The null-space-based behavioral control for autonomous robotic systems. Intelligent Service Robotics, 2008, 1, 27-39.	1.6	151
104	The Entrapment/Escorting Mission. IEEE Robotics and Automation Magazine, 2008, 15, 22-29.	2.2	65
105	Underwater Robotics. , 2008, , 987-1008.		51
106	Stability analysis for the Null-Space-based Behavioral control for multi-robot systems. , 2008, , .		28
107	Flocking for Multi-Robot Systems via the Null-Space-based Behavioral Control. , 2008, , .		17
108	Stability Analysis for Prioritized Closed-Loop Inverse Kinematic Algorithms for Redundant Robotic Systems. , 2008, , .		18

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109	The NSB control for 3-dimensional flocking of multi-robot systems. , 2008, , .		1
110	SmartMove4: an industrial implementation of trajectory planning for robots. Industrial Robot, 2007, 34, 217-224.	1.2	19
111	The Entrapment/Escorting Mission for a Multi-Robot System: Theory and Experiments. , 2007, , .		14
112	Experiences of formation control of multi-robot systems with the Null-Space-based Behavioral Control. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	21
113	On the Use of Adaptive/Integral Actions for Six-Degrees-of-Freedom Control of Autonomous Underwater Vehicles. IEEE Journal of Oceanic Engineering, 2007, 32, 300-312.	2.1	90
114	Use of a Robot Platoon to Implement Mobile Ad-hoc NETwork in Rescue Scenario - Preliminary Experimental Results. , 2007, , .		6
115	A Fuzzy-Logic-Based Approach for Mobile Robot Path Tracking. IEEE Transactions on Fuzzy Systems, 2007, 15, 211-221.	6.5	184
116	Linear estimation of the physical odometric parameters for differential-drive mobile robots. Autonomous Robots, 2007, 23, 59-68.	3.2	36
117	An Adaptive Law for Guidance and Control of Remotely Operated Vehicles. , 2006, , .		2
118	Kinematic Control of Platoons of Autonomous Vehicles. , 2006, 22, 1285-1292.		146
119	Coordinated control of mobile antennas for ad hoc networks. International Journal of Modelling, Identification and Control, 2006, 1, 63.	0.2	21
120	PRELIMINARY EXPERIMENTS OF FORMATION CONTROL USING THE NULL-SPACE-BASED BEHAVIORAL CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 635-640.	0.4	3
121	Linear Estimation of the Odometric Parameters for Differential-Drive Mobile Robots. , 2006, , .		7
122	Experiments of Formation Control with Collisions Avoidance using the Null-Space-Based Behavioral Control. , 2006, , .		22
123	An Adaptive Law for Guidance and Control of Remotely Operated Vehicles. , 2006, , .		0
124	Experiments of Formation Control with Collisions Avoidance using the Null-Space-Based Behavioral Control. , 2006, , .		0
125	EXPERIMENTAL KINEMATIC COMPARISON OF BEHAVIORAL APPROACHES FOR MOBILE ROBOTS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 295-300.	0.4	6
126	JOINT SPACE POINT-TO-POINT MOTION PLANNING FOR ROBOTS. AN INDUSTRIAL IMPLEMENTATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 187-192.	0.4	0

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127	A self-configuring MANET for coverage area adaptation through kinematic control of a platoon of mobile robots. , 2005, , .		11
128	A calibration method for odometry of mobile robots based on the least-squares technique: theory and experimental validation. , 2005, 21, 994-1004.		109
129	Adaptive Tracking Control of Underwater Vehicle-Manipulator Systems Based on the Virtual Decomposition Approach. IEEE Transactions on Automation Science and Engineering, 2004, 20, 594-602.	2.4	69
130	Diagnosis of actuator faults in AUVs based on neural networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 89-94.	0.4	1
131	A fuzzy approach to redundancy resolution for underwater vehicle-manipulator systems. Control Engineering Practice, 2003, 11, 445-452.	3.2	29
132	Fuzzy redundancy resolution and motion coordination for underwater vehicle-manipulator systems. IEEE Transactions on Fuzzy Systems, 2003, 11, 109-120.	6.5	67
133	A Survey of Fault Detection/Tolerance Strategies for AUVs and ROVs. , 2003, , 109-127.		30
134	A new on-line algorithm for inverse kinematics of robot manipulators ensuring path tracking capability under joint limits. IEEE Transactions on Automation Science and Engineering, 2003, 19, 162-167.	2.4	70
135	Fuzzy redundancy resolution and motion coordination for underwater vehicle-manipulator systems. IEEE Transactions on Fuzzy Systems, 2003, 11, 281-281.	6.5	2
136	Underwater Robots. Springer Tracts in Advanced Robotics, 2003, , .	0.3	27
137	A novel adaptive control law for underwater vehicles. IEEE Transactions on Control Systems Technology, 2003, 11, 221-232.	3.2	107
138	A new adaptive control law for the phantom ROV. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 479-484.	0.4	6
139	Explicit force control for underwater vehicle-manipulator systems. Robotica, 2002, 20, 251-260.	1.3	10
140	A MODULAR CONTROL LAW FOR UNDERWATER VEHICLE-MANIPULATOR SYSTEMS ADAPTING ON A MINIMUM SET OF PARAMETERS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 205-210.	0.4	3
141	Fault-accommodating thruster force allocation of an AUV considering thruster redundancy and saturation. IEEE Transactions on Automation Science and Engineering, 2002, 18, 223-233.	2.4	94
142	Real-time path planning and obstacle avoidance for RAIS: an autonomous underwater vehicle. IEEE Journal of Oceanic Engineering, 2001, 26, 216-227.	2.1	61
143	Adaptive control of an autonomous underwater vehicle: experimental results on ODIN. IEEE Transactions on Control Systems Technology, 2001, 9, 756-765.	3.2	218
144	External force control for underwater vehicle-manipulator systems. IEEE Transactions on Automation Science and Engineering, 2001, 17, 931-938.	2.4	29

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145	On the use of integral control actions for autonomous underwater vehicles. , 2001, , .		8
146	An experimental investigation into the fault-tolerant control of an autonomous underwater vehicle. Advanced Robotics, 2001, 15, 501-520.	1.1	17
147	A Fuzzy Approach to Redundancy Resolution for Underwater Vehicle-Manipulator Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 209-214.	0.4	16
148	Tracking control for underwater vehicle-manipulator systems with velocity estimation. IEEE Journal of Oceanic Engineering, 2000, 25, 399-413.	2.1	85
149	A systematic procedure for the identification of dynamic parameters of robot manipulators. Robotica, 1999, 17, 427-435.	1.3	71
150	Singularity-free regulation of underwater vehicle-manipulator systems. , 1998, , .		27
151	The Stock Markets as an Ineffective Sampler. , 0, , .		0
152	Experimental Odometry Calibration of the Mobile Robot Khepera II Based on the Least-Squares Technique. , 0, , .		5
153	Adaptive/integral actions for 6-DOF control of AUVs. , 0, , .		8