

# Riccardo Muradore

## List of Publications by Year in descending order

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Version: 2024-02-01

121  
papers

1,628  
citations

394286

19  
h-index

360920

35  
g-index

123  
all docs

123  
docs citations

123  
times ranked

1628  
citing authors

#	ARTICLE	IF	CITATIONS
1	Discrete stochastic port-Hamiltonian systems. <i>Automatica</i> , 2022, 137, 110122.	3.0	3
2	A multi-modal unsupervised fault detection system based on power signals and thermal imaging via deep AutoEncoder neural network. <i>Engineering Applications of Artificial Intelligence</i> , 2022, 110, 104729.	4.3	10
3	Thermal endoscope based on cost-effective LWIR camera cores. <i>HardwareX</i> , 2022, 11, e00300.	1.1	1
4	A novel inverse dynamic model for 3-DoF delta robots. <i>Mechatronics</i> , 2022, 83, 102752.	2.0	10
5	Second-Order-Optimal Filter on Lie Groups for Planar Rigid Bodies. <i>IEEE Transactions on Automatic Control</i> , 2022, 67, 4971-4977.	3.6	1
6	Stabilization of planar non-Markovian switched linear systems with unbounded random delays. <i>European Journal of Control</i> , 2021, 57, 109-118.	1.6	2
7	Stabilization of bilateral teleoperators with asymmetric stochastic delay. <i>Systems and Control Letters</i> , 2021, 147, 104828.	1.3	5
8	Minimal controllability time for systems with nonlinear drift under a compact convex state constraint. <i>Automatica</i> , 2021, 125, 109428.	3.0	1
9	A First Evaluation of a Multi-Modal Learning System to Control Surgical Assistant Robots via Action Segmentation. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2021, 3, 714-724.	2.1	15
10	Bilateral teleoperation of stochastic port-Hamiltonian systems using energy tanks. <i>International Journal of Robust and Nonlinear Control</i> , 2021, 31, 9332-9357.	2.1	5
11	Modeling of Surgical Procedures Using Statecharts for Semi-Autonomous Robotic Surgery. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2021, 3, 888-899.	2.1	7
12	An Optimized Two-Layer Approach for Efficient and Robustly Stable Bilateral Teleoperation. , 2021, , .		0
13	A Modified Recursive Newton-Euler Algorithm Embedding a Collision Avoidance Module. , 2021, , .		0
14	Velocity Obstacle-based Trajectory Planner for Two-Link Planar Manipulators. , 2021, , .		4
15	A Time-of-Flight Stereoscopic Endoscope for Anatomical 3D Reconstruction. , 2021, , .		2
16	A velocity obstacles approach for autonomous landing and teleoperated robots. <i>Autonomous Robots</i> , 2020, 44, 217-232.	3.2	12
17	Global/local motion planning based on Dynamic Trajectory Reconfiguration and Dynamical Systems for Autonomous Surgical Robots. , 2020, , .		4
18	A Cost-Effective System for Aerial 3D Thermography of Buildings. <i>Journal of Imaging</i> , 2020, 6, 76.	1.7	18

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19	Improving Rigid 3-D Calibration for Robotic Surgery. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 569-573.	2.1	22
20	Technical and Functional Validation of a Teleoperated Multirobots Platform for Minimally Invasive Surgery. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 148-156.	2.1	10
21	PI-shaped LQG control design for adaptive optics systems. Control Engineering Practice, 2020, 102, 104528.	3.2	11
22	A deep learning unsupervised approach for fault diagnosis of household appliances. IFAC-PapersOnLine, 2020, 53, 10749-10754.	0.5	1
23	XSAO: an extremely small adaptive optics module for small-aperture telescopes with multiactuator adaptive lens. Journal of Astronomical Telescopes, Instruments, and Systems, 2020, 6, 1.	1.0	1
24	Gray-Box Model Identification and Payload Estimation for Delta Robots. IFAC-PapersOnLine, 2020, 53, 8771-8776.	0.5	1
25	A variable stochastic admittance control framework with energy tank. IFAC-PapersOnLine, 2020, 53, 9986-9991.	0.5	3
26	Late Breaking Results: Enabling Containerized Computing and Orchestration of ROS-based Robotic SW Applications on Cloud-Server-Edge Architectures. , 2020, , .		5
27	Efficient implementation of the Shackâ€™Hartmann centroid extraction for edge computing. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2020, 37, 1548.	0.8	1
28	Integrating Model Predictive Control and Dynamic Waypoints Generation for Motion Planning in Surgical Scenario. , 2020, , .		6
29	A Passivity-Based Bilateral Teleoperation Architecture using Distributed Nonlinear Model Predictive Control. , 2020, , .		6
30	A Multi-Modal Learning System for On-Line Surgical Action Segmentation. , 2020, , .		2
31	Rigid 3D Registration of Pre-operative Information for Semi-Autonomous Surgery. , 2020, , .		4
32	Planning with Real-Time Collision Avoidance for Cooperating Agents under Rigid Body Constraints. , 2019, , .		4
33	Enhancing Surgical Process Modeling for Artificial Intelligence development in robotics: the SARAS case study for Minimally Invasive Procedures. , 2019, , .		10
34	An energy-shared two-layer approach for multi-master-multi-slave bilateral teleoperation systems. , 2019, , .		22
35	Tele-Echography using a Two-Layer Teleoperation Algorithm with Energy Scaling. , 2019, , .		11
36	Dynamic Motion Planning for Autonomous Assistive Surgical Robots. Electronics (Switzerland), 2019, 8, 957.	1.8	18

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37	A Multirobots Teleoperated Platform for Artificial Intelligence Training Data Collection in Minimally Invasive Surgery. , 2019, , .		15
38	Cognitive Robotic Architecture for Semi-Autonomous Execution of Manipulation Tasks in a Surgical Environment. , 2019, , .		18
39	FSO Communication System with Multi Actuator Adaptive Lens. , 2019, , .		0
40	Adaptive optics in the mouse eye: wavefront sensing based vs image-guided aberration correction. Biomedical Optics Express, 2019, 10, 4757.	1.5	15
41	Improvement of coupling efficiency in free-space optical communication with a multi-actuator adaptive lens. Optics Letters, 2019, 44, 606.	1.7	8
42	Humanâ€“Robot Interfaces in Autonomous Surgical Robots. , 2019, , 187-199.		0
43	Surgical Action Recognition with Spatiotemporal Convolutional Neural Networks. , 2019, , .		0
44	A Multiplatform CPU-Based Architecture for Cost-Effective Adaptive Optics Systems. IEEE Transactions on Industrial Informatics, 2018, 14, 4431-4439.	7.2	23
45	Soft Robotic Manipulator for Improving Dexterity in Minimally Invasive Surgery. Surgical Innovation, 2018, 25, 69-76.	0.4	40
46	Effect of a contact lens on mouse retinal in vivo imaging: Effective focal length changes and monochromatic aberrations. Experimental Eye Research, 2018, 172, 86-93.	1.2	27
47	Hybrid Motion Planner Integrating Global Voronoi Diagrams and Local Velocity Obstacle Method. , 2018, , .		6
48	An Energy Saving Approach to Active Object Recognition and Localization. , 2018, , .		3
49	Fast stabilization of a high-energy ultrafast OPA with adaptive lenses. Scientific Reports, 2018, 8, 14317.	1.6	3
50	Boosting a high-energy IR OPA for Attosecond Science with high-speed adaptive deformable lenses. , 2018, , .		0
51	Smart Green Applications: From Renewable Energy Management to Intelligent Transportation Systems. Energies, 2018, 11, 1317.	1.6	5
52	On cyber-physical attacks in bilateral teleoperation systems: An experimental analysis. , 2018, , .		5
53	Formal Verification of Medical CPS. ACM Transactions on Cyber-Physical Systems, 2018, 2, 1-29.	1.9	3
54	Stabilization of a High-energy Optical Parametric Amplifier with High-speed Adaptive Deformable Lenses. , 2018, , .		0

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55	Adaptive optics on small astronomical telescope with multi-actuator adaptive lens. , 2018, , .		2
56	High-energy OPA stability control with adaptive lenses. , 2018, , .		0
57	Wavefront control with a multi-actuator adaptive Lens in imaging applications. Proceedings of SPIE, 2017, , .	0.8	0
58	Optimal Solution of Kinodynamic Motion Planning for the Cart-Pole System. IFAC-PapersOnLine, 2017, 50, 6308-6313.	0.5	0
59	Impedance control of series elastic actuators: Passivity and acceleration-based control. Mechatronics, 2017, 47, 37-48.	2.0	67
60	Cost Effective Quality Assessment in Industrial Parts Manufacturing via Optical Acquisition. Procedia Manufacturing, 2017, 11, 1207-1214.	1.9	3
61	Robust Real-Time Needle Tracking in 2-D Ultrasound Images Using Statistical Filtering. IEEE Transactions on Control Systems Technology, 2017, 25, 966-978.	3.2	23
62	Impedance Control of Series Elastic Actuators Using Acceleration Feedback. Biosystems and Biorobotics, 2017, , 33-37.	0.2	3
63	A Formal Approach to Cyber-Physical Attacks. , 2017, , .		33
64	Parametric formal verification: the robotic paint spraying case study. IFAC-PapersOnLine, 2017, 50, 9248-9253.	0.5	8
65	A Bilateral Teleoperation Architecture using Smith Predictor and Adaptive Network Buffering. IFAC-PapersOnLine, 2017, 50, 11421-11426.	0.5	5
66	High-speed adaptive deformable lens for boosting an high-energy optical parametric amplifier. , 2017, , .		0
67	Cutaneous feedback in teleoperated robotic hands. , 2016, , .		5
68	Teaching physical human-robot interaction to computer science undergraduate students. , 2016, , .		2
69	Communication-Aware Bandwidth-Optimized Predictive Control of Motor Drives in Electric Vehicles. IEEE Transactions on Industrial Electronics, 2016, 63, 5602-5611.	5.2	7
70	A Cognitive Robot Control Architecture for Autonomous Execution of Surgical Tasks. Journal of Medical Robotics Research, 2016, 01, 1650008.	1.0	22
71	A Review of Algorithms for Compliant Control of Stiff and Fixed-Compliance Robots. IEEE/ASME Transactions on Mechatronics, 2016, 21, 613-624.	3.7	213
72	Phase identification for product quality prediction in batch processes: Application to industrial resin production. , 2015, , .		0

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73	Improving the accuracy of interferometric measurements through adaptive vibration cancellation. , 2015, , .		5
74	Simulation alternatives for the verification of networked cyber-physical systems. Microprocessors and Microsystems, 2015, 39, 843-853.	1.8	5
75	Development of a Cognitive Robotic System for Simple Surgical Tasks. International Journal of Advanced Robotic Systems, 2015, 12, 37.	1.3	35
76	A two-layer approach for shared control in semi-autonomous robotic surgery. , 2015, , .		4
77	Energy-Efficient Intrusion Detection and Mitigation for Networked Control Systems Security. IEEE Transactions on Industrial Informatics, 2015, 11, 830-840.	7.2	21
78	Formal verification of robotic surgery tasks by reachability analysis. Microprocessors and Microsystems, 2015, 39, 836-842.	1.8	10
79	An Energy Tank-Based Interactive Control Architecture for Autonomous and Teleoperated Robotic Surgery. IEEE Transactions on Robotics, 2015, 31, 1073-1088.	7.3	142
80	Formal Verification Applied to Robotic Surgery. Lecture Notes in Control and Information Sciences, 2015, , 347-355.	0.6	5
81	Multi-input multi-output identification for control of adaptive optics systems. Proceedings of SPIE, 2014, , .	0.8	0
82	Adaptive vibration cancellation in adaptive optics: An experimental validation. , 2014, , .		4
83	Verification of Robotic Surgery Tasks by Reachability Analysis: A Comparison of Tools. , 2014, , .		1
84	Simulation Alternatives for Modeling Networked Cyber-Physical Systems. , 2014, , .		2
85	Improving Performance of Networked Control Systems by Using Adaptive Buffering. IEEE Transactions on Industrial Electronics, 2014, 61, 4847-4856.	5.2	35
86	An application of adaptive techniques to vibration rejection in adaptive optics systems. Control Engineering Practice, 2014, 32, 87-95.	3.2	10
87	Distributed Control Architecture for Automated Surgical Task Execution with Coordinated Robot Arms. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 10213-10218.	0.4	2
88	Model Predictive Control over Delay-Based Differentiated Services Control Networks. , 2013, , .		1
89	Inertial parameter identification including friction and motor dynamics. , 2013, , .		12
90	Passivity-Based Control over Differentiated-Services Packet Networks. , 2013, , .		0

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91	Real-time biopsy needle tip estimation in 2D ultrasound images. , 2013, , .		12
92	Predictive control of networked control systems over differentiated services lossy networks. , 2012, , .		5
93	On the rejection of vibrations in adaptive optics systems. Proceedings of SPIE, 2012, , .	0.8	9
94	Vibrations in AO control: a short analysis of on-sky data around the world. Proceedings of SPIE, 2012, , .	0.8	26
95	GALACSI system design and analysis. Proceedings of SPIE, 2012, , .	0.8	28
96	Open Problems in Verification and Refinement of Autonomous Robotic Systems. , 2012, , .		13
97	Towards automated surgical robotics: A requirements engineering approach. , 2012, , .		21
98	A SystemC/Matlab co-simulation tool for networked control systems. Simulation Modelling Practice and Theory, 2012, 23, 71-86.	2.2	25
99	A PLS-Based Statistical Approach for Fault Detection and Isolation of Robotic Manipulators. IEEE Transactions on Industrial Electronics, 2012, 59, 3167-3175.	5.2	176
100	Plant control over QoS-enabled packet networks. , 2011, , .		1
101	Adaptive LQ Control over Differentiated Service Lossy Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 13245-13250.	0.4	3
102	Robotic Surgery. IEEE Robotics and Automation Magazine, 2011, 18, 24-32.	2.2	41
103	Sparse calibration of an extreme Adaptive Optics system. , 2010, , .		2
104	Dynamic Calibration of Adaptive Optics Systems: A System Identification Approach. IEEE Transactions on Control Systems Technology, 2010, 18, 705-713.	3.2	27
105	Simulation of networked control systems with applications to telerobotics. , 2009, , .		2
106	Statistical methods for estimating the dynamical parameters of manipulators. , 2009, , .		6
107	High performance adaptive optics system with fine tip/tilt control. Control Engineering Practice, 2009, 17, 122-135.	3.2	32
108	The field stabilization and adaptive optics mirrors for the European Extremely Large Telescope. Proceedings of SPIE, 2008, , .	0.8	10

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109	Dynamic calibration of adaptive optics systems: A system identification approach. , 2008, , .		4
110	Fine tip/tilt estimation and vibration suppression for high performance AO systems. , 2008, , .		0
111	Adaptive Optics Systems: A Challenge for Closed Loop Subspace Identification. Proceedings of the American Control Conference, 2007, , .	0.0	6
112	Compensating non-linear effects in a MIMO system with unobservable and uncontrollable modes. , 2007, , .		1
113	Compensating Non-linear Effects In AO Control Loop. , 2007, , .		0
114	SUBSPACE IDENTIFICATION METHODS APPLIED TO ADAPTIVE OPTICS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 943-948.	0.4	0
115	A FRAMEWORK FOR PLS-SIM INTEGRATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 291-296.	0.4	0
116	Optimal sensor location for distributed-sensor systems using multivariate regression. Computers and Chemical Engineering, 2006, 30, 521-534.	2.0	12
117	LQ control design for adaptive optics systems based on MIMO identified model. , 2006, , .		3
118	Using structured and unstructured estimators for distillation units: a critical comparison. Computer Aided Chemical Engineering, 2005, 20, 1201-1206.	0.3	0
119	Using MPC to control middle-vessel continuous distillation columns. Journal of Process Control, 2005, 15, 925-930.	1.7	15
120	Mixed control: the discrete-time case. Systems and Control Letters, 2005, 54, 1-13.	1.3	45
121	Robust Control of Systems with Sharp Resonances. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 37-42.	0.4	0