

Raffaello D'Andrea

List of Publications by Year in descending order

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Version: 2024-02-01

61
papers

2,680
citations

218677

26
h-index

182427

51
g-index

61
all docs

61
docs citations

61
times ranked

2289
citing authors

#	ARTICLE	IF	CITATIONS
1	Design and Control of Drones. Annual Review of Control, Robotics, and Autonomous Systems, 2022, 5, 161-177.	11.8	10
2	Sim-to-Real for High-Resolution Optical Tactile Sensing: From Images to Three-Dimensional Contact Force Distributions. Soft Robotics, 2022, 9, 926-937.	8.0	15
3	Leveraging distributed contact force measurements for slip detection: a physics-based approach enabled by a data-driven tactile sensor. , 2022, , .		5
4	A Vision-Based Sensing Approach for a Spherical Soft Robotic Arm. Frontiers in Robotics and AI, 2021, 8, 630935.	3.2	13
5	Zero-Shot Sim-to-Real Transfer of Tactile Control Policies for Aggressive Swing-Up Manipulation. IEEE Robotics and Automation Letters, 2021, 6, 5761-5768.	5.1	8
6	Design and Control of an Inflatable Spherical Robotic Arm for Pick and Place Applications. Actuators, 2021, 10, 299.	2.3	3
7	Tilt-Prioritized Quadcopter Attitude Control. IEEE Transactions on Control Systems Technology, 2020, 28, 376-387.	5.2	38
8	Learning-based parametrized model predictive control for trajectory tracking. Optimal Control Applications and Methods, 2020, 41, 2225-2249.	2.1	7
9	An Annular Wing VTOL UAV: Flight Dynamics and Control. Drones, 2020, 4, 14.	4.9	7
10	Design, fabrication, modeling and control of a fabric-based spherical robotic arm. Mechatronics, 2020, 68, 102369.	3.3	24
11	Full-Order Solution to the Attitude Reset Problem for Kalman Filtering of Attitudes. Journal of Guidance, Control, and Dynamics, 2020, 43, 1232-1246.	2.8	6
12	Learning the sense of touch in simulation: a sim-to-real strategy for vision-based tactile sensing. , 2020, , .		17
13	Iterative Bias Estimation for an Ultra-Wideband Localization System. IFAC-PapersOnLine, 2020, 53, 1391-1396.	0.9	5
14	Design, modeling and control of a flying vehicle with a single moving part that can be positioned anywhere in space. Mechatronics, 2019, 61, 117-130.	3.3	12
15	Computationally Efficient Force and Moment Models for Propellers in UAV Forward Flight Applications. Drones, 2019, 3, 77.	4.9	10
16	A Method for Reducing the Complexity of Model Predictive Control in Robotics Applications. IEEE Robotics and Automation Letters, 2019, 4, 2516-2523.	5.1	4
17	Fast Generation of Collision-Free Trajectories for Robot Swarms Using GPU Acceleration. IEEE Access, 2019, 7, 6679-6690.	4.2	20
18	Design, Motivation and Evaluation of a Full-Resolution Optical Tactile Sensor. Sensors, 2019, 19, 928.	3.8	73

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19	Ground Truth Force Distribution for Learning-Based Tactile Sensing: A Finite Element Approach. IEEE Access, 2019, 7, 173438-173449.	4.2	38
20	Computationally Efficient Trajectory Generation for Fully Actuated Multirotor Vehicles. IEEE Transactions on Robotics, 2018, 34, 555-571.	10.3	34
21	Accelerometer-Based Tilt Determination for Rigid Bodies With a Nonaccelerated Pivot Point. IEEE Transactions on Control Systems Technology, 2018, 26, 2106-2120.	5.2	4
22	Calibrating Away Inaccuracies in Ultra Wideband Range Measurements: A Maximum Likelihood Approach. IEEE Access, 2018, 6, 78719-78730.	4.2	25
23	An omni-directional multirotor vehicle. Mechatronics, 2018, 55, 76-93.	3.3	41
24	Self-Calibrating Ultra-Wideband Network Supporting Multi-Robot Localization. IEEE Access, 2018, 6, 22292-22304.	4.2	74
25	The Flying Platform "A testbed for ducted fan actuation and control design. Mechatronics, 2017, 42, 52-68.	3.3	24
26	Implementation of a parametrized infinite-horizon model predictive control scheme with stability guarantees. , 2017, , .		6
27	Augmenting Ultra-Wideband Localization with Computer Vision for Accurate Flight. IFAC-PapersOnLine, 2017, 50, 12734-12740.	0.9	20
28	Basis functions design for the approximation of constrained linear quadratic regulator problems encountered in model predictive control. , 2017, , .		3
29	Approximation of continuous-time infinite-horizon optimal control problems arising in model predictive control. , 2016, , .		3
30	Parametrized infinite-horizon model predictive control for linear time-invariant systems with input and state constraints. , 2016, , .		11
31	Application of an approximate model predictive control scheme on an unmanned aerial vehicle. , 2016, , .		18
32	Relaxed hover solutions for multicopters: Application to algorithmic redundancy and novel vehicles. International Journal of Robotics Research, 2016, 35, 873-889.	8.5	83
33	Cloud-Based Collaborative 3D Mapping in Real-Time With Low-Cost Robots. IEEE Transactions on Automation Science and Engineering, 2015, 12, 423-431.	5.2	108
34	A Computationally Efficient Motion Primitive for Quadcopter Trajectory Generation. IEEE Transactions on Robotics, 2015, 31, 1294-1310.	10.3	242
35	Real-Time Trajectory Generation for Quadcopters. IEEE Transactions on Robotics, 2015, 31, 877-892.	10.3	86
36	Event-Based State Estimation With Variance-Based Triggering. IEEE Transactions on Automatic Control, 2014, 59, 3266-3281.	5.7	195

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37	The Distributed Flight Array: Design, implementation, and analysis of a modular vertical take-off and landing vehicle. <i>International Journal of Robotics Research</i> , 2014, 33, 375-400.	8.5	51
38	A platform for aerial robotics research and demonstration: The Flying Machine Arena. <i>Mechatronics</i> , 2014, 24, 41-54.	3.3	190
39	A frequency domain iterative learning algorithm for high-performance, periodic quadrocopter maneuvers. <i>Mechatronics</i> , 2014, 24, 954-965.	3.3	35
40	Guest Editorial: A Revolution in the Warehouse: A Retrospective on Kiva Systems and the Grand Challenges Ahead. <i>IEEE Transactions on Automation Science and Engineering</i> , 2012, 9, 638-639.	5.2	123
41	Design and Analysis of a Blind Juggling Robot. <i>IEEE Transactions on Robotics</i> , 2012, 28, 1228-1243.	10.3	34
42	Aerial Robotic Construction towards a New Field of Architectural Research. <i>International Journal of Architectural Computing</i> , 2012, 10, 439-459.	1.5	101
43	Limited benefit of joint estimation in multi-agent iterative learning. <i>Asian Journal of Control</i> , 2012, 14, 613-623.	3.0	8
44	Performance benchmarking of quadrotor systems using time-optimal control. <i>Autonomous Robots</i> , 2012, 33, 69-88.	4.8	71
45	Optimization-based iterative learning for precise quadrocopter trajectory tracking. <i>Autonomous Robots</i> , 2012, 33, 103-127.	4.8	115
46	Adaptive fast open-loop maneuvers for quadrocopters. <i>Autonomous Robots</i> , 2012, 33, 89-102.	4.8	34
47	The Distributed Flight Array. <i>Mechatronics</i> , 2011, 21, 908-917.	3.3	77
48	Performing and extending aggressive maneuvers using iterative learning control. <i>Robotics and Autonomous Systems</i> , 2011, 59, 1-11.	5.1	27
49	Autonomous quadrotor flight using a vision system and accommodating frames misalignment. , 2009, , .		35
50	Theory and implementation of path planning by negotiation for decentralized agents. <i>Robotics and Autonomous Systems</i> , 2008, 56, 422-436.	5.1	49
51	Motion design and learning of autonomous robots based on primitives and heuristic cost-to-go. <i>Robotics and Autonomous Systems</i> , 2008, 56, 658-669.	5.1	2
52	Antenna array synthesis with clusters of unmanned aerial vehicles. <i>Automatica</i> , 2008, 44, 1976-1984.	5.0	10
53	On the peaking phenomenon in the control of vehicular platoons. <i>Systems and Control Letters</i> , 2008, 57, 528-537.	2.3	16
54	Visuomotor Optimality and its Utility in Parametrization of Response. <i>IEEE Transactions on Biomedical Engineering</i> , 2008, 55, 1783-1791.	4.2	4

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55	A decomposition approach to multi-vehicle cooperative control. Robotics and Autonomous Systems, 2007, 55, 276-291.	5.1	122
56	Trajectory generation and control for four wheeled omnidirectional vehicles. Robotics and Autonomous Systems, 2006, 54, 13-22.	5.1	85
57	Near-optimal dynamic trajectory generation and control of an omnidirectional vehicle. Robotics and Autonomous Systems, 2004, 46, 47-64.	5.1	184
58	Design of full state feedback finite-precision controllers. International Journal of Robust and Nonlinear Control, 2002, 12, 537-553.	3.7	5
59	Linear matrix inequality conditions for robustness and control design. International Journal of Robust and Nonlinear Control, 2001, 11, 541-554.	3.7	4
60	Full information and full control in a behavioral setting. Systems and Control Letters, 2000, 41, 85-93.	2.3	0
61	âž optimal interconnections. Systems and Control Letters, 1997, 32, 313-322.	2.3	6