Raffaello D'Andrea

List of Publications by Year
in descending order

61	2,680	218677 26	182427 51
papers	citations	h-index	g-index

61	61	61	2289
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Computationally Efficient Motion Primitive for Quadrocopter Trajectory Generation. IEEE Transactions on Robotics, 2015, 31, 1294-1310.	10.3	242
2	Event-Based State Estimation With Variance-Based Triggering. IEEE Transactions on Automatic Control, 2014, 59, 3266-3281.	5.7	195
3	A platform for aerial robotics research and demonstration: The Flying Machine Arena. Mechatronics, 2014, 24, 41-54.	3.3	190
4	Near-optimal dynamic trajectory generation and control of an omnidirectional vehicle. Robotics and Autonomous Systems, 2004, 46, 47-64.	5.1	184
5	Guest Editorial: A Revolution in the Warehouse: A Retrospective on Kiva Systems and the Grand Challenges Ahead. IEEE Transactions on Automation Science and Engineering, 2012, 9, 638-639.	5.2	123
6	A decomposition approach to multi-vehicle cooperative control. Robotics and Autonomous Systems, 2007, 55, 276-291.	5.1	122
7	Optimization-based iterative learning for precise quadrocopter trajectory tracking. Autonomous Robots, 2012, 33, 103-127.	4.8	115
8	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
9	Aerial Robotic Construction towards a New Field of Architectural Research. International Journal of Architectural Computing, 2012, 10, 439-459.	1.5	101
10	Real-Time Trajectory Generation for Quadrocopters. IEEE Transactions on Robotics, 2015, 31, 877-892.	10.3	86
11	Trajectory generation and control for four wheeled omnidirectional vehicles. Robotics and Autonomous Systems, 2006, 54, 13-22.	5.1	85
12	Relaxed hover solutions for multicopters: Application to algorithmic redundancy and novel vehicles. International Journal of Robotics Research, 2016, 35, 873-889.	8.5	83
13	The Distributed Flight Array. Mechatronics, 2011, 21, 908-917.	3.3	77
14	Self-Calibrating Ultra-Wideband Network Supporting Multi-Robot Localization. IEEE Access, 2018, 6, 22292-22304.	4.2	74
15	Design, Motivation and Evaluation of a Full-Resolution Optical Tactile Sensor. Sensors, 2019, 19, 928.	3.8	73
16	Performance benchmarking of quadrotor systems using time-optimal control. Autonomous Robots, 2012, 33, 69-88.	4.8	71
17	The Distributed Flight Array: Design, implementation, and analysis of a modular vertical take-off and landing vehicle. International Journal of Robotics Research, 2014, 33, 375-400.	8.5	51
18	Theory and implementation of path planning by negotiation for decentralized agents. Robotics and Autonomous Systems, 2008, 56, 422-436.	5.1	49

#	Article	IF	Citations
19	An omni-directional multirotor vehicle. Mechatronics, 2018, 55, 76-93.	3.3	41
20	Ground Truth Force Distribution for Learning-Based Tactile Sensing: A Finite Element Approach. IEEE Access, 2019, 7, 173438-173449.	4.2	38
21	Tilt-Prioritized Quadrocopter Attitude Control. IEEE Transactions on Control Systems Technology, 2020, 28, 376-387.	5.2	38
22	Autonomous quadrotor flight using a vision system and accommodating frames misalignment. , 2009, , .		35
23	A frequency domain iterative learning algorithm for high-performance, periodic quadrocopter maneuvers. Mechatronics, 2014, 24, 954-965.	3.3	35
24	Design and Analysis of a Blind Juggling Robot. IEEE Transactions on Robotics, 2012, 28, 1228-1243.	10.3	34
25	Adaptive fast open-loop maneuvers for quadrocopters. Autonomous Robots, 2012, 33, 89-102.	4.8	34
26	Computationally Efficient Trajectory Generation for Fully Actuated Multirotor Vehicles. IEEE Transactions on Robotics, 2018, 34, 555-571.	10.3	34
27	Performing and extending aggressive maneuvers using iterative learning control. Robotics and Autonomous Systems, 2011, 59, 1-11.	5.1	27
28	Calibrating Away Inaccuracies in Ultra Wideband Range Measurements: A Maximum Likelihood Approach. IEEE Access, 2018, 6, 78719-78730.	4.2	25
29	The Flying Platform â€“ A testbed for ducted fan actuation and control design. Mechatronics, 2017, 42, 52-68.	3.3	24
30	Design, fabrication, modeling and control of a fabric-based spherical robotic arm. Mechatronics, 2020, 68, 102369.	3.3	24
31	Augmenting Ultra-Wideband Localization with Computer Vision for Accurate Flight. IFAC-PapersOnLine, 2017, 50, 12734-12740.	0.9	20
32	Fast Generation of Collision-Free Trajectories for Robot Swarms Using GPU Acceleration. IEEE Access, 2019, 7, 6679-6690.	4.2	20
33	Application of an approximate model predictive control scheme on an unmanned aerial vehicle. , 2016, , .		18
34	Learning the sense of touch in simulation: a sim-to-real strategy for vision-based tactile sensing. , 2020, , .		17
35	On the peaking phenomenon in the control of vehicular platoons. Systems and Control Letters, 2008, 57, 528-537.	2.3	16
36	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

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37	A Vision-Based Sensing Approach for a Spherical Soft Robotic Arm. Frontiers in Robotics and AI, 2021, 8, 630935.	3.2	13
38	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
39	Parametrized infinite-horizon model predictive control for linear time-invariant systems with input and state constraints. , 2016, , .		11
40	Antenna array synthesis with clusters of unmanned aerial vehicles. Automatica, 2008, 44, 1976-1984.	5.0	10
41	Computationally Efficient Force and Moment Models for Propellers in UAV Forward Flight Applications. Drones, 2019, 3, 77.	4.9	10
42	Design and Control of Drones. Annual Review of Control, Robotics, and Autonomous Systems, 2022, 5, 161-177.	11.8	10
43	Limited benefit of joint estimation in multiâ€agent iterative learning. Asian Journal of Control, 2012, 14, 613-623.	3.0	8
44	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
45	Learningâ€based parametrized model predictive control for trajectory tracking. Optimal Control Applications and Methods, 2020, 41, 2225-2249.	2.1	7
46	An Annular Wing VTOL UAV: Flight Dynamics and Control. Drones, 2020, 4, 14.	4.9	7
47	âˆž optimal interconnections. Systems and Control Letters, 1997, 32, 313-322.	2.3	6
48	Implementation of a parametrized infinite-horizon model predictive control scheme with stability guarantees. , 2017, , .		6
49	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
50	Design of full state feedback finite-precision controllers. International Journal of Robust and Nonlinear Control, 2002, 12, 537-553.	3.7	5
51	Iterative Bias Estimation for an Ultra-Wideband Localization System. IFAC-PapersOnLine, 2020, 53, 1391-1396.	0.9	5
52	Leveraging distributed contact force measurements for slip detection: a physics-based approach enabled by a data-driven tactile sensor. , 2022, , .		5
53	Linear matrix inequality conditions for robustness and control design. International Journal of Robust and Nonlinear Control, 2001, 11, 541-554.	3.7	4
54	Visuomotor Optimality and its Utility in Parametrization of Response. IEEE Transactions on Biomedical Engineering, 2008, 55, 1783-1791.	4.2	4

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55	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
56	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
57	Approximation of continuous-time infinite-horizon optimal control problems arising in model predictive control. , 2016, , .		3
58	Basis functions design for the approximation of constrained linear quadratic regulator problems encountered in model predictive control. , 2017, , .		3
59	Design and Control of an Inflatable Spherical Robotic Arm for Pick and Place Applications. Actuators, 2021, 10, 299.	2.3	3
60	Motion design and learning of autonomous robots based on primitives and heuristic cost-to-go. Robotics and Autonomous Systems, 2008, 56, 658-669.	5.1	2
61	Full information and full control in a behavioral setting. Systems and Control Letters, 2000, 41, 85-93.	2.3	0