

Stefano Di Cairano

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

68 papers	1,144 citations	16 h-index	31 g-index
76 ext. papers	1,611 ext. citations	3.5 avg, IF	5.13 L-index

#	Paper	IF	Citations
68	H-Infinity Loop-Shaped Model Predictive Control With HVAC Application. <i>IEEE Transactions on Control Systems Technology</i> , 2022 , 1-16	4.8	0
67	Fast Multi-Robot Motion Planning via Imitation Learning of Mixed-Integer Programs. <i>IFAC-PapersOnLine</i> , 2021 , 54, 598-604	0.7	0
66	A Predictive Controller for Drivability and Comfort in Multi-Motor Electric Vehicles. <i>IFAC-PapersOnLine</i> , 2021 , 54, 650-656	0.7	1
65	Inverse Learning for Data-Driven Calibration of Model-Based Statistical Path Planning. <i>IEEE Transactions on Intelligent Vehicles</i> , 2021 , 6, 131-145	5	3
64	Reachability-Based Decision-Making for Autonomous Driving: Theory and Experiments. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 29, 1907-1921	4.8	3
63	Electric Satellite Station Keeping, Attitude Control, and Momentum Management by MPC. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 29, 1475-1489	4.8	1
62	Early Termination of Convex QP Solvers in Mixed-Integer Programming for Real-Time Decision Making 2021 , 5, 1417-1422		1
61	. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2020 , 56, 3170-3181	3.7	4
60	Active-Set based Inexact Interior Point QP Solver for Model Predictive Control. <i>IFAC-PapersOnLine</i> , 2020 , 53, 6522-6528	0.7	1
59	Industry engagement with control research: Perspective and messages. <i>Annual Reviews in Control</i> , 2020 , 49, 1-14	10.3	10
58	Inexact Adjoint-based SQP Algorithm for Real-Time Stochastic Nonlinear MPC. <i>IFAC-PapersOnLine</i> , 2020 , 53, 6529-6535	0.7	5
57	Positive Invariant Sets for Safe Integrated Vehicle Motion Planning and Control. <i>IEEE Transactions on Intelligent Vehicles</i> , 2020 , 5, 112-126	5	8
56	Trajectory tracking for autonomous vehicles on varying road surfaces by friction-adaptive nonlinear model predictive control. <i>Vehicle System Dynamics</i> , 2020 , 58, 705-725	2.8	25
55	Robust Motion Planning for Uncertain Systems With Disturbances Using the Invariant-Set Motion Planner. <i>IEEE Transactions on Automatic Control</i> , 2020 , 65, 4456-4463	5.9	6
54	Active Learning for Estimating Reachable Sets for Systems With Unknown Dynamics. <i>IEEE Transactions on Cybernetics</i> , 2020 , PP,	10.2	7
53	PRESAS: Block-structured preconditioning of iterative solvers within a primal active-set method for fast model predictive control. <i>Optimal Control Applications and Methods</i> , 2020 , 41, 2282-2307	1.7	7
52	Autonomous Vehicle Decision-Making and Monitoring based on Signal Temporal Logic and Mixed-Integer Programming 2020 ,		3

51	Noise-Statistics Learning of Automotive-Grade Sensors Using Adaptive Marginalized Particle Filtering. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2019 , 141,	1.6	3
50	Motion Planning of Autonomous Road Vehicles by Particle Filtering. <i>IEEE Transactions on Intelligent Vehicles</i> , 2019 , 4, 197-210	5	16
49	Necessary and sufficient conditions for constraint satisfaction in switched systems using switch-robust control invariant sets. <i>International Journal of Robust and Nonlinear Control</i> , 2019 , 29, 2589-2602	3.6	4
48	Cascaded Reference Governor-MPC for Motion Control of Two-Stage Manufacturing Machines. <i>IEEE Transactions on Control Systems Technology</i> , 2019 , 27, 2030-2044	4.8	3
47	A Structure Exploiting Branch-and-Bound Algorithm for Mixed-Integer Model Predictive Control 2019 ,		5
46	Nonlinear Model Predictive Control of Coupled Rotational-Translational Spacecraft Relative Motion 2019 ,		2
45	Steady-State Analysis of HVAC Performance using Indoor Fans in Control Design 2019 ,		1
44	Inverse Learning for Human-Adaptive Motion Planning 2019 ,		5
43	Automotive Applications of Model Predictive Control. <i>Control Engineering</i> , 2019 , 493-527	1	2
42	Tire-Stiffness and Vehicle-State Estimation Based on Noise-Adaptive Particle Filtering. <i>IEEE Transactions on Control Systems Technology</i> , 2019 , 27, 1100-1114	4.8	30
41	Station keeping and momentum management of low-thrust satellites using MPC. <i>Aerospace Science and Technology</i> , 2018 , 76, 229-241	4.9	20
40	Reconfigurable Model Predictive Control for Multievacuator Vapor Compression Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2018 , 26, 984-1000	4.8	12
39	Real-time optimization and model predictive control for aerospace and automotive applications 2018 ,		16
38	Reachability-based Decision Making for City Driving 2018 ,		5
37	Block Structured Preconditioning within an Active-Set Method for Real-Time Optimal Control 2018 ,		14
36	On-Off Quantization of an MPC Policy for Coupled Station Keeping, Attitude Control, and Momentum Management of GEO Satellites 2018 ,		1
35	Data-Driven Estimation of Backward Reachable and Invariant Sets for Unmodeled Systems via Active Learning 2018 ,		8
34	Control Architecture Design for Autonomous Vehicles 2018 ,		8

33	2018,		4
32	Geometric Mechanics Based Nonlinear Model Predictive Spacecraft Attitude Control with Reaction Wheels. <i>Journal of Guidance, Control, and Dynamics</i> , 2017 , 40, 309-319	2.1	18
31	MPC on manifolds with an application to the control of spacecraft attitude on SO(3). <i>Automatica</i> , 2017 , 76, 293-300	5.7	26
30	Motion planning with invariant set trees 2017,		9
29	Indirect adaptive MPC for output tracking of uncertain linear polytopic systems 2017,		4
28	Reference and command governors for systems with constraints: A survey on theory and applications. <i>Automatica</i> , 2017 , 75, 306-328	5.7	148
27	Driver Intention-based Vehicle Threat Assessment using Random Forests and Particle Filtering. <i>IFAC-PapersOnLine</i> , 2017 , 50, 13860-13865	0.7	9
26	Particle Gibbs with Ancestor Sampling for Identification of Tire-Friction Parameters. <i>IFAC-PapersOnLine</i> , 2017 , 50, 14849-14854	0.7	3
25	Automated driving: Safe motion planning using positively invariant sets 2017,		18
24	MPC for coupled station keeping, attitude control, and momentum management of GEO satellites using on-off electric propulsion 2017,		5
23	Indirect adaptive model predictive control for linear systems with polytopic uncertainty 2016,		10
22	Particle filtering for online motion planning with task specifications 2016,		13
21	Driveline oscillations damping: A tractable predictive control solution based on a piecewise affine model. <i>Nonlinear Analysis: Hybrid Systems</i> , 2016 , 19, 168-185	4.5	17
20	Path planning using positive invariant sets 2016,		17
19	Further results and properties of indirect adaptive model predictive control for linear systems with polytopic uncertainty 2016,		4
18	Joint Decision Making and Motion Planning for Road Vehicles Using Particle Filtering. <i>IFAC-PapersOnLine</i> , 2016 , 49, 175-181	0.7	7
17	MPC for coupled station keeping, attitude control, and momentum management of low-thrust geostationary satellites 2016,		11
16	Model adjustable predictive control with stability guarantees 2015,		13

15	Model Predictive Control for simultaneous station keeping and momentum management of low-thrust satellites 2015 ,		11
14	Reference governor for Network Control Systems subject to variable time-delay. <i>Automatica</i> , 2015 , 62, 77-86	5.7	15
13	MPC and spatial governor for multistage precision manufacturing machines. <i>IFAC-PapersOnLine</i> , 2015 , 48, 398-403	0.7	1
12	Stabilizing Dynamic Controllers for Hybrid Systems: A Hybrid Control Lyapunov Function Approach. <i>IEEE Transactions on Automatic Control</i> , 2014 , 59, 2629-2643	5.9	18
11	Constrained spacecraft attitude control on SO(3) using reference governors and nonlinear model predictive control 2014 ,		9
10	. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2014 , 15, 2491-2505	6.1	164
9	Robust dual control MPC with guaranteed constraint satisfaction 2014 ,		10
8	Alternating direction method of multipliers for strictly convex quadratic programs: Optimal parameter selection 2014 ,		11
7	Model Predictive Control of Engine Speed During Vehicle Deceleration. <i>IEEE Transactions on Control Systems Technology</i> , 2014 , 22, 2205-2217	4.8	26
6	Vehicle Yaw Stability Control by Coordinated Active Front Steering and Differential Braking in the Tire Sideslip Angles Domain. <i>IEEE Transactions on Control Systems Technology</i> , 2013 , 21, 1236-1248	4.8	186
5	Lyapunov based predictive control of vehicle drivetrains over CAN. <i>Control Engineering Practice</i> , 2013 , 21, 1884-1898	3.9	60
4	An Industry Perspective on MPC in Large Volumes Applications: Potential Benefits and Open Challenges. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012 , 45, 52-59		24
3	A predictive control solution for driveline oscillations damping 2011 ,		10
2	Equivalent Piecewise Affine Models of Linear Hybrid Automata. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 498-502	5.9	11
1	Model Predictive Powertrain Control: An Application to Idle Speed Regulation. <i>Lecture Notes in Control and Information Sciences</i> , 2010 , 183-194	0.5	12