Stefano Di Cairano

List of Publications by Citations

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	Vehicle Yaw Stability Control by Coordinated Active Front Steering and Differential Braking in the Tire Sideslip Angles Domain. *IEEE Transactions on Control Systems Technology*, **2013**, 21, 1236-1248	4.8	186
67	. *IEEE Transactions on Intelligent Transportation Systems*, **2014**, 15, 2491-2505	6.1	164
66	Reference and command governors for systems with constraints: A survey on theory and applications. *Automatica*, **2017**, 75, 306-328	5.7	148
65	Lyapunov based predictive control of vehicle drivetrains over CAN. *Control Engineering Practice*, **2013**, 21, 1884-1898	3.9	60
64	Tire-Stiffness and Vehicle-State Estimation Based on Noise-Adaptive Particle Filtering. *IEEE Transactions on Control Systems Technology*, **2019**, 27, 1100-1114	4.8	30
63	MPC on manifolds with an application to the control of spacecraft attitude on SO(3). *Automatica*, **2017**, 76, 293-300	5.7	26
62	Model Predictive Control of Engine Speed During Vehicle Deceleration. *IEEE Transactions on Control Systems Technology*, **2014**, 22, 2205-2217	4.8	26
61	Trajectory tracking for autonomous vehicles on varying road surfaces by friction-adaptive nonlinear model predictive control. *Vehicle System Dynamics*, **2020**, 58, 705-725	2.8	25
60	An Industry Perspective on MPC in Large Volumes Applications: Potential Benefits and Open Challenges. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 52-59		24
59	Station keeping and momentum management of low-thrust satellites using MPC. *Aerospace Science and Technology*, **2018**, 76, 229-241	4.9	20
58	Geometric Mechanics Based Nonlinear Model Predictive Spacecraft Attitude Control with Reaction Wheels. *Journal of Guidance, Control, and Dynamics*, **2017**, 40, 309-319	2.1	18
57	Stabilizing Dynamic Controllers for Hybrid Systems: A Hybrid Control Lyapunov Function Approach. *IEEE Transactions on Automatic Control*, **2014**, 59, 2629-2643	5.9	18
56	Automated driving: Safe motion planning using positively invariant sets **2017**,		18
55	Driveline oscillations damping: A tractable predictive control solution based on a piecewise affine model. *Nonlinear Analysis: Hybrid Systems*, **2016**, 19, 168-185	4.5	17
54	Path planning using positive invariant sets **2016**,		17
53	Motion Planning of Autonomous Road Vehicles by Particle Filtering. *IEEE Transactions on Intelligent Vehicles*, **2019**, 4, 197-210	5	16
52	Real-time optimization and model predictive control for aerospace and automotive applications **2018**,		16

51	Reference governor for Network Control Systems subject to variable time-delay. *Automatica*, **2015**, 62, 77-86	5.7	15
50	Block Structured Preconditioning within an Active-Set Method for Real-Time Optimal Control **2018**,		14
49	Model adjustable predictive control with stability guarantees **2015**,		13
48	Particle filtering for online motion planning with task specifications **2016**,		13
47	Reconfigurable Model Predictive Control for Multievaporator Vapor Compression Systems. *IEEE Transactions on Control Systems Technology*, **2018**, 26, 984-1000	4.8	12
46	Model Predictive Powertrain Control: An Application to Idle Speed Regulation. *Lecture Notes in Control and Information Sciences*, **2010**, 183-194	0.5	12
45	Model Predictive Control for simultaneous station keeping and momentum management of low-thrust satellites **2015**,		11
44	Alternating direction method of multipliers for strictly convex quadratic programs: Optimal parameter selection **2014**,		11
43	Equivalent Piecewise Affine Models of Linear Hybrid Automata. *IEEE Transactions on Automatic Control*, **2010**, 55, 498-502	5.9	11
42	MPC for coupled station keeping, attitude control, and momentum management of low-thrust geostationary satellites **2016**,		11
41	Indirect adaptive model predictive control for linear systems with polytopic uncertainty **2016**,		10
40	Robust dual control MPC with guaranteed constraint satisfaction **2014**,		10
39	A predictive control solution for driveline oscillations damping **2011**,		10
38	Industry engagement with control research: Perspective and messages. *Annual Reviews in Control*, **2020**, 49, 1-14	10.3	10
37	Motion planning with invariant set trees **2017**,		9
36	Constrained spacecraft attitude control on SO(3) using reference governors and nonlinear model predictive control **2014**,		9
35	Driver Intention-based Vehicle Threat Assessment using Random Forests and Particle Filtering. *IFAC-PapersOnLine*, **2017**, 50, 13860-13865	0.7	9
34	Positive Invariant Sets for Safe Integrated Vehicle Motion Planning and Control. *IEEE Transactions on Intelligent Vehicles*, **2020**, 5, 112-126	5	8

33	Data-Driven Estimation of Backward Reachable and Invariant Sets for Unmodeled Systems via Active Learning **2018**,		8
32	Control Architecture Design for Autonomous Vehicles **2018**,		8
31	Active Learning for Estimating Reachable Sets for Systems With Unknown Dynamics. *IEEE Transactions on Cybernetics*, **2020**, PP,	10.2	7
30	PRESAS: Block-structured preconditioning of iterative solvers within a primal active-set method for fast model predictive control. *Optimal Control Applications and Methods*, **2020**, 41, 2282-2307	1.7	7
29	Joint Decision Making and Motion Planning for Road Vehicles Using Particle Filtering. *IFAC-PapersOnLine*, **2016**, 49, 175-181	0.7	7
28	Robust Motion Planning for Uncertain Systems With Disturbances Using the Invariant-Set Motion Planner. *IEEE Transactions on Automatic Control*, **2020**, 65, 4456-4463	5.9	6
27	Reachability-based Decision Making for City Driving **2018**,		5
26	MPC for coupled station keeping, attitude control, and momentum management of GEO satellites using on-off electric propulsion **2017**,		5
25	A Structure Exploiting Branch-and-Bound Algorithm for Mixed-Integer Model Predictive Control **2019**,		5
24	Inexact Adjoint-based SQP Algorithm for Real-Time Stochastic Nonlinear MPC. *IFAC-PapersOnLine*, **2020**, 53, 6529-6535	0.7	5
23	Inverse Learning for Human-Adaptive Motion Planning **2019**,		5
22	Necessary and sufficient conditions for constraint satisfaction in switched systems using switch-robust control invariant sets. *International Journal of Robust and Nonlinear Control*, **2019**, 29, 2589-2602	3.6	4
21	. *IEEE Transactions on Aerospace and Electronic Systems*, **2020**, 56, 3170-3181	3.7	4
20	Indirect adaptive MPC for output tracking of uncertain linear polytopic systems **2017**,		4
19	Further results and properties of indirect adaptive model predictive control for linear systems with polytopic uncertainty **2016**,		4
18	**2018**,		4
17	Noise-Statistics Learning of Automotive-Grade Sensors Using Adaptive Marginalized Particle Filtering. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2019**, 141,	1.6	3
16	Cascaded Reference Governor MPC for Motion Control of Two-Stage Manufacturing Machines. *IEEE Transactions on Control Systems Technology*, **2019**, 27, 2030-2044	4.8	3

15	Particle Gibbs with Ancestor Sampling for Identification of Tire-Friction Parameters. *IFAC-PapersOnLine*, **2017**, 50, 14849-14854	0.7	3
14	Autonomous Vehicle Decision-Making and Monitoring based on Signal Temporal Logic and Mixed-Integer Programming **2020**,		3
13	Inverse Learning for Data-Driven Calibration of Model-Based Statistical Path Planning. *IEEE Transactions on Intelligent Vehicles*, **2021**, 6, 131-145	5	3
12	Reachability-Based Decision-Making for Autonomous Driving: Theory and Experiments. *IEEE Transactions on Control Systems Technology*, **2021**, 29, 1907-1921	4.8	3
11	Nonlinear Model Predictive Control of Coupled Rotational-Translational Spacecraft Relative Motion **2019**,		2
10	Automotive Applications of Model Predictive Control. *Control Engineering*, **2019**, 493-527	1	2
9	MPC and spatial governor for multistage precision manufacturing machines. *IFAC-PapersOnLine*, **2015**, 48, 398-403	0.7	1
8	Active-Set based Inexact Interior Point QP Solver for Model Predictive Control. *IFAC-PapersOnLine*, **2020**, 53, 6522-6528	0.7	1
7	A Predictive Controller for Drivability and Comfort in Multi-Motor Electric Vehicles. *IFAC-PapersOnLine*, **2021**, 54, 650-656	0.7	1
6	Steady-State Analysis of HVAC Performance using Indoor Fans in Control Design **2019**,		1
5	Electric Satellite Station Keeping, Attitude Control, and Momentum Management by MPC. *IEEE Transactions on Control Systems Technology*, **2021**, 29, 1475-1489	4.8	1
4	On-Off Quantization of an MPC Policy for Coupled Station Keeping, Attitude Control, and Momentum Management of GEO Satellites **2018**,		1
3	Early Termination of Convex QP Solvers in Mixed-Integer Programming for Real-Time Decision Making **2021**, 5, 1417-1422		1
2	H-Infinity Loop-Shaped Model Predictive Control With HVAC Application. *IEEE Transactions on Control Systems Technology*, **2022**, 1-16	4.8	0
1	Fast Multi-Robot Motion Planning via Imitation Learning of Mixed-Integer Programs. *IFAC-PapersOnLine*, **2021**, 54, 598-604	0.7	0