Paolo Falcone

List of Publications by Year
in descending order

85	3,617	361413	330143
papers	citations	20 h-index	37 g-index

86	86	86	2466
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Predictive Active Steering Control for Autonomous Vehicle Systems. IEEE Transactions on Control Systems Technology, 2007, 15, 566-580.	5.2	1,015
2	MPC-based approach to active steering for autonomous vehicle systems. International Journal of Vehicle Autonomous Systems, 2005, 3, 265.	0.2	337
3	MPC-based yaw and lateral stabilisation via active front steering and braking. Vehicle System Dynamics, 2008, 46, 611-628.	3.7	303
4	Design and Experimental Validation of a Cooperative Driving System in the Grand Cooperative Driving Challenge. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 994-1007.	8.0	186
5	Coordination of Cooperative Autonomous Vehicles: Toward safer and more efficient road transportation. IEEE Signal Processing Magazine, 2016, 33, 74-84.	5.6	97
6	Predictive Threat Assessment via Reachability Analysis and Set Invariance Theory. IEEE Transactions on Intelligent Transportation Systems, 2011, 12, 1352-1361.	8.0	85
7	A control matching model predictive control approach to string stable vehicle platooning. Control Engineering Practice, 2015, 45, 163-173.	5.5	83
8	Design, Analysis, and Experimental Validation of a Distributed Protocol for Platooning in the Presence of Time-Varying Heterogeneous Delays. IEEE Transactions on Control Systems Technology, 2015, , 1-1.	5.2	78
9	Traffic coordination at road intersections: Autonomous decision-making algorithms using model-based heuristics. IEEE Intelligent Transportation Systems Magazine, 2017, 9, 8-21.	3.8	77
10	Autonomous cooperative driving: A velocity-based negotiation approach for intersection crossing. , 2013, , .		76
11	Cooperative receding horizon conflict resolution at traffic intersections. , 2014, , .		66
12	Receding horizon maneuver generation for automated highway driving. Control Engineering Practice, 2015, 41, 124-133.	5.5	59
13	An approximate solution to the optimal coordination problem for autonomous vehicles at intersections. , 2015, , .		58
14	A model predictive control approach for combined braking and steering in autonomous vehicles. , 2007, , .		55
15	Optimal Coordination of Automated Vehicles at Intersections: Theory and Experiments. IEEE Transactions on Control Systems Technology, 2019, 27, 2510-2525.	5.2	52
16	Design and Experimental Validation of a Distributed Interaction Protocol for Connected Autonomous Vehicles at a Road Intersection. IEEE Transactions on Vehicular Technology, 2019, 68, 9451-9465.	6.3	49
17	Safe Transitions From Automated to Manual Driving Using Driver Controllability Estimation. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 1806-1816.	8.0	45
18	INTEGRATED BRAKING AND STEERING MODEL PREDICTIVE CONTROL APPROACH IN AUTONOMOUS VEHICLES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 273-278.	0.4	41

#	Article	IF	Citations
19	A receding horizon approach to string stable cooperative adaptive cruise control. , 2011, , .		38
20	Safety Verification of Automated Driving Systems. IEEE Intelligent Transportation Systems Magazine, 2013, 5, 73-86.	3.8	38
21	Real-Time Constrained Trajectory Planning and Vehicle Control for Proactive Autonomous Driving With Road Users. , 2019, , .		37
22	Design and Experimental Validation of a Cooperative Driving Control Architecture for the Grand Cooperative Driving Challenge 2016. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 1290-1301.	8.0	35
23	Reference governor for constrained piecewise affine systems. Journal of Process Control, 2009, 19, 1229-1237.	3.3	32
24	Primal decomposition of the optimal coordination of vehicles at traffic intersections. , 2016, , .		31
25	Predictive manoeuvre generation for automated driving. , 2013, , .		29
26	A Robust Scenario MPC Approach for Uncertain Multi-Modal Obstacles. , 2021, 5, 947-952.		29
27	Cooperative Intersection Crossing Over 5G. IEEE/ACM Transactions on Networking, 2021, 29, 303-317.	3.8	29
28	Collision avoidance at intersections: A probabilistic threat-assessment and decision-making system for safety interventions. , 2014, , .		25
29	An MIQP-based heuristic for Optimal Coordination of Vehicles at Intersections. , 2018, , .		25
30	Challenges for cooperative ITS: Improving road safety through the integration of wireless communications, control, and positioning. , 2015, , .		24
31	Predictive Prevention of Loss of Vehicle Control for Roadway Departure Avoidance. IEEE Transactions on Intelligent Transportation Systems, 2013, 14, 56-68.	8.0	23
32	Combined longitudinal and lateral control design for string stable vehicle platooning within a designated lane. , 2014, , .		23
33	Model predictive path planning with time-varying safety constraints for highway autonomous driving. , 2015, , .		23
34	A Computationally Efficient Model for Pedestrian Motion Prediction. , 2018, , .		23
35	Optimisation-based coordination of connected, automated vehicles at intersections. Vehicle System Dynamics, 2020, 58, 726-747.	3.7	23
36	Driver performance in the presence of adaptive cruise control related failures: Implications for safety analysis and fault tolerance. , 2013, , .		22

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37	A Distributed Model Predictive Control Approach to Active Steering Control of String Stable Cooperative Vehicle Platoon. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 750-755.	0.4	22
38	Energy-Optimal Coordination of Autonomous Vehicles at Intersections. , 2018, , .		22
39	Optimal Control Design for Perturbed Constrained Networked Control Systems. , 2021, 5, 553-558.		21
40	On the resource allocation problem in wireless networked control systems. , 2017, , .		17
41	New LMI conditions for static output feedback synthesis with multiple performance objectives. , 2014, , .		16
42	Optimal Scheduling of Downlink Communication for a Multi-Agent System With a Central Observation Post. , 2018, 2, 37-42.		16
43	Online driver behavior classification using probabilistic ARX models. , 2013, , .		14
44	Collision-Aware Communication for Intersection Management of Automated Vehicles. IEEE Access, 2018, 6, 77359-77371.	4.2	14
45	Optimal Coordination of Automated Vehicles at Intersections with Turns. , 2019, , .		14
46	Communication analysis for centralized intersection crossing coordination. , 2014, , .		13
47	A Control Matching-based Predictive Approach to String Stable Vehicle Platooning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 10700-10705.	0.4	12
48	Full-Complexity Characterization of Control-Invariant Domains for Systems With Uncertain Parameter Dependence. , 2019, 3, 19-24.		12
49	Computation of low-complexity control-invariant sets for systems with uncertain parameter dependence. Automatica, 2019, 101, 330-337.	5.0	12
50	Guaranteeing persistent feasibility of model predictive motion planning for autonomous vehicles. , 2017, , .		11
51	Experimental validation of a semiâ€distributed sequential quadratic programming method for optimal coordination of automated vehicles at intersections. Optimal Control Applications and Methods, 2020, 41, 1068-1096.	2.1	11
52	Reachability analysis of cooperative adaptive cruise controller. , 2012, , .		9
53	Event-based receding horizon control for two-stage multi-product production plants. Control Engineering Practice, 2007, 15, 1556-1568.	5.5	8
54	Measurement Scheduling for Control Invariance in Networked Control Systems. , 2018, , .		8

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55	Computation of robust control invariant sets with predefined complexity for uncertain systems. International Journal of Robust and Nonlinear Control, 2021, 31, 1674-1688.	3.7	8
56	On Low Complexity Predictive Approaches to Control of Autonomous Vehicles. Lecture Notes in Control and Information Sciences, 2010, , 195-210.	1.0	6
57	Threat assessment design under driver parameter uncertainty. , 2012, , .		6
58	Robust static output feedback synthesis for platoons under leader and predecessor feedback. International Journal of Robust and Nonlinear Control, 2017, 27, 1726-1756.	3.7	6
59	An Asynchronous Algorithm for Optimal Vehicle Coordination at Traffic Intersections * *This work was supported by Copplar (project number 32226302), the Swedish Research Council (VR, grant number) Tj ETQq1 1 0.784314 rgBT /O IFAC-PapersOnLine, 2017, 50, 12008-12014.	0.9	5
60	Receding-horizon robust online communication scheduling for constrained networked control systems. , 2019, , .		5
61	ParkPredict: Motion and Intent Prediction of Vehicles in Parking Lots. , 2020, , .		5
62	Low speed maneuvering assistance for long vehicle combinations. , 2013, , .		4
63	Restricted-complexity characterization of control-invariant domains with application to lateral vehicle dynamics control. , 2017, , .		4
64	A Data-driven Markovian Framework for Multi-agent Pedestrian Collision Risk Prediction. , 2019, , .		4
65	Joint synthesis of dynamic feed-forward and static state feedback for platoon control. , 2014, , .		3
66	Cooperation with disagreement correction in the presence of communication failures. , 2014, , .		3
67	Coordination of motion actuators in heavy vehicles using Model Predictive Control Allocation. , 2016, , .		3
68	Low-Complexity Explicit MPC Controller for Vehicle Lateral Motion Control. , 2018, , .		3
69	Tree-Structured Polyhedral Invariant Set Calculations. , 2020, 4, 426-431.		3
70	Optimal scheduling and control for constrained multiâ€agent networked control systems. Optimal Control Applications and Methods, 0, , .	2.1	3
71	Set-Based Threat Assessment in Lane Guidance Applications. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 554-559.	0.4	2
72	Model-based threat assessment in semi-autonomous vehicles with model parameter uncertainties. , 2011, , .		2

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73	Advanced three dimensional monitoring of structural vibrations and displacements by remote radar sensing. , 2015, , .		2
74	Platoon Control Under a Novel Leader and Predecessor Following Scheme With the Use of an Advanced Aerodynamic Model. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2018, 140, .	1.6	2
75	Scheduling and Robust Invariance in Networked Control Systems. IEEE Transactions on Automatic Control, 2022, 67, 3075-3082.	5.7	2
76	Experimental Validation of Distributed Optimal Vehicle Coordination. , 2018, , .		2
77	Platoon Control based on Predecessor and Delayed Leader Information via Minimized Headway Times. , 2020, , .		2
78	A Semidistributed Interior Point Algorithm for Optimal Coordination of Automated Vehicles at Intersections. IEEE Transactions on Control Systems Technology, 2022, 30, 1977-1989.	5.2	2
79	Adaptive output-feedback control of MIMO plants with unknown, time-varying state delay. , 2008, , .		1
80	State feedback synthesis for homogenous platoons under the leader and predecessor following scheme. , 2014, , .		1
81	Robust static output feedback synthesis under an integral quadratic constraint on the states. , 2015, , .		1
82	How to Stop Disagreeing and Start Cooperatingin the Presence of Asymmetric Packet Loss. Sensors, 2018, 18, 1287.	3.8	1
83	Vehicle Controls. The Electrical Engineering Handbook, 2010, , 3-1-3-60.	0.2	1
84	Controller synthesis for a homogenous platoon under leader and predecessor following scheme. , 2014, , .		0
85	A Framework for Vehicle Lateral Motion Control With Guaranteed Tracking and Performance. , 2019, , .		0