Dimos V Dimarogonas

List of Publications by Year
in descending order

166 papers	8,006 citations	147801 31 h-index	66911 78 g-index
167 all docs	167 docs citations	167 times ranked	3621 citing authors

#	Article	IF	Citations
1	Distributed Event-Triggered Control for Multi-Agent Systems. IEEE Transactions on Automatic Control, 2012, 57, 1291-1297.	5.7	1,917
2	Event-based broadcasting for multi-agent average consensus. Automatica, 2013, 49, 245-252.	5.0	1,027
3	Leader–follower cooperative attitude control of multiple rigid bodies. Systems and Control Letters, 2009, 58, 429-435.	2.3	305
4	Global consensus for discrete-time multi-agent systems with input saturation constraints. Automatica, 2014, 50, 499-506.	5.0	293
5	Dynamic Event-Triggered and Self-Triggered Control for Multi-agent Systems. IEEE Transactions on Automatic Control, 2019, 64, 3300-3307.	5.7	284
6	Stability analysis for multi-agent systems using the incidence matrix: Quantized communication and formation control. Automatica, 2010, 46, 695-700.	5.0	231
7	A feedback stabilization and collision avoidance scheme for multiple independent non-point agents. Automatica, 2006, 42, 229-243.	5.0	228
8	Event-triggered control for multi-agent systems. , 2009, , .		182
9	Control Barrier Functions for Signal Temporal Logic Tasks. , 2019, 3, 96-101.		168
10	Multi-agent plan reconfiguration under local LTL specifications. International Journal of Robotics Research, 2015, 34, 218-235.	8.5	155
11	Event-Triggered Pinning Control of Switching Networks. IEEE Transactions on Control of Network Systems, 2015, 2, 204-213.	3.7	147
12	On the stability of distance-based formation control. , 2008, , .		104
13	Event-triggered intermittent sampling for nonlinear model predictive control. Automatica, 2017, 81, 148-155.	5.0	100
14	Simultaneous task allocation and planning for temporal logic goals in heterogeneous multi-robot systems. International Journal of Robotics Research, 2018, 37, 818-838.	8.5	92
15	Self-Triggered Model Predictive Control for Nonlinear Input-Affine Dynamical Systems via Adaptive Control Samples Selection. IEEE Transactions on Automatic Control, 2017, 62, 177-189.	5.7	91
16	Distributed event–based control strategies for interconnected linear systems. IET Control Theory and Applications, 2013, 7, 877-886.	2.1	90
17	Leader–Follower Coordinated Tracking of Multiple Heterogeneous Lagrange Systems Using Continuous Control. IEEE Transactions on Robotics, 2014, 30, 739-745.	10.3	88
18	Novel event-triggered strategies for Model Predictive Controllers. , 2011, , .		85

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19	A General Approach to Coordination Control of Mobile Agents With Motion Constraints. IEEE Transactions on Automatic Control, 2018, 63, 1509-1516.	5.7	80
20	Multi-Agent Second Order Average Consensus With Prescribed Transient Behavior. IEEE Transactions on Automatic Control, 2017, 62, 5282-5288.	5.7	75
21	Fuel-Efficient En Route Formation of Truck Platoons. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 102-112.	8.0	75
22	Decentralized connectivity maintenance in mobile networks with bounded inputs. , 2008, , .		69
23	Distributed aperiodic model predictive control for multi‐agent systems. IET Control Theory and Applications, 2015, 9, 10-20.	2.1	69
24	Leader–Follower Formation Control With Prescribed Performance Guarantees. IEEE Transactions on Control of Network Systems, 2021, 8, 450-461.	3.7	68
25	Multi-agent planning under local LTL specifications and event-based synchronization. Automatica, 2016, 70, 239-248.	5.0	67
26	Robust Self-Triggered MPC With Adaptive Prediction Horizon for Perturbed Nonlinear Systems. IEEE Transactions on Automatic Control, 2019, 64, 4780-4787.	5.7	67
27	Robust Trajectory Tracking Control for Underactuated Autonomous Underwater Vehicles in Uncertain Environments. IEEE Transactions on Automation Science and Engineering, 2021, 18, 1288-1301.	5.2	66
28	Control Barrier Functions for Multi-Agent Systems Under Conflicting Local Signal Temporal Logic Tasks. , 2019, 3, 757-762.		62
29	Robust formation control in $\mathbb{SE}(3)$ for tree-graph structures with prescribed transient and steady state performance. Automatica, 2019, 103, 538-548.	5.0	60
30	Robust control for signal temporal logic specifications using discrete average space robustness. Automatica, 2019, 101, 377-387.	5.0	47
31	Distributed Event-Triggered Communication and Control of Linear Multiagent Systems Under Tactile Communication. IEEE Transactions on Automatic Control, 2018, 63, 3979-3985.	5.7	44
32	Fuel-optimal centralized coordination of truck platooning based on shortest paths. , 2015, , .		40
33	A robust interaction control approach for underwater vehicle manipulator systems. Annual Reviews in Control, 2018, 46, 315-325.	7.9	40
34	Decentralized multi-agent control from local LTL specifications. , 2012, , .		38
35	Event-Based Vehicle Coordination Using Nonlinear Unidirectional Controllers. IEEE Transactions on Control of Network Systems, 2018, 5, 1575-1584.	3.7	38
36	Robust Cooperative Manipulation Without Force/Torque Measurements: Control Design and Experiments. IEEE Transactions on Control Systems Technology, 2020, 28, 713-729.	5.2	38

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37	Barrier Function Based Collaborative Control of Multiple Robots Under Signal Temporal Logic Tasks. IEEE Transactions on Control of Network Systems, 2020, 7, 1916-1928.	3.7	37
38	High-Order Barrier Functions: Robustness, Safety, and Performance-Critical Control. IEEE Transactions on Automatic Control, 2022, 67, 3021-3028.	5.7	37
39	Collective Circumnavigation. Unmanned Systems, 2014, 02, 219-229.	3.6	36
40	3D navigation and collision avoidance for a non-holonomic vehicle. , 2008, , .		32
41	Decentralized tubeâ€based model predictive control of uncertain nonlinear multiagent systems. International Journal of Robust and Nonlinear Control, 2019, 29, 2799-2818.	3.7	31
42	Nonlinear consensus via continuous, sampled, and aperiodic updates. International Journal of Control, 2013, 86, 567-578.	1.9	30
43	Inverse Agreement Protocols With Application to Distributed Multi-Agent Dispersion. IEEE Transactions on Automatic Control, 2009, 54, 657-663.	5.7	28
44	Cloud-Supported Formation Control of Second-Order Multiagent Systems. IEEE Transactions on Control of Network Systems, 2018, 5, 1563-1574.	3.7	28
45	A receding horizon approach to multi-agent planning from local LTL specifications. , 2014, , .		26
46	Robust decentralised navigation of multi-agent systems with collision avoidance and connectivity maintenance using model predictive controllers. International Journal of Control, 2020, 93, 1470-1484.	1.9	26
47	On Robustness Metrics for Learning STL Tasks. , 2020, , .		26
48	A self-triggered Model Predictive Control framework for the cooperation of distributed nonholonomic agents. , 2013, , .		25
49	Event-triggered pinning control of complex networks with switching topologies. , 2014, , .		25
50	Control of multi-agent systems with event-triggered cloud access. , 2015, , .		24
51	Closed-Form Barrier Functions for Multi-Agent Ellipsoidal Systems With Uncertain Lagrangian Dynamics. , 2019, 3, 727-732.		24
52	A Self-triggered Position Based Visual Servoing Model Predictive Control Scheme for Underwater Robotic Vehicles. Machines, 2020, 8, 33.	2.2	24
53	Event-based model Predictive control for the cooperation of distributed agents. , 2012, , .		23
54	Multi-agent average consensus control with prescribed performance guarantees. , 2012, , .		23

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55	Communication-Free Multi-Agent Control Under Local Temporal Tasks and Relative-Distance Constraints. IEEE Transactions on Automatic Control, 2016, 61, 3948-3962.	5.7	22
56	Feedback control strategies for multi-agent systems under a fragment of signal temporal logic tasks. Automatica, 2019, 106, 284-293.	5.0	22
57	Adaptive robot navigation with collision avoidance subject to 2nd-order uncertain dynamics. Automatica, 2021, 123, 109303.	5.0	22
58	Decomposition of Finite LTL Specifications for Efficient Multi-agent Planning. Springer Proceedings in Advanced Robotics, 2018, , 253-267.	1.3	21
59	Connectivity preserving distributed swarm aggregation for multiple kinematic agents. , 2007, , .		20
60	Sufficient Conditions for Decentralized Potential Functions Based Controllers Using Canonical Vector Fields. IEEE Transactions on Automatic Control, 2012, 57, 2621-2626.	5.7	20
61	Revising motion planning under Linear Temporal Logic specifications in partially known workspaces. , 2013, , .		19
62	Hierarchical Decomposition of LTL Synthesis Problem for Nonlinear Control Systems. IEEE Transactions on Automatic Control, 2019, 64, 4676-4683.	5.7	19
63	Robustness and Invariance of Connectivity Maintenance Control for Multiagent Systems. SIAM Journal on Control and Optimization, 2017, 55, 1887-1914.	2.1	18
64	Slung load transportation with a single aerial vehicle and disturbance removal. , 2016, , .		17
65	Coupled Multi-Robot Systems Under Linear Temporal Logic and Signal Temporal Logic Tasks. IEEE Transactions on Control Systems Technology, 2021, 29, 858-865.	5.2	17
66	Coordinating Truck Platooning by Clustering Pairwise Fuel-Optimal Plans. , 2015, , .		16
67	Event-triggered control for vehicle platooning. , 2015, , .		15
68	Explicit Computation of Sampling Period in Periodic Event-Triggered Multiagent Control Under Limited Data Rate. IEEE Transactions on Control of Network Systems, 2019, 6, 1366-1378.	3.7	15
69	Communication-based Decentralized Cooperative Object Transportation Using Nonlinear Model Predictive Control. , 2018, , .		15
70	Periodic Behaviors for Discrete-Time Second-Order Multiagent Systems With Input Saturation Constraints. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016, 63, 663-667.	3.0	13
71	Family of controllers for attitude synchronization on the sphere. Automatica, 2017, 75, 271-281.	5.0	13
72	Aperiodic Sampled-Data Control via Explicit Transmission Mapping: A Set-Invariance Approach. IEEE Transactions on Automatic Control, 2018, 63, 3523-3530.	5.7	13

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73	Distributed ℓ_1-State-and-Fault Estimation for Multiagent Systems. IEEE Transactions on Control of Network Systems, 2020, 7, 699-710.	3.7	13
74	Efficient Automata-based Planning and Control under Spatio-Temporal Logic Specifications. , 2020, , .		13
75	Distributed Motion Coordination for Multirobot Systems Under LTL Specifications. IEEE Transactions on Robotics, 2022, 38, 1047-1062.	10.3	13
76	A Robust, Multiple Control Barrier Function Framework for Input Constrained Systems. , 2022, 6, 1742-1747.		13
77	Timed abstractions for distributed cooperative manipulation. Autonomous Robots, 2018, 42, 781-799.	4.8	12
78	Asymptotic Tracking of Second-Order Nonsmooth Feedback Stabilizable Unknown Systems With Prescribed Transient Response. IEEE Transactions on Automatic Control, 2021, 66, 3296-3302.	5.7	12
79	A robust nonâ€linear MPC framework for control of underwater vehicle manipulator systems under highâ€level tasks. IET Control Theory and Applications, 2021, 15, 323-337.	2.1	12
80	Quantized agreement under time-varying communication topology. , 2008, , .		11
81	Distributed real-time fault detection and isolation for cooperative multi-agent systems. , 2012, , .		11
82	Multi-agent trajectory tracking with self-triggered cloud access. , 2016, , .		11
83	Compositional abstraction refinement for control synthesis. Nonlinear Analysis: Hybrid Systems, 2018, 27, 437-451.	3.5	11
84	Event-Triggered Control of Nonlinear Systems With Updating Threshold. , 2019, 3, 655-660.		11
85	Reactive and Risk-Aware Control for Signal Temporal Logic. IEEE Transactions on Automatic Control, 2022, 67, 5262-5277.	5.7	11
86	Analysis of robot navigation schemes using Rantzer’s Dual Lyapunov Theorem. , 2008, , .		10
87	Motion and action planning under LTL specifications using navigation functions and action description language. , 2013, , .		10
88	Decentralized motion planning with collision avoidance for a team of UAVs under high level goals. , 2017, , .		10
89	Decentralized Control of Uncertain Multi-Agent Systems with Connectivity Maintenance and Collision Avoidance. , 2018, , .		10
90	Motion Feasibility Conditions for Multiagent Control Systems on Lie Groups. IEEE Transactions on Control of Network Systems, 2020, 7, 493-502.	3.7	10

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91	Control Design for Risk-Based Signal Temporal Logic Specifications. , 2020, 4, 1000-1005.		10
92	Distributed Implementation of Control Barrier Functions for Multi-agent Systems. , 2022, 6, 1879-1884.		10
93	L<inf>2</inf> gain stability analysis of event-triggered agreement protocols. , 2011, , .		9
94	Event-triggered model predictive control with machine learning for compensation of model uncertainties. , 2017, , .		9
95	A hybrid barrier certificate approach to satisfy linear temporal logic specifications. , 2018, , .		9
96	Integrated Motion Planning and Control Under Metric Interval Temporal Logic Specifications. , 2019, , .		9
97	A Symbolic Approach to the Self-Triggered Design for Networked Control Systems. , 2019, 3, 1050-1055.		9
98	Aerial Slung-Load Position Tracking Under Unknown Wind Forces. IEEE Transactions on Automatic Control, 2021, 66, 3952-3968.	5.7	9
99	Opinion consensus of modified Hegselmann-Krause models. , 2012, , .		8
100	Posture regulation for unicycleâ€like robots with prescribed performance guarantees. IET Control Theory and Applications, 2015, 9, 192-202.	2.1	8
101	Control framework for slung load transportation with two aerial vehicles. , 2017, , .		8
102	Decentralized Robust Control of Coupled Multi-Agent Systems under Local Signal Temporal Logic Tasks. , 2018, , .		8
103	Robust self-triggered control for time-varying and uncertain constrained systems via reachability analysis. Automatica, 2019, 107, 574-581.	5.0	8
104	Consensus Control for Leader-follower Multi-agent Systems under Prescribed Performance Guarantees. , 2019, , .		8
105	Scalable time-constrained planning of multi-robot systems. Autonomous Robots, 2020, 44, 1451-1467.	4.8	8
106	Satisfaction of Linear Temporal Logic Specifications Through Recurrence Tools for Hybrid Systems. IEEE Transactions on Automatic Control, 2021, 66, 818-825.	5.7	8
107	A Tube-based MPC Scheme for Interaction Control of Underwater Vehicle Manipulator Systems. , 2018, , .		7
108	Energy-Optimal Cooperative Manipulation via Provable Internal-Force Regulation. , 2020, , .		7

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109	Barrier Function-based Model Predictive Control under Signal Temporal Logic Specifications. , 2021, , .		7
110	An inverse agreement control strategy with application to swarm dispersion. , 2007, , .		6
111	Leader-follower cooperative attitude control of multiple rigid bodies. , 2008, , .		6
112	Distributed solution for a Maximum Variance Unfolding Problem with sensor and robotic network applications. , 2012, , .		6
113	Consensus in multi-agent systems with second-order dynamics and non-periodic sampled-data exchange. , 2014, , .		6
114	A Hybrid Controller for Obstacle Avoidance in an n-dimensional Euclidean Space. , 2019, , .		6
115	Second Order Consensus for Leader-follower Multi-agent Systems with Prescribed Performance. IFAC-PapersOnLine, 2019, 52, 103-108.	0.9	6
116	Symmetry Reduction in Optimal Control of Multiagent Systems on Lie Groups. IEEE Transactions on Automatic Control, 2020, 65, 4973-4980.	5.7	6
117	Intermittent Connectivity Maintenance With Heterogeneous Robots. IEEE Transactions on Robotics, 2021, 37, 225-245.	10.3	6
118	Perimeter Surveillance Based on Set-Invariance. IEEE Robotics and Automation Letters, 2021, 6, 9-16.	5.1	6
119	Signal Temporal Logic Task Decomposition via Convex Optimization. , 2022, 6, 1238-1243.		6
120	On Compatibility and Region of Attraction for Safe, Stabilizing Control Laws. IEEE Transactions on Automatic Control, 2022, 67, 4924-4931.	5.7	6
121	Quantized cooperative control using relative state measurements. , 2011, , .		5
122	Lyapunov-based generic controller design for thrust-propelled underactuated systems. , 2016, , .		5
123	Collaborative transportation of a bar by two aerial vehicles with attitude inner loop and experimental validation. , 2017, , .		5
124	Self- Triggered Control under Actuator Delays. , 2018, , .		5
125	Decentralized abstractions for multi-agent systems under coupled constraints. European Journal of Control, 2019, 45, 1-16.	2.6	5
126	Synthesizing Communication Plans for Reachability and Safety Specifications. IEEE Transactions on Automatic Control, 2020, 65, 561-576.	5.7	5

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127	Obstacle Avoidance via Hybrid Feedback. IEEE Transactions on Automatic Control, 2022, 67, 512-519.	5.7	5
128	Fixed-Time Convergent Control Barrier Functions for Coupled Multi-Agent Systems Under STL Tasks. , 2021, , .		5
129	Decentralized Model Predictive Control for Equilibrium-based Collaborative UAV Bar Transportation. , 2022, , .		5
130	A common framework for attitude synchronization of unit vectors in networks with switching topology. , 2016, , .		4
131	A hybrid systems framework for multi agent task planning and control. , 2017, , .		4
132	Self-triggered control for constrained systems: A contractive set-based approach. , 2017, , .		4
133	Multi-Agent Motion Planning and Object Transportation under High Level Goals **This work was supported by the H2020 ERC Starting Grand BU-COPHSYS, the Swedish Research Council (VR), the Knut och Alice Wallenberg Foundation and the European Union's Horizon 2020 Research and Innovation Programme under the Grant Agreement No. 644128 (AEROWORKS). IFAC-PapersOnLine, 2017, 50, 15816-15821.	0.9	4
134	Generalized PID Synchronization of Higher Order Nonlinear Systems With a Recursive Lyapunov Approach. IEEE Transactions on Control of Network Systems, 2018, 5, 1608-1621.	3.7	4
135	Adaptive Leader-Follower Coordination of Lagrangian Multi-Agent Systems under Transient Constraints. , 2019, , .		4
136	A Common Framework for Complete and Incomplete Attitude Synchronization in Networks With Switching Topology. IEEE Transactions on Automatic Control, 2020, 65, 271-278.	5.7	4
137	Efficient Cooperation of Heterogeneous Robotic Agents: A Decentralized Framework. IEEE Robotics and Automation Magazine, 2021, 28, 74-87.	2.0	4
138	Inverse agreement algorithms with application to swarm dispersion for multiple nonholonomic agents. , 2008, , .		3
139	Optimal Control of Left-Invariant Multi-Agent Systems with Asymmetric Formation Constraints. , 2018, , .		3
140	Distributed Event-Based Control and Stability of Interconnected Systems. , 2019, , .		3
141	Resource-aware networked control systems under temporal logic specifications. Discrete Event Dynamic Systems: Theory and Applications, 2019, 29, 473-499.	1.5	3
142	Dual Quaternion Cluster-Space Formation Control. IEEE Robotics and Automation Letters, 2021, 6, 6789-6796.	5.1	3
143	Enhancing Data-Driven Reachability Analysis using Temporal Logic Side Information. , 2022, , .		3
144	Aperiodic model predictive control via perturbation analysis. , 2012, , .		2

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145	Robust decentralized abstractions for multiple mobile manipulators. , 2017, , .		2
146	Event-Triggered Control for a Class of Cascade Systems. , 2018, , .		2
147	Asymptotic Stability of Uncertain Lagrangian Systems with Prescribed Transient Response. , 2019, , .		2
148	Approximately symbolic models for a class of continuous-time nonlinear systems. , 2019, , .		2
149	Compositional abstraction refinement for control synthesis under lasso-shaped specifications. , 2017, , .		2
150	The Two-Stage PI2 Control Strategy. , 2022, 6, 2072-2077.		2
151	Adaptive Cooperative Control for Human-Robot Load Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 5623-5630.	5.1	2
152	Hierarchical control for uncertain discrete-time nonlinear systems under signal temporal logic specifications. , 2021, , .		2
153	Further results on formation infeasibility and velocity alignment. , 2007, , .		1
154	Sufficient conditions for decentralized navigation functions based controllers using canonical vector fields. , 2011, , .		1
155	A decentralized event-based predictive navigation scheme for Air-Traffic Control. , 2012, , .		1
156	Obstacle avoidance in formation using navigation-like functions and constraint based programming. , 2013, , .		1
157	Consensus in multi-agent systems with non-periodic sampled-data exchange and uncertain network topology. , 2014, , .		1
158	Time-constrained multi-agent task scheduling based on prescribed performance control. , 2018, , .		1
159	Intermittent Connectivity Maintenance with Heterogeneous Robots using a Beads-on-a-Ring Strategy. , 2019, , .		1
160	A fully distributed motion coordination strategy for multi-robot systems with local information. , 2020, , .		1
161	Augmenting Control Policies with Motion Planning for Robust and Safe Multi-robot Navigation. , 2020, , .		1
162	Area Defense and Surveillance on Rectangular Regions Using Control Barrier Functions. , 2021, , .		1

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163	Cooperative Manipulation via Internal Force Regulation: A Rigidity Theory Perspective. IEEE Transactions on Control of Network Systems, 2023, 10, 1222-1233.	3.7	1
164	On Asymptotic Stability of Leader–Follower Multiagent Systems Under Transient Constraints. , 2022, 6, 3164-3169.		1
165	A fully distributed motion coordination strategy for multi-robot systems with local information. , 2020, , .		0
166	Time-Constrained Leader-Follower Multiagent Task Scheduling and Control Synthesis. IEEE Transactions on Control of Network Systems, 2022, 9, 367-379.	3.7	0