

Dimos V Dimarogonas

List of Publications by Year in descending order

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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	Cooperative Manipulation via Internal Force Regulation: A Rigidity Theory Perspective. IEEE Transactions on Control of Network Systems, 2023, 10, 1222-1233.	3.7	1
2	Distributed Motion Coordination for Multirobot Systems Under LTL Specifications. IEEE Transactions on Robotics, 2022, 38, 1047-1062.	10.3	13
3	Time-Constrained Leader-Follower Multiagent Task Scheduling and Control Synthesis. IEEE Transactions on Control of Network Systems, 2022, 9, 367-379.	3.7	0
4	Signal Temporal Logic Task Decomposition via Convex Optimization. , 2022, 6, 1238-1243.		6
5	High-Order Barrier Functions: Robustness, Safety, and Performance-Critical Control. IEEE Transactions on Automatic Control, 2022, 67, 3021-3028.	5.7	37
6	Obstacle Avoidance via Hybrid Feedback. IEEE Transactions on Automatic Control, 2022, 67, 512-519.	5.7	5
7	Reactive and Risk-Aware Control for Signal Temporal Logic. IEEE Transactions on Automatic Control, 2022, 67, 5262-5277.	5.7	11
8	Distributed Implementation of Control Barrier Functions for Multi-agent Systems. , 2022, 6, 1879-1884.		10
9	A Robust, Multiple Control Barrier Function Framework for Input Constrained Systems. , 2022, 6, 1742-1747.		13
10	The Two-Stage PI2 Control Strategy. , 2022, 6, 2072-2077.		2
11	Adaptive Cooperative Control for Human-Robot Load Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 5623-5630.	5.1	2
12	On Compatibility and Region of Attraction for Safe, Stabilizing Control Laws. IEEE Transactions on Automatic Control, 2022, 67, 4924-4931.	5.7	6
13	On Asymptotic Stability of Leader-Follower Multiagent Systems Under Transient Constraints. , 2022, 6, 3164-3169.		1
14	Decentralized Model Predictive Control for Equilibrium-based Collaborative UAV Bar Transportation. , 2022, , .		5
15	Enhancing Data-Driven Reachability Analysis using Temporal Logic Side Information. , 2022, , .		3
16	Satisfaction of Linear Temporal Logic Specifications Through Recurrence Tools for Hybrid Systems. IEEE Transactions on Automatic Control, 2021, 66, 818-825.	5.7	8
17	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
18	Intermittent Connectivity Maintenance With Heterogeneous Robots. IEEE Transactions on Robotics, 2021, 37, 225-245.	10.3	6

#	ARTICLE	IF	CITATIONS
19	Aerial Slung-Load Position Tracking Under Unknown Wind Forces. IEEE Transactions on Automatic Control, 2021, 66, 3952-3968.	5.7	9
20	Adaptive robot navigation with collision avoidance subject to 2nd-order uncertain dynamics. Automatica, 2021, 123, 109303.	5.0	22
21	Perimeter Surveillance Based on Set-Invariance. IEEE Robotics and Automation Letters, 2021, 6, 9-16.	5.1	6
22	Leader-Follower Formation Control With Prescribed Performance Guarantees. IEEE Transactions on Control of Network Systems, 2021, 8, 450-461.	3.7	68
23	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
24	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
25	Efficient Cooperation of Heterogeneous Robotic Agents: A Decentralized Framework. IEEE Robotics and Automation Magazine, 2021, 28, 74-87.	2.0	4
26	Dual Quaternion Cluster-Space Formation Control. IEEE Robotics and Automation Letters, 2021, 6, 6789-6796.	5.1	3
27	A robust nonlinear MPC framework for control of underwater vehicle manipulator systems under high-level tasks. IET Control Theory and Applications, 2021, 15, 323-337.	2.1	12
28	Barrier Function-based Model Predictive Control under Signal Temporal Logic Specifications. , 2021, , .		7
29	Fixed-Time Convergent Control Barrier Functions for Coupled Multi-Agent Systems Under STL Tasks. , 2021, , .		5
30	Area Defense and Surveillance on Rectangular Regions Using Control Barrier Functions. , 2021, , .		1
31	Hierarchical control for uncertain discrete-time nonlinear systems under signal temporal logic specifications. , 2021, , .		2
32	Robust Cooperative Manipulation Without Force/Torque Measurements: Control Design and Experiments. IEEE Transactions on Control Systems Technology, 2020, 28, 713-729.	5.2	38
33	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
34	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
35	Motion Feasibility Conditions for Multiagent Control Systems on Lie Groups. IEEE Transactions on Control of Network Systems, 2020, 7, 493-502.	3.7	10
36	Synthesizing Communication Plans for Reachability and Safety Specifications. IEEE Transactions on Automatic Control, 2020, 65, 561-576.	5.7	5

#	ARTICLE	IF	CITATIONS
37	Distributed Self-Triggered State and Fault Estimation for Multiagent Systems. IEEE Transactions on Control of Network Systems, 2020, 7, 699-710.	3.7	13
38	Energy-Optimal Cooperative Manipulation via Provable Internal-Force Regulation. , 2020, , .		7
39	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
40	A fully distributed motion coordination strategy for multi-robot systems with local information. , 2020, , .		0
41	Scalable time-constrained planning of multi-robot systems. Autonomous Robots, 2020, 44, 1451-1467.	4.8	8
42	A fully distributed motion coordination strategy for multi-robot systems with local information. , 2020, , .		1
43	Efficient Automata-based Planning and Control under Spatio-Temporal Logic Specifications. , 2020, , .		13
44	A Self-triggered Position Based Visual Servoing Model Predictive Control Scheme for Underwater Robotic Vehicles. Machines, 2020, 8, 33.	2.2	24
45	Symmetry Reduction in Optimal Control of Multiagent Systems on Lie Groups. IEEE Transactions on Automatic Control, 2020, 65, 4973-4980.	5.7	6
46	Control Design for Risk-Based Signal Temporal Logic Specifications. , 2020, 4, 1000-1005.		10
47	On Robustness Metrics for Learning STL Tasks. , 2020, , .		26
48	Augmenting Control Policies with Motion Planning for Robust and Safe Multi-robot Navigation. , 2020, , .		1
49	Control Barrier Functions for Signal Temporal Logic Tasks. , 2019, 3, 96-101.		168
50	Control Barrier Functions for Multi-Agent Systems Under Conflicting Local Signal Temporal Logic Tasks. , 2019, 3, 757-762.		62
51	Robust self-triggered control for time-varying and uncertain constrained systems via reachability analysis. Automatica, 2019, 107, 574-581.	5.0	8
52	Closed-Form Barrier Functions for Multi-Agent Ellipsoidal Systems With Uncertain Lagrangian Dynamics. , 2019, 3, 727-732.		24
53	Integrated Motion Planning and Control Under Metric Interval Temporal Logic Specifications. , 2019, , .		9
54	A Symbolic Approach to the Self-Triggered Design for Networked Control Systems. , 2019, 3, 1050-1055.		9

#	ARTICLE	IF	CITATIONS
55	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
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	Event-Triggered Control of Nonlinear Systems With Updating Threshold. , 2019, 3, 655-660.		11
58	Robust Self-Triggered MPC With Adaptive Prediction Horizon for Perturbed Nonlinear Systems. IEEE Transactions on Automatic Control, 2019, 64, 4780-4787.	5.7	67
59	Robust formation control in $\langle \text{mml:math xmlns:mml=} \text{"http://www.w3.org/1998/Math/MathML"} \text{display="inline" overflow="scroll" id="d1e224" altimg="si2.gif"} \rangle \langle \text{mml:mi mathvariant="double-struck"} \rangle \text{SE} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 103, 538-548.$ for tree-graph structures with prescribed transient and steady state performance. Automatica, 2019, 103, 538-548.		
60	Decentralized tube-based model predictive control of uncertain nonlinear multiagent systems. International Journal of Robust and Nonlinear Control, 2019, 29, 2799-2818.	3.7	31
61	Hierarchical Decomposition of LTL Synthesis Problem for Nonlinear Control Systems. IEEE Transactions on Automatic Control, 2019, 64, 4676-4683.	5.7	19
62	Adaptive Leader-Follower Coordination of Lagrangian Multi-Agent Systems under Transient Constraints. , 2019, , .		4
63	Asymptotic Stability of Uncertain Lagrangian Systems with Prescribed Transient Response. , 2019, , .		2
64	Approximately symbolic models for a class of continuous-time nonlinear systems. , 2019, , .		2
65	Consensus Control for Leader-follower Multi-agent Systems under Prescribed Performance Guarantees. , 2019, , .		8
66	Distributed Event-Based Control and Stability of Interconnected Systems. , 2019, , .		3
67	A Hybrid Controller for Obstacle Avoidance in an n -dimensional Euclidean Space. , 2019, , .		6
68	Intermittent Connectivity Maintenance with Heterogeneous Robots using a Beads-on-a-Ring Strategy. , 2019, , .		1
69	Second Order Consensus for Leader-follower Multi-agent Systems with Prescribed Performance. IFAC-PapersOnLine, 2019, 52, 103-108.	0.9	6
70	Resource-aware networked control systems under temporal logic specifications. Discrete Event Dynamic Systems: Theory and Applications, 2019, 29, 473-499.	1.5	3
71	Decentralized abstractions for multi-agent systems under coupled constraints. European Journal of Control, 2019, 45, 1-16.	2.6	5
72	Robust control for signal temporal logic specifications using discrete average space robustness. Automatica, 2019, 101, 377-387.	5.0	47

#	ARTICLE	IF	CITATIONS
73	Dynamic Event-Triggered and Self-Triggered Control for Multi-agent Systems. IEEE Transactions on Automatic Control, 2019, 64, 3300-3307.	5.7	284
74	Aperiodic Sampled-Data Control via Explicit Transmission Mapping: A Set-Invariance Approach. IEEE Transactions on Automatic Control, 2018, 63, 3523-3530.	5.7	13
75	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
76	A General Approach to Coordination Control of Mobile Agents With Motion Constraints. IEEE Transactions on Automatic Control, 2018, 63, 1509-1516.	5.7	80
77	Compositional abstraction refinement for control synthesis. Nonlinear Analysis: Hybrid Systems, 2018, 27, 437-451.	3.5	11
78	Decomposition of Finite LTL Specifications for Efficient Multi-agent Planning. Springer Proceedings in Advanced Robotics, 2018, , 253-267.	1.3	21
79	Fuel-Efficient En Route Formation of Truck Platoons. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 102-112.	8.0	75
80	Timed abstractions for distributed cooperative manipulation. Autonomous Robots, 2018, 42, 781-799.	4.8	12
81	Cloud-Supported Formation Control of Second-Order Multiagent Systems. IEEE Transactions on Control of Network Systems, 2018, 5, 1563-1574.	3.7	28
82	Event-Based Vehicle Coordination Using Nonlinear Unidirectional Controllers. IEEE Transactions on Control of Network Systems, 2018, 5, 1575-1584.	3.7	38
83	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
84	Time-constrained multi-agent task scheduling based on prescribed performance control. , 2018, , .		1
85	Event-Triggered Control for a Class of Cascade Systems. , 2018, , .		2
86	Optimal Control of Left-Invariant Multi-Agent Systems with Asymmetric Formation Constraints. , 2018, , .		3
87	Self-Triggered Control under Actuator Delays. , 2018, , .		5
88	A Tube-based MPC Scheme for Interaction Control of Underwater Vehicle Manipulator Systems. , 2018, , .		7
89	A hybrid barrier certificate approach to satisfy linear temporal logic specifications. , 2018, , .		9
90	Decentralized Control of Uncertain Multi-Agent Systems with Connectivity Maintenance and Collision Avoidance. , 2018, , .		10

#	ARTICLE	IF	CITATIONS
91	A robust interaction control approach for underwater vehicle manipulator systems. Annual Reviews in Control, 2018, 46, 315-325.	7.9	40
92	Decentralized Robust Control of Coupled Multi-Agent Systems under Local Signal Temporal Logic Tasks. , 2018, , .		8
93	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
94	Communication-based Decentralized Cooperative Object Transportation Using Nonlinear Model Predictive Control. , 2018, , .		15
95	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
96	Event-triggered intermittent sampling for nonlinear model predictive control. Automatica, 2017, 81, 148-155.	5.0	100
97	Robustness and Invariance of Connectivity Maintenance Control for Multiagent Systems. SIAM Journal on Control and Optimization, 2017, 55, 1887-1914.	2.1	18
98	Multi-Agent Second Order Average Consensus With Prescribed Transient Behavior. IEEE Transactions on Automatic Control, 2017, 62, 5282-5288.	5.7	75
99	Family of controllers for attitude synchronization on the sphere. Automatica, 2017, 75, 271-281.	5.0	13
100	Decentralized motion planning with collision avoidance for a team of UAVs under high level goals. , 2017, , .		10
101	A hybrid systems framework for multi agent task planning and control. , 2017, , .		4
102	Self-triggered control for constrained systems: A contractive set-based approach. , 2017, , .		4
103	Collaborative transportation of a bar by two aerial vehicles with attitude inner loop and experimental validation. , 2017, , .		5
104	Event-triggered model predictive control with machine learning for compensation of model uncertainties. , 2017, , .		9
105	Multi-Agent Motion Planning and Object Transportation under High Level Goals * *This work was supported by the H2020 ERC Starting Grant 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
106	Robust decentralized abstractions for multiple mobile manipulators. , 2017, , .		2
107	Control framework for slung load transportation with two aerial vehicles. , 2017, , .		8
108	Compositional abstraction refinement for control synthesis under lasso-shaped specifications. , 2017, , .		2

#	ARTICLE	IF	CITATIONS
109	Multi-agent trajectory tracking with self-triggered cloud access. , 2016, , .		11
110	Lyapunov-based generic controller design for thrust-propelled underactuated systems. , 2016, , .		5
111	A common framework for attitude synchronization of unit vectors in networks with switching topology. , 2016, , .		4
112	Multi-agent planning under local LTL specifications and event-based synchronization. Automatica, 2016, 70, 239-248.	5.0	67
113	Slung load transportation with a single aerial vehicle and disturbance removal. , 2016, , .		17
114	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
115	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
116	Posture regulation for unicycle-like robots with prescribed performance guarantees. IET Control Theory and Applications, 2015, 9, 192-202.	2.1	8
117	Fuel-optimal centralized coordination of truck platooning based on shortest paths. , 2015, , .		40
118	Event-triggered control for vehicle platooning. , 2015, , .		15
119	Coordinating Truck Platooning by Clustering Pairwise Fuel-Optimal Plans. , 2015, , .		16
120	Control of multi-agent systems with event-triggered cloud access. , 2015, , .		24
121	Multi-agent plan reconfiguration under local LTL specifications. International Journal of Robotics Research, 2015, 34, 218-235.	8.5	155
122	Distributed aperiodic model predictive control for multi-agent systems. IET Control Theory and Applications, 2015, 9, 10-20.	2.1	69
123	Event-Triggered Pinning Control of Switching Networks. IEEE Transactions on Control of Network Systems, 2015, 2, 204-213.	3.7	147
124	Collective Circumnavigation. Unmanned Systems, 2014, 02, 219-229.	3.6	36
125	A receding horizon approach to multi-agent planning from local LTL specifications. , 2014, , .		26
126	Consensus in multi-agent systems with second-order dynamics and non-periodic sampled-data exchange. , 2014, , .		6

#	ARTICLE	IF	CITATIONS
127	Consensus in multi-agent systems with non-periodic sampled-data exchange and uncertain network topology. , 2014, , .		1
128	Event-triggered pinning control of complex networks with switching topologies. , 2014, , .		25
129	Global consensus for discrete-time multi-agent systems with input saturation constraints. Automatica, 2014, 50, 499-506.	5.0	293
130	Leader-Follower Coordinated Tracking of Multiple Heterogeneous Lagrange Systems Using Continuous Control. IEEE Transactions on Robotics, 2014, 30, 739-745.	10.3	88
131	Motion and action planning under LTL specifications using navigation functions and action description language. , 2013, , .		10
132	Event-based broadcasting for multi-agent average consensus. Automatica, 2013, 49, 245-252.	5.0	1,027
133	Nonlinear consensus via continuous, sampled, and aperiodic updates. International Journal of Control, 2013, 86, 567-578.	1.9	30
134	Obstacle avoidance in formation using navigation-like functions and constraint based programming. , 2013, , .		1
135	Distributed event-based control strategies for interconnected linear systems. IET Control Theory and Applications, 2013, 7, 877-886.	2.1	90
136	Revising motion planning under Linear Temporal Logic specifications in partially known workspaces. , 2013, , .		19
137	A self-triggered Model Predictive Control framework for the cooperation of distributed nonholonomic agents. , 2013, , .		25
138	Decentralized multi-agent control from local LTL specifications. , 2012, , .		38
139	Event-based model Predictive control for the cooperation of distributed agents. , 2012, , .		23
140	Opinion consensus of modified Hegselmann-Krause models. , 2012, , .		8
141	A decentralized event-based predictive navigation scheme for Air-Traffic Control. , 2012, , .		1
142	Distributed solution for a Maximum Variance Unfolding Problem with sensor and robotic network applications. , 2012, , .		6
143	Multi-agent average consensus control with prescribed performance guarantees. , 2012, , .		23
144	Distributed Event-Triggered Control for Multi-Agent Systems. IEEE Transactions on Automatic Control, 2012, 57, 1291-1297.	5.7	1,917

#	ARTICLE	IF	CITATIONS
145	Distributed real-time fault detection and isolation for cooperative multi-agent systems. , 2012, , .		11
146	Sufficient Conditions for Decentralized Potential Functions Based Controllers Using Canonical Vector Fields. IEEE Transactions on Automatic Control, 2012, 57, 2621-2626.	5.7	20
147	Aperiodic model predictive control via perturbation analysis. , 2012, , .		2
148	Novel event-triggered strategies for Model Predictive Controllers. , 2011, , .		85
149	L_2 gain stability analysis of event-triggered agreement protocols. , 2011, , .		9
150	Quantized cooperative control using relative state measurements. , 2011, , .		5
151	Sufficient conditions for decentralized navigation functions based controllers using canonical vector fields. , 2011, , .		1
152	Stability analysis for multi-agent systems using the incidence matrix: Quantized communication and formation control. Automatica, 2010, 46, 695-700.	5.0	231
153	Leader-follower cooperative attitude control of multiple rigid bodies. Systems and Control Letters, 2009, 58, 429-435.	2.3	305
154	Event-triggered control for multi-agent systems. , 2009, , .		182
155	Inverse Agreement Protocols With Application to Distributed Multi-Agent Dispersion. IEEE Transactions on Automatic Control, 2009, 54, 657-663.	5.7	28
156	Decentralized connectivity maintenance in mobile networks with bounded inputs. , 2008, , .		69
157	Analysis of robot navigation schemes using Rantzer's Dual Lyapunov Theorem. , 2008, , .		10
158	Quantized agreement under time-varying communication topology. , 2008, , .		11
159	Leader-follower cooperative attitude control of multiple rigid bodies. , 2008, , .		6
160	3D navigation and collision avoidance for a non-holonomic vehicle. , 2008, , .		32
161	On the stability of distance-based formation control. , 2008, , .		104
162	Inverse agreement algorithms with application to swarm dispersion for multiple nonholonomic agents. , 2008, , .		3

#	ARTICLE	IF	CITATIONS
163	Further results on formation infeasibility and velocity alignment. , 2007, , .		1
164	An inverse agreement control strategy with application to swarm dispersion. , 2007, , .		6
165	Connectivity preserving distributed swarm aggregation for multiple kinematic agents. , 2007, , .		20
166	A feedback stabilization and collision avoidance scheme for multiple independent non-point agents. Automatica, 2006, 42, 229-243.	5.0	228