

Amir Aghdam

List of Publications by Year in descending order

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157
papers

1,301
citations

623734

14
h-index

526287

27
g-index

162
all docs

162
docs citations

162
times ranked

786
citing authors

#	ARTICLE	IF	CITATIONS
1	A Class of Bounded Distributed Control Strategies for Connectivity Preservation in Multi-Agent Systems. IEEE Transactions on Automatic Control, 2010, 55, 2828-2833.	5.7	171
2	A Model Predictive Decentralized Control Scheme With Reduced Communication Requirement for Spacecraft Formation. IEEE Transactions on Control Systems Technology, 2008, 16, 268-278.	5.2	90
3	Distributed Deployment Strategies for Improved Coverage in a Network of Mobile Sensors With Prioritized Sensing Field. IEEE Transactions on Industrial Informatics, 2013, 9, 451-461.	11.3	56
4	A Distributed Deployment Strategy for a Network of Cooperative Autonomous Vehicles. IEEE Transactions on Control Systems Technology, 2015, 23, 737-745.	5.2	43
5	Self-Deployment Algorithms for Coverage Problem in a Network of Mobile Sensors with Unidentical Sensing Ranges. , 2010, , .		36
6	Distributed Coverage Control of Mobile Sensor Networks Subject to Measurement Error. IEEE Transactions on Automatic Control, 2016, 61, 3330-3343.	5.7	36
7	An Efficient Target Monitoring Scheme With Controlled Node Mobility for Sensor Networks. IEEE Transactions on Control Systems Technology, 2012, 20, 1522-1532.	5.2	34
8	Distributed consensus control of unicycle agents in the presence of external disturbances. Systems and Control Letters, 2015, 82, 86-90.	2.3	31
9	A Gradient-Based Coverage Optimization Strategy for Mobile Sensor Networks. IEEE Transactions on Control of Network Systems, 2017, 4, 477-488.	3.7	29
10	Robust Stability of LTI Systems Over Semialgebraic Sets Using Sum-of-Squares Matrix Polynomials. IEEE Transactions on Automatic Control, 2008, 53, 417-423.	5.7	24
11	Elimination of Fixed Modes by Means of High-Performance Constrained Periodic Control. , 2006, , .		22
12	Distributed coordination of multi-agent systems for coverage problem in presence of obstacles. , 2012, , .		22
13	Decentralized Control Design for Interconnected Systems Based on A Centralized Reference Controller. , 2006, , .		19
14	Characterization of link failures in multi-agent systems under the agreement protocol. , 2012, , .		19
15	A Necessary and Sufficient Condition for the Existence of a LTI Stabilizing Decentralized Overlapping Controller. , 2006, , .		18
16	Stability of uncertain piecewise affine systems with time delay: delay-dependent Lyapunov approach. International Journal of Control, 2009, 82, 1423-1434.	1.9	18
17	A Distributed Deployment Strategy for Multi-Agent Systems Subject to Health Degradation and Communication Delays. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 73, 623-633.	3.4	18
18	Maximum Lifetime Strategy for Target Monitoring With Controlled Node Mobility in Sensor Networks With Obstacles. IEEE Transactions on Automatic Control, 2016, 61, 3493-3508.	5.7	18

#	ARTICLE	IF	CITATIONS
19	Distributed control of a network of single integrators with limited angular fields of view. Automatica, 2016, 63, 187-197.	5.0	18
20	High-Performance Decentralized Control for Formation Flying with Leader-Follower Structure. , 2006, , .		17
21	Distributed Sensor Coordination Algorithms for Efficient Coverage in a Network of Heterogeneous Mobile Sensors. IEEE Transactions on Automatic Control, 2017, 62, 5954-5961.	5.7	17
22	Decentralized fixed modes for LTI time-delay systems. , 2010, , .		15
23	On the structural controllability of multi-agent systems subject to failure: A graph-theoretic approach. , 2010, , .		15
24	Global network connectivity assessment via local data exchange for underwater acoustic sensor networks. , 2013, , .		15
25	An adaptive tracking problem for a family of retarded time-delay plants. International Journal of Adaptive Control and Signal Processing, 2007, 21, 885-910.	4.1	14
26	A Framework for Evaluating the Best Achievable Performance by Distributed Lifetime-Efficient Routing Schemes in Wireless Sensor Networks. IEEE Transactions on Wireless Communications, 2015, 14, 3231-3246.	9.2	14
27	Deep Teams: Decentralized Decision Making With Finite and Infinite Number of Agents. IEEE Transactions on Automatic Control, 2020, 65, 4230-4245.	5.7	14
28	Toward Autonomous Mobile Sensor Networks Technology. IEEE Transactions on Industrial Informatics, 2016, 12, 576-586.	11.3	13
29	Detectability of multiple link failures in multi-agent systems under the agreement protocol. , 2012, , .		12
30	Characterization of Decentralized and Quotient Fixed Modes via Graph Theory. Proceedings of the American Control Conference, 2007, , .	0.0	11
31	A certainty equivalence result in team-optimal control of mean-field coupled Markov chains. , 2017, , .		11
32	Optimal target tracking strategy with controlled node mobility in mobile sensor networks. , 2010, , .		10
33	Pole Assignment With Improved Control Performance by Means of Periodic Feedback. IEEE Transactions on Automatic Control, 2010, 55, 248-252.	5.7	10
34	Joint power optimization and connectivity control problem over underwater random sensor networks. , 2015, , .		10
35	Connectivity Assessment of Random Directed Graphs with Application to Underwater Sensor Networks. IEEE Transactions on Control Systems Technology, 2017, 25, 1457-1464.	5.2	10
36	A Necessary and Sufficient Condition for Robust Stability of LTI Discrete-Time Systems using Sum-of-Squares Matrix Polynomials. , 2006, , .		9

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37	A class of bounded distributed controllers for connectivity preservation of unicycles. , 2010, , .		9
38	Cost-efficient routing with controlled node mobility in sensor networks. , 2011, , .		9
39	Self-deployment algorithms for field coverage in a network of nonidentical mobile sensors: Vertex-based approach. , 2011, , .		9
40	Cooperative receding horizon control for multi-target interception in uncertain environments. , 2014, , .		9
41	Optimal Dynamic Pricing for Binary Demands in Smart Grids: A Fair and Privacy-Preserving Strategy. , 2018, , .		9
42	A necessary and sufficient condition for stabilization of decentralized time-delay systems with commensurate delays. , 2008, , .		8
43	Distributed deployment algorithms for improved coverage in mobile sensor networks. , 2011, , .		8
44	Optimal Cooperative Wireless Transmission With Limited Channel State Information. IEEE Transactions on Communications, 2015, 63, 4768-4783.	7.8	8
45	Delay-dependent robust stability analysis for switched time-delay systems with polytopic uncertainties. International Journal of Robust and Nonlinear Control, 2015, 25, 1623-1637.	3.7	8
46	Generalized algebraic connectivity for asymmetric networks. , 2016, , .		8
47	Near-Optimal Control Strategy in Leader-Follower Networks: A Case Study for Linear Quadratic Mean-Field Teams. , 2018, , .		8
48	MinMax Mean-Field Team Approach for a Leader-Follower Network: A Saddle-Point Strategy. , 2020, 4, 121-126.		8
49	Distributed adaptive consensus tracking control for nonlinear multi-agent systems with time-varying delays. IET Control Theory and Applications, 2020, 14, 3382-3394.	2.1	8
50	Pole assignment with improved control performance by means of periodic feedback. , 2007, , .		7
51	Optimal Information Flow Structure for Control of Interconnected Systems. , 2007, , .		6
52	Structural controllability of multi-agent systems subject to simultaneous failure of links and agents. , 2011, , .		6
53	A bounded distributed connectivity preserving aggregation strategy with collision avoidance property. Systems and Control Letters, 2013, 62, 1098-1104.	2.3	6
54	Connectivity measures for random directed graphs with applications to underwater sensor networks. , 2015, , .		6

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55	Stability analysis of dynamic decision-making for vehicle heading control. , 2015, , .		6
56	Cooperative control for multi-target interception with sensing and communication limitations: A game-theoretic approach. , 2015, , .		6
57	Distributed Control of Multi-Agent Systems With Limited Communication Range in the Fixed Obstacle Environments. IEEE Access, 2019, 7, 118259-118268.	4.2	6
58	On Structurally Constrained Control Design with a Prespecified Form. Proceedings of the American Control Conference, 2007, , .	0.0	5
59	Decentralized pole assignment for interconnected systems. , 2008, , .		5
60	Adaptive robust control of uncertain neutral time-delay systems. , 2008, , .		5
61	Connectivity preservation in a network of single integrator agents. , 2009, , .		5
62	Overlapping control systems with delayed communication channels: Stability analysis and controller design. , 2009, , .		5
63	Convergence analysis for a class of nonlinear consensus algorithms. , 2010, , .		5
64	Leader selection in multi-agent systems subject to partial failure. , 2011, , .		5
65	Cooperative control of multi-agent systems with limited angular field of view. , 2012, , .		5
66	A connectivity preserving containment control strategy for unicycles with static leaders. , 2012, , .		5
67	Self-deployment algorithms for coverage improvement in a network of nonidentical mobile sensors with limited communication ranges. , 2013, , .		5
68	An adaptive regulation method for a class of uncertain timeâ€delay systems. International Journal of Adaptive Control and Signal Processing, 2013, 27, 771-780.	4.1	5
69	Data Collection Versus Data Estimation: A Fundamental Trade-Off in Dynamic Networks. IEEE Transactions on Network Science and Engineering, 2020, 7, 2000-2015.	6.4	5
70	Characterizing all classes of LTI stabilizing structurally constrained controllers by means of combinatorics. , 2007, , .		4
71	A Two-Stage Formation Flying Strategy to Reduce the Mission Time. , 2007, , .		4
72	Robust Stabilizability Verification of Polynomially Uncertain LTI Systems. IEEE Transactions on Automatic Control, 2007, 52, 1721-1726.	5.7	4

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73	Supervisory control of discrete-event systems with output: Application to hybrid systems. International Journal of Control, 2008, 81, 1451-1461.	1.9	4
74	Stability of uncertain piecewise affine systems with time-delay. , 2009, , .		4
75	Coverage control in multi-vehicle systems subject to health degradation. , 2013, , .		4
76	Generalized formulation for trajectory optimization in patrolling problems. , 2015, , .		4
77	Near-Optimal Design for Fault-Tolerant Systems with Homogeneous Components under Incomplete Information. , 2018, , .		4
78	A Mean-Field Team Approach to Minimize the Spread of Infection in a Network. , 2019, , .		4
79	Reinforcement Learning in Deep Structured Teams: Initial Results with Finite and Infinite Valued Features. , 2020, , .		4
80	Digital Control Design for Systems with Approximate Decentralized Fixed Modes. , 2006, , .		3
81	An adaptive switching scheme for uncertain discrete time-delay systems. International Journal of Adaptive Control and Signal Processing, 2010, 24, 1-11.	4.1	3
82	Energy and time efficient formation reconfiguration strategies. , 2009, , .		3
83	Stability analysis of switched time-delay systems with polytopic uncertainties. , 2010, , .		3
84	A connectivity preserving containment control strategy for a network of single integrator agents. , 2011, , .		3
85	A bounded connectivity preserving aggregation strategy with collision avoidance property for single-integrator agents. , 2012, , .		3
86	An Energy-Efficient Strategy to Improve Coverage in a Network of Wireless Mobile Sensors with Nonidentical Sensing Ranges. , 2013, , .		3
87	Distributed coordination of a network of nonidentical agents with limited communication capabilities in the presence of fixed obstacles. , 2013, , .		3
88	Distributed connectivity optimization in asymmetric networks. , 2017, , .		3
89	Connectivity, Transmission Power, and Lifetime Optimization in Asymmetric Networks: A Distributed Approach. IEEE Access, 2018, 6, 69492-69515.	4.2	3
90	Expected Convergence Rate to Consensus in Asymmetric Networks: Analysis and Distributed Estimation. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 972-987.	9.3	3

#	ARTICLE	IF	CITATIONS
91	An adaptive switching scheme for network control systems subject to uncertainty. , 2007, , .		2
92	Stability Criterion for General Proper Systems with Constrained Control Structure. , 2007, , .		2
93	A Cooperative Model Predictive Control Technique for Spacecraft Formation Flying. Proceedings of the American Control Conference, 2007, , .	0.0	2
94	LQ suboptimal decentralised controllers with disturbance rejection property for hierarchical systems. International Journal of Control, 2008, 81, 1720-1732.	1.9	2
95	Model reduction and consistency in discrete event representation of biological systems. , 2008, , .		2
96	An Adaptive Rate Assignment Strategy for CDMA2000 IS-856 Subject to RAB Delay. , 2009, , .		2
97	Robust degree of exponential stability in polynomially uncertain overlapping control systems. , 2010, , .		2
98	Two-stage time-optimal formation reconfiguration strategy under acceleration and velocity constraints. , 2010, , .		2
99	Distributed control of formation flying spacecraft using deterministic communication schedulers. , 2010, , .		2
100	Cooperative Self-Deployment Strategies in a Mobile Sensor Network with Non-Uniform Coverage Priority. , 2011, , .		2
101	Self-Deployment Algorithms for Field Coverage in a Network of Nonidentical Mobile Sensors. , 2011, , .		2
102	Distributed coverage optimization in a network of mobile agents subject to measurement error. , 2012, , .		2
103	Maximum lifetime strategy for target monitoring in a mobile sensor network with obstacles. , 2012, , .		2
104	Maximum life span strategy for target tracking in mobile sensor networks. , 2012, , .		2
105	Structural controllability of multi-agent networks: Importance of individual links. , 2013, , .		2
106	Distributed control of multi-agent systems with rotating field of view. , 2013, , .		2
107	A Computationally Efficient Connectivity Measure for Random Graphs. , 2015, , .		2
108	Cooperative receding horizon control of double integrator vehicles for multi-target interception. , 2016, , .		2

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109	Time-efficient trajectory optimization in patrolling problems with non-prespecified depots and robots. , 2016, , .		2
110	Non-prespecified Starting Depot Formulations for Minimum-Distance Trajectory Optimization in Patrolling Problem. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 87, 699-710.	3.4	2
111	A Follower-Based Control Allocation in Multi-Agent Networks. , 2018, , .		2
112	Generalised formulations for minimum distance trajectory in patrolling problems. IET Control Theory and Applications, 2020, 14, 1401-1410.	2.1	2
113	Optimal Path Tracking With Dubinsâ€™ Vehicles. IEEE Systems Journal, 2021, 15, 466-477.	4.6	2
114	Estimation of the Connectivity of Random Graphs Through Q-Learning Techniques. IEEE Journal of Radio Frequency Identification, 2022, 6, 318-331.	2.3	2
115	Rational optimization using sum-of-squares techniques. , 2007, , .		1
116	A Model Reduction Technique for IIR Filters using Balanced Realization. Proceedings of the American Control Conference, 2007, , .	0.0	1
117	A switching supervisory control design for uncertain discrete time-delay systems. , 2008, , .		1
118	Robust SISO controller order reduction. , 2009, , .		1
119	Controllability and observability of uncertain systems: A robust measure. , 2009, , .		1
120	Elimination of limit cycles in wireless communication networks using three-level comparators. , 2010, , .		1
121	Distributed connectivity preservation of a team of single integrator agents subject to measurement error. , 2011, , .		1
122	Laser cavity squeezing using optimal servo controller in optomechanical sensors. , 2012, , .		1
123	Coverage control in multi-agent systems subject to communication delays. , 2012, , .		1
124	Joint optimal relay selection and power allocation for cooperative transmission in wireless sensor networks. , 2013, , .		1
125	Rate Assignment in Wireless Networks: Stability Analysis and Controller Design. IEEE Transactions on Control Systems Technology, 2013, 21, 521-529.	5.2	1
126	Distributed deployment strategies to increase coverage in a network of wireless mobile sensors. , 2013, , .		1

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127	Distributed coverage optimization in a network of static and mobile sensors. , 2013, , .		1
128	A Computationally Efficient Connectivity Measure for Random Graphs. , 2014, , .		1
129	A cooperative receding horizon controller for multi-target interception with Obstacle Avoidance. , 2016, , .		1
130	Enhancements to patrolling operations based on Dubins' Traveling Salesman Problem. , 2016, , .		1
131	Distributed Dynamic Average Consensus in Asymmetric Networks. , 2018, , .		1
132	Lifetime Optimization and Connectivity Control in Asymmetric Networks. , 2019, , .		1
133	Distributed Consensus Protocols for Time-Varying Multi-Agent Networks with Improved Convergence Properties. , 2020, , .		1
134	A Multi-Spectral Approach to Fuzzy Quantum Modelling of Nonlinear Systems. IEEE Journal of Radio Frequency Identification, 2021, 5, 254-260.	2.3	1
135	Deep Structured Teams in Arbitrary-Size Linear Networks: Decentralized Estimation, Optimal Control and Separation Principle. , 2021, , .		1
136	Receding Horizon Control in Deep Structured Teams: A Provably Tractable Large-Scale Approach with Application to Swarm Robotics. , 2021, , .		1
137	On Forward Kinematics of a 3SPR Parallel Manipulator. , 2023, 7, 425-430.		1
138	A Method to Obtain the Infinity-Norm of Systems using the Routh Table. , 2006, , .		0
139	Supervisory control of switching control systems. , 2006, , .		0
140	A near-optimal decentralized servomechanism controller for hierarchical interconnected systems. , 2007, , .		0
141	Performance analysis for a class of decentralized control systems. , 2008, , .		0
142	Stability of IS-856 CDMA networks with non-fully buffered users: A fair rate allocation strategy. , 2010, , .		0
143	Multi-vehicle coordinated motion via stabilization of time-varying sets. , 2010, , .		0
144	Relaxed convergence conditions for multi-agent systems under a class of consensus algorithms. , 2011, , .		0

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145	Convergence analysis and controller design for a team of mobile robots subject to measurement error. , 2011, , .		0
146	Decentralized pole-placement using generalized sampled-data hold functions. , 2012, , .		0
147	Convergence analysis for a class of bounded distributed connectivity preserving consensus algorithms for unicycles. , 2012, , .		0
148	H<inf>∞</inf> controller design for laser cavity squeezing in optomechanical sensors. , 2012, , .		0
149	Characterization of structured and unstructured decentralized fixed modes using transfer matrices. , 2012, , .		0
150	An explicit solution for the energy-efficient cooperative transmission problem in wireless sensor networks. , 2013, , .		0
151	Formation control of a team of single-integrator agents with measurement error. , 2013, , .		0
152	Welcome by the president of IEEE Canada. , 2014, , .		0
153	Direct strain estimation in ultrasound elastography using a novel dynamic programming approach. , 2018, , .		0
154	Robust Suboptimal Output Synchronization of Nonlinear Heterogeneous Agents. , 2020, , .		0
155	Distributed Sensor Coordination Algorithms for Efficient Coverage in a Network of Heterogeneous Mobile Sensors. IEEE Transactions on Automatic Control, 2017, 62, .	5.7	0
156	Maximum Lifetime Strategy for Target Monitoring with Controlled Node Mobility in Sensor Networks with Obstacles. IEEE Transactions on Automatic Control, 2016, 61, .	5.7	0
157	A Computationally Efficient Connectivity Index for Weighted Directed Graphs With Application to Underwater Sensor Networks. IEEE Access, 2022, 10, 54822-54832.	4.2	0