

Xiaoming Hu

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154
papers

2,825
citations

23
h-index

49
g-index

193
ext. papers

3,472
ext. citations

3.3
avg, IF

5.4
L-index

#	Paper	IF	Citations
154	Formation constrained multi-agent control. <i>IEEE Transactions on Automation Science and Engineering</i> , 2001 , 17, 947-951		478
153	A control Lyapunov function approach to multiagent coordination. <i>IEEE Transactions on Automation Science and Engineering</i> , 2002 , 18, 847-851		206
152	Consensus of multi-agent linear dynamic systems. <i>Asian Journal of Control</i> , 2008 , 10, 144-155	1.7	180
151	Control of mobile platforms using a virtual vehicle approach. <i>IEEE Transactions on Automatic Control</i> , 2001 , 46, 1777-1782	5.9	159
150	Drift-free attitude estimation for accelerated rigid bodies. <i>Automatica</i> , 2004 , 40, 653-659	5.7	145
149	An Extension of LaSalle's Invariance Principle and Its Application to Multi-Agent Consensus. <i>IEEE Transactions on Automatic Control</i> , 2008 , 53, 1765-1770	5.9	108
148	Guided crowd dynamics via modified social force model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 411, 63-73	3.3	84
147	Distributed attitude synchronization control of multi-agent systems with switching topologies. <i>Automatica</i> , 2014 , 50, 832-840	5.7	79
146	Modeling and simulating for congestion pedestrian evacuation with panic. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2015 , 428, 396-409	3.3	73
145	An optimization approach to adaptive Kalman filtering. <i>Automatica</i> , 2011 , 47, 1785-1793	5.7	73
144	A hybrid control approach to action coordination for mobile robots. <i>Automatica</i> , 2002 , 38, 125-130	5.7	65
143	Sufficient conditions for connectivity maintenance and rendezvous in leader-follower networks. <i>Automatica</i> , 2010 , 46, 133-139	5.7	63
142	Observer-Based Leader-Following Formation Control Using Onboard Sensor Information. <i>IEEE Transactions on Robotics</i> , 2008 , 24, 1457-1462	6.5	54
141	Opinion consensus of modified Hegselmann-Krause models. <i>Automatica</i> , 2014 , 50, 622-627	5.7	39
140	Nonlinear filtering in target tracking using cooperative mobile sensors. <i>Automatica</i> , 2010 , 46, 2041-2046	5.7	39
139	Consensus and formation control on SE(3) for switching topologies. <i>Automatica</i> , 2016 , 66, 109-121	5.7	37
138	Formation constrained multi-agent control		35

137	Non-regular feedback linearization of nonlinear systems via a normal form algorithm. <i>Automatica</i> , 2004 , 40, 439-447	5.7	31
136	Distributed sampled-data control of nonholonomic multi-robot systems with proximity networks. <i>Automatica</i> , 2017 , 77, 170-179	5.7	30
135	Nonlinear state estimation for rigid-body motion with low-pass sensors. <i>Systems and Control Letters</i> , 2000 , 40, 183-190	2.4	29
134	Multi-robot tracking of a moving object using directional sensors 2004 ,		27
133	Drift-free attitude estimation for accelerated rigid bodies		25
132	Cooperative Minimum Time Surveillance With Multiple Ground Vehicles. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 2679-2691	5.9	23
131	Observers for systems with implicit output. <i>IEEE Transactions on Automatic Control</i> , 2000 , 45, 168-173	5.9	22
130	Path planning and navigation of mobile robots in unknown environments		21
129	Problems on time-varying port-controlled Hamiltonian systems: geometric structure and dissipative realization. <i>Automatica</i> , 2005 , 41, 717-723	5.7	20
128	On state observers for nonlinear systems. <i>Systems and Control Letters</i> , 1991 , 17, 465-473	2.4	19
127	Consensus of high order linear multi-agent systems using output error feedback 2009 ,		18
126	Active state estimation of nonlinear systems?. <i>Automatica</i> , 2004 , 40, 2075-2082	5.7	18
125	Epipolar Visual Servoing for Multirobot Distributed Consensus. <i>IEEE Transactions on Robotics</i> , 2013 , 29, 1212-1225	6.5	17
124	Stabilization of random Boolean networks 2010 ,		17
123	An extension of LaSalle's Invariance Principle for a class of switched linear systems. <i>Systems and Control Letters</i> , 2009 , 58, 754-758	2.4	17
122	OPTIMAL TARGET TRAJECTORY ESTIMATION AND FILTERING USING NETWORKED SENSORS. <i>Journal of Systems Science and Complexity</i> , 2008 , 21, 325-336	1	16
121	Constructive stabilization for quadratic input nonlinear systems. <i>Automatica</i> , 2008 , 44, 1996-2005	5.7	16
120	Coordinated control with multiple dynamic leaders for uncertain Lagrangian systems via self-tuning adaptive distributed observer. <i>International Journal of Robust and Nonlinear Control</i> , 2017 , 27, 2708-2724	3.6	15

119	Nonlinear Observers for Unicycle Robots With Range Sensors. <i>IEEE Transactions on Automatic Control</i> , 2007 , 52, 1325-1329	5.9	15
118	Consensus control for linear systems with optimal energy cost. <i>Automatica</i> , 2018 , 93, 83-91	5.7	14
117	Exact solutions to a class of feedback systems on . <i>Automatica</i> , 2016 , 63, 138-147	5.7	14
116	Connectivity Preserving Flocking without Velocity Measurement. <i>Asian Journal of Control</i> , 2013 , 15, 521-532	5.7	14
115	Consensus of linear multi-agent systems subject to actuator saturation. <i>International Journal of Control, Automation and Systems</i> , 2013 , 11, 649-656	2.9	14
114	Distributed cooperative object attitude manipulation 2012 ,		14
113	Connectivity maintenance and distributed tracking for double-integrator agents with bounded potential functions. <i>International Journal of Robust and Nonlinear Control</i> , 2015 , 25, 542-558	3.6	13
112	Distributed attitude synchronization control 2011 ,		13
111	Interval Consensus for Multiagent Networks. <i>IEEE Transactions on Automatic Control</i> , 2020 , 65, 1855-1869	5.9	13
110	Inverse optimal control for discrete-time finite-horizon Linear Quadratic Regulators. <i>Automatica</i> , 2019 , 110, 108593	5.7	12
109	Coordinated trajectory following for mobile manipulation		12
108	. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 6466-6472	5.9	11
107	Distributed high-gain attitude synchronization using rotation vectors. <i>Journal of Systems Science and Complexity</i> , 2015 , 28, 289-304	1	10
106	Finite-Time Attitude Synchronization With Distributed Discontinuous Protocols. <i>IEEE Transactions on Automatic Control</i> , 2018 , 63, 3608-3615	5.9	10
105	Tracking control of leader-follower multi-agent systems subject to actuator saturation. <i>IEEE/CAA Journal of Automatica Sinica</i> , 2014 , 1, 84-91	7	10
104	. <i>IEEE Access</i> , 2020 , 8, 147728-147737	3.5	10
103	A geodesic feedback law to decouple the full and reduced attitude. <i>Systems and Control Letters</i> , 2017 , 102, 32-41	2.4	9
102	Intrinsic reduced attitude formation with ring inter-agent graph. <i>Automatica</i> , 2017 , 85, 193-201	5.7	9

101	Credit scoring by incorporating dynamic networked information. <i>European Journal of Operational Research</i> , 2020 , 286, 1103-1112	5.6	9
100	Optimal output consensus for linear systems: a topology free approach. <i>Automatica</i> , 2016 , 68, 352-356	5.7	9
99	Cooperative shift estimation of target trajectory using clustered sensors. <i>Journal of Systems Science and Complexity</i> , 2014 , 27, 413-429	1	9
98	On the Smallest Enclosing Balls. <i>Communications in Information and Systems</i> , 2006 , 6, 137-160	0.8	9
97	Design of evacuation strategies with crowd density feedback. <i>Science China Information Sciences</i> , 2016 , 59, 1-11	3.4	9
96	Projected primal-dual gradient flow of augmented Lagrangian with application to distributed maximization of the algebraic connectivity of a network. <i>Automatica</i> , 2018 , 98, 34-41	5.7	9
95	Detecting community structure in networks via consensus dynamics and spatial transformation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2017 , 483, 156-170	3.3	8
94	Constructive Stabilization of Quadratic-Input Nonlinear Systems with Bounded Controls. <i>Journal of Dynamical and Control Systems</i> , 2008 , 14, 571-593	1.1	8
93	Relative attitude formation control of multi-agent systems. <i>International Journal of Robust and Nonlinear Control</i> , 2017 , 27, 4457-4477	3.6	7
92	Consensus control design for multi-agent systems using relative output feedback. <i>Journal of Systems Science and Complexity</i> , 2014 , 27, 237-251	1	6
91	Shaping up crowd of agents through controlling their statistical moments 2015 ,		6
90	Bipartite consensus strategies for competition networks 2014 ,		6
89	The proportion of leaders needed for the expected consensus. <i>Automatica</i> , 2011 , 47, 2697-2703	5.7	6
88	Multi-robot distributed visual consensus using epipoles 2011 ,		6
87	Exploring community structure in networks by consensus dynamics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2016 , 450, 342-353	3.3	5
86	Distributed attitude synchronization using backstepping and sliding mode control. <i>Control Theory and Technology</i> , 2014 , 12, 48-55	1	5
85	Multiagent Opinion Dynamics of Bounded Confidence with Nonlocal Aggregative Interaction. <i>SIAM Journal on Control and Optimization</i> , 2017 , 55, 2543-2573	1.9	5
84	Parallel simultaneous stabilization of a set of Port-Controlled Hamiltonian systems subject to actuator saturation. <i>Journal of Systems Science and Complexity</i> , 2011 , 24, 120-139	1	5

83	A boolean control network approach to pursuit evasion problems in polygonal environments 2011 ,		5
82	Opinion consensus of modified Hegselmann-Krause models 2012 ,		5
81	Robust formation control and servoing using switching range sensors. <i>Robotics and Autonomous Systems</i> , 2010 , 58, 1003-1016	3.5	5
80	On the number of leaders needed to ensure network connectivity 2008 ,		5
79	Distributed adaptive Kalman filter based on variational Bayesian technique. <i>Control Theory and Technology</i> , 2019 , 17, 37-47	1	4
78	Decentralized cooperative tracking subject to motion constraints. <i>Automatica</i> , 2018 , 96, 121-126	5.7	4
77	Camera Control in Multi-Camera Systems for Video Quality Enhancement. <i>IEEE Sensors Journal</i> , 2014 , 14, 2955-2966	4	4
76	Distributed control of periodic formations for multiple under-actuated autonomous vehicles. <i>IET Control Theory and Applications</i> , 2017 , 11, 66-72	2.5	4
75	Interval consensus: A novel class of constrained consensus problems for multiagent networks 2017 ,		4
74	Distributed control for intrinsic reduced attitude formation with ring inter-agent graph 2015 ,		4
73	Distributed attitude synchronization control of multi-agent systems with directed topologies 2012 ,		4
72	Estimate of Domain of Attraction for a Class of Port-Controlled Hamiltonian Systems Subject to Both Actuator Saturation and Disturbances. <i>Asian Journal of Control</i> , 2012 , 14, 1108-1112	1.7	4
71	Distributed Attitude Control of Multi-Agent Formations*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 4513-4518		4
70	The number of leaders needed for consensus 2009 ,		4
69	Contour reconstruction using recursive smoothing splines - Algorithms and experimental validation. <i>Robotics and Autonomous Systems</i> , 2009 , 57, 617-628	3.5	4
68	Exact solutions to the closed loop kinematics of an almost globally stabilizing feedback law on $SO(3)$ 2012 ,		4
67	Cooperative Object Path Following Control by means of Mobile Manipulators: a Switched Systems Approach. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012 , 45, 773-778		4
66	Cooperative surveillance missions with multiple unmanned ground vehicles (UGVs) 2008 ,		4

65	MULTI-ROBOT FORMATION CONTROL AND TERRAIN SERVOING WITH LIMITED SENSOR INFORMATION. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2005 , 38, 577-582		4
64	Formation Control for Mobile Robots with Limited Sensor Information		4
63	Modeling and Simulation of Crowd Evacuation With Signs at Subway Platform: A Case Study of Beijing Subway Stations. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2020 , 1-13	6.1	4
62	Intrinsic tetrahedron formation of reduced attitude. <i>Automatica</i> , 2018 , 87, 375-382	5.7	4
61	Seeking community structure in networks via biogeography-based optimization with consensus dynamics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2019 , 527, 121188	3.3	3
60	Spherical cyclic formation control 2016 ,		3
59	Analytical solutions to feedback systems on the special orthogonal group $SO(n)$ 2013 ,		3
58	Optimal leader-follower control for crowd evacuation 2013 ,		3
57	Localization and mapping using recursive smoothing splines 2007 ,		3
56	Estimation, Intervention and Interaction of Multi-agent Systems. <i>Zidonghua Xuebao/Acta Automatica Sinica</i> , 2013 , 39, 1796		3
55	Contour Reconstruction and Matching Using Recursive Smoothing Splines. <i>Lecture Notes in Control and Information Sciences</i> , 2007 , 193-206	0.5	3
54	Leader-following formation control problem of unicycles 2016 ,		3
53	An intrinsic approach to formation control of regular polyhedra for reduced attitudes. <i>Automatica</i> , 2020 , 111, 108619	5.7	3
52	Modeling Collective Behaviors: A Moment-Based Approach. <i>IEEE Transactions on Automatic Control</i> , 2021 , 66, 33-48	5.9	3
51	Coordination of multiple rigid bodies under distance-induced interaction topologies. <i>IET Control Theory and Applications</i> , 2018 , 12, 2067-2075	2.5	3
50	Pose Synchronization of Multiple Rigid Bodies Under Average Dwell Time Condition. <i>Journal of Systems Science and Complexity</i> , 2018 , 31, 215-233	1	2
49	Opinion consensus under external influences. <i>Systems and Control Letters</i> , 2018 , 119, 23-30	2.4	2
48	Analytical Solutions to a Class of Feedback Systems on $SO(n)$. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014 , 47, 445-450		2

47	Three-dimensional illumination procedure for photodynamic therapy of dermatology. <i>Journal of Biomedical Optics</i> , 2014 , 19, 98003	3.5	2
46	Distributed attitude synchronization control of multi-agent systems with time-varying topologies 2012 ,		2
45	New results on non-regular linearization of non-linear systems. <i>International Journal of Control</i> , 2007 , 80, 1651-1664	1.5	2
44	Linear reachability versus global stabilization. <i>IEEE Transactions on Automatic Control</i> , 1999 , 44, 1303-1305	3.5	2
43	Stabilization of planar nonlinear systems by polynomial feedback control. <i>Systems and Control Letters</i> , 1994 , 22, 177-185	2.4	2
42	A moment-based approach to modeling collective behaviors 2018 ,		2
41	A Design of Smart Unmanned Vending Machine for New Retail Based on Binocular Camera and Machine Vision. <i>IEEE Consumer Electronics Magazine</i> , 2021 , 1-1	3.2	2
40	Optimal control using microscopic models for a pollutant elimination problem. <i>Journal of Systems Science and Complexity</i> , 2017 , 30, 86-100	1	1
39	Synchronization of Unicycle Robots with Proximity Communication Networks. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014 , 47, 9197-9202		1
38	Finite-time attitude synchronization with a discontinuous protocol 2017 ,		1
37	Generalized formation control for unicycles 2015 ,		1
36	Adaptive simultaneous stabilization of two Port-Controlled Hamiltonian systems subject to actuator saturation 2012 ,		1
35	2012 ,		1
34	Synchronization of multi-agent systems with topological interaction. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 14642-14647		1
33	2009 ,		1
32	A high level decentralized tracking algorithm for three manipulators subject to motion constraints 2012 ,		1
31	A transformation of the Position Based Visual Servoing Problem into a convex optimization problem 2012 ,		1
30	On the number of leaders needed to ensure network connectivity in arbitrary dimensions 2009 ,		1

29	Constructive camera pose control for optimizing multiview distributed video coding 2008 ,		1
28	Connectivity Constrained Multi-UGV Surveillance. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2008 , 41, 581-586		1
27	Robust Formation Adaptation for Mobile Robots 2006 ,		1
26	Active nonlinear observers for mobile systems 2004 ,		1
25	Drift-free Attitude Estimation Using Quasi-linear Observers 321-336		1
24	Multi-Robot Terrain Servoing with Proximity Sensors		1
23	INPUT TRACKING FOR STABLE LINEAR SYSTEMS. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2002 , 35, 461-466		1
22	Some results in nonlinear output regulation and feedback stabilization. <i>International Journal of Control</i> , 1994 , 59, 1085-1093	1.5	1
21	Discrete-time inverse linear quadratic optimal control over finite time-horizon under noisy output measurements. <i>Control Theory and Technology</i> , 1	1	1
20	Identifiability and Solvability in Inverse Linear Quadratic Optimal Control Problems. <i>Journal of Systems Science and Complexity</i> , 2021 , 34, 1840-1857	1	1
19	Hidden Markov Models: Inverse Filtering, Belief Estimation and Privacy Protection. <i>Journal of Systems Science and Complexity</i> , 2021 , 34, 1801-1820	1	1
18	Linearization of Nonlinear Systems 2010 , 279-313		1
17	Global Controllability of Affine Control Systems 2010 , 147-172		1
16	Consistent Kalman filters for nonlinear uncertain systems over sensor networks. <i>Control Theory and Technology</i> , 2020 , 18, 399-408	1	1
15	Observer-based leader-following tracking control under both fixed and switching topologies. <i>Control Theory and Technology</i> , 2016 , 14, 28-38	1	1
14	Fuzzy Hegselmann-Krause Opinion Dynamics with Opinion Leaders 2019 ,		1
13	A Convex Optimization Approach to Inverse Optimal Control 2018 ,		1
12	Optimizing Robustness of Core-Periphery Structure in Complex Networks. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2021 , 1-1	3.5	1

11	Study on Attitude Measurement System for Virtual Surgery Navigation. <i>Lecture Notes in Computer Science</i> , 2006 , 1262-1267	0.9	1
10	A differential game approach to intrinsic formation control. <i>Automatica</i> , 2022 , 136, 110077	5.7	0
9	Optimal Output Consensus Control for Systems of Agents with Continuous Linear Dynamics. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 10050-10055		
8	Global Nonlinear Feedback Stabilization and Nonpeaking Conditions. <i>Automatica</i> , 1998 , 34, 1453-1454	5.7	
7	Active state estimation of nonlinear systems. <i>Automatica</i> , 2004 , 40, 2075-2082	5.7	
6	Input-output behavior for stable linear systems. <i>Journal of the Franklin Institute</i> , 2001 , 338, 497-507	4	
5	Input Tracking and Output Fusion for Linear Systems 159-172		
4	Switched Systems 2010 , 431-508		
3	Design of Center Manifold 2010 , 315-354		
2	An Estimated General Cross Validation Function for Periodic Control Theoretic Smoothing Splines. <i>Lecture Notes in Control and Information Sciences</i> , 2010 , 95-104	0.5	
1	Algebra, Lie Group and Lie Algebra 2010 , 91-119		