Naira Hovakimyan

List of Publications by Year
in descending order

96 papers	2,566 citations	331670 21 h-index	276875 41 g-index
97 all docs	97 docs citations	97 times ranked	1100 citing authors

#	Article	IF	Citations
1	Tube-Certified Trajectory Tracking for Nonlinear Systems With Robust Control Contraction Metrics. IEEE Robotics and Automation Letters, 2022, 7, 5528-5535.	5.1	12
2	Improving the Robustness of Reinforcement Learning Policies With ${\mathcal {L}_{1}}$ Adaptive Control. IEEE Robotics and Automation Letters, 2022, 7, 6574-6581.	5.1	9
3	Robust Nonlinear Tracking Control with Exponential Convergence Using Contraction Metrics and Disturbance Estimation. Sensors, 2022, 22, 4743.	3.8	2
4	L_1 Adaptive Augmentation for Geometric Tracking Control of Quadrotors. , 2022, , .		6
5	$\mathcal {L}_1$ Adaptive Output Feedback for Nonsquare Systems With Arbitrary Relative Degree. IEEE Transactions on Automatic Control, 2021, 66, 895-901.	5.7	3
6	Optimal Multivehicle Motion Planning Using Bernstein Approximants. IEEE Transactions on Automatic Control, 2021, 66, 1453-1467.	5.7	14
7	Design of Command Limiting Control Law Using Exponential Potential Functions. Journal of Guidance, Control, and Dynamics, 2021, 44, 441-448.	2.8	5
8	Time Coordination and Collision Avoidance Using Leader-Follower Strategies in Multi-Vehicle Missions. Robotics, 2021, 10, 34.	3.5	7
9	Command Limiting for Aerial Vehicles With Rate Control Augmentation Systems. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 1702-1712.	4.7	3
10	Impact of Confirmation Bias on Competitive Information Spread in Social Networks. IEEE Transactions on Control of Network Systems, 2021, 8, 816-827.	3.7	7
11	Guest Editorial: Autonomous systems: Navigation, learning, and control. IET Cyber-Systems and Robotics, 2021, 3, 279-280.	1.8	0
12	A Simplified Approach to Analyze Complementary Sensitivity Tradeoffs in Continuous-Time and Discrete-Time Systems. IEEE Transactions on Automatic Control, 2020, 65, 1697-1703.	5.7	5
13	A multilevel sampled-data approach for resilient navigation and control of autonomous systems. International Journal of Robust and Nonlinear Control, 2020, 30, 1071-1097.	3.7	3
14	Guaranteed Collision Avoidance in Multivehicle Cooperative Missions Using Speed Adjustment. Journal of Aerospace Information Systems, 2020, 17, 436-453.	1.4	4
15	Novel Stealthy Attack and Defense Strategies for Networked Control Systems. IEEE Transactions on Automatic Control, 2020, 65, 3847-3862.	5.7	28
16	Safe Feedback Motion Planning: A Contraction Theory and $\mathcal{L}_1$-Adaptive Control Based Approach. , 2020, , .		14
17	Adaptive Robust Quadratic Programs using Control Lyapunov and Barrier Functions. , 2020, , .		18
18	Socially Aware Path Planning for a Flying Robot in Close Proximity of Humans. ACM Transactions on Cyber-Physical Systems, 2019, 3, 1-24.	2.5	5

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19	Sensitivity analysis of linear continuous-time feedback systems subject to control and measurement noise: An information-theoretic approach. Systems and Control Letters, 2019, 133, 104548.	2.3	4
20	Flight Control Methods for Multirotor UAS. , 2019, , .		3
21	Detectability of Intermittent Zero-Dynamics Attack in Networked Control Systems. , 2019, , .		4
22	Hidden Markov Model Estimation-Based Q-learning for Partially Observable Markov Decision Process. , 2019, , .		5
23	Consistent approximation of optimal control problems using Bernstein polynomials. , 2019, , .		9
24	Intent-Aware Probabilistic Trajectory Estimation for Collision Prediction with Uncertainty Quantification. , 2019, , .		5
25	Attack-resilient Estimation for Linear Discrete-time Stochastic Systems with Input and State Constraints. , 2019, , .		9
26	A Path Planning Framework for a Flying Robot in Close Proximity of Humans. , 2019, , .		1
27	Optimal Motion Planning for Differentially Flat Systems Using Bernstein Approximation. , 2018, 2, 181-186.		29
28	$\mathcal{L}_1$ Adaptive Output Feedback Augmentation for Missile Systems. IEEE Transactions on Aerospace and Electronic Systems, 2018, 54, 680-692.	4.7	12
29	A Bank Angle Protection Method Based on Exponential Potential Functions. , 2018, , .		2
30	A Multirate Adaptive Control for MIMO Systems with Application to Cyber-Physical Security. , 2018, , .		11
31	Sensitivity Analysis of Continuous-Time Systems based on Power Spectral Density. , 2018, , .		3
32	Stabilization and Optimal Trajectory Generation for a Compact Aerial Manipulation System with a Delta-type Parallel Robot. , 2018, , .		11
33	Load Capacity Improvements in Nucleic Acid Based Systems Using Discrete-Time Feedback Control. , 2018, , .		0
34	Guaranteed Collision Avoidance Based on Line-of-Sight Angle and Time-to-Collision. , 2018, , .		9
35	Bottom hole pressure estimation and adaptive control in managed pressure drilling system. International Journal of Adaptive Control and Signal Processing, 2017, 31, 545-561.	4.1	9
36	L1 Adaptive Control Within a Flight Envelope Protection System. Journal of Guidance, Control, and Dynamics, 2017, 40, 1013-1026.	2.8	15

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37	A Flight Envelope Protection Method Based on Potential Functions. , 2017, , .		4
38	Evaluation of an L1 Adaptive Flight Control Law on Calspanâ€™s Variable-Stability Learjet. Journal of Guidance, Control, and Dynamics, 2017, 40, 1051-1060.	2.8	27
39	A Bank Angle Protection Method Based on Potential Functions for Nonlinear Aircraft Model. , 2017, , .		2
40	An $\mathcal{L}_1$ adaptive control design for output-feedback sampled-data systems. , 2017, , .		5
41	Design of a Flight Envelope Protection System for NASAâ€™s Transport Class Model. Journal of Guidance, Control, and Dynamics, 2017, 40, 863-877.	2.8	27
42	Dual-rate L<inf>1</inf> adaptive controller for cyber-physical sampled-data systems. , 2017, , .		5
43	Cooperative Trajectory Generation Using Pythagorean Hodograph BÃ©zier Curves. Journal of Guidance, Control, and Dynamics, 2016, 39, 1744-1763.	2.8	46
44	L1 adaptive output regulator design with application to Managed Pressure Drilling. Journal of Process Control, 2016, 42, 1-13.	3.3	16
45	L1 Stability Augmentation System for Calspan's Variable-Stability Learjet. , 2016, , .		25
46	Cooperative Target Tracking with Time-Varying Formation Radius. , 2015, , .		12
47	Coordinated vision-based tracking for multiple UAVs. , 2015, , .		10
48	Flight Envelope Protection for NASA's Transport Class Model. , 2014, , .		22
49	On the construction of barrier in a visibility based pursuit evasion game. , 2014, , .		11
50	Multi-Criteria Optimization for Filter Design of L1 Adaptive Control. Journal of Optimization Theory and Applications, 2014, 161, 557-581.	1.5	12
51	L1 Adaptive Augmentation of a Helicopter Baseline Controller. , 2013, , .		14
52	Vision-Based Cyclic Pursuit for Cooperative Target Tracking. Journal of Guidance, Control, and Dynamics, 2013, 36, 617-622.	2.8	43
53	Distributed Control of Uncertain Networked Systems: A Decoupled Design. IEEE Transactions on Automatic Control, 2013, 58, 2536-2549.	5.7	24
54	L<inf>1</inf> adaptive control of uncertain networked control systems. , 2013, , .		0

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55	Positive invariant set estimation of adaptive controller in the presence of input saturation. International Journal of Adaptive Control and Signal Processing, 2013, 27, 1012-1030.	4.1	14
56	Cooperative target tracking in balanced circular formation: Multiple UAVs tracking a ground vehicle. , 2013, , .		19
57	L<inf>1</inf> adaptive controller for MIMO systems with unmatched uncertainties using modified piecewise constant adaptation law. , 2012, , .		9
58	L$_1$ adaptive control for safety-critical systems. IEEE Control Systems, 2011, 31, 54-104.	0.8	146
59	Geometric 3D Path-Following Control for a Fixed-Wing UAV on SO(3). , 2011, , .		36
60	Active control of visual sensor for navigation and guidance. Computational Management Science, 2010, 7, 85-110.	1.3	1
61	Noise attenuation over additive Gaussian channels. , 2010, , .		1
62	GUARANTEED STRATEGIES FOR NONLINEAR MULTI-PLAYER PURSUIT-EVASION GAMES. International Game Theory Review, 2010, 12, 1-17.	0.5	77
63	Vision-based target tracking and motion estimation using a small UAV. , 2010, , .		41
64	Robustness of ℒ$_1$ adaptive controllers in the gap metric in the presence of nonzero initialization. , 2010, , .		1
65	Robustness of L<inf>1</inf> adaptive controllers in the gap metric. , 2010, , .		2
66	Control of continuous-time systems with communication constraints: Linear quadratic stabilization and fundamental limitations. , 2010, , .		0
67	Path Following for Small Unmanned Aerial Vehicles Using L1 Adaptive Augmentation of Commercial Autopilots. Journal of Guidance, Control, and Dynamics, 2010, 33, 550-564.	2.8	137
68	â„'$_1$Adaptive Control Theory. , 2010, , .		366
69	Integrated estimator and L<inf>1</inf> adaptive controller for well drilling systems. , 2009, , .		2
70	**â„'** $_1$ adaptive controller for tailless unstable aircraft in the presence of unknown actuator failures. International Journal of Control, 2009, 82, 705-720.	1.9	47
71	L1 Adaptive Output-Feedback Controller for Non-Strictly-Positive-Real Reference Systems: Missile Longitudinal Autopilot Design. Journal of Guidance, Control, and Dynamics, 2009, 32, 717-726.	2.8	107
72	Adaptive Dynamic Inversion for Nonaffine-in-Control Uncertain Systems via Time-Scale Separation. Part II. Journal of Dynamical and Control Systems, 2008, 14, 33-41.	0.8	22

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73	L1 Adaptive Controller for a Missile longitudinal Autopilot Design. , 2008, , .		21
74	${cal L}_1$ Adaptive Output Feedback Controller for Systems of Unknown Dimension. IEEE Transactions on Automatic Control, 2008, 53, 815-821.	5.7	71
75	Design and Analysis of a Novel ${cal L}_1$ Adaptive Control Architecture With Guaranteed Transient Performance. IEEE Transactions on Automatic Control, 2008, 53, 586-591.	5.7	339
76	Dynamic inversion for multivariable non-affine-in-control systems via time-scale separation. International Journal of Control, 2008, 81, 1960-1967.	1.9	22
77	L<inf>1</inf> adaptive controller for multi-input multi-output systems in the presence of unmatched disturbances. , 2008, , .		7
78	L<inf>1</inf> adaptive controller for nonlinear systems in the presence of unmodelled dynamics: Part II. , 2008, , .		16
79	L<inf>1</inf> adaptive controller for a class of systems with unknown nonlinearities: Part I. , 2008, , .		24
80	Novel L1 Adaptive Control Methodology for Aerial Refueling with Guaranteed Transient Performance. Journal of Guidance, Control, and Dynamics, 2008, 31, 182-193.	2.8	66
81	Vision-based tracking using intelligent excitation. International Journal of Control, 2008, 81, 1763-1778.	1.9	5
82	Range Identification in the Presence of Unknown Motion Parameters for Perspective Vision Systems. Proceedings of the American Control Conference, 2007, , .	0.0	9
83	L1 Adaptive Output Feedback Controller to Systems of Unknown Dimension. Proceedings of the American Control Conference, 2007, , .	0.0	21
84	Guaranteed Transient Performance with L1 Adaptive Controller for Systems with Unknown Time-varying Parameters and Bounded Disturbances: Part I. Proceedings of the American Control Conference, 2007, , .	0.0	70
85	L<inf>1</inf> adaptive controller for systems in the presence of unmodelled actuator dynamics. , 2007, , .		11
86	L1 Adaptive Control of a UAV for Aerobiological Sampling. Proceedings of the American Control Conference, 2007, , .	0.0	10
87	Guaranteed Transient Performance with L<sub>1</sub> Adaptive Controller for Parametric Strict Feedback Systems. , 2007, , .		1
88	L1 Adaptive Output Feedback Controller for Systems with Time-varying Unknown Parameters and Bounded Disturbances. Proceedings of the American Control Conference, 2007, , .	0.0	28
89	L1 Adaptive Controller for Tailless Unstable Aircraft. Proceedings of the American Control Conference, 2007, , .	0.0	19
90	Stabilization of Cascaded Systems via L1 Adaptive Controller with Application to a UAV Path Following Problem and Flight Test Results. Proceedings of the American Control Conference, 2007, , .	0.0	33

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91	Novel â…,<inf>1</inf> neural network adaptive control architecture with guaranteed transient performance. , 2007, , .		4
92	Time-critical coordinated path following for multiple UAVs via L<inf>1</inf> adaptive output feedback controllers. , 2007, , .		4
93	Dynamic Inversion for Nonaffine-in-Control Systems via Time-Scale Separation. Part I. Journal of Dynamical and Control Systems, 2007, 13, 451-465.	0.8	87
94	Adaptive Dynamic Inversion via Time-Scale Separation. , 2006, , .		13
95	Decentralized adaptive output feedback control via input/output inversion. International Journal of Control, 2006, 79, 1538-1551.	1.9	8
96	Adaptive output feedback control of a class of multi-input multi-output systems using neural networks. International Journal of Control, 2004, 77, 1318-1329.	1.9	58