Yang Zheng

List of Publications by Year in descending order

57	3,291	394421	414414
papers	citations	19	32
		h-index	g-index

57	57	57	1894
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Platoon Control of Connected Vehicles from a Networked Control Perspective: Literature Review, Component Modeling, and Controller Synthesis. IEEE Transactions on Vehicular Technology, 2024, , 1-1.	6.3	43
2	Sum-of-squares chordal decomposition of polynomial matrix inequalities. Mathematical Programming, 2023, 197, 71-108.	2.4	4
3	Block Factor-Width-Two Matrices and Their Applications to Semidefinite and Sum-of-Squares Optimization. IEEE Transactions on Automatic Control, 2023, 68, 943-958.	5.7	2
4	Connectivity of the Feasible and Sublevel Sets of Dynamic Output Feedback Control With Robustness Constraints. , 2023, 7, 442-447.		4
5	Leading Cruise Control in Mixed Traffic Flow: System Modeling, Controllability, and String Stability. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 12861-12876.	8.0	31
6	Decomposed structured subsets for semidefinite and sum-of-squares optimization. Automatica, 2022, 137, 110125.	5.0	2
7	Cooperative Formation of Autonomous Vehicles in Mixed Traffic Flow: Beyond Platooning. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 15951-15966.	8.0	27
8	System-level, input–output and new parameterizations of stabilizing controllers, and their numerical computation. Automatica, 2022, 140, 110211.	5.0	4
9	Controllability Analysis and Optimal Control of Mixed Traffic Flow With Human-Driven and Autonomous Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 7445-7459.	8.0	65
10	On the Equivalence of Youla, System-Level, and Input–Output Parameterizations. IEEE Transactions on Automatic Control, 2021, 66, 413-420.	5.7	18
11	Non-asymptotic Identification of Linear Dynamical Systems Using Multiple Trajectories. , 2021, , .		1
12	Efficient Neural Network Verification via Layer-based Semidefinite Relaxations and Linear Cuts. , 2021, , .		9
13	Non-Asymptotic Identification of Linear Dynamical Systems Using Multiple Trajectories. , 2021, 5, 1693-1698.		28
14	Chordal and factor-width decompositions for scalable semidefinite and polynomial optimization. Annual Reviews in Control, 2021, 52, 243-279.	7.9	17
15	Distributed Design for Decentralized Control Using Chordal Decomposition and ADMM. IEEE Transactions on Control of Network Systems, 2020, 7, 614-626.	3.7	10
16	Chordal decomposition in operator-splitting methods for sparse semidefinite programs. Mathematical Programming, 2020, 180, 489-532.	2.4	41
17	On the Existence of Block-Diagonal Solutions to Lyapunov and ${\mathcal {H}_\infty }$ Riccati Inequalities. IEEE Transactions on Automatic Control, 2020, 65, 3170-3175.	5.7	5
18	Transfer learning with deep neural networks for model predictive control of HVAC and natural ventilation in smart buildings. Journal of Cleaner Production, 2020, 254, 119866.	9.3	147

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19	Sparsity Invariance for Convex Design of Distributed Controllers. IEEE Transactions on Control of Network Systems, 2020, 7, 1836-1847.	3.7	17
20	Smoothing Traffic Flow via Control of Autonomous Vehicles. IEEE Internet of Things Journal, 2020, 7, 3882-3896.	8.7	98
21	Optimal Formation of Autonomous Vehicles in Mixed Traffic Flow. IFAC-PapersOnLine, 2020, 53, 15204-15210.	0.9	4
22	Impact of Disturbances on Mixed Traffic Control with Autonomous Vehicles. , 2020, , .		4
23	An Input–Output Parametrization of Stabilizing Controllers: Amidst Youla and System Level Synthesis. , 2019, 3, 1014-1019.		30
24	Controllability Analysis and Optimal Controller Synthesis of Mixed Traffic Systems. , 2019, , .		8
25	On Separable Quadratic Lyapunov Functions for Convex Design of Distributed Controllers. , 2019, , .		7
26	Reducing time headway for platooning of connected vehicles via V2V communication. Transportation Research Part C: Emerging Technologies, 2019, 102, 87-105.	7.6	163
27	Chordal Decomposition in Rank Minimized Semidefinite Programs with Applications to Subspace Clustering. , 2019, , .		1
28	Sparse sum-of-squares (SOS) optimization: A bridge between DSOS/SDSOS and SOS optimization for sparse polynomials. , 2019, , .		10
29	Fast ADMM for Sum-of-Squares Programs Using Partial Orthogonality. IEEE Transactions on Automatic Control, 2019, 64, 3869-3876.	5.7	13
30	Distributed Platoon Control Under Topologies With Complex Eigenvalues: Stability Analysis and Controller Synthesis. IEEE Transactions on Control Systems Technology, 2019, 27, 206-220.	5.2	91
31	Block Factor-Width-Two Matrices in Semidefinite Programming. , 2019, , .		3
32	Robust cooperation of connected vehicle systems with eigenvalue-bounded interaction topologies in the presence of uncertain dynamics. Frontiers of Mechanical Engineering, 2018, 13, 354-367.	4.3	16
33	Crash probability estimation via quantifying driver hazard perception. Accident Analysis and Prevention, 2018, 116, 116-125.	5.7	22
34	Scalable Design of Structured Controllers Using Chordal Decomposition. IEEE Transactions on Automatic Control, 2018, 63, 752-767.	5.7	30
35	Platooning of Connected Vehicles With Undirected Topologies: Robustness Analysis and Distributed H-infinity Controller Synthesis. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 1353-1364.	8.0	143
36	Parallel Optimal Control for Cooperative Automation of Large-scale Connected Vehicles via ADMM. , 2018, , .		18

#	ARTICLE	IF	CITATIONS
37	Scalable analysis of linear networked systems via chordal decomposition. , 2018, , .		6
38	Decomposition and Completion of Sum-of-Squares Matrices. , 2018, , .		3
39	Reducing Time Headway for Platoons of Connected Vehicles via Multiple-Predecessor Following. , 2018, , .		12
40	Dynamical Modeling and Distributed Control of Connected and Automated Vehicles: Challenges and Opportunities. IEEE Intelligent Transportation Systems Magazine, 2017, 9, 46-58.	3.8	270
41	Exploiting Sparsity in the Coefficient Matching Conditions in Sum-of-Squares Programming Using ADMM. , 2017, 1, 80-85.		17
42	Distributed Model Predictive Control for Heterogeneous Vehicle Platoons Under Unidirectional Topologies. IEEE Transactions on Control Systems Technology, 2017, 25, 899-910.	5.2	383
43	Improving efficiency and scalability of sum of squares optimization: Recent advances and limitations. , 2017, , .		16
44	Fast ADMM for semidefinite programs with chordal sparsity. , 2017, , .		25
45	A chordal decomposition approach to scalable design of structured feedback gains over directed graphs. , 2016, , .		4
46	Evaluation of Forward Collision Avoidance system using driver's hazard perception. , 2016, , .		3
47	Distributed sliding mode control for multi-vehicle systems with positive definite topologies. , 2016, , .		40
48	Robust control of heterogeneous vehicular platoon with uncertain dynamics and communication delay. IET Intelligent Transport Systems, 2016, 10, 503-513.	3.0	169
49	Stability Margin Improvement of Vehicular Platoon Considering Undirected Topology and Asymmetric Control. IEEE Transactions on Control Systems Technology, 2016, 24, 1253-1265.	5.2	185
50	Stability and Scalability of Homogeneous Vehicular Platoon: Study on the Influence of Information Flow Topologies. IEEE Transactions on Intelligent Transportation Systems, 2016, 17, 14-26.	8.0	510
51	Effect of Pulseâ€andâ€Glide Strategy on Traffic Flow for a Platoon of Mixed Automated and Manually Driven Vehicles. Computer-Aided Civil and Infrastructure Engineering, 2015, 30, 892-905.	9.8	69
52	Scalability limitation of homogeneous vehicular platoon under undirected information flow topology and constant spacing policy. , 2015, , .		9
53	An overview of vehicular platoon control under the four-component framework. , 2015, , .		151
54	Longitudinal collision mitigation via coordinated braking of multiple vehicles using model predictive control. Integrated Computer-Aided Engineering, 2015, 22, 171-185.	4.6	80

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55	Driving risk assessment using near-crash database through data mining of tree-based model. Accident Analysis and Prevention, 2015, 84, 54-64.	5.7	100
56	Influence of information flow topology on closed-loop stability of vehicle platoon with rigid formation. , 2014, , .		83
57	Driving risk assessment using cluster analysis based on naturalistic driving data. , 2014, , .		20