

Yang Zheng

List of Publications by Year in descending order

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57
docs citations

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times ranked

1894
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | 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 |
| 2 | Distributed Model Predictive Control for Heterogeneous Vehicle Platoons Under Unidirectional Topologies. IEEE Transactions on Control Systems Technology, 2017, 25, 899-910. | 5.2 | 383 |
| 3 | 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 |
| 4 | 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 |
| 5 | Robust control of heterogeneous vehicular platoon with uncertain dynamics and communication delay. IET Intelligent Transport Systems, 2016, 10, 503-513. | 3.0 | 169 |
| 6 | Reducing time headway for platooning of connected vehicles via V2V communication. Transportation Research Part C: Emerging Technologies, 2019, 102, 87-105. | 7.6 | 163 |
| 7 | An overview of vehicular platoon control under the four-component framework. , 2015, , . | | 151 |
| 8 | 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 |
| 9 | 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 |
| 10 | 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 |
| 11 | Smoothing Traffic Flow via Control of Autonomous Vehicles. IEEE Internet of Things Journal, 2020, 7, 3882-3896. | 8.7 | 98 |
| 12 | 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 |
| 13 | Influence of information flow topology on closed-loop stability of vehicle platoon with rigid formation. , 2014, , . | | 83 |
| 14 | Longitudinal collision mitigation via coordinated braking of multiple vehicles using model predictive control. Integrated Computer-Aided Engineering, 2015, 22, 171-185. | 4.6 | 80 |
| 15 | Effect of Pulse-and-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 |
| 16 | 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 |
| 17 | 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 |
| 18 | Chordal decomposition in operator-splitting methods for sparse semidefinite programs. Mathematical Programming, 2020, 180, 489-532. | 2.4 | 41 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Distributed sliding mode control for multi-vehicle systems with positive definite topologies. , 2016, , . | | 40 |
| 20 | 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 |
| 21 | Scalable Design of Structured Controllers Using Chordal Decomposition. IEEE Transactions on Automatic Control, 2018, 63, 752-767. | 5.7 | 30 |
| 22 | An Input-Output Parametrization of Stabilizing Controllers: Amidst Youla and System Level Synthesis. , 2019, 3, 1014-1019. | | 30 |
| 23 | Non-Asymptotic Identification of Linear Dynamical Systems Using Multiple Trajectories. , 2021, 5, 1693-1698. | | 28 |
| 24 | Cooperative Formation of Autonomous Vehicles in Mixed Traffic Flow: Beyond Platooning. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 15951-15966. | 8.0 | 27 |
| 25 | Fast ADMM for semidefinite programs with chordal sparsity. , 2017, , . | | 25 |
| 26 | Crash probability estimation via quantifying driver hazard perception. Accident Analysis and Prevention, 2018, 116, 116-125. | 5.7 | 22 |
| 27 | Driving risk assessment using cluster analysis based on naturalistic driving data. , 2014, , . | | 20 |
| 28 | Parallel Optimal Control for Cooperative Automation of Large-scale Connected Vehicles via ADMM. , 2018, , . | | 18 |
| 29 | On the Equivalence of Youla, System-Level, and Input-Output Parameterizations. IEEE Transactions on Automatic Control, 2021, 66, 413-420. | 5.7 | 18 |
| 30 | Exploiting Sparsity in the Coefficient Matching Conditions in Sum-of-Squares Programming Using ADMM. , 2017, 1, 80-85. | | 17 |
| 31 | Sparsity Invariance for Convex Design of Distributed Controllers. IEEE Transactions on Control of Network Systems, 2020, 7, 1836-1847. | 3.7 | 17 |
| 32 | Chordal and factor-width decompositions for scalable semidefinite and polynomial optimization. Annual Reviews in Control, 2021, 52, 243-279. | 7.9 | 17 |
| 33 | Improving efficiency and scalability of sum of squares optimization: Recent advances and limitations. , 2017, , . | | 16 |
| 34 | 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 |
| 35 | Fast ADMM for Sum-of-Squares Programs Using Partial Orthogonality. IEEE Transactions on Automatic Control, 2019, 64, 3869-3876. | 5.7 | 13 |
| 36 | Reducing Time Headway for Platoons of Connected Vehicles via Multiple-Predecessor Following. , 2018, , . | | 12 |

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| 37 | Sparse sum-of-squares (SOS) optimization: A bridge between DSOS/SDSOS and SOS optimization for sparse polynomials. , 2019, , . | | 10 |
| 38 | Distributed Design for Decentralized Control Using Chordal Decomposition and ADMM. IEEE Transactions on Control of Network Systems, 2020, 7, 614-626. | 3.7 | 10 |
| 39 | Scalability limitation of homogeneous vehicular platoon under undirected information flow topology and constant spacing policy. , 2015, , . | | 9 |
| 40 | Efficient Neural Network Verification via Layer-based Semidefinite Relaxations and Linear Cuts. , 2021, , . | | 9 |
| 41 | Controllability Analysis and Optimal Controller Synthesis of Mixed Traffic Systems. , 2019, , . | | 8 |
| 42 | On Separable Quadratic Lyapunov Functions for Convex Design of Distributed Controllers. , 2019, , . | | 7 |
| 43 | Scalable analysis of linear networked systems via chordal decomposition. , 2018, , . | | 6 |
| 44 | On the Existence of Block-Diagonal Solutions to Lyapunov and \mathcal{H}_∞ Riccati Inequalities. IEEE Transactions on Automatic Control, 2020, 65, 3170-3175. | 5.7 | 5 |
| 45 | A chordal decomposition approach to scalable design of structured feedback gains over directed graphs. , 2016, , . | | 4 |
| 46 | Optimal Formation of Autonomous Vehicles in Mixed Traffic Flow. IFAC-PapersOnLine, 2020, 53, 15204-15210. | 0.9 | 4 |
| 47 | Impact of Disturbances on Mixed Traffic Control with Autonomous Vehicles. , 2020, , . | | 4 |
| 48 | Sum-of-squares chordal decomposition of polynomial matrix inequalities. Mathematical Programming, 2023, 197, 71-108. | 2.4 | 4 |
| 49 | System-level, input-output and new parameterizations of stabilizing controllers, and their numerical computation. Automatica, 2022, 140, 110211. | 5.0 | 4 |
| 50 | Connectivity of the Feasible and Sublevel Sets of Dynamic Output Feedback Control With Robustness Constraints. , 2023, 7, 442-447. | | 4 |
| 51 | Evaluation of Forward Collision Avoidance system using driver's hazard perception. , 2016, , . | | 3 |
| 52 | Decomposition and Completion of Sum-of-Squares Matrices. , 2018, , . | | 3 |
| 53 | Block Factor-Width-Two Matrices in Semidefinite Programming. , 2019, , . | | 3 |
| 54 | Decomposed structured subsets for semidefinite and sum-of-squares optimization. Automatica, 2022, 137, 110125. | 5.0 | 2 |

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|----|--|-----|-----------|
| 55 | 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 |
| 56 | Chordal Decomposition in Rank Minimized Semidefinite Programs with Applications to Subspace Clustering. , 2019, , . | | 1 |
| 57 | Non-asymptotic Identification of Linear Dynamical Systems Using Multiple Trajectories. , 2021, , . | | 1 |