Jinglai Shen

List of Publications by Year
in descending order

60 papers	980 citations	566801 15 h-index	476904 29 g-index
60 all docs	60 docs citations	60 times ranked	601 citing authors

#	Article	IF	Citations
1	Constrained optimization and distributed computation based car following control of a connected and autonomous vehicle platoon. Transportation Research Part B: Methodological, 2016, 94, 314-334.	2.8	148
2	Linear Complementarity Systems: Zeno States. SIAM Journal on Control and Optimization, 2005, 44, 1040-1066.	1.1	75
3	Conewise Linear Systems: Nonâ€Zenoness and Observability. SIAM Journal on Control and Optimization, 2006, 45, 1769-1800.	1.1	62
4	Lyapunov Stability of Complementarity and Extended Systems. SIAM Journal on Optimization, 2007, 17, 1056-1101.	1.2	62
5	Strongly Regular Differential Variational Systems. IEEE Transactions on Automatic Control, 2007, 52, 242-255.	3.6	47
6	Dynamics and control of a 3D pendulum. , 2004, , .		41
7	Controllability and motion planning of a multibody Chaplygin's sphere and Chaplygin's top. International Journal of Robust and Nonlinear Control, 2008, 18, 905-945.	2.1	41
8	Generating Functions of Switched Linear Systems: Analysis, Computation, and Stability Applications. IEEE Transactions on Automatic Control, 2011, 56, 1059-1074.	3.6	33
9	On the asymptotics of penalized spline smoothing. Electronic Journal of Statistics, 2011, 5, .	0.4	32
10	Stability and Stabilization of Relative Equilibria of Dumbbell Bodies in Central Gravity. Journal of Guidance, Control, and Dynamics, 2005, 28, 833-842.	1.6	30
11	Mathematical Models for the Triaxial Attitude Control Testbed. Mathematical and Computer Modelling of Dynamical Systems, 2003, 9, 165-192.	1.4	21
12	Hybrid MPC System for Platoon based Cooperative Lane change Control Using Machine Learning Aided Distributed Optimization. Transportation Research Part B: Methodological, 2022, 159, 104-142.	2.8	21
13	Semicopositive linear complementarity systems. International Journal of Robust and Nonlinear Control, 2007, 17, 1367-1386.	2.1	20
14	Stability of Discrete-Time Switched Homogeneous Systems on Cones and Conewise Homogeneous Inclusions. SIAM Journal on Control and Optimization, 2012, 50, 2216-2253.	1.1	20
15	Translational and Rotational Maneuvers of an Underactuated Space Robot using Prismatic Actuators. International Journal of Robotics Research, 2002, 21, 607-618.	5.8	18
16	Least Sparsity of p-Norm Based Optimization Problems with $p>1$. SIAM Journal on Optimization, 2018, 28, 2721-2751.	1.2	17
17	Local Equilibrium Controllability of Multibody Systems Controlled via Shape Change. IEEE Transactions on Automatic Control, 2004, 49, 506-520.	3.6	16
18	Switching and stability properties of conewise linear systems. ESAIM - Control, Optimisation and Calculus of Variations, 2010, 16, 764-793.	0.7	16

#	Article	IF	Citations
19	Resilient Stabilization of Switched Linear Control Systems Against Adversarial Switching. IEEE Transactions on Automatic Control, 2017, 62, 3820-3834.	3.6	16
20	Estimation of Monotone Functions via *P*-Splines: A Constrained Dynamical Optimization Approach. SIAM Journal on Control and Optimization, 2011, 49, 646-671.	1.1	15
21	Linear Complementarity Systems with Singleton Properties: Non-Zenoness. Proceedings of the American Control Conference, 2007, , .	0.0	14
22	Quadratic stability and stabilization of bimodal piecewise linear systems. Automatica, 2014, 50, 1444-1450.	3.0	14
23	A class of grouped Brunk estimators and penalized spline estimators for monotone regression. Biometrika, 2010, 97, 585-601.	1.3	12
24	Fully Distributed Optimization-Based CAV Platooning Control Under Linear Vehicle Dynamics. Transportation Science, 2022, 56, 381-403.	2.6	12
25	Positive Invariance of Constrained Affine Dynamics and Its Applications to Hybrid Systems and Safety Verification. IEEE Transactions on Automatic Control, 2012, 57, 3-18.	3.6	11
26	Equations of motion for the triaxial attitude control testbed. , 0, , .		10
27	Globally convergent adaptive tracking of spacecraft angular velocity with inertia identification and adaptive linearization. , 0, , .		10
28	Shape change actuation for precision attitude control. IEEE Control Systems, 2003, 23, 44-56.	1.0	10
29	Shape restricted smoothing splines via constrained optimal control and nonsmooth Newtonâ€™s methods. Automatica, 2015, 53, 216-224.	3.0	10
30	Observability analysis of conewise linear systems via directional derivative and positive invariance techniques. Automatica, 2010, 46, 843-851.	3.0	9
31	Uniform Convergence and Rate Adaptive Estimation of Convex Functions via Constrained Optimization. SIAM Journal on Control and Optimization, 2013, 51, 2753-2787.	1.1	8
32	Robust Non-Zenoness of Piecewise Affine Systems with Applications to Linear Complementarity Systems. SIAM Journal on Optimization, 2014, 24, 2023-2056.	1.2	8
33	Semistability of switched linear systems with applications to distributed sensor networks: A generating function approach. , 2011, , .		7
34	Air spindle attitude control via proof mass actuators. , 0, , .		6
35	Integral tau methods for stiff stochastic chemical systems. Journal of Chemical Physics, 2011, 134, 044129.	1.2	6
36	Semistability of switched linear systems with application to PageRank algorithms. European Journal of Control, 2014, 20, 132-140.	1.6	6

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37	Solution uniqueness of convex piecewise affine functions based optimization with applications to constrained <i>â„</i>₁ minimization. ESAIM - Control, Optimisation and Calculus of Variations, 2019, 25, 56.	0.7	6
38	Nonconvex, Fully Distributed Optimization Based CAV Platooning Control Under Nonlinear Vehicle Dynamics. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 20506-20521.	4.7	6
39	Translational and rotational spacecraft maneuvers via shape change actuators. , 2001, , .		5
40	Local equilibrium controllability of the triaxial attitude control testbed. , 0, , .		5
41	Controllability and motion planning of multibody systems with nonholonomic constraints. , 0, , .		5
42	Dynamics and control of an elastic dumbbell spacecraft in a central gravitational field. , 0, , .		5
43	A penalty decomposition algorithm with greedy improvement for meanâ€reverting portfolios with sparsity and volatility constraints. International Transactions in Operational Research, 2023, 30, 2415-2435.	1.8	5
44	Attitude control of a tilted air spindle testbed using proof mass actuators. , 2002, , .		4
45	Asymptotic stability of rigid body attitude systems. , 0, , .		4
46	Stability of discrete-time conewise linear inclusions and switched linear systems. , 2010, , .		4
47	Stability of switched linear systems on cones: A generating function approach. , 2010, , .		4
48	A study of the generalized input-to-state ℒ<inf>2</inf>-gain of discrete-time switched linear systems. , 2011, , .		4
49	A constrained optimal control approach to smoothing splines. , 2011, , .		4
50	Generalized Input-to-State ell_2-Gains of Discrete-Time Switched Linear Control Systems. SIAM Journal on Control and Optimization, 2016, 54, 1475-1503.	1.1	4
51	A computational approach to conflict detection problems for air traffic control. , 1999, , .		3
52	Estimation of shape constrained functions in dynamical systems and its application to gene networks. , 2010, , .		2
53	Convex regression via penalized splines: A complementarity approach. , 2012, , .		2
54	Minimax Lower Bound and Optimal Estimation of Convex Functions in the Sup-Norm. IEEE Transactions on Automatic Control, 2017, 62, 3482-3487.	3.6	2

#	Article	IF	Citations
55	Stabilization of Switched Linear Systems Using Continuous Control Input against Known Adversarial Switching. , 2018, , .		1
56	A two stage k-monotone B-spline regression estimator: Uniform Lipschitz property and optimal convergence rate. Electronic Journal of Statistics, 2018, 12, .	0.4	1
57	Robust non-Zenoness of piecewise analytic systems with applications to complementarity systems. , 2010, , .		0
58	Addendum to â€œGenerating Functions of Switched Linear Systems: Analysis, Computation, and Stability Applicationsâ€•[May 11 1059-1074]. IEEE Transactions on Automatic Control, 2013, 58, 1887-1887.	3.6	0
59	Minimax Lower Bound of k-Monotone Estimation in the Sup-norm. , 2019, , .		0
60	Column Partition Based Distributed Algorithms for Coupled Convex Sparse Optimization: Dual and Exact Regularization Approaches. IEEE Transactions on Signal and Information Processing Over Networks, 2021, 7, 375-391.	1.6	0