Joseph K Scott

List of Publications by Year
in descending order

42 papers	1,199 citations	471509 17 h-index	477307 29 g-index
42 all docs	42 docs citations	42 times ranked	597 citing authors

#	Article	IF	Citations
1	Improved Interval Reachability Bounds for Nonlinear Discrete-Time Systems using an Efficient One-Dimensional Partitioning Method. , 2021, , .		1
2	Set-valued state estimation of nonlinear discrete-time systems with nonlinear invariants based on constrained zonotopes. Automatica, 2021, 129, 109638.	5.0	20
3	Tight reachability bounds for constrained nonlinear systems using mean value differential inequalities. Automatica, 2021, 134, 109911.	5.0	2
4	Framework for predicting the fractionation of complex liquid feeds via polymer membranes. Journal of Membrane Science, 2021, 640, 119767.	8.2	21
5	Guaranteed methods based on constrained zonotopes for set-valued state estimation of nonlinear discrete-time systems. Automatica, 2020, 111, 108614.	5.0	40
6	Accurate Uncertainty Propagation for Discrete-Time Nonlinear Systems Using Differential Inequalities With Model Redundancy. IEEE Transactions on Automatic Control, 2020, 65, 5043-5057.	5.7	6
7	Exploiting nonlinear invariants and path constraints to achieve tighter reachable set enclosures using differential inequalities. Mathematics of Control, Signals, and Systems, 2020, 32, 101-127.	2.3	5
8	Convergence-order analysis for differential-inequalities-based bounds and relaxations of the solutions of ODEs. Journal of Global Optimization, 2019, 73, 113-151.	1.8	8
9	Global Solution Strategies for the Network-Constrained Unit Commitment Problem With AC Transmission Constraints. IEEE Transactions on Power Systems, 2019, 34, 1139-1150.	6.5	29
10	Convex relaxations for global optimization under uncertainty described by continuous random variables. AICHE Journal, 2018, 64, 3023-3033.	3.6	1
11	Efficient Reachability Bounds for Discrete-Time Nonlinear Systems by Extending the Continuous-Time Theory of Differential Inequalities. , 2018, , .		7
12	Accurate Set-Based State Estimation for Nonlinear Discrete-Time Systems using Differential Inequalities with Model Redundancy. , 2018, , .		2
13	Mean Value Form Enclosures for Nonlinear Reachability Analysis. , 2018, , .		4
14	Tight Reachability Bounds for Nonlinear Systems Using Nonlinear and Uncertain Solution Invariants. , 2018, , .		6
15	Convex Relaxations for Nonlinear Stochastic Optimal Control Problems. , 2018, , .		1
16	A comparison of zonotope order reduction techniques. Automatica, 2018, 95, 378-384.	5.0	46
17	Differentiability Conditions for Stochastic Hybrid Systems with Application to the Optimal Design of Microgrids. Journal of Optimization Theory and Applications, 2017, 173, 658-682.	1.5	3
18	Rapid and accurate reachability analysis for nonlinear dynamic systems by exploiting model redundancy. Computers and Chemical Engineering, 2017, 106, 596-608.	3.8	23

#	ARTICLE	IF	CITATIONS
19	Closed-loop input design for guaranteed fault diagnosis using set-valued observers. Automatica, 2016, 74, 107-117.	5.0	77
20	Microkinetic model for the dry reforming of methane on Rh doped pyrochlore catalysts. Journal of Catalysis, 2016, 340, 196-204.	6.2	34
21	Bounds on reachable sets using ordinary differential equations with linear programs embedded. IMA Journal of Mathematical Control and Information, 2016, 33, 519-541.	1.7	12
22	Constrained zonotopes: A new tool for set-based estimation and fault detection. Automatica, 2016, 69, 126-136.	5.0	198
23	Using degrees of rate control to improve selective n-butane oxidation over model MOF-encapsulated catalysts: sterically-constrained Ag_3Pd(111). Faraday Discussions, 2016, 188, 21-38.	3.2	15
24	Reverse propagation of McCormick relaxations. Journal of Global Optimization, 2015, 63, 1-36.	1.8	20
25	Convex and concave relaxations of implicit functions. Optimization Methods and Software, 2015, 30, 424-460.	2.4	36
26	Reachability Analysis and Deterministic Global Optimization of DAE Models. Differential-algebraic Equations Forum, 2015, , 61-116.	0.6	7
27	Input design for guaranteed fault diagnosis using zonotopes. Automatica, 2014, 50, 1580-1589.	5.0	149
28	Nonlinear convex and concave relaxations for the solutions of parametric ODEs. Optimal Control Applications and Methods, 2013, 34, 145-163.	2.1	33
29	Improved relaxations for the parametric solutions of ODEs using differential inequalities. Journal of Global Optimization, 2013, 57, 143-176.	1.8	39
30	Convex and Concave Relaxations for the Parametric Solutions of Semi-explicit Index-One Differential-Algebraic Equations. Journal of Optimization Theory and Applications, 2013, 156, 617-649.	1.5	22
31	Interval bounds on the solutions of semi-explicit index-one DAEs. Part 1: analysis. Numerische Mathematik, 2013, 125, 1-25.	1.9	14
32	Interval bounds on the solutions of semi-explicit index-one DAEs. Part 2: computation. Numerische Mathematik, 2013, 125, 27-60.	1.9	9
33	Fault-tolerant model predictive control with active fault isolation. , 2013, , .		31
34	Bounds on the reachable sets of nonlinear control systems. Automatica, 2013, 49, 93-100.	5.0	87
35	A hybrid stochastic-deterministic input design method for active fault diagnosis. , 2013, , .		23
36	Design of active inputs for set-based fault diagnosis. , 2013, , .		26

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37	Bounds on Reachable Sets Using Ordinary Differential Equations with Linear Programs Embedded. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 62-67.	0.4	1
38	Active fault diagnosis using moving horizon input design. , 2013, , .		17
39	Convex relaxations for nonconvex optimal control problems. , 2011, , .		11
40	Generalized McCormick relaxations. Journal of Global Optimization, 2011, 51, 569-606.	1.8	78
41	Tight, efficient bounds on the solutions of chemical kinetics models. Computers and Chemical Engineering, 2010, 34, 717-731.	3.8	33
42	Convex enclosures for the reachable sets of nonlinear parametric ordinary differential equations. , 2010, , .		2