Joseph K Scott

List of Publications by Year
in descending order

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

#	Article	IF	Citations
1	Constrained zonotopes: A new tool for set-based estimation and fault detection. Automatica, 2016, 69, 126-136.	5.0	198
2	Input design for guaranteed fault diagnosis using zonotopes. Automatica, 2014, 50, 1580-1589.	5.0	149
3	Bounds on the reachable sets of nonlinear control systems. Automatica, 2013, 49, 93-100.	5.0	87
4	Generalized McCormick relaxations. Journal of Global Optimization, 2011, 51, 569-606.	1.8	78
5	Closed-loop input design for guaranteed fault diagnosis using set-valued observers. Automatica, 2016, 74, 107-117.	5.0	77
6	A comparison of zonotope order reduction techniques. Automatica, 2018, 95, 378-384.	5.0	46
7	Guaranteed methods based on constrained zonotopes for set-valued state estimation of nonlinear discrete-time systems. Automatica, 2020, 111, 108614.	5.0	40
8	Improved relaxations for the parametric solutions of ODEs using differential inequalities. Journal of Global Optimization, 2013, 57, 143-176.	1.8	39
9	Convex and concave relaxations of implicit functions. Optimization Methods and Software, 2015, 30, 424-460.	2.4	36
10	Microkinetic model for the dry reforming of methane on Rh doped pyrochlore catalysts. Journal of Catalysis, 2016, 340, 196-204.	6.2	34
11	Tight, efficient bounds on the solutions of chemical kinetics models. Computers and Chemical Engineering, 2010, 34, 717-731.	3.8	33
12	Nonlinear convex and concave relaxations for the solutions of parametric ODEs. Optimal Control Applications and Methods, 2013, 34, 145-163.	2.1	33
13	Fault-tolerant model predictive control with active fault isolation. , 2013, , .		31
14	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
15	Design of active inputs for set-based fault diagnosis. , 2013, , .		26
16	A hybrid stochastic-deterministic input design method for active fault diagnosis. , 2013, , .		23
17	Rapid and accurate reachability analysis for nonlinear dynamic systems by exploiting model redundancy. Computers and Chemical Engineering, 2017, 106, 596-608.	3.8	23
18	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

#	ARTICLE	IF	CITATIONS
19	Framework for predicting the fractionation of complex liquid feeds via polymer membranes. Journal of Membrane Science, 2021, 640, 119767.	8.2	21
20	Reverse propagation of McCormick relaxations. Journal of Global Optimization, 2015, 63, 1-36.	1.8	20
21	Set-valued state estimation of nonlinear discrete-time systems with nonlinear invariants based on constrained zonotopes. Automatica, 2021, 129, 109638.	5.0	20
22	Active fault diagnosis using moving horizon input design. , 2013, , .		17
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	Interval bounds on the solutions of semi-explicit index-one DAEs. Part 1: analysis. Numerische Mathematik, 2013, 125, 1-25.	1.9	14
25	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
26	Convex relaxations for nonconvex optimal control problems. , 2011, , .		11
27	Interval bounds on the solutions of semi-explicit index-one DAEs. Part 2: computation. Numerische Mathematik, 2013, 125, 27-60.	1.9	9
28	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
29	Efficient Reachability Bounds for Discrete-Time Nonlinear Systems by Extending the Continuous-Time Theory of Differential Inequalities. , 2018, , .		7
30	Reachability Analysis and Deterministic Global Optimization of DAE Models. Differential-algebraic Equations Forum, 2015, , 61-116.	0.6	7
31	Tight Reachability Bounds for Nonlinear Systems Using Nonlinear and Uncertain Solution Invariants. , 2018, , .		6
32	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
33	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
34	Mean Value Form Enclosures for Nonlinear Reachability Analysis. , 2018, , .		4
35	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
36	Convex enclosures for the reachable sets of nonlinear parametric ordinary differential equations. , 2010, , .		2

#	Article	IF	Citations
37	Accurate Set-Based State Estimation for Nonlinear Discrete-Time Systems using Differential Inequalities with Model Redundancy. , 2018, , .		2
38	Tight reachability bounds for constrained nonlinear systems using mean value differential inequalities. Automatica, 2021, 134, 109911.	5.0	2
39	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
40	Convex relaxations for global optimization under uncertainty described by continuous random variables. AICHE Journal, 2018, 64, 3023-3033.	3.6	1
41	Convex Relaxations for Nonlinear Stochastic Optimal Control Problems. , 2018, , .		1
42	Improved Interval Reachability Bounds for Nonlinear Discrete-Time Systems using an Efficient One-Dimensional Partitioning Method. , 2021, , .		1