

Tingshu Hu

List of Publications by Year in descending order

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85
papers

4,858
citations

201385

27
h-index

264894

42
g-index

85
all docs

85
docs citations

85
times ranked

1752
citing authors

#	ARTICLE	IF	CITATIONS
1	Control Systems with Actuator Saturation. , 2001, , .		936
2	An analysis and design method for linear systems subject to actuator saturation and disturbance. Automatica, 2002, 38, 351-359.	3.0	709
3	Analysis and design for discrete-time linear systems subject to actuator saturation. Systems and Control Letters, 2002, 45, 97-112.	1.3	401
4	Composite quadratic Lyapunov functions for constrained control systems. IEEE Transactions on Automatic Control, 2003, 48, 440-450.	3.6	254
5	Stability and Performance for Saturated Systems via Quadratic and Nonquadratic Lyapunov Functions. IEEE Transactions on Automatic Control, 2006, 51, 1770-1786.	3.6	233
6	Anti-windup synthesis for linear control systems with input saturation: Achieving regional, nonlinear performance. Automatica, 2008, 44, 512-519.	3.0	202
7	Analysis of linear systems in the presence of actuator saturation and L2-disturbances. Automatica, 2004, 40, 1229-1238.	3.0	193
8	Stability analysis of linear time-delay systems subject to input saturation. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2002, 49, 233-240.	0.1	192
9	Stabilization of Switched Systems via Composite Quadratic Functions. IEEE Transactions on Automatic Control, 2008, 53, 2571-2585.	3.6	120
10	Absolute Stability With a Generalized Sector Condition. IEEE Transactions on Automatic Control, 2004, 49, 535-548.	3.6	102
11	Exact characterization of invariant ellipsoids for single input linear systems subject to actuator saturation. IEEE Transactions on Automatic Control, 2002, 47, 164-169.	3.6	101
12	Nonlinear control design for linear differential inclusions via convex hull of quadratics. Automatica, 2007, 43, 685-692.	3.0	80
13	Piecewise-quadratic Lyapunov functions for systems with deadzones or saturations. Systems and Control Letters, 2009, 58, 365-371.	1.3	79
14	Conjugate Convex Lyapunov Functions for Dual Linear Differential Inclusions. IEEE Transactions on Automatic Control, 2006, 51, 661-666.	3.6	73
15	An explicit description of null controllable regions of linear systems with saturating actuators. Systems and Control Letters, 2002, 47, 65-78.	1.3	71
16	Non-conservative matrix inequality conditions for stability/stabilizability of linear differential inclusions. Automatica, 2010, 46, 190-196.	3.0	66
17	Stabilization of exponentially unstable linear systems with saturating actuators. IEEE Transactions on Automatic Control, 2001, 45, 973-979.	3.6	64
18	An analysis and design method for linear systems subject to actuator saturation and disturbance. , 2000, , .		58

#	ARTICLE	IF	CITATIONS
19	Control design for robust tracking and smooth transition in power systems with battery/supercapacitor hybrid energy storage devices. <i>Journal of Power Sources</i> , 2014, 267, 566-575.	4.0	58
20	Output Regulation of Linear Systems With Bounded Continuous Feedback. <i>IEEE Transactions on Automatic Control</i> , 2004, 49, 1941-1953.	3.6	54
21	On enlarging the basin of attraction for linear systems under saturated linear feedback. <i>Systems and Control Letters</i> , 2000, 40, 59-69.	1.3	53
22	Output feedback design for saturated linear plants using deadzone loops. <i>Automatica</i> , 2009, 45, 2917-2924.	3.0	52
23	Absolute stability analysis of discrete-time systems with composite quadratic Lyapunov functions. <i>IEEE Transactions on Automatic Control</i> , 2005, 50, 781-797.	3.6	51
24	Properties of the Composite Quadratic Lyapunov Functions. <i>IEEE Transactions on Automatic Control</i> , 2004, 49, 1162-1167.	3.6	50
25	Conjugate Lyapunov functions for saturated linear systems. <i>Automatica</i> , 2005, 41, 1949-1956.	3.0	48
26	Semi-global stabilization with guaranteed regional performance of linear systems subject to actuator saturation. <i>Systems and Control Letters</i> , 2001, 43, 203-210.	1.3	43
27	Dual Matrix Inequalities in Stability and Performance Analysis of Linear Differential/Difference Inclusions. , 2006, , 103-122.		40
28	Null controllable region of LTI discrete-time systems with input saturation. <i>Automatica</i> , 2002, 38, 2009-2013.	3.0	36
29	On maximizing the convergence rate for linear systems with input saturation. <i>IEEE Transactions on Automatic Control</i> , 2003, 48, 1249-1253.	3.6	31
30	Constrained Control Design for Magnetic Bearing Systems. <i>Journal of Dynamic Systems, Measurement and Control</i> , <i>Transactions of the ASME</i> , 2005, 127, 601-616.	0.9	29
31	On semiglobal stabilizability of antistable systems by saturated linear feedback. <i>IEEE Transactions on Automatic Control</i> , 2002, 47, 1193-1198.	3.6	25
32	On improving the performance with bounded continuous feedback laws. <i>IEEE Transactions on Automatic Control</i> , 2002, 47, 1570-1575.	3.6	24
33	On the tightness of a recent set invariance condition under actuator saturation. <i>Systems and Control Letters</i> , 2003, 49, 389-399.	1.3	23
34	Dissipativity for dual linear differential inclusions through conjugate storage functions. , 2004, , .		23
35	Reducing Power Loss in Magnetic Bearings by Optimizing Current Allocation. <i>IEEE Transactions on Magnetics</i> , 2004, 40, 1625-1635.	1.2	21
36	Nonlinear L_2 gain and regional analysis for linear systems with anti-windup compensation. , 0, , .		20

#	ARTICLE	IF	CITATIONS
37	Set invariance and performance analysis of linear systems via truncated ellipsoids. Automatica, 2009, 45, 2046-2051.	3.0	20
38	Practical stabilization of exponentially unstable linear systems subject to actuator saturation nonlinearity and disturbance. International Journal of Robust and Nonlinear Control, 2001, 11, 555-588.	2.1	19
39	Regional anti-windup compensation for linear systems with input saturation. , 0, , .		19
40	Linear discrete-time global and regional anti-windup: an LMI approach. International Journal of Control, 2009, 82, 2179-2192.	1.2	19
41	Control of saturated linear plants via output feedback containing an internal deadzone loop. , 2006, , .		15
42	Exact characterization of invariant ellipsoids for linear systems with saturating actuators. , 0, , .		13
43	On Several Composite Quadratic Lyapunov Functions for Switched Systems. , 2006, , .		13
44	Output regulation of general linear systems with saturating actuators. , 0, , .		10
45	A Unified Lyapunov Approach to Analysis of Oscillations and Stability for Systems With Piecewise Linear Elements. IEEE Transactions on Automatic Control, 2010, 55, 2864-2869.	3.6	10
46	Output regulation of general discrete-time linear systems with saturation nonlinearities. International Journal of Robust and Nonlinear Control, 2002, 12, 1129-1143.	2.1	9
47	Analysis of linear systems in the presence of actuator saturation and L_2 -disturbances. , 0, , .		9
48	Constrained control design of magnetic bearing systems. , 0, , .		7
49	Stability regions for saturated linear systems via conjugate Lyapunov functions. , 2004, , .		6
50	Performance analysis of saturated systems via two forms of differential inclusions. , 0, , .		6
51	Analysis of oscillation and stability for systems with piecewise linear components via saturation functions. , 2009, , .		6
52	Improvement of parametric stability margin under pole assignment. IEEE Transactions on Automatic Control, 1999, 44, 1938-1942.	3.6	5
53	Null controllability and stabilization of linear systems subject to asymmetric actuator saturation. , 0, , .		5
54	Analysis and design for discrete-time linear systems subject to actuator saturation. , 0, , .		5

#	ARTICLE	IF	CITATIONS
55	Switching Law Construction for Discrete-Time Systems Via Composite Quadratic Functions. Proceedings of the American Control Conference, 2007, , .	0.0	5
56	Nonlinear feedback laws for practical stabilization of systems with input and state constraints. , 2008, , .		5
57	The equivalence of several set invariance conditions under saturation. , 0, , .		4
58	Controlled invariance of ellipsoids: linear vs. nonlinear feedback. Systems and Control Letters, 2004, 53, 203-210.	1.3	4
59	Robust stabilization of exponentially unstable linear systems with saturating actuators. , 1999, , .		3
60	Human gait modeling: dealing with holonomic constraints. , 2004, , .		3
61	Magnetically suspended balance beam with disturbances: A test rig for nonlinear output regulation. , 2004, , .		3
62	Analysis of systems with saturation/deadzone via piecewise-quadratic Lyapunov functions. Proceedings of the American Control Conference, 2007, , .	0.0	3
63	Disturbance rejection with saturating actuators for discrete-time linear systems. , 0, , .		3
64	On maximizing the convergence rate for linear systems with input saturation. , 2001, , .		2
65	Convex analysis of invariant sets for a class of nonlinear systems. Systems and Control Letters, 2005, 54, 729-737.	1.3	2
66	Polyhedral functions, composite quadratic functions, and equivalent conditions for stability/stabilization. , 2008, , .		2
67	A complete stability analysis of planar linear systems under saturation. , 0, , .		1
68	Semi-global stabilization of linear systems subject to output saturation. , 0, , .		1
69	Absolute stability with a generalized sector condition. , 0, , .		1
70	Properties of the composite quadratic Lyapunov functions. , 0, , .		1
71	Absolute stability analysis through a connection to saturation nonlinearities. , 2004, , .		1
72	Non-quadratic Lyapunov functions for performance analysis of saturated systems. , 0, , .		1

#	ARTICLE	IF	CITATIONS
73	Active Vibration Control for Uncertain Time-Varying Systems Via Output Feedback. Proceedings of the American Control Conference, 2007, , .	0.0	1
74	Improving performance analysis with structures of outputs and constraints. , 2008, , .		1
75	On enlarging the basin of attraction for linear systems under saturated linear feedback. , 2000, , .		0
76	A complete stability analysis of planar discrete-time linear systems under saturation. , 2001, , .		0
77	Output regulation of general discrete-time linear systems with saturating actuators. , 2001, , .		0
78	On improving the performance with bounded continuous feedback laws. , 0, , .		0
79	Composite quadratic Lyapunov functions. , 0, , .		0
80	On the necessity of a recent set invariance condition under actuator saturation. , 2002, , .		0
81	On semi-global stabilizability of anti-stable systems by saturated linear feedback. , 2002, , .		0
82	Composite quadratic Lyapunov functions for constrained control systems. , 0, , .		0
83	Convex analysis of invariant sets for a class of nonlinear systems. , 2004, , .		0
84	Bounding self-induced oscillations via invariant level sets of piecewise quadratic Lyapunov functions. , 2011, , .		0
85	Output regulation with continuous feedback for linear systems with saturating actuators. , 0, , .		0