Tingshu Hu

List of Publications by Year in Descending Order

54 papers	3,409 citations	24 h-index	58 g-index
85 ext. papers	4,325 ext. citations	4 avg, IF	5.31 L-index

#	Paper	IF	Citations
54	Control design for robust tracking and smooth transition in power systems with battery/supercapacitor hybrid energy storage devices. *Journal of Power Sources*, **2014**, 267, 566-575	8.9	44
53	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	5.9	7
52	Non-conservative matrix inequality conditions for stability/stabilizability of linear differential inclusions. *Automatica*, **2010**, 46, 190-196	5.7	51
51	Linear discrete-time global and regional anti-windup: an LMI approach. *International Journal of Control*, **2009**, 82, 2179-2192	1.5	11
50	Analysis of oscillation and stability for systems with piecewise linear components via saturation functions **2009**,		5
49	Piecewise-quadratic Lyapunov functions for systems with deadzones or saturations. *Systems and Control Letters*, **2009**, 58, 365-371	2.4	59
48	Set invariance and performance analysis of linear systems via truncated ellipsoids. *Automatica*, **2009**, 45, 2046-2051	5.7	15
47	Output feedback design for saturated linear plants using deadzone loops. *Automatica*, **2009**, 45, 2917-2924	5.7	43
46	Stabilization of Switched Systems via Composite Quadratic Functions. *IEEE Transactions on Automatic Control*, **2008**, 53, 2571-2585	5.9	86
45	Polyhedral functions, composite quadratic functions, and equivalent conditions for stability/stabilization **2008**,		2
44	Nonlinear feedback laws for practical stabilization of systems with input and state constraints **2008** ,		5
43	Anti-windup synthesis for linear control systems with input saturation: Achieving regional, nonlinear performance. *Automatica*, **2008**, 44, 512-519	5.7	140
42	Nonlinear control design for linear differential inclusions via convex hull of quadratics. *Automatica*, **2007**, 43, 685-692	5.7	67
41	Switching Law Construction for Discrete-Time Systems Via Composite Quadratic Functions. *Proceedings of the American Control Conference*, **2007**,	1.2	1
40	Analysis of systems with saturation/deadzone via piecewise-quadratic Lyapunov functions. *Proceedings of the American Control Conference*, **2007**,	1.2	3
39	On Several Composite Quadratic Lyapunov Functions for Switched Systems **2006**,		13
38	Conjugate convex Lyapunov functions for dual linear differential inclusions. *IEEE Transactions on Automatic Control*, **2006**, 51, 661-666	5.9	58

37	Stability and Performance for Saturated Systems via Quadratic and Nonquadratic Lyapunov Functions. *IEEE Transactions on Automatic Control*, **2006**, 51, 1770-1786	5.9	173
36	Control of saturated linear plants via output feedback containing an internal deadzone loop **2006**,		7
35	Dual Matrix Inequalities in Stability and Performance Analysis of Linear Differential/Difference Inclusions **2006**, 103-122		22
34	Constrained Control Design for Magnetic Bearing Systems. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2005**, 127, 601-616	1.6	23
33	Absolute stability analysis of discrete-time systems with composite quadratic Lyapunov functions. *IEEE Transactions on Automatic Control*, **2005**, 50, 781-797	5.9	40
32	Convex analysis of invariant sets for a class of nonlinear systems. *Systems and Control Letters*, **2005**, 54, 729-737	2.4	2
31	Conjugate Lyapunov functions for saturated linear systems. *Automatica*, **2005**, 41, 1949-1956	5.7	36
30	Human gait modeling: dealing with holonomic constraints **2004**,		1
29	Dissipativity for dual linear differential inclusions through conjugate storage functions **2004**,		19
28	Reducing power loss in magnetic bearings by optimizing current allocation. *IEEE Transactions on Magnetics*, **2004**, 40, 1625-1635	2	16
27	Controlled invariance of ellipsoids: linear vs. nonlinear feedback. *Systems and Control Letters*, **2004**, 53, 203-210	2.4	2
26	Analysis of linear systems in the presence of actuator saturation and L2-disturbances. *Automatica*, **2004**, 40, 1229-1238	5.7	145
25	Magnetically suspended balance beam with disturbances: A test rig for nonlinear output regulation **2004**,		1
24	Properties of the composite quadratic Lyapunov functions. *IEEE Transactions on Automatic Control*, **2004**, 49, 1162-1167	5.9	39
23	Absolute stability with a generalized sector condition. *IEEE Transactions on Automatic Control*, **2004** , 49, 535-548	5.9	76
22	Output regulation of linear systems with bounded continuous feedback. *IEEE Transactions on Automatic Control*, **2004**, 49, 1941-1953	5.9	37
21	On the tightness of a recent set invariance condition under actuator saturation. *Systems and Control Letters*, **2003**, 49, 389-399	2.4	18
20	Composite quadratic Lyapunov functions for constrained control systems. *IEEE Transactions on Automatic Control*, **2003**, 48, 440-450	5.9	192

19	On maximizing the convergence rate for linear systems with input saturation. *IEEE Transactions on Automatic Control*, **2003**, 48, 1249-1253	5.9	23
18	Analysis and design for discrete-time linear systems subject to actuator saturation. *Systems and Control Letters*, **2002**, 45, 97-112	2.4	308
17	An explicit description of null controllable regions of linear systems with saturating actuators. *Systems and Control Letters*, **2002**, 47, 65-78	2.4	56
16	Output regulation of general discrete-time linear systems with saturation nonlinearities. *International Journal of Robust and Nonlinear Control*, **2002**, 12, 1129-1143	3.6	3
15	An analysis and design method for linear systems subject to actuator saturation and disturbance. *Automatica*, **2002**, 38, 351-359	5.7	522
14	Null controllable region of LTI discrete-time systems with input saturation. *Automatica*, **2002**, 38, 2009-2013	3.7	22
13	On improving the performance with bounded continuous feedback laws. *IEEE Transactions on Automatic Control*, **2002**, 47, 1570-1575	5.9	17
12	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		148
11	On semiglobal stabilizability of antistable systems by saturated linear feedback. *IEEE Transactions on Automatic Control*, **2002**, 47, 1193-1198	5.9	18
10	Exact characterization of invariant ellipsoids for single input linear systems subject to actuator saturation. *IEEE Transactions on Automatic Control*, **2002**, 47, 164-169	5.9	69
9	Semi-global stabilization with guaranteed regional performance of linear systems subject to actuator saturation. *Systems and Control Letters*, **2001**, 43, 203-210	2.4	33
8	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	3.6	12
7	Control Systems with Actuator Saturation **2001**,		649
6	Stabilization of exponentially unstable linear systems with saturating actuators. *IEEE Transactions on Automatic Control*, **2001**, 45, 973-979	5.9	21
5	On enlarging the basin of attraction for linear systems under saturated linear feedback. *Systems and Control Letters*, **2000**, 40, 59-69	2.4	36
4	Improvement of parametric stability margin under pole assignment. *IEEE Transactions on Automatic Control*, **1999**, 44, 1938-1942	5.9	3
3	Properties of the composite quadratic Lyapunov functions		1
2	Regional anti-windup compensation for linear systems with input saturation		7

List of Publications

1 Null controllability and stabilization of linear systems subject to asymmetric actuator saturation 2