

Hiroshi Ito

List of Publications by Year in descending order

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84
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docs citations

84
times ranked

372
citing authors

#	ARTICLE	IF	CITATIONS
1	Strict Lyapunov functions and feedback controls for SIR models with quarantine and vaccination. Discrete and Continuous Dynamical Systems - Series B, 2022, 27, 6969.	0.9	10
2	A Strict Smooth Lyapunov Function and Input-to-State Stability of SIR Model. , 2021, , .		5
3	A Construction of Strict Lyapunov Functions for A Bilinear Balancing Model. IFAC-PapersOnLine, 2021, 54, 161-166.	0.9	6
4	Vaccination with Input-to-State Stability for SIR Model of Epidemics. , 2021, , .		6
5	A Complete Characterization of Integral Input-to-State Stability and Its Small-Gain Theorem for Stochastic Systems. IEEE Transactions on Automatic Control, 2020, 65, 3039-3052.	5.7	15
6	Interval observer of minimal error dynamics. Automatica, 2020, 113, 108794.	5.0	5
7	Interpreting models of infectious diseases in terms of integral input-to-state stability. Mathematics of Control, Signals, and Systems, 2020, 32, 611-631.	2.3	6
8	Strong Integral Input-to-State Stability of Nonlinear Networks through Balancing Kinetics. , 2020, , .		1
9	Asymptotic and tracking guarantees in interval observer design for systems with unmeasured polytopic nonlinearities. IFAC-PapersOnLine, 2020, 53, 5010-5015.	0.9	4
10	Signed Small-Gain Criteria Amenable to Asymmetry with Respect to Equilibria in Establishing iISS of Networks. , 2020, , .		2
11	Smaller and negative exponents in Lyapunov functions for interconnected iISS systems. IFAC-PapersOnLine, 2020, 53, 6287-6292.	0.9	0
12	An intuitive modification of max-separable Lyapunov functions to cover non-ISS systems. Automatica, 2019, 107, 518-525.	5.0	4
13	A Glimpse on Recent Educational Activities in the Nonlinear Control Field. IFAC-PapersOnLine, 2019, 52, 196-199.	0.9	0
14	A geometrical formulation to unify construction of Lyapunov functions for interconnected iISS systems. Annual Reviews in Control, 2019, 48, 195-208.	7.9	2
15	A Fusion of Max- and Sum-Separable Lyapunov Functions Capable of Addressing iISS in Networks. , 2019, , .		0
16	Chamfering Max-Separable Lyapunov Functions to Accept Non-ISS in Interconnected Systems. , 2019, , .		2
17	A Closed Form Expression of Nonlinear Scalings for Lyapunov Functions of ISS Networks. IFAC-PapersOnLine, 2019, 52, 544-549.	0.9	1
18	An Approach to Interval Observers for Takagi-Sugeno Systems with Attractiveness Guarantees. , 2019, , .		7

#	ARTICLE	IF	CITATIONS
19	A Small-Gain Theorem in the Absence of Strong iISS. IEEE Transactions on Automatic Control, 2019, 64, 3897-3904.	5.7	6
20	A Left Eigenvector Producing a Smooth Lyapunov Function of ISS Networks. Lecture Notes in Control and Information Sciences, 2019, , 247-268.	1.0	0
21	Interval observers for global feedback control of nonlinear systems with robustness with respect to disturbances. European Journal of Control, 2018, 39, 68-77.	2.6	19
22	A Smooth Construction of ISS Lyapunov Functions for Interconnected Systems. , 2018, , .		0
23	An Implicit Function Approach to Lyapunov functions for Interconnections Containing Non-ISS Components. IFAC-PapersOnLine, 2018, 51, 254-259.	0.9	3
24	Adaptable iISS Small-Gain Formulation and its Application to Observer-Based Output Feedback Design. , 2018, , .		1
25	Bypassing Disturbance Separability in Verifying Integral Input-to-State Stability of Cascade Systems. , 2018, , .		0
26	Integral Input-to-State Stability of Cascaded Systems and Observer-Based Feedback Design. , 2018, , .		1
27	Relationships Between Subclasses of Integral Input-to-State Stability. IEEE Transactions on Automatic Control, 2017, 62, 2476-2482.	5.7	3
28	Lyapunov Functions to Avoid Squashed Sublevel Sets for Interconnections Containing Non-ISS Components * *The work was supported in part by JSPS KAKENHI Grant Number 26420422.. IFAC-PapersOnLine, 2017, 50, 7427-7432.	0.9	1
29	Path-Wise Bounds and iISS of Nonlinear Systems Exposed to Global Stochastic Noise * *The work was supported in part by JSPS KAKENHI Grant Number 26420422.. IFAC-PapersOnLine, 2017, 50, 7433-7438.	0.9	1
30	A new formulation of small-gain theorem without imposing strong iISS with respect to Disturbances on components. , 2017, , .		3
31	Convergence of stochastic processes in the presence of disturbances: iISS/iSS and their cascades. , 2017, , .		0
32	Relaxing growth rate assumption for integral input-to-state stability of cascade systems. , 2017, , .		1
33	A small-gain-type improved criterion via preservation of iISS/iSS dissipation inequalities. , 2017, , .		5
34	Technical Committee on Nonlinear Systems and Control [Technical Activities]. IEEE Control Systems, 2016, 36, 17-18.	0.8	2
35	Lower-power Lyapunov functions for networks of integral input-to-state stable systems. , 2016, , .		1
36	Stability of systems coupled through noisy mediums. , 2016, , .		4

#	ARTICLE	IF	CITATIONS
37	Stochastic Stability via Lyapunov Functions without Differentiability at Supposed Equilibria**This work was partially supported by Grant-in-Aid for Scientific Research (B) of KAKENHI (15H04022).. IFAC-PapersOnLine, 2016, 49, 321-326.	0.9	1
38	Allowing Nonlinear Stability Margins in Interconnection of iISS Dissipation Inequalities**The work was supported in part by JSPS KAKENHI Grant Number 26420422.. IFAC-PapersOnLine, 2016, 49, 921-926.	0.9	1
39	iISS and ISS dissipation inequalities: preservation and interconnection by scaling. Mathematics of Control, Signals, and Systems, 2016, 28, 1.	2.3	11
40	Allowing vanishing stability margins in preservation of (i)ISS dissipation inequalities by scaling. , 2016, , .		1
41	An iISS Framework for Stochastic Robustness of Interconnected Nonlinear Systems. IEEE Transactions on Automatic Control, 2016, 61, 1508-1523.	5.7	28
42	A Lyapunov-Krasovskii Methodology for a Class of Large-Scale Systems with Neutral-type Delays in an iISS Framework. Advances in Delays and Dynamics, 2016, , 205-223.	0.4	0
43	Construction of iISS Lyapunov functions for interconnected parabolic systems. , 2015, , .		2
44	Preservation and interconnection of iISS and ISS dissipation inequalities by scaling $\hat{\alpha}$ — $\hat{\alpha}$ —The work was supported in part by JSPS KAKENHI Grant Number 26420422. The work of Kellett was supported by the Australian Research Council under FT1101000746.. IFAC-PapersOnLine, 2015, 48, 766-771.	0.9	5
45	Sum-separable Lyapunov functions for networks of ISS systems: A gain function approach. , 2015, , .		4
46	A Lyapunov approach to iISS and iNSS for stochastic systems in path-wise probability. , 2015, , .		4
47	Integral input-to-state stabilization by stochastic noise generated in bounded regions. , 2015, , .		4
48	Stability of stochastic nonlinear systems in cascade with not necessarily unbounded decay rates. Automatica, 2015, 62, 51-64.	5.0	26
49	Construction of Lyapunov Functions for Interconnected Parabolic Systems: An iISS Approach. SIAM Journal on Control and Optimization, 2015, 53, 3364-3382.	2.1	66
50	Separable Lyapunov functions for monotone systems: Constructions and limitations. Discrete and Continuous Dynamical Systems - Series B, 2015, 20, 2497-2526.	0.9	54
51	Max- and sum-separable Lyapunov functions for monotone systems and their level sets. , 2014, , .		15
52	Integral input-to-state stability of bilinear infinite-dimensional systems. , 2014, , .		16
53	Stochastic robustness of interconnected nonlinear systems in an iISS framework. , 2014, , .		8
54	Strong iISS is preserved under cascade interconnection. Automatica, 2014, 50, 2424-2427.	5.0	36

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55	Combining iISS and ISS With Respect to Small Inputs: The Strong iISS Property. IEEE Transactions on Automatic Control, 2014, 59, 2518-2524.	5.7	70
56	Stability Criteria for Cascaded Nonlinear Stochastic Systems Admitting Not Necessarily Unbounded Decay Rate. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 8616-8622.	0.4	4
57	Construction of Lyapunov Functionals for Networks of Coupled Delay Differential and Continuous-Time Difference Equations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6800-6805.	0.4	0
58	Revisiting the $\langle \text{scp} \rangle \text{iISS} \langle / \text{scp} \rangle$ Small-Gain Theorem through Transient Plus $\langle \text{scp} \rangle \text{ISS} \langle / \text{scp} \rangle$ Small-Gain Regulation. Asian Journal of Control, 2013, 15, 11-19.	3.0	8
59	Construction of Lyapunov-Krasovskii functionals for networks of iISS retarded systems in small-gain formulation. Automatica, 2013, 49, 3246-3257.	5.0	23
60	Robust Stability of Networks of iISS Systems: Construction of Sum-Type Lyapunov Functions. IEEE Transactions on Automatic Control, 2013, 58, 1192-1207.	5.7	69
61	A two-phase approach to stability of networks given in iISS framework: Utilization of a matrix-like criterion. , 2013, , .		1
62	Utility of iISS in Composing Lyapunov Functions for Interconnections. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 723-730.	0.4	6
63	Strong iISS: Combination of iISS and ISS with respect to small inputs. , 2012, , .		7
64	A cyclic small-gain condition and an equivalent matrix-like criterion for iISS networks. , 2012, , .		0
65	Necessary conditions for global asymptotic stability of networks of iISS systems. Mathematics of Control, Signals, and Systems, 2012, 24, 55-74.	2.3	16
66	Capability and limitation of max- and sum-type construction of Lyapunov functions for networks of iISS systems. Automatica, 2012, 48, 1197-1204.	5.0	50
67	A small-gain theorem and construction of sum-type Lyapunov functions for networks of iISS systems. , 2011, , .		7
68	On a Small Gain Theorem for ISS Networks in Dissipative Lyapunov Form. European Journal of Control, 2011, 17, 357-365.	2.6	84
69	A Small-Gain Methodology for Networks of iISS Retarded Systems based on Lyapunov-Krasovskii Functionals. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 5100-5105.	0.4	4
70	A small-gain condition for iISS of interconnected retarded systems based on Lyapunov-Krasovskii functionals. Automatica, 2010, 46, 1646-1656.	5.0	70
71	Necessary conditions for stability of networks of iISS systems. , 2010, , .		5
72	Computing asymptotic gains of large-scale interconnections. , 2010, , .		7

#	ARTICLE	IF	CITATIONS
73	Interpreting the iISS small-gain theorem as transient plus ISS small-gain regulation. , 2010, , .		5
74	A Lyapunov Approach to Cascade Interconnection of Integral Input-to-State Stable Systems. IEEE Transactions on Automatic Control, 2010, 55, 702-708.	5.7	83
75	Construction of Lyapunov functions for networks of iISS systems: An explicit solution for a cyclic structure. , 2010, , .		9
76	On a small gain theorem for networks of iISS systems. , 2009, , .		15
77	Necessary and Sufficient Small Gain Conditions for Integral Input-to-State Stable Systems: A Lyapunov Perspective. IEEE Transactions on Automatic Control, 2009, 54, 2389-2404.	5.7	140
78	A degree of flexibility in Lyapunov inequalities for establishing input-to-state stability of interconnected systems. Automatica, 2008, 44, 2340-2346.	5.0	9
79	Nonlinear generalization of scaled ?? control: global robustification against nonlinearly bounded uncertainties. International Journal of Robust and Nonlinear Control, 2004, 14, 1433-1467.	3.7	3
80	A Reduced-Order Controller Design for Nonlinear Systems with Uncertainties and Disturbances. European Journal of Control, 2004, 10, 207-222.	2.6	2
81	Uniting local and global controllers for uncertain nonlinear systems: beyond global inverse optimality. Systems and Control Letters, 2002, 45, 59-79.	2.3	7
82	Recursive scaling design for robust global nonlinear stabilization via output feedback. International Journal of Robust and Nonlinear Control, 2000, 10, 821-848.	3.7	10
83	Output feedback disturbance attenuation with robustness to nonlinear uncertain dynamics via state-dependent scaling. , 0, , .		0