Iasson Karafyllis

List of Publications by Year
in descending order

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112 papers	3,245 citations	136885 32 h-index	168321 53 g-index
114 all docs	114 docs citations	114 times ranked	1083 citing authors

#	Article	IF	Citations
1	Stability and Stabilization of Nonlinear Systems. Communications and Control Engineering, 2011, , .	1.0	231
2	Nonlinear Stabilization Under Sampled and Delayed Measurements, and With Inputs Subject to Delay and Zero-Order Hold. IEEE Transactions on Automatic Control, 2012, 57, 1141-1154.	3.6	210
3	From Continuous-Time Design to Sampled-Data Design of Observers. IEEE Transactions on Automatic Control, 2009, 54, 2169-2174.	3.6	183
4	Global exponential sampled-data observers for nonlinear systems with delayed measurements. Systems and Control Letters, 2013, 62, 539-549.	1.3	108
5	Sampled-data boundary feedback control of 1-D parabolic PDEs. Automatica, 2018, 87, 226-237.	3.0	98
6	Global stability results for systems under sampledâ€data control. International Journal of Robust and Nonlinear Control, 2009, 19, 1105-1128.	2.1	95
7	ISS with Respect to Boundary Disturbances for 1-D Parabolic PDEs. IEEE Transactions on Automatic Control, 2016, 61, 3712-3724.	3.6	91
8	Input-to-Output Stability for Systems Described by Retarded Functional Differential Equations. European Journal of Control, 2008, 14, 539-555.	1.6	82
9	Delay-robustness of linear predictor feedback without restriction on delay rate. Automatica, 2013, 49, 1761-1767.	3.0	77
10	Stabilization of nonlinear delay systems using approximate predictors and high-gain observers. Automatica, 2013, 49, 3623-3631.	3.0	75
11	Converse Lyapunovâ€“Krasovskii theorems for systems described by neutral functional differential equations in Hale's form. International Journal of Control, 2013, 86, 232-243.	1.2	74
12	ISS In Different Norms For 1-D Parabolic Pdes With Boundary Disturbances. SIAM Journal on Control and Optimization, 2017, 55, 1716-1751.	1.1	70
13	Global Output Stability for Systems Described by Retarded Functional Differential Equations: Lyapunov Characterizations. European Journal of Control, 2008, 14, 516-536.	1.6	69
14	Lyapunov theorems for systems described by retarded functional differential equations. Nonlinear Analysis: Theory, Methods & Applications, 2006, 64, 590-617.	0.6	65
15	The Non-Uniform in Time Small-Gain Theorem for a Wide Class of Control Systems with Outputs. European Journal of Control, 2004, 10, 307-323.	1.6	60
16	Stability results for systems described by coupled retarded functional differential equations and functional difference equations. Nonlinear Analysis: Theory, Methods & Applications, 2009, 71, 3339-3362.	0.6	59
17	On the relation of delay equations to first-order hyperbolic partial differential equations. ESAIM - Control, Optimisation and Calculus of Variations, 2014, 20, 894-923.	0.7	58
18	Lane-Free Artificial-Fluid Concept for Vehicular Traffic. Proceedings of the IEEE, 2021, 109, 114-121.	16.4	57

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19	Necessary and sufficient Lyapunov-like conditions for robust nonlinear stabilization. ESAIM - Control, Optimisation and Calculus of Variations, 2010, 16, 887-928.	0.7	50
20	Event-triggered boundary control of constant-parameter reactionâ€“diffusion PDEs: A small-gain approach. Automatica, 2021, 128, 109562.	3.0	50
21	Global stabilisation of nonlinear delay systems with a compact absorbing set. International Journal of Control, 2014, 87, 1010-1027.	1.2	44
22	Numerical schemes for nonlinear predictor feedback. Mathematics of Control, Signals, and Systems, 2014, 26, 519-546.	1.4	43
23	Sampled-data boundary feedback control of 1-D linear transport PDEs with non-local terms. Systems and Control Letters, 2017, 107, 68-75.	1.3	43
24	Adaptive Certainty-Equivalence Control With Regulation-Triggered Finite-Time Least-Squares Identification. IEEE Transactions on Automatic Control, 2018, 63, 3261-3275.	3.6	43
25	A system-theoretic framework for a wide class of systems I: Applications to numerical analysis. Journal of Mathematical Analysis and Applications, 2007, 328, 876-899.	0.5	41
26	A Vector Lyapunov Function Characterization of Input-to-State Stability with Application to Robust Global Stabilization of the Chemostat. European Journal of Control, 2008, 14, 47-61.	1.6	40
27	Adaptive boundary control of constant-parameter reactionâ€“diffusion PDEs using regulation-triggered finite-time identification. Automatica, 2019, 103, 166-179.	3.0	38
28	Feedback Control of Nonlinear Hyperbolic PDE Systems Inspired by Traffic Flow Models. IEEE Transactions on Automatic Control, 2019, 64, 3647-3662.	3.6	37
29	Robust output feedback stabilization and nonlinear observer design. Systems and Control Letters, 2005, 54, 925-938.	1.3	36
30	Predictor-based tracking for neuromuscular electrical stimulation. International Journal of Robust and Nonlinear Control, 2015, 25, 2391-2419.	2.1	35
31	On the Observer Problem for Discrete-Time Control Systems. IEEE Transactions on Automatic Control, 2007, 52, 12-25.	3.6	34
32	Global Stabilization of Feedforward Systems Under Perturbations in Sampling Schedule. SIAM Journal on Control and Optimization, 2012, 50, 1389-1412.	1.1	33
33	Control of hot spots in plug flow reactors. Computers and Chemical Engineering, 2002, 26, 1087-1094.	2.0	32
34	A new smallâ€gain theorem with an application to the stabilization of the chemostat. International Journal of Robust and Nonlinear Control, 2012, 22, 1602-1630.	2.1	32
35	A system-theoretic framework for a wide class of systems II: Input-to-output stability. Journal of Mathematical Analysis and Applications, 2007, 328, 466-486.	0.5	31
36	Exponential Stability Analysis of Sampled-Data ODEâ€“PDE Systems and Application to Observer Design. IEEE Transactions on Automatic Control, 2017, 62, 3091-3098.	3.6	30

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37	Analysis and control of a non-local PDE traffic flow model. International Journal of Control, 2022, 95, 660-678.	1.2	30
38	Robust predictor feedback for discrete-time systems with input delays. International Journal of Control, 2013, 86, 1652-1663.	1.2	29
39	Robust global stabilisability by means of sampled-data control with positive sampling rate. International Journal of Control, 2009, 82, 755-772.	1.2	28
40	Feedback control of scalar conservation laws with application to density control in freeways by means of variable speed limits. Automatica, 2019, 105, 228-236.	3.0	28
41	Global Exponential Stability for Discrete-Time Networks With Applications to Traffic Networks. IEEE Transactions on Control of Network Systems, 2015, 2, 68-77.	2.4	27
42	Stability of integral delay equations and stabilization of age-structured models. ESAIM - Control, Optimisation and Calculus of Variations, 2017, 23, 1667-1714.	0.7	26
43	Non-uniform in time robust global asymptotic output stability. Systems and Control Letters, 2005, 54, 181-193.	1.3	24
44	Global exponential observers for two classes of nonlinear systems. Systems and Control Letters, 2012, 61, 797-806.	1.3	24
45	Small-Gain-Based Boundary Feedback Design for Global Exponential Stabilization of One-Dimensional Semilinear Parabolic PDEs. SIAM Journal on Control and Optimization, 2019, 57, 2016-2036.	1.1	23
46	Price stabilization using buffer stocks. Journal of Economic Dynamics and Control, 2008, 32, 1212-1235.	0.9	22
47	Relaxed Lyapunov criteria for robust global stabilisation of non-linear systems. International Journal of Control, 2009, 82, 2077-2094.	1.2	22
48	Adaptive Control by Regulation-Triggered Batch Least Squares. IEEE Transactions on Automatic Control, 2020, 65, 2842-2855.	3.6	22
49	Global Stabilization of Nonlinear Systems Based on Vector Control Lyapunov Functions. IEEE Transactions on Automatic Control, 2013, 58, 2550-2562.	3.6	20
50	Observer-Based Event-Triggered Boundary Control of a Class of Reactionâ€“Diffusion PDEs. IEEE Transactions on Automatic Control, 2022, 67, 2905-2917.	3.6	20
51	Lyapunov-based boundary feedback design for parabolic PDEs. International Journal of Control, 2021, 94, 1247-1260.	1.2	19
52	A vector Small-Gain Theorem for general nonlinear control systems. , 2009, , .		18
53	Non-uniform robust global asymptotic stability for discrete-time systems and applications to numerical analysis. IMA Journal of Mathematical Control and Information, 2006, 23, 11-41.	1.1	17
54	Small-gain stability analysis of certain hyperbolicâ€“parabolic PDE loops. Systems and Control Letters, 2018, 118, 52-61.	1.3	17

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55	A note on sampled-data observers. Systems and Control Letters, 2020, 144, 104760.	1.3	17
56	Hybrid dead-beat observers for a class of nonlinear systems. Systems and Control Letters, 2011, 60, 608-617.	1.3	15
57	Sampled-data observers for 1-D parabolic PDEs with non-local outputs. Systems and Control Letters, 2019, 133, 104553.	1.3	15
58	Sampled boundary observer for strict-feedback nonlinear ODE systems with parabolic PDE sensor. Automatica, 2019, 101, 439-449.	3.0	15
59	Robust global stabilization by means of discrete-delay output feedback. Systems and Control Letters, 2008, 57, 987-995.	1.3	14
60	Global exponential stabilization of freeway models. International Journal of Robust and Nonlinear Control, 2016, 26, 1184-1210.	2.1	14
61	Sampled-data and event-triggered boundary control of a class of reactionâ€“diffusion PDEs with collocated sensing and actuation. Automatica, 2022, 137, 110026.	3.0	13
62	Control Lyapunov functions and stabilization by means of continuous time-varying feedback. ESAIM - Control, Optimisation and Calculus of Variations, 2009, 15, 599-625.	0.7	12
63	Can we prove stability by using a positive definite function with non sign-definite derivative?. IMA Journal of Mathematical Control and Information, 2012, 29, 147-170.	1.1	12
64	Global Stabilization of a Class of Nonlinear Reaction-Diffusion Partial Differential Equations by Boundary Feedback. SIAM Journal on Control and Optimization, 2019, 57, 3723-3748.	1.1	12
65	Event-triggered boundary control of constant-parameter reaction-diffusion PDEs: a small-gain approach. , 2020, , .		12
66	Lyapunov conditions for uniform asymptotic output stability and a relaxation of BarbÄƒlatâ€™s lemma. Automatica, 2021, 132, 109792.	3.0	12
67	Event-triggered boundary control of a continuum model of highly re-entrant manufacturing systems. Automatica, 2021, 134, 109902.	3.0	12
68	Dynamics of a reaction-diffusion system with Brusselator kinetics under feedback control. Physical Review E, 1999, 59, 372-380.	0.8	11
69	Control Lyapunov Functionals and robust stabilization of nonlinear time-delay systems. , 2008, , .		11
70	Nash equilibrium and robust stability in dynamic games: A small-gain perspective. Computers and Mathematics With Applications, 2010, 60, 2936-2952.	1.4	11
71	Input-to state stability with respect to boundary disturbances for the 1-D heat equation. , 2016, , .		11
72	Sampled-data observers for delay systems and hyperbolic PDEâ€“ODE loops. Automatica, 2021, 123, 109349.	3.0	11

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73	Robust Global Adaptive Exponential Stabilization of Discrete-Time Systems With Application to Freeway Traffic Control. IEEE Transactions on Automatic Control, 2017, 62, 6195-6208.	3.6	10
74	Yield trajectory tracking for hyperbolic age-structured population systems. Automatica, 2018, 90, 138-146.	3.0	10
75	Global exponential stabilisation of acyclic traffic networks. International Journal of Control, 2019, 92, 564-584.	1.2	10
76	Nonlinear adaptive cruise control of vehicular platoons. International Journal of Control, 2023, 96, 147-169.	1.2	10
77	Constructing artificial traffic fluids by designing cruise controllers. Systems and Control Letters, 2022, 167, 105317.	1.3	10
78	Spill-Free Transfer and Stabilization of Viscous Liquid. IEEE Transactions on Automatic Control, 2022, 67, 4585-4597.	3.6	9
79	Lyapunov-Based Two-Dimensional Cruise Control of Autonomous Vehicles on Lane-Free Roads. , 2021, , .		8
80	Stability analysis of nonlinear inviscid microscopic and macroscopic traffic flow models of bidirectional cruise-controlled vehicles. IMA Journal of Mathematical Control and Information, 2022, 39, 609-642.	1.1	7
81	Decay estimates for 1-D parabolic PDES with boundary disturbances. ESAIM - Control, Optimisation and Calculus of Variations, 2018, 24, 1511-1540.	0.7	6
82	Local and coordinated ramp metering within the unifying framework of an adaptive control scheme. Transportation Research, Part A: Policy and Practice, 2019, 128, 89-113.	2.0	6
83	Stability results for systems described by retarded functional differential equations. , 2007, , .		5
84	Stability and control of nonlinear systems described by retarded functional equations: a review of recent results. Science in China Series F: Information Sciences, 2009, 52, 2104-2126.	1.1	5
85	Reduced order dead-beat observers for the chemostat. Nonlinear Analysis: Real World Applications, 2013, 14, 340-351.	0.9	5
86	Sampled-data feedback stabilization of age-structured chemostat models. , 2015, , .		5
87	Stability results for the continuity equation. Systems and Control Letters, 2020, 135, 104594.	1.3	5
88	Boundary-to-Displacement asymptotic gains for wave systems with Kelvinâ€“Voigt damping. International Journal of Control, 2021, 94, 2822-2833.	1.2	5
89	Feedback Stabilization Methods for the Solution of Nonlinear Programming Problems. Journal of Optimization Theory and Applications, 2014, 161, 783-806.	0.8	4
90	Global stability results for systems under sampled-data control. , 2007, , .		3

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91	Stability of Sampled-Data PDE-ODE Systems and Application to Observer Design and Output-Feedback Stabilization. IFAC-PapersOnLine, 2017, 50, 13289-13294.	0.5	3
92	Adaptive Regulation- Triggered Control of Hyperbolic PDEs by Batch Least-Squares. , 2021, , .		3
93	From continuous-time design to sampled-data design of nonlinear observers. , 2008, , .		2
94	Nash equilibrium and robust stability in dynamic games: A small-gain perspective. , 2010, , .		2
95	Disturbance attenuation limitations for systems with input delays. , 2015, , .		2
96	Wave Equations With Kelvin-Voigt Damping and Boundary Disturbance: A Study of the Asymptotic Gain Properties. , 2019, , .		2
97	Nonlinear stabilization under sampled and delayed measurements, and with inputs subject to delay and zero-order hold. , 2011, , .		1
98	Global exponential stabilization of freeway models. , 2015, , .		1
99	Nonlinear adaptive control scheme for discrete-time systems with application to freeway traffic flow networks. , 2016, , .		1
100	An adaptive control scheme for local and coordinated ramp metering. , 2017, , .		1
101	Traffic Flow Inspired Analysis and Boundary Control for a Class of 2Ã—2 Hyperbolic Systems. , 2018, , .		1
102	On the relation of IOS-gains and asymptotic gains for linear systems. Systems and Control Letters, 2021, 152, 104934.	1.3	1
103	Small-gain theorem for a wide class of feedback systems with control applications. , 2007, , .		1
104	Using Nudging for the Control of a Non-Local PDE Traffic Flow Model. , 2020, , .		1
105	Relaxed Lyapunov criteria for robust global stabilization of nonlinear systems. , 2009, , .		0
106	Feedback Stabilization Methods for the Numerical Solution of Systems of Ordinary Differential Equations. , 2009, , .		0
107	Vector control Lyapunov functions as a tool for decentralized and distributed control. , 2013, , .		0
108	ISS in Spatial Lp Norms for Hyperbolic PDEs. Communications and Control Engineering, 2019, , 39-56.	1.0	0

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109	Input-to-State Stability for PDEs. , 2021, , 1030-1033.		0
110	Boundary Event-Triggered Control of Highly Re-Entrant Manufacturing System Described by a Nonlinear Hyperbolic PDE. , 2021, , .		0
111	Input-to-State Stability for PDEs. , 2020, , 1-4.		0
112	Sampled-Data Boundary Control of a Class of Reaction-Diffusion PDEs with Collocated Sensing and Actuation. , 2021, , .		0