

Alfonso Baños

List of Publications by Year in descending order

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112
papers

1,591
citations

361413

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h-index

361022

35
g-index

114
all docs

114
docs citations

114
times ranked

779
citing authors

#	ARTICLE	IF	CITATIONS
1	Interconnection of port-Hamiltonian systems and composition of Dirac structures. Automatica, 2007, 43, 212-225.	5.0	113
2	Reset Control Systems. Advances in Industrial Control, 2012, , .	0.5	80
3	Delay-Independent Stability of Reset Systems. IEEE Transactions on Automatic Control, 2009, 54, 341-346.	5.7	72
4	Delay-dependent stability of reset systems. Automatica, 2010, 46, 216-221.	5.0	72
5	Reset Times-Dependent Stability of Reset Control Systems. IEEE Transactions on Automatic Control, 2011, 56, 217-223.	5.7	71
6	Robust PID Design Based on QFT and Convex-Concave Optimization. IEEE Transactions on Control Systems Technology, 2017, 25, 441-452.	5.2	71
7	A passivity-based approach to reset control systems stability. Systems and Control Letters, 2010, 59, 18-24.	2.3	67
8	Reset compensation for temperature control: Experimental application on heat exchangers. Chemical Engineering Journal, 2010, 159, 170-181.	12.7	55
9	Stability analysis of linear impulsive delay dynamical systems via looped-functionals. Automatica, 2017, 81, 107-114.	5.0	44
10	Input-output stability of systems with backlash. Automatica, 2006, 42, 1017-1024.	5.0	37
11	A PI tuning rule for integrating plus dead time processes with parametric uncertainty. ISA Transactions, 2017, 67, 246-255.	5.7	35
12	Reset control systems with reset band: Well-posedness, limit cycles and stability analysis. Systems and Control Letters, 2014, 63, 1-11.	2.3	33
13	Automatic Loop Shaping in QFT Using CRONE Structures. JVC/Journal of Vibration and Control, 2008, 14, 1513-1529.	2.6	31
14	Nonlinear adaptive sliding mode control with fast non-overshooting responses and chattering avoidance. Journal of the Franklin Institute, 2017, 354, 2788-2815.	3.4	31
15	Design of Reset Control Systems: The PI+CI Compensator. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2012, 134, .	1.6	29
16	Definition and tuning of a PI+CI reset controller. , 2007, , .		27
17	Network-Based Reset Control Systems With Time-Varying Delays. IEEE Transactions on Industrial Informatics, 2014, 10, 514-522.	11.3	27
18	Stability of non-linear QFT designs based on robust absolute stability criteria. International Journal of Control, 2000, 73, 74-88.	1.9	25

#	ARTICLE	IF	CITATIONS
19	Tuning of Fractional PID Controllers by Using QFT. , 2006, , .		25
20	Reset Control of an Industrial In-Line pH Process. IEEE Transactions on Control Systems Technology, 2012, 20, 1100-1106.	5.2	23
21	On the thermal performance of flat and cavity receivers for a parabolic dish concentrator and low/medium temperatures. Solar Energy, 2020, 199, 911-923.	6.1	23
22	Stabilization of nonlinear systems based on a generalized BÅzout identity. Automatica, 1996, 32, 591-595.	5.0	21
23	Bode optimal loop shaping with CRONE compensators. JVC/Journal of Vibration and Control, 2011, 17, 1964-1974.	2.6	21
24	Optimal reset adaptive observer design. Systems and Control Letters, 2011, 60, 877-883.	2.3	20
25	Nonlinear quantitative feedback theory. International Journal of Robust and Nonlinear Control, 2007, 17, 181-202.	3.7	19
26	Tuning of reset proportional integral compensators with a variable reset ratio and reset band. IET Control Theory and Applications, 2014, 8, 1949-1962.	2.1	19
27	Limit cycles analysis of reset control systems with reset band. Nonlinear Analysis: Hybrid Systems, 2011, 5, 163-173.	3.5	18
28	Design of PI+CI Reset Compensators for second order plants. , 2007, , .		17
29	An impulsive dynamical systems framework for reset control systems. International Journal of Control, 2016, 89, 1985-2007.	1.9	17
30	Improvements on the computation of boundaries in QFT. International Journal of Robust and Nonlinear Control, 2006, 16, 575-597.	3.7	16
31	Nonlinear robust stabilization by conicity and QFT techniques. Automatica, 2000, 36, 1309-1320.	5.0	15
32	The input amplitude saturation problem in QFT: A survey. Annual Reviews in Control, 2011, 35, 34-55.	7.9	15
33	Reset control of integrating plus dead time processes. Journal of Process Control, 2016, 38, 22-30.	3.3	14
34	A QFT framework for nonlinear robust stability. International Journal of Robust and Nonlinear Control, 2002, 12, 357-372.	3.7	13
35	Reset times-dependent stability of reset control with unstable base systems. , 2007, , .		13
36	A QFT Framework for Antiwindup Control Systems Design. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2010, 132, .	1.6	13

#	ARTICLE	IF	CITATIONS
37	Nonlinear quantitative stability. International Journal of Robust and Nonlinear Control, 2004, 14, 289-306.	3.7	12
38	QFT-based design of PI+CI reset compensators: Application in process control. , 2008, , .		12
39	Well-Posedness of Reset Control Systems as State-Dependent Impulsive Dynamical Systems. Abstract and Applied Analysis, 2012, 2012, 1-16.	0.7	12
40	Non-linear QFT synthesis by local linearization. International Journal of Control, 2003, 76, 429-436.	1.9	11
41	PI+CI compensation with variable reset: Application on solar collector fields. , 2008, , .		11
42	Delay-dependent stability of reset control systems. Proceedings of the American Control Conference, 2007, , .	0.0	10
43	Discrete-time reset control applied to networked control systems. , 2009, , .		10
44	A combined FSP and reset control approach to improve the set-point tracking task of dead-time processes. Control Engineering Practice, 2013, 21, 351-359.	5.5	10
45	Exponential stability of a PI plus reset integrator controller by a sampled-data system approach. Nonlinear Analysis: Hybrid Systems, 2018, 29, 133-146.	3.5	10
46	Parametric identification of transfer functions from frequency response data. Computing & Control Engineering Journal, 1995, 6, 137-144.	0.0	9
47	Reset control for passive teleoperation. , 2008, , .		9
48	Delay-dependent stability of reset control systems with input/output delays. , 2013, , .		9
49	Reset Control for DC-DC Converters: An Experimental Application. IEEE Access, 2019, 7, 128487-128497.	4.2	9
50	Stability Analysis of reset control systems with reset band. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 180-185.	0.4	8
51	Gain-scheduled wheel slip reset control in automotive brake systems. , 2016, , .		8
52	Robust proportional-integral-derivative design for processes with interval parametric uncertainty. IET Control Theory and Applications, 2017, 11, 1016-1023.	2.1	8
53	Multirate control strategies for avoiding sample losses. Application to UGV path tracking. ISA Transactions, 2020, 101, 130-146.	5.7	8
54	Nonlinear Nonconvex Optimization by Evolutionary Algorithms Applied to Robust Control. Mathematical Problems in Engineering, 2009, 2009, 1-21.	1.1	7

#	ARTICLE	IF	CITATIONS
55	Reset control of a liquid level process. , 2013, , .		7
56	An automatic tuner with short experiment and probabilistic plant parameterization. International Journal of Robust and Nonlinear Control, 2017, 27, 1857-1873.	3.7	7
57	QFT design of multi-loop nonlinear control systems. International Journal of Robust and Nonlinear Control, 2000, 10, 1263-1277.	3.7	6
58	Some results in nonlinear QFT. International Journal of Robust and Nonlinear Control, 2001, 11, 157-184.	3.7	6
59	Networked reset control systems with discrete time-varying delays. , 2010, , .		6
60	Reset observers for linear time-delay systems. A delay-independent approach. , 2011, , .		6
61	Robust PID design by chance-constrained optimization. Journal of the Franklin Institute, 2017, 354, 8217-8231.	3.4	6
62	Grid voltage regulation using a reset PI+CI controller for Energy storage systems. IFAC-PapersOnLine, 2018, 51, 226-231.	0.9	6
63	On composition of Dirac structures and its implications for control by interconnection. , 2003, , 55-63.		6
64	Parametrization of nonlinear stabilizing controllers: the observer-controller configuration. IEEE Transactions on Automatic Control, 1998, 43, 1268-1272.	5.7	5
65	AUTOMATIC LOOP SHAPING IN QFT BY USING CRONE STRUCTURES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 207-212.	0.4	5
66	Delay-Independent Stability of Reset Control Systems. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	5
67	Reset times-dependent stability of reset control systems. , 2007, , .		5
68	The Design of QFT Robust Compensators with Magnitude and Phase Specifications. Mathematical Problems in Engineering, 2010, 2010, 1-20.	1.1	5
69	Reset Control Systems with Reset Band: Well-posedness and Limit Cycles Analysis. , 2011, , .		5
70	QFT loop shaping with fractional order complex pole-based terms. JVC/Journal of Vibration and Control, 2013, 19, 294-308.	2.6	5
71	Robust PI compensators design for FOPDT systems with large uncertainty. , 2014, , .		5
72	Reset control of an industrial in-line pH process. , 2009, , .		4

#	ARTICLE	IF	CITATIONS
73	PI+CI tuning for integrating plus deadtime systems. , 2012, , .		4
74	PID synthesis under probabilistic parametric uncertainty. , 2016, , .		4
75	Reset control of boost converters. , 2018, , .		4
76	Bode optimal loop shaping with CRONE compensators. , 2008, , .		3
77	Stability of reset control systems with variable reset: Application to PI+CI compensation. , 2009, , .		3
78	Interactive tool for analysis of reset control systems. , 2011, , .		3
79	Design of networked periodic reset control systems. , 2011, , .		3
80	Stability of time-delay reset control systems with time-dependent resetting law**This work was supported by FEDER (European Union), â€ˆMinisterio de Ciencia e Innovaci_onâ€™™ of Spain under project DPI2010-20466-C02-02 and the ANR Project LIMICOS 12-BS03-005-01.. IFAC-PapersOnLine, 2015, 48, 371-376.	0.9	3
81	*The first author acknowledges gratefully the support from the Technion â€ˆ“ Israel Institute of Technology, in co-operation with General Motors Company under project GAC1761. The second and fifth authors acknowledge gratefully the support from the Spanish government under project DPI2013-47100-C2-1-P (including FEDER co-funding) and an FPU grant (FPU12/01026).. IFAC-PapersOnLine, 2017, 50, 1403-1408.	0.9	3
82	IQC analysis of reset control systems with time-varying delay. International Journal of Control, 2019, 92, 2007-2014.	1.9	3
83	Delay-Independent Stability Via Reset Loops. Advances in Delays and Dynamics, 2014, , 111-125.	0.4	3
84	A QFT approach to robust dualâ€™rate control systems. International Journal of Robust and Nonlinear Control, 2022, 32, 1026-1054.	3.7	3
85	Linear Control of Uncertain Nonlinear Plants. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1995, 28, 813-818.	0.4	2
86	Fundamentals of nonlinear quantitative feedback theory. , 2001, , 63-132.		2
87	Stability of reset control systems with inputs. , 2008, , .		2
88	Periodic reset control of an in-line pH process. , 2011, , .		2
89	ℋ<inf>∞</inf> / ℋ<inf>2</inf> analysis for time-delay reset control systems. , 2013, , .		2
90	IQC analysis for time-delay reset control systems with first order reset elements. , 2013, , .		2

#	ARTICLE	IF	CITATIONS
91	Reset control of synchronous motors with permanent magnet excitation. , 2014, , .		2
92	Tuning of PI compensators for integrating systems with large parametric uncertainty. , 2014, , .		2
93	Reset control of the double integrator with finite settling time and finite jerk. Automatica, 2021, 127, 109536.	5.0	2
94	Reset Control of Parallel MISO Systems. Mathematics, 2021, 9, 1823.	2.2	2
95	Reset compensation applied on industrial heat exchangers. , 2009, , .		1
96	Design of networked reset control systems for reference tracking. , 2011, , .		1
97	Structural Properties of the Unobservable Subspace. Mathematical Problems in Engineering, 2015, 2015, 1-11.	1.1	1
98	Evaluation of an Interpolated Controller in an Industrial Photobioreactor. IEEE Access, 2021, 9, 24406-24415.	4.2	1
99	Stability of reset control systems with variable reset: Application to PI+CI compensation. , 2009, , .		1
100	Stability of Reset Control Systems. Advances in Industrial Control, 2012, , 93-145.	0.5	1
101	Nonlinear Problems in Friction Compensation. , 2002, , 117-130.		1
102	Tuning Rules for the Design of MISO Reset Control Systems. , 2020, , .		1
103	Nonlinear QFT synthesis based on harmonic balance and multiplier theory. , 2001, , 123-136.		0
104	Region of attraction estimation for saturated reset control systems. , 2014, , .		0
105	Corrigendum to "Structural Properties of the Unobservable Subspace". Mathematical Problems in Engineering, 2015, 2015, 1-1.	1.1	0
106	Car platooning reconfiguration applying reset control techniques. , 2016, , .		0
107	Autotuning of an in-line pH control system. , 2016, , .		0
108	Well-posedness of reset control systems with input delay. , 2016, , .		0

#	ARTICLE	IF	CITATIONS
109	Stability of Time-Delay Reset Control Systems. Advances in Industrial Control, 2012, , 147-179.	0.5	0
110	Application Cases. Advances in Industrial Control, 2012, , 211-247.	0.5	0
111	Definition of Reset Control System and Basic Results. Advances in Industrial Control, 2012, , 57-91.	0.5	0
112	Identificación de sistemas de primer y segundo orden mediante control basado en reset. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2020, 17, 116.	1.0	0