Alfonso BaÃ±os

List of Publications by Year
in descending order

112 papers	1,591 citations	361413 20 h-index	361022 35 g-index
114 all docs	114 docs citations	114 times ranked	779 citing authors

#	Article	IF	Citations
1	A QFT approach to robust dual–rate control systems. International Journal of Robust and Nonlinear Control, 2022, 32, 1026-1054.	3.7	3
2	Evaluation of an Interpolated Controller in an Industrial Photobioreactor. IEEE Access, 2021, 9, 24406-24415.	4.2	1
3	Reset control of the double integrator with finite settling time and finite jerk. Automatica, 2021, 127, 109536.	5.0	2
4	Reset Control of Parallel MISO Systems. Mathematics, 2021, 9, 1823.	2.2	2
5	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
6	Multirate control strategies for avoiding sample losses. Application to UGV path tracking. ISA Transactions, 2020, 101, 130-146.	5.7	8
7	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
8	Tuning Rules for the Design of MISO Reset Control Systems. , 2020, , .		1
9	Reset Control for DC–DC Converters: An Experimental Application. IEEE Access, 2019, 7, 128487-128497.	4.2	9
10	IQC analysis of reset control systems with time-varying delay. International Journal of Control, 2019, 92, 2007-2014.	1.9	3
11	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
12	Grid voltage regulation using a reset PI+CI controller for Energy storage systems. IFAC-PapersOnLine, 2018, 51, 226-231.	0.9	6
13	Reset control of boost converters. , 2018, , .		4
14	Robust PID Design Based on QFT and Convex–Concave Optimization. IEEE Transactions on Control Systems Technology, 2017, 25, 441-452.	5.2	71
15	A PI tuning rule for integrating plus dead time processes with parametric uncertainty. ISA Transactions, 2017, 67, 246-255.	5.7	35
16	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
17	Stability analysis of linear impulsive delay dynamical systems via looped-functionals. Automatica, 2017, 81, 107-114.	5.0	44
18	Robust proportional–integral–derivative design for processes with interval parametric uncertainty. IET Control Theory and Applications, 2017, 11, 1016-1023.	2.1	8

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19	Robust PID design by chance-constrained optimization. Journal of the Franklin Institute, 2017, 354, 8217-8231.	3.4	6
20	An automatic tuner with short experiment and probabilistic plant parameterization. International Journal of Robust and Nonlinear Control, 2017, 27, 1857-1873.	3.7	7
21	Improvements on Interpolation Techniques based on Linear Programming for Constrained Control *The first author acknowledges gratefully the support from the Technion â€" 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
22	Car platooning reconfiguration applying reset control techniques. , 2016, , .		0
23	Autotuning of an in-line pH control system. , 2016, , .		0
24	Gain-scheduled wheel slip reset control in automotive brake systems. , 2016, , .		8
25	PID synthesis under probabilistic parametric uncertainty. , 2016, , .		4
26	Well-posedness of reset control systems with input delay. , 2016, , .		0
27	An impulsive dynamical systems framework for reset control systems. International Journal of Control, 2016, 89, 1985-2007.	1.9	17
28	Reset control of integrating plus dead time processes. Journal of Process Control, 2016, 38, 22-30.	3.3	14
29	Stability of time-delay reset control systems with time-dependent resetting law**This work was supported by FEDER (European Union), â€˜Ministerio 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
30	Corrigendum to â€œStructural Properties of the Unobservable Subspaceâ€. Mathematical Problems in Engineering, 2015, 2015, 1-1.	1.1	0
31	Structural Properties of the Unobservable Subspace. Mathematical Problems in Engineering, 2015, 2015, 1-11.	1.1	1
32	Reset control of synchronous motors with permanent magnet excitation. , 2014, , .		2
33	Region of attraction estimation for saturated reset control systems. , 2014, , .		0
34	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
35	Robust PI compensators design for FOPDT systems with large uncertainty. , 2014, , .		5
36	Tuning of PI compensators for integrating systems with large parametric uncertainty. , 2014, , .		2

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37	Network-Based Reset Control Systems With Time-Varying Delays. IEEE Transactions on Industrial Informatics, 2014, 10, 514-522.	11.3	27
38	Reset control systems with reset band: Well-posedness, limit cycles and stability analysis. Systems and Control Letters, 2014, 63, 1-11.	2.3	33
39	Delay-Independent Stability Via Reset Loops. Advances in Delays and Dynamics, 2014, , 111-125.	0.4	3
40	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
41	&#x210B;<inf>&#x221E;</inf> / &#x210B;<inf>2</inf> analysis for time-delay reset control systems. , 2013, , .		2
42	QFT loop shaping with fractional order complex pole-based terms. JVC/Journal of Vibration and Control, 2013, 19, 294-308.	2.6	5
43	Reset control of a liquid level process. , 2013, , .		7
44	Delay-dependent stability of reset control systems with input/output delays. , 2013, , .		9
45	IQC analysis for time-delay reset control systems with first order reset elements. , 2013, , .		2
46	Well-Posedness of Reset Control Systems as State-Dependent Impulsive Dynamical Systems. Abstract and Applied Analysis, 2012, 2012, 1-16.	0.7	12
47	Reset Control Systems. Advances in Industrial Control, 2012, , .	0.5	80
48	Design of Reset Control Systems: The PIâ€‰+â€‰CI Compensator. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2012, 134, .	1.6	29
49	Reset Control of an Industrial In-Line pH Process. IEEE Transactions on Control Systems Technology, 2012, 20, 1100-1106.	5.2	23
50	PI&#x002B;CI tuning for integrating plus deadtime systems. , 2012, , .		4
51	Stability of Time-Delay Reset Control Systems. Advances in Industrial Control, 2012, , 147-179.	0.5	0
52	Stability of Reset Control Systems. Advances in Industrial Control, 2012, , 93-145.	0.5	1
53	Application Cases. Advances in Industrial Control, 2012, , 211-247.	0.5	0
54	Definition of Reset Control System and Basic Results. Advances in Industrial Control, 2012, , 57-91.	0.5	0

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55	Reset observers for linear time-delay systems. A delay-independent approach. , 2011, , .		6
56	Reset Times-Dependent Stability of Reset Control Systems. IEEE Transactions on Automatic Control, 2011, 56, 217-223.	5.7	71
57	Interactive tool for analysis of reset control systems. , 2011, , .		3
58	Periodic reset control of an in-line pH process. , 2011, , .		2
59	Optimal reset adaptive observer design. Systems and Control Letters, 2011, 60, 877-883.	2.3	20
60	Limit cycles analysis of reset control systems with reset band. Nonlinear Analysis: Hybrid Systems, 2011, 5, 163-173.	3.5	18
61	The input amplitude saturation problem in QFT: A survey. Annual Reviews in Control, 2011, 35, 34-55.	7.9	15
62	Reset Control Systems with Reset Band: Well-posedness and Limit Cycles Analysis. , 2011, , .		5
63	Design of networked reset control systems for reference tracking. , 2011, , .		1
64	Design of networked periodic reset control systems. , 2011, , .		3
65	Bode optimal loop shaping with CRONE compensators. JVC/Journal of Vibration and Control, 2011, 17, 1964-1974.	2.6	21
66	Delay-dependent stability of reset systems. Automatica, 2010, 46, 216-221.	5.0	72
67	A passivity-based approach to reset control systems stability. Systems and Control Letters, 2010, 59, 18-24.	2.3	67
68	Reset compensation for temperature control: Experimental application on heat exchangers. Chemical Engineering Journal, 2010, 159, 170-181.	12.7	55
69	The Design of QFT Robust Compensators with Magnitude and Phase Specifications. Mathematical Problems in Engineering, 2010, 2010, 1-20.	1.1	5
70	Networked reset control systems with discrete time-varying delays. , 2010, , .		6
71	A QFT Framework for Antiwindup Control Systems Design. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2010, 132, .	1.6	13
72	Nonlinear Nonconvex Optimization by Evolutionary Algorithms Applied to Robust Control. Mathematical Problems in Engineering, 2009, 2009, 1-21.	1.1	7

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73	Stablity of reset control systems with variable reset: Application to PI+CI compensation. , 2009, , .		3
74	Discrete-time reset control applied to networked control systems. , 2009, , .		10
75	Reset control of an industrial in-line pH process. , 2009, , .		4
76	Reset compensation applied on industrial heat exchangers. , 2009, , .		1
77	Delay-Independent Stability of Reset Systems. IEEE Transactions on Automatic Control, 2009, 54, 341-346.	5.7	72
78	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
79	Stability of reset control systems with variable reset: Application to PI+CI compensation. , 2009, , .		1
80	Automatic Loop Shaping in QFT Using CRONE Structures. JVC/Journal of Vibration and Control, 2008, 14, 1513-1529.	2.6	31
81	PI+CI compensation with variable reset: Application on solar collector fields. , 2008, , .		11
82	Reset control for passive teleoperation. , 2008, , .		9
83	QFT-based design of PI+CI reset compensators: Application in process control. , 2008, , .		12
84	Bode optimal loop shaping with CRONE compensators. , 2008, , .		3
85	Stability of reset control systems with inputs. , 2008, , .		2
86	Delay-dependent stability of reset control systems. Proceedings of the American Control Conference, 2007, , .	0.0	10
87	Design of PI+CI Reset Compensators for second order plants. , 2007, , .		17
88	Reset times-dependent stability of reset control with unstable base systems. , 2007, , .		13
89	Reset times-dependent stability of reset control systems. , 2007, , .		5
90	Definition and tuning of a PI+CI reset controller. , 2007, , .		27

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91	Interconnection of port-Hamiltonian systems and composition of Dirac structures. Automatica, 2007, 43, 212-225.	5.0	113
92	Nonlinear quantitative feedback theory. International Journal of Robust and Nonlinear Control, 2007, 17, 181-202.	3.7	19
93	Tuning of Fractional PID Controllers by Using QFT. , 2006, , .		25
94	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
95	Improvements on the computation of boundaries in QFT. International Journal of Robust and Nonlinear Control, 2006, 16, 575-597.	3.7	16
96	Inputâ€"output stability of systems with backlash. Automatica, 2006, 42, 1017-1024.	5.0	37
97	Delay-Independent Stability of Reset Control Systems. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	5
98	Nonlinear quantitative stability. International Journal of Robust and Nonlinear Control, 2004, 14, 289-306.	3.7	12
99	Non-linear QFT synthesis by local linearization. International Journal of Control, 2003, 76, 429-436.	1.9	11
100	On composition of Dirac structures and its implications for control by interconnection. , 2003, , 55-63.		6
101	A QFT framework for nonlinear robust stability. International Journal of Robust and Nonlinear Control, 2002, 12, 357-372.	3.7	13
102	Nonlinear Problems in Friction Compensation. , 2002, , 117-130.		1
103	Nonlinear QFT synthesis based on harmonic balance and multiplier theory. , 2001, , 123-136.		0
104	Fundamentals of nonlinear quantitative feedback theory. , 2001, , 63-132.		2
105	Some results in nonlinear QFT. International Journal of Robust and Nonlinear Control, 2001, 11, 157-184.	3.7	6
106	QFT design of multi-loop nonlinear control systems. International Journal of Robust and Nonlinear Control, 2000, 10, 1263-1277.	3.7	6
107	Nonlinear robust stabilization by conicity and QFT techniques. Automatica, 2000, 36, 1309-1320.	5.0	15
108	Stability of non-linear QFT designs based on robust absolute stability criteria. International Journal of Control, 2000, 73, 74-88.	1.9	25

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109	Parametrization of nonlinear stabilizing controllers: the observer-controller configuration. IEEE Transactions on Automatic Control, 1998, 43, 1268-1272.	5.7	5
110	Stabilization of nonlinear systems based on a generalized Bézout identity. Automatica, 1996, 32, 591-595.	5.0	21
111	Linear Control of Uncertain Nonlinear Plants. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1995, 28, 813-818.	0.4	2
112	Parametric identification of transfer functions from frequency response data. Computing & Control Engineering Journal, 1995, 6, 137-144.	0.0	9