Joaquin Alvarez

List of Publications by Year
in descending order

64 papers	888 citations	623699 14 h-index	526264 27 g-index
67 all docs	67 docs citations	67 times ranked	683 citing authors

#	Article	IF	Citations
1	An Invariance Principle for Discontinuous Dynamic Systems With Application to a Coulomb Friction Oscillator. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2000, 122, 687-690.	1.6	113
2	Nonlinear regulation of a Lorenz system by feedback linearization techniques. Journal of Dynamical and Control Systems, 1994, 4, 277-298.	0.4	82
3	The sympathy of two pendulum clocks: beyond Huygens' observations. Scientific Reports, 2016, 6, 23580.	3.3	64
4	Robust synchronization of Sprott circuits using sliding mode control. Chaos, Solitons and Fractals, 2006, 30, 11-18.	5.1	58
5	Hybrid Sliding-Mode-Based Control of Underactuated Systems With Dry Friction. IEEE Transactions on Industrial Electronics, 2008, 55, 3998-4003.	7.9	44
6	Global position regulation of friction manipulators via switched chattering control. International Journal of Control, 2003, 76, 1446-1452.	1.9	36
7	Tracking control of the boost converter. IET Control Theory and Applications, 2004, 151, 218-224.	1.7	35
8	Nonlinear disturbance decoupling control of a binary distillation column. Automatica, 1990, 26, 567-572.	5.0	34
9	Robust observation and identification ofnDOF Lagrangian systems. International Journal of Robust and Nonlinear Control, 2007, 17, 842-861.	3.7	33
10	Robust sliding mode control for the boost converter. , 0, , .		30
11	Hopf bifurcation control: A new approach. Systems and Control Letters, 2006, 55, 437-451.	2.3	30
12	Bifurcations and Chaos in a Linear Control System with Saturated Input. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1997, 07, 1811-1822.	1.7	26
13	Master-slave synchronization via dynamic control. Communications in Nonlinear Science and Numerical Simulation, 2020, 80, 104977.	3.3	23
14	Analog Implementation of a Robust Control Strategy for Mechanical Systems. IEEE Transactions on Industrial Electronics, 2009, 56, 3377-3385.	7.9	15
15	Complex dynamics in classical control systems. Systems and Control Letters, 1997, 31, 277-285.	2.3	13
16	A controller for 2-DOF underactuated mechanical systems with discontinuous friction. Nonlinear Dynamics, 2008, 53, 191-200.	5.2	13
17	Nonsmooth $\mathcal{H}_\infty$ synthesis of non-minimum-phase servo-systems with backlash. Control Engineering Practice, 2016, 46, 77-84.	5.5	13
18	Master-slave teleoperation of underactuated mechanical systems with communication delays. International Journal of Control, Automation and Systems, 2017, 15, 827-836.	2.7	13

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19	Motion Control Design for an Omnidirectional Mobile Robot Subject to Velocity Constraints. Mathematical Problems in Engineering, 2015, 2015, 1-15.	1.1	12
20	Synchronization in the Lorenz system: Stability and robustness. Nonlinear Dynamics, 1996, 10, 89-103.	5.2	11
21	BIFURCATION ANALYSIS OF A 2-DOF ROBOT MANIPULATOR DRIVEN BY CONSTANT TORQUES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 617-627.	1.7	11
22	Robust synchronization of nonlinear SISO systems using sliding mode control. Nonlinear Dynamics, 2006, 46, 293-306.	5.2	11
23	Control structure with disturbance identification for Lagrangian systems. International Journal of Non-Linear Mechanics, 2011, 46, 486-495.	2.6	11
24	Application of the active disturbance rejection control structure to improve the controller performance of uncertain pneumatic actuators. Asian Journal of Control, 2019, 21, 99-113.	3.0	11
25	Robust Control of the Boost Converter. , 0, , .		10
26	Robust synchronization of arrays of uncertain nonlinear second-order dynamical systems. Nonlinear Dynamics, 2012, 67, 2735-2746.	5.2	10
27	Chaotic behavior of driven, second-order, piecewise linear systems. Chaos, Solitons and Fractals, 2017, 105, 8-13.	5.1	9
28	Discontinuous H â̂ž control of underactuated mechanical systems with friction and backlash. International Journal of Control, Automation and Systems, 2016, 14, 1213-1222.	2.7	8
29	Bifurcations and chaos produced by the modulation signal in a PWM buck converter. Chaos, Solitons and Fractals, 2009, 42, 2260-2271.	5.1	7
30	Homoclinic Chaos in 2-DOF Robot Manipulators Driven by PD Controllers. Nonlinear Dynamics, 2000, 21, 157-171.	5.2	6
31	Output feedback and dynamical sliding-mode control of power converters. International Journal of Electronics, 2011, 98, 505-519.	1.4	6
32	Robust output synchronization of second-order systems. European Physical Journal: Special Topics, 2014, 223, 757-772.	2.6	6
33	Sensorless Nonsmooth Hâ̂ž-Tracking Synthesis of Servosystems with Backlash and Coulomb Frictionâ̂—â̂—Y. Orlov gratefully acknowledges the financial support from CONACYT (Consejo Nacional de Ciencia y) Tj ETQq1 1 0.784314 rgBT /Over		8
34	Melnikov-Type Chaos of Planar Systems with Two Discontinuities. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1550027.	1.7	6
35	Stability robustness of linearizing controllers with state estimation for discrete-time nonlinear systems. IMA Journal of Mathematical Control and Information, 2001, 18, 479-489.	1.7	5
36	Hopf bifurcation control for affine systems. , 2004, , .		5

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37	Robust synchronization of arrays of Lagrangian systems. International Journal of Control, Automation and Systems, 2010, 8, 1039-1047.	2.7	5
38	Regulation and force control using sliding modes to reduce rebounds in a mechanical system subject to a unilateral constraint. IET Control Theory and Applications, 2012, 6, 2785-2792.	2.1	5
39	Robust Observer for a Class of Nonlinear SISO Dynamical Systems. Mathematical Problems in Engineering, 2016, 2016, 1-9.	1.1	4
40	Oscillations in First-Order, Continuous-Time Systems via Time-Delay Feedback. Complexity, 2018, 2018, 1-14.	1.6	4
41	Rotating waves in oscillators with Huygensâ€™ coupling**This work was partly supported by the CONACyT under Grant CB2012-180011-Y.. IFAC-PapersOnLine, 2015, 48, 71-76.	0.9	3
42	Robust Tracking and Cruise Control of a Class of Robotic Systems. Mathematical Problems in Engineering, 2015, 2015, 1-10.	1.1	3
43	Synchronization of asymmetrically coupled systems. Nonlinear Dynamics, 2019, 95, 2217-2234.	5.2	3
44	Tracking on the boost converter using standard regulation techniques. , 2001, , .		2
45	Feedback stabilization and force control using sliding modes in a mechanical system subject to unilateral constraints. , 2010, , .		2
46	Sliding mode control with H<inf>&#x221E;</inf> attenuator for unmatched disturbances in a mechanical system with friction and a force constraint. , 2012, , .		2
47	Robust tracking control of a shaking table with dry friction. Nonlinear Dynamics, 2016, 86, 1535-1547.	5.2	2
48	Synchronization in Dynamically Coupled Fractional-Order Chaotic Systems: Studying the Effects of Fractional Derivatives. Complexity, 2021, 2021, 1-12.	1.6	2
49	Chaotic dynamics in a PD-controlled pendulum. , 0, , .		1
50	Homoclinic chaos in inverted pendula. , 0, , .		1
51	Synchronization of linear piecewise chaotic systems using sliding mode control. Journal of Physics: Conference Series, 2005, 23, 309-316.	0.4	1
52	Robust output synchronization of phase planar systems. Chaos, 2007, 17, 023124.	2.5	1
53	Normal Form and Control of the Hopf bifurcation. Proceedings of the American Control Conference, 2007, , .	0.0	1
54	Synchronization of two inverted pendula via dynamic coupling. , 2016, , .		1

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55	A robust internal model controller for nonlinear systems. , 0, , .		0
56	Robust synchronization of nDOF lagrangian systems. , 0, , .		0
57	Two new techniques to synchronize phase planar systems using discontinuous feedback. Journal of Physics: Conference Series, 2005, 23, 285-299.	0.4	0
58	Controlled Synchronization of a Mechanical System in a Fuzzy Scheme*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 276-281.	0.4	0
59	Two synchronized pendulums in a fuzzy variable structure. , 2010, , .		0
60	Control of Bifurcations Using Discontinuous Control. , 2012, , .		0
61	Chaos in discontinuous system by using continuous approximation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 215-219.	0.4	0
62	Open-loop synchronization: uncoupled oscillators may show synchronized motion**Partially supported by the Mexican Council for Science and Technology (CONACYT). IFAC-PapersOnLine, 2015, 48, 251-256.	0.9	0
63	Robust tracking control of servo systems with backlash: Nonsmooth &#x210B;<inf>&#x221E;</inf> control vs. linear &#x210B;<inf>&#x221E;</inf> control. , 2015, , .		0
64	Blind Identification of Noisy Non-stationary Sources Using a Binary Mask. IEEE Latin America Transactions, 2019, 17, 176-182.	1.6	0