

Luis Aguilar

List of Publications by Year in descending order

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1520
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-Sustaining Oscillations With an Internal Two-Fuzzy Inference System Based on the Poincaré-Bendixson Method. IEEE Transactions on Fuzzy Systems, 2022, 30, 2563-2573.	6.5	3
2	Self-excited oscillations in an inverted cart-pendulum based on the two-relay approach. ISA Transactions, 2022, 121, 306-315.	3.1	3
3	Increasing Power Generation Efficiency in Horizontal Wind Turbines by Rejecting Electromechanical Uncertainties Due to the Wind. , 2022, 6, 217-222.		4
4	Prescribed-Time Robust Differentiator Design Using Finite Varying Gains. , 2022, 6, 620-625.		20
5	Stability Analysis for Mamdani-Type Integral Fuzzy-Based Sliding-Mode Control of Systems Under Persistent Disturbances. IEEE Transactions on Fuzzy Systems, 2022, 30, 1640-1647.	6.5	5
6	Robust observer design with prescribed settling-time bound and finite varying gains. European Journal of Control, 2022, 68, 100667.	1.6	7
7	Leader-Follower Synchronization and ISS Analysis for a Network of Boundary-Controlled Wave PDEs. , 2021, 5, 683-688.		30
8	Self-excited periodic motion in underactuated mechanical systems using two-fuzzy inference system. Fuzzy Sets and Systems, 2021, , .	1.6	2
9	Two-Relay Controller and Its Application in Snake-Like Robot Motion: An Infinite-Dimensional Setting. , 2021, , .		3
10	Prescribed-Time Stabilization of Controllable Planar Systems Using Switched State Feedback. , 2021, 5, 2048-2053.		15
11	State-Feedback Nonlinear H^∞ Boundary Control for a Gantry Crane with Flexible Cable. , 2021, , .		2
12	Robust PID control of quadrotors with power reduction analysis. ISA Transactions, 2020, 98, 47-62.	3.1	81
13	A Lyapunov Analysis for Mamdani Type Fuzzy-Based Sliding Mode Control. IEEE Transactions on Fuzzy Systems, 2020, 28, 1887-1895.	6.5	13
14	Robust sensorless speed tracking controller for surface-mount permanent magnet synchronous motors subjected to uncertain load variations. International Journal of Systems Science, 2020, 51, 35-48.	3.7	7
15	μ -Control Tuning to Guarantee the Output Performance of LTI Second-Order Systems. IFAC-PapersOnLine, 2020, 53, 4611-4616.	0.5	0
16	A family of anti-swing motion controllers for 2D-cranes with load hoisting/lowering. Mechanical Systems and Signal Processing, 2019, 133, 106253.	4.4	22
17	High-order sliding-mode observer-based input-output linearization. International Journal of Robust and Nonlinear Control, 2019, 29, 3183-3199.	2.1	24
18	Fuzzy Control Synthesis for Systems with Discontinuous Friction. Studies in Fuzziness and Soft Computing, 2019, , 73-83.	0.6	1

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19	Fuzzy Control for Wheeled Mobile Robots. Studies in Fuzziness and Soft Computing, 2019, , 85-96.	0.6	2
20	Fuzzy Lyapunov Synthesis for Nonsmooth Mechanical Systems. Studies in Fuzziness and Soft Computing, 2019, , 43-54.	0.6	0
21	Fuzzy Control for Biped Robots Under Impacts. Studies in Fuzziness and Soft Computing, 2019, , 97-120.	0.6	0
22	Type-2 Fuzzy Logic in Control of Nonsmooth Systems. Studies in Fuzziness and Soft Computing, 2019, , .	0.6	9
23	Self-tuning for a SISO-type Fuzzy Control Based on the Relay Feedback Approach. Studies in Computational Intelligence, 2019, , 171-186.	0.7	1
24	Reduction of power consumption on quadrotor vehicles via trajectory design and a controller-gains tuning stage. Aerospace Science and Technology, 2018, 78, 280-296.	2.5	43
25	$\hat{\alpha}_2$ -gain tuning of variable structure SISO systems of relative degree n . International Journal of Control, 2018, 91, 2422-2444.	1.2	5
26	Adaptive H_{∞} Synthesis for Linear Systems with Uncertain Parameters. , 2018, , .		0
27	Active Disturbance Rejection for a Three Degrees of Freedom Gyroscope. IFAC-PapersOnLine, 2018, 51, 372-377.	0.5	2
28	Robust Positioning Control Law for a 3D Underactuated Crane System. IFAC-PapersOnLine, 2018, 51, 450-455.	0.5	3
29	A model-based velocity controller for chaotization of flexible joint robot manipulators. International Journal of Advanced Robotic Systems, 2018, 15, 172988141880252.	1.3	10
30	Fuzzy Slope Adaptation for the Sliding Mode Control of a Pneumatic Parallel Platform. International Journal of Fuzzy Systems, 2017, 19, 167-178.	2.3	6
31	Sensorless H_{∞} speed-tracking synthesis for surface-mount permanent magnet synchronous motor. ISA Transactions, 2017, 67, 140-150.	3.1	15
32	Chattering existence and attenuation in fuzzy-based sliding mode control. Engineering Applications of Artificial Intelligence, 2017, 61, 152-160.	4.3	28
33	Sensor Less Fuzzy Logic Tracking Control for a Servo System with Friction and Backlash. Studies in Computational Intelligence, 2017, , 603-613.	0.7	0
34	Variable Structure Tracking Control-Observer for a Perturbed Inertia Wheel Pendulum via Position Measurements. IFAC-PapersOnLine, 2017, 50, 7151-7156.	0.5	3
35	Integral Sliding Modes with Nonlinear H_{∞} for Time-Varying Minimum-Phase Underactuated Systems with Unmatched Disturbances. Mathematical Problems in Engineering, 2017, 2017, 1-13.	0.6	0
36	Robust sensorless speed-tracking controller for surface-mount permanent magnet synchronous motors. , 2016, , .		2

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37	Discontinuous H^∞ control of underactuated mechanical systems with friction and backlash. International Journal of Control, Automation and Systems, 2016, 14, 1213-1222.	1.6	8
38	Nonsmooth H^∞ synthesis of non-minimum-phase servo-systems with backlash. Control Engineering Practice, 2016, 46, 77-84.	3.2	13
39	Robust output control of systems subjected to perturbations via high-order sliding modes observation and identification. , 2016, , 57-76.		2
40	L2-Gain analysis of sliding mode dynamics. , 2016, , 131-153.		1
41	Sensorless Nonsmooth H^∞ -Tracking Synthesis of Servosystems with Backlash and Coulomb Friction— $\hat{a}-Y$. Orlov gratefully acknowledges the financial support from CONACYT (Consejo Nacional de Ciencia y Tj ETQq1 1 0.784314 rgBT /Overlo	1.784314	8
42	Analysis and Synthesis of Global Nonlinear H^∞ Controller for Robot Manipulators. Mathematical Problems in Engineering, 2015, 2015, 1-9.	0.6	8
43	Generic nonsmooth H^∞ output synthesis: Tracking control with application to a coal-fired boiler/turbine unit with input dead zone. , 2015, , .		0
44	Output sliding mode-based stabilization of underactuated 3-DOF helicopter prototype and its experimental verification. Journal of the Franklin Institute, 2015, 352, 1580-1594.	1.9	12
45	Generic Nonsmooth H^∞ Output Synthesis: Application to a Coal-Fired Boiler/Turbine Unit With Actuator Dead Zone. IEEE Transactions on Control Systems Technology, 2015, 23, 2117-2128.	3.2	18
46	Self-Oscillations in Dynamic Systems. Systems and Control: Foundations and Applications, 2015, , .	0.1	20
47	Robust tracking control of servo systems with backlash: Nonsmooth H^∞ control vs. linear H^∞ control. , 2015, , .		0
48	A hybrid optimization method with PSO and GA to automatically design Type-1 and Type-2 fuzzy logic controllers. International Journal of Machine Learning and Cybernetics, 2015, 6, 175-196.	2.3	55
49	Generation of Self-Oscillations in Systems with Double Integrator. Systems and Control: Foundations and Applications, 2015, , 109-119.	0.1	1
50	Self-Oscillation via Locus of a Perturbed Relay System Design (LPRS). Systems and Control: Foundations and Applications, 2015, , 53-64.	0.1	0
51	Three Link Serial Structure Underactuated Robot. Systems and Control: Foundations and Applications, 2015, , 99-107.	0.1	0
52	Output-Based Robust Generation of Self-Oscillations via High-Order Sliding Modes Observer. Systems and Control: Foundations and Applications, 2015, , 81-88.	0.1	0
53	Describing Function-Based Design of TRC for Generation of Self-Oscillation. Systems and Control: Foundations and Applications, 2015, , 19-37.	0.1	0
54	Poincaré Map-Based Design. Systems and Control: Foundations and Applications, 2015, , 39-52.	0.1	0

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55	Generating Self-Oscillations in Furuta Pendulum. Systems and Control: Foundations and Applications, 2015, , 91-98.	0.1	0
56	Fixed-Phase Loop (FPL). Systems and Control: Foundations and Applications, 2015, , 121-135.	0.1	0
57	Robustification of the Self-Oscillation via Sliding Modes Tracking Controllers. Systems and Control: Foundations and Applications, 2015, , 67-80.	0.1	0
58	Orbital Stability Analysis of Two-Relay Controller in Second Order Systems via Lyapunov Functions and Its Application to a 3-DOF Underactuated Helicopter. , 2014, , .		0
59	Advanced H^∞ Control. Systems and Control: Foundations and Applications, 2014, , .	0.1	36
60	Analysis and synthesis of sliding mode control for large scale variable speed wind turbine for power optimization. Renewable Energy, 2014, 71, 715-728.	4.3	112
61	Type-1 and Type-2 fuzzy logic controller design using a Hybrid PSO-GA optimization method. Information Sciences, 2014, 285, 35-49.	4.0	63
62	H_∞ Generation of Periodic Motion of Mechanical Systems of One Degree of Underactuation. , 2014, , 169-190.		0
63	The LMI Approach in an Infinite-Dimensional Setting. Systems and Control: Foundations and Applications, 2014, , 23-41.	0.1	0
64	Advanced H_∞ Synthesis of Fully Actuated Robot Manipulators with Frictional Joints. , 2014, , 123-149.		0
65	LMI-Based H_∞ Synthesis of the Current Profile in Tokamak Plasmas. , 2014, , 191-209.		0
66	Nonsmooth H_∞ Synthesis in the Presence of Backlash. , 2014, , 151-167.		0
67	Nonlinear H_∞ Control. Systems and Control: Foundations and Applications, 2014, , 55-63.	0.1	1
68	Pendulum Position Based Fuzzy Regulator of the Furuta Pendulum – A Stable Closed-Loop System Design Approach. Lecture Notes in Computer Science, 2014, , 426-435.	1.0	1
69	A Review on Self-oscillating Relay Feedback Systems and Its Application to Underactuated Systems with Degree of Underactuation One. Lecture Notes in Control and Information Sciences, 2013, , 187-205.	0.6	1
70	Second order sliding mode tracking controller for inertia wheel pendulum. Journal of the Franklin Institute, 2013, 350, 92-106.	1.9	43
71	Nonsmooth h_∞ output regulation with application to a coal-fired boiler/turbine unit with actuator deadzone. , 2013, , .		6
72	Performance analysis of relay feedback position regulators for manipulators with Coulomb friction. , 2013, , .		1

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73	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.	1.2	5
74	Bio-inspired optimization of fuzzy logic controllers for autonomous mobile robots. , 2012, , .		14
75	Maximizing the performance of variable speed wind turbine with nonlinear output feedback control. Procedia Engineering, 2012, 35, 31-40.	1.2	25
76	Periodic motion stabilization of a virtually constrained 3-DOF underactuated helicopter using second order sliding modes. , 2012, , .		4
77	Stabilization of a 3-DOF underactuated helicopter prototype: Second order sliding mode algorithm synthesis, stability analysis, and numerical verification. , 2012, , .		5
78	Self-oscillating relay feedback systems: A review and recent results. , 2012, , .		2
79	Sliding mode control with H _∞ attenuator for unmatched disturbances in a mechanical system with friction and a force constraint. , 2012, , .		2
80	Designing Type-1 and Type-2 Fuzzy Logic Controllers via Fuzzy Lyapunov Synthesis for nonsmooth mechanical systems. Engineering Applications of Artificial Intelligence, 2012, 25, 971-979.	4.3	105
81	Robust quasi-continuous sliding-mode control of a variable-speed wind turbine. , 2012, , .		7
82	On synchronization of chaotic systems based on the Thau observer design. Communications in Nonlinear Science and Numerical Simulation, 2012, 17, 17-25.	1.7	19
83	Generating oscillations in inertia wheel pendulum via two-relay controller. International Journal of Robust and Nonlinear Control, 2012, 22, 318-330.	2.1	21
84	Two relay controller for real time trajectory generation and its application to inverted orbital stabilization of inertia wheel pendulum via quasi-continuous HOSM. Asian Journal of Control, 2012, 14, 58-66.	1.9	10
85	Periodic motion planning and nonlinear tracking control of a 3-DOF underactuated helicopter. International Journal of Systems Science, 2011, 42, 829-838.	3.7	41
86	Tracking control for inverted orbital stabilization of inertia wheel pendulum Trajectory generation, stability analysis, and experiments. , 2011, , .		0
87	Output feedback sliding mode control of a PVTOL including actuators dynamics. , 2011, , .		19
88	Nonlinear Output Feedback H _∞ -Tracking Control of a 3-DOF Underactuated Helicopter. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 11145-11150.	0.4	3
89	Generation of walking periodic motions for a biped robot via genetic algorithms. Applied Soft Computing Journal, 2011, 11, 5306-5314.	4.1	34
90	Fuzzy logic control with genetic membership function parameters optimization for the output regulation of a servomechanism with nonlinear backlash. Expert Systems With Applications, 2010, 37, 4368-4378.	4.4	93

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91	Output feedback second order sliding mode control design for a 3-DOF helicopter based on its simplified model. , 2010, , .		4
92	A T-S Fuzzy Logic Controller for biped robot walking based on adaptive network fuzzy inference system. , 2010, , .		8
93	Type-2 fuzzy load regulation of a servomechanism with backlash using only motor position measurements. , 2010, , .		3
94	An Observer for the Type-1 Fuzzy Control of a Servomechanism with Backlash Using Only Motor Measurements. Studies in Computational Intelligence, 2010, , 405-421.	0.7	4
95	Type-2 Fuzzy Logic Controllers Optimization Using Genetic Algorithms and Particle Swarm Optimization. , 2010, , .		19
96	Feedback stabilization and force control using sliding modes in a mechanical system subject to unilateral constraints. , 2010, , .		2
97	Two relay based control for orbital stabilization of inertia wheel pendulum—The bounded input case. , 2010, , .		0
98	Two-relay controller for real-time trajectory generation and its application to inverted orbital stabilization of inertia wheel pendulum. , 2010, , .		2
99	Optimization of Type-2 Fuzzy Logic Controllers Using PSO Applied to Linear Plants. Studies in Computational Intelligence, 2010, , 181-193.	0.7	8
100	Bio-inspired Optimization Methods of Fuzzy Logic Controllers Applied to Linear Plants. Advances in Intelligent and Soft Computing, 2010, , 245-252.	0.2	1
101	Neuro-Fuzzy Based Output Feedback Controller Design for Biped Robot Walking. Studies in Computational Intelligence, 2010, , 423-444.	0.7	1
102	An Application of Fuzzy Lyapunov Synthesis in the Design of Type-2 Fuzzy Logic Controllers. Advances in Intelligent and Soft Computing, 2010, , 229-236.	0.2	0
103	Output Feedback Nonlinear -Tracking Control of a Nonminimum-Phase 2-DOF Underactuated Mechanical System. Journal of Robotics, 2009, 2009, 1-10.	0.6	3
104	Optimization of type-2 fuzzy logic controllers for mobile robots using evolutionary methods. , 2009, , .		15
105	A cognitive map and fuzzy inference engine model for online design and self fine-tuning of fuzzy logic controllers. International Journal of Intelligent Systems, 2009, 24, 1134-1173.	3.3	27
106	Optimization of interval type-2 fuzzy logic controllers for a perturbed autonomous wheeled mobile robot using genetic algorithms. Information Sciences, 2009, 179, 2158-2174.	4.0	307
107	Impulsive control of a mechanical oscillator with friction. , 2009, , .		8
108	Inducing oscillations in an inertia wheel pendulum via two-relays controller: Theory and experiments. , 2009, , .		5

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109	Genetic design of biped walking fuzzy logic controller. , 2009, , .		2
110	Generating self-excited oscillations for underactuated mechanical systems via two-relay controller. International Journal of Control, 2009, 82, 1678-1691.	1.2	19
111	Designing Type-2 Fuzzy Logic System Controllers via Fuzzy Lyapunov Synthesis for the output regulator of a servomechanism with nonlinear backlash. , 2009, , .		3
112	A fuzzy-genetic controller for the output regulation of a servomechanism with backlash. , 2009, , .		0
113	Generating Self-Excited Oscillations via Two-Relay Controller. IEEE Transactions on Automatic Control, 2009, 54, 416-420.	3.6	63
114	Sliding Mode Velocity-observer-based Stabilization of a 3-DOF Helicopter Prototype. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 179-184.	0.4	4
115	Evolutionary Optimization of Type-2 Fuzzy Logic Systems Applied to Linear Plants. Studies in Computational Intelligence, 2009, , 17-31.	0.7	6
116	Genetic Optimization for the Design of Walking Patterns of a Biped Robot. Studies in Computational Intelligence, 2009, , 259-271.	0.7	0
117	Controlling Unstable Non-Minimum-Phase Systems with Fuzzy Logic: The Perturbed Case. Studies in Computational Intelligence, 2009, , 245-257.	0.7	0
118	Systematic design of a stable type-2 fuzzy logic controller. Applied Soft Computing Journal, 2008, 8, 1274-1279.	4.1	84
119	Fuzzy Control for Output Regulation of a Servomechanism with Backlash. Studies in Computational Intelligence, 2008, , 19-28.	0.7	6
120	Sliding mode control synthesis of a 3-DOF helicopter prototype using position feedback. , 2008, , .		16
121	Optimization with Genetic Algorithms of Interval Type-2 Fuzzy Logic controllers for an autonomous wheeled mobile robot: A comparison under different kinds of perturbations. , 2008, , .		14
122	Hybrid Genetic-Fuzzy Optimization of a Type-2 Fuzzy Logic Controller. , 2008, , .		16
123	Identification based generation of self-excited oscillations for underactuated mechanical systems via two-relay algorithm. , 2008, , .		6
124	Asymptotic harmonic generator and its application to finite time orbital stabilization of a friction pendulum with experimental verification. International Journal of Control, 2008, 81, 227-234.	1.2	34
125	A Cognitive Map-Fuzzy Logic Controller model: Experiments on control objectives sensibility. , 2008, , .		0
126	Robust Orbital Stabilization of Pendubot: Algorithm Synthesis, Experimental Verification, and Application to Swing up and Balancing Control. , 2008, , 383-400.		3

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127	Performance analysis of Cognitive Map-Fuzzy Logic Controller model for adaptive control application. , 2008, , .		4
128	Genetic optimization of a Type-2 fuzzy controller for output regulation of a servomechanism with backlash. , 2008, , .		11
129	Systematic Design of a Stable Type-2 Fuzzy Logic Controller. , 2008, , 319-331.		5
130	Optimization of Interval Type-2 Fuzzy Logic Controllers for a Perturbed Autonomous Wheeled Mobile Robot Using Genetic Algorithms. Studies in Computational Intelligence, 2008, , 3-18.	0.7	10
131	Nonlinear H-Output Regulation of a Multi-stable Drive System including Backlash with a Single-Stability Approximation. Proceedings of the American Control Conference, 2007, , .	0.0	2
132	Nonlinear H [∞] -Output Regulation of a Nonminimum Phase Servomechanism With Backlash. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2007, 129, 544-549.	0.9	27
133	FPGA as a Tool for Implementing Non-fixed Structure Fuzzy Logic Controllers. , 2007, , .		9
134	Evolutionary optimization of interval type-2 membership functions using the Human Evolutionary Model. IEEE International Conference on Fuzzy Systems, 2007, , .	0.0	7
135	Empirical and Sensor Knowledge-extraction for Fuzzy Logic Motor Control Design. , 2007, , .		3
136	Hybrid Control for an Autonomous Wheeled Mobile Robot Under Perturbed Torques. Lecture Notes in Computer Science, 2007, , 594-603.	1.0	15
137	Tracking Control for a Unicycle Mobile Robot Using a Fuzzy Logic Controller. , 2007, , 243-253.		3
138	From Type-1 to Type-2 Fuzzy Logic Control: A Stability and Robustness Study. , 2007, , 135-149.		2
139	Periodic motion of underactuated mechanical systems self-generated by variable structure controllers: Design and experiments. , 2007, , .		5
140	Chattering Attenuation Using Linear-in-the-Parameter Neural Nets in Variable Structure Control of Robot Manipulators with Friction. , 2007, , 229-241.		2
141	A Generic Approach to Fuzzy Logic Controller Synthesis on FPGA. , 2006, , .		4
142	Synchronization of Mechanical Systems with a New Van der Pol Chaotic Oscillator. , 2006, , .		1
143	Swing up and Balancing Control of Pendubot via Model Orbit Stabilization: Algorithm Synthesis and Experimental Verification. , 2006, , .		13
144	Output Excitation via Continuous Sliding-Modes to Generate Periodic Motion in Underactuated Systems. , 2006, , .		4

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145	Hybrid second-order sliding-mode tracking control for Acrobot. , 2005, , .		1
146	Non-smooth η -position control of mechanical manipulators with frictional joints. International Journal of Control, 2004, 77, 1062-1069.	1.2	8
147	Quasihomogeneity Approach to the Pendubot Stabilization around Periodic Orbits. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 411-416.	0.4	10
148	Nonlinear H^∞ -control of nonsmooth time-varying systems with application to friction mechanical manipulators. Automatica, 2003, 39, 1531-1542.	3.0	50
149	Global position regulation of friction manipulators via switched chattering control. International Journal of Control, 2003, 76, 1446-1452.	1.2	36
150	Switched chattering control vs. backlash/friction phenomena in electrical servo-motors. International Journal of Control, 2003, 76, 959-967.	1.2	85
151	H^∞ Robust Control Design for an Arm Manipulator. Journal of Intelligent and Robotic Systems: Theory and Applications, 2000, 27, 21-30.	2.0	3
152	Switched chattering control of electrical servo-motors and backlash/friction attenuation. , 0, , .		0
153	Model Orbit Robust Stabilization (MORS) of Pendubot with Application to Swing up Control. , 0, , .		14
154	Application of a Discontinuous Controller with Chattering Attenuation to Unicycle Mobile Robots. , 0, , .		0
155	Finite Time Model Orbit Stabilization of Friction Pendulum. , 0, , .		0
156	Output Excitation via Second-Order Sliding-Modes to Generate Periodic Motion for Underactuated Systems. , 0, , .		4
157	Intelligent control of dynamic systems using type-2 fuzzy logic and stability issues. International Mathematical Forum, 0, , 1371-1382.	0.2	27