Enrique Ponce

List of Publications by Year
in descending order

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101 papers	2,237 citations	201674 27 h-index	254184 43 g-index
105 all docs	105 docs citations	105 times ranked	564 citing authors

#	Article	IF	Citations
1	Bifurcation Sets of Continuous Piecewise Linear Systems with Two Zones. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 2073-2097.	1.7	214
2	Canonical Discontinuous Planar Piecewise Linear Systems. SIAM Journal on Applied Dynamical Systems, 2012, 11, 181-211.	1.6	155
3	A general mechanism to generate three limit cycles in planar Filippov systems with two zones. Nonlinear Dynamics, 2014, 78, 251-263.	5.2	109
4	On the existence and uniqueness of limit cycles in planar continuous piecewise linear systems without symmetry. Nonlinear Analysis: Real World Applications, 2013, 14, 2002-2012.	1.7	89
5	On simplifying and classifying piecewise-linear systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2002, 49, 609-620.	0.1	80
6	LIMIT CYCLE BIFURCATION FROM CENTER IN SYMMETRIC PIECEWISE-LINEAR SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 895-907.	1.7	62
7	A case study for homoclinic chaos in an autonomous electronic circuit. Physica D: Nonlinear Phenomena, 1993, 62, 230-253.	2.8	59
8	Nonlinear Analysis of Interconnected Power Converters: A Case Study. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2015, 5, 326-335.	3.6	56
9	The discontinuous matching of two planar linear foci can have three nested crossing limit cycles. Publicacions Matematiques, 2014, EXTRA, 221-253.	0.5	55
10	On the existence and uniqueness of limit cycles in LiÃ©nard differential equations allowing discontinuities. Nonlinearity, 2008, 21, 2121-2142.	1.4	54
11	HORSESHOES NEAR HOMOCLINIC ORBITS FOR PIECEWISE LINEAR DIFFERENTIAL SYSTEMS IN â„3. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 1171-1184.	1.7	49
12	BIFURCATION OF INVARIANT CONES IN PIECEWISE LINEAR HOMOGENEOUS SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 2469-2484.	1.7	48
13	Canards, Folded Nodes, and Mixed-Mode Oscillations in Piecewise-Linear Slow-Fast Systems. SIAM Review, 2016, 58, 653-691.	9.5	46
14	Stabilization of oscillations through backstepping in high-dimensional systems. IEEE Transactions on Automatic Control, 2005, 50, 705-710.	5.7	45
15	NONHYPERBOLIC BOUNDARY EQUILIBRIUM BIFURCATIONS IN PLANAR FILIPPOV SYSTEMS: A CASE STUDY APPROACH. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 1377-1392.	1.7	45
16	Nonlinear control of dc-dc bidirectional converters in stand-alone dc Microgrids. , 2012, , .		45
17	Route to chaos via strange non-chaotic attractors. Journal of Physics A, 1990, 23, L383-L387.	1.6	44
18	LIMIT CYCLE BIFURCATION IN 3D CONTINUOUS PIECEWISE LINEAR SYSTEMS WITH TWO ZONES: APPLICATION TO CHUA'S CIRCUIT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 3153-3164.	1.7	44

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19	The Focus-Center-Limit Cycle Bifurcation in Symmetric 3D Piecewise Linear Systems. SIAM Journal on Applied Mathematics, 2005, 65, 1933-1951.	1.8	41
20	Hopf-like bifurcations in planar piecewise linear systems. Publicacions Matematiques, 1997, 41, 135-148.	0.5	38
21	Uniqueness and Non-uniqueness of Limit Cycles for Piecewise Linear Differential Systems with Three Zones and No Symmetry. Journal of Nonlinear Science, 2015, 25, 861-887.	2.1	37
22	On the critical crossing cycle bifurcation in planar Filippov systems. Journal of Differential Equations, 2015, 259, 7086-7107.	2.2	37
23	The continuous matching of two stable linear systems can be unstable. Discrete and Continuous Dynamical Systems, 2006, 16, 689-703.	0.9	37
24	A Simple Solution to the Bragaâ€“Mello Conjecture. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1550009.	1.7	34
25	BIFURCATION SETS OF SYMMETRICAL CONTINUOUS PIECEWISE LINEAR SYSTEMS WITH THREE ZONES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2002, 12, 1675-1702.	1.7	31
26	Bifurcation of a periodic orbit from infinity in planar piecewise linear vector fields. Nonlinear Analysis: Theory, Methods & Applications, 1999, 36, 623-653.	1.1	28
27	Canards in piecewise-linear systems: explosions and super-explosions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120603.	2.1	28
28	Limit Cycle and Boundary Equilibrium Bifurcations in Continuous Planar Piecewise Linear Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1530008.	1.7	27
29	Jump bifurcations in some degenerate planar piecewise linear differential systems with three zones. Physica D: Nonlinear Phenomena, 2016, 325, 74-85.	2.8	27
30	Hypernormal form calculation for triple-zero degeneracies. Bulletin of the Belgian Mathematical Society - Simon Stevin, 1999, 6, .	0.2	27
31	Global first harmonic bifurcation diagram for odd piecewise linear control systems. Dynamical Systems, 1996, 11, 49-88.	0.7	25
32	A BIPARAMETRIC BIFURCATION IN 3D CONTINUOUS PIECEWISE LINEAR SYSTEMS WITH TWO ZONES: APPLICATION TO CHUA'S CIRCUIT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 445-457.	1.7	22
33	Control of interconnected power electronic converters in dc distribution systems. , 2011, , .		21
34	Existence of piecewise linear differential systems with exactly n limit cycles for all. Nonlinear Analysis: Theory, Methods & Applications, 2003, 54, 977-994.	1.1	20
35	Bifurcation Analysis of a DCâ€“DC Bidirectional Power Converter Operating with Constant Power Loads. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1630010.	1.7	19
36	The boundary focusâ€“saddle bifurcation in planar piecewise linear systems. Application to the analysis of memristor oscillators. Nonlinear Analysis: Real World Applications, 2018, 43, 495-514.	1.7	19

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37	PIECEWISE LINEAR FEEDBACK SYSTEMS WITH ARBITRARY NUMBER OF LIMIT CYCLES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 895-904.	1.7	18
38	Bifurcation Analysis of Hysteretic Systems with Saddle Dynamics. Applied Mathematics and Nonlinear Sciences, 2017, 2, 449-464.	1.6	18
39	Local and global bifurcations in simple Takagi-Sugeno fuzzy systems. IEEE Transactions on Fuzzy Systems, 2001, 9, 355-368.	9.8	17
40	Invariant manifolds of periodic orbits for piecewise linear three-dimensional systems. IMA Journal of Applied Mathematics, 2004, 69, 71-91.	1.6	16
41	Revisiting the Teixeira Singularity Bifurcation Analysis: Application to the Control of Power Converters. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2018, 28, 1850106.	1.7	16
42	Unfolding the fold-Hopf bifurcation in piecewise linear continuous differential systems with symmetry. Physica D: Nonlinear Phenomena, 2013, 250, 34-46.	2.8	15
43	On Discontinuous Piecewise Linear Models for Memristor Oscillators. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2017, 27, 1730022.	1.7	15
44	Two Limit Cycles in LiÃ©nard Piecewise Linear Differential Systems. Journal of Nonlinear Science, 2019, 29, 1499-1522.	2.1	14
45	A Method for Homoclinic and Heteroclinic Continuation in Two and Three Dimensions. , 1990, , 197-210.		12
46	Limit cycles of polynomial LiÃ©nard systems. Physical Review E, 1998, 58, 5185-5187.	2.1	12
47	BIFURCATION ANALYSIS OF TIME-DELAY CONTROL SYSTEMS WITH SATURATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 1089-1109.	1.7	12
48	On Double Boundary Equilibrium Bifurcations in Piecewise Smooth Planar Systems. Qualitative Theory of Dynamical Systems, 2011, 10, 277-301.	1.7	12
49	On the Teixeira singularity bifurcation in a DCâ€“DC power electronic converter. Nonlinear Dynamics, 2019, 96, 1243-1266.	5.2	12
50	Limit cycle bifurcations in resonant LC power inverters under zero current switching strategy. Nonlinear Dynamics, 2018, 91, 1145-1161.	5.2	12
51	Algebraic determination of limit cycles in a family of three-dimensional piecewise linear differential systems. Nonlinear Analysis: Theory, Methods & Applications, 2011, 74, 6712-6727.	1.1	10
52	Sliding mode control of interconnected power electronic converters in DC microgrids. , 2013, , .		10
53	Hopf bifurcation at infinity in 3D symmetric piecewise linear systems. Application to a Bonhoefferâ€“van der Pol oscillator. Nonlinear Analysis: Real World Applications, 2020, 54, 103112.	1.7	10
54	On the robustness of the DC-DC boost converter under washout SMC. , 2009, , .		9

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55	FOLLOWING A SADDLE-NODE OF PERIODIC ORBITS' BIFURCATION CURVE IN CHUA'S CIRCUIT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 487-495.	1.7	9
56	On the fold-Hopf bifurcation for continuous piecewise linear differential systems with symmetry. Chaos, 2010, 20, 033119.	2.5	9
57	Unravelling the dynamical richness of 3D canonical memristorÂoscillators. Microelectronic Engineering, 2017, 182, 15-24.	2.4	9
58	Nonlinear Dynamic Modeling and Analysis of Self-Oscillating H-Bridge Parallel Resonant Converter Under Zero Current Switching Control: Unveiling Coexistence of Attractors. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 1657-1667.	5.4	8
59	A frequency-domain approach to bifurcations in control systems with saturation. International Journal of Systems Science, 2000, 31, 1261-1271.	5.5	7
60	ON PERIODIC ORBITS OF 3D SYMMETRIC PIECEWISE LINEAR SYSTEMS WITH REAL TRIPLE EIGENVALUES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 2391-2399.	1.7	7
61	A multiple focus-center-cycle bifurcation in 4D discontinuous piecewise linear memristor oscillators. Nonlinear Dynamics, 2018, 94, 3011-3028.	5.2	7
62	Suppression of Undesired Attractors in a Self-Oscillating H-Bridge Parallel Resonant Converters Under Zero Current Switching Control. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 692-696.	3.0	7
63	BISTABILITY AND HYSTERESIS IN SYMMETRIC 3D PIECEWISE LINEAR OSCILLATORS WITH THREE ZONES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 3633-3645.	1.7	6
64	A PIECEWISE LINEAR ELECTRONIC CIRCUIT WITH A MULTIPLICITY OF BIFURCATIONS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2004, 14, 3871-3881.	1.7	5
65	Order through fluctuations, and systems dynamics models. Environment and Planning B: Planning and Design, 1985, 12, 103-112.	1.7	4
66	Behavior patterns of logistic models with a delay. Mathematics and Computers in Simulation, 1997, 44, 123-141.	4.4	4
67	Chaos through Sliding Bifurcations in a Boost Converter under a SMC Strategy*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 279-284.	0.4	4
68	Sliding Mode Controllers Design through Bifurcation Analysis *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 1284-1289.	0.4	4
69	Bifurcations from a center at infinity in 3D piecewise linear systems with two zones. Physica D: Nonlinear Phenomena, 2020, 402, 132280.	2.8	4
70	Limit cycles from a monodromic infinity in planar piecewise linear systems. Journal of Mathematical Analysis and Applications, 2021, 496, 124818.	1.0	4
71	Planar Filippov Systems with Maximal Crossing Set and Piecewise Linear Focus Dynamics. Springer Proceedings in Mathematics and Statistics, 2013, , 221-232.	0.2	4
72	Some Recent Results for Continuous Switched Linear Systems. , 2006, , .		3

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73	Sliding Dynamics Bifurcations in the Control of Boost Converters*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 13293-13298.	0.4	3
74	Algebraically computable piecewise linear nodal oscillators. Applied Mathematics and Computation, 2013, 219, 4194-4207.	2.2	3
75	Dynamic analysis of self-oscillating H-bridge inverters with state feedback. Journal of the Franklin Institute, 2020, 357, 494-521.	3.4	3
76	Bifurcation analysis of low-order nonlinear control systems with delay. , 0, , .		2
77	INSTABILITY IN THE SIMPLEST CLASS OF CONTINUOUS SWITCHED LINEAR SYSTEMS WITH STABLE COMPONENTS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 79-84.	0.4	2
78	A NEW METHODOLOGY FOR LIMIT CYCLE BIFURCATION FROM INFINITY IN N-DIMENSIONAL SYMMETRIC PIECEWISE LINEAR CONTROL SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 215-220.	0.4	2
79	LIMIT CYCLE BIFURCATION INDUCED BY RATE-LIMITERS IN THE FEEDBACK LOOP. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 209-214.	0.4	2
80	Analysis of coexisting solutions and control of their bifurcations in a parallel LC resonant inverter. , 2017, , .		2
81	Periodic orbits in hysteretic systems with real eigenvalues. Nonlinear Dynamics, 2019, 97, 2557-2578.	5.2	2
82	Delay effects on the limit cycling behavior in resonant inverters with state feedback. Nonlinear Theory and Its Applications IEICE, 2019, 10, 337-356.	0.6	2
83	Bifurcation set for a disregarded Bogdanov-Takens unfolding: Application to 3D cubic memristor oscillators. Nonlinear Dynamics, 2021, 104, 1657-1675.	5.2	2
84	A Hopf-Zero Degenerated Case in Symmetric Piecewise Linear Systems. Springer Proceedings in Mathematics and Statistics, 2013, , 325-333.	0.2	2
85	The describing function method accuracy in first order plants with rate-limited feedback. , 2003, , .		2
86	Bifurcation Analysis of an Inverted Pendulum with Saturated Hamiltonian Control Laws. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 173-174.	0.4	1
87	LIMIT CYCLE BIFURCATION IN SISO CONTROL SYSTEMS WITH SATURATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 646-651.	0.4	1
88	Limit Cycle Bifurcation from a Persistent Center at Infinity in 3D Piecewise Linear Systems with Two Zones. Trends in Mathematics, 2017, , 55-58.	0.1	1
89	Sliding bifurcations in resonant inverters. , 2017, , .		1
90	A direct transition to chaos in hysteretic systems with focus dynamics. Chaos, 2019, 29, 103111.	2.5	1

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91	On normal forms and return maps for pseudo-focus points. Journal of Mathematical Analysis and Applications, 2022, 507, 125774.	1.0	1
92	Some Recent Results for Continuous Switched Linear Systems. , 2006, , .		1
93	Symbolic Computation and Bifurcation Methods. , 1990, , 105-122.		1
94	BIFURCATION ANALYSIS OF A ROTATING ARM WITH SATURATED HAMILTONIAN CONTROL LAWS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 3223-3243.	1.7	0
95	DYNAMICAL COMPLEXITY NEAR NON-CONTROLLABLE 3D PIECEWISE LINEAR LUR'E SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 439-444.	0.4	0
96	Rate-limiter stability analysis comparing bifurcation and LMI-based approaches. , 2011, , .		0
97	Periodic Orbit Bifurcations in Planar Hysteretic Systems without Equilibria. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2030016.	1.7	0
98	Bifurcation Analysis in a Self-Oscillating Series Resonant Converter. , 2020, , 15-28.		0
99	Piecewise Linear Analogue of Hopf-Zero Bifurcation in an Extended BVP Oscillator. SEMA SIMAI Springer Series, 2014, , 113-121.	0.7	0
100	Bifurcation Phenomena in Elementary Takagi-Sugeno Fuzzy Systems. , 2006, , 285-315.		0
101	Bifurcation Phenomena in Elementary Takagiâ€“Sugeno Fuzzy Systems. , 0, , 285-315.		0