Joan Torregrosa

List of Publications by Year
in descending order

72 papers	1,034 citations	471509 17 h-index	477307 29 g-index
72 all docs	72 docs citations	72 times ranked	222 citing authors

#	ARTICLE	IF	CITATIONS
1	Piecewise linear perturbations of a linear center. Discrete and Continuous Dynamical Systems, 2013, 33, 3915-3936.	0.9	111
2	Center-Focus Problem for Discontinuous Planar Differential Equations. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 1755-1765.	1.7	74
3	New lower bound for the Hilbert number in piecewise quadratic differential systems. Journal of Differential Equations, 2019, 266, 4170-4203.	2.2	47
4	Uniqueness of limit cycles for sewing planar piecewise linear systems. Journal of Mathematical Analysis and Applications, 2015, 431, 529-544.	1.0	42
5	Limit cycles in planar piecewise linear differential systems with nonregular separation line. Physica D: Nonlinear Phenomena, 2016, 337, 67-82.	2.8	41
6	Center Problem for Several Differential Equations via Cherkas' Method. Journal of Mathematical Analysis and Applications, 1998, 228, 322-343.	1.0	40
7	A new algorithm for the computation of the Lyapunov constants for some degenerated critical points. Nonlinear Analysis: Theory, Methods & Applications, 2001, 47, 4479-4490.	1.1	37
8	Limit cycles for rigid cubic systems. Journal of Mathematical Analysis and Applications, 2005, 303, 391-404.	1.0	35
9	LOWER BOUNDS FOR THE MAXIMUM NUMBER OF LIMIT CYCLES OF DISCONTINUOUS PIECEWISE LINEAR DIFFERENTIAL SYSTEMS WITH A STRAIGHT LINE OF SEPARATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1350066.	1.7	33
10	On extended Chebyshev systems with positive accuracy. Journal of Mathematical Analysis and Applications, 2017, 448, 171-186.	1.0	31
11	Small-Amplitude Limit Cycles in Liénard Systems via Multiplicity. Journal of Differential Equations, 1999, 159, 186-211.	2.2	30
12	Upper bounds for the number of zeroes for some Abelian integrals. Nonlinear Analysis: Theory, Methods & Applications, 2012, 75, 5169-5179.	1.1	28
13	Explicit non-algebraic limit cycles for polynomial systems. Journal of Computational and Applied Mathematics, 2007, 200, 448-457.	2.0	25
14	Limit cycles appearing from the perturbation of a system with a multiple line of critical points. Nonlinear Analysis: Theory, Methods & Applications, 2012, 75, 278-285.	1.1	25
15	Bifurcation of Limit Cycles from a Polynomial Non-global Center. Journal of Dynamics and Differential Equations, 2008, 20, 945-960.	1.9	22
16	Abel-like differential equations with no periodic solutions. Journal of Mathematical Analysis and Applications, 2008, 342, 931-942.	1.0	19
17	A new Chebyshev family with applications to Abel equations. Journal of Differential Equations, 2012, 252, 1635-1641.	2.2	19
18	A Relation between Small Amplitude and Big Limit Cycles. Rocky Mountain Journal of Mathematics, 2001, 31, .	0.4	18

#	ARTICLE	IF	CITATIONS
19	Parallelization of the Lyapunov constants and cyclicity for centers of planar polynomial vector fields. Journal of Differential Equations, 2015, 259, 6494-6509.	2.2	17
20	Exact number of limit cycles for a family of rigid systems. Proceedings of the American Mathematical Society, 2004, 133, 751-758.	0.8	16
21	On the Chebyshev property for a new family of functions. Journal of Mathematical Analysis and Applications, 2012, 387, 631-644.	1.0	16
22	Lower bounds for the local cyclicity for families of centers. Journal of Differential Equations, 2021, 275, 309-331.	2.2	16
23	The number of polynomial solutions of polynomial Riccati equations. Journal of Differential Equations, 2016, 261, 5071-5093.	2.2	15
24	New lower bounds for the Hilbert numbers using reversible centers. Nonlinearity, 2019, 32, 331-355.	1.4	15
25	24 crossing limit cycles in only one nest for piecewise cubic systems. Applied Mathematics Letters, 2020, 103, 106189.	2.7	15
26	Limit Cycles Bifurcating from a k-dimensional Isochronous Center Contained in $\mathbb{R}^n$ with $k \leq n$. Mathematical Physics Analysis and Geometry, 2007, 10, 237-249.	1.0	14
27	Some results on homoclinic and heteroclinic connections in planar systems. Nonlinearity, 2010, 23, 2977-3001.	1.4	14
28	Existence and uniqueness of limit cycles for generalized φ-Laplacian Liénard equations. Journal of Mathematical Analysis and Applications, 2016, 439, 745-765.	1.0	12
29	Periods for transversal maps via Lefschetz numbers for periodic points. Transactions of the American Mathematical Society, 1995, 347, 4779-4806.	0.9	11
30	Bifurcation of limit cycles from a centre in $\mathbb{R}^4$ in resonance 1:N. Dynamical Systems, 2009, 24, 123-137.	0.4	11
31	Limit cycles in 4-star-symmetric planar piecewise linear systems. Journal of Differential Equations, 2020, 268, 2414-2434.	2.2	11
32	Lower bounds for the local cyclicity of centers using high order developments and parallelization. Journal of Differential Equations, 2021, 271, 447-479.	2.2	11
33	On the Relation between Index and Multiplicity. Journal of the London Mathematical Society, 1998, 57, 757-768.	1.0	10
34	Limit Cycles Coming from Some Uniform Isochronous Centers. Advanced Nonlinear Studies, 2016, 16, 197-220.	1.7	9
35	Limit cycles via higher order perturbations for some piecewise differential systems. Physica D: Nonlinear Phenomena, 2018, 371, 28-47.	2.8	8
36	Local cyclicity in low degree planar piecewise polynomial vector fields. Nonlinear Analysis: Real World Applications, 2021, 60, 103278.	1.7	8

#	ARTICLE	IF	CITATIONS
37	Limit cycles for 3-monomial differential equations. Journal of Mathematical Analysis and Applications, 2015, 428, 735-749.	1.0	7
38	Periods for Transversal Maps Via Lefschetz Numbers for Periodic Points. Transactions of the American Mathematical Society, 1995, 347, 4779.	0.9	7
39	Limit cycles bifurcating from isochronous surfaces of revolution in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:msup><mml:mi mathvariant="double-struck">R</mml:mi><mml:mn>3</mml:mn></mml:msup></mml:math>. Journal of Mathematical Analysis and Applications, 2011, 281, 414-426.	1.0	6
40	GLOBAL CLASSIFICATION OF A CLASS OF CUBIC VECTOR FIELDS WHOSE CANONICAL REGIONS ARE PERIOD ANNULI. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2011, 21, 1831-1867.	1.7	6
41	A proof of PerkoȽ¼s conjectures for the Bogdanovâ€"Takens system. Journal of Differential Equations, 2013, 255, 2655-2671.	2.2	6
42	Explicit upper and lower bounds for the traveling wave solutions of Fisher-Kolmogorov type equations. Discrete and Continuous Dynamical Systems, 2013, 33, 3567-3582.	0.9	6
43	Shape and period of limit cycles bifurcating from a class of Hamiltonian period annulus. Nonlinear Analysis: Theory, Methods & Applications, 2013, 81, 130-148.	1.1	6
44	Algebraic Limit Cycles in Piecewise Linear Differential Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2018, 28, 1850039.	1.7	6
45	Euler-Jacobi formula for double points and applications to quadratic and cubic systems. Bulletin of the Belgian Mathematical Society - Simon Stevin, 1999, 6, .	0.2	6
46	Periodic orbits from second order perturbation via rational trigonometric integrals. Physica D: Nonlinear Phenomena, 2014, 280-281, 59-72.	2.8	5
47	Simultaneous bifurcation of limit cycles from a cubic piecewise center with two period annuli. Journal of Mathematical Analysis and Applications, 2018, 461, 248-272.	1.0	5
48	On the Number of Limit Cycles in Generalized Abel Equations. SIAM Journal on Applied Dynamical Systems, 2020, 19, 2343-2370.	1.6	5
49	A Bendixonâ€"Dulac theorem for some piecewise systems. Nonlinearity, 2020, 33, 2455-2480.	1.4	5
50	Center problem for systems with two monomial nonlinearities. Communications on Pure and Applied Analysis, 2016, 15, 577-598.	0.8	5
51	SOME RESULTS ON RIGID SYSTEMS. , 2005, , .		4
52	GLOBAL PHASE PORTRAITS OF SOME REVERSIBLE CUBIC CENTERS WITH COLLINEAR OR INFINITELY MANY SINGULARITIES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250273.	1.7	4
53	Rational Parameterizations Approach for Solving Equations in Some Dynamical Systems Problems. Qualitative Theory of Dynamical Systems, 2019, 18, 583-602.	1.7	4
54	Limit cycles from a monodromic infinity in planar piecewise linear systems. Journal of Mathematical Analysis and Applications, 2021, 496, 124818.	1.0	4

#	ARTICLE	IF	CITATIONS
55	Orbitally symmetric systems with applications to planar centers. Communications on Pure and Applied Analysis, 2021, 20, 3319.	0.8	4
56	Hopf bifurcation in 3-dimensional polynomial vector fields. Communications in Nonlinear Science and Numerical Simulation, 2022, 105, 106068.	3.3	4
57	Limit Cycles Bifurcating from a 2-Dimensional Isochronous Torus in $\mathbb{R}^3$. Advanced Nonlinear Studies, 2011, 11, 377-389.	1.7	3
58	Simultaneous bifurcation of limit cycles from a linear center with extra singular points. Bulletin Des Sciences Mathematiques, 2014, 138, 124-138.	1.0	3
59	Cyclicity of a fake saddle inside the quadratic vector fields. Journal of Differential Equations, 2015, 258, 588-620.	2.2	3
60	Criticality via first order development of the period constants. Nonlinear Analysis: Theory, Methods & Applications, 2021, 203, 112164.	1.1	3
61	Asymptotic Expansion of the Heteroclinic Bifurcation for the Planar Normal Form of the 1:2 Resonance. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1650017.	1.7	2
62	Weak-Foci of High Order and Cyclicity. Qualitative Theory of Dynamical Systems, 2017, 16, 235-248.	1.7	2
63	New lower bounds of the number of critical periods in reversible centers. Journal of Differential Equations, 2021, 292, 427-460.	2.2	2
64	GLOBAL PHASE PORTRAITS OF SOME REVERSIBLE CUBIC CENTERS WITH NONCOLLINEAR SINGULARITIES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1350161.	1.7	1
65	The center and cyclicity problems for quartic linear-like reversible systems. Nonlinear Analysis: Theory, Methods & Applications, 2020, 190, 111593.	1.1	1
66	Centers of projective vector fields of spatial quasi-homogeneous systems with weight (m , m , n) and degree 2 on the sphere. Electronic Journal of Qualitative Theory of Differential Equations, 2016, , 1-26.	0.5	1
67	The local cyclicity problem: Melnikov method using Lyapunov constants. Proceedings of the Edinburgh Mathematical Society, 0, , 1-20.	0.3	1
68	Bifurcation of limit cycles in piecewise quadratic differential systems with an invariant straight line. Journal of Mathematical Analysis and Applications, 2022, 514, 126256.	1.0	1
69	Corrigendum to "Shape and period of limit cycles bifurcating from a class of Hamiltonian period annulus"[Nonlinear Anal. 81 (2013) 130–148]. Nonlinear Analysis: Theory, Methods & Applications, 2013, 93, 1-2.	1.1	0
70	Centers and Limit Cycles of Vector Fields Defined on Invariant Spheres. Journal of Nonlinear Science, 2021, 31, 1.	2.1	0
71	First-order perturbation for multi-parameter center families. Journal of Differential Equations, 2022, 309, 291-310.	2.2	0
72	Simultaneous Bifurcation of Limit Cycles and Critical Periods. Qualitative Theory of Dynamical Systems, 2022, 21, 1.	1.7	0