Mike R Jeffrey

List of Publications by Year
in descending order

53 papers	556 citations	759233 12 h-index	677142 22 g-index
56 all docs	56 docs citations	56 times ranked	212 citing authors

#	Article	IF	Citations
1	Nondeterministic Chaos, and the Two-fold Singularity in Piecewise Smooth Flows. SIAM Journal on Applied Dynamical Systems, 2011, 10, 423-451.	1.6	69
2	Dynamics at a Switching Intersection: Hierarchy, Isonomy, and Multiple Sliding. SIAM Journal on Applied Dynamical Systems, 2014, 13, 1082-1105.	1.6	58
3	Hidden dynamics in models of discontinuity and switching. Physica D: Nonlinear Phenomena, 2014, 273-274, 34-45.	2.8	45
4	Teixeira singularities in 3D switched feedback control systems. Systems and Control Letters, 2010, 59, 615-622.	2.3	34
5	Nondeterminism in the Limit of Nonsmooth Dynamics. Physical Review Letters, 2011, 106, 254103.	7.8	32
6	Regularization of hidden dynamics in piecewise smooth flows. Journal of Differential Equations, 2015, 259, 4615-4633.	2.2	32
7	Piecewise Smooth Dynamical Systems Theory: The Case of the Missing Boundary Equilibrium Bifurcations. Journal of Nonlinear Science, 2016, 26, 1161-1173.	2.1	31
8	Canards and curvature: the 'smallness of ϵ' in slow–fast dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 2404-2421.	2.1	27
9	Grazing-sliding bifurcations, border collision maps and the curse of dimensionality for piecewise smooth bifurcation theory. Nonlinearity, 2015, 28, 263-283.	1.4	24
10	The two-fold singularity of nonsmooth flows: Leading order dynamics in -dimensions. Physica D: Nonlinear Phenomena, 2013, 263, 1-10.	2.8	23
11	The Ghosts of Departed Quantities in Switches and Transitions. SIAM Review, 2018, 60, 116-136.	9.5	21
12	Hidden Degeneracies in Piecewise Smooth Dynamical Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1650087.	1.7	14
13	Modeling with Nonsmooth Dynamics. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , .	0.5	13
14	Non-Filippov dynamics arising from the smoothing of nonsmooth systems, and its robustness to noise. Nonlinear Dynamics, 2014, 76, 1395-1410.	5.2	12
15	An Introduction to Piecewise Smooth Dynamics. Advanced Courses in Mathematics, CRM Barcelona, 2019, , .	0.3	12
16	A unified approach to explain contrary effects of hysteresis and smoothing in nonsmooth systems. Communications in Nonlinear Science and Numerical Simulation, 2017, 50, 142-168.	3.3	10
17	Jitter in Piecewise-Smooth Dynamical Systems with Intersecting Discontinuity Surfaces. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2018, 28, 1830020.	1.7	10
18	Nondeterministic dynamics of a mechanical system. Physical Review E, 2014, 90, 022914.	2.1	9

#	Article	IF	Citations
19	Exit from sliding in piecewise-smooth flows: Deterministic vs. determinacy-breaking. Chaos, 2016, 26, 033108.	2.5	8
20	Discontinuity-induced bifurcation cascades in flows and maps with application to models of the yeast cell cycle. Physica D: Nonlinear Phenomena, 2014, 271, 32-47.	2.8	7
21	On the mathematical basis of solid friction. Nonlinear Dynamics, 2015, 81, 1699-1716.	5.2	7
22	Peel or coat spheres by convolution, repeatedly. Journal of Mathematical Physics, 2007, 48, 123507.	1.1	5
23	Three discontinuity-induced bifurcations to destroy self-sustained oscillations in a superconducting resonator. Physica D: Nonlinear Phenomena, 2012, 241, 2077-2082.	2.8	5
24	Mathematical analysis of a model for the growth of the bovine corpus luteum. Journal of Mathematical Biology, 2014, 69, 1515-1546.	1.9	5
25	Hidden Bifurcations and Attractors in Nonsmooth Dynamical Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1650068.	1.7	5
26	The hidden unstable orbits of maps with gaps. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190473.	2.1	5
27	Into higher dimensions for nonsmooth dynamical systems. Physica D: Nonlinear Phenomena, 2022, 434, 133222.	2.8	5
28	Smoothing tautologies, hidden dynamics, and sigmoid asymptotics for piecewise smooth systems. Chaos, 2015, 25, 103125.	2.5	4
29	Bifurcations of hidden orbits in discontinuous maps. Nonlinearity, 2021, 34, 6140-6172.	1.4	4
30	Ageing of an oscillator due to frequency switching. Communications in Nonlinear Science and Numerical Simulation, 2021, 102, 105950.	3.3	4
31	On the Dulac's problem for piecewise analytic vector fields. Journal of Differential Equations, 2019, 266, 2259-2273.	2.2	3
32	Two-fold singularities in nonsmooth dynamics—Higher dimensional analogs. Chaos, 2020, 30, 093142.	2.5	3
33	Homoclinic Boundary-Saddle Bifurcations in Planar Nonsmooth Vector Fields. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2022, 32, .	1.7	3
34	Micro-Slip as a Loss of Determinacy in Dry-Friction Oscillators. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1930015.	1.7	2
35	An Update on that Singularity. Trends in Mathematics, 2017, , 107-112.	0.1	2
36	Pausing for arbitrarily long times in dynamical systems. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20180574.	2.1	1

#	ARTICLE	IF	CITATIONS
37	Uncertainty in classical systems (with a local, non-stochastic, non-chaotic origin). Journal of Physics A: Mathematical and Theoretical, 2020, 53, 115701.	2.1	1
38	Hidden dynamics for piecewise smooth maps. Nonlinearity, 2021, 34, 3184-3198.	1.4	1
39	Loss of Determinacy at Small Scales, with Application to Multiple Timescale and Nonsmooth Dynamics. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2021, 31, 2150041.	1.7	0
40	One Switch in the Plane: A Primer. , 2018, , 31-60.		0
41	Asymptotics of Switching: Smoothing and Other Perturbations. , 2018, , 307-353.		0
42	Applications from Physics, Biology, and Climate. , 2018, , 407-473.		0
43	Layer Analysis. , 2018, , 125-169.		0
44	Global Bifurcations and Explosions. , 2018, , 273-306.		0
45	Nonlinear Switching (Local Theory): The Phenomena of Hidden Dynamics. , 2018, , 201-241.		0
46	Four Obsessions of the Two-Fold Singularity. , 2018, , 355-405.		0
47	Tangencies: The Shape of the Discontinuity Surface. , 2018, , 103-124.		0
48	The Vector Field Canopy. , 2018, , 91-101.		0
49	The Three Experiments Revisited. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 59-73.	0.5	0
50	Ideal and Non-ideal Sliding. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 45-57.	0.5	0
51	Layers and Implementations. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 35-43.	0.5	0
52	Three Experiments. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 25-33.	0.5	0
53	Mathematics for a Nonsmooth World. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 1-14.	0.5	0