

# Mike R Jeffrey

## List of Publications by Year in descending order

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Version: 2024-02-01

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  | 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         |
| 2  | Into higher dimensions for nonsmooth dynamical systems. Physica D: Nonlinear Phenomena, 2022, 434, 133222.   | 2.8 | 5         |
| 3  | 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         |
| 4  | Hidden dynamics for piecewise smooth maps. Nonlinearity, 2021, 34, 3184-3198.  | 1.4 | 1         |
| 5  | Bifurcations of hidden orbits in discontinuous maps. Nonlinearity, 2021, 34, 6140-6172.  | 1.4 | 4         |
| 6  | Ageing of an oscillator due to frequency switching. Communications in Nonlinear Science and Numerical Simulation, 2021, 102, 105950.   | 3.3 | 4         |
| 7  | Two-fold singularities in nonsmooth dynamics—Higher dimensional analogs. Chaos, 2020, 30, 093142.  | 2.5 | 3         |
| 8  | 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         |
| 9  | 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         |
| 10 | Modeling with Nonsmooth Dynamics. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , .   | 0.5 | 13        |
| 11 | The Three Experiments Revisited. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 59-73.   | 0.5 | 0         |
| 12 | Ideal and Non-ideal Sliding. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 45-57.   | 0.5 | 0         |
| 13 | Layers and Implementations. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 35-43.  | 0.5 | 0         |
| 14 | Three Experiments. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 25-33.   | 0.5 | 0         |
| 15 | Mathematics for a Nonsmooth World. Frontiers in Applied Dynamical Systems: Reviews and Tutorials, 2020, , 1-14.  | 0.5 | 0         |
| 16 | On the Dulac's problem for piecewise analytic vector fields. Journal of Differential Equations, 2019, 266, 2259-2273.  | 2.2 | 3         |
| 17 | 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         |
| 18 | An Introduction to Piecewise Smooth Dynamics. Advanced Courses in Mathematics, CRM Barcelona, 2019, , .  | 0.3 | 12        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | 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         |
| 20 | The Ghosts of Departed Quantities in Switches and Transitions. SIAM Review, 2018, 60, 116-136.  | 9.5 | 21        |
| 21 | 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        |
| 22 | One Switch in the Plane: A Primer. , 2018, , 31-60.   |     | 0         |
| 23 | Asymptotics of Switching: Smoothing and Other Perturbations. , 2018, , 307-353.   |     | 0         |
| 24 | Applications from Physics, Biology, and Climate. , 2018, , 407-473.   |     | 0         |
| 25 | Layer Analysis. , 2018, , 125-169.  |     | 0         |
| 26 | Global Bifurcations and Explosions. , 2018, , 273-306.  |     | 0         |
| 27 | Nonlinear Switching (Local Theory): The Phenomena of Hidden Dynamics. , 2018, , 201-241.  |     | 0         |
| 28 | Four Obsessions of the Two-Fold Singularity. , 2018, , 355-405.   |     | 0         |
| 29 | Tangencies: The Shape of the Discontinuity Surface. , 2018, , 103-124.  |     | 0         |
| 30 | The Vector Field Canopy. , 2018, , 91-101.  |     | 0         |
| 31 | 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        |
| 32 | An Update on that Singularity. Trends in Mathematics, 2017, , 107-112.  | 0.1 | 2         |
| 33 | 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         |
| 34 | Piecewise Smooth Dynamical Systems Theory: The Case of the Missing Boundary Equilibrium Bifurcations. Journal of Nonlinear Science, 2016, 26, 1161-1173.                                      | 2.1 | 31        |
| 35 | Exit from sliding in piecewise-smooth flows: Deterministic vs. determinacy-breaking. Chaos, 2016, 26, 033108.   | 2.5 | 8         |
| 36 | Hidden Degeneracies in Piecewise Smooth Dynamical Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1650087.                             | 1.7 | 14        |

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|----|--|-----|-----------|
| 37 | Smoothing tautologies, hidden dynamics, and sigmoid asymptotics for piecewise smooth systems. <i>Chaos</i> , 2015, 25, 103125.   | 2.5 | 4         |
| 38 | Regularization of hidden dynamics in piecewise smooth flows. <i>Journal of Differential Equations</i> , 2015, 259, 4615-4633.  | 2.2 | 32        |
| 39 | On the mathematical basis of solid friction. <i>Nonlinear Dynamics</i> , 2015, 81, 1699-1716.  | 5.2 | 7         |
| 40 | Grazing-sliding bifurcations, border collision maps and the curse of dimensionality for piecewise smooth bifurcation theory. <i>Nonlinearity</i> , 2015, 28, 263-283.                                    | 1.4 | 24        |
| 41 | Nondeterministic dynamics of a mechanical system. <i>Physical Review E</i> , 2014, 90, 022914.   | 2.1 | 9         |
| 42 | Dynamics at a Switching Intersection: Hierarchy, Isonomy, and Multiple Sliding. <i>SIAM Journal on Applied Dynamical Systems</i> , 2014, 13, 1082-1105.  | 1.6 | 58        |
| 43 | Discontinuity-induced bifurcation cascades in flows and maps with application to models of the yeast cell cycle. <i>Physica D: Nonlinear Phenomena</i> , 2014, 271, 32-47.                               | 2.8 | 7         |
| 44 | Non-Filippov dynamics arising from the smoothing of nonsmooth systems, and its robustness to noise. <i>Nonlinear Dynamics</i> , 2014, 76, 1395-1410.   | 5.2 | 12        |
| 45 | Mathematical analysis of a model for the growth of the bovine corpus luteum. <i>Journal of Mathematical Biology</i> , 2014, 69, 1515-1546.   | 1.9 | 5         |
| 46 | Hidden dynamics in models of discontinuity and switching. <i>Physica D: Nonlinear Phenomena</i> , 2014, 273-274, 34-45.  | 2.8 | 45        |
| 47 | The two-fold singularity of nonsmooth flows: Leading order dynamics in $n$ -dimensions. <i>Physica D: Nonlinear Phenomena</i> , 2013, 263, 1-10.   | 2.8 | 23        |
| 48 | Three discontinuity-induced bifurcations to destroy self-sustained oscillations in a superconducting resonator. <i>Physica D: Nonlinear Phenomena</i> , 2012, 241, 2077-2082.                            | 2.8 | 5         |
| 49 | Nondeterministic Chaos, and the Two-fold Singularity in Piecewise Smooth Flows. <i>SIAM Journal on Applied Dynamical Systems</i> , 2011, 10, 423-451.  | 1.6 | 69        |
| 50 | Nondeterminism in the Limit of Nonsmooth Dynamics. <i>Physical Review Letters</i> , 2011, 106, 254103.   | 7.8 | 32        |
| 51 | Canards and curvature: the "smallness of $\langle b \rangle$ " in slow-fast dynamics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011, 467, 2404-2421. | 2.1 | 27        |
| 52 | Teixeira singularities in 3D switched feedback control systems. <i>Systems and Control Letters</i> , 2010, 59, 615-622.  | 2.3 | 34        |
| 53 | Peel or coat spheres by convolution, repeatedly. <i>Journal of Mathematical Physics</i> , 2007, 48, 123507.  | 1.1 | 5         |