

# William D Kalies

## List of Publications by Year in descending order

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28  
papers

675  
citations

687363

13  
h-index

580821

25  
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times ranked

374  
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-Dimensional Analysis of Solid Oxide Fuel Cell Ni-YSZ Anode Interconnectivity. <i>Microscopy and Microanalysis</i> , 2009, 15, 71-77.	0.4	85
2	An Algorithmic Approach to Chain Recurrence. <i>Foundations of Computational Mathematics</i> , 2005, 5, 409-449.	2.5	79
3	A Database Schema for the Analysis of Global Dynamics of Multiparameter Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2009, 8, 757-789.	1.6	79
4	Homotopy Classes for Stable Connections between Hamiltonian Saddle-Focus Equilibria. <i>Communications in Mathematical Physics</i> , 1998, 193, 337-371.	2.2	66
5	Multitransition Homoclinic and Heteroclinic Solutions of the Extended Fisher-Kolmogorov Equation. <i>Journal of Differential Equations</i> , 1996, 131, 209-228.	2.2	53
6	A Computational Approach to Conley's Decomposition Theorem. <i>Journal of Computational and Nonlinear Dynamics</i> , 2006, 1, 312-319.	1.2	47
7	Topological characterization of spatial-temporal chaos. <i>Physical Review E</i> , 2004, 70, 035203.	2.1	32
8	Homotopy Classes for Stable Periodic and Chaotic Patterns in Fourth-Order Hamiltonian Systems. <i>Communications in Mathematical Physics</i> , 2000, 214, 573-592.	2.2	30
9	Rigorous Computation of the Global Dynamics of Integrodifference Equations with Smooth Nonlinearities. <i>SIAM Journal on Numerical Analysis</i> , 2013, 51, 2957-2983.	2.3	26
10	Polygonal approximation of flows. <i>Topology and Its Applications</i> , 2007, 154, 2501-2520.	0.4	21
11	Verified Homology Computations for Nodal Domains. <i>Multiscale Modeling and Simulation</i> , 2009, 7, 1695-1726.	1.6	17
12	Lattice structures for attractors I. <i>Journal of Computational Dynamics</i> , 2014, 1, 307-338.	1.1	17
13	Lattice Structures for Attractors II. <i>Foundations of Computational Mathematics</i> , 2016, 16, 1151-1191.	2.5	15
14	Analytic Continuation of Local (Un)Stable Manifolds with Rigorous Computer Assisted Error Bounds. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018, 17, 157-202.	1.6	15
15	Topological portraits of multiscale coordination dynamics. <i>Journal of Neuroscience Methods</i> , 2020, 339, 108672.	2.5	15
16	Slow motion in higher-order systems and $\hat{\Gamma}$ -convergence in one space dimension. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 2001, 44, 33-57.	1.1	12
17	Topological Horseshoes of Traveling Waves for a Fast-Slow Predator-Prey System. <i>Journal of Dynamics and Differential Equations</i> , 2007, 19, 623-654.	1.9	12
18	On the detection of simple points in higher dimensions using cubical homology. <i>IEEE Transactions on Image Processing</i> , 2006, 15, 2462-2469.	9.8	11

#	ARTICLE	IF	CITATIONS
19	Efficient computation of Lyapunov functions for Morse decompositions. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2015, 20, 2419-2451.	0.9	11
20	Probabilistic and numerical validation of homology computations for nodal domains. <i>Electronic Research Announcements in Mathematical Sciences</i> , 2007, 13, 60-74.	0.7	9
21	Lattice Structures for Attractors III. <i>Journal of Dynamics and Differential Equations</i> , 2022, 34, 1729-1768.	1.9	9
22	An Algorithmic Approach to Lattices and Order in Dynamics. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018, 17, 1617-1649.	1.6	6
23	Closed characteristics of second-order Lagrangians. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 2004, 134, 143-158.	1.2	5
24	Chaos near a resonant inclination-flip. <i>Physica D: Nonlinear Phenomena</i> , 2016, 334, 141-157.	2.8	2
25	Closed characteristics on singular energy levels of second-order Lagrangian systems. <i>Journal of Differential Equations</i> , 2008, 244, 555-581.	2.2	1
26	On the asymptotic behavior of a phase-field model for elastic phase transitions. <i>Journal of Dynamics and Differential Equations</i> , 1997, 9, 289-306.	1.9	0
27	A Database Schema for the Analysis of Global Dynamics. , 2009, , .		0
28	Complexity in a Hybrid van der Pol System. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2021, 31, .	1.7	0