

# Thomas Wanner

## List of Publications by Year in descending order

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59  
papers

946  
citations

430754

18  
h-index

501076

28  
g-index

60  
all docs

60  
docs citations

60  
times ranked

404  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolution of pattern complexity in the Cahn–Hilliard theory of phase separation. <i>Acta Materialia</i> , 2005, 53, 693-704.	3.8	75
2	Spinodal Decomposition for the Cahn-Hilliard Equation in Higher Dimensions: Nonlinear Dynamics. <i>Archive for Rational Mechanics and Analysis</i> , 2000, 151, 187-219.	1.1	63
3	Linearization of Random Dynamical Systems. <i>Dynamics Reported</i> , 1995, , 203-268.	0.6	57
4	Spinodal Decomposition for the Cahn-Hilliard Equation in Higher Dimensions. Part I: Probability and Wavelength Estimate. <i>Communications in Mathematical Physics</i> , 1998, 195, 435-464.	1.0	54
5	Unexpectedly Linear Behavior for the Cahn–Hilliard Equation. <i>SIAM Journal on Applied Mathematics</i> , 2000, 60, 2182-2202.	0.8	39
6	Spinodal Decomposition for the Cahn–Hilliard–Cook Equation. <i>Communications in Mathematical Physics</i> , 2001, 223, 553-582.	1.0	34
7	Monte Carlo Simulations for Spinodal Decomposition. <i>Journal of Statistical Physics</i> , 1999, 95, 925-948.	0.5	33
8	STRUCTURE OF THE ATTRACTOR OF THE CAHN–HILLIARD EQUATION ON A SQUARE. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2007, 17, 1221-1263.	0.7	30
9	Second phase spinodal decomposition for the Cahn-Hilliard-Cook equation. <i>Transactions of the American Mathematical Society</i> , 2008, 360, 449-490.	0.5	30
10	Homology metrics for microstructure response fields in polycrystals. <i>Acta Materialia</i> , 2010, 58, 102-110.	3.8	30
11	Coreduction homology algorithm for inclusions and persistent homology. <i>Computers and Mathematics With Applications</i> , 2010, 60, 2812-2833.	1.4	28
12	Rigorous Numerics for the Cahn-Hilliard Equation on the Unit Square. <i>Revista Matematica Complutense</i> , 2008, 21, .	0.7	26
13	Perturbation of doubly periodic solution branches with applications to the Cahn-Hilliard equation. <i>Physica D: Nonlinear Phenomena</i> , 1997, 100, 257-278.	1.3	25
14	Coreduction Homology Algorithm for Regular CW-Complexes. <i>Discrete and Computational Geometry</i> , 2011, 46, 361-388.	0.4	25
15	Dissipative Quasi-geostrophic Dynamics under Random Forcing. <i>Journal of Mathematical Analysis and Applications</i> , 1998, 228, 221-233.	0.5	22
16	Topological microstructure analysis using persistence landscapes. <i>Physica D: Nonlinear Phenomena</i> , 2016, 334, 60-81.	1.3	22
17	Maximum norms of random sums and transient pattern formation. <i>Transactions of the American Mathematical Society</i> , 2003, 356, 2251-2279.	0.5	21
18	Spinodal Decomposition for Multicomponent Cahn–Hilliard Systems. <i>Journal of Statistical Physics</i> , 2000, 98, 871-896.	0.5	19

#	ARTICLE	IF	CITATIONS
19	Pattern formation in a nonlinear model for animal coats. <i>Journal of Differential Equations</i> , 2003, 191, 143-174.	1.1	19
20	Verified Homology Computations for Nodal Domains. <i>Multiscale Modeling and Simulation</i> , 2009, 7, 1695-1726.	0.6	17
21	Computer-assisted equilibrium validation for the diblock copolymer model. <i>Discrete and Continuous Dynamical Systems</i> , 2017, 37, 1075-1107.	0.5	16
22	The Dynamics of Nucleation in Stochastic Cahn-Hilliard Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2011, 10, 707-743.	0.7	15
23	Computer-Assisted Proof of Heteroclinic Connections in the One-Dimensional Ohta-Kawasaki Model. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018, 17, 694-731.	0.7	15
24	Nucleation in the one-dimensional stochastic Cahn-Hilliard model. <i>Discrete and Continuous Dynamical Systems</i> , 2010, 27, 25-52.	0.5	15
25	Topological simplification of nonautonomous difference equations. <i>Journal of Difference Equations and Applications</i> , 2006, 12, 283-296.	0.7	14
26	A Hermite spectral method for the computation of homoclinic orbits and associated functionals. <i>Journal of Computational and Applied Mathematics</i> , 2007, 206, 986-1006.	1.1	14
27	A semi-implicit spectral method for stochastic nonlocal phase-field models. <i>Discrete and Continuous Dynamical Systems</i> , 2009, 25, 399-429.	0.5	14
28	Slow motion in higher-order systems and $\epsilon$ -convergence in one space dimension. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 2001, 44, 33-57.	0.6	12
29	Invariant Foliations and Decoupling of Non-autonomous Difference Equations. <i>Journal of Difference Equations and Applications</i> , 2003, 9, 459-472.	0.7	12
30	Probabilistic validation of homology computations for nodal domains. <i>Annals of Applied Probability</i> , 2007, 17, .	0.6	12
31	Validated Saddle-Node Bifurcations and Applications to Lattice Dynamical Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2016, 15, 1690-1733.	0.7	10
32	Roughness in surface growth equations. <i>Interfaces and Free Boundaries</i> , 2001, 3, 465-484.	0.2	9
33	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
34	Complex transient patterns on the disk. <i>Discrete and Continuous Dynamical Systems</i> , 2006, 15, 1049-1078.	0.5	9
35	Branch interactions and long-term dynamics for the diblock copolymer model in one dimension. <i>Discrete and Continuous Dynamical Systems</i> , 2013, 33, 3671-3705.	0.5	9
36	Solutions of Nonlinear Planar Elliptic Problems with Triangle Symmetry. <i>Journal of Differential Equations</i> , 1997, 136, 1-34.	1.1	8

#	ARTICLE	IF	CITATIONS
37	Rigorous Validation of Isolating Blocks for Flows and Their Conley Indices. <i>SIAM Journal on Applied Dynamical Systems</i> , 2014, 13, 1847-1878.	0.7	8
38	Linking Combinatorial and Classical Dynamics: Conley Index and Morse Decompositions. <i>Foundations of Computational Mathematics</i> , 2020, 20, 967-1012.	1.5	7
39	Creating semiflows on simplicial complexes from combinatorial vector fields. <i>Journal of Differential Equations</i> , 2021, 304, 375-434.	1.1	7
40	On the chromaticity of certain subgraphs of a q-tree. <i>Journal of Graph Theory</i> , 1989, 13, 597-605.	0.5	6
41	Topology-guided sampling of nonhomogeneous random processes. <i>Annals of Applied Probability</i> , 2010, 20, .	0.6	6
42	A Randomized Subdivision Algorithm for Determining the Topology of Nodal Sets. <i>SIAM Journal of Scientific Computing</i> , 2013, 35, B1034-B1054.	1.3	6
43	Degenerate Nucleation in the Cahn–Hilliard–Cook Model. <i>SIAM Journal on Applied Dynamical Systems</i> , 2016, 15, 459-494.	0.7	5
44	SURFACE ROUGHNESS IN MOLECULAR BEAM EPITAXY. <i>Stochastics and Dynamics</i> , 2001, 01, 239-260.	0.6	4
45	Enstrophy dynamics of stochastically forced large-scale geophysical flows. <i>Journal of Mathematical Physics</i> , 2002, 43, 2616.	0.5	4
46	Rigorous cubical approximation and persistent homology of continuous functions. <i>Computers and Mathematics With Applications</i> , 2018, 75, 1648-1666.	1.4	4
47	A Lefschetz fixed point theorem for multivalued maps of finite spaces. <i>Mathematische Zeitschrift</i> , 2020, 294, 1477-1497.	0.4	4
48	Topological Analysis of the Diblock Copolymer Equation. <i>Springer Proceedings in Mathematics and Statistics</i> , 2016, , 27-51.	0.1	4
49	Combinatorial vs. classical dynamics: Recurrence. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2022, 108, 106226.	1.7	4
50	Supersolvable and Modularly Complemented Matroid Extensions. <i>European Journal of Combinatorics</i> , 1991, 12, 341-360.	0.5	2
51	Topology in Dynamics, Differential Equations, and Data. <i>Physica D: Nonlinear Phenomena</i> , 2016, 334, 1-3.	1.3	2
52	Spinodal decomposition: A survey of recent results. , 2000, , 1288-1299.		2
53	Spinodal Decomposition in the Linear Cahn-Hilliard Model. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 1998, 78, 1003-1004.	0.9	1
54	Validated bounds on embedding constants for Sobolev space Banach algebras. <i>Mathematical Methods in the Applied Sciences</i> , 2018, 41, 9361-9376.	1.2	1

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55	Analyzing the Squared Distance-to-Measure Gradient Flow System with k-Order Voronoi Diagrams. Discrete and Computational Geometry, 2019, 61, 91-119.	0.4	1
56	Towards a formal tie between combinatorial and classical vector field dynamics. Journal of Computational Dynamics, 2016, 3, 2-2.	0.4	1
57	Rigorous continuation of bifurcation points in the diblock copolymer equation. Journal of Computational Dynamics, 2017, 4, 3-3.	0.4	1
58	Probabilistic estimates of the maximum norm of random Neumann Fourier series. Communications in Nonlinear Science and Numerical Simulation, 2017, 47, 348-369.	1.7	0
59	Equilibrium validation in models for pattern formation based on Sobolev embeddings. Discrete and Continuous Dynamical Systems - Series B, 2021, 26, 603-632.	0.5	0