

Zhi-An Wang

List of Publications by Year in descending order

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431
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#	ARTICLE	IF	CITATIONS
1	COMPETING EFFECTS OF ATTRACTION VS. REPULSION IN CHEMOTAXIS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2013, 23, 1-36.	3.3	228
2	Global stability of prey-taxis systems. <i>Journal of Differential Equations</i> , 2017, 262, 1257-1290.	2.2	149
3	Boundedness, blowup and critical mass phenomenon in competing chemotaxis. <i>Journal of Differential Equations</i> , 2016, 260, 162-196.	2.2	128
4	On a Diffusive Susceptible-Infected-Susceptible Epidemic Model with Mass Action Mechanism and Birth-Death Effect: Analysis, Simulations, and Comparison with Other Mechanisms. <i>SIAM Journal on Applied Mathematics</i> , 2018, 78, 2129-2153.	1.8	126
5	Nonlinear Stability of Traveling Waves to a Hyperbolic-Parabolic System Modeling Chemotaxis. <i>SIAM Journal on Applied Mathematics</i> , 2010, 70, 1522-1541.	1.8	107
6	Asymptotic dynamics of the one-dimensional attraction-repulsion Keller-Segel model. <i>Mathematical Methods in the Applied Sciences</i> , 2015, 38, 444-457.	2.3	103
7	Classical solutions and pattern formation for a volume filling chemotaxis model. <i>Chaos</i> , 2007, 17, 037108.	2.5	100
8	Boundedness, Stabilization, and Pattern Formation Driven by Density-Suppressed Motility. <i>SIAM Journal on Applied Mathematics</i> , 2018, 78, 1632-1657.	1.8	99
9	Pattern formation of the attraction-repulsion Keller-Segel system. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2013, 18, 2597-2625.	0.9	90
10	Asymptotic nonlinear stability of traveling waves to conservation laws arising from chemotaxis. <i>Journal of Differential Equations</i> , 2011, 250, 1310-1333.	2.2	86
11	Asymptotic dynamics on a singular chemotaxis system modeling onset of tumor angiogenesis. <i>Journal of Differential Equations</i> , 2016, 260, 2225-2258.	2.2	81
12	Global stabilization of the full attraction-repulsion Keller-Segel system. <i>Discrete and Continuous Dynamical Systems</i> , 2020, 40, 3509-3527.	0.9	79
13	Asymptotic stability of traveling waves of a chemotaxis model with singular sensitivity. <i>Journal of Differential Equations</i> , 2013, 255, 193-219.	2.2	76
14	Classical solutions and steady states of an attraction-repulsion chemotaxis in one dimension. <i>Journal of Biological Dynamics</i> , 2012, 6, 31-41.	1.7	75
15	NONLINEAR STABILITY OF LARGE AMPLITUDE VISCOUS SHOCK WAVES OF A GENERALIZED HYPERBOLIC-PARABOLIC SYSTEM ARISING IN CHEMOTAXIS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2010, 20, 1967-1998.	3.3	74
16	Mathematics of traveling waves in chemotaxis --Review paper-- . <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2013, 18, 601-641.	0.9	69
17	Shock formation in a chemotaxis model. <i>Mathematical Methods in the Applied Sciences</i> , 2008, 31, 45-70.	2.3	65
18	Stability of traveling waves of the Keller-Segel system with logarithmic sensitivity. <i>Mathematical Models and Methods in Applied Sciences</i> , 2014, 24, 2819-2849.	3.3	62

#	ARTICLE	IF	CITATIONS
19	Global dynamics and spatio-temporal patterns of predator-prey systems with density-dependent motion. <i>European Journal of Applied Mathematics</i> , 2021, 32, 652-682.	2.9	58
20	Critical mass on the Keller-Segel system with signal-dependent motility. <i>Proceedings of the American Mathematical Society</i> , 2020, 148, 4855-4873.	0.8	53
21	Global dynamics of a three-species spatial food chain model. <i>Journal of Differential Equations</i> , 2022, 333, 144-183.	2.2	53
22	Stationary Solutions of a Volume-Filling Chemotaxis Model with Logistic Growth and Their Stability. <i>SIAM Journal on Applied Mathematics</i> , 2012, 72, 740-766.	1.8	44
23	Convergence to nonlinear diffusion waves for a hyperbolic-parabolic chemotaxis system modelling vasculogenesis. <i>Journal of Differential Equations</i> , 2022, 314, 251-286.	2.2	44
24	Prevention of blow-up by fast diffusion in chemotaxis. <i>Journal of Mathematical Analysis and Applications</i> , 2010, 362, 553-564.	1.0	43
25	Steadily propagating waves of a chemotaxis model. <i>Mathematical Biosciences</i> , 2012, 240, 161-168.	1.9	43
26	Traveling wave solutions from microscopic to macroscopic chemotaxis models. <i>Journal of Mathematical Biology</i> , 2010, 61, 739-761.	1.9	42
27	Global Regularity versus Infinite-Time Singularity Formation in a Chemotaxis Model with Volume-Filling Effect and Degenerate Diffusion. <i>SIAM Journal on Mathematical Analysis</i> , 2012, 44, 3502-3525.	1.9	42
28	Asymptotic and viscous stability of large-amplitude solutions of a hyperbolic system arising from biology. <i>Indiana University Mathematics Journal</i> , 2018, 67, 1383-1424.	0.9	41
29	Global classical solutions for a class of reaction-diffusion system with density-suppressed motility. <i>Electronic Research Archive</i> , 2022, 30, 995-1015.	0.9	36
30	STABILITY OF THE RAREFACTION WAVE FOR THE GENERALIZED KDV-BURGERS EQUATION. <i>Acta Mathematica Scientia</i> , 2002, 22, 319-328.	1.0	32
31	Boundary layer problem on a hyperbolic system arising from chemotaxis. <i>Journal of Differential Equations</i> , 2016, 261, 5035-5070.	2.2	32
32	Stability of Boundary Layers for a Viscous Hyperbolic System Arising from Chemotaxis: One-Dimensional Case. <i>SIAM Journal on Mathematical Analysis</i> , 2018, 50, 3058-3091.	1.9	31
33	Stationary and non-stationary patterns of the density-suppressed motility model. <i>Physica D: Nonlinear Phenomena</i> , 2020, 402, 132259.	2.8	31
34	Boundedness and asymptotics of a reaction-diffusion system with density-dependent motility. <i>Journal of Differential Equations</i> , 2020, 269, 6758-6793.	2.2	30
35	Large-time behavior of a parabolic-parabolic chemotaxis model with logarithmic sensitivity in one dimension. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2013, 18, 821-845.	0.9	28
36	On Chemotaxis Models with Cell Population Interactions. <i>Mathematical Modelling of Natural Phenomena</i> , 2010, 5, 173-190.	2.4	24

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37	Singularity formation in chemotaxis systems with volume-filling effect. <i>Nonlinearity</i> , 2011, 24, 3279-3297.	1.4	24
38	Global bifurcation and stability of steady states for a reaction-diffusion-chemotaxis model with volume-filling effect. <i>Nonlinearity</i> , 2015, 28, 2639-2660.	1.4	24
39	Convergence of boundary layers for the Keller-Segel system with singular sensitivity in the half-plane. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 2019, 130, 251-287.	1.6	24
40	Decay rates of solutions to dissipative nonlinear evolution equations with ellipticity. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2004, 55, 994-1014.	1.4	23
41	Asymptotic dynamics and spatial patterns of a ratio-dependent predator-prey system with prey-taxis. <i>Applicable Analysis</i> , 2022, 101, 81-99.	1.3	23
42	Global dynamics and diffusion limit of a one-dimensional repulsive chemotaxis model. <i>Communications on Pure and Applied Analysis</i> , 2013, 12, 3027-3046.	0.8	23
43	The flux limited Keller-Segel system; properties and derivation from kinetic equations. <i>Revista Matematica Iberoamericana</i> , 2019, 36, 357-386.	0.9	21
44	Boundary spike-layer solutions of the singular Keller-Segel system: existence and stability. <i>Proceedings of the London Mathematical Society</i> , 2021, 122, 42-68.	1.3	20
45	Mathematical analysis of a kinetic model for cell movement in network tissues. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2010, 14, 1055-1080.	0.9	16
46	On the Lotka-Volterra competition system with dynamical resources and density-dependent diffusion. <i>Journal of Mathematical Biology</i> , 2021, 82, 7.	1.9	15
47	Steady states and pattern formation of the density-suppressed motility model. <i>IMA Journal of Applied Mathematics</i> , 2021, 86, 577-603.	1.6	15
48	Initial boundary value problems for a system of parabolic conservation laws arising from chemotaxis in multi-dimensions. <i>Discrete and Continuous Dynamical Systems</i> , 2019, 39, 3789-3838.	0.9	15
49	Asymptotic profile of a parabolic-hyperbolic system with boundary effect arising from tumor angiogenesis. <i>Journal of Differential Equations</i> , 2015, 259, 5168-5191.	2.2	14
50	On the parabolic-elliptic Keller-Segel system with signal-dependent motilities: A paradigm for global boundedness and steady states. <i>Mathematical Methods in the Applied Sciences</i> , 2021, 44, 10881-10898.	2.3	14
51	Convergence to traveling waves of a singular PDE-ODE hybrid chemotaxis system in the half space. <i>Journal of Differential Equations</i> , 2020, 268, 6940-6970.	2.2	13
52	Global Boundedness of the Fully Parabolic Keller-Segel System with Signal-Dependent Motilities. <i>Acta Applicandae Mathematicae</i> , 2021, 171, 1.	1.0	13
53	Traveling wave solutions to the density-suppressed motility model. <i>Journal of Differential Equations</i> , 2021, 301, 1-36.	2.2	13
54	Phase Transitions and Bump Solutions of the Keller-Segel Model with Volume Exclusion. <i>SIAM Journal on Applied Mathematics</i> , 2020, 80, 232-261.	1.8	12

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55	Boundary layers and stabilization of the singular Keller-Segel system. <i>Kinetic and Related Models</i> , 2018, 11, 1085-1123.	0.9	12
56	Global existence and asymptotic behavior of the Boussinesq-Burgers system. <i>Journal of Mathematical Analysis and Applications</i> , 2015, 424, 584-597.	1.0	10
57	Nonlinear stability of strong traveling waves for the singular Keller-Segel system with large perturbations. <i>Journal of Differential Equations</i> , 2018, 265, 2577-2613.	2.2	10
58	Boundary-layer profile of a singularly perturbed nonlocal semi-linear problem arising in chemotaxis. <i>Nonlinearity</i> , 2020, 33, 5111-5141.	1.4	10
59	Wavefront of an angiogenesis model. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2012, 17, 2849-2860.	0.9	10
60	Optimal decay rates to diffusion wave for nonlinear evolution equations with ellipticity. <i>Journal of Mathematical Analysis and Applications</i> , 2006, 319, 740-763.	1.0	9
61	Traveling bands for the Keller-Segel model with population growth. <i>Mathematical Biosciences and Engineering</i> , 2015, 12, 717-737.	1.9	9
62	Large time profile of solutions for a dissipative nonlinear evolution system with conservational form. <i>Journal of Physics A</i> , 2005, 38, 10955-10969.	1.6	8
63	Optimal decay rates of solutions to dissipative nonlinear evolution equations with ellipticity. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2006, 57, 399-418.	1.4	8
64	Uniqueness and convergence on equilibria of the Keller-Segel system with subcritical mass. <i>Communications in Partial Differential Equations</i> , 2019, 44, 545-572.	2.2	8
65	The Keller-Segel system with logistic growth and signal-dependent motility. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2021, 26, 3023.	0.9	8
66	Cauchy problem of a system of parabolic conservation laws arising from the singular Keller-Segel model in multi-dimensions. <i>Indiana University Mathematics Journal</i> , 2021, 70, 1-47.	0.9	8
67	Global weak solutions to the Camassa-Holm equation. <i>Discrete and Continuous Dynamical Systems</i> , 2008, 21, 883-906.	0.9	8
68	Development of traveling waves in an interacting two-species chemotaxis model. <i>Discrete and Continuous Dynamical Systems</i> , 2014, 34, 2907-2927.	0.9	8
69	Mesenchymal Motion Models in One Dimension. <i>SIAM Journal on Applied Mathematics</i> , 2008, 69, 375-397.	1.8	7
70	Cauchy problem of the magnetohydrodynamic Burgers system. <i>Communications in Mathematical Sciences</i> , 2015, 13, 127-151.	1.0	7
71	Asymptotic Stability of Diffusion Waves of a Quasi-Linear Hyperbolic-Parabolic Model for Vasculogenesis. <i>SIAM Journal on Mathematical Analysis</i> , 2022, 54, 1313-1346.	1.9	7
72	On a parabolic-hyperbolic chemotaxis system with discontinuous data: Well-posedness, stability and regularity. <i>Journal of Differential Equations</i> , 2020, 268, 4374-4415.	2.2	6

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73	Reaction, diffusion and chemotaxis in wave propagation. Discrete and Continuous Dynamical Systems - Series B, 2015, 20, 1-21.	0.9	6
74	Nonlinear stability of phase transition steady states to a hyperbolic-parabolic system modeling vascular networks. Journal of the London Mathematical Society, 2021, 103, 1480-1514.	1.0	6
75	Asymptotic stability of exogenous chemotaxis systems with physical boundary conditions. Quarterly of Applied Mathematics, 2021, 79, 717-743.	0.7	5
76	Patterns in a generalized volume-filling chemotaxis model with cell proliferation. Analysis and Applications, 2017, 15, 83-106.	2.2	4
77	A dual-gradient chemotaxis system modeling the spontaneous aggregation of microglia in Alzheimer's disease. Analysis and Applications, 2018, 16, 307-338.	2.2	4
78	Global weak solutions and asymptotics of a singular PDE-ODE Chemotaxis system with discontinuous data. Science China Mathematics, 2020, , 1.	1.7	2
79	Global solvability of a class of reaction-diffusion systems with cross-diffusion. Applied Mathematics Letters, 2021, , 107699.	2.7	1
80	Radial spiky steady states of a flux-limited Keller-Segel model: Existence, asymptotics, and stability. Studies in Applied Mathematics, 2022, 148, 1251-1273.	2.4	1
81	Traveling wave solutions of a singular Keller-Segel system with logistic source. Mathematical Biosciences and Engineering, 2022, 19, 8107-8131.	1.9	1
82	Asymptotic profile of solutions to a non-linear dissipative evolution system with conservation. Mathematical Methods in the Applied Sciences, 2007, 30, 977-994.	2.3	0
83	A reducing mechanism on wave speed for chemotaxis systems with degenerate diffusion. Calculus of Variations and Partial Differential Equations, 2021, 60, 1.	1.7	0
84	Nonlinear Stability of Large Amplitude Traveling Waves to Hyperbolic-parabolic System Modeling Chemotaxis. Series in Contemporary Applied Mathematics, 2012, , 519-526.	0.8	0
85	A kinetic chemotaxis model with internal states and temporal sensing. Kinetic and Related Models, 2022, 15, 27.	0.9	0