Zhi-An Wang

List of Publications by Year
in descending order

85	3,009	147801 31	175258 52
papers	citations	h-index	g-index

86	86	86	431
all docs	docs citations	times ranked	citing authors

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

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

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

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55	Boundary layers and stabilization of the singular Keller-Segel system. Kinetic and Related Models, 2018, 11, 1085-1123.	0.9	12
56	Global existence and asymptotic behavior of the Boussinesqâ€“Burgers system. Journal of Mathematical Analysis and Applications, 2015, 424, 584-597.	1.0	10
57	Nonlinear stability of strong traveling waves for the singular Kellerâ€“Segel system with large perturbations. Journal of Differential Equations, 2018, 265, 2577-2613.	2.2	10
58	Boundary-layer profile of a singularly perturbed nonlocal semi-linear problem arising in chemotaxis. Nonlinearity, 2020, 33, 5111-5141.	1.4	10
59	Wavefront of an angiogenesis model. Discrete and Continuous Dynamical Systems - Series B, 2012, 17, 2849-2860.	0.9	10
60	Optimal decay rates to diffusion wave for nonlinear evolution equations with ellipticity. Journal of Mathematical Analysis and Applications, 2006, 319, 740-763.	1.0	9
61	Traveling bands for the Keller-Segel model with population growth. Mathematical Biosciences and Engineering, 2015, 12, 717-737.	1.9	9
62	Large time profile of solutions for a dissipative nonlinear evolution system with conservational form. Journal of Physics A, 2005, 38, 10955-10969.	1.6	8
63	Optimal decay rates of solutions to dissipative nonlinear evolution equations with ellipticity. Zeitschrift Fur Angewandte Mathematik Und Physik, 2006, 57, 399-418.	1.4	8
64	Uniqueness and convergence on equilibria of the Kellerâ€“Segel system with subcritical mass. Communications in Partial Differential Equations, 2019, 44, 545-572.	2.2	8
65	The Keller-Segel system with logistic growth and signal-dependent motility. Discrete and Continuous Dynamical Systems - Series B, 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. Indiana University Mathematics Journal, 2021, 70, 1-47.	0.9	8
67	Global weak solutions to the Camassa-Holm equation. Discrete and Continuous Dynamical Systems, 2008, 21, 883-906.	0.9	8
68	Development of traveling waves in an interacting two-species chemotaxis model. Discrete and Continuous Dynamical Systems, 2014, 34, 2907-2927.	0.9	8
69	Mesenchymal Motion Models in One Dimension. SIAM Journal on Applied Mathematics, 2008, 69, 375-397.	1.8	7
70	Cauchy problem of the magnetohydrodynamic Burgers system. Communications in Mathematical Sciences, 2015, 13, 127-151.	1.0	7
71	Asymptotic Stability of Diffusion Waves of a Quasi-Linear Hyperbolic-Parabolic Model for Vasculogenesis. SIAM Journal on Mathematical Analysis, 2022, 54, 1313-1346.	1.9	7
72	On a parabolic-hyperbolic chemotaxis system with discontinuous data: Well-posedness, stability and regularity. Journal of Differential Equations, 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 hyperbolicâ€“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 Alzheimerâ€™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 reactionâ€“diffusion systems with cross-diffusion. Applied Mathematics Letters, 2021, , 107699.	2.7	1
80	Radial spiky steady states of a fluxâ€limited Kellerâ€“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