Wei-Ming Ni

List of Publications by Year
in descending order

90 papers	9,350 citations	53794 45 h-index	51608 86 g-index
91 all docs	91 docs citations	91 times ranked	1557 citing authors

#	Article	IF	Citations
1	Directed movement changes coexistence outcomes in heterogeneous environments. Ecology Letters, 2022, 25, 366-377.	6.4	6
2	Carrying Capacity of Spatially Distributed Metapopulations. Trends in Ecology and Evolution, 2021, 36, 164-173.	8.7	23
3	Carrying Capacity of a Population Diffusing in a Heterogeneous Environment. Mathematics, 2020, 8, 49.	2.2	21
4	On the effects of carrying capacity and intrinsic growth rate on single and multiple species in spatially heterogeneous environments. Journal of Mathematical Biology, 2020, 81, 403-433.	1.9	13
5	Effect of Stressors on the Carrying Capacity of Spatially Distributed Metapopulations. American Naturalist, 2020, 196, E46-E60.	2.1	23
6	Dynamics of a consumerâ€“resource reactionâ€“diffusion model. Journal of Mathematical Biology, 2019, 78, 1605-1636.	1.9	21
7	Global dynamics of the Lotkaâ€“Volterra competitionâ€“diffusion system with equal amount of total resources, III. Calculus of Variations and Partial Differential Equations, 2017, 56, 1.	1.7	42
8	Carrying capacity in a heterogeneous environment with habitat connectivity. Ecology Letters, 2017, 20, 1118-1128.	6.4	76
9	Global Dynamics of the Lotkaâ€Volterra Competitionâ€Diffusion System: Diffusion and Spatial Heterogeneity I. Communications on Pure and Applied Mathematics, 2016, 69, 981-1014.	3.1	129
10	Effects of diffusion on total biomass in heterogeneous continuous and discrete-patch systems. Theoretical Ecology, 2016, 9, 443-453.	1.0	23
11	Global dynamics of the Lotkaâ€“Volterra competitionâ€“diffusion system with equal amount of total resources, II. Calculus of Variations and Partial Differential Equations, 2016, 55, 1.	1.7	51
12	Dispersal and spatial heterogeneity: single species. Journal of Mathematical Biology, 2016, 72, 239-254.	1.9	53
13	Effects of dispersal on total biomass in a patchy, heterogeneous system: Analysis and experiment. Mathematical Biosciences, 2015, 264, 54-62.	1.9	43
14	Pattern formation in a cross-diffusion system. Discrete and Continuous Dynamical Systems, 2015, 35, 1589-1607.	0.9	37
15	Advection-mediated competition in general environments. Journal of Differential Equations, 2014, 257, 3466-3500.	2.2	16
16	The existence and stability of nontrivial steady states for S-K-T competition model with cross diffusion. Discrete and Continuous Dynamical Systems, 2014, 34, 5271-5298.	0.9	31
17	The effects of diffusion and spatial variation in Lotkaâ€“Volterra competitionâ€“diffusion system II: The general case. Journal of Differential Equations, 2013, 254, 4088-4108.	2.2	62
18	The effects of diffusion and spatial variation in Lotkaâ€“Volterra competitionâ€“diffusion system I: Heterogeneity vs. homogeneity. Journal of Differential Equations, 2013, 254, 528-546.	2.2	92

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19	Non-existence of localized travelling waves with non-zero speed in single reaction-diffusion equations. Discrete and Continuous Dynamical Systems, 2013, 33, 3707-3718.	0.9	2
20	Uniqueness and Complete Dynamics in Heterogeneous Competition-Diffusion Systems. SIAM Journal on Applied Mathematics, 2012, 72, 1695-1712.	1.8	96
21	Limiting profiles of semilinear elliptic equations with large advection in population dynamics. Discrete and Continuous Dynamical Systems, 2010, 28, 1051-1067.	0.9	45
22	On the global existence and finite time blow-up of shadow systems. Journal of Differential Equations, 2009, 247, 1762-1776.	2.2	26
23	Higher Order Approximations in the Heat Equation and the Truncated Moment Problem. SIAM Journal on Mathematical Analysis, 2009, 40, 2241-2261.	1.9	6
24	Stability from the point of view of diffusion, relaxation and spatial inhomogeneity. Discrete and Continuous Dynamical Systems, 2008, 20, 259-274.	0.9	7
25	On steady states of van der Waals force driven thin film equations. European Journal of Applied Mathematics, 2007, 18, 153-180.	2.9	23
26	On the number of interior peak solutions for a singularly perturbed Neumann problem. Communications on Pure and Applied Mathematics, 2007, 60, 252-281.	3.1	80
27	Boundary-clustered interfaces for the Allenâ€“Cahn equation. Pacific Journal of Mathematics, 2007, 229, 447-468.	0.5	21
28	On positive solutions concentrating on spheres for the Gierերâ€“Meinhardt system. Journal of Differential Equations, 2006, 221, 158-189.	2.2	79
29	The dynamics of a kinetic activatorâ€“inhibitor system. Journal of Differential Equations, 2006, 229, 426-465.	2.2	32
30	Multiple clustered layer solutions for semilinear Neumann problems on a ball. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2005, 22, 143-163.	1.4	51
31	Turing patterns in the Lengyel-Epstein system for the CIMA reaction. Transactions of the American Mathematical Society, 2005, 357, 3953-3969.	0.9	146
32	Singularly perturbed elliptic equations with symmetry: Existence of solutions concentrating on spheres, Part II. Indiana University Mathematics Journal, 2004, 53, 297-330.	0.9	89
33	Global Bifurcation and Structure of Turing Patterns in the 1-D Lengyel?Epstein Model. Journal of Dynamics and Differential Equations, 2004, 16, 297-320.	1.9	93
34	Qualitative Properties of Solutions to Elliptic Problems. Handbook of Differential Equations: Stationary Partial Differential Equations, 2004, , 157-233.	0.7	45
35	Singularly Perturbed Elliptic Equations with Symmetry: Existence of Solutions Concentrating on Spheres, Part I. Communications in Mathematical Physics, 2003, 235, 427-466.	2.2	173
36	A method to measure the two-dimensional image of magneto-optical Kerr effect. Review of Scientific Instruments, 2003, 74, 4718-4722.	1.3	10

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37	A new spectrometer using multiple gratings with a two-dimensional charge-coupled diode array detector. Review of Scientific Instruments, 2003, 74, 2973-2976.	1.3	9
38	On the rate of convergence and asymptotic profile of solutions to the viscous burgers equations. Indiana University Mathematics Journal, 2002, 51, 0-0.	0.9	13
39	Solutions, concentrating on spheres, to symmetric singularly perturbed problems. Comptes Rendus Mathematique, 2002, 335, 145-150.	0.3	12
40	Monotonicity of stable solutions in shadow systems. Transactions of the American Mathematical Society, 2001, 353, 5057-5069.	0.9	29
41	Existence and infinite multiplicity for an inhomogeneous semilinear elliptic equation on ${f R}^n$. Mathematische Annalen, 2001, 320, 191-210.	1.4	36
42	Stability of least energy patterns of the shadow system for an activator-inhibitor model. Japan Journal of Industrial and Applied Mathematics, 2001, 18, 259-272.	0.9	54
43	Further Study on a Nonlinear Heat Equation. Journal of Differential Equations, 2001, 169, 588-613.	2.2	70
44	ALGORITHMS AND VISUALIZATION FOR SOLUTIONS OF NONLINEAR ELLIPTIC EQUATIONS, PART II: DIRICHLET, NEUMANN AND ROBIN BOUNDARY CONDITIONS AND PROBLEMS IN 3D. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 1781-1799.	1.7	7
45	ALGORITHMS AND VISUALIZATION FOR SOLUTIONS OF NONLINEAR ELLIPTIC EQUATIONS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2000, 10, 1565-1612.	1.7	93
46	Boundary element monotone iteration scheme for semilinear elliptic partial differential equations, Part II: Quasimonotone iteration for coupled systems. Mathematics of Computation, 1999, 69, 629-653.	2.1	3
47	Diffusion vs Cross-Diffusion: An Elliptic Approach. Journal of Differential Equations, 1999, 154, 157-190.	2.2	227
48	On the location and profile of spike-layer solutions to a singularly perturbed semilinear Dirichlet problem: Intermediate solutions. Duke Mathematical Journal, 1998, 94, 597.	1.5	47
49	Diffusion, Self-Diffusion and Cross-Diffusion. Journal of Differential Equations, 1996, 131, 79-131.	2.2	554
50	Boundary element monotone iteration scheme for semilinear elliptic partial differential equations. Mathematics of Computation, 1996, 65, 943-983.	2.1	32
51	On the location and profile of spike-layer solutions to singularly perturbed semilinear dirichlet problems. Communications on Pure and Applied Mathematics, 1995, 48, 731-768.	3.1	255
52	Point condensation generated by a reaction-diffusion system in axially symmetric domains. Japan Journal of Industrial and Applied Mathematics, 1995, 12, 327-365.	0.9	66
53	Spike-Layers in Semilinear Elliptic Singular Perturbation Problemsâ€. The IMA Volumes in Mathematics and Its Applications, 1993, , 131-139.	0.5	1
54	Locating the peaks of least-energy solutions to a semilinear Neumann problem. Duke Mathematical Journal, 1993, 70, 247.	1.5	440

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55	Global existence, large time behavior and life span of solutions of a semilinear parabolic Cauchy problem. Transactions of the American Mathematical Society, 1992, 333, 365-378.	0.9	170
56	Singular behavior of least-energy solutions of a semilinear Neumann problem involving critical Sobolev exponents. Duke Mathematical Journal, 1992, 67, 1.	1.5	99
57	On the stability and instability of positive steady states of a semilinear heat equation in â„n. Communications on Pure and Applied Mathematics, 1992, 45, 1153-1181.	3.1	160
58	On the Existence and Shape of Solutions to a Semilinear Neumann Problem. , 1992, , 425-436.		5
59	On the structure of the conformal Gaussian curvature equation on â„2. Duke Mathematical Journal, 1991, 62, 721.	1.5	43
60	On the shape of least-energy solutions to a semilinear Neumann problem. Communications on Pure and Applied Mathematics, 1991, 44, 819-851.	3.1	500
61	On the structure of the conformal Gaussian curvature equation on R2. II. Mathematische Annalen, 1991, 290, 671-680.	1.4	19
62	A generalized Pohozaev identity and its applications. Journal of the Mathematical Society of Japan, 1990, 42, 541.	0.4	31
63	On the existence and symmetry properties of finite total mass solutions of the matukuma equation, the eddington equation and their generalizations. Informa, 1989, 108, 175-194.	0.6	54
64	On the Existence of Positive Entire Solutions of a Semilinear Elliptic Equation. , 1989, , 17-42.		1
65	Semilinear elliptic equations of Matukuma-type and related topics. Japan Journal of Industrial and Applied Mathematics, 1988, 5, 1-32.	0.4	104
66	On the diffusion coefficient of a semilinear Neumann problem. Lecture Notes in Mathematics, 1988, , 160-174.	0.2	49
67	On conformal scalar curvature equations in â„n. Duke Mathematical Journal, 1988, 57, 895.	1.5	145
68	Some Aspects of Semilinear Elliptic Equations on â„n. Mathematical Sciences Research Institute Publications, 1988, , 171-205.	0.3	12
69	A counterexample to the nodal domain conjecture and a related semilinear equation. Proceedings of the American Mathematical Society, 1988, 102, 271-271.	0.8	52
70	Lane-Emden Equations and Related Topics in Nonlinear Elliptic and Parabolic Problems. , 1987, , 135-152.		1
71	On the Neumann problem for some semilinear elliptic equations and systems of activator-inhibitor type. Transactions of the American Mathematical Society, 1986, 297, 351-368.	0.9	92
72	On Matukuma's equation and related topics. Proceedings of the Japan Academy Series A: Mathematical Sciences, 1986, 62, 260.	0.4	13

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73	Nonexistence theorems for singular solutions of quasilinear partial differential equations. Communications on Pure and Applied Mathematics, 1986, 39, 379-399.	3.1	114
74	On the existence of positive entire solutions of a semilinear elliptic equation. Archive for Rational Mechanics and Analysis, 1986, 91, 283-308.	2.4	287
75	On the elliptic equation Î”u+Ku(n+2)/(nâˆ’2)=0 and related topics. Duke Mathematical Journal, 1985, 52, 485.	1.5	127
76	Uniqueness and nonuniqueness for positive radial solutions of Î”u + f(u, r) = 0. Communications on Pure and Applied Mathematics, 1985, 38, 67-108.	3.1	221
77	The Number of Peaks of Positive Solutions of Semilinear Parabolic Equations. SIAM Journal on Mathematical Analysis, 1985, 16, 460-471.	1.9	29
78	Singular behavior in nonlinear parabolic equations. Transactions of the American Mathematical Society, 1985, 287, 657-657.	0.9	101
79	On the least growth of harmonic functions am the boundary behavior of riemann mappings. Communications in Partial Differential Equations, 1985, 10, 767-786.	2.2	4
80	On the asymptotic behavior of solutions of certain quasilinear parabolic equations. Journal of Differential Equations, 1984, 54, 97-120.	2.2	125
81	An Exterior Dirichlet Problem with Applications to Some Nonlinear Equations Arising in Geometry. American Journal of Mathematics, 1984, 106, 689.	1.1	43
82	Uniqueness of solutions of nonlinear Dirichlet problems. Journal of Differential Equations, 1983, 50, 289-304.	2.2	87
83	On the existence and boundary behavior of solutions to a class of nonlinear Dirichlet problems. Proceedings of the American Mathematical Society, 1983, 89, 254-258.	0.8	3
84	CONFORMAL METRICS WITH ZERO SCALAR CURVATURE AND A SYMMETRIZATION PROCESS VIA MAXIMUM PRINCIPLE. , 1982, , 193-202.		0
85	Title is missing!. Indiana University Mathematics Journal, 1982, 31, 801.	0.9	199
86	On the elliptic equation ?u+K(x)e 2u =0 and conformal metrics with prescribed Gaussian curvatures. Inventiones Mathematicae, 1982, 66, 343-352.	2.5	86
87	On the positive radial solutions of some semilinear elliptic equations on ? n. Applied Mathematics and Optimization, 1982, 9, 373-380.	1.6	20
88	Title is missing!. Indiana University Mathematics Journal, 1982, 31, 493.	0.9	298
89	On the existence of global vortex rings. Journal D'Analyse Mathematique, 1980, 37, 208-247.	0.8	51
90	Symmetry and related properties via the maximum principle. Communications in Mathematical Physics, 1979, 68, 209-243.	2.2	2,202