# Wei-Ming Ni

List of Publications by Year
in descending order

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

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Symmetry and related properties via the maximum principle. Communications in Mathematical Physics, 1979, 68, 209-243. | 2.2 | 2,202 |
| 2 | Diffusion, Self-Diffusion and Cross-Diffusion. Journal of Differential Equations, 1996, 131, 79-131. | 2.2 | 554 |
| 3 | 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 |
| 4 | Locating the peaks of least-energy solutions to a semilinear Neumann problem. Duke Mathematical Journal, 1993, 70, 247. | 1.5 | 440 |
| 5 | Title is missing!. Indiana University Mathematics Journal, 1982, 31, 493. | 0.9 | 298 |
| 6 | 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 |
| 7 | 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 |
| 8 | Diffusion vs Cross-Diffusion: An Elliptic Approach. Journal of Differential Equations, 1999, 154, 157-190. | 2.2 | 227 |
| 9 | Uniqueness and nonuniqueness for positive radial solutions of $\Delta u + f(u, r) = 0$. Communications on Pure and Applied Mathematics, 1985, 38, 67-108. | 3.1 | 221 |
| 10 | Title is missing!. Indiana University Mathematics Journal, 1982, 31, 801. | 0.9 | 199 |
| 11 | 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 |
| 12 | 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 |
| 13 | On the stability and instability of positive steady states of a semilinear heat equation in $\mathbb{R}^n$. Communications on Pure and Applied Mathematics, 1992, 45, 1153-1181. | 3.1 | 160 |
| 14 | Turing patterns in the Lengyel-Epstein system for the CIMA reaction. Transactions of the American Mathematical Society, 2005, 357, 3953-3969. | 0.9 | 146 |
| 15 | On conformal scalar curvature equations in $\mathbb{R}^n$. Duke Mathematical Journal, 1988, 57, 895. | 1.5 | 145 |
| 16 | Global Dynamics of the Lotka–Volterra Competition–Diffusion System: Diffusion and Spatial Heterogeneity I. Communications on Pure and Applied Mathematics, 2016, 69, 981-1014. | 3.1 | 129 |
| 17 | On the elliptic equation $\Delta u + K u^{(n+2)/(n-2)} = 0$ and related topics. Duke Mathematical Journal, 1985, 52, 485. | 1.5 | 127 |
| 18 | On the asymptotic behavior of solutions of certain quasilinear parabolic equations. Journal of Differential Equations, 1984, 54, 97-120. | 2.2 | 125 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 19 | Nonexistence theorems for singular solutions of quasilinear partial differential equations. Communications on Pure and Applied Mathematics, 1986, 39, 379-399. | 3.1 | 114 |
| 20 | Semilinear elliptic equations of Matukuma-type and related topics. Japan Journal of Industrial and Applied Mathematics, 1988, 5, 1-32. | 0.4 | 104 |
| 21 | Singular behavior in nonlinear parabolic equations. Transactions of the American Mathematical Society, 1985, 287, 657-657. | 0.9 | 101 |
| 22 | Singular behavior of least-energy solutions of a semilinear Neumann problem involving critical Sobolev exponents. Duke Mathematical Journal, 1992, 67, 1. | 1.5 | 99 |
| 23 | Uniqueness and Complete Dynamics in Heterogeneous Competition-Diffusion Systems. SIAM Journal on Applied Mathematics, 2012, 72, 1695-1712. | 1.8 | 96 |
| 24 | 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 |
| 25 | 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 |
| 26 | 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 |
| 27 | The effects of diffusion and spatial variation in Lotka–Volterra competition–diffusion system I: Heterogeneity vs. homogeneity. Journal of Differential Equations, 2013, 254, 528-546. | 2.2 | 92 |
| 28 | 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 |
| 29 | Uniqueness of solutions of nonlinear Dirichlet problems. Journal of Differential Equations, 1983, 50, 289-304. | 2.2 | 87 |
| 30 | 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 |
| 31 | 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 |
| 32 | On positive solutions concentrating on spheres for the Gierer–Meinhardt system. Journal of Differential Equations, 2006, 221, 158-189. | 2.2 | 79 |
| 33 | Carrying capacity in a heterogeneous environment with habitat connectivity. Ecology Letters, 2017, 20, 1118-1128. | 6.4 | 76 |
| 34 | Further Study on a Nonlinear Heat Equation. Journal of Differential Equations, 2001, 169, 588-613. | 2.2 | 70 |
| 35 | 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 |
| 36 | The effects of diffusion and spatial variation in Lotka–Volterra competition–diffusion system II: The general case. Journal of Differential Equations, 2013, 254, 4088-4108. | 2.2 | 62 |

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|---|---------|----|-----------|
| 37 | 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 |
| 38 | 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 |
| 39 | Dispersal and spatial heterogeneity: single species. Journal of Mathematical Biology, 2016, 72, 239-254. | 1.9 | 53 |
| 40 | 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 |
| 41 | On the existence of global vortex rings. Journal D'Analyse Mathematique, 1980, 37, 208-247. | 0.8 | 51 |
| 42 | 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 |
| 43 | Global dynamics of the Lotka–Volterra competition–diffusion system with equal amount of total resources, II. Calculus of Variations and Partial Differential Equations, 2016, 55, 1. | 1.7 | 51 |
| 44 | On the diffusion coefficient of a semilinear Neumann problem. Lecture Notes in Mathematics, 1988, , 160-174. | 0.2 | 49 |
| 45 | 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 |
| 46 | Qualitative Properties of Solutions to Elliptic Problems. Handbook of Differential Equations: Stationary Partial Differential Equations, 2004, , 157-233. | 0.7 | 45 |
| 47 | Limiting profiles of semilinear elliptic equations with large advection in population dynamics. Discrete and Continuous Dynamical Systems, 2010, 28, 1051-1067. | 0.9 | 45 |
| 48 | An Exterior Dirichlet Problem with Applications to Some Nonlinear Equations Arising in Geometry. American Journal of Mathematics, 1984, 106, 689. | 1.1 | 43 |
| 49 | On the structure of the conformal Gaussian curvature equation on $\mathbb{R}^2$. Duke Mathematical Journal, 1991, 62, 721. | 1.5 | 43 |
| 50 | Effects of dispersal on total biomass in a patchy, heterogeneous system: Analysis and experiment. Mathematical Biosciences, 2015, 264, 54-62. | 1.9 | 43 |
| 51 | Global dynamics of the Lotka–Volterra competition–diffusion system with equal amount of total resources, III. Calculus of Variations and Partial Differential Equations, 2017, 56, 1. | 1.7 | 42 |
| 52 | Pattern formation in a cross-diffusion system. Discrete and Continuous Dynamical Systems, 2015, 35, 1589-1607. | 0.9 | 37 |
| 53 | Existence and infinite multiplicity for an inhomogeneous semilinear elliptic equation on ${f R}^n$. Mathematische Annalen, 2001, 320, 191-210. | 1.4 | 36 |
| 54 | Boundary element monotone iteration scheme for semilinear elliptic partial differential equations. Mathematics of Computation, 1996, 65, 943-983. | 2.1 | 32 |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 55 | The dynamics of a kinetic activator–inhibitor system. Journal of Differential Equations, 2006, 229, 426-465. | 2.2 | 32 |
| 56 | A generalized Pohozaev identity and its applications. Journal of the Mathematical Society of Japan, 1990, 42, 541. | 0.4 | 31 |
| 57 | 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 |
| 58 | The Number of Peaks of Positive Solutions of Semilinear Parabolic Equations. SIAM Journal on Mathematical Analysis, 1985, 16, 460-471. | 1.9 | 29 |
| 59 | Monotonicity of stable solutions in shadow systems. Transactions of the American Mathematical Society, 2001, 353, 5057-5069. | 0.9 | 29 |
| 60 | On the global existence and finite time blow-up of shadow systems. Journal of Differential Equations, 2009, 247, 1762-1776. | 2.2 | 26 |
| 61 | On steady states of van der Waals force driven thin film equations. European Journal of Applied Mathematics, 2007, 18, 153-180. | 2.9 | 23 |
| 62 | Effects of diffusion on total biomass in heterogeneous continuous and discrete-patch systems. Theoretical Ecology, 2016, 9, 443-453. | 1.0 | 23 |
| 63 | Effect of Stressors on the Carrying Capacity of Spatially Distributed Metapopulations. American Naturalist, 2020, 196, E46-E60. | 2.1 | 23 |
| 64 | Carrying Capacity of Spatially Distributed Metapopulations. Trends in Ecology and Evolution, 2021, 36, 164-173. | 8.7 | 23 |
| 65 | Dynamics of a consumer–resource reaction–diffusion model. Journal of Mathematical Biology, 2019, 78, 1605-1636. | 1.9 | 21 |
| 66 | Carrying Capacity of a Population Diffusing in a Heterogeneous Environment. Mathematics, 2020, 8, 49. | 2.2 | 21 |
| 67 | Boundary-clustered interfaces for the Allen–Cahn equation. Pacific Journal of Mathematics, 2007, 229, 447-468. | 0.5 | 21 |
| 68 | On the positive radial solutions of some semilinear elliptic equations on ? n. Applied Mathematics and Optimization, 1982, 9, 373-380. | 1.6 | 20 |
| 69 | On the structure of the conformal Gaussian curvature equation on R2. II. Mathematische Annalen, 1991, 290, 671-680. | 1.4 | 19 |
| 70 | Advection-mediated competition in general environments. Journal of Differential Equations, 2014, 257, 3466-3500. | 2.2 | 16 |
| 71 | On Matukuma's equation and related topics. Proceedings of the Japan Academy Series A: Mathematical Sciences, 1986, 62, 260. | 0.4 | 13 |
| 72 | 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 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|-----|-----------|
| 73 | 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 |
| 74 | Solutions, concentrating on spheres, to symmetric singularly perturbed problems. Comptes Rendus Mathematique, 2002, 335, 145-150. | 0.3 | 12 |
| 75 | Some Aspects of Semilinear Elliptic Equations on â„ⁿ. Mathematical Sciences Research Institute Publications, 1988, , 171-205. | 0.3 | 12 |
| 76 | A method to measure the two-dimensional image of magneto-optical Kerr effect. Review of Scientific Instruments, 2003, 74, 4718-4722. | 1.3 | 10 |
| 77 | 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 |
| 78 | 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 |
| 79 | Stability from the point of view of diffusion, relaxation and spatial inhomogeneity. Discrete and Continuous Dynamical Systems, 2008, 20, 259-274. | 0.9 | 7 |
| 80 | Higher Order Approximations in the Heat Equation and the Truncated Moment Problem. SIAM Journal on Mathematical Analysis, 2009, 40, 2241-2261. | 1.9 | 6 |
| 81 | Directed movement changes coexistence outcomes in heterogeneous environments. Ecology Letters, 2022, 25, 366-377. | 6.4 | 6 |
| 82 | On the Existence and Shape of Solutions to a Semilinear Neumann Problem. , 1992, , 425-436. | | 5 |
| 83 | 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 |
| 84 | 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 |
| 85 | 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 |
| 86 | 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 |
| 87 | Spike-Layers in Semilinear Elliptic Singular Perturbation Problemsâ€. The IMA Volumes in Mathematics and Its Applications, 1993, , 131-139. | 0.5 | 1 |
| 88 | Lane-Emden Equations and Related Topics in Nonlinear Elliptic and Parabolic Problems. , 1987, , 135-152. | | 1 |
| 89 | On the Existence of Positive Entire Solutions of a Semilinear Elliptic Equation. , 1989, , 17-42. | | 1 |
| 90 | CONFORMAL METRICS WITH ZERO SCALAR CURVATURE AND A SYMMETRIZATION PROCESS VIA MAXIMUM PRINCIPLE. , 1982, , 193-202. | | 0 |