Yuan Lou

List of Publications by Year
in descending order

105 papers	5,331 citations	101543 36 h-index	88630 70 g-index
106 all docs	106 docs citations	106 times ranked	1102 citing authors

#	Article	IF	Citations
1	Spatiotemporal patterns in a diffusive predatorâ€"prey system with nonlocal intraspecific prey competition. Studies in Applied Mathematics, 2022, 148, 396-432.	2.4	23
2	Control Strategies for a Multi-strain Epidemic Model. Bulletin of Mathematical Biology, 2022, 84, 10.	1.9	7
3	Directed movement changes coexistence outcomes in heterogeneous environments. Ecology Letters, 2022, 25, 366-377.	6.4	6
4	Classifying the level set of principal eigenvalue for time-periodic parabolic operators and applications. Journal of Functional Analysis, 2022, 282, 109338.	1.4	10
5	A New Monotonicity for Principal Eigenvalues with Applications to Time-Periodic Patch Models. SIAM Journal on Applied Mathematics, 2022, 82, 576-601.	1.8	8
6	Global dynamics of a generalist predatorâ€"prey model in open advective environments. Journal of Mathematical Biology, 2022, 84, 46.	1.9	17
7	Total biomass of a single population in two-patch environments. Theoretical Population Biology, 2022, 146, 1-14.	1.1	6
8	Maximizing the total population with logistic growth in a patchy environment. Journal of Mathematical Biology, 2021, 82, 2.	1.9	16
9	Asymptotics of the Principal Eigenvalue for a Linear Time-Periodic Parabolic Operator I: Large Advection. SIAM Journal on Mathematical Analysis, 2021, 53, 5243-5277.	1.9	7
10	Evolution of anisotropic diffusion in two-dimensional heterogeneous environments. Journal of Mathematical Biology, 2021, 82, 36.	1.9	1
11	Impact of State-Dependent Dispersal on Disease Prevalence. Journal of Nonlinear Science, 2021, 31, 73.	2.1	12
12	Three-patch Models for the Evolution of Dispersal in Advective Environments: Varying Drift and Network Topology. Bulletin of Mathematical Biology, 2021, 83, 109.	1.9	14
13	Competitive exclusion in a nonlocal reactionâ€"diffusionâ€"advection model of phytoplankton populations. Nonlinear Analysis: Real World Applications, 2021, 61, 103350.	1.7	4
14	Ecological and evolutionary dynamics in periodic and advective habitats. Methods and Applications of Analysis, 2021, 28, 423-452.	0.5	1
15	Evolution of dispersal in spatial population models with multiple timescales. Journal of Mathematical Biology, 2020, 80, 3-37.	1.9	12
16	Are Two-Patch Models Sufficient? The Evolution of Dispersal and Topology of River Network Modules. Bulletin of Mathematical Biology, 2020, 82, 131.	1.9	14
17	Dynamics of a parabolic-ODE competition system in heterogeneous environments. Proceedings of the American Mathematical Society, 2020, 148, 3025-3038.	0.8	4
18	The generalised principal eigenvalue of time-periodic nonlocal dispersal operators and applications. Journal of Differential Equations, 2020, 269, 4960-4997.	2.2	13

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19	Global dynamics of a Lotkaâ€“Volterra competitionâ€“diffusionâ€“advection system in heterogeneous environments. Journal Des Mathematiques Pures Et Appliquees, 2019, 121, 47-82.	1.6	93
20	Concentration phenomena in an integro-PDE model for evolution of conditional dispersal. Indiana University Mathematics Journal, 2019, 68, 881-923.	0.9	4
21	A spatial SEIRS reaction-diffusion model in heterogeneous environment. Journal of Differential Equations, 2019, 267, 5084-5114.	2.2	79
22	Monotonicity and Global Dynamics of a Nonlocal Two-Species Phytoplankton Model. SIAM Journal on Applied Mathematics, 2019, 79, 716-742.	1.8	15
23	Monotonicity of the principal eigenvalue for a linear time-periodic parabolic operator. Proceedings of the American Mathematical Society, 2019, 147, 5291-5302.	0.8	15
24	Dynamics of a consumerâ€“resource reactionâ€“diffusion model. Journal of Mathematical Biology, 2019, 78, 1605-1636.	1.9	21
25	Persistence, Competition, and Evolution. Mathematics of Planet Earth, 2019, , 205-238.	0.1	4
26	Hopf bifurcation in a delayed reactionâ€“diffusionâ€“advection population model. Journal of Differential Equations, 2018, 264, 5333-5359.	2.2	65
27	Coexistence and bistability of a competition model in open advective environments. Mathematical Biosciences, 2018, 306, 10-19.	1.9	31
28	Nonexistence of nonconstant steady-state solutions in a triangular cross-diffusion model. Journal of Differential Equations, 2017, 262, 5160-5178.	2.2	15
29	Dimorphism by Singularity Theory in a Model for River Ecology. Bulletin of Mathematical Biology, 2017, 79, 1051-1069.	1.9	6
30	Dynamics and asymptotic profiles of steady states of an epidemic model in advective environments. Journal of Differential Equations, 2017, 263, 2343-2373.	2.2	139
31	Local dynamics of a diffusive predatorâ€“prey model in spatially heterogeneous environment. Journal of Fixed Point Theory and Applications, 2017, 19, 755-772.	1.1	31
32	An integro-PDE model for evolution of random dispersal. Journal of Functional Analysis, 2017, 272, 1755-1790.	1.4	14
33	Evolution of natal dispersal in spatially heterogenous environments. Mathematical Biosciences, 2017, 283, 136-144.	1.9	16
34	The Role of Advection in a Two-Species Competition Model: A Bifurcation Approach. Memoirs of the American Mathematical Society, 2017, 245, 0-0.	0.9	20
35	The Emergence of Range Limits in Advective Environments. SIAM Journal on Applied Mathematics, 2016, 76, 641-662.	1.8	34
36	A spatial SIS model in advective heterogeneous environments. Journal of Differential Equations, 2016, 261, 3305-3343.	2.2	143

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37	Asymptotic Behavior of the Principal Eigenvalue for Cooperative Elliptic Systems and Applications. Journal of Dynamics and Differential Equations, 2016, 28, 29-48.	1.9	28
38	Multiple steady-states in phytoplankton population induced by photoinhibition. Journal of Differential Equations, 2015, 258, 2408-2434.	2.2	10
39	Evolution of dispersal in advective homogeneous environment: The effect of boundary conditions. Journal of Differential Equations, 2015, 259, 141-171.	2.2	114
40	Global Existence and Uniform Boundedness of Smooth Solutions to a Cross-Diffusion System with Equal Diffusion Rates. Communications in Partial Differential Equations, 2015, 40, 1905-1941.	2.2	35
41	Evolution of dispersal in closed advective environments. Journal of Biological Dynamics, 2015, 9, 188-212.	1.7	75
42	Some reaction diffusion models in spatial ecology. Scientia Sinica Mathematica, 2015, 45, 1619-1634.	0.2	9
43	Pattern formation in a cross-diffusion system. Discrete and Continuous Dynamical Systems, 2015, 35, 1589-1607.	0.9	37
44	Qualitative analysis for a Lotka-Volterra competition system in advective homogeneous environment. Discrete and Continuous Dynamical Systems, 2015, 36, 953-969.	0.9	13
45	Competition between two similar species in the unstirred chemostat. Discrete and Continuous Dynamical Systems - Series B, 2015, 21, 621-639.	0.9	3
46	Evolution of conditional dispersal: evolutionarily stable strategies in spatial models. Journal of Mathematical Biology, 2014, 68, 851-877.	1.9	38
47	Approaching the Ideal Free Distribution in Two-Species Competition Models with Fitness-Dependent Dispersal. SIAM Journal on Mathematical Analysis, 2014, 46, 1228-1262.	1.9	25
48	Evolutionarily Stable and Convergent Stable Strategies in Reactionâ€"Diffusion Models for Conditional Dispersal. Bulletin of Mathematical Biology, 2014, 76, 261-291.	1.9	30
49	Evolution of dispersal in open advective environments. Journal of Mathematical Biology, 2014, 69, 1319-1342.	1.9	128
50	Global dynamics of a competition model with non-local dispersal I: The shadow system. Journal of Mathematical Analysis and Applications, 2014, 412, 485-497.	1.0	14
51	Global dynamics for two-species competition in patchy environment. Mathematical Biosciences and Engineering, 2014, 11, 947-970.	1.9	11
52	Random dispersal versus fitness-dependent dispersal. Journal of Differential Equations, 2013, 254, 2905-2941.	2.2	24
53	An integro-PDE model from population genetics. Journal of Differential Equations, 2013, 254, 2367-2392.	2.2	11
54	An introduction to migration-selection PDE models. Discrete and Continuous Dynamical Systems, 2013, 33, 4349-4373.	0.9	34

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55	On several conjectures from evolution of dispersal. Journal of Biological Dynamics, 2012, 6, 117-130.	1.7	59
56	Evolutionary stability of ideal free dispersal strategies in patchy environments. Journal of Mathematical Biology, 2012, 65, 943-965.	1.9	57
57	Effects of diffusion and advection on the smallest eigenvalue of an elliptic operator and their applications. Indiana University Mathematics Journal, 2012, 61, 45-80.	0.9	41
58	Evolutionary Convergence to Ideal Free Dispersal Strategies and Coexistence. Bulletin of Mathematical Biology, 2012, 74, 257-299.	1.9	18
59	Dynamics of a three species competition model. Discrete and Continuous Dynamical Systems, 2012, 32, 3099-3131.	0.9	20
60	Dynamics of a reaction-diffusion-advection model for two competing species. Discrete and Continuous Dynamical Systems, 2012, 32, 3841-3859.	0.9	55
61	Evolution of mixed dispersal in periodic environments. Discrete and Continuous Dynamical Systems - Series B, 2012, 17, 2047-2072.	0.9	37
62	On the dependence of population size upon random dispersal rate. Discrete and Continuous Dynamical Systems - Series B, 2012, 17, 2771-2788.	0.9	25
63	Global Dynamics of a Tritrophic Model for Two Patches with Cost of Dispersal. SIAM Journal on Applied Mathematics, 2011, 71, 1801-1820.	1.8	6
64	Evolutionary ecology of movement by predators and prey. Theoretical Ecology, 2011, 4, 255-267.	1.0	18
65	The Effect of Travel Loss on Evolutionarily Stable Distributions of Populations in Space. American Naturalist, 2011, 178, 15-29.	2.1	13
66	An indefinite nonlinear diffusion problem in population genetics, II: Stability and multiplicity. Discrete and Continuous Dynamical Systems, 2010, 27, 643-655.	0.9	30
67	Reactionâ€"diffusion models with large advection coefficients. Applicable Analysis, 2010, 89, 983-1004.	1.3	26
68	Single Phytoplankton Species Growth with Light and Advection in a Water Column. SIAM Journal on Applied Mathematics, 2010, 70, 2942-2974.	1.8	66
69	Random dispersal vs. non-local dispersal. Discrete and Continuous Dynamical Systems, 2010, 26, 551-596.	0.9	192
70	Evolution of dispersal and the ideal free distribution. Mathematical Biosciences and Engineering, 2010, 7, 17-36.	1.9	105
71	Evolution of cross-diffusion and self-diffusion. Journal of Biological Dynamics, 2009, 3, 410-429.	1.7	16
72	Tracking prey or tracking the prey's resource? Mechanisms of movement and optimal habitat selection by predators. Journal of Theoretical Biology, 2009, 256, 187-200.	1.7	44

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73	Evolution of dispersal in heterogeneous landscapes. Chapman & Hall/CRC Mathematical and Computational Biology Series, 2009, , 213-229.	0.1	9
74	Evolution of conditional dispersal: a reactionâ€“diffusionâ€“advection model. Journal of Mathematical Biology, 2008, 57, 361-386.	1.9	105
75	Approximating the ideal free distribution via reactionâ€“diffusionâ€“advection equations. Journal of Differential Equations, 2008, 245, 3687-3703.	2.2	66
76	Principal eigenvalue and eigenfunctions of an elliptic operator with large advection and its application to a competition model. Indiana University Mathematics Journal, 2008, 57, 627-658.	0.9	84
77	Asymptotic profiles of the steady states for an SIS epidemic reaction-diffusion model. Discrete and Continuous Dynamical Systems, 2008, 21, 1-20.	0.9	338
78	Advection-mediated coexistence of competing species. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2007, 137, 497-518.	1.2	110
79	Evolution under multiallelic migrationâ€“selection models. Theoretical Population Biology, 2007, 72, 21-40.	1.1	26
80	Evolution at a multiallelic locus under migration and uniform selection. Journal of Mathematical Biology, 2007, 54, 787-796.	1.9	8
81	Multiallelic selection polymorphism. Theoretical Population Biology, 2006, 69, 217-229.	1.1	9
82	Evolution under the multiallelic Levene model. Theoretical Population Biology, 2006, 70, 401-411.	1.1	13
83	Movement toward better environments and the evolution of rapid diffusion. Mathematical Biosciences, 2006, 204, 199-214.	1.9	115
84	On the effects of migration and spatial heterogeneity on single and multiple species. Journal of Differential Equations, 2006, 223, 400-426.	2.2	204
85	Evolution of a semilinear parabolic system for migration and selection without dominance. Journal of Differential Equations, 2006, 225, 624-665.	2.2	26
86	Loops and branches of coexistence states in a Lotkaâ€“Volterra competition model. Journal of Differential Equations, 2006, 230, 720-742.	2.2	36
87	Minimization of the principal eigenvalue for an elliptic boundary value problem with indefinite weight, and applications to population dynamics. Japan Journal of Industrial and Applied Mathematics, 2006, 23, 275-292.	0.9	75
88	Effects of Sog on Dpp-Receptor Binding. SIAM Journal on Applied Mathematics, 2005, 65, 1748-1771.	1.8	25
89	Multiple Reversals of Competitive Dominance in Ecological Reserves via External Habitat Degradation. Journal of Dynamics and Differential Equations, 2004, 16, 973-1010.	1.9	17
90	Evolution of a semilinear parabolic system for migration and selection in population genetics. Journal of Differential Equations, 2004, 204, 292-322.	2.2	23

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91	Does movement toward better environments always benefit a population?. Journal of Mathematical Analysis and Applications, 2003, 277, 489-503.	1.0	90
92	On a limiting system in the Lotka--Volterra competition with cross-diffusion. Discrete and Continuous Dynamical Systems, 2003, 10, 435-458.	0.9	75
93	A Semilinear Parabolic System for Migration and Selection in Population Genetics. Journal of Differential Equations, 2002, 181, 388-418.	2.2	49
94	Patterns of Multiallelic Polymorphism Maintained by Migration and Selection. Theoretical Population Biology, 2001, 59, 297-313.	1.1	37
95	Qualitative behaviour of positive solutions of a predatorâ€"prey model: effects of saturation. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2001, 131, 321-349.	1.2	85
96	On diffusion-induced blowups in a mutualistic model. Nonlinear Analysis: Theory, Methods & Applications, 2001, 45, 329-342.	1.1	38
97	Proof of a Conjecture for the Perturbed Gelfand Equation from Combustion Theory. Journal of Differential Equations, 2001, 173, 213-230.	2.2	34
98	On $3imes 3$ Lotka-Volterra competition systems with cross-diffusion. Discrete and Continuous Dynamical Systems, 2000, 6, 175-190.	0.9	54
99	Diffusion vs Cross-Diffusion: An Elliptic Approach. Journal of Differential Equations, 1999, 154, 157-190.	2.2	227
100	S-Shaped Global Bifurcation Curve and Hopf Bifurcation of Positive Solutions to a Predatorâ€"Prey Model. Journal of Differential Equations, 1998, 144, 390-440.	2.2	80
101	On the global existence of a cross-diffusion system. Discrete and Continuous Dynamical Systems, 1998, 4, 193-203.	0.9	109
102	Some uniqueness and exact multiplicity results for a predator-prey model. Transactions of the American Mathematical Society, 1997, 349, 2443-2475.	0.9	105
103	Diffusion, Self-Diffusion and Cross-Diffusion. Journal of Differential Equations, 1996, 131, 79-131.	2.2	554
104	Necessary and sufficient condition for the existence of positive solutions of certain cooperative system. Nonlinear Analysis: Theory, Methods & Applications, 1996, 26, 1079-1095.	1.1	54
105	Uniqueness and nonuniqueness of coexistence states in the lotka-volterra competition model. Communications on Pure and Applied Mathematics, 1994, 47, 1571-1594.	3.1	64