

Horst Malchow

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

47
papers

1,881
citations

24
h-index

43
g-index

49
ext. papers

2,033
ext. citations

3.3
avg, IF

4.54
L-index

#	Paper	IF	Citations
47	Spatiotemporal Complexity of Plankton and Fish Dynamics. <i>SIAM Review</i> , 2002 , 44, 311-370	7.4	334
46	Wave of chaos: new mechanism of pattern formation in spatio-temporal population dynamics. <i>Theoretical Population Biology</i> , 2001 , 59, 157-74	1.2	166
45	Experimental demonstration of chaos in a microbial food web. <i>Nature</i> , 2005 , 435, 1226-9	50.4	163
44	Transition to spatiotemporal chaos can resolve the paradox of enrichment. <i>Ecological Complexity</i> , 2004 , 1, 37-47	2.6	88
43	The Allee effect and infectious diseases: extinction, multistability, and the (dis-)appearance of oscillations. <i>American Naturalist</i> , 2009 , 173, 72-88	3.7	83
42	A diffusive SI model with Allee effect and application to FIV. <i>Mathematical Biosciences</i> , 2007 , 206, 61-80	3.9	83
41	Structure formation by active Brownian particles. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995 , 207, 140-146	2.3	72
40	Pathogens can Slow Down or Reverse Invasion Fronts of their Hosts. <i>Biological Invasions</i> , 2005 , 7, 817-832	7	60
39	Quantification of the spatial aspect of chaotic dynamics in biological and chemical systems. <i>Bulletin of Mathematical Biology</i> , 2003 , 65, 425-46	2.1	52
38	Spatiotemporal Patterns in Ecology and Epidemiology		49
37	Motional instabilities in prey-predator systems. <i>Journal of Theoretical Biology</i> , 2000 , 204, 639-47	2.3	48
36	Strange Periodic Attractors in a Prey-Predator System with Infected Prey. <i>Mathematical Population Studies</i> , 2006 , 13, 119-134	0.8	47
35	Critical phenomena in plankton communities: KISS model revisited. <i>Nonlinear Analysis: Real World Applications</i> , 2000 , 1, 37-51	2.1	46
34	Oscillations and waves in a virally infected plankton system: Part I: The lysogenic stage. <i>Ecological Complexity</i> , 2004 , 1, 211-223	2.6	44
33	Spatio-temporal pattern formation in coupled models of plankton dynamics and fish school motion. <i>Nonlinear Analysis: Real World Applications</i> , 2000 , 1, 53-67	2.1	43
32	Numerical study of plankton fish dynamics in a spatially structured and noisy environment. <i>Ecological Modelling</i> , 2002 , 149, 247-255	3	39
31	Patterns of Patchy Spread in Deterministic and Stochastic Models of Biological Invasion and Biological Control. <i>Biological Invasions</i> , 2005 , 7, 771-793	2.7	38

30	Disease-induced modification of prey competition in eco-epidemiological models. <i>Ecological Complexity</i> , 2014 , 18, 74-82	2.6	35
29	Constructive effects of environmental noise in an excitable prey-predator plankton system with infected prey. <i>Ecological Complexity</i> , 2007 , 4, 223-233	2.6	30
28	Effects of seasonal perturbations on a model plankton community. <i>Environmental Modeling and Assessment</i> , 1997 , 2, 43-48	2	26
27	Oscillations and waves in a virally infected plankton system. <i>Ecological Complexity</i> , 2006 , 3, 200-208	2.6	26
26	Pattern formation in models of plankton dynamics. A synthesis. <i>Oceanologica Acta: European Journal of Oceanology - Revue Europeene De Oceanologie</i> , 2001 , 24, 479-487		25
25	Non-equilibrium spatio-temporal patterns in models of non-linear plankton dynamics. <i>Freshwater Biology</i> , 2000 , 45, 239-251	3.1	24
24	Bifurcations in a Bistable Reaction-Diffusion System. <i>Annalen Der Physik</i> , 1979 , 491, 121-134	2.6	18
23	The Fokker-Planck law of diffusion and pattern formation in heterogeneous environments. <i>Journal of Mathematical Biology</i> , 2016 , 73, 683-704	2	17
22	On competition of predators and prey infection. <i>Ecological Complexity</i> , 2010 , 7, 446-457	2.6	17
21	Fish and Plankton Interplay Determines Both Plankton Spatio-Temporal Pattern Formation and Fish School Walks: A Theoretical Study. <i>Nonlinear Dynamics, Psychology, and Life Sciences</i> , 2000 , 4, 135-152	0.4	16
20	Dissipative pattern formation in ternary non-linear reaction-electrodifffusion systems with concentration-dependent diffusivities. <i>Journal of Theoretical Biology</i> , 1988 , 135, 371-81	2.3	16
19	Plankton blooms and patchiness generated by heterogeneous physical environments. <i>Ecological Complexity</i> , 2014 , 20, 185-194	2.6	15
18	Modeling the invasion of recessive Bt-resistant insects: an impact on transgenic plants. <i>Journal of Theoretical Biology</i> , 2004 , 231, 121-7	2.3	14
17	Nutrients and toxin producing phytoplankton control algal blooms - a spatio-temporal study in a noisy environment. <i>Journal of Biosciences</i> , 2005 , 30, 749-60	2.3	13
16	Noise-induced suppression of periodic travelling waves in oscillatory reaction-diffusion systems. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010 , 466, 1903-1917	2.4	11
15	SWITCHING FEEDING AMONG SOUND AND INFECTED PREY IN ECOEPIDEMIC SYSTEMS. <i>Journal of Biological Systems</i> , 2010 , 18, 727-747	1.6	11
14	Noise can prevent onset of chaos in spatiotemporal population dynamics. <i>European Physical Journal B</i> , 2010 , 78, 253-264	1.2	10
13	A type IV functional response with different shapes in a predator-prey model. <i>Journal of Theoretical Biology</i> , 2020 , 505, 110419	2.3	8

12	Beyond Bt resistance of pests in the context of population dynamical complexity. <i>Ecological Complexity</i> , 2007 , 4, 201-211	2.6	7
11	Invasion of pests resistant to Bt toxins can lead to inherent non-uniqueness in genetically modified Bt-plant dynamics: mathematical modeling. <i>Journal of Theoretical Biology</i> , 2006 , 242, 539-46	2.3	7
10	Competition and diffusive invasion in a noisy environment. <i>Mathematical Medicine and Biology</i> , 2011 , 28, 153-63	1.3	5
9	Predation may defeat spatial spread of infection. <i>Journal of Biological Dynamics</i> , 2008 , 2, 40-54	2.4	5
8	Pattern formation in reaction-electrodifffusion systems with variable diffusivities and reaction rates. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1995 , 213, 159-167	3.3	5
7	Rotifer Population Dynamics in Two Coupled Habitats: Invasion of Chaos. <i>Biological Invasions</i> , 2005 , 7, 877-883	2.7	4
6	Time delay as a key factor of model plankton dynamics. <i>Comptes Rendus - Biologies</i> , 2004 , 327, 277-82	1.4	3
5	Vertical mixing and hysteresis in the competition of buoyant and non-buoyant plankton prey species in a shallow lake. <i>Ecological Modelling</i> , 2016 , 323, 51-60	3	2
4	Coexistence of competitors mediated by nonlinear noise. <i>European Physical Journal: Special Topics</i> , 2017 , 226, 2157-2170	2.3	2
3	Invasive competition with Fokker-Planck diffusion and noise. <i>Ecological Complexity</i> , 2018 , 34, 134-138	2.6	1
2	Control of Competitive Bioinvasion. <i>Lecture Notes in Mathematics</i> , 2013 , 293-305	0.4	1
1	Containment strategies of epidemic invasions. <i>International Journal of Computer Mathematics</i> , 2012 , 89, 639-678	1.2	1