Horst Malchow

List of Publications by Year in Descending Order

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	A type IV functional response with different shapes in a predator-prey model. *Journal of Theoretical Biology*, **2020**, 505, 110419	2.3	8
46	Invasive competition with Fokker-Planck diffusion and noise. *Ecological Complexity*, **2018**, 34, 134-138	2.6	1
45	Coexistence of competitors mediated by nonlinear noise. *European Physical Journal: Special Topics*, **2017**, 226, 2157-2170	2.3	2
44	The Fokker-Planck law of diffusion and pattern formation in heterogeneous environments. *Journal of Mathematical Biology*, **2016**, 73, 683-704	2	17
43	Vertical mixing and hysteresis in the competition of buoyant and non-buoyant plankton prey species in a shallow lake. *Ecological Modelling*, **2016**, 323, 51-60	3	2
42	Plankton blooms and patchiness generated by heterogeneous physical environments. *Ecological Complexity*, **2014**, 20, 185-194	2.6	15
41	Disease-induced modification of prey competition in eco-epidemiological models. *Ecological Complexity*, **2014**, 18, 74-82	2.6	35
40	Control of Competitive Bioinvasion. *Lecture Notes in Mathematics*, **2013**, 293-305	0.4	1
39	Containment strategies of epidemic invasions. *International Journal of Computer Mathematics*, **2012**, 89, 639-678	1.2	1
38	Competition and diffusive invasion in a noisy environment. *Mathematical Medicine and Biology*, **2011**, 28, 153-63	1.3	5
37	Noise-induced suppression of periodic travelling waves in oscillatory reaction–diffusion systems. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2010**, 466, 1903-1917	2.4	11
36	SWITCHING FEEDING AMONG SOUND AND INFECTED PREY IN ECOEPIDEMIC SYSTEMS. *Journal of Biological Systems*, **2010**, 18, 727-747	1.6	11
35	On competition of predators and prey infection. *Ecological Complexity*, **2010**, 7, 446-457	2.6	17
34	Noise can prevent onset of chaos in spatiotemporal population dynamics. *European Physical Journal B*, **2010**, 78, 253-264	1.2	10
33	The Allee effect and infectious diseases: extinction, multistability, and the (dis-)appearance of oscillations. *American Naturalist*, **2009**, 173, 72-88	3.7	83
32	Predation may defeat spatial spread of infection. *Journal of Biological Dynamics*, **2008**, 2, 40-54	2.4	5
31	Beyond Bt resistance of pests in the context of population dynamical complexity. *Ecological Complexity*, **2007**, 4, 201-211	2.6	7

30	Constructive effects of environmental noise in an excitable prey–predator plankton system with infected prey. *Ecological Complexity*, **2007**, 4, 223-233	2.6	30
29	A diffusive SI model with Allee effect and application to FIV. *Mathematical Biosciences*, **2007**, 206, 61-80	3.9	83
28	Strange Periodic Attractors in a Prey-Predator System with Infected Prey. *Mathematical Population Studies*, **2006**, 13, 119-134	0.8	47
27	Oscillations and waves in a virally infected plankton system. *Ecological Complexity*, **2006**, 3, 200-208	2.6	26
26	Invasion of pests resistant to Bt toxins can lead to inherent non-uniqueness in genetically modified Bt-plant dynamics: mathematical modeling. *Journal of Theoretical Biology*, **2006**, 242, 539-46	2.3	7
25	Experimental demonstration of chaos in a microbial food web. *Nature*, **2005**, 435, 1226-9	50.4	163
24	Nutrients and toxin producing phytoplankton control algal blooms - a spatio-temporal study in a noisy environment. *Journal of Biosciences*, **2005**, 30, 749-60	2.3	13
23	Rotifer Population Dynamics in Two Coupled Habitats: Invasion of Chaos. *Biological Invasions*, **2005**, 7, 877-883	2.7	4
22	Pathogens can Slow Down or Reverse Invasion Fronts of their Hosts. *Biological Invasions*, **2005**, 7, 817-832	2.7	60
21	Patterns of Patchy Spread in Deterministic and Stochastic Models of Biological Invasion and Biological Control. *Biological Invasions*, **2005**, 7, 771-793	2.7	38
20	Modeling the invasion of recessive Bt-resistant insects: an impact on transgenic plants. *Journal of Theoretical Biology*, **2004**, 231, 121-7	2.3	14
19	Transition to spatiotemporal chaos can resolve the paradox of enrichment. *Ecological Complexity*, **2004**, 1, 37-47	2.6	88
18	Oscillations and waves in a virally infected plankton system: Part I: The lysogenic stage. *Ecological Complexity*, **2004**, 1, 211-223	2.6	44
17	Time delay as a key factor of model plankton dynamics. *Comptes Rendus - Biologies*, **2004**, 327, 277-82	1.4	3
16	Quantification of the spatial aspect of chaotic dynamics in biological and chemical systems. *Bulletin of Mathematical Biology*, **2003**, 65, 425-46	2.1	52
15	Numerical study of plankton–fish dynamics in a spatially structured and noisy environment. *Ecological Modelling*, **2002**, 149, 247-255	3	39
14	Spatiotemporal Complexity of Plankton and Fish Dynamics. *SIAM Review*, **2002**, 44, 311-370	7.4	334
13	Pattern formation in models of plankton dynamics. A synthesis. *Oceanologica Acta: European Journal of Oceanology - Revue Europeene De Oceanologie*, **2001**, 24, 479-487		25

12	Wave of chaos: new mechanism of pattern formation in spatio-temporal population dynamics. *Theoretical Population Biology*, **2001**, 59, 157-74	1.2	166
11	Motional instabilities in prey-predator systems. *Journal of Theoretical Biology*, **2000**, 204, 639-47	2.3	48
10	Critical phenomena in plankton communities: KISS model revisited. *Nonlinear Analysis: Real World Applications*, **2000**, 1, 37-51	2.1	46
9	Spatio-temporal pattern formation in coupled models of plankton dynamics and fish school motion. *Nonlinear Analysis: Real World Applications*, **2000**, 1, 53-67	2.1	43
8	Fish and Plankton Interplay Determines Both Plankton Spatio-Temporal Pattern Formation and Fish School Walks: A Theoretical Study. *Nonlinear Dynamics, Psychology, and Life Sciences*, **2000**, 4, 135-152	0.4	16
7	Non-equilibrium spatio-temporal patterns in models of non-linear plankton dynamics. *Freshwater Biology*, **2000**, 45, 239-251	3.1	24
6	Effects of seasonal perturbations on a model plankton community. *Environmental Modeling and Assessment*, **1997**, 2, 43-48	2	26
5	Structure formation by active Brownian particles. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1995**, 207, 140-146	2.3	72
4	Pattern formation in reaction-electrodiffusion systems with variable diffusivities and reaction rates. *Physica A: Statistical Mechanics and Its Applications*, **1995**, 213, 159-167	3.3	5
3	Dissipative pattern formation in ternary non-linear reaction-electrodiffusion systems with concentration-dependent diffusivities. *Journal of Theoretical Biology*, **1988**, 135, 371-81	2.3	16
2	Bifurcations in a Bistable Reaction-Diffusion System. *Annalen Der Physik*, **1979**, 491, 121-134	2.6	18
1	Spatiotemporal Patterns in Ecology and Epidemiology		49