Frank M Hilker

List of Publications by Year
in descending order

76 papers	2,193 citations	201674 27 h-index	254184 43 g-index
82 all docs	82 docs citations	82 times ranked	1655 citing authors

#	Article	IF	Citations
1	Bifurcation Sequences in a Discontinuous Piecewise-Smooth Map Combining Constant-Catch and Threshold-Based Harvesting Strategies. SIAM Journal on Applied Dynamical Systems, 2022, 21, 470-499.	1.6	4
2	Comparison between best-response dynamics and replicator dynamics in a social-ecological model of lake eutrophication. Journal of Theoretical Biology, 2021, 509, 110491.	1.7	3
3	Optimal control of harvest timing in discrete population models. Natural Resource Modelling, 2021, 34, e12321.	2.0	5
4	Towards Building a Sustainable Future: Positioning Ecological Modelling for Impact in Ecosystems Management. Bulletin of Mathematical Biology, 2021, 83, 107.	1.9	14
5	Separate seasons of infection and reproduction can lead to multi-year population cycles. Journal of Theoretical Biology, 2020, 489, 110158.	1.7	7
6	Threshold harvesting as a conservation or exploitation strategy in population management. Theoretical Ecology, 2020, 13, 519-536.	1.0	7
7	Forecasting resilience profiles of the run-up to regime shifts in nearly-one-dimensional systems. Journal of the Royal Society Interface, 2020, 17, 20200566.	3.4	6
8	Ecological Allee effects modulate optimal strategies for conservation in agricultural landscapes. Ecological Modelling, 2020, 435, 109208.	2.5	6
9	Degenerate Period Adding Bifurcation Structure of One-Dimensional Bimodal Piecewise Linear Maps. SIAM Journal on Applied Mathematics, 2020, 80, 1356-1376.	1.8	5
10	Analyzing the mutual feedbacks between lake pollution and human behaviour in a mathematical social-ecological model. Ecological Complexity, 2020, 43, 100834.	2.9	12
11	Multiple Attractors and Long Transients in Spatially Structured Populations with an Allee Effect. Bulletin of Mathematical Biology, 2020, 82, 82.	1.9	13
12	Resource-harvester cycles caused by delayed knowledge of the harvested population state can be dampened by harvester forecasting. Theoretical Ecology, 2020, 13, 425-434.	1.0	3
13	Enhancing population stability with combined adaptive limiter control and finding the optimal harvestingâ€"restocking balance. Theoretical Population Biology, 2019, 130, 1-12.	1.1	3
14	Proportional threshold harvesting in discrete-time population models. Journal of Mathematical Biology, 2019, 79, 1927-1951.	1.9	12
15	Eco-epidemiological interactions with predator interference and infection. Theoretical Population Biology, 2019, 130, 191-202.	1.1	14
16	Fish disease dynamics in changing rivers: Salmonid Ceratomyxosis in the Klamath River. Ecological Complexity, 2019, 40, 100776.	2.9	7
17	Modelling Vector Transmission and Epidemiology of Co-Infecting Plant Viruses. Viruses, 2019, 11, 1153.	3.3	23
18	Coinfections by noninteracting pathogens are not independent and require new tests of interaction. PLoS Biology, 2019, 17, e3000551.	5.6	26

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19	Hydra effect and paradox of enrichment in discrete-time predator-prey models. Mathematical Biosciences, 2019, 310, 120-127.	1.9	25
20	Preytaxis and Travelling Waves in an Eco-epidemiological Model. Bulletin of Mathematical Biology, 2019, 81, 995-1030.	1.9	6
21	Coinfections by noninteracting pathogens are not independent and require new tests of interaction. , 2019, 17, e3000551.		0
22	Coinfections by noninteracting pathogens are not independent and require new tests of interaction. , 2019, 17, e3000551.		0
23	Coinfections by noninteracting pathogens are not independent and require new tests of interaction. , 2019, 17, e3000551.		0
24	Coinfections by noninteracting pathogens are not independent and require new tests of interaction. , 2019, 17, e3000551.		0
25	Coinfections by noninteracting pathogens are not independent and require new tests of interaction. , 2019, 17, e3000551.		0
26	Coinfections by noninteracting pathogens are not independent and require new tests of interaction. , 2019, 17, e3000551.		0
27	Separatrix reconstruction to identify tipping points in an eco-epidemiological model. Applied Mathematics and Computation, 2018, 318, 80-91.	2.2	20
28	Hunting cooperation and Allee effects in predators. Journal of Theoretical Biology, 2017, 419, 13-22.	1.7	157
29	The evolution of parasitic and mutualistic plantâ€“virus symbioses through transmission-virulence trade-offs. Virus Research, 2017, 241, 77-87.	2.2	18
30	Moving forward in circles: challenges and opportunities in modelling population cycles. Ecology Letters, 2017, 20, 1074-1092.	6.4	100
31	Modeling Virus Coinfection to Inform Management of Maize Lethal Necrosis in Kenya. Phytopathology, 2017, 107, 1095-1108.	2.2	41
32	Diseased Social Predators. Bulletin of Mathematical Biology, 2017, 79, 2175-2196.	1.9	19
33	Optimal Culling and Biocontrol in a Predatorâ€“Prey Model. Bulletin of Mathematical Biology, 2017, 79, 88-116.	1.9	8
34	Population control methods in stochastic extinction and outbreak scenarios. PLoS ONE, 2017, 12, e0170837.	2.5	5
35	On basins of attraction for a predator-prey model via meshless approximation. AIP Conference Proceedings, 2016, , .	0.4	7
36	Adaptive threshold harvesting and the suppression of transients. Journal of Theoretical Biology, 2016, 395, 103-114.	1.7	6

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37	The Fokkerâ€“Planck law of diffusion and pattern formation in heterogeneous environments. Journal of Mathematical Biology, 2016, 73, 683-704.	1.9	22
38	Stabilizing Populations with Adaptive Limiters: Prospects and Fallacies. SIAM Journal on Applied Dynamical Systems, 2014, 13, 447-465.	1.6	13
39	A Mathematical Biologistâ€™s Guide to Absolute and Convective Instability. Bulletin of Mathematical Biology, 2014, 76, 1-26.	1.9	17
40	Harvest timing and its population dynamic consequences in a discrete single-species model. Mathematical Biosciences, 2014, 248, 78-87.	1.9	39
41	Disease in group-defending prey can benefit predators. Theoretical Ecology, 2014, 7, 87-100.	1.0	22
42	Plankton blooms and patchiness generated by heterogeneous physical environments. Ecological Complexity, 2014, 20, 185-194.	2.9	17
43	Seasonal Invasion Dynamics in a Spatially Heterogeneous River with Fluctuating Flows. Bulletin of Mathematical Biology, 2014, 76, 1522-1565.	1.9	23
44	Disease-induced modification of prey competition in eco-epidemiological models. Ecological Complexity, 2014, 18, 74-82.	2.9	43
45	Harvesting and Dynamics in Some One-Dimensional Population Models. Springer Proceedings in Mathematics and Statistics, 2014, , 61-73.	0.2	5
46	Complex Dynamics in an Eco-epidemiological Model. Bulletin of Mathematical Biology, 2013, 75, 2059-2078.	1.9	39
47	Predatorâ€“prey oscillations can shift when diseases become endemic. Journal of Theoretical Biology, 2013, 316, 1-8.	1.7	24
48	Adaptive limiter control of unimodal population maps. Journal of Theoretical Biology, 2013, 337, 161-173.	1.7	13
49	Harvesting, census timing and â€œhiddenâ€• hydra effects. Ecological Complexity, 2013, 14, 95-107.	2.9	30
50	Why are metapopulations so rare?. Ecology, 2012, 93, 1967-1978.	3.2	75
51	Rabbits protecting birds: Hypopredation and limitations of hyperpredation. Journal of Theoretical Biology, 2012, 297, 103-115.	1.7	15
52	Directional biases and resourceâ€dependence in dispersal generate spatial patterning in a consumerâ€“producer model. Ecology Letters, 2012, 15, 209-217.	6.4	15
53	The hydra effect in predatorâ€“prey models. Journal of Mathematical Biology, 2012, 64, 341-360.	1.9	50
54	Prey, predators, parasites: intraguild predation or simpler community modules in disguise?. Journal of Animal Ecology, 2011, 80, 414-421.	2.8	35

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55	Target-oriented chaos control. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 3986-3992.	2.1	42
56	Modelling Disease Introduction as Biological Control ofÂInvasive Predators to Preserve Endangered Prey. Bulletin of Mathematical Biology, 2010, 72, 444-468.	1.9	37
57	Predatorâ€“prey systems in streams and rivers. Theoretical Ecology, 2010, 3, 175-193.	1.0	36
58	A spatially stochastic epidemic model with partial immunization shows in mean field approximation the reinfection threshold. Journal of Biological Dynamics, 2010, 4, 634-649.	1.7	27
59	Population collapse to extinction: the catastrophic combination of parasitism and Allee effect. Journal of Biological Dynamics, 2010, 4, 86-101.	1.7	45
60	The Allee Effect and Infectious Diseases: Extinction, Multistability, and the (Disâ€)Appearance of Oscillations. American Naturalist, 2009, 173, 72-88.	2.1	96
61	Disease-induced stabilization of predatorâ€“prey oscillations. Journal of Theoretical Biology, 2008, 255, 299-306.	1.7	101
62	Mathematical Models of Pattern Formation in Planktonic Predation-Diffusion Systems: A Review. , 2008, , 1-26.		1
63	Preventing Extinction and Outbreaks in Chaotic Populations. American Naturalist, 2007, 170, 232-241.	2.1	36
64	A diffusive SI model with Allee effect and application to FIV. Mathematical Biosciences, 2007, 206, 61-80.	1.9	97
65	Triggering crashes in chaotic dynamics. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 362, 407-411.	2.1	8
66	Implications of partial immunity on the prospects for tuberculosis control by post-exposure interventions. Journal of Theoretical Biology, 2007, 248, 608-617.	1.7	43
67	Preventing Extinction and Outbreaks in Chaotic Populations. American Naturalist, 2007, 170, 232.	2.1	3
68	Strange Periodic Attractors in a Prey-Predator System with Infected Prey. Mathematical Population Studies, 2006, 13, 119-134.	2.2	48
69	Oscillations and waves in a virally infected plankton system. Ecological Complexity, 2006, 3, 200-208.	2.9	28
70	Parameterizing, evaluating and comparing metapopulation models with data from individual-based simulations. Ecological Modelling, 2006, 199, 476-485.	2.5	17
71	Paradox of simple limiter control. Physical Review E, 2006, 73, 052901.	2.1	28
72	Spatiotemporal patterns in an excitable plankton system with lysogenic viral infection. Mathematical and Computer Modelling, 2005, 42, 1035-1048.	2.0	43

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73	Experimental demonstration of chaos in a microbial food web. Nature, 2005, 435, 1226-1229.	27.8	208
74	Pathogens can Slow Down or Reverse Invasion Fronts of their Hosts. Biological Invasions, 2005, 7, 817-832.	2.4	71
75	Patterns of Patchy Spread in Deterministic and Stochastic Models of Biological Invasion and Biological Control. Biological Invasions, 2005, 7, 771-793.	2.4	45
76	Oscillations and waves in a virally infected plankton system. Ecological Complexity, 2004, 1, 211-223.	2.9	49