Steven F Railsback

List of Publications by Year
in descending order

65 papers	10,613 citations	172457 29 h-index	138484 58 g-index
67 all docs	67 docs citations	67 times ranked	8563 citing authors

#	Article	IF	Citations
1	A standard protocol for describing individual-based and agent-based models. Ecological Modelling, 2006, 198, 115-126.	2.5	2,219
2	The ODD protocol: A review and first update. Ecological Modelling, 2010, 221, 2760-2768.	2.5	1,913
3	Pattern-Oriented Modeling of Agent-Based Complex Systems: Lessons from Ecology. Science, 2005, 310, 987-991.	12.6	1,685
4	Individual-based Modeling and Ecology. , 2005, , .		985
5	Agent-based Simulation Platforms: Review and Development Recommendations. Simulation, 2006, 82, 609-623.	1.8	582
6	The ODD Protocol for Describing Agent-Based and Other Simulation Models: A Second Update to Improve Clarity, Replication, and Structural Realism. Jasss, 2020, 23, .	1.8	349
7	Pattern-oriented modelling: a â€˜multi-scopeâ€™ for predictive systems ecology. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 298-310.	4.0	322
8	Towards better modelling and decision support: Documenting model development, testing, and analysis using TRACE. Ecological Modelling, 2014, 280, 129-139.	2.5	185
9	Concepts from complex adaptive systems as a framework for individual-based modelling. Ecological Modelling, 2001, 139, 47-62.	2.5	182
10	ANALYSIS OF HABITAT-SELECTION RULES USING ANINDIVIDUAL-BASED MODEL. Ecology, 2002, 83, 1817-1830.	3.2	174
11	Movement rules for individual-based models of stream fish. Ecological Modelling, 1999, 123, 73-89.	2.5	164
12	Bioenergetics Modeling of Stream Trout Growth: Temperature and Food Consumption Effects. Transactions of the American Fisheries Society, 1999, 128, 241-256.	1.4	142
13	Design and Performance of a Channel Reconstruction Project in a Coastal California Gravel-Bed Stream. Environmental Management, 2001, 28, 761-776.	2.7	142
14	Making Predictions in a Changing World: The Benefits of Individual-Based Ecology. BioScience, 2015, 65, 140-150.	4.9	136
15	Individual-based model of sympatric populations of brown and rainbow trout for instream flow assessment: model description and calibration. Ecological Modelling, 1998, 110, 175-207.	2.5	124
16	WHAT CAN HABITAT PREFERENCE MODELS TELL US? TESTS USING A VIRTUAL TROUT POPULATION. , 2003, 13, 1580-1594.		92
17	TESTS OF THEORY FOR DIEL VARIATION IN SALMONID FEEDING ACTIVITY AND HABITAT USE. Ecology, 2005, 86, 947-959.	3.2	85
18	Why It Is Time to Put PHABSIM Out to Pasture. Fisheries, 2016, 41, 720-725.	0.8	77

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19	Next-Generation Individual-Based Models Integrate Biodiversity and Ecosystems: Yes We Can, and Yes We Must. Ecosystems, 2017, 20, 229-236.	3.4	77
20	Effects of land use on bird populations and pest control services on coffee farms. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6109-6114.	7.1	61
21	InSTREAM-Gen: Modelling eco-evolutionary dynamics of trout populations under anthropogenic environmental change. Ecological Modelling, 2016, 326, 36-53.	2.5	53
22	Trait-mediated trophic interactions: is foraging theory keeping up?. Trends in Ecology and Evolution, 2013, 28, 119-125.	8.7	51
23	Contrast of Degraded and Restored Stream Habitat Using an Individual-Based Salmon Model. North American Journal of Fisheries Management, 2013, 33, 384-399.	1.0	45
24	Projecting Cumulative Benefits of Multiple River Restoration Projects: An Example from the Sacramento-San Joaquin River System in California. Environmental Management, 2008, 42, 933-945.	2.7	41
25	Pattern-oriented modeling of bird foraging and pest control in coffee farms. Ecological Modelling, 2011, 222, 3305-3319.	2.5	40
26	GETTING â€œRESULTSâ€• THE PATTERNâ€ORIENTED APPROACH TO ANALYZING NATURAL SYSTEMS WITH INDIVIDUALâ€BASED MODELS. Natural Resource Modelling, 2001, 14, 465-475.	2.0	33
27	Exploring the Persistence of Stream-Dwelling Trout Populations under Alternative Real-World Turbidity Regimes with an Individual-Based Model. Transactions of the American Fisheries Society, 2009, 138, 348-360.	1.4	33
28	Feeding modes in stream salmonid population models: is drift feeding the whole story?. Environmental Biology of Fishes, 2014, 97, 615-625.	1.0	32
29	Local Variability Mediates Vulnerability of Trout Populations to Land Use and Climate Change. PLoS ONE, 2015, 10, e0135334.	2.5	32
30	Use of a reservoir water quality model to simulate global climate change effects on fish habitat. Climatic Change, 1992, 20, 277-296.	3.6	31
31	POPULATIONâ€LEVEL ANALYSIS AND VALIDATION OF AN INDIVIDUALâ€BASED CUTTHROAT TROUT MODEL. Natural Resource Modelling, 2002, 15, 83-110.	2.0	31
32	Mechanistic simulations predict that thermal and hydrological effects of climate change on Mediterranean trout cannot be offset by adaptive behaviour, evolution, and increased food production. Science of the Total Environment, 2019, 693, 133648.	8.0	25
33	Estimating Multi-Factor Cumulative Watershed Effects on Fish Populations with an Individual-Based Model. Fisheries, 2007, 32, 292-298.	0.8	24
34	Designing, Formulating, and Communicating Agent-Based Models. , 2012, , 361-377.		24
35	A physical habitat model for predicting the effects of flow fluctuations in nursery habitats of the endangered Colorado pikeminnow (Ptychocheilus lucius). River Research and Applications, 2006, 22, 1125-1142.	1.7	22
36	Importance of fish behaviour in modelling conservation problems: food limitation as an example. Journal of Fish Biology, 2011, 79, 1648-1662.	1.6	22

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37	Legacy effects of wildfire on stream thermal regimes and rainbow trout ecology: an integrated analysis of observation and individual-based models. Freshwater Science, 2015, 34, 1571-1584.	1.8	22
38	Ecoâ€evolutionary responses to recreational fishing under different harvest regulations. Ecology and Evolution, 2018, 8, 9600-9613.	1.9	22
39	Agent-Based Models in Ecology: Patterns and Alternative Theories of Adaptive Behaviour. , 2006, , 139-152.		20
40	Keeping modelling notebooks with TRACE: Good for you and good for environmental research and management support. Environmental Modelling and Software, 2021, 136, 104932.	4.5	19
41	SOFTWARE ENGINEERING CONSIDERATIONS FOR INDIVIDUALâ€BASED MODELS. Natural Resource Modelling, 2002, 15, 5-22.	2.0	18
42	Modeling potential river management conflicts between frogs and salmonids. Canadian Journal of Fisheries and Aquatic Sciences, 2016, 73, 773-784.	1.4	17
43	What We Donâ€™t Know About the Effects of Temperature on Salmonid Growth. Transactions of the American Fisheries Society, 2022, 151, 3-12.	1.4	16
44	EFFECTS OF PASSAGE BARRIERS ON DEMOGRAPHICS AND STABILITY PROPERTIES OF A VIRTUAL TROUT POPULATION. River Research and Applications, 2012, 28, 479-489.	1.7	15
45	Effects of Streamflow Diversion on a Fish Population: Combining Empirical Data and Individual-Based Models in a Site-Specific Evaluation. North American Journal of Fisheries Management, 2014, 34, 247-257.	1.0	15
46	Contingent trade-off decisions with feedbacks in cyclical environments: testing alternative theories. Behavioral Ecology, 2020, 31, 1192-1206.	2.2	15
47	Analysis of Habitat-Selection Rules Using an Individual-Based Model. Ecology, 2002, 83, 1817.	3.2	14
48	Importance of the Daily Light Cycle in Populationâ€“Habitat Relations: A Simulation Study. Transactions of the American Fisheries Society, 2021, 150, 130-143.	1.4	13
49	<scp>InSTREAM</scp> 7: Instream flow assessment and management model for stream trout. River Research and Applications, 2021, 37, 1294-1302.	1.7	13
50	Demonstration Flow Assessment: Judgment and Visual Observation in Instream Flow Studies. Fisheries, 2008, 33, 217-227.	0.8	12
51	Facultative anadromy in salmonids: linking habitat, individual life history decisions, and population-level consequences. Canadian Journal of Fisheries and Aquatic Sciences, 2014, 71, 1270-1278.	1.4	12
52	New predictions from old theory: Emergent effects of multiple stressors in a model of piscivorous fish. Ecological Modelling, 2016, 326, 54-62.	2.5	12
53	Modeling Atlantic salmon (Salmo salar) and brown trout (S. trutta) population responses and interactions under increased minimum flow in a regulated river. Ecological Engineering, 2021, 162, 106182.	3.6	9
54	The role of the geophysical template and environmental regimes in controlling stream-living trout populations. Canadian Journal of Fisheries and Aquatic Sciences, 2015, 72, 893-901.	1.4	8

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55	Why It Is Time to Put PHABSIM Out to Pasture: Response to Comments 1 and 2. Fisheries, 2017, 42, 517-518.	0.8	7
56	Modeling alternatives for basin-level hydropower development: 1. Optimization methods and applications. Water Resources Research, 1992, 28, 2581-2590.	4.2	4
57	Population-level analysis and validation of an individual-based cutthroat trout model. , 2002, 15, 83-110.		4
58	Aeration at Ohio River Basin Navigation Dams. Journal of Environmental Engineering, ASCE, 1990, 116, 361-375.	1.4	3
59	Effects of Spatial Extent on Modeled Relations between Habitat and Anadromous Salmonid Spawning Success. Transactions of the American Fisheries Society, 2015, 144, 1220-1236.	1.4	3
60	Bridging Levels from Individuals to Communities and Ecosystems: Including Adaptive Behavior and Feedbacks in Ecological Theory and Models. Bulletin of the Ecological Society of America, 2020, 101, e01648.	0.2	3
61	Suboptimal foraging theory: How inaccurate predictions and approximations can make better models of adaptive behavior. Ecology, 2022, 103, e3721.	3.2	3
62	All Fish, All the Time: A Good General Objective for Fish Passage Projects?. Fisheries, 2021, 46, 119-124.	0.8	2
63	Discussion of â€œ Indexing Gas Transfer in Selfâ€Aerated Flows â€•by John S. Gulliver, John R. Thene, and Alan J. Rindels (June, 1990, Vol. 116, No. 3). Journal of Environmental Engineering, ASCE, 1991, 117, 866-867.	1.4	1
64	Closure to â€œ Aeration at Ohio River Basin Navigation Dams â€•by Steven F. Railsback, John M. Bownds, Michael J. Sale, Martha M. Stevens, and George H. Taylor (March/April, 1990, Vol. 116, No. 2). Journal of Environmental Engineering, ASCE, 1992, 118, 447-451.	1.4	0
65	Model the Real, Artificial, or Stylized Iguana? Artificial Life and Adaptive Behavior Can Be Linked Through Pattern-Oriented Modeling. Adaptive Behavior, 2009, 17, 309-312.	1.9	0