Ferdi L Hellweger

List of Publications by Year
in descending order

59 papers	2,074 citations	257101 24 h-index	253896 43 g-index
59 all docs	59 docs citations	59 times ranked	2826 citing authors

#	Article	IF	Citations
1	Copper leaching from recreational vessel antifouling paints in freshwater: A Berlin case study. Journal of Environmental Management, 2022, 301, 113895.	3.8	1
2	Models predict planned phosphorus load reduction will make Lake Erie more toxic. Science, 2022, 376, 1001-1005.	6.0	62
3	Dynamic carbon flux network of a diverse marine microbial community. ISME Communications, 2021, 1, .	1.7	7
4	Combining Molecular Observations and Microbial Ecosystem Modeling: A Practical Guide. Annual Review of Marine Science, 2020, 12, 267-289.	5.1	9
5	Circadian clock helps cyanobacteria manage energy in coastal and high latitude ocean. ISME Journal, 2020, 14, 560-568.	4.4	16
6	Episodic Decrease in Temperature Increases mcy Gene Transcription and Cellular Microcystin in Continuous Cultures of Microcystis aeruginosa PCC 7806. Frontiers in Microbiology, 2020, 11, 601864.	1.5	23
7	Fresh Ideas Bloom in Gut Healthcare to Cross-Fertilize Lake Management. Environmental Science & Technology, 2019, 53, 14099-14112.	4.6	2
8	Phosphorus loading from onsite wastewater systems to a lake (at long time scales). Lake and Reservoir Management, 2019, 35, 90-101.	0.4	10
9	Carbon limitation drives GC content evolution of a marine bacterium in an individual-based genome-scale model. ISME Journal, 2018, 12, 1180-1187.	4.4	44
10	Editorial: The Individual Microbe: Single-Cell Analysis and Agent-Based Modelling. Frontiers in Microbiology, 2018, 9, 2825.	1.5	13
11	Heterotrophic substrate specificity in the aquatic environment: The role of microscale patchiness investigated using modelling. Environmental Microbiology, 2018, 20, 3825-3835.	1.8	5
12	Neutral Evolution and Dispersal Limitation Produce Biogeographic Patterns in Microcystis aeruginosa Populations of Lake Systems. Microbial Ecology, 2017, 74, 416-426.	1.4	9
13	Community Biological Ammonium Demand: A Conceptual Model for Cyanobacteria Blooms in Eutrophic Lakes. Environmental Science & Technology, 2017, 51, 7785-7793.	4.6	56
14	From Genes to Ecosystems in Microbiology: Modeling Approaches and the Importance of Individuality. Frontiers in Microbiology, 2017, 8, 2299.	1.5	37
15	The Role of Ocean Currents in the Temperature Selection of Plankton: Insights from an Individual-Based Model. PLoS ONE, 2016, 11, e0167010.	1.1	16
16	Dynamic, mechanistic, molecularâ€level modelling of cyanobacteria: <i>Anabaena</i> and nitrogen interaction. Environmental Microbiology, 2016, 18, 2721-2731.	1.8	25
17	Advancing microbial sciences by individual-based modelling. Nature Reviews Microbiology, 2016, 14, 461-471.	13.6	193
18	Equivalent Porous Media (EPM) Simulation of Groundwater Hydraulics and Contaminant Transport in Karst Aquifers. PLoS ONE, 2015, 10, e0138954.	1.1	40

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19	From protein damage to cell aging to population fitness in E. coli: Insights from a multi-level agent-based model. Ecological Modelling, 2015, 301, 62-71.	1.2	10
20	100 Years since Streeter and Phelps: It Is Time To Update the Biology in Our Water Quality Models. Environmental Science & Technology, 2015, 49, 6372-6373.	4.6	12
21	Age-correlated stress resistance improves fitness of yeast: support from agent-based simulations. BMC Systems Biology, 2014, 8, 18.	3.0	12
22	Biogeographic patterns in ocean microbes emerge in a neutral agent-based model. Science, 2014, 345, 1346-1349.	6.0	141
23	<i>Escherichia coli</i>adapts to tetracycline resistance plasmid (pBR322) by mutating endogenous potassium transport:<i>in silico</i>hypothesis testing. FEMS Microbiology Ecology, 2013, 83, 622-631.	1.3	18
24	Mighty small: Observing and modeling individual microbes becomes big science. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18027-18028.	3.3	54
25	Use of Agent-Based Modeling To Explore the Mechanisms of Intracellular Phosphorus Heterogeneity in Cultured Phytoplankton. Applied and Environmental Microbiology, 2013, 79, 4359-4368.	1.4	8
26	Effects of Spatial Resolution in Urban Hydrologic Simulations. Journal of Hydrologic Engineering - ASCE, 2012, 17, 129-137.	0.8	52
27	Heterogeneity of Intracellular Polymer Storage States in Enhanced Biological Phosphorus Removal (EBPR) â€“ Observation and Modeling. Environmental Science & Technology, 2012, 46, 3244-3252.	4.6	32
28	Modeling Adaptive Mutation of Enteric Bacteria in Surface Water Using Agent-Based Methods. Water, Air, and Soil Pollution, 2012, 223, 2035-2049.	1.1	8
29	Microscale patchiness leads to large and important intraspecific internal nutrient heterogeneity in phytoplankton. Aquatic Ecology, 2012, 46, 101-118.	0.7	26
30	A Simple Model of Tetracycline Antibiotic Resistance in the Aquatic Environment (with Application to) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.2	39
31	Population Dynamics of Escherichia coli in Surface Water1. Journal of the American Water Resources Association, 2011, 47, 611-619.	1.0	11
32	Anatomy of an urban waterbody: A case study of Bostonâ€™s Muddy River. Environmental Pollution, 2011, 159, 1996-2002.	3.7	3
33	Is the whole the sumof its parts? Agent-basedmodelling of wastewater treatment systems. Water Science and Technology, 2011, 63, 1590-1598.	1.2	10
34	Resonating circadian clocks enhance fitness in cyanobacteria in silico. Ecological Modelling, 2010, 221, 1620-1629.	1.2	27
35	Challenges to Returning Public Access Swimming to the Charles River in an Urban Environment. Proceedings of the Water Environment Federation, 2010, 2010, 913-927.	0.0	0
36	A bunch of tiny individualsâ€”Individual-based modeling for microbes. Ecological Modelling, 2009, 220, 8-22.	1.2	139

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37	Carrying photosynthesis genes increases ecological fitness of cyanophage <i>in silico</i>. Environmental Microbiology, 2009, 11, 1386-1394.	1.8	74
38	Investigating the Fate and Transport of <i>Escherichia coli</i> in the Charles River, Boston, Using Highâ€Resolution Observation and Modeling¹. Journal of the American Water Resources Association, 2008, 44, 509-522.	1.0	43
39	Spatially explicit individual-based modeling using a fixed super-individual density. Computers and Geosciences, 2008, 34, 144-152.	2.0	16
40	The role of inter-generation memory in diel phytoplankton division patterns. Ecological Modelling, 2008, 212, 382-396.	1.2	6
41	Agentâ€based modeling of the complex life cycle of a cyanobacterium (Anabaena) in a shallow reservoir. Limnology and Oceanography, 2008, 53, 1227-1241.	1.6	58
42	IS IT TIME TO ABANDON THE CHEMISTRY APPROACH TO BIOGEOCHEMISTRY? (AGENT-BASED WATER QUALITY) Tj ETQq0 0 0 rgBT /Ove	0.0	1
43	Accounting for Intrapopulation Variability in Biogeochemical Models Using Agent-Based Methods. Environmental Science & Technology, 2007, 41, 2855-2860.	4.6	22
44	Urban hydrology in a computer game?. Environmental Modelling and Software, 2007, 22, 1679-1684.	1.9	28
45	Individual-based modeling of phytoplankton: Evaluating approaches for applying the cell quota model. Journal of Theoretical Biology, 2007, 249, 554-565.	0.8	22
46	Mapping Turbidity in the Charles River, Boston Using a High-resolution Satellite. Environmental Monitoring and Assessment, 2007, 132, 311-320.	1.3	27
47	MEASURING AND MODELING LARGE-SCALE POLLUTANT DISPERSION IN SURFACE WATERS. Proceedings of the Water Environment Federation, 2005, 2005, 807-830.	0.0	1
48	VALIDATION OF THE NARCOSIS TARGET LIPID MODEL FOR PETROLEUM PRODUCTS: GASOLINE AS A CASE STUDY. Environmental Toxicology and Chemistry, 2005, 24, 2382.	2.2	78
49	Dynamics of arsenic speciation in surface waters: As(III) production by algae. Applied Organometallic Chemistry, 2005, 19, 727-735.	1.7	12
50	Use of satellite imagery for water quality studies in New York Harbor. Estuarine, Coastal and Shelf Science, 2004, 61, 437-448.	0.9	175
51	Transport in the Hudson estuary: A modeling study of estuarine circulation and tidal trapping. Estuaries and Coasts, 2004, 27, 527-538.	1.7	22
52	Modeling the Effect of Algal Dynamics on Arsenic Speciation in Lake Biwa. Environmental Science & Technology, 2004, 38, 6716-6723.	4.6	73
53	Greedy algae reduce arsenate. Limnology and Oceanography, 2003, 48, 2275-2288.	1.6	104
54	Tracing Amazon River water into the Caribbean Sea. Journal of Marine Research, 2002, 60, 537-549.	0.3	92

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55	Adding Human Health Risk Analysis Tools to Geographic Information Systems. Transactions in GIS, 2002, 6, 471-484.	1.0	7
56	A Three-Dimensional Model for Cohesive Sediment Dynamics in Shallow Bays. , 2000, , 1.		3
57	A Shared Environmental Geographic Information System to Build an Inter-Agency Relationship. , 2000, , 1.		1
58	SWMOD: A Simple GIS Based Toxics Modeling Framework. Proceedings of the Water Environment Federation, 2000, 2000, 1418-1434.	0.0	1
59	Definition and Connection of Hydrologic Elements using Geographic Data. Journal of Hydrologic Engineering - ASCE, 1999, 4, 10-18.	0.8	38