Enrico Bertuzzo

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.

105 papers	4,681 citations	34 h-index	66 g-index
126 ext. papers	5,743 ext. citations	6.3 avg, IF	5.91 L-index

#	Paper	IF	Citations
105	Spread and dynamics of the COVID-19 epidemic in Italy: Effects of emergency containment measures. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 10484-10491	11.5	590
104	Neutral metacommunity models predict fish diversity patterns in Mississippi-Missouri basin. *Nature*, **2008**, 453, 220-2	50.4	266
103	Transport in the hydrologic response: Travel time distributions, soil moisture dynamics, and the old water paradox. *Water Resources Research*, **2010**, 46,	5.4	182
102	Catchment residence and travel time distributions: The master equation. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	180
101	Catchment travel time distributions and water flow in soils. *Water Resources Research*, **2011**, 47,	5.4	152
100	On spatially explicit models of cholera epidemics. *Journal of the Royal Society Interface*, **2010**, 7, 321-33	4.1	133
99	Reassessment of the 2010-2011 Haiti cholera outbreak and rainfall-driven multiseason projections. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 6602-7	11.5	132
98	Storage selection functions: A coherent framework for quantifying how catchments store and release water and solutes. *Water Resources Research*, **2015**, 51, 4840-4847	5.4	130
97	Fluvial network organization imprints on microbial co-occurrence networks. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 12799-804	11.5	130
96	Headwaters are critical reservoirs of microbial diversity for fluvial networks. *Proceedings of the Royal Society B: Biological Sciences*, **2013**, 280, 20131760	4.4	122
95	River networks as ecological corridors: A complex systems perspective for integrating hydrologic, geomorphologic, and ecologic dynamics. *Water Resources Research*, **2009**, 45,	5.4	119
94	Modelling cholera epidemics: the role of waterways, human mobility and sanitation. *Journal of the Royal Society Interface*, **2012**, 9, 376-88	4.1	113
93	Rethinking wastewater risks and monitoring in light of the COVID-19 pandemic. *Nature Sustainability*, **2020**, 3, 981-990	22.1	111
92	Mobile phone data highlights the role of mass gatherings in the spreading of cholera outbreaks. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 6421-6	11.5	106
91	On the space-time evolution of a cholera epidemic. *Water Resources Research*, **2008**, 44,	5.4	96
90	Transport at basin scales: 1. Theoretical framework. *Hydrology and Earth System Sciences*, **2006**, 10, 19-29	5.5	83
89	Metapopulation persistence and species spread in river networks. *Ecology Letters*, **2014**, 17, 426-34	10	78

88	Geomorphic controls on elevational gradients of species richness. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 1737-42	11.5	73
87	Prediction of the spatial evolution and effects of control measures for the unfolding Haiti cholera outbreak. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	70
86	Estimating species distribution and abundance in river networks using environmental DNA. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 11724-11729	11.5	68
85	Generalized reproduction numbers and the prediction of patterns in waterborne disease. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 19703-8	11.5	66
84	The geography of COVID-19 spread in Italy and implications for the relaxation of confinement measures. *Nature Communications*, **2020**, 11, 4264	17.4	59
83	Spatial effects on species persistence and implications for biodiversity. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 4346-51	11.5	55
82	Geomorphic signatures on Brutsaert base flow recession analysis. *Water Resources Research*, **2013**, 49, 5462-5472	5.4	54
81	On the Lagrangian formulations of reactive solute transport in the hydrologic response. *Water Resources Research*, **2005**, 41,	5.4	41
80	Scaling of dissolved organic carbon removal in river networks. *Advances in Water Resources*, **2017**, 110, 136-146	4.7	40
79	How network structure can affect nitrogen removal by streams. *Freshwater Biology*, **2018**, 63, 128-140	3.1	40
78	Integrated field, laboratory, and theoretical study of PKD spread in a Swiss prealpine river. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 11992-11997	11.5	39
77	Hydrologic controls on basin-scale distribution of benthic invertebrates. *Water Resources Research*, **2014**, 50, 2903-2920	5.4	38
76	Comparative study of ecohydrological streamflow probability distributions. *Water Resources Research*, **2010**, 46,	5.4	38
75	Hydrology and density feedbacks control the ecology of intermediate hosts of schistosomiasis across habitats in seasonal climates. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 6427-32	11.5	38
74	Patterns of vegetation biodiversity: the roles of dispersal directionality and river network structure. *Journal of Theoretical Biology*, **2008**, 252, 221-9	2.3	36
73	Hydrologic variability affects invertebrate grazing on phototrophic biofilms in stream microcosms. *PLoS ONE*, **2013**, 8, e60629	3.7	36
72	Transport at basin scales: 2. Applications. *Hydrology and Earth System Sciences*, **2006**, 10, 31-48	5.5	35
71	Catchment-scale herbicides transport: Theory and application. *Advances in Water Resources*, **2013**, 52, 232-242	4.7	34

70	Transport of fluorobenzoate tracers in a vegetated hydrologic control volume: 2. Theoretical inferences and modeling. *Water Resources Research*, **2015**, 51, 2793-2806	5.4	33
69	Spatially explicit conditions for waterborne pathogen invasion. *American Naturalist*, **2013**, 182, 328-46	3.7	33
68	On the probability of extinction of the Haiti cholera epidemic. *Stochastic Environmental Research and Risk Assessment*, **2016**, 30, 2043-2055	3.5	31
67	The potential impact of case-area targeted interventions in response to cholera outbreaks: A modeling study. *PLoS Medicine*, **2018**, 15, e1002509	11.6	31
66	Unexpected large evasion fluxes of carbon dioxide from turbulent streams draining the world's mountains. *Nature Communications*, **2019**, 10, 4888	17.4	31
65	River networks and ecological corridors: Reactive transport on fractals, migration fronts, hydrochory. *Water Resources Research*, **2007**, 43,	5.4	31
64	Climate-Induced Changes in Spring Snowmelt Impact Ecosystem Metabolism and Carbon Fluxes in an Alpine Stream Network. *Ecosystems*, **2018**, 21, 373-390	3.9	30
63	Emergent productivity regimes of river networks. *Limnology and Oceanography Letters*, **2019**, 4, 173-181	7.9	30
62	Metapopulation capacity of evolving fluvial landscapes. *Water Resources Research*, **2015**, 51, 2696-2706	5.4	30
61	A Theoretical Analysis of the Geography of Schistosomiasis in Burkina Faso Highlights the Roles of Human Mobility and Water Resources Development in Disease Transmission. *PLoS Neglected Tropical Diseases*, **2015**, 9, e0004127	4.8	28
60	Floquet theory for seasonal environmental forcing of spatially explicit waterborne epidemics. *Theoretical Ecology*, **2014**, 7, 351-365	1.6	27
59	Heterogeneity in schistosomiasis transmission dynamics. *Journal of Theoretical Biology*, **2017**, 432, 87-99	2.3	26
58	Hydrologic controls and anthropogenic drivers of the zebra mussel invasion of the Mississippi-Missouri river system. *Water Resources Research*, **2011**, 47,	5.4	26
57	Spread of proliferative kidney disease in fish along stream networks: A spatial metacommunity framework. *Freshwater Biology*, **2018**, 63, 114-127	3.1	25
56	On species persistence-time distributions. *Journal of Theoretical Biology*, **2012**, 303, 15-24	2.3	25
55	An epidemiological model for proliferative kidney disease in salmonid populations. *Parasites and Vectors*, **2016**, 9, 487	4	25
54	SEHR-ECHO v1.0: a Spatially Explicit Hydrologic Response model for ecohydrologic applications. *Geoscientific Model Development*, **2014**, 7, 2733-2746	6.3	24
53	Glucose- but not rice-based oral rehydration therapy enhances the production of virulence determinants in the human pathogen Vibrio cholerae. *PLoS Neglected Tropical Diseases*, **2014**, 8, e3347	4.8	24

52	Biophysical controls on cluster dynamics and architectural differentiation of microbial biofilms in contrasting flow environments. *Environmental Microbiology*, **2014**, 16, 802-12	5.2	24
51	Hydroclimatology of dual-peak annual cholera incidence: Insights from a spatially explicit model. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	24
50	Inferences from catchment-scale tracer circulation experiments. *Journal of Hydrology*, **2009**, 369, 368-380		24
49	River landscapes and optimal channel networks. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 6548-6553	11.5	23
48	The role of aquatic reservoir fluctuations in long-term cholera patterns. *Epidemics*, **2012**, 4, 33-42	5.1	23
47	Cholera in the Lake Kivu region (DRC): Integrating remote sensing and spatially explicit epidemiological modeling. *Water Resources Research*, **2014**, 50, 5624-5637	5.4	22
46	Stochastic dynamics of cholera epidemics. *Physical Review E*, **2010**, 81, 051901	2.4	22
45	On neutral metacommunity patterns of river basins at different scales of aggregation. *Water Resources Research*, **2009**, 45,	5.4	22
44	On the predictive ability of mechanistic models for the Haitian cholera epidemic. *Journal of the Royal Society Interface*, **2015**, 12, 20140840	4.1	21
43	On the geographic range of freshwater fish in river basins. *Water Resources Research*, **2009**, 45,	5.4	20
42	On the role of human mobility in the spread of cholera epidemics: towards an epidemiological movement ecology. *Ecohydrology*, **2012**, 5, 531-540	2.5	18
41	Modelling human movement in cholera spreading along fluvial systems. *Ecohydrology*, **2011**, 4, 49-55	2.5	18
40	Near real-time forecasting for cholera decision making in Haiti after Hurricane Matthew. *PLoS Computational Biology*, **2018**, 14, e1006127	5	17
39	Rainfall mediations in the spreading of epidemic cholera. *Advances in Water Resources*, **2013**, 60, 34-46	4.7	17
38	Transport of fluorobenzoate tracers in a vegetated hydrologic control volume: 1. Experimental results. *Water Resources Research*, **2015**, 51, 2773-2792	5.4	17
37	Evolving biodiversity patterns in changing river networks. *Journal of Theoretical Biology*, **2019**, 462, 418-424		17
36	<i>tran</i>-SAS v1.0: a numerical model to compute catchment-scale hydrologic transport using StorAge Selection functions. *Geoscientific Model Development*, **2018**, 11, 1627-1639	6.3	17
35	Micro-Hotspots of Risk in Urban Cholera Epidemics. *Journal of Infectious Diseases*, **2018**, 218, 1164-1168	7	17

34	Conditions for transient epidemics of waterborne disease in spatially explicit systems. *Royal Society Open Science*, **2019**, 6, 181517	3.3	16
33	Modeling Key Drivers of Cholera Transmission Dynamics Provides New Perspectives for Parasitology. *Trends in Parasitology*, **2017**, 33, 587-599	6.4	15
32	The scaling structure of the global road network. *Royal Society Open Science*, **2017**, 4, 170590	3.3	15
31	Generation and application of river network analogues for use in ecology and evolution. *Ecology and Evolution*, **2020**, 10, 7537-7550	2.8	14
30	A minimalist model of extinction and range dynamics of virtual mountain species driven by warming temperatures. *PLoS ONE*, **2019**, 14, e0213775	3.7	13
29	Nonpoint source transport models from empiricism to coherent theoretical frameworks. *Ecological Modelling*, **2005**, 184, 19-35	3	13
28	Impact of stochastic fluctuations in storage-discharge relations on streamflow distributions. *Water Resources Research*, **2010**, 46,	5.4	11
27	Modeling the coupled dynamics of stream metabolism and microbial biomass. *Limnology and Oceanography*, **2020**, 65, 1573-1593	4.8	10
26	Permafrost dynamics and the risk of anthrax transmission: a modelling study. *Scientific Reports*, **2020**, 10, 16460	4.9	10
25	Seasonality in cholera dynamics: A rainfall-driven model explains the wide range of patterns in endemic areas. *Advances in Water Resources*, **2017**, 108, 357-366	4.7	8
24	Effects of altered river network connectivity on the distribution of Salmo trutta: Insights from a metapopulation model. *Freshwater Biology*, **2019**, 64, 1877-1895	3.1	8
23	Real-time projections of cholera outbreaks through data assimilation and rainfall forecasting. *Advances in Water Resources*, **2017**, 108, 345-356	4.7	8
22	Environmental heterogeneity promotes spatial resilience of phototrophic biofilms in streambeds. *Biology Letters*, **2018**, 14,	3.6	8
21	Mapping landscape connectivity as a driver of species richness under tectonic and climatic forcing. *Earth Surface Dynamics*, **2019**, 7, 895-910	3.8	6
20	A transmission model of the 2010 cholera epidemic in Haiti. *Annals of Internal Medicine*, **2011**, 155, 403-4; author reply 404	8	6
19	Dynamic spatio-temporal patterns of metapopulation occupancy in patchy habitats. *Royal Society Open Science*, **2021**, 8, 201309	3.3	5
18	Light and hydrologic variability as drivers of stream biofilm dynamics in a flume experiment. *Ecohydrology*, **2014**, 7, 391-400	2.5	4
17	Detection of Vibrio cholerae O1 and O139 in environmental waters of rural Bangladesh: a flow-cytometry-based field trial. *Epidemiology and Infection*, **2015**, 143, 2330-42	4.3	4

16	Potential impacts of precipitation change on large-scale patterns of tree diversity. *Water Resources Research*, **2010**, 46,	5.4	4
15	The geography of COVID-19 spread in Italy and implications for the relaxation of confinement measures		4
14	The Metabolic Regimes at the Scale of an Entire Stream Network Unveiled Through Sensor Data and Machine Learning. *Ecosystems*, **2021**, 24, 1792-1809	3.9	4
13	Range of reproduction number estimates for COVID-19 spread. *Biochemical and Biophysical Research Communications*, **2021**, 538, 253-258	3.4	4
12	Persistence of amphibian metapopulation occupancy in dynamic wetlandscapes. *Landscape Ecology*, **2022**, 37, 695	4.3	3
11	Generation and application of river network analogues for use in ecology and evolution		3
10	Micro-hotspots of Risk in Urban Cholera Epidemics		3
9	The epidemicity index of recurrent SARS-CoV-2 infections. *Nature Communications*, **2021**, 12, 2752	17.4	3
8	Optimizing the spatio-temporal allocation of COVID-19 vaccines: Italy as a case study		3
7	Loss of geomorphic diversity in shallow tidal embayments promoted by storm-surge barriers.. *Science Advances*, **2022**, 8, eabm8446	14.3	3
6	SEHR-ECHO v1.0: a Spatially-Explicit Hydrologic Response model for ecohydrologic applications		2
5	SESTET: A spatially explicit stream temperature model based on equilibrium temperature. *Hydrological Processes*, **2020**, 34, 355-369	3.3	2
4	Emergent spatial patterns of competing benthic and pelagic algae in a river network: A parsimonious basin-scale modeling analysis. *Water Research*, **2021**, 193, 116887	12.5	2
3	Sensor-based localization of epidemic sources on human mobility networks. *PLoS Computational Biology*, **2021**, 17, e1008545	5	0
2	Optimizing a remotely sensed proxy for plankton biomass in Lake Kivu. *International Journal of Remote Sensing*, **2014**, 35, 5219-5238	3.1	
1	Reply to comment by Porporato and Calabrese on Storage selection functions: A coherent framework for quantifying how catchments store and release water and solutes *Water Resources Research*, **2016**, 52, 616-618	5.4	