

Andrea Rinaldo

List of Publications by Year in Descending Order

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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.

142
papers

8,396
citations

50
h-index

88
g-index

150
ext. papers

10,048
ext. citations

6.6
avg, IF

6.32
L-index

#	Paper	IF	Citations
142	Persistence of amphibian metapopulation occupancy in dynamic wetlandscapes. <i>Landscape Ecology</i> , 2022 , 37, 695	4.3	3
141	Epidemicity of cholera spread and the fate of infection control measures.. <i>Journal of the Royal Society Interface</i> , 2022 , 19, 20210844	4.1	1
140	A Note on the Role of Seasonal Expansions and Contractions of the Flowing Fluvial Network on Metapopulation Persistence. <i>Water Resources Research</i> , 2021 , 57, e2021WR029813	5.4	3
139	Tracing and Closing the Water Balance in a Vegetated Lysimeter. <i>Water Resources Research</i> , 2021 , 57, e2020WR029049	5.4	7
138	The epidemicity index of recurrent SARS-CoV-2 infections. <i>Nature Communications</i> , 2021 , 12, 2752	17.4	3
137	The Widened Pipe Model of plant hydraulic evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	5
136	Tree water deficit and dynamic source water partitioning. <i>Hydrological Processes</i> , 2021 , 35,	3.3	11
135	Toward catchment hydro-biogeochemical theories. <i>Wiley Interdisciplinary Reviews: Water</i> , 2021 , 8, e14955.7		22
134	Range of reproduction number estimates for COVID-19 spread. <i>Biochemical and Biophysical Research Communications</i> , 2021 , 538, 253-258	3.4	4
133	Dynamic spatio-temporal patterns of metapopulation occupancy in patchy habitats. <i>Royal Society Open Science</i> , 2021 , 8, 201309	3.3	5
132	Spread and dynamics of the COVID-19 epidemic in Italy: Effects of emergency containment measures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 10484-10491	11.5	590
131	Earth and field observations underpin metapopulation dynamics in complex landscapes: Near-term study on carabids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 12877-12884	11.5	3
130	Generation and application of river network analogues for use in ecology and evolution. <i>Ecology and Evolution</i> , 2020 , 10, 7537-7550	2.8	14
129	Transport and Water Age Dynamics in Soils: A Comparative Study of Spatially Integrated and Spatially Explicit Models. <i>Water Resources Research</i> , 2020 , 56, no	5.4	8
128	Advancing ecohydrology in the 21st century: A convergence of opportunities. <i>Ecohydrology</i> , 2020 , 13, e2208	2.5	14
127	Modelled effects of prawn aquaculture on poverty alleviation and schistosomiasis control. <i>Nature Sustainability</i> , 2020 , 2, 611-620	22.1	20
126	Assessing the impact of non-pharmaceutical interventions on SARS-CoV-2 transmission in Switzerland. <i>Swiss Medical Weekly</i> , 2020 , 150, w20295	3.1	33

125	River Networks as Ecological Corridors: Species, Populations, Pathogens 2020 ,		14
124	SESTET: A spatially explicit stream temperature model based on equilibrium temperature. <i>Hydrological Processes</i> , 2020 , 34, 355-369	3.3	2
123	Species 2020 , 47-113		
122	Populations 2020 , 114-224		
121	Waterborne Disease 2020 , 225-339		
120	Afterthoughts and Outlook 2020 , 340-361		
119	Achieving coordinated national immunity and cholera elimination in Haiti through vaccination: a modelling study. <i>The Lancet Global Health</i> , 2020 , 8, e1081-e1089	13.6	10
118	The geography of COVID-19 spread in Italy and implications for the relaxation of confinement measures. <i>Nature Communications</i> , 2020 , 11, 4264	17.4	59
117	Biological fluid dynamics of airborne COVID-19 infection. <i>Rendiconti Lincei</i> , 2020 , 31, 1-33	1.7	39
116	On the probabilistic nature of the species-area relation. <i>Journal of Theoretical Biology</i> , 2019 , 462, 391-407.	3	3
115	Conditions for transient epidemics of waterborne disease in spatially explicit systems. <i>Royal Society Open Science</i> , 2019 , 6, 181517	3.3	16
114	Estimation of streamflow recession parameters: New insights from an analytic streamflow distribution model. <i>Hydrological Processes</i> , 2019 , 33, 1595-1609	3.3	8
113	A minimalist model of extinction and range dynamics of virtual mountain species driven by warming temperatures. <i>PLoS ONE</i> , 2019 , 14, e0213775	3.7	13
112	Effects of altered river network connectivity on the distribution of <i>Salmo trutta</i> : Insights from a metapopulation model. <i>Freshwater Biology</i> , 2019 , 64, 1877-1895	3.1	8
111	Generalized size scaling of metabolic rates based on single-cell measurements with freshwater phytoplankton. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 17323-17329	11.5	11
110	Space and time predictions of schistosomiasis snail host population dynamics across hydrologic regimes in Burkina Faso. <i>Geospatial Health</i> , 2019 , 14,	2.2	8
109	Velocities, Residence Times, Tracer Breakthroughs in a Vegetated Lysimeter: A Multitracer Experiment. <i>Water Resources Research</i> , 2019 , 55, 21-33	5.4	19
108	Evolving biodiversity patterns in changing river networks. <i>Journal of Theoretical Biology</i> , 2019 , 462, 418-424	4.2	17

107	Rainfall as a driver of epidemic cholera: Comparative model assessments of the effect of intra-seasonal precipitation events. <i>Acta Tropica</i> , 2019 , 190, 235-243	3.2	29
106	Field migration rates of tidal meanders recapitulate fluvial morphodynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 1463-1468	11.5	41
105	Epidemicity thresholds for water-borne and water-related diseases. <i>Journal of Theoretical Biology</i> , 2018 , 447, 126-138	2.3	14
104	Spread of proliferative kidney disease in fish along stream networks: A spatial metacommunity framework. <i>Freshwater Biology</i> , 2018 , 63, 114-127	3.1	25
103	River networks as ecological corridors: A coherent ecohydrological perspective. <i>Advances in Water Resources</i> , 2018 , 112, 27-58	4.7	34
102	Near real-time forecasting for cholera decision making in Haiti after Hurricane Matthew. <i>PLoS Computational Biology</i> , 2018 , 14, e1006127	5	17
101	Integration of satellite remote sensing data in ecosystem modelling at local scales: Practices and trends. <i>Methods in Ecology and Evolution</i> , 2018 , 9, 1810-1821	7.7	33
100	River landscapes and optimal channel networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 6548-6553	11.5	23
99	The potential impact of case-area targeted interventions in response to cholera outbreaks: A modeling study. <i>PLoS Medicine</i> , 2018 , 15, e1002509	11.6	31
98	Catchment Drainage Network Scaling Laws Found Experimentally in Overland Flow Morphologies. <i>Geophysical Research Letters</i> , 2018 , 45, 9614-9622	4.9	2
97	Environmental heterogeneity promotes spatial resilience of phototrophic biofilms in streambeds. <i>Biology Letters</i> , 2018 , 14,	3.6	8
96	Estimating species distribution and abundance in river networks using environmental DNA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 11724-11729	11.5	68
95	Using SAS functions and high-resolution isotope data to unravel travel time distributions in headwater catchments. <i>Water Resources Research</i> , 2017 , 53, 1864-1878	5.4	70
94	Demographic stochasticity and resource autocorrelation control biological invasions in heterogeneous landscapes. <i>Oikos</i> , 2017 , 126, 1554-1563	4	17
93	Modeling Key Drivers of Cholera Transmission Dynamics Provides New Perspectives for Parasitology. <i>Trends in Parasitology</i> , 2017 , 33, 587-599	6.4	15
92	A generalized definition of reactivity for ecological systems and the problem of transient species dynamics. <i>Methods in Ecology and Evolution</i> , 2017 , 8, 1574-1584	7.7	15
91	Classification and prediction of river network ephemerality and its relevance for waterborne disease epidemiology. <i>Advances in Water Resources</i> , 2017 , 110, 263-278	4.7	22
90	Integrated field, laboratory, and theoretical study of PKD spread in a Swiss prealpine river. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 11992-11997	11.5	39

89	Covariations in ecological scaling laws fostered by community dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 10672-10677	11.5	14
88	Real-time projections of cholera outbreaks through data assimilation and rainfall forecasting. <i>Advances in Water Resources</i> , 2017 , 108, 345-356	4.7	8
87	On the probability of extinction of the Haiti cholera epidemic. <i>Stochastic Environmental Research and Risk Assessment</i> , 2016 , 30, 2043-2055	3.5	31
86	Field study on drainage densities and rescaled width functions in a high-altitude alpine catchment. <i>Hydrological Processes</i> , 2016 , 30, 2138-2152	3.3	7
85	Geomorphic controls on elevational gradients of species richness. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 1737-42	11.5	73
84	An epidemiological model for proliferative kidney disease in salmonid populations. <i>Parasites and Vectors</i> , 2016 , 9, 487	4	25
83	Statistical characterization of spatiotemporal sediment dynamics in the Venice lagoon. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016 , 121, 1049-1064	3.8	19
82	Mobile phone data highlights the role of mass gatherings in the spreading of cholera outbreaks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 6421-6	11.5	106
81	Hydrology and density feedbacks control the ecology of intermediate hosts of schistosomiasis across habitats in seasonal climates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 6427-32	11.5	38
80	Generalized receptor law governs phototaxis in the phytoplankton <i>Euglena gracilis</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 7045-50	11.5	41
79	Metapopulation capacity of evolving fluvial landscapes. <i>Water Resources Research</i> , 2015 , 51, 2696-2706	5.4	30
78	Linking water age and solute dynamics in streamflow at the Hubbard Brook Experimental Forest, NH, USA. <i>Water Resources Research</i> , 2015 , 51, 9256-9272	5.4	60
77	Storage selection functions: A coherent framework for quantifying how catchments store and release water and solutes. <i>Water Resources Research</i> , 2015 , 51, 4840-4847	5.4	130
76	Transport of fluorobenzoate tracers in a vegetated hydrologic control volume: 2. Theoretical inferences and modeling. <i>Water Resources Research</i> , 2015 , 51, 2793-2806	5.4	33
75	Transport of fluorobenzoate tracers in a vegetated hydrologic control volume: 1. Experimental results. <i>Water Resources Research</i> , 2015 , 51, 2773-2792	5.4	17
74	Thermodynamics in the hydrologic response: Travel time formulation and application to Alpine catchments. <i>Water Resources Research</i> , 2015 , 51, 1671-1687	5.4	20
73	Modeling chloride transport using travel time distributions at Plynlimon, Wales. <i>Water Resources Research</i> , 2015 , 51, 3259-3276	5.4	95
72	Scale-dependent effects of solar radiation patterns on the snow-dominated hydrologic response. <i>Geophysical Research Letters</i> , 2015 , 42, 3895-3902	4.9	24

71	A Theoretical Analysis of the Geography of Schistosomiasis in Burkina Faso Highlights the Roles of Human Mobility and Water Resources Development in Disease Transmission. <i>PLoS Neglected Tropical Diseases</i> , 2015 , 9, e0004127	4.8	28
70	Resilience and reactivity of global food security. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 6902-7	11.5	128
69	Sample and population exponents of generalized Taylor's law. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 7755-60	11.5	45
68	On the predictive ability of mechanistic models for the Haitian cholera epidemic. <i>Journal of the Royal Society Interface</i> , 2015 , 12, 20140840	4.1	21
67	Metapopulation persistence and species spread in river networks. <i>Ecology Letters</i> , 2014 , 17, 426-34	10	78
66	Floquet theory for seasonal environmental forcing of spatially explicit waterborne epidemics. <i>Theoretical Ecology</i> , 2014 , 7, 351-365	1.6	27
65	Hydrologic controls on basin-scale distribution of benthic invertebrates. <i>Water Resources Research</i> , 2014 , 50, 2903-2920	5.4	38
64	Complex interaction of dendritic connectivity and hierarchical patch size on biodiversity in river-like landscapes. <i>American Naturalist</i> , 2014 , 183, 13-25	3.7	74
63	Cholera in the Lake Kivu region (DRC): Integrating remote sensing and spatially explicit epidemiological modeling. <i>Water Resources Research</i> , 2014 , 50, 5624-5637	5.4	22
62	Fluvial network organization imprints on microbial co-occurrence networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 12799-804	11.5	130
61	Glucose- but not rice-based oral rehydration therapy enhances the production of virulence determinants in the human pathogen <i>Vibrio cholerae</i> . <i>PLoS Neglected Tropical Diseases</i> , 2014 , 8, e33347	4.8	24
60	Evolution and selection of river networks: statics, dynamics, and complexity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 2417-24	11.5	100
59	Geomorphic signatures on Brutsaert base flow recession analysis. <i>Water Resources Research</i> , 2013 , 49, 5462-5472	5.4	54
58	Analytic probability distributions for snow-dominated streamflow. <i>Water Resources Research</i> , 2013 , 49, 2701-2713	5.4	30
57	Catchment-scale herbicides transport: Theory and application. <i>Advances in Water Resources</i> , 2013 , 52, 232-242	4.7	34
56	Statistical mechanics of wind wave-induced erosion in shallow tidal basins: Inferences from the Venice Lagoon. <i>Geophysical Research Letters</i> , 2013 , 40, 3402-3407	4.9	31
55	Scaling body size fluctuations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 4646-50	11.5	59
54	Rainfall mediations in the spreading of epidemic cholera. <i>Advances in Water Resources</i> , 2013 , 60, 34-46	4.7	17

53	The geomorphometry of endorheic drainage basins: implications for interpreting and modelling their evolution. <i>Earth Surface Processes and Landforms</i> , 2013 , 38, 1881-1896	3.7	16
52	Chloride circulation in a lowland catchment and the formulation of transport by travel time distributions. <i>Water Resources Research</i> , 2013 , 49, 4619-4632	5.4	67
51	Spatially explicit conditions for waterborne pathogen invasion. <i>American Naturalist</i> , 2013 , 182, 328-46	3.7	33
50	Kinematics of age mixing in advection-dispersion models. <i>Water Resources Research</i> , 2013 , 49, 8539-8551	5.4	45
49	Hydrologic variability affects invertebrate grazing on phototrophic biofilms in stream microcosms. <i>PLoS ONE</i> , 2013 , 8, e60629	3.7	36
48	Ecohydrology: a fast moving field. <i>Ecohydrology</i> , 2012 , 5, 519-519	2.5	
47	Dendritic connectivity controls biodiversity patterns in experimental metacommunities. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 5761-6	11.5	210
46	Hydroclimatology of dual-peak annual cholera incidence: Insights from a spatially explicit model. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	24
45	The role of aquatic reservoir fluctuations in long-term cholera patterns. <i>Epidemics</i> , 2012 , 4, 33-42	5.1	23
44	On the role of human mobility in the spread of cholera epidemics: towards an epidemiological movement ecology. <i>Ecohydrology</i> , 2012 , 5, 531-540	2.5	18
43	Modelling cholera epidemics: the role of waterways, human mobility and sanitation. <i>Journal of the Royal Society Interface</i> , 2012 , 9, 376-88	4.1	113
42	An exactly solvable coarse-grained model for species diversity. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2012 , 2012, P07017	1.9	4
41	Reassessment of the 2010-2011 Haiti cholera outbreak and rainfall-driven multiseason projections. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 6602-7	11.5	132
40	Generalized reproduction numbers and the prediction of patterns in waterborne disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 19703-8	11.5	66
39	Signatures of sea level changes on tidal geomorphology: Experiments on network incision and retreat. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	40
38	Prediction of the spatial evolution and effects of control measures for the unfolding Haiti cholera outbreak. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	70
37	Catchment residence and travel time distributions: The master equation. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	180
36	Catchment travel time distributions and water flow in soils. <i>Water Resources Research</i> , 2011 , 47,	5.4	152

35	Evolution of dispersal in explicitly spatial metacommunities. <i>Journal of Theoretical Biology</i> , 2011 , 269, 256-65	2.3	20
34	Spatial effects on species persistence and implications for biodiversity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 4346-51	11.5	55
33	Metabolic principles of river basin organization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 11751-5	11.5	22
32	Effects of connectivity and recurrent local disturbances on community structure and population density in experimental metacommunities. <i>PLoS ONE</i> , 2011 , 6, e19525	3.7	65
31	On spatially explicit models of cholera epidemics. <i>Journal of the Royal Society Interface</i> , 2010 , 7, 321-33	4.1	133
30	Ecohydrology of Terrestrial Ecosystems. <i>BioScience</i> , 2010 , 60, 898-907	5.7	85
29	Transport in the hydrologic response: Travel time distributions, soil moisture dynamics, and the old water paradox. <i>Water Resources Research</i> , 2010 , 46,	5.4	182
28	River networks as ecological corridors: A complex systems perspective for integrating hydrologic, geomorphologic, and ecologic dynamics. <i>Water Resources Research</i> , 2009 , 45,	5.4	119
27	Neutral metacommunity models predict fish diversity patterns in Mississippi-Missouri basin. <i>Nature</i> , 2008 , 453, 220-2	50.4	266
26	On the space-time evolution of a cholera epidemic. <i>Water Resources Research</i> , 2008 , 44,	5.4	96
25	Patterns of vegetation biodiversity: the roles of dispersal directionality and river network structure. <i>Journal of Theoretical Biology</i> , 2008 , 252, 221-9	2.3	36
24	Landscape evolution in tidal embayments: Modeling the interplay of erosion, sedimentation, and vegetation dynamics. <i>Journal of Geophysical Research</i> , 2007 , 112,		202
23	A neutral metapopulation model of biodiversity in river networks. <i>Journal of Theoretical Biology</i> , 2007 , 245, 351-63	2.3	71
22	Scaling in ecosystems and the linkage of macroecological laws. <i>Physical Review Letters</i> , 2007 , 98, 068104	7.4	31
21	Biologically-controlled multiple equilibria of tidal landforms and the fate of the Venice lagoon. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	169
20	Network allometry. <i>Geophysical Research Letters</i> , 2002 , 29, 3-1	4.9	46
19	Scaling, Optimality, and Landscape Evolution. <i>Journal of Statistical Physics</i> , 2001 , 104, 1-48	1.5	79
18	Microbial size spectra from natural and nutrient enriched ecosystems. <i>Limnology and Oceanography</i> , 2001 , 46, 778-789	4.8	74

17	Topology of the fittest transportation network. <i>Physical Review Letters</i> , 2000 , 84, 4745-8	7.4	99
16	Size and form in efficient transportation networks. <i>Nature</i> , 1999 , 399, 130-2	50.4	591
15	CHANNEL NETWORKS. <i>Annual Review of Earth and Planetary Sciences</i> , 1998 , 26, 289-327	15.3	117
14	Sculpting of a Fractal River Basin. <i>Physical Review Letters</i> , 1997 , 78, 4522-4525	7.4	63
13	Scaling laws for river networks. <i>Physical Review E</i> , 1996 , 53, 1510-1515	2.4	154
12	On landscape self-organization. <i>Journal of Geophysical Research</i> , 1994 , 99, 11971-11993		86
11	Self-organized river basin landscapes: Fractal and multifractal characteristics. <i>Water Resources Research</i> , 1994 , 30, 3531-3539	5.4	53
10	Self-organized fractal river networks. <i>Physical Review Letters</i> , 1993 , 70, 822-825	7.4	211
9	Energy dissipation, runoff production, and the three-dimensional structure of river basins. <i>Water Resources Research</i> , 1992 , 28, 1095-1103	5.4	219
8	Fractal structures as least energy patterns: The case of river networks. <i>Geophysical Research Letters</i> , 1992 , 19, 889-892	4.9	107
7	Minimum energy and fractal structures of drainage networks. <i>Water Resources Research</i> , 1992 , 28, 2183-2195	3.4	187
6	Geomorphological dispersion. <i>Water Resources Research</i> , 1991 , 27, 513-525	5.4	239
5	A Note on Fractal Channel Networks. <i>Water Resources Research</i> , 1991 , 27, 3041-3049	5.4	92
4	Generation and application of river network analogues for use in ecology and evolution		3
3	Optimizing the spatio-temporal allocation of COVID-19 vaccines: Italy as a case study		3
2	The intrusion of ecology into hydrology and morphodynamics. <i>Rendiconti Lincei</i> , 1	1.7	
1	Ecohydrology 2.0. <i>Rendiconti Lincei</i> ,	1.7	1