Renato Casagrandi

List of Publications by Year
in descending order

81 papers	4,340 citations	147566 31 h-index	118652 62 g-index
87 all docs	87 docs citations	87 times ranked	6083 citing authors

#	Article	IF	Citations
1	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.	3.3	878
2	Phenotypic diversity and ecosystem functioning in changing environments: A theoretical framework. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 11376-11381.	3.3	395
3	Trends and missing parts in the study of movement ecology. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 19060-19065.	3.3	276
4	On spatially explicit models of cholera epidemics. Journal of the Royal Society Interface, 2010, 7, 321-333.	1.5	166
5	A simple mechanistic model of seed dispersal, predation and plant establishment: Janzen-Connell and beyond. Journal of Ecology, 2004, 92, 733-746.	1.9	158
6	Reassessment of the 2010â€“2011 Haiti cholera outbreak and rainfall-driven multiseason projections. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6602-6607.	3.3	153
7	Modelling cholera epidemics: the role of waterways, human mobility and sanitation. Journal of the Royal Society Interface, 2012, 9, 376-388.	1.5	143
8	The SIRC model and influenza A. Mathematical Biosciences, 2006, 200, 152-169.	0.9	141
9	Metapopulation persistence and species spread in river networks. Ecology Letters, 2014, 17, 426-434.	3.0	113
10	The geography of COVID-19 spread in Italy and implications for the relaxation of confinement measures. Nature Communications, 2020, 11, 4264.	5.8	110
11	Assessing the effectiveness of a large marine protected area for reef shark conservation. Biological Conservation, 2017, 207, 64-71.	1.9	109
12	A mesoscale approach to extinction risk in fragmented habitats. Nature, 1999, 400, 560-562.	13.7	82
13	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.	1.5	82
14	A Theoretical Approach to Tourism Sustainability. Ecology and Society, 2002, 6, .	0.9	77
15	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, 19703-19708.	3.3	76
16	Traveling waves in a model of influenza A drift. Journal of Theoretical Biology, 2003, 222, 437-445.	0.8	74
17	Looking for hotspots of marine metacommunity connectivity: a methodological framework. Scientific Reports, 2016, 6, 23705.	1.6	58
18	Big-data-driven modeling unveils country-wide drivers of endemic schistosomiasis. Scientific Reports, 2017, 7, 489.	1.6	58

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19	Integration of satellite remote sensing data in ecosystem modelling at local scales: Practices and trends. Methods in Ecology and Evolution, 2018, 9, 1810-1821.	2.2	48
20	Habitat Destruction, Environmental Catastrophes, and Metapopulation Extinction. Theoretical Population Biology, 2002, 61, 127-140.	0.5	45
21	The spatial spread of schistosomiasis: A multidimensional network model applied to Saint-Louis region, Senegal. Advances in Water Resources, 2017, 108, 406-415.	1.7	45
22	Population genomics meet Lagrangian simulations: Oceanographic patterns and long larval duration ensure connectivity among <i>Paracentrotus lividus</i> populations in theÂAdriatic and Ionian seas. Ecology and Evolution, 2017, 7, 2463-2479.	0.8	43
23	Modelling the local dynamics of the zebra mussel (Dreissena polymorpha). Freshwater Biology, 2007, 52, 1223-1238.	1.2	41
24	Heterogeneity in schistosomiasis transmission dynamics. Journal of Theoretical Biology, 2017, 432, 87-99.	0.8	40
25	A Persistence Criterion for Metapopulations. Theoretical Population Biology, 2002, 61, 115-125.	0.5	39
26	A Minimal Model for Forest Fire Regimes. American Naturalist, 1999, 153, 527-539.	1.0	38
27	Hydrologic controls and anthropogenic drivers of the zebra mussel invasion of the Mississippiâ€Missouri river system. Water Resources Research, 2011, 47, .	1.7	38
28	Spatially Explicit Conditions for Waterborne Pathogen Invasion. American Naturalist, 2013, 182, 328-346.	1.0	37
29	Modeling Plastics Exposure for the Marine Biota: Risk Maps for Fin Whales in the Pelagos Sanctuary (North-Western Mediterranean). Frontiers in Marine Science, 2019, 6, .	1.2	35
30	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.	1.3	34
31	Floquet theory for seasonal environmental forcing of spatially explicit waterborne epidemics. Theoretical Ecology, 2014, 7, 351-365.	0.4	33
32	Potential and realized connectivity of the seagrass <i>Posidonia oceanica</i> and their implication for conservation. Diversity and Distributions, 2017, 23, 1423-1434.	1.9	33
33	Modelled effects of prawn aquaculture on poverty alleviation and schistosomiasis control. Nature Sustainability, 2019, 2, 611-620.	11.5	32
34	Integrating field data into individual-based models of the migration of European eel larvae. Marine Ecology - Progress Series, 2013, 487, 135-149.	0.9	31
35	A generalized definition of reactivity for ecological systems and the problem of transient species dynamics. Methods in Ecology and Evolution, 2017, 8, 1574-1584.	2.2	28
36	Hydroclimatology of dualâ€peak annual cholera incidence: Insights from a spatially explicit model. Geophysical Research Letters, 2012, 39, .	1.5	27

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37	The role of aquatic reservoir fluctuations in long-term cholera patterns. Epidemics, 2012, 4, 33-42.	1.5	25
38	On the predictive ability of mechanistic models for the Haitian cholera epidemic. Journal of the Royal Society Interface, 2015, 12, 20140840.	1.5	25
39	The intermediate dispersal principle in spatially explicit metapopulations. Journal of Theoretical Biology, 2006, 239, 22-32.	0.8	23
40	Conditions for transient epidemics of waterborne disease in spatially explicit systems. Royal Society Open Science, 2019, 6, 181517.	1.1	23
41	Movement Strategies of Seed Predators as Determinants of Plant Recruitment Patterns. American Naturalist, 2008, 172, 694-711.	1.0	22
42	Epidemicity thresholds for water-borne and water-related diseases. Journal of Theoretical Biology, 2018, 447, 126-138.	0.8	22
43	On the role of human mobility in the spread of cholera epidemics: towards an epidemiological movement ecology. Ecohydrology, 2012, 5, 531-540.	1.1	21
44	Shifts in the thermal niche of fruit trees under climate change: The case of peach cultivation in France. Agricultural and Forest Meteorology, 2021, 300, 108327.	1.9	21
45	Modelling human movement in cholera spreading along fluvial systems. Ecohydrology, 2011, 4, 49-55.	1.1	20
46	Sexâ€•and ageâ€•structured models for Alpine ibex <i>Capra ibex ibex</i> population dynamics. Wildlife Biology, 2012, 18, 318-332.	0.6	19
47	Optimal control of the spatial allocation of COVID-19 vaccines: Italy as a case study. PLoS Computational Biology, 2022, 18, e1010237.	1.5	19
48	The dynamics of microplastics and associated contaminants: Data-driven Lagrangian and Eulerian modelling approaches in the Mediterranean Sea. Science of the Total Environment, 2021, 777, 145944.	3.9	18
49	Rainfall mediations in the spreading of epidemic cholera. Advances in Water Resources, 2013, 60, 34-46.	1.7	17
50	When will the zebra mussel reach Florence? A model for the spread of <i>Dreissena polymorpha</i> in the Arno water system (Italy). Ecohydrology, 2009, 2, 428-439.	1.1	16
51	Inefficient epidemic spreading in scale-free networks. Physical Review E, 2008, 77, 026113.	0.8	15
52	Data-driven analysis of amino acid change dynamics timely reveals SARS-CoV-2 variant emergence. Scientific Reports, 2021, 11, 21068.	1.6	15
53	Reduced order models for the prediction of the time of occurrence of extreme episodes. Chaos, Solitons and Fractals, 2001, 12, 313-320.	2.5	14
54	The temporal patterns of disease severity and prevalence in schistosomiasis. Chaos, 2015, 25, 036405.	1.0	13

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55	Evidence of peak-to-peak dynamics in ecology. Ecology Letters, 2001, 4, 610-617.	3.0	12
56	Barn swallows long-distance migration occurs between significantly temperature-correlated areas. Scientific Reports, 2018, 8, 12359.	1.6	11
57	Deep Learning Segmentation of Satellite Imagery Identifies Aquatic Vegetation Associated with Snail Intermediate Hosts of Schistosomiasis in Senegal, Africa. Remote Sensing, 2022, 14, 1345.	1.8	11
58	When resolution does matter: Modelling indirect contacts in dairy farms at different levels of detail. PLoS ONE, 2019, 14, e0223652.	1.1	10
59	Spatial patterns and temporal variability of seagrass connectivity in the Mediterranean Sea. Diversity and Distributions, 2020, 26, 169-182.	1.9	10
60	Connectivity interplays with age in shaping contagion over networks with vital dynamics. Physical Review E, 2015, 91, 022809.	0.8	9
61	The epidemicity index of recurrent SARS-CoV-2 infections. Nature Communications, 2021, 12, 2752.	5.8	8
62	Within-host mechanisms of immune regulation explain the contrasting dynamics of two helminth species in both single and dual infections. PLoS Computational Biology, 2020, 16, e1008438.	1.5	8
63	Instabilities in Creative Professions: A Minimal Model. Nonlinear Dynamics, Psychology, and Life Sciences, 2000, 4, 255-273.	0.2	7
64	A Transmission Model of the 2010 Cholera Epidemic in Haiti. Annals of Internal Medicine, 2011, 155, 403.	2.0	7
65	Extending full protection inside existing marine protected areas, or reducing fishing effort outside, can reconcile conservation and fisheries goals. Journal of Applied Ecology, 2020, 57, 1948-1957.	1.9	7
66	Impact of ICT in Environmental Sciences: A citation analysis 1990â€“2007. Environmental Modelling and Software, 2009, 24, 865-871.	1.9	6
67	Detection ofVibrio choleraeO1 and O139 in environmental waters of rural Bangladesh: a flow-cytometry-based field trial. Epidemiology and Infection, 2015, 143, 2330-2342.	1.0	6
68	The time varying network of urban space uses in Milan. Applied Network Science, 2019, 4, .	0.8	6
69	A coupled Lagrangian-Eulerian model for microplastics as vectors of contaminants applied to the Mediterranean Sea. Environmental Research Letters, 2022, 17, 024038.	2.2	6
70	Reconstruction of long-distance bird migration routes using advanced machine learning techniques on geolocator data. Journal of the Royal Society Interface, 2019, 16, 20190031.	1.5	5
71	Protection reveals density-dependent dynamics in fish populations: A case study in the central Mediterranean. PLoS ONE, 2020, 15, e0228604.	1.1	5
72	Central-place seed foraging and vegetation patterns. Theoretical Population Biology, 2009, 76, 229-240.	0.5	4

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73	A parsimonious mechanistic model of reproductive and vegetative growth in fruit trees predicts consequences of fruit thinning and branch pruning. Tree Physiology, 2021, 41, 1794-1807.	1.4	4
74	Local resource competition and the skewness of the sex ratio: a demographic model. Mathematical Biosciences and Engineering, 2008, 5, 813-830.	1.0	4
75	Identification of Ecological Hotspots for the Seagrass Posidonia oceanica via Metapopulation Modeling. Frontiers in Marine Science, 2021, 8, .	1.2	3
76	Low-GHG culturally acceptable diets to reduce individual carbon footprint by 20%. Journal of Cleaner Production, 2022, 338, 130623.	4.6	3
77	Influence of Network Heterogeneity on Chaotic Dynamics of Infectious Diseases. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 267-272.	0.4	2
78	Microplastic as a vector of chemical contamination in the marine environment: A coupled Lagrangian-Eulerian approach. , 2020, , .		2
79	On the Aperiodic Locomotor Behavior of Halobacterium salinarium Under Periodic Light Stimuli. Journal of Theoretical Biology, 2002, 214, 647-656.	0.8	1
80	Remarks on Epidemic Spreading in Scale-Free Networks. Understanding Complex Systems, 2009, , 77-89.	0.3	1
81	Understanding large-scale, long-term larval connectivity patterns: The case of the Northern Line Islands in the Central Pacific Ocean. PLoS ONE, 2017, 12, e0182681.	1.1	1