

Frederic Bartumeus

List of Publications by Year in descending order

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Version: 2024-02-01

95
papers

5,850
citations

76326

40
h-index

79698

73
g-index

102
all docs

102
docs citations

102
times ranked

6302
citing authors

#	ARTICLE	IF	CITATIONS
1	Comment on "Inverse Square Lévy Walks are not Optimal Search Strategies for $d < 2$ ". Physical Review Letters, 2021, 126, 048901.	7.8	17
2	Deep learning identification for citizen science surveillance of tiger mosquitoes. Scientific Reports, 2021, 11, 4718.	3.3	33
3	Landscape-scaled strategies can outperform Lévy random searches. Physical Review E, 2021, 103, 022105.	2.1	6
4	The Potential Role of School Citizen Science Programs in Infectious Disease Surveillance: A Critical Review. International Journal of Environmental Research and Public Health, 2021, 18, 7019.	2.6	6
5	At the tip of an iceberg: citizen science and active surveillance collaborating to broaden the known distribution of <i>Aedes japonicus</i> in Spain. Parasites and Vectors, 2021, 14, 375.	2.5	11
6	Seed dispersal as a search strategy: dynamic and fragmented landscapes select for multi-scale movement strategies in plants. Movement Ecology, 2021, 9, 4.	2.8	11
7	The scent of fear makes sea urchins go ballistic. Movement Ecology, 2021, 9, 50.	2.8	4
8	A Langevin dynamics approach to the distribution of animal move lengths. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 023406.	2.3	4
9	Occupancy patterns in superorganisms: a spin-glass approach to ant exploration. Royal Society Open Science, 2020, 7, 201250.	2.4	2
10	Bumblebees learn foraging routes through exploitation-exploration cycles. Journal of the Royal Society Interface, 2019, 16, 20190103.	3.4	25
11	A novel integrative approach elucidates fine-scale dispersal patchiness in marine populations. Scientific Reports, 2019, 9, 10796.	3.3	15
12	First detection of <i>Aedes japonicus</i> in Spain: an unexpected finding triggered by citizen science. Parasites and Vectors, 2019, 12, 53.	2.5	70
13	Modelling the three-dimensional space use of aquatic animals combining topography and Eulerian telemetry data. Methods in Ecology and Evolution, 2019, 10, 1551-1557.	5.2	20
14	Sustainable innovation in vector control requires strong partnerships with communities. PLoS Neglected Tropical Diseases, 2019, 13, e0007204.	3.0	45
15	Generation and maintenance of predation hotspots of a functionally important herbivore in a patchy habitat mosaic. Functional Ecology, 2018, 32, 556-565.	3.6	5
16	Citizen Science: A Gateway for Innovation in Disease-Carrying Mosquito Management?. Trends in Parasitology, 2018, 34, 727-729.	3.3	41
17	Visualizing dynamic microvillar search and stabilization during ligand detection by T cells. Science, 2017, 356, .	12.6	225
18	Thermal stratification drives movement of a coastal apex predator. Scientific Reports, 2017, 7, 526.	3.3	24

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19	Citizen science provides a reliable and scalable tool to track disease-carrying mosquitoes. <i>Nature Communications</i> , 2017, 8, 916.	12.8	137
20	Nonstationary dynamics of encounters: Mean valuable territory covered by a random searcher. <i>Physical Review E</i> , 2017, 96, 032111.	2.1	5
21	Direct Evidence of Adult <i>Aedes albopictus</i> Dispersal by Car. <i>Scientific Reports</i> , 2017, 7, 14399.	3.3	135
22	Early-life foraging: Behavioral responses of newly fledged albatrosses to environmental conditions. <i>Ecology and Evolution</i> , 2017, 7, 6766-6778.	1.9	46
23	Active and reactive behaviour in human mobility: the influence of attraction points on pedestrians. <i>Royal Society Open Science</i> , 2016, 3, 160177.	2.4	13
24	Variability in individual activity bursts improves ant foraging success. <i>Journal of the Royal Society Interface</i> , 2016, 13, 20160856.	3.4	12
25	Foraging success under uncertainty: search tradeoffs and optimal space use. <i>Ecology Letters</i> , 2016, 19, 1299-1313.	6.4	74
26	Signatures of chaos in animal search patterns. <i>Scientific Reports</i> , 2016, 6, 23492.	3.3	28
27	T cell migration, search strategies and mechanisms. <i>Nature Reviews Immunology</i> , 2016, 16, 193-201.	22.7	362
28	Expectation-Maximization Binary Clustering for Behavioural Annotation. <i>PLoS ONE</i> , 2016, 11, e0151984.	2.5	107
29	Ordinary and Extraordinary Movement Behaviour of Small Resident Fish within a Mediterranean Marine Protected Area. <i>PLoS ONE</i> , 2016, 11, e0159813.	2.5	33
30	AtrapaelTigre.com: enlisting citizen-scientists in the war on tiger mosquitoes. , 2016, , 295-308.		8
31	Inferring Lévy walks from curved trajectories: A rescaling method. <i>Physical Review E</i> , 2015, 92, 022147.	2.1	9
32	First-passage times in multiscale random walks: The impact of movement scales on search efficiency. <i>Physical Review E</i> , 2015, 92, 052702.	2.1	13
33	Approaches to passive mosquito surveillance in the EU. <i>Parasites and Vectors</i> , 2015, 8, 9.	2.5	106
34	Experimental evidence for inherent Lévy search behaviour in foraging animals. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2015, 282, 20150424.	2.6	54
35	Behavioural ecology cannot turn its back on Lévy walk research. <i>Physics of Life Reviews</i> , 2015, 14, 84-86.	2.8	8
36	Stochastic Optimal Foraging: Tuning Intensive and Extensive Dynamics in Random Searches. <i>PLoS ONE</i> , 2014, 9, e106373.	2.5	56

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37	First record of Asian tiger mosquito, <i>Aedes albopictus</i> (Diptera, Culicidae), in Anadalusia and first corroboration of the data from Tigatrapp application. <i>Anales De Biología</i> , 2014, , .	0.4	6
38	Random Search Strategies. <i>Springer Series in Synergetics</i> , 2014, , 177-205.	0.4	11
39	How superdiffusion gets arrested: ecological encounters explain shift from Lévy to Brownian movement. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2014, 281, 20132605.	2.6	54
40	Bivariate Gaussian bridges: directional factorization of diffusion in Brownian bridge models. <i>Movement Ecology</i> , 2014, 2, 5.	2.8	20
41	Stochastic Foundations in Movement Ecology. <i>Springer Series in Synergetics</i> , 2014, , .	0.4	85
42	Biological Searches and Random Animal Motility. <i>Springer Series in Synergetics</i> , 2014, , 267-288.	0.4	1
43	Coupling instantaneous energy-budget models and behavioural mode analysis to estimate optimal foraging strategy: an example with wandering albatrosses. <i>Movement Ecology</i> , 2014, 2, 8.	2.8	46
44	Reorientation patterns in central-place foraging: internal clocks and klinokinesis. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20130859.	3.4	14
45	Mechanistic analysis of the search behaviour of <i>Caenorhabditis elegans</i> . <i>Journal of the Royal Society Interface</i> , 2014, 11, 20131092.	3.4	46
46	Cell Motility. <i>Springer Series in Synergetics</i> , 2014, , 209-244.	0.4	0
47	Anomalous Diffusion and Continuous-Time Random Walks. <i>Springer Series in Synergetics</i> , 2014, , 113-148.	0.4	1
48	Microscopic, Mesoscopic and Macroscopic Descriptions of Dispersal. <i>Springer Series in Synergetics</i> , 2014, , 63-111.	0.4	0
49	Search times with arbitrary detection constraints. <i>Physical Review E</i> , 2013, 88, 022101.	2.1	10
50	Stochastic Optimal Foraging Theory. <i>Lecture Notes in Mathematics</i> , 2013, , 3-32.	0.2	9
51	New Approaches to Human Mobility: Using Mobile Phones for Demographic Research. <i>Demography</i> , 2013, 50, 1105-1128.	2.5	147
52	Evaluating a key herbivorous fish as a mobile link: a Brownian bridge approach. <i>Marine Ecology - Progress Series</i> , 2013, 492, 199-210.	1.9	20
53	Optimal Intermittence in Search Strategies under Speed-Selective Target Detection. <i>Physical Review Letters</i> , 2012, 108, 028102.	7.8	15
54	Intermittent Motion in Desert Locusts: Behavioural Complexity in Simple Environments. <i>PLoS Computational Biology</i> , 2012, 8, e1002498.	3.2	82

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55	The Effects of Spatially Heterogeneous Prey Distributions on Detection Patterns in Foraging Seabirds. PLoS ONE, 2012, 7, e34317.	2.5	38
56	Linking animal movement to site fidelity. Journal of Mathematical Biology, 2012, 64, 647-656.	1.9	22
57	Unified effects of aggregation reveal larger prey groups take longer to find. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 2985-2990.	2.6	61
58	How Landscape Heterogeneity Frames Optimal Diffusivity in Searching Processes. PLoS Computational Biology, 2011, 7, e1002233.	3.2	42
59	Retention Time Variability as a Mechanism for Animal Mediated Long-Distance Dispersal. PLoS ONE, 2011, 6, e28447.	2.5	27
60	Fishery Discards Impact on Seabird Movement Patterns at Regional Scales. Current Biology, 2010, 20, 215-222.	3.9	147
61	Animal movement, search strategies and behavioural ecology: a cross-disciplinary way forward. Journal of Animal Ecology, 2010, 79, 906-909.	2.8	55
62	Ant search strategies after interrupted tandem runs. Journal of Experimental Biology, 2010, 213, 1697-1708.	1.7	39
63	Lévy-taxis: a novel search strategy for finding odor plumes in turbulent flow-dominated environments. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 434010.	2.1	48
64	Optimising the success of random destructive searches: Lévy walks can outperform ballistic motions. Journal of Theoretical Biology, 2009, 260, 98-103.	1.7	54
65	Ecological thresholds in European alpine lakes. Freshwater Biology, 2009, 54, 2494-2517.	2.4	117
66	Behavioral intermittence, Lévy patterns, and randomness in animal movement. Oikos, 2009, 118, 488-494.	2.7	82
67	Optimal search behavior and classic foraging theory. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 434002.	2.1	130
68	The influence of turning angles on the success of non-oriented animal searches. Journal of Theoretical Biology, 2008, 252, 43-55.	1.7	107
69	Superdiffusion and encounter rates in diluted, low dimensional worlds. European Physical Journal: Special Topics, 2008, 157, 157-166.	2.6	33
70	Ecophysiological significance of scale-dependent patterns in prokaryotic genomes unveiled by a combination of statistic and genometric analyses. Genomics, 2008, 91, 538-543.	2.9	9
71	Niche segregation factors in an assemblage of pelagic rotifers of a deep high-mountain lake (Redon, France). <i>Journal of Great Lakes Research</i> , 2008, 34, 107-114.	1.8	5
72	Fractal reorientation clocks: Linking animal behavior to statistical patterns of search. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 19072-19077.	7.1	170

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73	Rab18 Is Reduced in Pituitary Tumors Causing Acromegaly and Its Overexpression Reverts Growth Hormone Hypersecretion. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2008, 93, 2269-2276.	3.6	25
74	LÃVY PROCESSES IN ANIMAL MOVEMENT: AN EVOLUTIONARY HYPOTHESIS. <i>Fractals</i> , 2007, 15, 151-162.	3.7	131
75	Gap percolation in rainforests. <i>Oikos</i> , 2005, 110, 177-185.	2.7	22
76	ANIMAL SEARCH STRATEGIES: A QUANTITATIVE RANDOM-WALK ANALYSIS. <i>Ecology</i> , 2005, 86, 3078-3087.	3.2	532
77	Necessary criterion for distinguishing true superdiffusion from correlated random walk processes. <i>Physical Review E</i> , 2005, 72, 011111.	2.1	70
78	Determinants of neurosurgical outcome in pituitary tumors. <i>Journal of Endocrinological Investigation</i> , 2005, 28, 787-794.	3.3	13
79	Role of food partitioning in structuring the zooplankton community in mountain lakes. <i>Oecologia</i> , 2003, 136, 627-634.	2.0	26
80	Helical Levy walks: Adjusting searching statistics to resource availability in microzooplankton. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 12771-12775.	7.1	252
81	MUTUAL INTERFERENCE BETWEEN PREDATORS CAN GIVE RISE TO TURING SPATIAL PATTERNS. <i>Ecology</i> , 2002, 83, 28-34.	3.2	170
82	Optimizing the Encounter Rate in Biological Interactions: LÃVY versus Brownian Strategies. <i>Physical Review Letters</i> , 2002, 88, 097901.	7.8	281
83	LÃVY flight random searches in biological phenomena. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002, 314, 208-213.	2.6	94
84	Mutual Interference between Predators Can Give Rise to Turing Spatial Patterns. <i>Ecology</i> , 2002, 83, 28.	3.2	1
85	Correlation of atrophy measures on MRI with neuropsychological sequelae in children and adolescents with traumatic brain injury. <i>Brain Injury</i> , 2001, 15, 211-221.	1.2	80
86	Self-organized spatial structures in a ratio-dependent predatorâprey model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 295, 53-57.	2.6	43
87	The main features of seasonal variability in the external forcing and dynamics of a deep mountain lake (RedÃ, Pyrenees). <i>Journal of Limnology</i> , 2000, 59, 97.	1.1	49
88	Age effects on long-term neuropsychological outcome in paediatric traumatic brain injury. <i>Brain Injury</i> , 2000, 14, 495-503.	1.2	89
89	Microbial plankton assemblages, composition and biomass, during two ice-free periods in a deep high mountain lake (Estany RedÃ, Pyrenees). <i>Journal of Limnology</i> , 1999, 58, 193.	1.1	41
90	The relative importance of the planktonic food web in the carbon cycle of an oligotrophic mountain lake in a poorly vegetated catchment (RedÃ, Pyrenees). <i>Journal of Limnology</i> , 1999, 58, 203.	1.1	23

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91	Recovery of Hypopituitarism after Neurosurgical Treatment of Pituitary Adenomas. Journal of Clinical Endocrinology and Metabolism, 1999, 84, 3696-3700.	3.6	189
92	Cavernous angiomas of the cranial nerves. Journal of Neurosurgery, 1990, 73, 620-622.	1.6	79
93	Spontaneous thrombosis of an intracranial aneurysm. World Neurosurgery, 1984, 22, 29-32.	1.3	18
94	Neurinomas of the facial nerve. Journal of Neurosurgery, 1975, 43, 608-613.	1.6	34
95	Genetic implications of familial brain tumors. Journal of Neurosurgery, 1974, 41, 573-575.	1.6	24