Jean-Christophe Poggiale

List of Publications by Year
in descending order

92	3,318	159585 30	161849 54
papers	citations	h-index	g-index

96	96	96	3804
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Marine ecosystemsâ€™ responses to climatic and anthropogenic forcings in the Mediterranean. Progress in Oceanography, 2011, 91, 97-166.	3.2	385
2	Dynamic energy budget theory restores coherence in biology. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 3413-3428.	4.0	204
3	Functional approach to sediment reworking by gallery-forming macrobenthic organisms: modeling and application with the polychaete Nereis diversicolor. Marine Ecology - Progress Series, 2002, 229, 127-136.	1.9	141
4	A New Approach for the Modelling of Sediment Reworking Induced by a Macrobenthic Community. Acta Biotheoretica, 1997, 45, 295-319.	1.5	114
5	Benthic biogeochemistry: state of the art technologies and guidelines for the future of in situ survey. Journal of Experimental Marine Biology and Ecology, 2003, 285-286, 5-31.	1.5	103
6	Modeling environmental effects on the size-structured energy flow through marine ecosystems. Part 1: The model. Progress in Oceanography, 2007, 74, 479-499.	3.2	103
7	Effects of temperature on in vitro sediment reworking processes by a gallery biodiffusor, the polychaete Neanthes virens. Marine Ecology - Progress Series, 2004, 266, 185-193.	1.9	96
8	Emergence of Population Growth Models: Fast Migration and Slow Growth. Journal of Theoretical Biology, 1996, 182, 99-108.	1.7	88
9	Effects of chronic uranium exposure on life history and physiology of Daphnia magna over three successive generations. Aquatic Toxicology, 2010, 99, 309-319.	4.0	82
10	An Ecosystem-Based Approach to Assess the Status of a Mediterranean Ecosystem, the Posidonia oceanica Seagrass Meadow. PLoS ONE, 2014, 9, e98994.	2.5	82
11	Imaging Oxygen Distribution in Marine Sediments. The Importance of Bioturbation and Sediment Heterogeneity. Acta Biotheoretica, 2008, 56, 123-135.	1.5	78
12	Aggregation methods in dynamical systems and applications in population and community dynamics. Physics of Life Reviews, 2008, 5, 79-105.	2.8	74
13	Sediment reworking by marine benthic species from the Gullmar Fjord (Western Sweden): Importance of faunal biovolume. Journal of Experimental Marine Biology and Ecology, 2007, 348, 133-144.	1.5	73
14	From individuals to populations to communities: A dynamic energy budget model of marine ecosystem size-spectrum including life history diversity. Journal of Theoretical Biology, 2013, 324, 52-71.	1.7	70
15	Predator Migration Decisions, the Ideal Free Distribution, and Predatorâ€Prey Dynamics. American Naturalist, 1999, 153, 267-281.	2.1	67
16	Aggregation and emergence in ecological modelling: integration of ecological levels. Ecological Modelling, 2000, 127, 11-20.	2.5	66
17	Macroscopic Dynamic Effects of Migrations in Patchy Predator-prey Systems. Journal of Theoretical Biology, 1997, 185, 459-474.	1.7	62
18	Modelling the community size-spectrum: recent developments and new directions. Ecological Modelling, 2016, 337, 4-14.	2.5	57

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19	Aggregation and emergence in systems of ordinary differential equations. Mathematical and Computer Modelling, 1998, 27, 1-21.	2.0	56
20	Effect of predator density dependent dispersal of prey on stability of a predatorâ€"prey system. Mathematical Biosciences, 2007, 206, 343-356.	1.9	52
21	An ecosystem-based approach to assess the status of Mediterranean algae-dominated shallow rocky reefs. Marine Pollution Bulletin, 2017, 117, 311-329.	5.0	49
22	Structural sensitivity of biological models revisited. Journal of Theoretical Biology, 2011, 283, 82-91.	1.7	47
23	Benthic macrofauna and sediment reworking quantification in contrasted environments in the Thau Lagoon. Estuarine, Coastal and Shelf Science, 2007, 72, 522-533.	2.1	46
24	From spatially explicit ecological models to mean-field dynamics: The state of the art and perspectives. Ecological Complexity, 2012, 10, 1-11.	2.9	45
25	Towards methodological approaches to implement the zooplankton component in â€œend to endâ€• food-web models. Progress in Oceanography, 2010, 84, 20-38.	3.2	42
26	Emergence of donor control in patchy predator-prey systems. Bulletin of Mathematical Biology, 1998, 60, 1149-1166.	1.9	40
27	How far details are important in ecosystem modelling: the case of multi-limiting nutrients in phytoplanktonâ€"zooplankton interactions. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 3495-3507.	4.0	40
28	2-D optical quantification of particle reworking activities in marine surface sediments. Journal of Experimental Marine Biology and Ecology, 2003, 285-286, 251-263.	1.5	35
29	Depth distribution of soil organic matter and burrowing activity of earthwormsâ€"mesocosm study using X-ray tomography and luminophores. Biology and Fertility of Soils, 2021, 57, 337-346.	4.3	33
30	Consequence of a sudden wind event on the dynamics of a coastal phytoplankton community: an insight into specific population growth rates using a single cell high frequency approach. Frontiers in Microbiology, 2014, 5, 485.	3.5	32
31	Assessing functional diversity: the influence of the number of the functional traits. Theoretical Ecology, 2020, 13, 117-126.	1.0	31
32	Predator-prey models in heterogeneous environment: Emergence of functional response. Mathematical and Computer Modelling, 1998, 27, 63-71.	2.0	30
33	From behavioural to population level: Growth and competition. Mathematical and Computer Modelling, 1998, 27, 41-49.	2.0	29
34	Quantitative steps in symbiogenesis and the evolution of homeostasis. Biological Reviews, 2003, 78, 435-463.	10.4	29
35	Spatial oxygen heterogeneity in a Hediste diversicolor irrigated burrow. Hydrobiologia, 2012, 680, 109-124.	2.0	29
36	Bifurcation analysis of a predatorâ€"prey model with predators using hawk and dove tactics. Journal of Theoretical Biology, 2006, 238, 597-607.	1.7	28

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37	Consumption and release of dissolved organic %%CONV_ERR%%carbon by marine bacteria in a pulsed-substrate environment: from experiments to modelling. Aquatic Microbial Ecology, 2009, 56, 41-54.	1.8	26
38	Long-term dynamics of three benthic Ampelisca (Crustacea-Amphipoda) populations from the Bay of Morlaix (western English Channel) related to their disappearance after the 'Amoco Cadiz' oil spill. Marine Ecology - Progress Series, 2001, 214, 201-209.	1.9	25
39	Modelling, singular perturbation and bifurcation analyses of bitrophic food chains. Mathematical Biosciences, 2018, 301, 93-110.	1.9	24
40	FAST OSCILLATING MIGRATIONS IN A PREDATOR-PREY MODEL. Mathematical Models and Methods in Applied Sciences, 1996, 06, 217-226.	3.3	23
41	Enrichment Paradox Induced by Spatial Heterogeneity in a Phytoplankton - Zooplankton System. Mathematical Modelling of Natural Phenomena, 2008, 3, 87-102.	2.4	23
42	EMERGING PROPERTIES IN POPULATION DYNAMICS WITH DIFFERENT TIME SCALES. Journal of Biological Systems, 1995, 03, 591-602.	1.4	22
43	Aggregation methods in food chains. Mathematical and Computer Modelling, 1998, 27, 109-120.	2.0	22
44	The practice of prediction: What can ecologists learn from applied, ecology-related fields?. Ecological Complexity, 2017, 32, 156-167.	2.9	22
45	Aggregation methods in food chains with nutrient recycling. Ecological Modelling, 2002, 157, 69-86.	2.5	21
46	Global Production Increased by Spatial Heterogeneity in a Population Dynamics Model. Acta Biotheoretica, 2005, 53, 359-370.	1.5	20
47	A review on spatial aggregation methods involving several time scales. Ecological Complexity, 2012, 10, 12-25.	2.9	20
48	Effects of lower trophic level biomass and water temperature on fish communities: A modelling study. Progress in Oceanography, 2016, 146, 22-37.	3.2	18
49	Analysis of a predatorâ€"prey model with specific time scales: a geometrical approach proving the occurrence of canard solutions. Journal of Mathematical Biology, 2020, 80, 39-60.	1.9	18
50	Impact of spatial heterogeneity on a predatorâ€"prey system dynamics. Comptes Rendus - Biologies, 2004, 327, 1058-1063.	0.2	16
51	A kinetic inhibition mechanism for maintenance. Journal of Theoretical Biology, 2007, 244, 576-587.	1.7	16
52	Aggregation and emergence in hierarchically organized systems: population dynamics. Acta Biotheoretica, 1996, 44, 301-316.	1.5	15
53	Effect of movement frequency on global hostâ€"parasitoid spatial dynamics with unstable local dynamics. Ecological Modelling, 2006, 197, 290-295.	2.5	15
54	Modelling DOC assimilation and bacterial growth efficiency in biodegradation experiments: a case study in the Northeast Atlantic Ocean. Aquatic Microbial Ecology, 2006, 43, 139-151.	1.8	14

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55	Scaling up the predator functional response in heterogeneous environment: When Holling type III can emerge?. Journal of Theoretical Biology, 2013, 336, 200-208.	1.7	14
56	Structural sensitivity and resilience in a predatorâ€"prey model with density-dependent mortality. Ecological Complexity, 2016, 28, 163-173.	2.9	14
57	Spatial synchrony in hostâ€"parasitoid models using aggregation of variables. Mathematical Biosciences, 2006, 203, 204-221.	1.9	13
58	Increased bacterial growth efficiency with environmental variability: results from DOC degradation by bacteria in pure culture experiments. Biogeosciences, 2010, 7, 1861-1876.	3.3	13
59	Alteration and release of aliphatic compounds by the polychaete Nereis virens (Sars) experimentally fed with hydrocarbons. Journal of Experimental Marine Biology and Ecology, 2001, 256, 199-213.	1.5	12
60	Relations Between Bacterial Biomass and Carbon Cycle in Marine Sediments: An Early Diagenetic Model. Acta Biotheoretica, 2003, 51, 295-315.	1.5	12
61	Analysis of functional response in presence of schooling phenomena: An IBM approach. Progress in Oceanography, 2015, 134, 232-243.	3.2	12
62	Does structural sensitivity alter complexityâ€"stability relationships?. Ecological Complexity, 2016, 28, 104-112.	2.9	12
63	Perturbations of the classical Lotka-Volterra system by behavioral sequences. Acta Biotheoretica, 1995, 43, 27-39.	1.5	11
64	Approximate aggregation of a two time scales periodic multi-strain SIS epidemic model: A patchy environment with fast migrations. Ecological Complexity, 2012, 10, 34-41.	2.9	11
65	Contrasting degradation rates of natural dissolved organic carbon by deep-sea prokaryotes under stratified water masses and deep-water convection conditions in the NW Mediterranean Sea. Marine Chemistry, 2021, 231, 103932.	2.3	11
66	Two-time scales in spatially structured models of population dynamics: A semigroup approach. Journal of Mathematical Analysis and Applications, 2011, 375, 149-165.	1.0	10
67	REDUCTION OF SLOWâ€"FAST PERIODIC SYSTEMS WITH APPLICATIONS TO POPULATION DYNAMICS MODELS. Mathematical Models and Methods in Applied Sciences, 2012, 22, .	3.3	10
68	Modeling the eco-physiology of the purple mauve stinger, Pelagia noctiluca using Dynamic Energy Budget theory. Journal of Sea Research, 2014, 94, 52-64.	1.6	10
69	Mechanisms behind the metabolic flexibility of an invasive comb jelly. Journal of Sea Research, 2014, 94, 156-165.	1.6	10
70	Is structural sensitivity a problem of oversimplified biological models? Insights from nested Dynamic Energy Budget models. Journal of Theoretical Biology, 2018, 448, 1-8.	1.7	10
71	Towards a simplification of models using regression trees. Journal of the Royal Society Interface, 2013, 10, 20120613.	3.4	9
72	Emergence of individual behaviour at the population level. Effects of density-dependent migration on population dynamics. Comptes Rendus De L'AcadÃ©mie Des Sciences SÃ©rie 3, Sciences De La Vie, 2000, 323, 119-127.	0.8	8

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73	Three-Dimensional Bifurcation Analysis of a Predator-Prey Model with Uncertain Formulation. SIAM Journal on Applied Mathematics, 2019, 79, 377-395.	1.8	8
74	Study of a virusâ€“bacteria interaction model in a chemostat: application of geometrical singular perturbation theory. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 4685-4697.	3.4	7
75	Lotka-Volterra's model and migrations: Breaking of the well-known center. Mathematical and Computer Modelling, 1998, 27, 51-61.	2.0	6
76	Implementation of the zooplankton functional response in plankton models: State of the art, recent challenges and future directions. Progress in Oceanography, 2012, 103, 80-91.	3.2	5
77	Impact of periodic nutrient input rate on trophic chain properties. Ecological Complexity, 2013, 14, 56-63.	2.9	5
78	Effects of the Bioturbating Marine Yabby Trypaea australiensis on Sediment Properties in Sandy Sediments Receiving Mangrove Leaf Litter. Journal of Marine Science and Engineering, 2019, 7, 426.	2.6	5
79	Assessment of congruence between co-occurrence and functional networks: A new framework for revealing community assembly rules. Scientific Reports, 2019, 9, 19996.	3.3	4
80	AGGREGATION, EMERGENCE AND IMMERGENCE IN HIERARCHICALLY ORGANIZED SYSTEMS. International Journal of General Systems, 1999, 27, 349-371.	2.5	3
81	Using a mathematical model to simulate the influence of tubificid worms (Oligochaeta) on oxygen concentrations in hyporheic sediments. Fundamental and Applied Limnology, 2008, 172, 135-145.	0.7	3
82	Biodiversity and Microbial Ecosystems Functioning. , 2015, , 261-291.		3
83	Ecosystem-Based Versus Species-Based Approach for Assessment of the Human Impact on the Mediterranean Seagrass Posidonia oceanica. , 2015, , 235-241.		3
84	Modeling in Microbial Ecology. , 2015, , 847-882.		3
85	Mathematical modelling is a necessary step in biology and in environmental sciences. Comptes Rendus - Geoscience, 2006, 338, 223-224.	1.2	2
86	Reduction of slow-fast asymptotically autonomous systems with applications to gradostat models. Ecological Complexity, 2013, 14, 75-84.	2.9	2
87	A simple geometrical condition for the existence of periodic solutions of planar periodic systems. Applications to some biological models. Journal of Mathematical Analysis and Applications, 2015, 423, 1469-1479.	1.0	2
88	Oxygen Distribution Heterogeneity Related to Bioturbation Quantified by Planar Optode Imaging. , 2010, , 277-282.		2
89	Damage-related protein turnover explains inter-specific patterns of maintenance rate and suggests modifications of the DEB theory. Journal of Sea Research, 2019, 143, 35-47.	1.6	1
90	Regime shifts at the origin of a long transient methodological development for predictive ecology. Physics of Life Reviews, 2020, 32, 50-52.	2.8	1

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91	Does evolution design robust food webs?. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20200747.	2.6	1
92	Corrigendum to â€œStructural sensitivity of biological models revisitedâ€•[J. Theor. Biol. 283 (2011) 83â€“91]. Journal of Theoretical Biology, 2012, 300, 376.	1.7	0