

Simone Pigolotti

List of Publications by Year in descending order

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Version: 2024-02-01

73
papers

2,073
citations

236612

25
h-index

276539

41
g-index

82
all docs

82
docs citations

82
times ranked

2017
citing authors

#	ARTICLE	IF	CITATIONS
1	Oscillation patterns in negative feedback loops. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6533-6537.	3.3	119
2	Generic Properties of Stochastic Entropy Production. Physical Review Letters, 2017, 119, 140604.	2.9	118
3	Dynamical evolution of ecosystems. Nature, 2006, 444, 926-928.	13.7	117
4	Oscillations and temporal signalling in cells. Physical Biology, 2007, 4, R1-R17.	0.8	108
5	Species Clustering in Competitive Lotka-Volterra Models. Physical Review Letters, 2007, 98, 258101.	2.9	72
6	Kinetic versus Energetic Discrimination in Biological Copying. Physical Review Letters, 2013, 110, 188101.	2.9	72
7	Swimming in turbulence: zooplankton fitness in terms of foraging efficiency and predation risk. Journal of Plankton Research, 2008, 31, 121-133.	0.8	68
8	Species lifetime distribution for simple models of ecologies. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 15747-15751.	3.3	66
9	Entropy production and coarse graining in Markov processes. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P05015.	0.9	65
10	Properties making a chaotic system a good pseudo random number generator. Physical Review E, 2005, 72, 016220.	0.8	55
11	Physical bioenergetics: Energy fluxes, budgets, and constraints in cells. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	52
12	Coarse graining of master equations with fast and slow states. Journal of Chemical Physics, 2008, 128, 154114.	1.2	47
13	Species competition: coexistence, exclusion and clustering. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 3183-3195.	1.6	45
14	Stop-and-go kinetics in amyloid fibrillation. Physical Review E, 2010, 82, 010901.	0.8	45
15	Bet-hedging strategies in expanding populations. PLoS Computational Biology, 2019, 15, e1006529.	1.5	44
16	Increased Mutation Rate Is Linked to Genome Reduction in Prokaryotes. Current Biology, 2020, 30, 3848-3855.e4.	1.8	44
17	Population Genetics in Compressible Flows. Physical Review Letters, 2012, 108, 128102.	2.9	42
18	Thermodynamics of Error Correction. Physical Review X, 2015, 5, .	2.8	40

#	ARTICLE	IF	CITATIONS
19	How Gaussian competition leads to lumpy or uniform species distributions. <i>Theoretical Ecology</i> , 2010, 3, 89-96.	0.4	39
20	Growth, competition and cooperation in spatial population genetics. <i>Theoretical Population Biology</i> , 2013, 84, 72-86.	0.5	39
21	Energetic funnel facilitates facilitated diffusion. <i>Nucleic Acids Research</i> , 2018, 46, 558-567.	6.5	39
22	Self-Consistent Method for Density Estimation. <i>Journal of the Royal Statistical Society Series B: Statistical Methodology</i> , 2011, 73, 407-422.	1.1	33
23	Mapping of uncertainty relations between continuous and discrete time. <i>Physical Review E</i> , 2018, 97, 032109.	0.8	33
24	Repressor Lattice: Feedback, Commensurability, and Dynamical Frustration. <i>Physical Review Letters</i> , 2009, 103, 118101.	2.9	32
25	Speciation-rate dependence in species-area relationships. <i>Journal of Theoretical Biology</i> , 2009, 260, 83-89.	0.8	31
26	Selective Advantage of Diffusing Faster. <i>Physical Review Letters</i> , 2014, 112, 188102.	2.9	28
27	Integral fluctuation relations for entropy production at stopping times. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2019, 2019, 104006.	0.9	26
28	Hyperaccurate currents in stochastic thermodynamics. <i>Physical Review E</i> , 2019, 100, 060102.	0.8	26
29	Length Scales in Brownian yet Non-Gaussian Dynamics. <i>Physical Review X</i> , 2021, 11, .	2.8	24
30	Modeling proteasome dynamics in Parkinson's disease. <i>Physical Biology</i> , 2009, 6, 036005.	0.8	23
31	Stochastic Spatial Models in Ecology: A Statistical Physics Approach. <i>Journal of Statistical Physics</i> , 2018, 172, 44-73.	0.5	23
32	Coarse-Grained Probabilistic Automata Mimicking Chaotic Systems. <i>Physical Review Letters</i> , 2003, 91, 044101.	2.9	22
33	Stochastic model for the species abundance problem in an ecological community. <i>Physical Review E</i> , 2004, 70, 011916.	0.8	22
34	Numerical and experimental study of the effects of noise on the permutation entropy. <i>New Journal of Physics</i> , 2015, 17, 093002.	1.2	22
35	Macroscopic equations for the adiabatic piston. <i>Physical Review E</i> , 2007, 76, 051103.	0.8	21
36	Initial growth of Boltzmann entropy and chaos in a large assembly of weakly interacting systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 385, 170-184.	1.2	21

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37	Species abundances and lifetimes: From neutral to niche-stabilized communities. <i>Journal of Theoretical Biology</i> , 2013, 338, 1-8.	0.8	21
38	Analysis of self-overlap reveals trade-offs in plankton swimming trajectories. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140164.	1.5	21
39	Population dynamics in compressible flows. <i>European Physical Journal: Special Topics</i> , 2012, 204, 57-73.	1.2	19
40	What Ecological Factors Shape Species-Area Curves in Neutral Models?. <i>PLoS ONE</i> , 2012, 7, e38232.	1.1	18
41	Adaptive behaviour, tri-trophic food-web stability and damping of chaos. <i>Journal of the Royal Society Interface</i> , 2012, 9, 1373-1380.	1.5	18
42	Switching between oscillations and homeostasis in competing negative and positive feedback motifs. <i>Journal of Theoretical Biology</i> , 2012, 307, 205-210.	0.8	18
43	Inherent directionality explains the lack of feedback loops in empirical networks. <i>Scientific Reports</i> , 2014, 4, 7497.	1.6	17
44	Symbolic Dynamics of Biological Feedback Networks. <i>Physical Review Letters</i> , 2009, 102, 088701.	2.9	16
45	Equilibrium Strategy and Population-Size Effects in Lowest Unique Bid Auctions. <i>Physical Review Letters</i> , 2012, 108, 088701.	2.9	16
46	Arcsine Laws in Stochastic Thermodynamics. <i>Physical Review Letters</i> , 2018, 121, 090601.	2.9	16
47	Protocols for Copying and Proofreading in Template-Assisted Polymerization. <i>Journal of Statistical Physics</i> , 2016, 162, 1167-1182.	0.5	14
48	Coexistence and invasibility in a two-species competition model with habitat-preference. <i>Journal of Theoretical Biology</i> , 2010, 265, 609-617.	0.8	13
49	Error-Speed Correlations in Biopolymer Synthesis. <i>Physical Review Letters</i> , 2019, 123, 038101.	2.9	13
50	Ocean currents promote rare species diversity in protists. <i>Science Advances</i> , 2020, 6, eaaz9037.	4.7	13
51	Enhanced Mutation Rate, Relaxed Selection, and the "Domino Effect" are associated with Gene Loss in <i>Blattabacterium</i> , A Cockroach Endosymbiont. <i>Molecular Biology and Evolution</i> , 2021, 38, 3820-3831.	3.5	13
52	Stochasticity enhances the gaining of bet-hedging strategies in contact-process-like dynamics. <i>Physical Review E</i> , 2015, 91, 032114.	0.8	12
53	Population genetics in microchannels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2120821119.	3.3	10
54	Replicator dynamics with turnover of players. <i>Physical Review E</i> , 2013, 88, 022806.	0.8	8

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55	Competition between fast- and slow-diffusing species in non-homogeneous environments. <i>Journal of Theoretical Biology</i> , 2016, 395, 204-210.	0.8	8
56	On \mathbb{R}^d - and $\mathbb{R}^{d/4}$ -space descriptions: Gibbs and Boltzmann entropies of symplectic coupled maps. <i>Physica Scripta</i> , 2012, 86, 058513.	1.2	7
57	Absorbing processes in Richardson diffusion: Analytical results. <i>Physics of Fluids</i> , 2006, 18, 048104.	1.6	5
58	Genetic oscillation patterns. <i>European Physical Journal: Special Topics</i> , 2009, 178, 45-56.	1.2	5
59	Evolution of Complex Asexual Reproductive Strategies in Jellyfish. <i>American Naturalist</i> , 2018, 192, 72-80.	1.0	5
60	Assembly of heteropolymers via a network of reaction coordinates. <i>Physical Review E</i> , 2019, 100, 062502.	0.8	5
61	Statistics of trajectories in two-state master equations. <i>Physical Review E</i> , 2009, 79, 021121.	0.8	4
62	Particle algorithms for population dynamics in flows. <i>Journal of Physics: Conference Series</i> , 2011, 333, 012013.	0.3	4
63	Generalized Euler-Lotka equation for correlated cell divisions. <i>Physical Review E</i> , 2021, 103, L060402.	0.8	4
64	Bifractal nature of chromosome contact maps. <i>Physical Review Research</i> , 2020, 2, .	1.3	4
65	Search and Localization Dynamics of the CRISPR-Cas9 System. <i>Physical Review Letters</i> , 2021, 127, 208102.	2.9	4
66	Stochastic thermodynamics: experiment and theory. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2020, 2020, 064001.	0.9	3
67	Limit-cycle oscillations and stable patterns in repressor lattices. <i>Physical Review E</i> , 2012, 86, 031905.	0.8	2
68	Effects of Growth and Mutation on Pattern Formation in Tissues. <i>PLoS ONE</i> , 2012, 7, e48772.	1.1	2
69	Quality control system response to stochastic growth of amyloid fibrils. <i>FEBS Letters</i> , 2013, 587, 1405-1410.	1.3	2
70	Stochastic competition between two populations in space. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2014, , 105-117.	0.3	2
71	Optimization and Fabrication of Multi-Level Microchannels for Long-Term Imaging of Bacterial Growth and Expansion. <i>Micromachines</i> , 2022, 13, 576.	1.4	1
72	Ecological oscillations induced by a shared predator and the "Winner peaks first" rule. <i>Physical Review E</i> , 2011, 84, 031915.	0.8	0

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73	Correction: "Analysis of self-overlap reveals trade-offs in plankton swimming trajectories". Journal of the Royal Society Interface, 2014, 11, 20140479.	1.5	0