David Lacoste

List of Publications by Year
in descending order

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64	1,563	279778	330122
papers	citations	23 h-index	37 g-index

70	70	70	1317
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Branching processes with resetting as a model for cell division. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 074001.	2.1	4
2	A robust transition to homochirality in complex chemical reaction networks. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	2.1	4
3	Emergence of homochirality in large molecular systems. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	32
4	Universal constraints on selection strength in lineage trees. Physical Review Research, 2021, 3, .	3.6	5
5	The generality of transient compartmentalization and its associated error thresholds. Journal of Theoretical Biology, 2020, 487, 110110.	1.7	9
6	Universal motifs and the diversity of autocatalytic systems. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 25230-25236.	7.1	54
7	Fluctuation relations and fitness landscapes of growing cell populations. Scientific Reports, 2020, 10, 11889.	3.3	23
8	Phase transitions in optimal betting strategies. Europhysics Letters, 2020, 131, 60005.	2.0	11
9	Survival of Self-Replicating Molecules under Transient Compartmentalization with Natural Selection. Life, 2019, 9, 78.	2.4	6
10	Linking lineage and population observables in biological branching processes. Physical Review E, 2019, 99, 042413.	2.1	31
11	Selection Dynamics in Transient Compartmentalization. Physical Review Letters, 2018, 120, 158101.	7.8	21
12	Reaction kinetics in open reactors and serial transfers between closed reactors. Journal of Chemical Physics, 2018, 148, 144902.	3.0	14
13	Mechanical Factors Affecting the Mobility of Membrane Proteins. , 2018, , 191-211.		1
14	Length and sequence relaxation of copolymers under recombination reactions. Journal of Chemical Physics, 2017, 147, 094905.	3.0	14
15	Information-theoretic analysis of the directional influence between cellular processes. PLoS ONE, 2017, 12, e0187431.	2.5	12
16	Thermodynamic bounds on equilibrium fluctuations of a global or local order parameter. Europhysics Letters, 2016, 115, 60007.	2.0	11
17	Thermodynamic inference based on coarse-grained data or noisy measurements. Physical Review E, 2016, 93, 032103.	2.1	9
18	Glucans monomer-exchange dynamics as an open chemical network. Journal of Chemical Physics, 2015, 143, 244903.	3.0	7

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19	Kinetics and thermodynamics of reversible polymerization in closed systems. New Journal of Physics, 2015, 17, 085008.	2.9	11
20	Fluctuation relations for equilibrium states with broken discrete or continuous symmetries. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P11018.	2.3	7
21	Stochastic thermodynamics of a tagged particle within a harmonic chain. Physical Review E, 2015, 91, 022114.	2.1	5
22	Isometric Fluctuation Relations for Equilibrium States with Broken Symmetry. Physical Review Letters, 2014, 113, 240602.	7.8	20
23	Shape matters in protein mobility within membranes. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5083-5087.	7.1	89
24	Energy versus Information Based Estimations of Dissipation Using a Pair of Magnetic Colloidal Particles. Physical Review Letters, 2014, 112, 180604.	7.8	15
25	Non-invasive estimation of dissipation from non-equilibrium fluctuations in chemical reactions. Journal of Chemical Physics, 2013, 139, 124109.	3.0	18
26	Fluctuation theorems and inequalities generalizing the second law of thermodynamics out of equilibrium. Physical Review E, 2012, 86, 051127.	2.1	12
27	Fluctuations and response from a Hatano and Sasa approach. Physica Scripta, 2012, 86, 058505.	2.5	5
28	History-Dependent Depolymerization of Actin Filaments. Biochemistry, 2012, 51, 7580-7587.	2.5	0
29	Random Hydrolysis Controls the Dynamic Instability of Microtubules. Biophysical Journal, 2012, 102, 1274-1283.	0.5	58
30	Random Hydrolysis Controls Dynamic Instability of Microtubules. Biophysical Journal, 2012, 102, 698a.	0.5	0
31	Inequalities Generalizing the Second Law of Thermodynamics for Transitions between Nonstationary States. Physical Review Letters, 2012, 108, 120601.	7.8	14
32	A Planar Lipid Bilayer in an Electric Field. Behavior Research Methods, 2011, 14, 63-95.	4.0	12
33	Modified fluctuation-dissipation theorem for general non-stationary states and application to the Glauberâ€“Ising chain. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P10025.	2.3	33
34	Modified fluctuation-dissipation theorem for non-equilibrium steady states and applications to molecular motors. Europhysics Letters, 2011, 93, 10002.	2.0	41
35	Condensation of actin filaments pushing against a barrier. New Journal of Physics, 2011, 13, 103032.	2.9	32
36	Fluctuation Relations for Molecular Motors. , 2011, , 61-88.		6

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37	A Poissonâ€“Boltzmann approach for a lipid membrane in an electric field. New Journal of Physics, 2010, 12, 095002.	2.9	18
38	Role of ATP-Hydrolysis in the Dynamics of a Single Actin Filament. Biophysical Journal, 2010, 98, 1418-1427.	0.5	38
39	Effective zero-thickness model for a conductive membrane driven by an electric field. Physical Review E, 2010, 81, 031912.	2.1	37
40	Fluctuation theorem for the flashing ratchet model of molecular motors. Physical Review E, 2009, 80, 021923.	2.1	33
41	Stochastic model for nucleosome sliding under an external force. Physical Review E, 2009, 79, 031922.	2.1	12
42	Thermal expansion within a chain of magnetic colloidal particles. Physical Review E, 2009, 80, 011401.	2.1	3
43	Membrane Tension Lowering Induced by Protein Activity. Physical Review Letters, 2009, 102, 038102.	7.8	76
44	Measuring colloidal forces with the magnetic chaining technique. European Physical Journal E, 2009, 28, 113-123.	1.6	28
45	Electrostatic and electrokinetic contributions to the elastic moduli of a driven membrane. European Physical Journal E, 2009, 28, 243-264.	1.6	51
46	Nonequilibrium Self-Assembly of a Filament Coupled to ATP/GTP Hydrolysis. Biophysical Journal, 2009, 96, 2146-2159.	0.5	53
47	Fluctuation theorem and large deviation function for a solvable model of a molecular motor. Physical Review E, 2008, 78, 011915.	2.1	66
48	Fluctuations of a driven membrane in an electrolyte. Europhysics Letters, 2007, 77, 18006.	2.0	25
49	Nonequilibrium Fluctuations and Mechanochemical Couplings of a Molecular Motor. Physical Review Letters, 2007, 99, 158102.	7.8	83
50	Depolarization of Multiple Scattered Reflected Light. AIP Conference Proceedings, 2007, , .	0.4	0
51	Dynamics of active membranes with internal noise. Europhysics Letters, 2005, 70, 418-424.	2.0	21
52	Fluctuation Spectrum of Fluid Membranes Coupled to an Elastic Meshwork: Jump of the Effective Surface Tension at the Mesh Size. Physical Review Letters, 2004, 92, 018102.	7.8	60
53	Depolarization of backscattered linearly polarized light. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2004, 21, 1799.	1.5	105
54	Geometric depolarization in patterns formed by backscattered light. Optics Letters, 2004, 29, 2040.	3.3	15

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55	Effective index of refraction, optical rotation, and circular dichroism in isotropic chiral liquid crystals. Physical Review E, 2002, 65, 031717.	2.1	3
56	Magneto-optics with diffuse light. Physica B: Condensed Matter, 2000, 279, 13-16.	2.7	7
57	Coherent backscattering of light in a magnetic field. Physical Review E, 2000, 61, 4556-4565.	2.1	24
58	Photonic Hall effect in absorbing media. Physical Review E, 2000, 62, 8636-8639.	2.1	8
59	Photonic Hall effect in ferrofluids: Theory and experiments. Physical Review E, 2000, 62, 3934-3943.	2.1	24
60	Transport mean free path for magneto-transverse light diffusion: an alternative approach. Waves in Random and Complex Media, 2000, 10, 367-372.	1.5	1
61	Transport mean free path for magneto-transverse light diffusion. Europhysics Letters, 1999, 45, 721-725.	2.0	15
62	Stokes parameters for light scattering from a Faraday-active sphere. Journal of Quantitative Spectroscopy and Radiative Transfer, 1999, 63, 305-319.	2.3	3
63	Optics of a Faraday-active Mie sphere. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1998, 15, 1636.	1.5	41
64	Sonoluminescence from Single Bubbles in Nonaqueous Liquids: New Parameter Space for Sonochemistry. The Journal of Physical Chemistry, 1995, 99, 14195-14197.	2.9	66