David Yllanes

List of Publications by Year
in descending order

51 papers	1,454 citations	304743 22 h-index	330143 37 g-index
58 all docs	58 docs citations	58 times ranked	977 citing authors

#	Article	IF	Citations
1	Minimal model of active colloids highlights the role of mechanical interactions in controlling the emergent behavior of active matter. Current Opinion in Colloid and Interface Science, 2016, 21, 34-43.	7.4	151
2	An In-Depth View of the Microscopic Dynamics of Ising Spin Glasses at Fixed Temperature. Journal of Statistical Physics, 2009, 135, 1121-1158.	1.2	83
3	Critical parameters of the three-dimensional Ising spin glass. Physical Review B, 2013, 88, .	3.2	82
4	Nonequilibrium Spin-Glass Dynamics from Picoseconds to a Tenth of a Second. Physical Review Letters, 2008, 101, 157201.	7.8	77
5	Janus: An FPGA-Based System for High-Performance Scientific Computing. Computing in Science and Engineering, 2009, 11, 48-58.	1.2	75
6	Nature of the spin-glass phase at experimental length scales. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P06026.	2.3	70
7	The Invar tensor package: Differential invariants of Riemann. Computer Physics Communications, 2008, 179, 586-590.	7.5	65
8	Self-Driven Phase Transitions Drive<i>Myxococcus xanthus</i>Fruiting Body Formation. Physical Review Letters, 2019, 122, 248102.	7.8	63
9	The Mpemba effect in spin glasses is a persistent memory effect. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15350-15355.	7.1	59
10	Thermodynamic glass transition in a spin glass without time-reversal symmetry. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6452-6456.	7.1	54
11	Kinetics of motility-induced phase separation and swim pressure. Physical Review E, 2017, 95, 012601.	2.1	43
12	Janus II: A new generation application-driven computer for spin-system simulations. Computer Physics Communications, 2014, 185, 550-559.	7.5	40
13	Curvature-dependent tension and tangential flows at the interface of motility-induced phases. Soft Matter, 2018, 14, 7435-7445.	2.7	40
14	The three-dimensional Ising spin glass in an external magnetic field: the role of the silent majority. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P05014.	2.3	38
15	Static versus Dynamic Heterogeneities in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>D</mml:mi><mml:mo>=</mml:mo><mml:mn>3</mml:mn></mml:math>Edwards-Anderson-Ising Spin Glass. Physical Review Letters, 2010, 105, 177202.	7.8	37
16	An exploration of ambigrammatic sequences in narnaviruses. Scientific Reports, 2019, 9, 17982.	3.3	36
17	How many dissenters does it take to disorder a flock?. New Journal of Physics, 2017, 19, 103026.	2.9	34
18	Matching Microscopic and Macroscopic Responses in Glasses. Physical Review Letters, 2017, 118, 157202.	7.8	31

#	Article	IF	Citations
19	Dynamical transition in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>D</mml:mi><mml:mo>=</mml:mo><mml:mn>3</mml:m spin glass in an external magnetic field. Physical Review E, 2014, 89, 032140.	2.1	30
20	Aging Rate of Spin Glasses from Simulations Matches Experiments. Physical Review Letters, 2018, 120, 267203.	7.8	29
21	A statics-dynamics equivalence through the fluctuationâ€“dissipation ratio provides a window into the spin-glass phase from nonequilibrium measurements. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1838-1843.	7.1	23
22	Thermal crumpling of perforated two-dimensional sheets. Nature Communications, 2017, 8, 1381.	12.8	23
23	Reconfigurable computing for Monte Carlo simulations: Results and prospects of the Janus project. European Physical Journal: Special Topics, 2012, 210, 33-51.	2.6	21
24	Comment on â€œEvidence of Non-Mean-Field-Like Low-Temperature Behavior in the Edwards-Anderson Spin-Glass Modelâ€• Physical Review Letters, 2013, 110, 219701.	7.8	20
25	Tethered Monte Carlo: Computing the effective potential without critical slowing down. Nuclear Physics B, 2009, 807, 424-454.	2.5	19
26	Sample-to-sample fluctuations of the overlap distributions in the three-dimensional Edwards-Anderson spin glass. Physical Review B, 2011, 84, .	3.2	17
27	Critical behavior of the dilute antiferromagnet in a magnetic field. Physical Review B, 2011, 84, .	3.2	16
28	Temperature chaos is a non-local effect. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 123301.	2.3	16
29	Finite-size scaling analysis of the distributions of pseudo-critical temperatures in spin glasses. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P10019.	2.3	15
30	Spin glass phase in the four-state three-dimensional Potts model. Physical Review B, 2009, 79, .	3.2	14
31	Cumulative overlap distribution function in realistic spin glasses. Physical Review B, 2014, 90, .	3.2	14
32	Temperature chaos is present in off-equilibrium spin-glass dynamics. Communications Physics, 2021, 4, .	5.3	13
33	Scaling Law Describes the Spin-Glass Response in Theory, Experiments, and Simulations. Physical Review Letters, 2020, 125, 237202.	7.8	12
34	A minimal model for household effects in epidemics. Physical Biology, 2020, 17, 065010.	1.8	12
35	Tethered Monte Carlo: Managing Rugged Free-Energy Landscapes with a Helmholtz-Potential Formalism. Journal of Statistical Physics, 2011, 144, 554-596.	1.2	10
36	Spin-glass dynamics in the presence of a magnetic field: exploration of microscopic properties. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 033301.	2.3	10

#	ARTICLE	IF	CITATIONS
37	Thermal buckling and symmetry breaking in thin ribbons under compression. Extreme Mechanics Letters, 2021, 44, 101270.	4.1	10
38	Epidemic dynamics in inhomogeneous populations and the role of superspreaders. Physical Review Research, 2021, 3, .	3.6	9
39	Critical behavior of three-dimensional disordered Potts models with many states. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P05002.	2.3	8
40	The Janus project: boosting spin-glass simulations using FPGAs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 227-232.	0.4	5
41	Polymorphism of genetic ambigrams. Virus Evolution, 2021, 7, veab038.	4.9	5
42	A random-walk-based epidemiological model. Scientific Reports, 2021, 11, 19308.	3.3	5
43	Explicit generation of the branching tree of states in spin glasses. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P05002.	2.3	3
44	Folding pathways to crumpling in thermalized elastic frames. Physical Review E, 2019, 100, 042112.	2.1	3
45	An FPGA-Based Supercomputer for Statistical Physics: The Weird Case of Janus. , 2013, , 481-506.		3
46	Cluster Monte Carlo algorithm with a conserved order parameter. Physical Review E, 2009, 80, 015701.	2.1	2
47	Numerical study of the overlap Leeâ€"Yang singularities in the three-dimensional Edwardsâ€"Anderson model. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P02031.	2.3	2
48	Nonequilibrium spin glass dynamics with Janus. , 2009, , .		1
49	Polysomally protected viruses. Physical Biology, 2021, 18, 046009.	1.8	1
50	Spin Glass Simulations on the Janus Architecture: A Desperate Quest for Strong Scaling. Lecture Notes in Computer Science, 2013, , 528-537.	1.3	1
51	Invar: computer algebra for the invariants of the Riemann tensor. EAS Publications Series, 2008, 30, 223-226.	0.3	0