Luis Antonio Fernandez

List of Publications by Year
in descending order

132 papers	3,715 citations	101384 36 h-index	149479 56 g-index
132 all docs	132 docs citations	132 times ranked	1607 citing authors

#	Article	IF	Citations
1	Numerical test of the replica-symmetric Hamiltonian for correlations of the critical state of spin glasses in a field. Physical Review E, 2022, 105, .	0.8	2
2	Spin-glass dynamics in the presence of a magnetic field: exploration of microscopic properties. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 033301.	0.9	10
3	Temperature chaos is present in off-equilibrium spin-glass dynamics. Communications Physics, 2021, 4, .	2.0	13
4	Scaling Law Describes the Spin-Glass Response in Theory, Experiments, and Simulations. Physical Review Letters, 2020, 125, 237202.	2.9	12
5	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.	3.3	59
6	An experiment-oriented analysis of 2D spin-glass dynamics: a twelve time-decades scaling study. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 224002.	0.7	10
7	Dimensional crossover in the aging dynamics of spin glasses in a film geometry. Physical Review B, 2019, 100, .	1.1	5
8	Dynamic variational study of chaos: spin glasses in three dimensions. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 033302.	0.9	14
9	Out-of-equilibrium 2D Ising spin glass: almost, but not quite, a free-field theory. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 103301.	0.9	7
10	Aging Rate of Spin Glasses from Simulations Matches Experiments. Physical Review Letters, 2018, 120, 267203.	2.9	29
11	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.	3.3	23
12	Numerical Construction of the Aizenman-Wehr Metastate. Physical Review Letters, 2017, 119, 037203.	2.9	9
13	Matching Microscopic and Macroscopic Responses in Glasses. Physical Review Letters, 2017, 118, 157202.	2.9	31
14	Universal critical behavior of the two-dimensional Ising spin glass. Physical Review B, 2016, 94, .	1.1	21
15	Temperature chaos is a non-local effect. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 123301.	0.9	16
16	Testing statics-dynamics equivalence at the spin-glass transition in three dimensions. Physical Review B, 2015, 91, .	1.1	21
17	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.	0.9	38
18	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:mn></mml:mr spin glass in an external magnetic field. Physical Review E, 2014, 89, 032140.	0.8	31

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19	Phase transition in three-dimensional Heisenberg spin glasses with strong random anisotropies through a multi-GPU parallelization. Physical Review B, 2014, 89, .	1.1	24
20	Janus II: A new generation application-driven computer for spin-system simulations. Computer Physics Communications, 2014, 185, 550-559.	3.0	40
21	Critical parameters of the three-dimensional Ising spin glass. Physical Review B, 2013, 88, .	1.1	82
22	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.	2.9	20
23	Temperature chaos in 3D Ising spin glasses is driven by rare events. Europhysics Letters, 2013, 103, 67003.	0.7	33
24	An FPGA-Based Supercomputer for Statistical Physics: The Weird Case of Janus. , 2013, , 481-506.		3
25	Spin Glass Simulations on the Janus Architecture: A Desperate Quest for Strong Scaling. Lecture Notes in Computer Science, 2013, , 528-537.	1.0	1
26	Correspondence between long-range and short-range spin glasses. Physical Review B, 2012, 86, .	1.1	36
27	Equilibrium Fluid-Solid Coexistence of Hard Spheres. Physical Review Letters, 2012, 108, 165701.	2.9	69
28	Numerical test of the Cardy-Jacobsen conjecture in the site-diluted Potts model in three dimensions. Physical Review B, 2012, 86, .	1.1	10
29	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.	3.3	54
30	ISDEP: Integrator of stochastic differential equations for plasmas. Computer Physics Communications, 2012, 183, 1877-1883.	3.0	13
31	Reconfigurable computing for Monte Carlo simulations: Results and prospects of the Janus project. European Physical Journal: Special Topics, 2012, 210, 33-51.	1.2	21
32	Finite-size scaling analysis of the distributions of pseudo-critical temperatures in spin glasses. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P10019.	0.9	15
33	Critical behavior of the dilute antiferromagnet in a magnetic field. Physical Review B, 2011, 84, .	1.1	16
34	Sample-to-sample fluctuations of the overlap distributions in the three-dimensional Edwards-Anderson spin glass. Physical Review B, 2011, 84, .	1.1	17
35	Kinetic simulations of fast ions in stellarators. Nuclear Fusion, 2011, 51, 083040.	1.6	14
36	Impact of 3D features on ion collisional transport in ITER. Nuclear Fusion, 2010, 50, 125007.	1.6	7

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37	Spin glasses on the hypercube. Physical Review B, 2010, 81, .	1.1	8
38	Nature of the spin-glass phase at experimental length scales. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P06026.	0.9	70
39	Critical behavior of three-dimensional disordered Potts models with many states. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P05002.	0.9	8
40	Separation and fractionation of order and disorder in highly polydisperse systems. Physical Review E, 2010, 82, 021501.	0.8	10
41	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.	2.9	37
42	Mean-value identities as an opportunity for Monte Carlo error reduction. Physical Review E, 2009, 79, 051109.	0.8	15
43	Phase transition in the three dimensional Heisenberg spin glass: Finite-size scaling analysis. Physical Review B, 2009, 80, .	1.1	73
44	Spin glass phase in the four-state three-dimensional Potts model. Physical Review B, 2009, 79, .	1.1	14
45	Microcanonical finite-size scaling in second-order phase transitions with diverging specific heat. Physical Review E, 2009, 80, 051105.	0.8	7
46	Janus: An FPGA-Based System for High-Performance Scientific Computing. Computing in Science and Engineering, 2009, 11, 48-58.	1.2	75
47	An In-Depth View of the Microscopic Dynamics of Ising Spin Glasses at Fixed Temperature. Journal of Statistical Physics, 2009, 135, 1121-1158.	0.5	83
48	Tethered Monte Carlo: Computing the effective potential without critical slowing down. Nuclear Physics B, 2009, 807, 424-454.	0.9	19
49	Nonequilibrium spin glass dynamics with Janus. , 2009, , .		1
50	Simulating spin systems on IANUS, an FPGA-based computer. Computer Physics Communications, 2008, 178, 208-216.	3.0	57
51	Ion heating in transitions to CERC in the stellarator TJ-II. Nuclear Fusion, 2008, 48, 065008.	1.6	12
52	Critical properties of the four-state commutative random permutation glassy Potts model in three and four dimensions. Physical Review B, 2008, 77, .	1.1	12
53	First-Order Transition in a Three-Dimensional Disordered System. Physical Review Letters, 2008, 100, 057201.	2.9	33
54	Nonequilibrium Spin-Glass Dynamics from Picoseconds to a Tenth of a Second. Physical Review Letters, 2008, 101, 157201.	2.9	77

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55	First Order Phase Transition in a 3D disordered system. , 2008, , .		0
56	Ion kinetic transport in TJ-II. , 2008, , .		0
57	Optimized Monte Carlo method for glasses. Philosophical Magazine, 2007, 87, 581-586.	0.7	8
58	Phase Diagram of a Polydisperse Soft-Spheres Model for Liquids and Colloids. Physical Review Letters, 2007, 98, 085702.	2.9	35
59	Ion kinetic transport in the presence of collisions and electric field in TJ-II ECRH plasmas. Plasma Physics and Controlled Fusion, 2007, 49, 753-776.	0.9	23
60	Ianus: an adaptive FPGA computer. Computing in Science and Engineering, 2006, 8, 41-49.	1.2	24
61	Ion Orbits and Ion Confinement Studies on ECRH Plasmas in TJ-II Stellarator. Fusion Science and Technology, 2006, 50, 412-418.	0.6	15
62	Finite Size Effects in the Specific Heat of Glass-Formers. AIP Conference Proceedings, 2006, , .	0.3	0
63	Critical behavior of the specific heat in glass formers. Physical Review E, 2006, 73, 020501.	0.8	34
64	Numerical study of the enlarged O(5) symmetry of the 3D antiferromagnetic RP2 spin model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 628, 281-290.	1.5	14
65	Phase diagram of the bosonic double-exchange model. Physical Review B, 2005, 71, .	1.1	7
66	Dynamical generation of a gauge symmetry in the double-exchange model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2003, 560, 140-148.	1.5	3
67	Off-equilibrium fluctuation-dissipation relations in the3dIsing spin glass in a magnetic field. Physical Review B, 2003, 67, .	1.1	7
68	Phase diagram and influence of defects in the double perovskites. Physical Review B, 2003, 67, .	1.1	66
69	Interplay between double-exchange, superexchange, and Lifshitz localization in doped manganites. Physical Review B, 2002, 66, .	1.1	40
70	Discontinuous transitions in double-exchange materials. Physical Review B, 2001, 63, .	1.1	35
71	Hybrid Monte Carlo algorithm for the double exchange model. Nuclear Physics B, 2001, 596, 587-610.	0.9	106
72	First-order transitions in double exchange materials. Journal of Magnetism and Magnetic Materials, 2001, 226-230, 849-850.	1.0	0

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73	Monte Carlo determination of the phase diagram of the double-exchange model. Physical Review B, 2001, 64, .	1.1	39
74	Variational mean-field approach to the double-exchange model. Physical Review B, 2001, 63, .	1.1	41
75	A measure of conductivity for lattice fermions at finite density. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 480, 392-398.	1.5	0
76	Critical behavior in the site-diluted three-dimensional three-state Potts model. Physical Review B, 2000, 61, 3215-3218.	1.1	50
77	Critical behavior of the three-dimensional Ising spin glass. Physical Review B, 2000, 62, 14237-14245.	1.1	217
78	Scaling corrections: site percolation and Ising model in three dimensions. Journal of Physics A, 1999, 32, 1-13.	1.6	162
79	On the universality class of monopole percolation in scalar QED. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 452, 310-317.	1.5	0
80	Antiferromagnetic O(N) models in four dimensions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 419, 303-310.	1.5	2
81	Finite-size scaling of the d = 4 site-diluted Ising model. Nuclear Physics, Section B, Proceedings Supplements, 1998, 63, 625-627.	0.5	1
82	Study of the Coulomb-Higgs transition in the abelian Higgs model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 416, 163-168.	1.5	2
83	Finite Size Scaling and â€œperfectâ€•actions: the three dimensional Ising model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 441, 330-338.	1.5	37
84	The four-dimensional site-diluted Ising model: A finite-size scaling study. Nuclear Physics B, 1998, 512, 681-701.	0.9	60
85	Critical exponents of the three-dimensional diluted Ising model. Physical Review B, 1998, 58, 2740-2747.	1.1	202
86	Antiferromagnetic four-dimensional O(4) model. Physical Review D, 1997, 55, 2965-2973.	1.6	11
87	Is the antiferromagneticRP2model in four dimensions trivial?. Physical Review D, 1997, 55, 5067-5074.	1.6	8
88	Ising exponents in the two-dimensional site-diluted Ising model. Journal of Physics A, 1997, 30, 8379-8383.	1.6	63
89	Critical properties of the antiferromagnetic P2 model in three dimensions. Nuclear Physics B, 1997, 483, 707-736.	0.9	45
90	Measures of critical exponents in the four-dimensional site percolation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 400, 346-351.	1.5	59

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91	Monte Carlo studies of antiferromagnetic spin models in three dimensions. Nuclear Physics, Section B, Proceedings Supplements, 1996, 47, 767-770.	0.5	2
92	Phase diagram of d = 4 Ising model with two couplings. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 376, 148-153.	1.5	16
93	A multisite microcanonical updating method. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 374, 152-158.	1.5	6
94	New universality class in three dimensions?: the antiferromagnetic RP2 model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 378, 207-212.	1.5	71
95	Finite size effects on measures of critical exponents in d = 3 O(N) models. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 387, 125-131.	1.5	125
96	Monte Carlo study of O(3) antiferromagnetic models in three dimensions. Physical Review B, 1996, 53, 2537-2545.	1.1	40
97	Polyakov loops and finite-size effects of hadron masses in full lattice QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 345, 49-54.	1.5	1
98	APE results of hadron masses in full QCD simulations. Nuclear Physics, Section B, Proceedings Supplements, 1995, 42, 300-302.	0.5	0
99	A proposal of a Monte Carlo renormalization group transformation. Nuclear Physics, Section B, Proceedings Supplements, 1995, 42, 802-804.	0.5	0
100	Thermal and repulsive traffic flow. Physical Review E, 1995, 52, 5946-5954.	0.8	4
101	Tempering Dynamics and Relaxation Times in the 3D Ising Model. Journal De Physique, I, 1995, 5, 1247-1254.	1.2	5
102	THE COULOMB-HIGGS PHASE TRANSITION OF THE U(1)-HIGGS MODEL. International Journal of Modern Physics C, 1994, 05, 343-345.	0.8	2
103	Proposal of a renormalization group transformation for lattice field theories. Physical Review D, 1994, 50, 5935-5943.	1.6	5
104	The Coulomb-Higgs phase transition in Z8 and q = 8 U(1)-Higgs models. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 312, 305-309.	1.5	5
105	The U(1)-Higgs model: critical behaviour in the confining-Higgs region. Nuclear Physics B, 1993, 405, 574-592.	0.9	22
106	Microcanonical fermionic average method for Monte Carlo simulations of lattice gauge theories with dynamical fermions. Physical Review D, 1993, 48, 402-416.	1.6	17
107	Weak first order transitions. The two-dimensional Potts model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 277, 485-490.	1.5	43
108	The confining-Higgs phase transition in U(1)-Higgs LGT. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 296, 154-158.	1.5	6

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109	Finite size renormalization group study of U(1) gauge theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 267, 100-104.	1.5	16
110	A renormalization group study of a gauge theory: SU(3) at finite temperature. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 253, 200-204.	1.5	2
111	Renormalization group study of the three state three dimensional Potts model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 231, 157-160.	1.5	15
112	The deconfining phase transition and the glueball channels in pure gauge QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 220, 607-610.	1.5	14
113	The 3D Z3 spin model and the deconfinement transition in QCD: A problem of universality. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 217, 309-313.	1.5	22
114	Phase diagram of the Z(3) spin model in three dimensions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 217, 314-318.	1.5	19
115	New regimes in the initial cosmic string network. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 227, 347-351.	1.5	13
116	A new computation of the correlation length near the deconfining transition in SU(3). Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 224, 333-338.	1.5	14
117	From APE to APE-100: From 1 to 100 gflops in lattice gauge theory simulations. Computer Physics Communications, 1989, 57, 285-289.	3.0	12
118	A variational study of the phase diagram of the potts three state model versus Monte Carlo simulation. Physica A: Statistical Mechanics and Its Applications, 1989, 161, 284-299.	1.2	3
119	The hadronic mass spectrum in quenched lattice QCD: Î²=5.7. Nuclear Physics B, 1989, 317, 509-525.	0.9	55
120	The deconfining phase transition in lattice gauge SU(3). Nuclear Physics B, 1989, 318, 553-578.	0.9	31
121	The hadronic mass spectrum in quenched lattice QCD: Results at Î² = 5.7 and Î² = 6.0. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1988, 214, 115-119.	1.5	57
122	Scaling in lattice QCD: Glueball masses and string tension. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1988, 205, 535-539.	1.5	25
123	Glueball masses and string tension Smeared loop-loop correlation functions. Nuclear Physics B, 1988, 295, 51-64.	0.9	21
124	Order of the Deconfining Phase Transition in Pure-Gauge QCD. Physical Review Letters, 1988, 61, 1545-1548.	2.9	111
125	Proton Decay in a Nucleus Revisited: Pionic Effects. Progress of Theoretical Physics, 1988, 80, 868-873.	2.0	0
126	Stochastic quantization of Yang-Mills field theory: Gauge-fixing parameter dependence and equilibrium limit. Physical Review D, 1987, 36, 510-514.	1.6	2

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127	Glueball masses and the loop-loop correlation functions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1987, 197, 400-402.	1.5	48
128	On Fermi-like corrections in proton decay in nuclei. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1987, 190, 131-134.	1.5	1
129	Proton decay in a nucleus: Effects of the nuclear surface. Physical Review D, 1986, 33, 277-279.	1.6	2
130	Neutron-antineutron oscillations in nuclei and the ?quantum zeno effect?. Zeitschrift FÃ¼r Physik C-Particles and Fields, 1985, 26, 615-620.	1.5	0
131	Does proton decay follow the exponential law?. Zeitschrift FÃ¼r Physik C-Particles and Fields, 1984, 21, 353-356.	1.5	3
132	Proton decay in a nucleus: Nonrelativistic treatment of nuclear effects. Physical Review D, 1983, 27, 2656-2667.	1.6	7