Victor Martin-Mayor

List of Publications by Year
in descending order

146 papers	5,309 citations	81900 39 h-index	106344 65 g-index
149 all docs	149 docs citations	149 times ranked	2955 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, .	2.1	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.	2.3	10
3	How we are leading a 3-XORSAT challenge: From the energy landscape to the algorithm and its efficient implementation on GPUs (a). Europhysics Letters, 2021, 133, 60005.	2.0	6
4	Temperature chaos is present in off-equilibrium spin-glass dynamics. Communications Physics, 2021, 4, .	5.3	13
5	Slow growth of magnetic domains helps fast evolution routes for out-of-equilibrium dynamics. Physical Review E, 2021, 104, 044114.	2.1	11
6	Scaling Law Describes the Spin-Glass Response in Theory, Experiments, and Simulations. Physical Review Letters, 2020, 125, 237202.	7.8	12
7	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
8	Precursors of the spin glass transition in three dimensions. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 084016.	2.3	4
9	On the critical exponent Î± of the 5D random-field Ising model. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 093203.	2.3	4
10	Learning a local symmetry with neural networks. Physical Review E, 2019, 100, 050102.	2.1	12
11	Slowing down of spin glass correlation length growth: Simulations meet experiments. Physical Review B, 2019, 100, .	3.2	15
12	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.	2.1	10
13	Evidence for Supersymmetry in the Random-Field Ising Model at <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>D</mml:mi><mml:mo>=</mml:mo><mml:mn>5</mml:mn></mml:math>. Physical Review Letters, 2019, 122, 240603.	7.8	33
14	Analog errors in Ising machines. Quantum Science and Technology, 2019, 4, 02LT03.	5.8	27
15	Numerical study of barriers and valleys in the free-energy landscape of spin glasses. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 134002.	2.1	3
16	Dimensional crossover in the aging dynamics of spin glasses in a film geometry. Physical Review B, 2019, 100, .	3.2	5
17	Review of Recent Developments in the Random-Field Ising Model. Journal of Statistical Physics, 2018, 172, 665-672.	1.2	27
18	Dynamic variational study of chaos: spin glasses in three dimensions. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 033302.	2.3	14

#	Article	IF	Citations
19	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.	2.3	7
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	Advantages of Unfair Quantum Ground-State Sampling. Scientific Reports, 2017, 7, 1044.	3.3	15
23	Specific-heat exponent and modified hyperscaling in the 4D random-field Ising model. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 033302.	2.3	8
24	An Ising model for metal-organic frameworks. Journal of Chemical Physics, 2017, 147, 084704.	3.0	3
25	Temperature Scaling Law for Quantum Annealing Optimizers. Physical Review Letters, 2017, 119, 110502.	7.8	44
26	Numerical Construction of the Aizenman-Wehr Metastate. Physical Review Letters, 2017, 119, 037203.	7.8	9
27	Restoration of dimensional reduction in the random-field Ising model at five dimensions. Physical Review E, 2017, 95, 042117.	2.1	39
28	Matching Microscopic and Macroscopic Responses in Glasses. Physical Review Letters, 2017, 118, 157202.	7.8	31
29	Practical engineering of hard spin-glass instances. Physical Review A, 2016, 94, .	2.5	22
30	Universal critical behavior of the two-dimensional Ising spin glass. Physical Review B, 2016, 94, .	3.2	21
31	Efficient numerical methods for the random-field Ising model: Finite-size scaling, reweighting extrapolation, and computation of response functions. Physical Review E, 2016, 93, 063308.	2.1	30
32	Phase Transitions in Disordered Systems: The Example of the Random-Field Ising Model in Four Dimensions. Physical Review Letters, 2016, 116, 227201.	7.8	47
33	Temperature chaos is a non-local effect. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 123301.	2.3	16
34	Testing statics-dynamics equivalence at the spin-glass transition in three dimensions. Physical Review B, 2015, 91, .	3.2	21
35	Soft Modes, Localization, and Two-Level Systems in Spin Glasses. Physical Review Letters, 2015, 115, 267205.	7.8	49
36	Unraveling Quantum Annealers using Classical Hardness. Scientific Reports, 2015, 5, 15324.	3.3	60

#	Article	IF	Citations
37	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
38	Cumulative overlap distribution function in realistic spin glasses. Physical Review B, 2014, 90, .	3.2	14
39	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:mrow></mml:math> spin glass in an external magnetic field. Physical Review E, 2014, 89, 032140.	2.1	8
40	Phase transition in three-dimensional Heisenberg spin glasses with strong random anisotropies through a multi-GPU parallelization. Physical Review B, 2014, 89, .	3.2	24
41	Janus II: A new generation application-driven computer for spin-system simulations. Computer Physics Communications, 2014, 185, 550-559.	7.5	40
42	Critical parameters of the three-dimensional Ising spin glass. Physical Review B, 2013, 88, .	3.2	82
43	Universality in the Three-Dimensional Random-Field Ising Model. Physical Review Letters, 2013, 110, 227201.	7.8	96
44	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
45	Temperature chaos in 3D Ising spin glasses is driven by rare events. Europhysics Letters, 2013, 103, 67003.	2.0	33
46	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
47	An FPGA-Based Supercomputer for Statistical Physics: The Weird Case of Janus. , 2013, , 481-506.		3
48	Spin Glass Simulations on the Janus Architecture: A Desperate Quest for Strong Scaling. Lecture Notes in Computer Science, 2013, , 528-537.	1.3	1
49	Correspondence between long-range and short-range spin glasses. Physical Review B, 2012, 86, .	3.2	36
50	Equilibrium Fluid-Solid Coexistence of Hard Spheres. Physical Review Letters, 2012, 108, 165701.	7.8	69
51	Numerical test of the Cardy-Jacobsen conjecture in the site-diluted Potts model in three dimensions. Physical Review B, 2012, 86, .	3.2	10
52	Neutron scattering experiments and simulations near the magnetic percolation threshold of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">Fe</mml:mi><mml:mi mathvariant="normal">x</mml:mi></mml:msub><mml:msub><mml:mi mathvariant="normal">Zn</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi mathvariant="normal">x</mml:mi></mml:mrow></mml:msub><mml:msub><mml:mi mathvariant="norm	3.2	1
53	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
54	ISDEP: Integrator of stochastic differential equations for plasmas. Computer Physics Communications, 2012, 183, 1877-1883.	7.5	13

#	ARTICLE	IF	CITATIONS
55	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
56	Tethered Monte Carlo: Managing Rugged Free-Energy Landscapes with a Helmholtz-Potential Formalism. Journal of Statistical Physics, 2011, 144, 554-596.	1.2	10
57	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
58	On the high-density expansion for Euclidean random matrices. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P02015.	2.3	13
59	Ensemble equivalence in spin systems with short-range interactions. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P08024.	2.3	3
60	Critical behavior of the dilute antiferromagnet in a magnetic field. Physical Review B, 2011, 84, .	3.2	16
61	Three-dimensional Heisenberg spin glass under a weak random anisotropy. Physical Review B, 2011, 84, .	3.2	6
62	Sample-to-sample fluctuations of the overlap distributions in the three-dimensional Edwards-Anderson spin glass. Physical Review B, 2011, 84, .	3.2	17
63	Kinetic simulations of fast ions in stellarators. Nuclear Fusion, 2011, 51, 083040.	3.5	14
64	Impact of 3D features on ion collisional transport in ITER. Nuclear Fusion, 2010, 50, 125007.	3.5	7
65	Spin glasses on the hypercube. Physical Review B, 2010, 81, .	3.2	8
66	Nature of the spin-glass phase at experimental length scales. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P06026.	2.3	70
67	Critical behavior of three-dimensional disordered Potts models with many states. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P05002.	2.3	8
68	Separation and fractionation of order and disorder in highly polydisperse systems. Physical Review E, 2010, 82, 021501.	2.1	10
69	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
70	Cluster Monte Carlo algorithm with a conserved order parameter. Physical Review E, 2009, 80, 015701.	2.1	2
71	Mean-value identities as an opportunity for Monte Carlo error reduction. Physical Review E, 2009, 79, 051109.	2.1	15
72	Phase transition in the three dimensional Heisenberg spin glass: Finite-size scaling analysis. Physical Review B, 2009, 80, .	3.2	73

#	Article	IF	Citations
73	Spin glass phase in the four-state three-dimensional Potts model. Physical Review B, 2009, 79, .	3.2	14
74	Microcanonical finite-size scaling in second-order phase transitions with diverging specific heat. Physical Review E, 2009, 80, 051105.	2.1	7
75	Janus: An FPGA-Based System for High-Performance Scientific Computing. Computing in Science and Engineering, 2009, 11, 48-58.	1.2	75
76	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
77	Tethered Monte Carlo: Computing the effective potential without critical slowing down. Nuclear Physics B, 2009, 807, 424-454.	2.5	19
78	Nonequilibrium spin glass dynamics with Janus. , 2009, , .		1
79	Simulating spin systems on IANUS, an FPGA-based computer. Computer Physics Communications, 2008, 178, 208-216.	7.5	57
80	Ion heating in transitions to CERC in the stellarator TJ-II. Nuclear Fusion, 2008, 48, 065008.	3.5	12
81	Critical properties of the four-state commutative random permutation glassy Potts model in three and four dimensions. Physical Review B, 2008, 77, .	3.2	12
82	First-Order Transition in a Three-Dimensional Disordered System. Physical Review Letters, 2008, 100, 057201.	7.8	33
83	Nonequilibrium Spin-Glass Dynamics from Picoseconds to a Tenth of a Second. Physical Review Letters, 2008, 101, 157201.	7.8	77
84	Ion kinetic transport in TJ-II. , 2008, , .		0
85	MICROCANONICAL METHOD FOR THE STUDY OF FIRST-ORDER TRANSITIONS. , 2008, , .		0
86	Optimized Monte Carlo method for glasses. Philosophical Magazine, 2007, 87, 581-586.	1.6	8
87	Weak first-order transition in the three-dimensional site-diluted Ising antiferromagnet in a magnetic field. Physical Review B, 2007, 76, .	3.2	19
88	CamposetÂal.Reply:. Physical Review Letters, 2007, 99, .	7.8	3
89	Microcanonical Approach to the Simulation of First-Order Phase Transitions. Physical Review Letters, 2007, 98, 137207.	7.8	49
90	Phase Diagram of a Polydisperse Soft-Spheres Model for Liquids and Colloids. Physical Review Letters, 2007, 98, 085702.	7.8	35

#	Article	IF	Citations
91	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.	2.1	23
92	Ianus: an adaptive FPGA computer. Computing in Science and Engineering, 2006, 8, 41-49.	1.2	24
93	Spin-Glass Transition of the Three-Dimensional Heisenberg Spin Glass. Physical Review Letters, 2006, 97, 217204.	7.8	66
94	Ion Orbits and Ion Confinement Studies on ECRH Plasmas in TJ-II Stellarator. Fusion Science and Technology, 2006, 50, 412-418.	1.1	15
95	Critical behavior of the specific heat in glass formers. Physical Review E, 2006, 73, 020501.	2.1	34
96	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.	4.1	14
97	Anderson localization in Euclidean random matrices. Physical Review B, 2005, 71, .	3.2	16
98	Rejuvenation and Memory in Model Spin Glasses. Progress of Theoretical Physics Supplement, 2005, 157, 25-28.	0.1	3
99	Phase diagram of the bosonic double-exchange model. Physical Review B, 2005, 71, .	3.2	7
100	Rejuvenation and memory in model spin glasses in three and four dimensions. Physical Review B, 2005, 72, .	3.2	20
101	Asymptotic aging in structural glasses. Physical Review B, 2004, 70, .	3.2	16
102	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.	4.1	3
103	Phonon interpretation of the â€˜boson peakâ€™ in supercooled liquids. Nature, 2003, 422, 289-292.	27.8	291
104	Brillouin and boson peaks in glasses from vector Euclidean random matrix theory. Journal of Chemical Physics, 2003, 119, 8577-8591.	3.0	30
105	Three-dimensional randomly dilute Ising model: Monte Carlo results. Physical Review E, 2003, 68, 036136.	2.1	46
106	Phase diagram and influence of defects in the double perovskites. Physical Review B, 2003, 67, .	3.2	66
107	Dynamic structure factor of the three-dimensional Ising model with purely relaxational dynamics. Physical Review E, 2003, 68, 016110.	2.1	9
108	Ageing in spin-glasses in three, four and infinite dimensions. Journal of Physics A, 2003, 36, 10755-10771.	1.6	13

#	Article	IF	Citations
109	Critical structure factor in Ising systems. Physical Review E, 2002, 66, 026112.	2.1	24
110	Eigenvalue analysis of the density matrix of four-dimensional spin glasses supports replica symmetry breaking. Physical Review B, 2002, 66, .	3.2	1
111	COLOSSAL EFFECTS IN TRANSITION METAL OXIDES CAUSED BY INTRINSIC INHOMOGENEITIES. International Journal of Modern Physics B, 2002, 16, 3293-3293.	2.0	0
112	Vibrations in glasses and Euclidean random matrix theory. Journal of Physics Condensed Matter, 2002, 14, 2167-2179.	1.8	45
113	Vibrational spectra in glasses. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2002, 82, 637-649.	0.6	8
114	Lattice-Spin Mechanism in Colossal Magnetoresistive Manganites. Physical Review Letters, 2002, 88, 136401.	7.8	64
115	Interplay between double-exchange, superexchange, and Lifshitz localization in doped manganites. Physical Review B, 2002, 66, .	3.2	40
116	Vibrational spectra in glasses. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2002, 82, 637-649.	0.6	5
117	Colossal Effects in Transition Metal Oxides Caused by Intrinsic Inhomogeneities. Physical Review Letters, 2001, 87, 277202.	7.8	394
118	Discontinuous transitions in double-exchange materials. Physical Review B, 2001, 63, .	3.2	35
119	Hybrid Monte Carlo algorithm for the double exchange model. Nuclear Physics B, 2001, 596, 587-610.	2.5	106
120	Vibrational Spectrum of Topologically Disordered Systems. Physical Review Letters, 2001, 87, 085502.	7.8	70
121	Monte Carlo determination of the phase diagram of the double-exchange model. Physical Review B, 2001, 64, .	3.2	39
122	Variational mean-field approach to the double-exchange model. Physical Review B, 2001, 63, .	3.2	41
123	The dynamical structure factor in topologically disordered systems. Journal of Chemical Physics, 2001, 114, 8068-8081.	3.0	31
124	Summability of the perturbative expansion for a zero-dimensional disordered spin model. Journal of Physics A, 2000, 33, 841-850.	1.6	37
125	Critical behavior in the site-diluted three-dimensional three-state Potts model. Physical Review B, 2000, 61, 3215-3218.	3.2	50
126	Spin-glass ordering in diluted magnetic semiconductors: A Monte Carlo study. Physical Review B, 2000, 62, 4999-5002.	3.2	8

#	Article	IF	Citations
127	Dynamical structure factor in disordered systems. Physical Review E, 2000, 62, 2373-2379.	2.1	27
128	Critical behavior of the three-dimensional Ising spin glass. Physical Review B, 2000, 62, 14237-14245.	3.2	217
129	Scaling corrections: site percolation and Ising model in three dimensions. Journal of Physics A, 1999, 32, 1-13.	1.6	162
130	Phase diagram and quasiparticles of a lattice SU(2) scalar-fermion model in 2+1 dimensions. Physical Review D, 1999, 61, .	4.7	4
131	Finite-size scaling of the d = 4 site-diluted Ising model. Nuclear Physics, Section B, Proceedings Supplements, 1998, 63, 625-627.	0.4	1
132	A lattice field theoretical model for high-Tc superconductivity. Nuclear Physics, Section B, Proceedings Supplements, 1998, 63, 658-660.	0.4	1
133	The four-dimensional site-diluted Ising model: A finite-size scaling study. Nuclear Physics B, 1998, 512, 681-701.	2.5	60
134	Critical exponents of the three-dimensional diluted Ising model. Physical Review B, 1998, 58, 2740-2747.	3.2	202
135	Test for random number generators:â€,â€,Schwinger-Dyson equations for the Ising model. Physical Review E, 1998, 58, 6787-6791.	2.1	13
136	A model for the doped copper oxide compounds. Europhysics Letters, 1998, 42, 541-546.	2.0	1
137	Is the antiferromagneticRP2model in four dimensions trivial?. Physical Review D, 1997, 55, 5067-5074.	4.7	8
138	Ising exponents in the two-dimensional site-diluted Ising model. Journal of Physics A, 1997, 30, 8379-8383.	1.6	63
139	Critical properties of the antiferromagnetic P2 model in three dimensions. Nuclear Physics B, 1997, 483, 707-736.	2.5	45
140	Antiferromagnetism in four dimensions: search for non-triviality. Nuclear Physics, Section B, Proceedings Supplements, 1997, 53, 680-682.	0.4	0
141	Critical exponents and unusual properties of the broken phase in the 3d-RP2 antiferromagnetic model. Nuclear Physics, Section B, Proceedings Supplements, 1997, 53, 686-689.	0.4	5
142	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.	4.1	59
143	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.	4.1	71
144	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.	4.1	125

#	Article	IF	Citations
145	Monte Carlo study of O(3) antiferromagnetic models in three dimensions. Physical Review B, 1996, 53, 2537-2545.	3.2	40
146	Exploring Complex Landscapes with Classical Monte Carlo. Lecture Notes in Physics, 0, , 339-372.	0.7	0