

Mark A Novotny

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90
papers

2,485
citations

29
h-index

46
g-index

92
ext. papers

2,578
ext. citations

3.5
avg, IF

4.77
L-index

#	Paper	IF	Citations
90	Kinetic Ising Model in an Oscillating Field: Finite-Size Scaling at the Dynamic Phase Transition. <i>Physical Review Letters</i> , 1998 , 81, 834-837	7.4	176
89	Monte Carlo algorithms with absorbing Markov chains: Fast local algorithms for slow dynamics. <i>Physical Review Letters</i> , 1995 , 74, 1-5	7.4	125
88	Kinetic Ising model in an oscillating field: Avrami theory for the hysteretic response and finite-size scaling for the dynamic phase transition. <i>Physical Review E</i> , 1999 , 59, 2710-2729	2.4	114
87	Suppressing roughness of virtual times in parallel discrete-event simulations. <i>Science</i> , 2003 , 299, 677-9	33.3	113
86	Test of the Kolmogorov-Johnson-Mehl-Avrami picture of metastable decay in a model with microscopic dynamics. <i>Physical Review B</i> , 1999 , 59, 9053-9069	3.3	88
85	Numerical study of a mixed Ising ferrimagnetic system. <i>Journal of Physics Condensed Matter</i> , 1997 , 9, 5951-5964	1.8	82
84	Stochastic hysteresis and resonance in a kinetic Ising system. <i>Physical Review E</i> , 1998 , 57, 6512-6533	2.4	79
83	From massively parallel algorithms and fluctuating time horizons to nonequilibrium surface growth. <i>Physical Review Letters</i> , 2000 , 84, 1351-4	7.4	72
82	Critical behavior of the Baxter-Wu model with quenched impurities. <i>Physical Review B</i> , 1981 , 24, 1468-1481	3.1	69
81	First-Order Reentrant Transition in Granular Superconducting Films. <i>Physical Review Letters</i> , 1984 , 53, 2177-2180	7.4	66
80	Numerical investigation of a model for oxygen ordering in YBa ₂ Cu ₃ O _{6+x} . <i>Physical Review B</i> , 1990 , 41, 8772-8791	3.3	65
79	Magnetization switching in nanoscale ferromagnetic grains: description by a kinetic Ising model. <i>Journal of Magnetism and Magnetic Materials</i> , 1995 , 150, 37-50	2.8	63
78	An evaluation of the performance of Restricted Boltzmann Machines as a model for anomaly network intrusion detection. <i>Computer Networks</i> , 2018 , 144, 111-119	5.4	52
77	Electrical, magnetic, and optical properties of the tetrathiafulvalene (TTF) pseudohalides, (TTF) ₁₂ (SCN) ₇ and (TTF) ₁₂ (SeCN) ₇ . <i>Physical Review B</i> , 1977 , 15, 595-601	3.3	52
76	New coherent states in periodic arrays of ultrasmall Josephson junctions. <i>Physical Review B</i> , 1988 , 38, 4562-4579	3.3	50
75	Parallelization of a Dynamic Monte Carlo Algorithm: A Partially Rejection-Free Conservative Approach. <i>Journal of Computational Physics</i> , 1999 , 153, 488-508	4.1	49
74	Superexchange in copper(II) dimers. 1. Synthesis, characterization, and magnetic behavior of the novel di- μ -bromo-bis[bromo(dimethylglyoxime)copper(II)], [CuBr ₂ (dmgH)] ₂ . <i>Inorganic Chemistry</i> , 1980 , 19, 2470-2473	5.1	47

73	A new approach to an old algorithm for the Simulation of Ising-like Systems. <i>Computers in Physics</i> , 1995 , 9, 46		45
72	The nature of the transition in $d = 4$ $U(1)$ lattice gauge theory. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1986 , 172, 86-92	4.2	43
71	Effects of boundary conditions on magnetization switching in kinetic Ising models of nanoscale ferromagnets. <i>Physical Review B</i> , 1997 , 55, 11521-11540	3.3	37
70	Density of states of the two-dimensional Hubbard model on a 4×4 lattice. <i>Physical Review B</i> , 1992 , 46, 11779-11786	3.3	37
69	Simulated Dynamics of Underpotential Deposition of Cu with Sulfate on Au(111). <i>Journal of the Electrochemical Society</i> , 1999 , 146, 1035-1040	3.9	36
68	Method to study relaxation of metastable phases: Macroscopic mean-field dynamics. <i>Physical Review E</i> , 1995 , 52, 356-372	2.4	36
67	Structural phase transitions and oxygen-oxygen interaction energies in $YBa_2Cu_3O_{6+x}$. <i>Physical Review B</i> , 1992 , 46, 381-389	3.3	36
66	Diffusion-limited aggregation with surface tension. <i>Physical Review A</i> , 1988 , 38, 1019-1026	2.6	35
65	Optical, spin-resonance, and magnetoresistance studies of $(\text{tetrathiatetracene})_2(\text{iodide})_3$. The nature of the ground state. <i>Physical Review B</i> , 1978 , 17, 2853-2857	3.3	35
64	Projection Method for Statics and Dynamics of Lattice Spin Systems. <i>Physical Review Letters</i> , 1998 , 80, 3384-3387	7.4	32
63	Reweighting in Monte Carlo and Monte Carlo renormalization-group studies. <i>Physical Review B</i> , 1991 , 43, 5773-5783	3.3	32
62	MCRG study of d -dimensional random field Ising models. <i>Journal of Applied Physics</i> , 1982 , 53, 1925-1926	2.5	30
61	Low-temperature nucleation in a kinetic Ising model under different stochastic dynamics with local energy barriers. <i>Journal of Chemical Physics</i> , 2004 , 121, 4193-202	3.9	29
60	Analytical and computational study of magnetization switching in kinetic Ising systems with demagnetizing fields. <i>Physical Review B</i> , 1996 , 54, 4113-4127	3.3	27
59	Numerical transfer-matrix study of metastability in the $d=2$ Ising model. <i>Physical Review Letters</i> , 1993 , 71, 3898-3901	7.4	27
58	Critical exponents for the Ising model between one and two dimensions. <i>Physical Review B</i> , 1992 , 46, 2939-2950	3.3	25
57	Transfer matrix studies of $d \geq 3$ Ising models. <i>Journal of Applied Physics</i> , 1990 , 67, 5448-5450	2.5	25
56	Application of a constrained-transfer-matrix method to metastability in the $d = 2$ Ising ferromagnet. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1994 , 212, 194-229	3.3	24

55	Macroscopic effects of local oxygen fluctuations in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$. <i>Physical Review B</i> , 1991 , 43, 202-209	3.3	23
54	First-order structural phase transitions in a lattice-gas model for $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$. <i>Physical Review B</i> , 1990 , 42, 10738-10741	3.3	22
53	Electron paramagnetic resonance linewidths and line shapes for the molecular magnets Fe_8 and Mn_{12} . <i>Journal of Applied Physics</i> , 2002 , 91, 7167	2.5	21
52	Spinodals and transfer matrices in $d=1$ models. <i>Physical Review B</i> , 1986 , 33, 7729-7737	3.3	21
51	Monte Carlo renormalization-group study of the Baxter-Wu model. <i>Physical Review B</i> , 1982 , 26, 330-336	3.3	21
50	What is the dimension from scaling of finite systems?. <i>Physical Review Letters</i> , 1993 , 70, 109-112	7.4	20
49	Monte Carlo simulation of magnetization reversal in Fe sesquilayers on $\text{W}(110)$. <i>Physical Review B</i> , 1997 , 56, 11791-11796	3.3	19
48	Numerical transfer-matrix study of a model with competing metastable states. <i>Physical Review E</i> , 1994 , 50, 1930-1947	2.4	19
47	Asymptotic behavior and noise reduction in diffusion-limited aggregation models. <i>Physical Review A</i> , 1989 , 39, 2587-2592	2.6	19
46	Monte Carlo renormalization-group study of the impure Baxter-Wu model. <i>Physical Review B</i> , 1985 , 32, 3112-3117	3.3	19
45	Hysteresis loop areas in kinetic Ising models: Effects of the switching mechanism. <i>Journal of Applied Physics</i> , 1998 , 83, 6494-6496	2.5	18
44	Evidence for a New Ordered Phase in a Periodic Array of Ultrasmall Josephson Junctions. <i>Europhysics Letters</i> , 1987 , 3, 1295-1300	1.6	18
43	Simulations of metastable decay in two- and three-dimensional models with microscopic dynamics. <i>Journal of Non-Crystalline Solids</i> , 2000 , 274, 356-363	3.9	17
42	A new battery-charging method suggested by molecular dynamics simulations. <i>Physical Chemistry Chemical Physics</i> , 2010 , 12, 2740-3	3.6	16
41	Equilibrium and non-equilibrium applications of lattice-gas models in electrochemistry. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 1998 , 134, 3-14	5.1	15
40	Large-scale computer investigations of finite-temperature nucleation and growth phenomena in magnetization reversal and hysteresis (invited). <i>Journal of Applied Physics</i> , 2002 , 91, 6908	2.5	15
39	Monte Carlo Renormalization Group for $\text{SU}(2)$ Lattice Gauge Theory. <i>Physical Review Letters</i> , 1984 , 53, 527-530	7.4	15
38	Quantum decoherence scaling with bath size: Importance of dynamics, connectivity, and randomness. <i>Physical Review A</i> , 2013 , 87,	2.6	13

37	Thermal magnetization reversal in arrays of nanoparticles. <i>Journal of Applied Physics</i> , 2001 , 89, 7588-7590	5	11
36	Equivalence of transfer matrices. <i>Journal of Mathematical Physics</i> , 1988 , 29, 2280-2287	1.2	11
35	Kinetic behavior of the Baxter-Wu model with quenched impurities. <i>Physical Review B</i> , 1985 , 32, 5874-5879	3.9	11
34	EXTREME LONG-TIME DYNAMIC MONTE CARLO SIMULATIONS FOR METASTABLE DECAY IN THE d=3 ISING FERROMAGNET. <i>International Journal of Modern Physics C</i> , 2003 , 14, 121-131	1.1	10
33	Finite-range-scaling analysis of metastability in an Ising model with long-range interactions. <i>Physical Review E</i> , 1994 , 49, 2711-2725	2.4	10
32	First-order reversal curve analysis of homogeneous nucleation in the two-dimensional kinetic Ising model. <i>Journal of Applied Physics</i> , 2005 , 97, 10E510	2.5	9
31	ADVANCED DYNAMIC ALGORITHMS FOR THE DECAY OF METASTABLE PHASES IN DISCRETE SPIN MODELS: BRIDGING DISPARATE TIME SCALES. <i>International Journal of Modern Physics C</i> , 1999 , 10, 1483-1493	1.1	9
30	Numerical Transfer Matrix Study of the Ising Model between One and Two Dimensions. <i>Europhysics Letters</i> , 1992 , 17, 297-302	1.6	9
29	Dynamic Monte Carlo simulations for a square-lattice Ising ferromagnet with a phonon heat bath. <i>Computer Physics Communications</i> , 2002 , 147, 737-740	4.2	8
28	Critical finite-range scaling in scalar-field theories and Ising models. <i>Physical Review E</i> , 1993 , 47, 1474-1485	1.1	8
27	Monte Carlo renormalization group for quantum systems. <i>Physical Review B</i> , 1985 , 31, 1449-1456	3.3	8
26	Training a Quantum Annealing Based Restricted Boltzmann Machine on Cybersecurity Data. <i>IEEE Transactions on Emerging Topics in Computational Intelligence</i> , 2021 , 1-12	4.1	8
25	Low-temperature long-time simulations of Ising ferromagnets using the Monte Carlo with Absorbing Markov Chains method. <i>Computer Physics Communications</i> , 2002 , 147, 659-664	4.2	7
24	Numerical transfer-matrix study of surface-tension anisotropy in Ising models on square and cubic lattices. <i>Physical Review B</i> , 1993 , 48, 14584-14598	3.3	7
23	Transition state in magnetization reversal. <i>Journal of Applied Physics</i> , 2003 , 93, 6817-6819	2.5	6
22	APPLICATION OF THE PROJECTED DYNAMICS METHOD TO AN ANISOTROPIC HEISENBERG MODEL. <i>International Journal of Modern Physics C</i> , 1999 , 10, 1503-1512	1.1	6
21	Molecular fields in chainlike metamagnets. <i>Solid State Communications</i> , 1985 , 54, 843-844	1.6	6
20	Monte Carlo study of the arbitrary q-state Potts model. <i>Journal of Applied Physics</i> , 1982 , 53, 7997-7998	2.5	6

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18	FeTAC, a chainlike metamagnet. <i>Journal of Applied Physics</i> , 1985 , 57, 3343-3345	2.5	5
17	Magnetic small world nanomaterials: Physical small-world networks. <i>Journal of Applied Physics</i> , 2005 , 97, 10B309	2.5	4
16	Angular dependence of switching properties in single Fe nanopillars. <i>Journal of Applied Physics</i> , 2004 , 95, 6666-6668	2.5	4
15	Measuring the Impact of Accurate Feature Selection on the Performance of RBM in Comparison to State of the Art Machine Learning Algorithms. <i>Electronics (Switzerland)</i> , 2020 , 9, 1167	2.6	4
14	Comparison of Use of a 2000 Qubit D-Wave Quantum Annealer and MCMC for Sampling, Image Reconstruction, and Classification. <i>IEEE Transactions on Emerging Topics in Computational Intelligence</i> , 2021 , 5, 119-129	4.1	4
13	Thermodynamics of the fully frustrated quantum Josephson-junction array: A hybrid Monte Carlo study. <i>Physical Review B</i> , 1994 , 50, 1321-1324	3.3	3
12	Computer simulation of a 1d quantum ground state. <i>Journal of Applied Physics</i> , 1984 , 55, 2447-2449	2.5	3
11	Comparison of D-Wave Quantum Annealing and Classical Simulated Annealing for Local Minima Determination. <i>IEEE Journal on Selected Areas in Information Theory</i> , 2020 , 1, 515-525	2.5	3
10	Mapping the dynamics of multi-dimensional systems onto a nearest-neighbor coupled discrete set of states conserving the mean first-passage times: a projective dynamics approach. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011 , 44, 345004	2	2
9	SMALL PURE CARBON MOLECULES WITH SMALL-WORLD NETWORKS USING DENSITY FUNCTIONAL THEORY SIMULATIONS. <i>International Journal of Modern Physics C</i> , 2009 , 20, 1345-1356	1.1	2
8	QUANTUM TRANSPORT THROUGH FULLY CONNECTED BETHE LATTICES. <i>International Journal of Modern Physics C</i> , 2012 , 23, 1240010	1.1	2
7	Projective dynamics analysis of magnetization reversal. <i>Physica B: Condensed Matter</i> , 2004 , 343, 195-199	2.8	2
6	Momentum-space Monte Carlo renormalization-group procedure. <i>Physical Review B</i> , 1991 , 44, 4314-4325	3.3	2
5	The Ising model between one and two dimensions. <i>Journal of Applied Physics</i> , 1988 , 63, 3546-3547	2.5	2
4	Two modes of magnetization switching in a simulated iron nanopillar in an obliquely oriented field. <i>Journal of Physics Condensed Matter</i> , 2010 , 22, 236001	1.8	1
3	MIXING DIFFERENT RANDOM DEPOSITIONS IN NONEQUILIBRIUM SURFACE GROWTH MODELS. <i>International Journal of Modern Physics C</i> , 2009 , 20, 1377-1385	1.1	1
2	A New Charging Method for Li-Ion Batteries: Dependence of the Charging Time on the Direction of an Additional Oscillating Field. <i>ECS Transactions</i> , 2010 , 33, 33-37	1	

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