

A Nihat Berker

List of Publications by Year in descending order

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125
papers

5,866
citations

94269

37
h-index

74018

75
g-index

126
all docs

126
docs citations

126
times ranked

1739
citing authors

#	ARTICLE	IF	CITATIONS
1	Asymmetric phase diagrams, algebraically ordered Berezinskii-Kosterlitz-Thouless phase, and peninsular Potts flow structure in long-range spin glasses. Physical Review E, 2022, 105, 024122.	0.8	4
2	First-order to second-order phase transition changeover and latent heats of q -state Potts models in $d=2,3$ from a simple Migdal-Kadanoff adaptation. Physical Review E, 2022, 105, .	0.8	8
3	Metastable Potts droplets. Physical Review E, 2021, 103, 032102.	0.8	0
4	The effect of weekend curfews on epidemics: a Monte Carlo simulation. Turkish Journal of Biology, 2021, 45, 436-441.	2.1	3
5	Phase transitions of the variety of random-field Potts models. Physica A: Statistical Mechanics and Its Applications, 2021, 583, 126339.	1.2	4
6	Spin- s spin-glass phases in the $d=3$ Ising model. Physical Review E, 2021, 104, 044131.	0.8	1
7	Electric-field induced phase transitions in capillary electrophoretic systems. Physics of Fluids, 2021, 33, 107114.	1.6	2
8	Frustrated Potts model: Multiplicity eliminates chaos via reentrance. Physical Review E, 2020, 102, 022122.	0.8	3
9	Across dimensions: Two- and three-dimensional phase transitions from the iterative renormalization-group theory of chains. Physical Review E, 2020, 102, 032134.	0.8	1
10	Metastable reverse-phase droplets within ordered phases: Renormalization-group calculation of field and temperature dependence of limiting size. Physical Review E, 2020, 101, 042127.	0.8	1
11	Complete density calculations of q -state Potts and clock models: Reentrance of interface densities under symmetry breaking. Physical Review E, 2020, 102, 062135.	0.8	11
12	Maximally random discrete-spin systems with symmetric and asymmetric interactions and maximally degenerate ordering. Physical Review E, 2018, 97, 052102.	0.8	2
13	Lower lower-critical spin-glass dimension from quenched mixed-spatial-dimensional spin glasses. Physical Review E, 2018, 98, .	0.8	13
14	Phase transitions between different spin-glass phases and between different chaoses in quenched random chiral systems. Physical Review E, 2017, 96, 032103.	0.8	12
15	Devil's staircase continuum in the chiral clock spin glass with competing ferromagnetic-antiferromagnetic and left-right chiral interactions. Physical Review E, 2017, 95, 042125.	0.8	10
16	Stepwise positional-orientational order and the multicritical-multistructural global phase diagram of the $d=3$ model from renormalization-group theory. Physical Review E, 2016, 93, 062113.	0.8	8
17	Chiral Potts spin glass in $d=2$ 3 dimensions. Physical Review E, 2016, 94, 032121.	0.8	2
18	Lower-critical spin-glass dimension from 23 sequenced hierarchical models. Physical Review E, 2015, 92, 022136.	0.8	15

#	ARTICLE	IF	CITATIONS
19	Successively thresholded domain boundary roughening driven by pinning centers and missing bonds: Hard-spin mean-field theory applied to 3D Ising magnets. Physical Review E, 2015, 92, 062131.	0.8	2
20	Odd-q-state clock spin-glass models in three dimensions, asymmetric phase diagrams, and multiple algebraically ordered phases. Physical Review E, 2014, 90, 062112.	0.8	24
21	Overfrustrated and underfrustrated spin glasses in 3 and 2: Evolution of phase diagrams and chaos including spin-glass order in 2. Physical Review E, 2014, 89, 042139.	0.8	26
22	High- q -state clock spin glasses in three dimensions and the Lyapunov exponents of chaotic phases and chaotic phase boundaries. Physical Review E, 2013, 87, .	0.8	27
23	Deep spin-glass hysteresis-area collapse and scaling in the three-dimensional \hat{A}_{\pm} Ising model. Physical Review E, 2012, 86, 041107.	0.8	8
24	Universality aspects of the $d=3$ random-bond Blume-Capel model. Physical Review E, 2012, 85, 061106.	0.8	29
25	Interface-roughening phase diagram of the three-dimensional Ising model for all interaction anisotropies from hard-spin mean-field theory. Physical Review E, 2011, 84, 051129.	0.8	5
26	Phase separation and charge-ordered phases of the $d=3$ Falicov-Kimball model at nonzero temperature: Temperature-density-chemical potential global phase diagram from renormalization-group theory. Physical Review B, 2011, 84, .	1.1	2
27	Theory and simulations of water flow through carbon nanotubes: prospects and pitfalls. Journal of Physics Condensed Matter, 2011, 23, 184110.	0.7	32
28	Wang's Landau study of the 2d random-bond Blume-Capel model. Physics Procedia, 2010, 3, 1443-1446.	1.2	0
29	Uncovering the secrets of the 2D random-bond Blume-Capel model. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 2930-2933.	1.2	2
30	Multicritical points and crossover mediating the strong violation of universality: Wang-Landau determinations in the random-bond $d=2$ Blume-Capel model. Physical Review E, 2010, 81, 041113.	0.8	56
31	Comment on "Spin-glass attractor on tridimensional hierarchical lattices in the presence of an external magnetic field", Physical Review E, 2010, 81, 043101.	0.8	1
32	Tensor renormalization group: Local magnetizations, correlation functions, and phase diagrams of systems with quenched randomness. Physical Review E, 2010, 82, 051110.	0.8	3
33	Strong violation of critical phenomena universality: Wang-Landau study of the two-dimensional Blume-Capel model under bond randomness. Physical Review E, 2009, 79, 011125.	0.8	58
34	Critical percolation phase and thermal Berezinskii-Kosterlitz-Thouless transition in a scale-free network with short-range and long-range random bonds. Physical Review E, 2009, 80, 041118.	0.8	26
35	Frustrated further-neighbor antiferromagnetic and electron-hopping interactions in the $d=3$ model: Finite-temperature global phase diagrams from renormalization group theory. Physical Review B, 2009, 80, .	1.1	2
36	Quenched-vacancy induced spin-glass order. Physical Review E, 2009, 79, 021110.	0.8	12

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37	Infinitely robust order and local order-parameter tulips in Apollonian networks with quenched disorder. <i>Physical Review E</i> , 2009, 79, 061120.	0.8	14
38	Chaotic spin correlations in frustrated Ising hierarchical lattices. <i>Physical Review B</i> , 2009, 79, .	1.1	16
39	Blume-Emery-Griffiths spin glass and inverted tricritical points. <i>Physical Review E</i> , 2008, 78, 031104.	0.8	30
40	Finite-temperature phase diagram of nonmagnetic impurities in high-temperature superconductors using a $\langle d \rangle = 3$ with quenched disorder. <i>Physical Review B</i> , 2008, 78, .	1.1	13
41	Multicritical points for spin-glass models on hierarchical lattices. <i>Physical Review E</i> , 2008, 77, 061116.	0.8	38
42	Excitation spectrum gap and spin-wave velocity of XXZ Heisenberg chains: Global renormalization-group calculation. <i>Physical Review B</i> , 2008, 77, .	1.1	10
43	High-precision thermodynamic and critical properties from tensor renormalization-group flows. <i>Physical Review E</i> , 2008, 77, 011104.	0.8	12
44	Quantum-Mechanically Induced Asymmetry in the Phase Diagrams of Spin-Glass Systems. <i>Physical Review Letters</i> , 2008, 100, 027204.	2.9	14
45	Reentrant and forward phase diagrams of the anisotropic three-dimensional Ising spin glass. <i>Physical Review E</i> , 2008, 77, 061110.	0.8	20
46	Field-driven hysteresis of the $d=3$ Ising spin glass: Hard-spin mean-field theory. <i>Physical Review B</i> , 2007, 76, .	1.1	7
47	Inverted Berezinskii-Kosterlitz-Thouless singularity and high-temperature algebraic order in an Ising model on a scale-free hierarchical-lattice small-world network. <i>Physical Review E</i> , 2006, 73, 066126.	0.8	141
48	Multicritical point relations in three dual pairs of hierarchical-lattice Ising spin glasses. <i>Physical Review B</i> , 2005, 72, .	1.1	22
49	Phase diagrams and crossover in spatially anisotropic $d=3$ Ising, XY magnetic, and percolation systems: Exact renormalization-group solutions of hierarchical models. <i>Physical Review E</i> , 2005, 72, 026129.	0.8	16
50	Scaling of thermal hysteresis at nematic-smectic-A phase transition in a binary mixture. <i>Physical Review E</i> , 2004, 69, 031705.	0.8	13
51	Comparative study of liquid-crystalline ordering in a monomer, linear polymer, and graft copolymer by the photon transmission technique. <i>Phase Transitions</i> , 2003, 76, 991-998.	0.6	4
52	Smectic A-C-A Liquid Crystal Reentrance: A Photon Transmission Study. <i>Phase Transitions</i> , 2002, 75, 301-308.	0.6	10
53	THE A-C-A PHASE DIAGRAM OF MIXED LIQUID CRYSTALS: A PHOTON TRANSMISSION STUDY. <i>International Journal of Modern Physics B</i> , 2001, 15, 2161-2167.	1.0	7
54	Multiplicity of ordered phases in frustrated systems obtained from hard-spin mean-field theory. <i>Physical Review E</i> , 2000, 62, R1469-R1472.	0.8	24

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55	Finite-temperature phase diagram of the Hubbard model. <i>European Physical Journal B</i> , 2000, 17, 3-6.	0.6	3
56	Strongly Asymmetric Tricriticality of Quenched Random-Field Systems. <i>Physical Review Letters</i> , 1999, 82, 2572-2574.	2.9	7
57	Global random-field spin-glass phase diagrams in two and three dimensions. <i>Physical Review B</i> , 1998, 57, 426-431.	1.1	48
58	Renormalization-group study of superfluidity and phase separation of helium mixtures immersed in a disordered porous medium. <i>Physical Review B</i> , 1997, 56, 11865-11871.	1.1	6
59	Renormalization-Group Calculation of Local Magnetizations and Correlations: Random-Bond, Random-Field, and Spin-Glass Systems. <i>Physical Review Letters</i> , 1997, 78, 1564-1567.	2.9	13
60	Renormalization-group study of superfluidity and phase separation of helium mixtures immersed in a nonrandom aerogel. <i>Physical Review B</i> , 1997, 55, 3798-3802.	1.1	5
61	Quenched bond randomness: Superfluidity in porous media and the strong violation of universality. <i>Journal of Low Temperature Physics</i> , 1997, 107, 51-75.	0.6	7
62	Tricritical and Critical End-Point Phenomena under Random Bonds. <i>Physical Review Letters</i> , 1996, 76, 4380-4383.	2.9	78
63	Vicinal Si(100) surfaces under external strain. <i>Physical Review B</i> , 1996, 53, 1002-1005.	1.1	10
64	Correlated Random-Chemical-Potential Model for the Phase Transitions of Helium Mixtures in Porous Media. <i>Physical Review Letters</i> , 1995, 74, 426-429.	2.9	94
65	Finite-temperature phase diagram of the t - J model: Renormalization-group theory. <i>Physical Review B</i> , 1995, 51, 12458-12463.	1.1	14
66	Renormalization-group theory of the random-field Ising model in three dimensions. <i>Physical Review B</i> , 1995, 51, 8266-8269.	1.1	68
67	Spin-wave bound-state energies from an Ising model. <i>Physical Review B</i> , 1994, 49, 1073-1078.	1.1	8
68	Closed-form solutions and free energy of hard-spin mean-field theory of a fully frustrated system. <i>Physical Review E</i> , 1994, 49, 2680-2683.	0.8	16
69	Critical behavior induced by quenched disorder. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1993, 194, 72-76.	1.2	124
70	Phase diagram of the Ising model on the square lattice with crossed diagonal bonds. <i>Physical Review B</i> , 1993, 48, 12393-12398.	1.1	19
71	Renormalization-group theory of an internal critical-end-point structure: The Blume-Emery-Griffiths model with biquadratic repulsion. <i>Physical Review B</i> , 1993, 47, 15019-15022.	1.1	47
72	Smectic-Corder, in-plane domains, and nematic reentrance in a microscopic model of liquid crystals. <i>Physical Review Letters</i> , 1992, 68, 333-336.	2.9	38

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73	Multicritical phase diagrams of the Blume-Emery-Griffiths model with repulsive biquadratic coupling. Physical Review Letters, 1991, 67, 1027-1030.	2.9	215
74	Monte Carlo mean-field theory and frustrated systems in two and three dimensions. Physical Review Letters, 1991, 66, 377-380.	2.9	91
75	Statistical Mechanics of Phase Transitions with a Hierarchy of Structures. Materials Research Society Symposia Proceedings, 1991, 255, 309.	0.1	0
76	Dimensionality effects on the multicritical phase diagrams of the Blume-Emery-Griffiths model with repulsive biquadratic coupling: Mean-field and renormalization-group studies. Journal of Applied Physics, 1991, 70, 6101-6103.	1.1	63
77	Hard-spin mean-field theory: Formulation for Ising, XY, and other models. Journal of Applied Physics, 1991, 70, 6074-6076.	1.1	26
78	Absence of temperature-driven first-order phase transitions in systems with random bonds (invited). Journal of Applied Physics, 1991, 70, 5941-5945.	1.1	92
79	Netz and Berker reply. Physical Review Letters, 1991, 67, 1808-1808.	2.9	18
80	Alerhandet al. Reply. Physical Review Letters, 1991, 66, 962-962.	2.9	23
81	Absence of Temperature-Driven First-Order Phase Transitions in Systems with Random Bonds. NATO ASI Series Series B: Physics, 1991, , 411-417.	0.2	0
82	Random-field mechanism in random-bond multicritical systems (abstract). Journal of Applied Physics, 1990, 67, 5991-5991.	1.1	0
83	Harris criterion for direct and orthogonal quenched randomness. Physical Review B, 1990, 42, 8640-8642.	1.1	16
84	Finite-temperature phase diagram of vicinal Si(100) surfaces. Physical Review Letters, 1990, 64, 2406-2409.	2.9	315
85	Mixtures in the frustrated spin-gas theory of reentrant polar liquid crystals. Physical Review A, 1989, 39, 4201-4206.	1.0	12
86	Pressure studies on phase transitions in 4-alkoxyphenyl-4-nitrobenzoxybenzoates. Physical Review A, 1989, 39, 4341-4344.	1.0	13
87	Random-Field Mechanism in Random-Bond Multicritical Systems. Physical Review Letters, 1989, 63, 2433-2433.	2.9	55
88	Random-field mechanism in random-bond multicritical systems. Physical Review Letters, 1989, 62, 2507-2510.	2.9	282
89	Equimagnetization lines in the hybrid-order phase diagram of the $d=3$ random-field Ising model (invited). Journal of Applied Physics, 1988, 64, 5785-5786.	1.1	29
90	Molecular structure and reentrant phases in polar liquid crystals. Journal De Physique, 1988, 49, 353-362.	1.8	50

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91	Reentrant transition enthalpies of liquid crystals: The frustrated spin-gas model and experiments. <i>Physical Review A</i> , 1987, 35, 1371-1375.	1.0	43
92	The Frustrated Spin-Gas Theory of Multiply Reentrant Liquid Crystals. <i>NATO ASI Series Series B: Physics</i> , 1987, , 205-213.	0.2	6
93	Modified hyperscaling relation for phase transitions under random fields. <i>Physical Review B</i> , 1986, 33, 4712-4715.	1.1	28
94	Quadruple reentrance (nematic-smectic-Ad-nematic-smectic-Ad-nematic-smectic-A1) from the frustrated spin-gas model of liquid crystals. <i>Physical Review A</i> , 1986, 33, 1158-1162.	1.0	67
95	Summary Abstract: Theory of reentrant melting of krypton adsorbed on graphite. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1985, 3, 1592-1593.	0.9	4
96	Reentrant melting of krypton adsorbed on graphite and the helical Potts-lattice-gas model. <i>Physical Review B</i> , 1985, 31, 4527-4537.	1.1	54
97	Magnetic susceptibilities of cluster-hierarchical models. <i>Physical Review B</i> , 1984, 29, 1315-1320.	1.1	44
98	Biaxial order in liquid crystals and their mixtures: A Potts-Ising model. <i>Physical Review A</i> , 1984, 30, 2562-2567.	1.0	24
99	Fully and partially frustrated simple-cubic Ising models: Landau-Ginzburg-Wilson theory. <i>Physical Review B</i> , 1984, 30, 1362-1365.	1.1	52
100	Ordering under random fields: Renormalization-group arguments. <i>Physical Review B</i> , 1984, 29, 5243-5245.	1.1	44
101	Oxygen chemisorbed on Ni(100): A renormalization-group study of the global phase diagram. <i>Physical Review B</i> , 1984, 29, 1279-1286.	1.1	30
102	Orderings and renormalization-group flows of a stacked frustrated triangular system in three dimensions. <i>Journal of Applied Physics</i> , 1984, 55, 2416-2418.	1.1	39
103	Orderings of a stacked frustrated triangular system in three dimensions. <i>Physical Review B</i> , 1984, 29, 5250-5252.	1.1	132
104	Scale-invariant quenched disorder and its stability criterion at random critical points. <i>Physical Review B</i> , 1984, 29, 2630-2635.	1.1	100
105	Hierarchical models and chaotic spin glasses. <i>Journal of Statistical Physics</i> , 1984, 36, 787-793.	0.5	41
106	Chaotic spin glasses: An upper critical dimension (invited). <i>Journal of Applied Physics</i> , 1984, 55, 1646-1648.	1.1	26
107	Critical behavior of the three-state Potts model: Monte Carlo renormalization group. <i>Physical Review B</i> , 1983, 28, 3897-3903.	1.1	6
108	Cratering due to surface defects in the Gaussian model. <i>Journal of Chemical Physics</i> , 1983, 78, 529-535.	1.2	2

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109	Spin-Glass Behavior in Frustrated Ising Models with Chaotic Renormalization-Group Trajectories. <i>Physical Review Letters</i> , 1982, 48, 767-770.	2.9	209
110	Exact criticality condition for randomly layered Ising models with competing interactions on a square lattice. <i>Physical Review B</i> , 1982, 26, 219-225.	1.1	14
111	First- and second-order phase transitions in Potts models: Competing mechanisms (invited). <i>Journal of Applied Physics</i> , 1982, 53, 7923-7926.	1.1	19
112	Amorphously packed, frustrated hierarchical models: Chaotic rescaling and spin-glass behavior. <i>Journal of Applied Physics</i> , 1982, 53, 7974-7976.	1.1	49
113	Random-field effects in metamagnet tricritical-point measurements. <i>Physical Review B</i> , 1982, 26, 3751-3757.	1.1	24
114	Hyperscaling and crossover exponents near the percolation threshold. <i>Journal of Physics C: Solid State Physics</i> , 1982, 15, L801-L805.	1.5	10
115	Scaling for first-order phase transitions in thermodynamic and finite systems. <i>Physical Review B</i> , 1982, 26, 2507-2513.	1.1	437
116	Commensurate-Incommensurate Phase Diagrams for Overlayers from a Helical Potts Model. <i>Physical Review Letters</i> , 1982, 48, 1552-1555.	2.9	114
117	Frustrated Spin-Gas Model for Doubly Reentrant Liquid Crystals. <i>Physical Review Letters</i> , 1981, 47, 1469-1472.	2.9	98
118	Critical exponents and marginality of the four-state Potts model: Monte Carlo renormalization group. <i>Physical Review B</i> , 1981, 24, 6732-6735.	1.1	26
119	Multicritical Phase Diagram of Gases Adsorbed on Graphite: Temperature Variation and Finite-Size Effects. <i>Physical Review Letters</i> , 1979, 42, 843-846.	2.9	94
120	A binding site model of membrane transport: Binary and cooperative flows. <i>Journal of Membrane Biology</i> , 1979, 50, 205-224.	1.0	0
121	Renormalisation-group calculations of finite systems: order parameter and specific heat for epitaxial ordering. <i>Journal of Physics C: Solid State Physics</i> , 1979, 12, 4961-4975.	1.5	383
122	First- and Second-Order Phase Transitions in Potts Models: Renormalization-Group Solution. <i>Physical Review Letters</i> , 1979, 43, 737-740.	2.9	359
123	Superfluidity and phase separation in helium films. <i>Physical Review B</i> , 1979, 19, 2488-2503.	1.1	184
124	Blume-Emery-Griffiths-Potts model in two dimensions: Phase diagram and critical properties from a position-space renormalization group. <i>Physical Review B</i> , 1976, 14, 4946-4963.	1.1	334
125	Critical interactions for the triangular spin-Ising model by a spin-restructuring transformation. <i>Physical Review B</i> , 1975, 12, 2752-2758.	1.1	26