

Anders W Sandvik

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

147
papers

6,522
citations

41
h-index

77
g-index

152
ext. papers

7,602
ext. citations

4.7
avg, IF

6.54
L-index

#	Paper	IF	Citations
147	Quantum criticality and spin liquid phase in the Shastry-Sutherland model. <i>Physical Review B</i> , 2022 , 105,	3.3	2
146	Emergent O(4) symmetry at the phase transition from plaquette-singlet to antiferromagnetic order in quasi-two-dimensional quantum magnets*. <i>Chinese Physics B</i> , 2021 , 30, 067505	1.2	3
145	Extreme Suppression of Antiferromagnetic Order and Critical Scaling in a Two-Dimensional Random Quantum Magnet. <i>Physical Review Letters</i> , 2021 , 126, 037201	7.4	4
144	Unconventional U(1) to Z _q crossover in quantum and classical q-state clock models. <i>Physical Review B</i> , 2021 , 103,	3.3	5
143	Z ₂ topological order and first-order quantum phase transitions in systems with combinatorial gauge symmetry. <i>Physical Review B</i> , 2021 , 104,	3.3	1
142	Quantum Phases of SrCu ₂ (BO ₃) ₂ from High-Pressure Thermodynamics. <i>Physical Review Letters</i> , 2020 , 124, 206602	7.4	12
141	Consistent Scaling Exponents at the Deconfined Quantum-Critical Point. <i>Chinese Physics Letters</i> , 2020 , 37, 057502	1.8	9
140	Temperature dependence of the [Formula: see text] anomaly in the excitation spectrum of the 2D quantum Heisenberg antiferromagnet. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 374007	1.8	1
139	Scaling and Diabatic Effects in Quantum Annealing with a D-Wave Device. <i>Physical Review Letters</i> , 2020 , 124, 090502	7.4	15
138	Monte Carlo Renormalization Flows in the Space of Relevant and Irrelevant Operators: Application to Three-Dimensional Clock Models. <i>Physical Review Letters</i> , 2020 , 124, 080602	7.4	7
137	Hilbert space fragmentation and Ashkin-Teller criticality in fluctuation coupled Ising models. <i>Physical Review B</i> , 2020 , 101,	3.3	4
136	Existence of a Spectral Gap in the Affleck-Kennedy-Lieb-Tasaki Model on the Hexagonal Lattice. <i>Physical Review Letters</i> , 2020 , 124, 177204	7.4	7
135	Comment on Gapless spin liquid ground state of the spin-1/2 J ₁ J ₂ Heisenberg model on square lattices. <i>Physical Review B</i> , 2020 , 101,	3.3	3
134	Multicritical Deconfined Quantum Criticality and Lifshitz Point of a Helical Valence-Bond Phase. <i>Physical Review Letters</i> , 2020 , 125, 257204	7.4	7
133	Valence-bond solids, vestigial order, and emergent SO(5) symmetry in a two-dimensional quantum magnet. <i>Physical Review Research</i> , 2020 , 2,	3.9	5
132	Tunable deconfined quantum criticality and interplay of different valence-bond solid phases. <i>Chinese Physics B</i> , 2020 , 29, 057506	1.2	6
131	Quantum-critical scaling properties of the two-dimensional random-singlet state. <i>Physical Review B</i> , 2020 , 102,	3.3	2

130	Pair hopping in systems of strongly interacting hard-core bosons. <i>Physical Review B</i> , 2019 , 100,	3.3	3
129	NMR relaxation in the spin-1 Heisenberg chain. <i>Physical Review B</i> , 2019 , 100,	3.3	9
128	Detecting Signals of Weakly First-order Phase Transitions in Two-dimensional Potts Models. <i>Journal of the Physical Society of Japan</i> , 2019 , 88, 034006	1.5	14
127	Symmetry-enhanced discontinuous phase transition in a two-dimensional quantum magnet. <i>Nature Physics</i> , 2019 , 15, 678-682	16.2	28
126	The AKLT Model on a Hexagonal Chain is Gapped. <i>Journal of Statistical Physics</i> , 2019 , 177, 1077-1088	1.5	4
125	Dynamic scaling of topological ordering in classical systems. <i>Physical Review B</i> , 2018 , 97,	3.3	7
124	Dynamical properties of the S=12 random Heisenberg chain. <i>Physical Review B</i> , 2018 , 97,	3.3	14
123	Numerical investigations of SO(4) emergent extended symmetry in spin-12 Heisenberg antiferromagnetic chains. <i>Physical Review B</i> , 2018 , 98,	3.3	7
122	Metamagnetism and zero-scale-factor universality in the two-dimensional JQ model. <i>Physical Review B</i> , 2018 , 98,	3.3	7
121	Dynamical signature of fractionalization at a deconfined quantum critical point. <i>Physical Review B</i> , 2018 , 98,	3.3	38
120	Typicality at quantum-critical points. <i>Chinese Physics B</i> , 2018 , 27, 087501	1.2	2
119	Random-Singlet Phase in Disordered Two-Dimensional Quantum Magnets. <i>Physical Review X</i> , 2018 , 8,	9.1	21
118	Anomalous Quantum-Critical Scaling Corrections in Two-Dimensional Antiferromagnets. <i>Physical Review Letters</i> , 2018 , 121, 117202	7.4	12
117	Critical Level Crossings and Gapless Spin Liquid in the Square-Lattice Spin-1/2 $J_{\{1\}}-J_{\{2\}}$ Heisenberg Antiferromagnet. <i>Physical Review Letters</i> , 2018 , 121, 107202	7.4	46
116	Dynamic scaling in the two-dimensional Ising spin glass with normal-distributed couplings. <i>Physical Review E</i> , 2017 , 96, 052102	2.4	5
115	Duality between the Deconfined Quantum-Critical Point and the Bosonic Topological Transition. <i>Physical Review X</i> , 2017 , 7,	9.1	63
114	Dynamic scaling of the restoration of rotational symmetry in Heisenberg quantum antiferromagnets. <i>Physical Review B</i> , 2017 , 96,	3.3	4
113	Confinement in the Bulk, Deconfinement on the Wall: Infrared Equivalence between Compactified QCD and Quantum Magnets. <i>Physical Review Letters</i> , 2017 , 119, 091601	7.4	33

112	Modulated phases in a three-dimensional Maier-Saupe model with competing interactions. <i>Physical Review E</i> , 2017 , 96, 012137	2.4	2
111	Amplitude Mode in Three-Dimensional Dimerized Antiferromagnets. <i>Physical Review Letters</i> , 2017 , 118, 147207	7.4	30
110	Indicators of conformal field theory: Entanglement entropy and multiple-point correlators. <i>Physical Review B</i> , 2017 , 96,	3.3	3
109	Dual time scales in simulated annealing of a two-dimensional Ising spin glass. <i>Physical Review E</i> , 2017 , 95, 052133	2.4	8
108	Field-driven quantum phase transitions in S=12 spin chains. <i>Physical Review B</i> , 2017 , 95,	3.3	10
107	Nearly Deconfined Spinon Excitations in the Square-Lattice Spin-1/2 Heisenberg Antiferromagnet. <i>Physical Review X</i> , 2017 , 7,	9.1	48
106	Level spectroscopy in a two-dimensional quantum magnet: Linearly dispersing spinons at the deconfined quantum critical point. <i>Physical Review B</i> , 2016 , 94,	3.3	20
105	Quantum criticality with two length scales. <i>Science</i> , 2016 , 352, 213-6	33.3	109
104	Properties of the random-singlet phase: From the disordered Heisenberg chain to an amorphous valence-bond solid. <i>Physical Review B</i> , 2016 , 94,	3.3	15
103	Constrained sampling method for analytic continuation. <i>Physical Review E</i> , 2016 , 94, 063308	2.4	39
102	Quantum versus classical annealing: insights from scaling theory and results for spin glasses on 3-regular graphs. <i>Physical Review Letters</i> , 2015 , 114, 147203	7.4	30
101	Anomalous quantum glass of bosons in a random potential in two dimensions. <i>Physical Review Letters</i> , 2015 , 114, 105303	7.4	11
100	Emergent topological excitations in a two-dimensional quantum spin system. <i>Physical Review B</i> , 2015 , 91,	3.3	10
99	Quantum Monte Carlo studies of spinons in one-dimensional spin systems. <i>Physical Review B</i> , 2015 , 92,	3.3	10
98	Velocity of excitations in ordered, disordered, and critical antiferromagnets. <i>Physical Review B</i> , 2015 , 92,	3.3	20
97	Multiplicative logarithmic corrections to quantum criticality in three-dimensional dimerized antiferromagnets. <i>Physical Review B</i> , 2015 , 92,	3.3	19
96	Universal dynamic scaling in three-dimensional Ising spin glasses. <i>Physical Review E</i> , 2015 , 92, 022128	2.4	15
95	Mott glass phase in a diluted bilayer Heisenberg quantum antiferromagnet. <i>Journal of Physics: Conference Series</i> , 2015 , 640, 012045	0.3	1

94	Topological properties of a Valence-Bond-Solid. <i>Journal of Physics: Conference Series</i> , 2015 , 640, 012048	0.3	0.3
93	1D valence bond solids in a magnetic field. <i>Journal of Physics: Conference Series</i> , 2015 , 640, 012043	0.3	5
92	Dynamic scaling at classical phase transitions approached through nonequilibrium quenching. <i>Physical Review B</i> , 2014 , 89,	3.3	41
91	Criticality and Mott glass phase in a disordered two-dimensional quantum spin system. <i>Physical Review B</i> , 2014 , 90,	3.3	9
90	Phase transitions in the frustrated Ising model on the square lattice. <i>Physical Review B</i> , 2013 , 87,	3.3	49
89	Bridging Lattice-Scale Physics and Continuum Field Theory with Quantum Monte Carlo Simulations. <i>Annual Review of Condensed Matter Physics</i> , 2013 , 4, 179-215	19.7	78
88	Thermal valence-bond-solid transition of quantum spins in two dimensions. <i>Physical Review B</i> , 2013 , 87,	3.3	12
87	Quasi-adiabatic quantum Monte Carlo algorithm for quantum evolution in imaginary time. <i>Physical Review B</i> , 2013 , 87,	3.3	22
86	Confinement and deconfinement of spinons in two dimensions. <i>Physical Review Letters</i> , 2013 , 110, 217213	3.3	24
85	Finite-size scaling method for the Berezinskii-Kosterlitz-Thouless transition. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2013 , 2013, P09001	1.9	33
84	Lattice model for the SU(N) Nèl to valence-bond solid quantum phase transition at large N. <i>Physical Review Letters</i> , 2012 , 108, 137201	7.4	79
83	Correlated valence-bond states. <i>Physical Review B</i> , 2012 , 86,	3.3	10
82	Antiferromagnetic order in systems with doublet Stot=12 ground states. <i>Physical Review B</i> , 2012 , 86,	3.3	1
81	Finite-size scaling and boundary effects in two-dimensional valence-bond solids. <i>Physical Review B</i> , 2012 , 85,	3.3	57
80	Universal Nèl temperature in three-dimensional quantum antiferromagnets. <i>Physical Review B</i> , 2012 , 85,	3.3	15
79	Ashkin-teller criticality and pseudo-first-order behavior in a frustrated Ising model on the square lattice. <i>Physical Review Letters</i> , 2012 , 108, 045702	7.4	71
78	Thermodynamics of a gas of deconfined bosonic spinons in two dimensions. <i>Physical Review Letters</i> , 2011 , 106, 207203	7.4	20
77	Properties of resonating-valence-bond spin liquids and critical dimer models. <i>Physical Review B</i> , 2011 , 84,	3.3	50

76	Method to characterize spinons as emergent elementary particles. <i>Physical Review Letters</i> , 2011 , 107, 157201	7.4	28
75	Plaquette renormalization scheme for tensor network states. <i>Physical Review E</i> , 2011 , 83, 056703	2.4	13
74	Definitions of entanglement entropy of spin systems in the valence-bond basis. <i>Physical Review B</i> , 2010 , 82,	3.3	8
73	Continuous quantum phase transition between an antiferromagnet and a valence-bond solid in two dimensions: evidence for logarithmic corrections to scaling. <i>Physical Review Letters</i> , 2010 , 104, 177201	7.4	117
72	Quantum phase transitions in disordered dimerized quantum spin models and the Harris criterion. <i>Physical Review B</i> , 2010 , 82,	3.3	13
71	Example of a first-order Néel to valence-bond-solid transition in two dimensions. <i>Physical Review B</i> , 2010 , 82,	3.3	31
70	Symmetry breaking and criticality in tensor-product states. <i>Physical Review B</i> , 2010 , 82,	3.3	26
69	Low-energy excitations of two-dimensional diluted Heisenberg quantum antiferromagnets. <i>Physical Review B</i> , 2010 , 81,	3.3	24
68	Loop updates for variational and projector quantum Monte Carlo simulations in the valence-bond basis. <i>Physical Review B</i> , 2010 , 82,	3.3	83
67	Effects of edge disorder in nanoscale antiferromagnetic clusters. <i>Physical Review B</i> , 2010 , 82,	3.3	2
66	Ground states of a frustrated quantum spin chain with long-range interactions. <i>Physical Review Letters</i> , 2010 , 104, 137204	7.4	47
65	Computational Studies of Quantum Spin Systems 2010 ,		219
64	Antiferromagnetic to valence-bond-solid transitions in two-dimensional SU(N) Heisenberg models with multispin interactions. <i>Physical Review B</i> , 2009 , 80,	3.3	137
63	Impurity-induced frustration in correlated oxides. <i>Physical Review Letters</i> , 2009 , 102, 167201	7.4	13
62	Edge effects in the two-dimensional spin-12 Heisenberg antiferromagnet. <i>Physical Review B</i> , 2009 , 79,	3.3	11
61	Z ₄ to U(1) crossover of the order-parameter symmetry in a two-dimensional valence-bond solid. <i>Physical Review B</i> , 2009 , 80,	3.3	5
60	Strong through-space two-halide magnetic exchange of -234 K in (2,5-dimethylpyrazine)copper(II) bromide. <i>Chemical Communications</i> , 2009 , 1359-61	5.8	32
59	Quantum Monte Carlo simulations of bosonic and fermionic impurities in a two-dimensional hard-core boson system. <i>Physical Review Letters</i> , 2008 , 101, 120405	7.4	1

58	Scale-renormalized matrix-product states for correlated quantum systems. <i>Physical Review Letters</i> , 2008 , 101, 140603	7.4	5
57	Evidence for deconfined quantum criticality in a two-dimensional Heisenberg model with four-spin interactions. <i>Physical Review Letters</i> , 2007 , 98, 227202	7.4	312
56	Variational ground states of two-dimensional antiferromagnets in the valence bond basis. <i>Physical Review B</i> , 2007 , 76,	3.3	31
55	Anomalous curie response of impurities in quantum-critical spin-1/2 Heisenberg antiferromagnets. <i>Physical Review Letters</i> , 2007 , 99, 027205	7.4	13
54	Valence bond solid phases in a cubic antiferromagnet. <i>Physical Review Letters</i> , 2007 , 99, 047202	7.4	13
53	Impurity induced spin texture in quantum critical 2D antiferromagnets. <i>Physical Review Letters</i> , 2007 , 98, 087203	7.4	25
52	Emergence of U(1) symmetry in the 3D XY model with Zq anisotropy. <i>Physical Review Letters</i> , 2007 , 99, 207203	7.4	51
51	Low-energy dynamics of the two-dimensional S=1/2 Heisenberg antiferromagnet on percolating clusters. <i>Physical Review Letters</i> , 2006 , 97, 117204	7.4	18
50	Correlations and confinement in nonplanar two-dimensional dimer models. <i>Physical Review B</i> , 2006 , 73,	3.3	43
49	Site dilution of quantum spins in the honeycomb lattice. <i>Physical Review B</i> , 2006 , 73,	3.3	47
48	High-precision finite-size scaling analysis of the quantum-critical point of S=1 Heisenberg antiferromagnetic bilayers. <i>Physical Review B</i> , 2006 , 73,	3.3	109
47	Quantum criticality and percolation in dimer-diluted two-dimensional antiferromagnets. <i>Physical Review Letters</i> , 2006 , 96, 207201	7.4	23
46	Some formal results for the valence bond basis. <i>Nuclear Physics B</i> , 2006 , 750, 142-178	2.8	59
45	Ground state projection of quantum spin systems in the valence-bond basis. <i>Physical Review Letters</i> , 2005 , 95, 207203	7.4	82
44	Stochastic series expansion algorithm for the S = 1/2 XY model with four-site ring exchange. <i>Physical Review E</i> , 2005 , 72, 026702	2.4	19
43	Antiferromagnetism induced by non-magnetic dopants in coupled spinPeierls chains. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, 6747-6753	1.8	
42	Impurity effects at finite temperature in the two-dimensional S=1 Heisenberg antiferromagnet. <i>Physical Review B</i> , 2004 , 70,	3.3	25
41	Ground state phases of the half-filled one-dimensional extended hubbard model. <i>Physical Review Letters</i> , 2004 , 92, 236401	7.4	89

40	Magnetic ordering in a doped frustrated spin-Peierls system. <i>Physical Review B</i> , 2004 , 69,	3-3	14
39	Crossover effects in the random-exchange spin-1/2 antiferromagnetic chain. <i>Physical Review B</i> , 2004 , 70,	3-3	21
38	The Directed-Loop Algorithm. <i>AIP Conference Proceedings</i> , 2003 ,	0	2
37	Specific heat of quasi-two-dimensional antiferromagnetic Heisenberg models with varying interplanar couplings. <i>Physical Review B</i> , 2003 , 68,	3-3	102
36	Comment on "Ground-state phase diagram of a half-filled one-dimensional extended Hubbard model". <i>Physical Review Letters</i> , 2003 , 91, 089701; discussion 089702	7-4	24
35	Stochastic series expansion method for quantum Ising models with arbitrary interactions. <i>Physical Review E</i> , 2003 , 68, 056701	2-4	82
34	Susceptibility of the 2D spin-1 / 2 Heisenberg antiferromagnet with an impurity. <i>Physical Review Letters</i> , 2003 , 91, 077204	7-4	38
33	Peierls transition in the presence of finite-frequency phonons in the one-dimensional extended Peierls-Hubbard model at half-filling. <i>Physical Review B</i> , 2003 , 67,	3-3	32
32	Quantum Monte Carlo with directed loops. <i>Physical Review E</i> , 2002 , 66, 046701	2-4	570
31	Multicritical point in a diluted bilayer Heisenberg quantum antiferromagnet. <i>Physical Review Letters</i> , 2002 , 89, 177201	7-4	50
30	Classical percolation transition in the diluted two-dimensional S=1/2 Heisenberg antiferromagnet. <i>Physical Review B</i> , 2002 , 66,	3-3	102
29	Bond-order-wave phase and quantum phase transitions in the one-dimensional extended Hubbard model. <i>Physical Review B</i> , 2002 , 65,	3-3	162
28	Finite-Size Scaling in the Diluted Two-Dimensional Heisenberg Antiferromagnet. <i>Progress of Theoretical Physics Supplement</i> , 2002 , 145, 332-338		
27	High-energy magnon dispersion and multimagnon continuum in the two-dimensional Heisenberg antiferromagnet. <i>Physical Review Letters</i> , 2001 , 86, 528-31	7-4	85
26	Comment on "quantum phase transition of the randomly diluted Heisenberg antiferromagnet on a square lattice". <i>Physical Review Letters</i> , 2001 , 86, 3209-10	7-4	20
25	Monte Carlo study of a two-dimensional quantum ferromagnet. <i>Physical Review B</i> , 2000 , 61, 364-374	3-3	25
24	Sign problem in Monte Carlo simulations of frustrated quantum spin systems. <i>Physical Review B</i> , 2000 , 62, 1102-1113	3-3	69
23	Possible exotic phases in the one-dimensional extended Hubbard model. <i>Physical Review B</i> , 1999 , 59, 4665-4679	3-3	53

22	Spin-Peierls Transition in the Heisenberg Chain with Finite-Frequency Phonons. <i>Physical Review Letters</i> , 1999 , 83, 195-198	7.4	49
21	Stochastic series expansion method with operator-loop update. <i>Physical Review B</i> , 1999 , 59, R14157-R14160	3.3	516
20	Multichain Mean-Field Theory of Quasi-One-Dimensional Quantum Spin Systems. <i>Physical Review Letters</i> , 1999 , 83, 3069-3072	7.4	88
19	Ground-state parameters, finite-size scaling, and low-temperature properties of the two-dimensional S=12 XY model. <i>Physical Review B</i> , 1999 , 60, 6588-6593	3.3	53
18	From Finite Temperature Many-Body Perturbation Theory to Series Expansions and Monte Carlo Simulations. <i>Springer Proceedings in Physics</i> , 1999 , 71-83	0.2	
17	Stochastic method for analytic continuation of quantum Monte Carlo data. <i>Physical Review B</i> , 1998 , 57, 10287-10290	3.3	143
16	Numerical calculations of the B1g Raman spectrum of the two-dimensional Heisenberg model. <i>Physical Review B</i> , 1998 , 57, 8478-8493	3.3	28
15	Role of winding numbers in quantum Monte Carlo simulations. <i>Physical Review B</i> , 1998 , 57, 13382-13385	3.3	3
14	Critical Temperature and the Transition from Quantum to Classical Order Parameter Fluctuations in the Three-Dimensional Heisenberg Antiferromagnet. <i>Physical Review Letters</i> , 1998 , 80, 5196-5199	7.4	74
13	1/N expansion for two-dimensional quantum ferromagnets. <i>Physical Review B</i> , 1998 , 58, 1464-1484	3.3	34
12	Finite-size scaling of the ground-state parameters of the two-dimensional Heisenberg model. <i>Physical Review B</i> , 1997 , 56, 11678-11690	3.3	321
11	An introduction to quantum monte carlo methods 1997 , 109-135		0
10	Error reduction using covariance in quantum Monte Carlo simulations. <i>Physical Review B</i> , 1996 , 54, 14910-14913	3.3	14913
9	Effects of intrabilayer coupling on the magnetic properties of YBa2Cu3O6. <i>Physical Review B</i> , 1996 , 53, R526-R529	3.3	20
8	Spin dynamics of SrCu2O3 and the Heisenberg ladder. <i>Physical Review B</i> , 1996 , 53, R2934-R2937	3.3	42
7	Magnetic raman scattering in two-dimensional spin-1/2 Heisenberg antiferromagnets: Spectral shape anomaly and magnetostrictive effects. <i>Physical Review Letters</i> , 1995 , 75, 553-556	7.4	37
6	Spin dynamics of La2CuO4 and the two-dimensional Heisenberg model. <i>Physical Review B</i> , 1995 , 51, 9403-9406	3.3	940625
5	NMR relaxation rates for the spin-1/2 Heisenberg chain. <i>Physical Review B</i> , 1995 , 52, R9831-R9834	3.3	39

4	Disorder induced phase transition in a two-dimensional random quantum antiferromagnet. <i>Physical Review Letters</i> , 1995 , 74, 1226-1229	7.4	29
3	Quantum critical behavior in a two-layer antiferromagnet. <i>Physical Review B</i> , 1995 , 51, 16483-16486	3.3	40
2	Numerical study of a two-dimensional quantum antiferromagnet with random ferromagnetic bonds. <i>Physical Review B</i> , 1994 , 50, 15803-15807	3.3	5
1	Quantum Monte Carlo simulation method for spin systems. <i>Physical Review B</i> , 1991 , 43, 5950-5961	3.3	360