

Anders W Sandvik

List of Publications by Year in descending order

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152
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152
times ranked

3090
citing authors

#	ARTICLE	IF	CITATIONS
1	Fractional and composite excitations of antiferromagnetic quantum spin trimer chains. Npj Quantum Materials, 2022, 7, .	5.2	8
2	Quantum criticality and spin liquid phase in the Shastry-Sutherland model. Physical Review B, 2022, 105, .	3.2	24
3	Quantum Spin Liquid Phase in the Shastry-Sutherland Model Detected by an Improved Level Spectroscopic Method. Chinese Physics Letters, 2022, 39, 077502.	3.3	6
4	Extreme Suppression of Antiferromagnetic Order and Critical Scaling in a Two-Dimensional Random Quantum Magnet. Physical Review Letters, 2021, 126, 037201.	7.8	21
5	Unconventional $U(1)$ to $Z \times q$ crossover in quantum and classical Z -state clock models. Physical Review B, 2021, 103, .	3.2	10
6	Emergent $O(4)$ symmetry at the phase transition from plaquette-singlet to antiferromagnetic order in quasi-two-dimensional quantum magnets*. Chinese Physics B, 2021, 30, 067505.	1.4	11
7	Z_2 topological order and first-order quantum phase transitions in systems with combinatorial gauge symmetry. Physical Review B, 2021, 104, .	3.2	2
8	Quantum-critical scaling properties of the two-dimensional random-singlet state. Physical Review B, 2020, 102, .	3.2	9
9	Quantum Phases of $SrCu_2BO_3$ from High- P . Physical Review Letters, 2020, 124, 206602.	3.2	17
10	Consistent Scaling Exponents at the Deconfined Quantum-Critical Point*. Chinese Physics Letters, 2020, 37, 057502.	3.3	27
11	Temperature dependence of the $(\pi,0)$ anomaly in the excitation spectrum of the 2D quantum Heisenberg antiferromagnet. Journal of Physics Condensed Matter, 2020, 32, 374007.	1.8	3
12	Bose-Einstein condensation of deconfined spinons in two dimensions. Physical Review B, 2020, 101, .	3.2	3
13	Scaling and Diabatic Effects in Quantum Annealing with a D-Wave Device. Physical Review Letters, 2020, 124, 090502.	7.8	44
14	Monte-Carlo Renormalization Flows in the Space of Relevant and Irrelevant Operators: Application to Three-Dimensional Clock Models. Physical Review Letters, 2020, 124, 080602.	7.8	18
15	Hilbert space fragmentation and Ashkin-Teller criticality in fluctuation coupled Ising models. Physical Review B, 2020, 101, .	3.2	10
16	Existence of a Spectral Gap in the Affleck-Kennedy-Lieb-Tasaki Model on the Hexagonal Lattice. Physical Review Letters, 2020, 124, 177204.	7.8	23
17	Comment on "Gapless spin liquid ground state of the spin- $1/2$ Heisenberg model on square lattices". Physical Review B, 2020, 101, .	3.2	6
18	Tunable deconfined quantum criticality and interplay of different valence-bond solid phases. Chinese Physics B, 2020, 29, 057506.	1.4	8

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19	Multicritical Deconfined Quantum Criticality and Lifshitz Point of a Helical Valence-Bond Phase. Physical Review Letters, 2020, 125, 257204.	7.8	21
20	Valence-bond solids, vestigial order, and emergent SO(5) symmetry in a two-dimensional quantum magnet. Physical Review Research, 2020, 2, .	3.6	14
21	The AKLT Model on a Hexagonal Chain is Gapped. Journal of Statistical Physics, 2019, 177, 1077-1088.	1.2	5
22	Pair hopping in systems of strongly interacting hard-core bosons. Physical Review B, 2019, 100, .	3.2	4
23	NMR relaxation in the spin-1 Heisenberg chain. Physical Review B, 2019, 100, .	3.2	12
24	Detecting Signals of Weakly First-order Phase Transitions in Two-dimensional Potts Models. Journal of the Physical Society of Japan, 2019, 88, 034006.	1.6	31
25	Symmetry-enhanced discontinuous phase transition in a two-dimensional quantum magnet. Nature Physics, 2019, 15, 678-682.	16.7	46
26	Dynamic scaling of topological ordering in classical systems. Physical Review B, 2018, 97, .	3.2	12
27	Dynamical properties of the $S=1$ random Heisenberg chain. Physical Review B, 2018, 97, .	3.2	12
28	Dynamical signature of fractionalization at a deconfined quantum critical point. Physical Review B, 2018, 98, .	3.2	65
29	Typicality at quantum-critical points. Chinese Physics B, 2018, 27, 087501.	1.4	4
30	Random-Singlet Phase in Disordered Two-Dimensional Quantum Magnets. Physical Review X, 2018, 8, .	8.9	43
31	Anomalous Quantum-Critical Scaling Corrections in Two-Dimensional Antiferromagnets. Physical Review Letters, 2018, 121, 117202.	7.8	20
32	Critical Level Crossings and Gapless Spin Liquid in the Square-Lattice Spin-1 Heisenberg chain. Physical Review X, 2018, 8, .	7.8	96
33	Numerical investigations of SO(4) emergent extended symmetry in spin-1/2 Heisenberg antiferromagnetic chains. Physical Review B, 2018, 98, .	3.2	11
34	Metamagnetism and zero-scale-factor universality in the two-dimensional $J=1$ Heisenberg chain. Physical Review B, 2018, 98, .	3.2	11
35	Dynamic scaling in the two-dimensional Ising spin glass with normal-distributed couplings. Physical Review E, 2017, 96, 052102.	2.1	6
36	Duality between the Deconfined Quantum-Critical Point and the Bosonic Topological Transition. Physical Review X, 2017, 7, .	8.9	82

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37	Dynamic scaling of the restoration of rotational symmetry in Heisenberg quantum antiferromagnets. Physical Review B, 2017, 96, .	3.2	5
38	Confinement in the Bulk, Deconfinement on the Wall: Infrared Equivalence between Compactified QCD and Quantum Magnets. Physical Review Letters, 2017, 119, 091601.	7.8	40
39	Modulated phases in a three-dimensional Maier-Saupe model with competing interactions. Physical Review E, 2017, 96, 012137.	2.1	3
40	Amplitude Mode in Three-Dimensional Dimerized Antiferromagnets. Physical Review Letters, 2017, 118, 147207.	7.8	35
41	Indicators of conformal field theory: Entanglement entropy and multiple-point correlators. Physical Review B, 2017, 96, .	3.2	4
42	Dual time scales in simulated annealing of a two-dimensional Ising spin glass. Physical Review E, 2017, 95, 052133.	2.1	9
43	Field-driven quantum phase transitions in $S=1$ spin chains. Physical Review B, 2017, 95, .	3.2	3
44	Nearly Deconfined Spinon Excitations in the Square-Lattice Spin-1 Heisenberg Antiferromagnet. Physical Review X, 2017, 7, .	8.9	83
45	Properties of the random-singlet phase: From the disordered Heisenberg chain to an amorphous valence-bond solid. Physical Review B, 2016, 94, .	3.2	20
46	Constrained sampling method for analytic continuation. Physical Review E, 2016, 94, 063308.	2.1	70
47	Level spectroscopy in a two-dimensional quantum magnet: Linearly dispersing spinons at the deconfined quantum critical point. Physical Review B, 2016, 94, .	3.2	29
48	Quantum criticality with two length scales. Science, 2016, 352, 213-216.	12.6	164
49	Quantum Monte Carlo studies of spinons in one-dimensional spin systems. Physical Review B, 2015, 92, .	3.2	14
50	Velocity of excitations in ordered, disordered, and critical antiferromagnets. Physical Review B, 2015, 92, .	3.2	28
51	Multiplicative logarithmic corrections to quantum criticality in three-dimensional dimerized antiferromagnets. Physical Review B, 2015, 92, .	3.2	25
52	Universal dynamic scaling in three-dimensional Ising spin glasses. Physical Review E, 2015, 92, 022128.	2.1	20
53	Mott glass phase in a diluted bilayer Heisenberg quantum antiferromagnet. Journal of Physics: Conference Series, 2015, 640, 012045.	0.4	1
54	Topological properties of a Valence-Bond-Solid. Journal of Physics: Conference Series, 2015, 640, 012048.	0.4	0

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55	1D valence bond solids in a magnetic field. <i>Journal of Physics: Conference Series</i> , 2015, 640, 012043.	0.4	11
56	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.	7.8	39
57	Anomalous Quantum Glass of Bosons in a Random Potential in Two Dimensions. <i>Physical Review Letters</i> , 2015, 114, 105303.	7.8	12
58	Emergent topological excitations in a two-dimensional quantum spin system. <i>Physical Review B</i> , 2015, 91, .	3.2	11
59	Dynamic scaling at classical phase transitions approached through nonequilibrium quenching. <i>Physical Review B</i> , 2014, 89, .	3.2	49
60	Criticality and Mott glass phase in a disordered two-dimensional quantum spin system. <i>Physical Review B</i> , 2014, 90, .	3.2	12
61	Phase transitions in the frustrated Ising model on the square lattice. <i>Physical Review B</i> , 2013, 87, .	3.2	71
62	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.	14.5	90
63	Thermal valence-bond-solid transition of quantum spins in two dimensions. <i>Physical Review B</i> , 2013, 87, .	3.2	16
64	Quasi-adiabatic quantum Monte Carlo algorithm for quantum evolution in imaginary time. <i>Physical Review B</i> , 2013, 87, .	3.2	26
65	Confinement and Deconfinement of Spinons in Two Dimensions. <i>Physical Review Letters</i> , 2013, 110, 217213.	7.8	29
66	Finite-size scaling method for the Berezinskiiâ€“Kosterlitzâ€“Thouless transition. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2013, 2013, P09001.	2.3	54
67	Antiferromagnetic order in systems with doublet $S_{\text{tot}}=12$ ground states. , 2013, , .		0
68	Correlated valence-bond states. <i>Physical Review B</i> , 2012, 86, .	3.2	11
69	Antiferromagnetic order in systems with doublet $S_{\text{tot}}=12$ ground states. <i>Physical Review B</i> , 2012, 86, .	3.2	2
70	Finite-size scaling and boundary effects in two-dimensional valence-bond solids. <i>Physical Review B</i> , 2012, 85, .	3.2	62
71	Two-orbital quantum spin model of magnetism in the iron pnictides. <i>Physical Review B</i> , 2012, 85, .	3.2	1
72	Universal Néel temperature in three-dimensional quantum antiferromagnets. <i>Physical Review B</i> , 2012, 85, .	3.2	19

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73	Ashkin-Teller Criticality and Pseudo-First-Order Behavior in a Frustrated Ising Model on the Square Lattice. Physical Review Letters, 2012, 108, 045702.	7.8	99
74	Lattice Model for the $SU(2)$ \times $U(1)$ Topological Anomaly. Physical Review Letters, 2012, 108, 137201.	7.8	95
75	Thermodynamics of a Gas of Deconfined Bosonic Spinons in Two Dimensions. Physical Review Letters, 2011, 106, 207203.	7.8	27
76	Properties of resonating-valence-bond spin liquids and critical dimer models. Physical Review B, 2011, 84, .	3.2	58
77	Method to Characterize Spinons as Emergent Elementary Particles. Physical Review Letters, 2011, 107, 157201.	7.8	33
78	Plaquette renormalization scheme for tensor network states. Physical Review E, 2011, 83, 056703.	2.1	14
79	Computational Studies of Quantum Spin Systems. AIP Conference Proceedings, 2010, , .	0.4	320
80	Definitions of entanglement entropy of spin systems in the valence-bond basis. Physical Review B, 2010, 82, .	3.2	8
81	Continuous Quantum Phase Transition between an Antiferromagnet and a Valence-Bond Solid in Two Dimensions: Evidence for Logarithmic Corrections to Scaling. Physical Review Letters, 2010, 104, 177201.	7.8	148
82	Quantum phase transitions in disordered dimerized quantum spin models and the Harris criterion. Physical Review B, 2010, 82, .	3.2	19
83	Example of a first-order Néel to valence-bond-solid transition in two dimensions. Physical Review B, 2010, 82, .	3.2	33
84	Symmetry breaking and criticality in tensor-product states. Physical Review B, 2010, 82, .	3.2	30
85	Low-energy excitations of two-dimensional diluted Heisenberg quantum antiferromagnets. Physical Review B, 2010, 81, .	3.2	26
86	Loop updates for variational and projector quantum Monte Carlo simulations in the valence-bond basis. Physical Review B, 2010, 82, .	3.2	100
87	Effects of edge disorder in nanoscale antiferromagnetic clusters. Physical Review B, 2010, 82, .	3.2	2
88	Ground States of a Frustrated Quantum Spin Chain with Long-Range Interactions. Physical Review Letters, 2010, 104, 137204.	7.8	62
89	Antiferromagnetic to valence-bond-solid transitions in two-dimensional $SU(2)$ spin models with multispin interactions. Physical Review B, 2009, 80, .	3.2	163
90	Impurity-Induced Frustration in Correlated Oxides. Physical Review Letters, 2009, 102, 167201.	7.8	14

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91	Edge effects in the two-dimensional spin- $\frac{1}{2}$ Heisenberg antiferromagnet. Physical Review B, 2009, 79, .	3.2	11
92	Z4 to U(1) crossover of the order-parameter symmetry in a two-dimensional valence-bond solid. Physical Review B, 2009, 80, .	3.2	6
93	Strong through-space two-halide magnetic exchange of ~ 234 K in (2,5-dimethylpyrazine)copper(II) bromide. Chemical Communications, 2009, , 1359.	4.1	35
94	Quantum Monte Carlo Simulations of Bosonic and Fermionic Impurities in a Two-Dimensional Hard-Core Boson System. Physical Review Letters, 2008, 101, 120405.	7.8	1
95	Scale-Renormalized Matrix-Product States for Correlated Quantum Systems. Physical Review Letters, 2008, 101, 140603.	7.8	8
96	Variational ground states of two-dimensional antiferromagnets in the valence bond basis. Physical Review B, 2007, 76, .	3.2	33
97	Anomalous Curie Response of Impurities in Quantum-Critical Spin-1/2 Heisenberg Antiferromagnets. Physical Review Letters, 2007, 99, 027205.	7.8	19
98	Valence Bond Solid Phases in a Cubic Antiferromagnet. Physical Review Letters, 2007, 99, 047202.	7.8	14
99	Impurity Induced Spin Texture in Quantum Critical 2D Antiferromagnets. Physical Review Letters, 2007, 98, 087203.	7.8	28
100	Emergence of U(1) Symmetry in the 3D X - Y Model with Anisotropy. Physical Review Letters, 2007, 99, 207203.	7.8	58
101	Evidence for Deconfined Quantum Criticality in a Two-Dimensional Heisenberg Model with Four-Spin Interactions. Physical Review Letters, 2007, 98, 227202.	7.8	393
102	Some formal results for the valence bond basis. Nuclear Physics B, 2006, 750, 142-178.	2.5	66
103	Low-Energy Dynamics of the Two-Dimensional $S=1/2$ Heisenberg Antiferromagnet on Percolating Clusters. Physical Review Letters, 2006, 97, 117204.	7.8	20
104	Correlations and confinement in nonplanar two-dimensional dimer models. Physical Review B, 2006, 73, .	3.2	48
105	Site dilution of quantum spins in the honeycomb lattice. Physical Review B, 2006, 73, .	3.2	53
106	High-precision finite-size scaling analysis of the quantum-critical point of $S=1/2$ Heisenberg antiferromagnetic bilayers. Physical Review B, 2006, 73, .	3.2	139
107	Quantum Criticality and Percolation in Dimer-Diluted Two-Dimensional Antiferromagnets. Physical Review Letters, 2006, 96, 207201.	7.8	30
108	Ground State Projection of Quantum Spin Systems in the Valence-Bond Basis. Physical Review Letters, 2005, 95, 207203.	7.8	88

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109	Stochastic series expansion algorithm for the $S=1/2$ XY model with four-site ring exchange. Physical Review E, 2005, 72, 026702.	2.1	26
110	Antiferromagnetism induced by non-magnetic dopants in coupled spin-1/2 Peierls chains. Journal of Physics Condensed Matter, 2004, 16, 6747-6753.	1.8	0
111	Impurity effects at finite temperature in the two-dimensional $S=1/2$ Heisenberg antiferromagnet. Physical Review B, 2004, 70, .	3.2	27
112	Ground State Phases of the Half-Filled One-Dimensional Extended Hubbard Model. Physical Review Letters, 2004, 92, 236401.	7.8	102
113	Magnetic ordering in a doped frustrated spin-Peierls system. Physical Review B, 2004, 69, .	3.2	14
114	Crossover effects in the random-exchange spin-1/2 antiferromagnetic chain. Physical Review B, 2004, 70, .	3.2	24
115	Specific heat of quasi-two-dimensional antiferromagnetic Heisenberg models with varying interplanar couplings. Physical Review B, 2003, 68, .	3.2	111
116	Comment on "Ground-State Phase Diagram of a Half-Filled One-Dimensional Extended Hubbard Model". Physical Review Letters, 2003, 91, 089701; discussion 089702.	7.8	25
117	Stochastic series expansion method for quantum Ising models with arbitrary interactions. Physical Review E, 2003, 68, 056701.	2.1	103
118	Susceptibility of the 2D Spin-1/2 Heisenberg Antiferromagnet with an Impurity. Physical Review Letters, 2003, 91, 077204.	7.8	43
119	Peierls transition in the presence of finite-frequency phonons in the one-dimensional extended Peierls-Hubbard model at half-filling. Physical Review B, 2003, 67, .	3.2	40
120	The Directed-Loop Algorithm. AIP Conference Proceedings, 2003, , .	0.4	3
121	Multicritical Point in a Diluted Bilayer Heisenberg Quantum Antiferromagnet. Physical Review Letters, 2002, 89, 177201.	7.8	55
122	Classical percolation transition in the diluted two-dimensional $S=1/2$ Heisenberg antiferromagnet. Physical Review B, 2002, 66, .	3.2	122
123	Bond-order-wave phase and quantum phase transitions in the one-dimensional extended Hubbard model. Physical Review B, 2002, 65, .	3.2	180
124	Finite-Size Scaling in the Diluted Two-Dimensional Heisenberg Antiferromagnet. Progress of Theoretical Physics Supplement, 2002, 145, 332-338.	0.1	0
125	Quantum Monte Carlo with directed loops. Physical Review E, 2002, 66, 046701.	2.1	662
126	High-Energy Magnon Dispersion and Multimagnon Continuum in the Two-Dimensional Heisenberg Antiferromagnet. Physical Review Letters, 2001, 86, 528-531.	7.8	97

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127	Comment on "Quantum Phase Transition of the Randomly Diluted Heisenberg Antiferromagnet on a Square Lattice" Physical Review Letters, 2001, 86, 3209-3209.	7.8	21
128	Monte Carlo study of a two-dimensional quantum ferromagnet. Physical Review B, 2000, 61, 364-374.	3.2	26
129	Sign problem in Monte Carlo simulations of frustrated quantum spin systems. Physical Review B, 2000, 62, 1102-1113.	3.2	91
130	Possible exotic phases in the one-dimensional extended Hubbard model. Physical Review B, 1999, 59, 4665-4679.	3.2	58
131	Spin-Peierls Transition in the Heisenberg Chain with Finite-Frequency Phonons. Physical Review Letters, 1999, 83, 195-198.	7.8	52
132	Stochastic series expansion method with operator-loop update. Physical Review B, 1999, 59, R14157-R14160.	3.2	610
133	Multichain Mean-Field Theory of Quasi-One-Dimensional Quantum Spin Systems. Physical Review Letters, 1999, 83, 3069-3072.	7.8	94
134	Ground-state parameters, finite-size scaling, and low-temperature properties of the two-dimensional S=1/2 XY model. Physical Review B, 1999, 60, 6588-6593.	3.2	55
135	From Finite Temperature Many-Body Perturbation Theory to Series Expansions and Monte Carlo Simulations. Springer Proceedings in Physics, 1999, , 71-83.	0.2	0
136	Stochastic method for analytic continuation of quantum Monte Carlo data. Physical Review B, 1998, 57, 10287-10290.	3.2	208
137	Numerical calculations of the Raman spectrum of the two-dimensional Heisenberg model. Physical Review B, 1998, 57, 8478-8493.	3.2	33
138	Role of winding numbers in quantum Monte Carlo simulations. Physical Review B, 1998, 57, 13382-13385.	3.2	5
139	Critical Temperature and the Transition from Quantum to Classical Order Parameter Fluctuations in the Three-Dimensional Heisenberg Antiferromagnet. Physical Review Letters, 1998, 80, 5196-5199.	7.8	86
140	1/N expansion for two-dimensional quantum ferromagnets. Physical Review B, 1998, 58, 1464-1484.	3.2	37
141	Finite-size scaling of the ground-state parameters of the two-dimensional Heisenberg model. Physical Review B, 1997, 56, 11678-11690.	3.2	372
142	An introduction to quantum monte carlo methods. , 1997, , 109-135.		1
143	Error reduction using covariance in quantum Monte Carlo simulations. Physical Review B, 1996, 54, 14910-14913.	3.2	4
144	Effects of intrabilayer coupling on the magnetic properties of YBa ₂ Cu ₃ O ₆ . Physical Review B, 1996, 53, R526-R529.	3.2	24

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145	Spin dynamics of SrCu ₂ O ₃ and the Heisenberg ladder. Physical Review B, 1996, 53, R2934-R2937.	3.2	46
146	Magnetic Raman Scattering in Two-Dimensional Spin-1/2 Heisenberg Antiferromagnets: Spectral Shape Anomaly and Magnetostrictive Effects. Physical Review Letters, 1995, 75, 553-556.	7.8	38
147	Spin dynamics of La ₂ CuO ₄ and the two-dimensional Heisenberg model. Physical Review B, 1995, 51, 9403-9406.	3.2	26
148	NMR relaxation rates for the spin-1/2 Heisenberg chain. Physical Review B, 1995, 52, R9831-R9834.	3.2	43
149	Disorder Induced Phase Transition in a Two-Dimensional Random Quantum Antiferromagnet. Physical Review Letters, 1995, 74, 1226-1229.	7.8	31
150	Quantum critical behavior in a two-layer antiferromagnet. Physical Review B, 1995, 51, 16483-16486.	3.2	48
151	Numerical study of a two-dimensional quantum antiferromagnet with random ferromagnetic bonds. Physical Review B, 1994, 50, 15803-15807.	3.2	7
152	Quantum Monte Carlo simulation method for spin systems. Physical Review B, 1991, 43, 5950-5961.	3.2	415