Stefan Wessel

List of Publications by Year in Descending Order

37 papers	1,180 citations	15 h-index	34 g-index
44 ext. papers	1,449 ext. citations	7 avg, IF	4.5 L-index

#	Paper	IF	Citations
37	Quantum Monte Carlo simulations of highly frustrated magnets in a cluster basis: The two-dimensional Shastry-Sutherland model. *Journal of Physics: Conference Series*, **2022**, 2207, 012032	0.3	0
36	Surrogate models for quantum spin systems based on reduced-order modeling.. *Physical Review E*, **2022**, 105, 045303	2.4	0
35	Torus spectroscopy of the Gross-Neveu-Yukawa quantum field theory: Free Dirac versus chiral Ising fixed point. *Physical Review B*, **2021**, 103,	3.3	4
34	A quantum magnetic analogue to the critical point of water. *Nature*, **2021**, 592, 370-375	50.4	9
33	Multiparameter universality and conformal field theory for anisotropic confined systems: test by Monte Carlo simulations. *Journal of Physics A: Mathematical and Theoretical*, **2021**, 54, 23LT01	2	0
32	Exact Critical Casimir Amplitude of Anisotropic Systems from Conformal Field Theory and Self-Similarity of Finite-Size Scaling Functions in d□ Dimensions. *Physical Review Letters*, **2021**, 126, 060601	7.4	2
31	Spin versus bond correlations along dangling edges of quantum critical magnets. *Physical Review B*, **2021**, 103,	3.3	2
30	Quantifying the fragility of unprotected quadratic band crossing points. *Physical Review B*, **2020**, 101,	3.3	2
29	Emergent symmetries and coexisting orders in Dirac fermion systems. *Physical Review Research*, **2020**, 2,	3.9	5
28	Nonordinary criticality at the edges of planar spin-1 Heisenberg antiferromagnets. *Physical Review B*, **2019**, 100,	3.3	6
27	Higgs Mode of Planar Coupled Spin Ladders and its Observation in C_{9}H_{18}N_{2}CuBr_{4}. *Physical Review Letters*, **2019**, 122, 127201	7.4	2
26	Thermodynamic properties of the Shastry-Sutherland model throughout the dimer-product phase. *Physical Review Research*, **2019**, 1,	3.9	20
25	Comment on "The role of electron-electron interactions in two-dimensional Dirac fermions". *Science*, **2019**, 366,	33.3	4
24	Diagnosing Fractionalization from the Spin Dynamics of Z_{2} Spin Liquids on the Kagome Lattice by Quantum Monte□Carlo Simulations. *Physical Review Letters*, **2018**, 121, 077202	7.4	8
23	Thermodynamic properties of the Shastry-Sutherland model from quantum Monte Carlo simulations. *Physical Review B*, **2018**, 98,	3.3	9
22	Nonordinary edge criticality of two-dimensional quantum critical magnets. *Physical Review B*, **2018**, 98,	3.3	10
21	Thermal Critical Points and Quantum Critical End Point in the Frustrated Bilayer Heisenberg Antiferromagnet. *Physical Review Letters*, **2018**, 121, 127201	7.4	10

20	Anisotropic XY antiferromagnets in a field. *European Physical Journal: Special Topics*, **2017**, 226, 779-788	2.3	0
19	Efficient Quantum Monte Carlo simulations of highly frustrated magnets: the frustrated spin-1/2 ladder. *SciPost Physics*, **2017**, 3,	6.1	15
18	Competing pairing channels in the doped honeycomb lattice Hubbard model. *Physical Review B*, **2016**, 94,	3.3	17
17	Thermodynamic properties of highly frustrated quantum spin ladders: Influence of many-particle bound states. *Physical Review B*, **2016**, 93,	3.3	22
16	Thermal Ising transitions in the vicinity of two-dimensional quantum critical points. *Physical Review B*, **2016**, 93,	3.3	43
15	Mott transition in the triangular lattice Hubbard model: A dynamical cluster approximation study. *Physical Review B*, **2015**, 91,	3.3	16
14	Finite-size effects in Luther-Emery phases of Holstein and Hubbard models. *Physical Review B*, **2015** , 92,	3.3	17
13	Evidence of a field-induced Berezinskii-Kosterlitz-Thouless scenario in a two-dimensional spin-dimer system. *Nature Communications*, **2014**, 5, 5169	17.4	29
12	Z2 topological invariants in two dimensions from quantum Monte Carlo. *Physical Review B*, **2013**, 87,	3.3	41
11	Quantum Monte Carlo studies of edge magnetism in chiral graphene nanoribbons. *Physical Review B*, **2013**, 87,	3.3	32
10	Antiferromagnetism in the Hubbard model on the Bernal-stacked honeycomb bilayer. *Physical Review Letters*, **2012**, 109, 126402	7.4	53
9	A quantum spin-liquid in correlated relativistic electrons. *Annalen Der Physik*, **2012**, 524, 118-122	2.6	
8	Quantum phase transitions in the Kane-Mele-Hubbard model. *Physical Review B*, **2012**, 85,	3.3	109
7	Geometric fluctuations in a two-dimensional quantum antiferromagnet. *Physical Review B*, **2012**, 85,	3.3	1
6	Critical scales in anisotropic spin systems from functional renormalization. *Physical Review B*, **2012**, 85,	3.3	14
5	Half-vortex unbinding and Ising transition in constrained superfluids. *Physical Review B*, **2012**, 85,	3.3	16
4	Cubic interactions and quantum criticality in dimerized antiferromagnets. *Physical Review B*, **2011**, 83,	3.3	31
3	Quantum spin liquid emerging in two-dimensional correlated Dirac fermions. *Nature*, **2010**, 464, 847-51	50.4	449

2	Generalized directed loop method for quantum Monte Carlo simulations. *Physical Review E*, **2005**, 71, 036706	2.4	173
1	Phase diagram and thermodynamic properties of the square lattice of antiferromagnetic spin-12 triangles in La4Cu3MoO12. *Physical Review B*, **2001**, 63,	3.3	8