

Stefan Wessel

List of Publications by Year in descending order

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44
papers

1,592
citations

361045

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288905

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docs citations

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times ranked

1480
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Quantum Monte Carlo simulations in the trimer basis: first-order transitions and thermal critical points in frustrated trilayer magnets. <i>SciPost Physics</i> , 2022, 12, . | 1.5 | 12 |
| 2 | Quantum Monte Carlo simulations of highly frustrated magnets in a cluster basis: The two-dimensional Shastry-Sutherland model. <i>Journal of Physics: Conference Series</i> , 2022, 2207, 012032. | 0.3 | 1 |
| 3 | Surrogate models for quantum spin systems based on reduced-order modeling. <i>Physical Review E</i> , 2022, 105, 045303. | 0.8 | 5 |
| 4 | Evidence for pressure induced unconventional quantum criticality in the coupled spin ladder antiferromagnet C9H18N2CuBr4. <i>Nature Communications</i> , 2022, 13, . | 5.8 | 3 |
| 5 | Exact Critical Casimir Amplitude of Anisotropic Systems from Conformal Field Theory and Self-Similarity of Finite-Size Scaling Functions in $d < 2$ Dimensions. <i>Physical Review Letters</i> , 2021, 126, 060601. | 2.9 | 7 |
| 6 | Torus spectroscopy of the Gross-Neveu-Yukawa quantum field theory: Free Dirac versus chiral Ising fixed point. <i>Physical Review B</i> , 2021, 103, . | 1.1 | 8 |
| 7 | A quantum magnetic analogue to the critical point of water. <i>Nature</i> , 2021, 592, 370-375. | 13.7 | 49 |
| 8 | Multiparameter universality and conformal field theory for anisotropic confined systems: test by Monte Carlo simulations. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 23LT01. | 0.7 | 4 |
| 9 | Signatures for Barzilevskii-Kosterlitz-Thouless critical behavior in the planar antiferromagnet $\text{BaNi}_2\text{V}_2\text{O}_8$. <i>Physical Review B</i> , 2021, 104, . | 1.1 | 6 |
| 10 | Global hierarchy vs local structure: Spurious self-feedback in scale-free networks. <i>Physical Review Research</i> , 2021, 3, . | 1.3 | 1 |
| 11 | Spin versus bond correlations along dangling edges of quantum critical magnets. <i>Physical Review B</i> , 2021, 103, . | 1.1 | 11 |
| 12 | Hierarchical single-ion anisotropies in spin-1 Heisenberg antiferromagnets on the honeycomb lattice. <i>Physical Review B</i> , 2021, 104, . | 1.1 | 5 |
| 13 | Reduction of the sign problem near $T=0$ in quantum Monte Carlo simulations. <i>Physical Review B</i> , 2020, 102, . | 1.1 | 3 |
| 14 | Quantifying the fragility of unprotected quadratic band crossing points. <i>Physical Review B</i> , 2020, 101, . | 1.1 | 2 |
| 15 | Emergent symmetries and coexisting orders in Dirac fermion systems. <i>Physical Review Research</i> , 2020, 2, . | 1.3 | 11 |
| 16 | Nonordinary criticality at the edges of planar spin-1 Heisenberg antiferromagnets. <i>Physical Review B</i> , 2019, 100, . | 1.1 | 23 |
| 17 | Higgs Mode of Planar Coupled Spin Ladders and its Observation in $\text{BaNi}_2\text{V}_2\text{O}_8$. <i>Physical Review Letters</i> , 2019, 122, 127201. | 2.9 | 11 |
| 18 | Spin dynamics of the planar Kagome lattice ferromagnet with four-site ring exchange processes. <i>Physical Review B</i> , 2019, 100, . | 1.1 | 3 |

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|----|---|-----|-----------|
| 19 | Comment on "The role of electron-electron interactions in two-dimensional Dirac fermions", Science, 2019, 366, . | 6.0 | 8 |
| 20 | Thermodynamic properties of the Shastry-Sutherland model throughout the dimer-product phase. Physical Review Research, 2019, 1, . | 1.3 | 39 |
| 21 | Thermodynamic properties of the Shastry-Sutherland model from quantum Monte Carlo simulations. Physical Review B, 2018, 98, . | 1.1 | 21 |
| 22 | Nonordinary edge criticality of two-dimensional quantum critical magnets. Physical Review B, 2018, 98, . | 1.1 | 30 |
| 23 | Thermal Critical Points and Quantum Critical End Point in the Frustrated Bilayer Heisenberg Antiferromagnet. Physical Review Letters, 2018, 121, 127201. | 2.9 | 23 |
| 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. | 2.9 | 13 |
| 25 | Anisotropic XY antiferromagnets in a field. European Physical Journal: Special Topics, 2017, 226, 779-788. | 1.2 | 2 |
| 26 | Efficient Quantum Monte Carlo simulations of highly frustrated magnets: the frustrated spin-1/2 ladder. SciPost Physics, 2017, 3, . | 1.5 | 24 |
| 27 | Competing pairing channels in the doped honeycomb lattice Hubbard model. Physical Review B, 2016, 94, . | 1.1 | 22 |
| 28 | Thermodynamic properties of highly frustrated quantum spin ladders: Influence of many-particle bound states. Physical Review B, 2016, 93, . | 1.1 | 33 |
| 29 | Thermal Ising transitions in the vicinity of two-dimensional quantum critical points. Physical Review B, 2016, 93, . | 1.1 | 56 |
| 30 | Mott transition in the triangular lattice Hubbard model: A dynamical cluster approximation study. Physical Review B, 2015, 91, . | 1.1 | 22 |
| 31 | Finite-size effects in Luther-Emery phases of Holstein and Hubbard models. Physical Review B, 2015, 92, . | 1.1 | 22 |
| 32 | Evidence of a field-induced Berezinskii-Kosterlitz-Thouless scenario in a two-dimensional spin dimer system. Nature Communications, 2014, 5, 5169. | 5.8 | 39 |
| 33 | Z^2 topological invariants in two dimensions from quantum Monte Carlo. Physical Review B, 2013, 87, . | 1.1 | 44 |
| 34 | Quantum Monte Carlo studies of edge magnetism in chiral graphene nanoribbons. Physical Review B, 2013, 87, . | 1.1 | 44 |
| 35 | Critical scales in anisotropic spin systems from functional renormalization. Physical Review B, 2012, 85, . | 1.1 | 19 |
| 36 | Half-vortex unbinding and Ising transition in constrained superfluids. Physical Review B, 2012, 85, . | 1.1 | 18 |

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|----|--|------|-----------|
| 37 | Antiferromagnetism in the Hubbard Model on the Bernal-Stacked Honeycomb Bilayer. Physical Review Letters, 2012, 109, 126402. | 2.9 | 61 |
| 38 | A quantum spin liquid in correlated relativistic electrons. Annalen Der Physik, 2012, 524, 118-122. | 0.9 | 0 |
| 39 | Quantum phase transitions in the Kane-Mele-Hubbard model. Physical Review B, 2012, 85, . | 1.1 | 130 |
| 40 | Geometric fluctuations in a two-dimensional quantum antiferromagnet. Physical Review B, 2012, 85, . | 1.1 | 1 |
| 41 | Cubic interactions and quantum criticality in dimerized antiferromagnets. Physical Review B, 2011, 83, . | 1.1 | 37 |
| 42 | Quantum spin liquid emerging in two-dimensional correlated Dirac fermions. Nature, 2010, 464, 847-851. | 13.7 | 503 |
| 43 | Generalized directed loop method for quantum Monte Carlo simulations. Physical Review E, 2005, 71, 036706. | 0.8 | 207 |
| 44 | Phase diagram and thermodynamic properties of the square lattice of antiferromagnetic spin-1/2 triangles in La ₄ Cu ₃ MoO ₁₂ . Physical Review B, 2001, 63, . | 1.1 | 9 |