

Hosho Katsura

List of Publications by Year in descending order

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Version: 2024-02-01

97
papers

6,759
citations

136950

32
h-index

58581

82
g-index

97
all docs

97
docs citations

97
times ranked

5284
citing authors

#	ARTICLE	IF	CITATIONS
1	Spin Current and Magnetoelectric Effect in Noncollinear Magnets. Physical Review Letters, 2005, 95, 057205.	7.8	1,871
2	Nearly Flatbands with Nontrivial Topology. Physical Review Letters, 2011, 106, 236803.	7.8	610
3	Observation of the Magnon Hall Effect. Science, 2010, 329, 297-299.	12.6	508
4	Quantum Spin Hall Effect in a Transition Metal Oxide Na_2IrO_4 . Physical Review Letters, 2009, 102, 256403.	7.8	435
5	Theory of the Thermal Hall Effect in Quantum Magnets. Physical Review Letters, 2010, 104, 066403.	7.8	416
6	General Relationship between the Entanglement Spectrum and the Edge State Spectrum of Topological Quantum States. Physical Review Letters, 2012, 108, 196402.	7.8	252
7	Dynamical Magnetoelectric Coupling in Helical Magnets. Physical Review Letters, 2007, 98, 027203.	7.8	227
8	Effect of lattice geometry on magnon Hall effect in ferromagnetic insulators. Physical Review B, 2012, 85, .	3.2	148
9	Parity-time-symmetric topological superconductor. Physical Review B, 2018, 98, .	3.2	132
10	Exact ground states and topological order in interacting Kitaev/Majorana chains. Physical Review B, 2015, 92, .	3.2	115
11	Extreme sensitivity of a frustrated quantum magnet Cs_2CuCl_4 . Physical Review B, 2010, 82, .	3.2	110
12	Localization and fractality in inhomogeneous quantum walks with self-duality. Physical Review E, 2010, 82, 031122.	2.1	96
13	Interacting Fibonacci anyons in a Rydberg gas. Physical Review A, 2012, 86, .	2.5	95
14	Onsager's Scars in Disordered Spin Chains. Physical Review Letters, 2020, 124, 180604.	7.8	90
15	Topological classification of gapped spin chains: Quantized Berry phase as a local order parameter. Physical Review B, 2008, 77, .	3.2	72
16	Ferromagnetism in the Hubbard model with topological/non-topological flat bands. Europhysics Letters, 2010, 91, 57007.	2.0	69
17	Phase diagram and pair Tomonaga-Luttinger liquid in a Bose-Hubbard model with flat bands. Physical Review A, 2013, 88, .	2.5	67
18	Dissipative spin chain as a non-Hermitian Kitaev ladder. Physical Review B, 2019, 99, .	3.2	64

#	ARTICLE	IF	CITATIONS
19	Learning disordered topological phases by statistical recovery of symmetry. Physical Review B, 2018, 97, .	3.2	58
20	Sine-square deformation of solvable spin chains and conformal field theories. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 115003.	2.1	52
21	Exact analysis of entanglement in gapped quantum spin chains. Physical Review B, 2007, 76, .	3.2	47
22	Entanglement in anSU(n) valence-bond-solid state. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 135304.	2.1	46
23	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi mathvariant="double-struck"} \rangle Z \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$ topological invariant for magnon spin Hall systems. Physical Review B, 2019, 99, .	3.2	45
24	Entanglement spectra of the two-dimensional Affleck-Kennedy-Lieb-Tasaki model: Correspondence between the valence-bond-solid state and conformal field theory. Physical Review B, 2011, 84, .	3.2	41
25	Fate of fractional quantum Hall states in open quantum systems: Characterization of correlated topological states for the full Liouvillian. Physical Review Research, 2020, 2, .	3.6	39
26	Deformed Fredkin spin chain with extensive entanglement. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 063103.	2.3	37
27	Sine-square deformation of free fermion systems in one and higher dimensions. Physical Review B, 2011, 84, .	3.2	36
28	Hofstadter's butterfly in quantum geometry. New Journal of Physics, 2016, 18, 103023.	2.9	36
29	The noncommutative index theorem and the periodic table for disordered topological insulators and superconductors. Journal of Mathematical Physics, 2018, 59, .	1.1	35
30	The \hat{Z}_2 index of disordered topological insulators with time reversal symmetry. Journal of Mathematical Physics, 2016, 57, 021903.	1.1	34
31	Exact ground state of the sine-square deformed XY spin chain. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 252001.	2.1	33
32	Degeneracy and consistency condition for Berry phases: Gap closing under a local gauge twist. Physical Review B, 2008, 78, .	3.2	32
33	Exact zero modes in twisted Kitaev chains. Physical Review B, 2017, 95, .	3.2	32
34	Non-Hermiticity and topological invariants of magnon Bogoliubov-de Gennes systems. Progress of Theoretical and Experimental Physics, 2020, 2020, .	6.6	32
35	Dissipative quantum Ising chain as a non-Hermitian Ashkin-Teller model. Physical Review B, 2019, 99, .	3.2	31
36	Entanglement and Density Matrix of a Block of Spins in AKLT Model. Journal of Statistical Physics, 2008, 133, 347-377.	1.2	30

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37	Three-dimensional topological magnon systems. <i>Physical Review B</i> , 2019, 100, .	3.2	28
38	Derivation of the matrix product ansatz for the Heisenberg chain from the algebraic Bethe ansatz. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 175003.	2.1	27
39	Ground States of the Spin-1 Bose-Hubbard Model. <i>Physical Review Letters</i> , 2013, 110, 130405.	7.8	25
40	Performance Comparison of Typical Binary-Integer Encodings in an Ising Machine. <i>IEEE Access</i> , 2021, 9, 81032-81039.	4.2	24
41	Theory of the Optical Conductivity of Spin Liquid States in One-Dimensional Mott Insulators. <i>Physical Review Letters</i> , 2009, 103, 177402.	7.8	23
42	Entanglement spectra of the quantum hard-square model: Holographic minimal models. <i>Physical Review A</i> , 2012, 86, .	2.5	22
43	Nagaoka states in the SU(2) spin-1 Heisenberg chain. <i>Physical Review Letters</i> , 2007, 99, 055701.	2.5	22
44	Entanglement in valence-bond-solid states on symmetric graphs. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 255303.	2.1	20
45	Entanglement and corner Hamiltonian spectra of integrable open spin chains. <i>Physical Review B</i> , 2016, 94, .	3.2	20
46	Supersymmetry breaking and Nambu-Goldstone fermions with cubic dispersion. <i>Physical Review D</i> , 2017, 95, .	4.7	20
47	Supersymmetry breaking and Nambu-Goldstone fermions in interacting Majorana chains. <i>Physical Review D</i> , 2019, 99, .	4.7	19
48	Entanglement entropy in the Calogero-Sutherland model. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, 13931-13942.	2.1	18
49	Zero-energy states in conformal field theory with sine-square deformation. <i>Progress of Theoretical and Experimental Physics</i> , 2017, 2017, .	6.6	18
50	Voltage dependence of Landau-Lifshitz-Gilbert damping of spin in a current-driven tunnel junction. <i>Physical Review B</i> , 2006, 73, .	3.2	17
51	Finite-size gap, magnetization, and entanglement of deformed Fredkin spin chain. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 405002.	2.1	17
52	Nonequilibrium Kondo Problem with Spin-Dependent Chemical Potentials: Exact Results. <i>Journal of the Physical Society of Japan</i> , 2007, 76, 054710.	1.6	16
53	Continuous Matrix Product Ansatz for the One-Dimensional Bose Gas with Point Interaction. <i>Journal of the Physical Society of Japan</i> , 2010, 79, 073002.	1.6	16
54	Ground-State Energies of Spinless Free Fermions and Hard-Core Bosons. <i>Physical Review Letters</i> , 2013, 111, 100402.	7.8	15

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55	A New Numerical Method for (\mathbb{Z}_2) Topological Insulators with Strong Disorder. Journal of the Physical Society of Japan, 2017, 86, 123710.	1.6	15
56	Effective dimension, level statistics, and integrability of Sachdev-Ye-Kitaev-like models. Physical Review D, 2018, 98, .	4.7	15
57	Exact supersymmetry in the relativistic hydrogen atom in general dimensions"supercharge and the generalized Johnson-Lippmann operator. Journal of Mathematical Physics, 2006, 47, 032301.	1.1	14
58	Mechanism for subgap optical conductivity in honeycomb Kitaev materials. Physical Review B, 2018, 97, .	3.2	14
59	Transforming generalized Ising models into Boltzmann machines. Physical Review E, 2019, 99, 032113.	2.1	14
60	Quantum Theory of Multiferroic Helimagnets: Collinear and Helical Phases. Physical Review Letters, 2008, 101, 187207.	7.8	13
61	Sine-square deformation and supersymmetric quantum mechanics. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 445208.	2.1	13
62	Quantum Ising chain with boundary dephasing. Progress of Theoretical and Experimental Physics, 2020, 2020, .	6.6	13
63	Exact results for nonlinear Drude weights in the spin-12 XXZ chain. Physical Review B, 2021, 103, .	3.2	13
64	Composite-kink solutions of coupled nonlinear wave equations. Physical Review D, 2014, 89, .	4.7	12
65	Exact ground states for interacting Kitaev chains. Physical Review B, 2018, 98, .	3.2	12
66	Supersymmetry breaking and Nambu-Goldstone fermions in an extended Nicolai model. Physical Review D, 2016, 94, .	4.7	11
67	Resonating valence bond states with trimer motifs. Physical Review B, 2017, 95, .	3.2	11
68	Ferromagnetism in the $SU(N)$ model with a nearly flat band. Physical Review B, 2019, 100, .	3.2	11
69	Flat-band solutions in D -dimensional decorated diamond and pyrochlore lattices: Reduction to molecular problem. Physical Review B, 2021, 104, .	3.2	11
70	Symmetry-protected quantization of complex Berry phases in non-Hermitian many-body systems. Physical Review B, 2022, 105, .	3.2	11
71	Rigorous Results on the Ground State of the Attractive $SU(N)$ ETQ1 10.784314 rgBT /Overlock 10 Tf 50 92 Td (stretchy="false")></td> <td>7.8</td> <td>10</td>	7.8	10
72	Theory of Raman Scattering in One-Dimensional Quantum Spin-12 Antiferromagnets. Physical Review Letters, 2012, 108, 237401.	7.8	9

#	ARTICLE	IF	CITATIONS
73	Hubbard models: Generalization of pairing states with \hat{I} . arXiv:1806.02275 $\text{Hubbard models: Generalization of pairing states with } \hat{I}$ $\text{Hubbard models: Generalization of pairing states with } \hat{I}$	3.2	9
74	Proposal of a spin-one chain model with competing dimer and trimer interactions. Physical Review B, 2017, 96, .	3.2	8
75	Symmetry-protected topological phases in spinful bosons with a flat band. Physical Review Research, 2021, 3, .	3.6	8
76	Fine structure of the nonlinear Drude weights in the spin- $\frac{1}{2}$ XXZ chain. Physical Review B, 2021, 104, .	3.4	8
77	Electron Localization or Delocalization in Incommensurate Helical Magnets. Physical Review Letters, 2006, 97, 116404.	7.8	6
78	Particle statistics, frustration, and ground-state energy. Physical Review B, 2018, 97, .	3.2	6
79	Interrelations among frustration-free models via Witten's conjugation. SciPost Physics Core, 2021, 4, .	2.8	6
80	Notes on Inhomogeneous Quantum Walks. , 2011, , .		5
81	Ferromagnetism in d-Dimensional SU(n) Hubbard Models with Nearly Flat Bands. Journal of Statistical Physics, 2021, 182, 1.	1.2	5
82	Phase diagram of an extended parafermion chain. SciPost Physics Core, 2022, 5, .	2.8	5
83	Block spin density matrix of the inhomogeneous AKLT model. Quantum Information Processing, 2008, 7, 153-174.	2.2	4
84	Synergetic effect of spin-orbit coupling and Zeeman splitting on the optical conductivity in the one-dimensional Hubbard model. Physical Review B, 2017, 95, .	3.2	4
85	Characterization of degenerate supersymmetric ground states of the Nicolai supersymmetric fermion lattice model by symmetry breakdown. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 385003.	2.1	4
86	Mott-insulator-like Bose-Einstein condensation in a tight-binding system of interacting bosons with a flat band. Physical Review Research, 2021, 3, .	3.6	4
87	Multifractals competing with solitons on Fibonacci optical lattices. New Journal of Physics, 2012, 14, 113012.	2.9	3
88	On integrable matrix product operators with bond dimension $D=4$. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P01006.	2.3	2
89	Rigorous Results for the Ground States of the Spin-2 Bose-Hubbard Model. Physical Review Letters, 2019, 122, 053401.	7.8	2
90	Simulating quantum circuits by adiabatic computation: Improved spectral gap bounds. Physical Review A, 2020, 101, .	2.5	2

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91	Exact solutions of few-magnon problems in the spin- S periodic XXZ chain. Physical Review B, 2022, 105, .	3.2	2
92	Multiple magnetization plateaus induced by farther neighbor interactions in an $S=1$ two-leg Heisenberg spin ladder. Physical Review B, 2021, 104, .	3.2	1
93	Existence of an energy gap in a one-dimensional Lesanovsky model. Physical Review A, 2013, 88, .	2.5	1
94	Energy Scale Deformation on Regular Polyhedra. Journal of the Physical Society of Japan, 2022, 91, .	1.6	1
95	Unraveling the Nature of Exotic Phase Transitions in Quantum Spin Chains. JPSJ News and Comments, 2021, 18, 04.	0.1	0
96	MATRIX PRODUCT STATES IN QUANTUM INTEGRABLE MODELS. , 2012, , .		0
97	ENTANGLEMENT PROPERTIES OF A QUANTUM LATTICE-GAS MODEL ON SQUARE AND TRIANGULAR LADDERS. , 2014, , .		0