

Sylvain Capponi

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1998804/publications.pdf>

Version: 2024-02-01

110
papers

3,018
citations

185998

28
h-index

182168

51
g-index

110
all docs

110
docs citations

110
times ranked

2107
citing authors

#	ARTICLE	IF	CITATIONS
1	Ferromagnetic Kondo model for manganites: Phase diagram, charge segregation, and influence of quantum localized spins. <i>Physical Review B</i> , 1998, 58, 6414-6427.	1.1	194
2	Phase diagram of a frustrated quantum antiferromagnet on the honeycomb lattice: Magnetic order versus valence-bond crystal formation. <i>Physical Review B</i> , 2011, 84, .	1.1	171
3	Quantum critical scaling of fidelity susceptibility. <i>Physical Review B</i> , 2010, 81, .	1.1	151
4	Thermodynamics of the Spin Luttinger Liquid in a Model Ladder Material. <i>Physical Review Letters</i> , 2008, 101, 247202.	2.9	149
5	Quantum Monte Carlo Simulations of Fidelity at Magnetic Quantum Phase Transitions. <i>Physical Review Letters</i> , 2009, 103, 170501.	2.9	104
6	Spin and charge dynamics of the ferromagnetic and antiferromagnetic two-dimensional half-filled Kondo lattice model. <i>Physical Review B</i> , 2001, 63, .	1.1	103
7	Numerical study of magnetization plateaus in the spin- $\frac{1}{2}$ Kagome Heisenberg antiferromagnet. <i>Physical Review B</i> , 2013, 88, .	1.1	93
8	Antiferromagnetism and Hole Pair Checkerboard in the Vortex State of HighTcSuperconductors. <i>Physical Review Letters</i> , 2002, 89, 137004.	2.9	85
9	Molecular superfluid phase in systems of one-dimensional multicomponent fermionic cold atoms. <i>Physical Review A</i> , 2008, 77, .	1.0	83
10	Nearly Deconfined Spinon Excitations in the Square-Lattice Spin- $\frac{1}{2}$ Heisenberg Antiferromagnet. <i>Physical Review X</i> , 2017, 7, .	2.8	83
11	Phases of one-dimensional SU(2) Tj ETQq1 1 0.784314 rgBT /Overloc Fermi gases From molecular Luttinger liquids to topological phases. <i>Annals of Physics</i> , 2016, 367, 509-531.	1.0	78
12	Spinon excitations in the square lattice: A continuous- $\frac{1}{2}$ model on the square lattice: A continuous- $\frac{1}{2}$ quantum Monte Carlo study. <i>Physical Review B</i> , 2009, 80, .	1.1	64
13	Phase diagram of interacting spinless fermions on the honeycomb lattice: A comprehensive exact diagonalization study. <i>Physical Review B</i> , 2015, 92, .	1.1	61
14	Spin 3/2 fermions with attractive interactions in a one-dimensional optical lattice: phase diagrams, entanglement entropy, and the effect of the trap. <i>European Physical Journal B</i> , 2009, 68, 293-308.	0.6	57
15	Numerical contractor renormalization method for quantum spin models. <i>Physical Review B</i> , 2004, 70, .	1.1	55
16	Symmetry-protected topological phases of alkaline-earth cold fermionic atoms in one dimension. <i>Europhysics Letters</i> , 2013, 102, 37008.	0.7	55
17	Valence Bond Entanglement Entropy. <i>Physical Review Letters</i> , 2007, 99, 117204.	2.9	53
18	Non-Abelian chiral spin liquid in a quantum antiferromagnet revealed by an iPEPS study. <i>Physical Review B</i> , 2018, 98, .	1.1	51

#	ARTICLE	IF	CITATIONS
19	Effective Theory of Magnetization Plateaux in the Shastry-Sutherland Lattice. Physical Review Letters, 2008, 101, 227201.	2.9	48
20	Confinement versus deconfinement of Cooper pairs in one-dimensional spin-3/2 fermionic cold atoms. Physical Review B, 2007, 75, .	1.1	46
21	Effects of long-range electronic interactions on a one-dimensional electron system. Physical Review B, 2000, 61, 13410-13417.	1.1	41
22	Haldane charge conjecture in one-dimensional multicomponent fermionic cold atoms. Physical Review B, 2010, 81, .	1.1	38
23	Three-component Fermi gas in a one-dimensional optical lattice. Physical Review A, 2009, 80, .	1.0	36
24	Numerical calculations of the Raman spectrum of the two-dimensional Heisenberg model. Physical Review B, 1998, 57, 8478-8493.	1.1	33
25	Phase diagrams of one-dimensional half-filled two-orbital $SU(N)$ fermion systems. Physical Review B, 2015, 91, .	1.1	29
26	Superconducting Gap for a Two-Leg Ladder. Physical Review Letters, 2003, 91, 137203.	2.9	28
27	Competing orders in one-dimensional half-filled multicomponent fermionic cold atoms: The Haldane-charge conjecture. Physical Review B, 2011, 84, .	1.1	28
28	p6chiral resonating valence bonds in the kagome antiferromagnet. Physical Review B, 2013, 87, .	1.1	28
29	Charge density correlations in ladders investigated by the contractor-renormalization method. Physical Review B, 2002, 66, .	1.1	27
30	Current carrying ground state in a bilayer model of strongly correlated systems. Physical Review B, 2004, 70, .	1.1	27
31	Zeeman Effect in Superconducting Two-Leg Ladders: Irrational Magnetization Plateaus and Exceeding the Pauli Limit. Physical Review Letters, 2006, 97, 087207.	2.9	27
32	Charge and spin inhomogeneous phases in the ferromagnetic Kondo lattice model. Physical Review B, 2002, 65, .	1.1	26
33	Weak- versus strong-disorder superfluid-Bose glass transition in one dimension. Physical Review B, 2017, 96, .	1.1	26
34	Finite size scaling of the spin stiffness of the antiferromagnetic $S = 1/2$ XXZ chain. European Physical Journal B, 2001, 24, 77-84.	0.6	25
35	Effective spin couplings in the Mott insulator of the honeycomb lattice Hubbard model. New Journal of Physics, 2012, 14, 115027.	1.2	24
36	Dynamical properties of the random Heisenberg chain. Physical Review B, 2018, 97, .	1.1	24

#	ARTICLE	IF	CITATIONS
37	Global phase diagram of the high-Tccuprates. Physical Review B, 2004, 70, .	1.1	22
38	Quantum phase transitions in multileg spin ladders with ring exchange. Physical Review B, 2013, 88, .	1.1	22
39	Quantum phase transitions in three-leg spin tubes. Physical Review B, 2010, 82, .	1.1	21
40	Chiral Spin Liquid on the Square Lattice: A View from Symmetric Projected Entangled Pair States. Physical Review Letters, 2020, 125, 017201.	2.9	21
41	Resonant magnetic mode in superconducting two-leg ladders. Physical Review B, 2004, 69, .	1.1	20
42	Modeling bond-order wave instabilities in doped frustrated antiferromagnets: Valence bond solids at fractional filling. Physical Review B, 2006, 74, .	1.1	20
43	Competing orders in the generalized Hund chain model at half filling. Physical Review B, 2010, 82, .	1.1	20
44	Quantum criticality in the SO(5) bilinear-biquadratic Heisenberg chain. Physical Review B, 2011, 83, .	1.1	20
45	Temperature dependence of the NMR relaxation rate $1/T_1$ for quantum spin chains. Physical Review B, 2016, 94, .	1.1	20
46	Phase diagram of interacting spinless fermions on the honeycomb lattice. Journal of Physics Condensed Matter, 2017, 29, 043002.	0.7	20
47	Unified phase diagram of antiferromagnetic SU(3) Heisenberg spin ladders. Physical Review B, 2018, 98, .	1.1	20
48	Nuclear magnetic resonance study of the magnetic-field-induced ordered phase in the $\text{NiCl}_2\text{Ba}_2\text{O}_7$ spin ladder. Physical Review B, 2017, 95, .	1.1	20
49	Antiholons in One-Dimensional tJ Models. Physical Review Letters, 2003, 90, 216401.	2.9	18
50	Persistent currents in a Möbius ladder: A test of interchain coherence of interacting electrons. Physical Review B, 1998, 57, 1457-1460.	1.1	17
51	Valence-bond entanglement entropy of frustrated spin chains. Physical Review B, 2010, 82, .	1.1	17
52	Single hole dynamics in the tJ model on two- and three-leg ladders. Physical Review B, 2001, 63, .	1.1	16
53	Dynamical dimer correlations at bipartite and non-bipartite Rokhsar-Kivelson points. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P01010.	0.9	16
54	Combined analytical and numerical approach to study magnetization plateaux in doped quasi-one-dimensional antiferromagnets. Physical Review B, 2011, 84, .	1.1	15

#	ARTICLE	IF	CITATIONS
55	Magnetization plateaus of an easy-axis kagome antiferromagnet with extended interactions. Physical Review B, 2015, 92, .	1.1	15
56	Bond alternation of polyacetylene as a spin-Peierls distortion. Chemical Physics Letters, 1996, 255, 238-243.	1.2	14
57	Low-frequency current fluctuations in doped ladders. Physical Review B, 2001, 65, .	1.1	13
58	Doped two-leg ladder with ring exchange: Exact diagonalization and density matrix renormalization group computations. Physical Review B, 2005, 72, .	1.1	13
59	Contractor-renormalization approach to frustrated magnets in a magnetic field. Physical Review B, 2007, 76, .	1.1	13
60	Asymmetric spin- $\frac{1}{2}$ bevelled ladders: Analytical studies supported by exact diagonalization, DMRG, and Monte Carlo simulations. Physical Review B, 2010, 82, .	1.1	13
61	Baxter-Wu model in a transverse magnetic field. Physical Review E, 2014, 89, 062136.	0.8	13
62	Dimensional modulation of spontaneous magnetic order in quasi-two-dimensional quantum antiferromagnets. Physical Review B, 2016, 94, .	1.1	13
63	Abelian chiral spin liquids on the square lattice. Physical Review B, 2021, 104, .	1.1	13
64	PHASE DIAGRAM OF ONE-DIMENSIONAL ALKALINE-EARTH COLD FERMIONIC ATOMS. Modern Physics Letters B, 2011, 25, 955-962.	1.0	12
65	A generalized perspective on non-perturbative linked-cluster expansions. Europhysics Letters, 2015, 110, 20006.	0.7	12
66	Staircase of crystal phases of hard-core bosons on the kagome lattice. Physical Review B, 2016, 94, .	1.1	12
67	Nuclear Magnetic Resonance Reveals Disordered Level-Crossing Physics in the Bose-Glass Regime of the Br-Doped Ni		

#	ARTICLE	IF	CITATIONS
73	Disorder-Induced Revival of the Bose-Einstein Condensation in N_i		

#	ARTICLE	IF	CITATIONS
91	Discrete lattice symmetry breaking in a two-dimensional frustrated spin-1 Heisenberg model. Physical Review B, 2018, 98, .	1.1	5
92	Haldane phases with ultracold fermionic atoms in double-well optical lattices. Physical Review B, 2019, 99, .	1.1	5
93	Symmetry-protected topological phases in a two-leg $SU(2)$ spin ladder with unequal spins. Physical Review B, 2020, 101, .		
94	Effective Hamiltonian Approach for Strongly Correlated Systems. Theoretical Chemistry Accounts, 2006, 116, 524-534.	0.5	4
95	Spin-nematic phases in models of correlated electron systems: A numerical study. Physical Review B, 2007, 75, .	1.1	4
96	Theory of the Raman spectra of the Shastry-Sutherland antiferromagnet $SrCu_2(BO_3)_2$ doped with nonmagnetic impurities. Physical Review B, 2009, 80, .	1.1	4
97	Engineering $SU(2)$ invariant spin models to mimic quantum dimer physics on the square lattice. Physical Review B, 2015, 92, .	1.1	4
98	Ground-state properties of the one-dimensional Hubbard model with pairing potential. Physica B: Condensed Matter, 2021, 604, 412665.	1.3	4
99	Truncated Lanczos method: Application to hole-doped spin ladders. Physical Review B, 2001, 63, .	1.1	3
100	Valence bond state in the delafossite $YCuO_{2.5}$. Journal of Physics Condensed Matter, 2007, 19, 145233.	0.7	2
101	ENTANGLEMENT OF QUANTUM SPIN SYSTEMS: A VALENCE-BOND APPROACH. Modern Physics Letters B, 2011, 25, 917-928.	1.0	2
102	Competing superconducting instabilities in the one-dimensional p-band degenerate cold fermionic system. Physical Review B, 2015, 92, .	1.1	2
103	Real Space Imaging of Spin Polarons in Zn-Doped $SrCu_2(BO_3)_2$. Physical Review Letters, 2015, 114, 056402.		
104	Transverse transport in coupled strongly correlated electronic chains. Zeitschrift für Physik B-Condensed Matter, 1996, 103, 173-176.	1.1	1
105	Numerical Contractor Renormalization applied to strongly correlated systems. AIP Conference Proceedings, 2006, , .	0.3	1
106	Weakly first-order quantum phase transition between spin-nematic and valence-bond crystal order in a square-lattice $SU(4)$ fermionic model. Physical Review B, 2022, 105, .	1.1	1
107	A unifying approach to unconventional orders in frustrated spin systems. Journal of Magnetism and Magnetic Materials, 2007, 310, 1355-1356.	1.0	0
108	Publisher's Note: Competing orders in the generalized Hund chain model at half filling [Phys. Rev. B 82 , 155134 (2010)]. Physical Review B, 2010, 82, .	1.1	0

#	ARTICLE	IF	CITATIONS
109	Effects of long range electronic interactions on a one-dimensional electron system. European Physical Journal Special Topics, 2000, 10, Pr3-119-Pr3-124.	0.2	0
110	Single Hole Dynamics in Correlated Insulators. , 2002, , 145-156.		0