Paola Verrucchi

List of Publications by Citations

79 papers	1,555 citations	20 h-index	38 g-index
83 ext. papers	1,717 ext. citations	3.2 avg, IF	4.24 L-index

#	Paper	IF	Citations
79	Studying quantum spin systems through entanglement estimators. *Physical Review Letters*, **2004**, 93, 167203	7.4	140
78	Entanglement and factorized ground states in two-dimensional quantum antiferromagnets. *Physical Review Letters*, **2005**, 94, 147208	7.4	112
77	Divergence of the entanglement range in low-dimensional quantum systems. *Physical Review A*, **2006**, 74,	2.6	96
76	Quantum Monte Carlo study of S=12 weakly anisotropic antiferromagnets on the square lattice. *Physical Review B*, **2003**, 67,	3.3	96
75	Nonperturbative entangling gates between distant qubits using uniform cold atom chains. *Physical Review Letters*, **2011**, 106, 140501	7.4	89
74	Optimal dynamics for quantum-state and entanglement transfer through homogeneous quantum systems. *Physical Review A*, **2010**, 82,	2.6	79
73	The effective potential and effective Hamiltonian in quantum statistical mechanics. *Journal of Physics Condensed Matter*, **1995**, 7, 7891-7938	1.8	70
72	Long quantum channels for high-quality entanglement transfer. *New Journal of Physics*, **2011**, 13, 123006	2.9	67
71	99%-fidelity ballistic quantum-state transfer through long uniform channels. *Physical Review A*, **2012**, 85,	2.6	62
70	Quantum Measurement Cooling. *Physical Review Letters*, **2019**, 122, 070603	7.4	47
69	Temperature and Spin Dependent Correlation Length of the Quantum Heisenberg Antiferromagnet on the Square Lattice. *Physical Review Letters*, **1996**, 77, 3439-3442	7.4	46
68	Quantum thermodynamics in classical phase space. *Physical Review A*, **1992**, 45, 8418-8429	2.6	43
67	Detection of XY behavior in weakly anisotropic quantum antiferromagnets on the square lattice. *Physical Review Letters*, **2003**, 90, 167205	7.4	40
66	Two-spin entanglement distribution near factorized states. *Journal of Physics A: Mathematical and Theoretical*, **2007**, 40, 9845-9857	2	39
65	Field-induced XY behavior in the S=12 antiferromagnet on the square lattice. *Physical Review B*, **2003**, 68,	3.3	36
64	Reading entanglement in terms of spin configurations in quantum magnets. *European Physical Journal D*, **2006**, 38, 563-570	1.3	35
63	Initializing an unmodulated spin chain to operate as a high-quality quantum data bus. *Physical Review A*, **2011**, 83,	2.6	30

62	Spin dynamics and magnetic correlation length in two-dimensional quantum heisenberg antiferromagnets. *Physical Review Letters*, **2000**, 84, 366-9	7.4	29
61	Quantum thermodynamics of the easy-plane ferromagnetic chain. *Physical Review B*, **1992**, 46, 11601-11616	3.3	29
60	Two-dimensional quantum Heisenberg antiferromagnet: Effective-Hamiltonian approach to the thermodynamics. *Physical Review B*, **1997**, 56, 14456-14468	3.3	27
59	Parametric representation of open quantum systems and cross-over from quantum to classical environment. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 6748-53	11.5	20
58	Manipulating and protecting entanglement by means of spin environments. *New Journal of Physics*, **2010**, 12, 083046	2.9	18
57	Thermodynamics of the quantum easy-plane antiferromagnet on the triangular lattice. *Physical Review B*, **1999**, 60, 7299-7303	3.3	18
56	Quantum effects on the Berezinskii-Kosterlitz-Thouless transition in the ferromagnetic two-dimensional XXZ model. *Physical Review B*, **1995**, 51, 12840-12843	3.3	16
55	When finite-size corrections vanish: The S=12 XXZ model and the Razumov-Stroganov state. *Physical Review A*, **2009**, 80,	2.6	15
54	Determination of ground-state properties in quantum spin systems by single-qubit unitary operations and entanglement excitation energies. *Physical Review A*, **2008**, 77,	2.6	14
53	Staggered magnetization and entanglement enhancement by magnetic impurities in a S=12 spin chain. *Physical Review A*, **2008**, 77,	2.6	14
52	Quantum renormalization of the XY model. *Journal of Applied Physics*, **1994**, 75, 5814-5816	2.5	14
51	Cuccoli, Tognetti, Vaia, and Verrucchi Reply:. *Physical Review Letters*, **1997**, 79, 1584-1584	7.4	13
50	Noise-resilient variational hybrid quantum-classical optimization. *Physical Review A*, **2020**, 102,	2.6	12
49	Extracting signatures of quantum criticality in the finite-temperature behavior of many-body systems. *Physical Review B*, **2007**, 76,	3.3	11
48	Effective cutting of a quantum spin chain by bond impurities. *Physical Review A*, **2013**, 88,	2.6	10
47	Finite-temperature ordering in two-dimensional magnets. *Physical Review B*, **2000**, 62, 3771-3777	3.3	10
46	Quantum thermodynamics of easy-plane ferromagnetic chains. *Physical Review B*, **1991**, 44, 903-905	3.3	9
45	Effective description of the short-time dynamics in open quantum systems. *Physical Review A*, **2017**, 96,	2.6	8

44	Parametric description of the quantum measurement process. *Europhysics Letters*, **2015**, 111, 40008	1.6	8
43	Semiclassical approach to the thermodynamics of spin chains. *Physical Review B*, **2000**, 62, 57-60	3.3	8
42	Heisenberg antiferromagnet on the square lattice for S>~1. *Physical Review B*, **1998**, 58, 14151-14154	3.3	8
41	Quantum correction to the BKT transition for 2D easy-plane antiferromagnets. *Journal of Applied Physics*, **1996**, 79, 4638	2.5	8
40	Quantum Berezinskii-Kosterlitz-Thouless transition in square-lattice magnets with easy-plane anisotropy. *Physica D: Nonlinear Phenomena*, **1998**, 119, 68-72	3.3	7
39	Phase diagram of the two-dimensional quantum antiferromagnet in a magnetic field. *Journal of Applied Physics*, **2006**, 99, 08H503	2.5	7
38	Whenever a quantum environment emerges as a classical system, it behaves like a measuring apparatus. *Quantum - the Open Journal for Quantum Science*,3, 179		7
37	Getting through to a qubit by magnetic solitons. *New Journal of Physics*, **2015**, 17, 083053	2.9	6
36	Quantum gates controlled by spin chain soliton excitations. *Journal of Applied Physics*, **2014**, 115, 17B302	2.5	6
35	Critical behavior of the two-dimensional easy-plane ferromagnet. *Journal of Applied Physics*, **1994**, 76, 6362-6364	2.5	6
34	Using solitons for manipulating qubits. *International Journal of Quantum Information*, **2014**, 12, 1461013	0.8	5
33	Dynamics of Open Quantum Systems Using Parametric Representation with Coherent States. *Open Systems and Information Dynamics*, **2013**, 20, 1340002	0.4	5
32	Quantum Monte Carlo Study of Entanglement in Quantum Spin Systems. *Journal of Low Temperature Physics*, **2005**, 140, 293-302	1.3	5
31	The quantum 2-D XXZ ferromagnet. *Journal of Magnetism and Magnetic Materials*, **1995**, 140-144, 1703-1704	2.0	5
30	Formation of the Haldane phase by soliton-pair dissociation: Results from a cluster approximation. *Physical Review B*, **1995**, 52, 3571-3576	3.3	4
29	Quantum dynamics of a macroscopic magnet operating as an environment of a mechanical oscillator. *Physical Review A*, **2016**, 94,	2.6	4
28	Getting Information via a Quantum Measurement: The Role of Decoherence. *International Journal of Theoretical Physics*, **2015**, 54, 4356-4366	1.1	3
27	Thermodynamics of two-dimensional XXZ easy-plane quantum Heisenberg magnets. *Journal of Applied Physics*, **1997**, 81, 4137-4139	2.5	3

26	Phase transitions in anisotropic two-dimensional quantum antiferromagnets. *Physica Status Solidi (B): Basic Research*, **2003**, 236, 433-436	1.3	3
25	Quantum two-dimensional Heisenberg antiferromagnet: Bridging the gap between field-theoretical and semiclassical approaches. *Physical Review B*, **2003**, 68,	3.3	3
24	Quantum Monte Carlo simulation of two-dimensional S=1/2 antiferromagnets with very weak easy-plane anisotropy. *Journal of Applied Physics*, **2003**, 93, 7640-7642	2.5	3
23	Spin Chains as Data Buses, Logic Buses and Entanglers **2014**, 1-37		3
22	Time and classical equations of motion from quantum entanglement via the Page and Wootters mechanism with generalized coherent states. *Nature Communications*, **2021**, 12, 1787	17.4	3
21	The rhythm of quantum algorithms. *Soft Computing*, **2017**, 21, 1515-1521	3.5	2
20	Open Quantum Systems and the Parametric Representation: From Entanglement to Berry Phase. *International Journal of Theoretical Physics*, **2014**, 53, 3434-3446	1.1	2
19	ENTANGLEMENT MODULATION IN A SPIN CHAIN BY A LOCAL IMPURITY. *International Journal of Quantum Information*, **2008**, 06, 567-573	0.8	2
18	Anisotropy and Ising-type transition of the S=5/2 two-dimensional Heisenberg antiferromagnet Mn-formate di-Urea. *Journal of Applied Physics*, **2003**, 93, 7637-7639	2.5	2
17	Correlated spin dynamics in 2-D quantum Heisenberg antiferromagnets from NMR relaxation in copper formiate tetradeuterate. *Applied Magnetic Resonance*, **2000**, 19, 391-398	0.8	2
16	The quantum Heisenberg antiferromagnet on the square lattice. *Journal of Applied Physics*, **1999**, 85, 6079-6081	2.5	2
15	Quantum correlations between distant qubits conveyed by large-S spin chains. *Physical Review B*, **2017**, 96,	3.3	1
14	Signatures of XY behavior in 2D weakly anisotropic antiferromagnets. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, E651-E652	2.8	1
13	Thermodynamics of the two-dimensional easy-axis quantum antiferromagnet. *Journal of Magnetism and Magnetic Materials*, **2001**, 226-230, 562-563	2.8	1
12	Phase transitions in the quantum easy-plane antiferromagnet on the triangular lattice. *Journal of Applied Physics*, **2000**, 87, 7037-7039	2.5	1
11	Thermodynamics and correlations of the easy-plane ferromagnet CsNiF3. *Journal of Applied Physics*, **1993**, 73, 6998-7000	2.5	1
10	Quantum thermodynamics of easy-plane ferromagnetic chains. *Journal of Magnetism and Magnetic Materials*, **1992**, 104-107, 785-787	2.8	1
9	Entanglement in quantum-critical spin systems **2006**, 313-321		1

8	Single-qubit remote manipulation by magnetic solitons. *Journal of Magnetism and Magnetic Materials*, **2016**, 400, 149-153	2.8	0
7	Two-Qubits in a Large-S Environment. *Proceedings (mdpi)*, **2019**, 12, 10	0.3	0
6	Classical Ising chain in transverse field. *Journal of Magnetism and Magnetic Materials*, **2007**, 310, e477-e479	2.8	0
5	Correlation length of the isotropic quantum Heisenberg antiferromagnet. *Journal of Applied Physics* , **1997**, 81, 4224-4226	2.5	
4	Quantum Heisenberg antiferromagnets: a survey of the activity in Florence (Review). *Low Temperature Physics*, **2005**, 31, 668-685	0.7	
3	Quantum Phase Transition in Spin Systems Studied through Entanglement Estimators. *Open Systems and Information Dynamics*, **2006**, 13, 445-453	0.4	
2	Reconciling field-theoretical and semiclassical approaches to quantum 2D antiferromagnets. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, 892-893	2.8	
1	Thermodynamics of quantum spin chains **1991**, 36-43		