Luigi Amico

List of Publications by Year
in descending order

92 papers	7,340 citations	147801 31 h-index	53230 85 g-index
93 all docs	93 docs citations	93 times ranked	3637 citing authors

#	Article	IF	Citations
1	Persistent current of SU(N) fermions. SciPost Physics, 2022, 12, .	4.9	13
2	The quantum solitons atomtronic interference device. Quantum Science and Technology, 2022, 7, 015015.	5.8	6
3	Enhancing sensitivity to rotations with quantum solitonic currents. SciPost Physics, 2022, 12, .	4.9	10
4	Variational quantum eigensolver for SU(N) fermions. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 265301.	2.1	2
5	Coherent phase slips in coupled matter-wave circuits. Physical Review Research, 2022, 4, .	3.6	7
6	Machine-learning engineering of quantum currents. Physical Review Research, 2021, 3, .	3.6	14
7	Roadmap on Atomtronics: State of the art and perspective. AVS Quantum Science, 2021, 3, .	4.9	87
8	Exact results for persistent currents of two bosons in a ring lattice. Physical Review A, 2020, 101, .	2.5	15
9	Topological pumping of quantum correlations. Physical Review Research, 2020, 2, .	3.6	12
10	Multimode N00N states in driven atomtronic circuits. Physical Review Research, 2020, 2, .	3.6	6
11	Andreev-reflection and Aharonov–Bohm dynamics in atomtronic circuits. Quantum Science and Technology, 2019, 4, 045001.	5.8	10
12	Monitoring currents in cold-atom circuis. Physical Review A, 2019, 100, .	2.5	12
13	Aharonov-Bohm effect in mesoscopic Bose-Einstein condensates. Physical Review A, 2019, 100, .	2.5	16
14	Nonclassical states in strongly correlated bosonic ring ladders. Physical Review A, 2019, 99, .	2.5	5
15	Rise and Fall of a Bright Soliton in an Optical Lattice. Physical Review Letters, 2019, 122, 053001.	7.8	14
16	Topological pumping in Aharonov–Bohm rings. Communications Physics, 2019, 2, .	5.3	18
17	Mesoscopic Vortex–Meissner currents in ring ladders. Quantum Science and Technology, 2018, 3, 035006.	5.8	17
18	Two-dimensional network of atomtronic qubits. Physical Review A, 2018, 97, .	2.5	5

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19	Readout of the atomtronic quantum interference device. Physical Review A, 2018, 97, .	2.5	25
20	Stabilizing Rabi oscillation of a charge qubit via the atomic clock technique. New Journal of Physics, 2018, 20, 023031.	2.9	10
21	Mesoscopic electron transport and atomic gases, a review of Frank W. J. Hekking's scientific work. SciPost Physics, 2018, 5, .	4.9	0
22	Focus on atomtronics-enabled quantum technologies. New Journal of Physics, 2017, 19, 020201.	2.9	89
23	Scaling of geometric phase versus band structure in cluster-Ising models. Physical Review E, 2017, 96, 020106.	2.1	9
24	Exact analysis of the spectral properties of the anisotropic two-bosons Rabi model. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 204001.	2.1	16
25	Home infusion program with enzyme replacement therapy for Fabry disease: The experience of a large Italian collaborative group. Molecular Genetics and Metabolism Reports, 2017, 12, 85-91.	1.1	20
26	Superconducting qubit-resonator-atom hybrid system. Quantum Science and Technology, 2017, 2, 035005.	5.8	13
27	Control of entanglement transitions in quantum spin clusters. Physical Review B, 2017, 96, .	3.2	8
28	Local reversibility and entanglement structure of many-body ground states. Quantum Science and Technology, 2017, 2, 015005.	5.8	14
29	An atomtronic flux qubit: a ring lattice of Bose–Einstein condensates interrupted by three weak links. New Journal of Physics, 2016, 18, 075013.	2.9	24
30	Superconducting resonator and Rydberg atom hybrid system in the strong coupling regime. Physical Review A, 2016, 94, .	2.5	21
31	Quantum State Transmission in a Superconducting Charge Qubit-Atom Hybrid. Scientific Reports, 2016, 6, 38356.	3.3	15
32	Charge-qubit–atom hybrid. Physical Review A, 2016, 93, .	2.5	24
33	Entanglement convertibility by sweeping through the quantum phases of the alternating bonds XXZ chain. Scientific Reports, 2016, 6, 26453.	3.3	15
34	Roadmap on quantum optical systems. Journal of Optics (United Kingdom), 2016, 18, 093001.	2.2	37
35	Coherent superposition of current flows in an atomtronic quantum interference device. New Journal of Physics, 2015, 17, 045023.	2.9	70
36	Optimal scaling of persistent currents for interacting bosons on a ring. European Physical Journal: Special Topics, 2015, 224, 519-524.	2.6	5

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37	Local Convertibility and the Quantum Simulation of Edge States in Many-Body Systems. Physical Review X, 2014, 4, .	8.9	16
38	Anisotropic Rabi model. Physical Review X, 2014, 4, .	8.9	83
39	Local convertibility of the ground state of the perturbed toric code. Physical Review B, 2014, 90, .	3.2	9
40	Superfluid qubit systems with ring shaped optical lattices. Scientific Reports, 2014, 4, 4298.	3.3	101
41	Local Response of Topological Order to an External Perturbation. Physical Review Letters, 2013, 110, 210602.	7.8	19
42	Local characterization of one-dimensional topologically ordered states. Physical Review B, 2013, 88, .	3.2	25
43	QUANTUM DISCORD IN THE GROUND STATE OF SPIN CHAINS. International Journal of Modern Physics B, 2013, 27, 1345030.	2.0	39
44	Effective dynamics of cold atoms flowing in two ring-shaped optical potentials with tunable tunneling. Physical Review A, 2013, 88, .	2.5	40
45	Optimal Correlations in Many-Body Quantum Systems. Physical Review Letters, 2012, 108, 240503.	7.8	14
46	QUANTUM DISCORD IN A SPIN SYSTEM WITH SYMMETRY BREAKING. International Journal of Modern Physics B, 2012, 26, 1243002.	2.0	17
47	Topological order in 1D Cluster state protected by symmetry. Quantum Information Processing, 2012, 11, 1961-1968.	2.2	42
48	Bethe Ansatz approach to the pairing fluctuations in the mesoscopic regime. Annalen Der Physik, 2012, 524, 133-145.	2.4	9
49	Quantum phase transition between cluster and antiferromagnetic states. Europhysics Letters, 2011, 95, 50001.	2.0	74
50	Ground-state factorization and correlations with broken symmetry. Europhysics Letters, 2011, 96, 27002.	2.0	60
51	Statistical mechanics of the cluster Ising model. Physical Review A, 2011, 84, .	2.5	84
52	Dynamical delocalization of Majorana edge states by sweeping across a quantum critical point. New Journal of Physics, 2010, 12, 055014.	2.9	51
53	Hidden order in bosonic gases confined in one-dimensional optical lattices. New Journal of Physics, 2010, 12, 013002.	2.9	18
54	Entanglement in a spin system with inverse square statistical interaction. New Journal of Physics, 2010, 12, 025022.	2.9	22

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55	Separation of variables for integrable spin–boson models. Nuclear Physics B, 2010, 839, 604-626.	2.5	34
56	Adiabatic dynamics of a quantum critical system coupled to an environment: Scaling and kinetic equation approaches. Physical Review B, 2009, 80, .	3.2	51
57	Topology-Induced Anomalous Defect Production by Crossing a Quantum Critical Point. Physical Review Letters, 2009, 102, 135702.	7.8	143
58	Thermalization Dynamics Close to a Quantum Phase Transition. Physical Review Letters, 2009, 102, 245701.	7.8	15
59	Quantum instability and edge entanglement in the quasi-long-range order. Physical Review A, 2009, 79, .	2.5	35
60	Entanglement and magnetic order. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 504001.	2.1	20
61	Entanglement in many-body systems. Reviews of Modern Physics, 2008, 80, 517-576.	45.6	2,781
62	Adiabatic Dynamics in Open Quantum Critical Many-Body Systems. Physical Review Letters, 2008, 101, 175701.	7.8	90
63	Bound entanglement in the XY model. New Journal of Physics, 2007, 9, 322-322.	2.9	25
64	Entanglement crossover close to a quantum critical point. Europhysics Letters, 2007, 77, 17001.	2.0	36
65	Integrable spin–boson models descending from rational six-vertex models. Nuclear Physics B, 2007, 787, 283-300.	2.5	21
66	Divergence of the entanglement range in low-dimensional quantum systems. Physical Review A, 2006, 74, .	2.5	107
67	Mesoscopic BCS pairing in the repulsive one-dimensional Hubbard model. Physical Review B, 2006, 73, .	3.2	3
68	Integrable spin-boson interaction in the Tavis-Cummings model from a generic boundary twist. European Physical Journal B, 2005, 43, 387-391.	1.5	18
69	Quantum Many Particle Systems in Ring-Shaped Optical Lattices. Physical Review Letters, 2005, 95, 063201.	7.8	192
70	Out of equilibrium correlation functions of quantum anisotropicXYmodels: one-particle excitations. Journal of Physics A, 2004, 37, 291-302.	1.6	21
71	Entanglement in one-dimensional spin systems. , 2004, 5436, 150.		0
72	Universality of the one-dimensional Bose gas with delta interaction. Annals of Physics, 2004, 314, 496-507.	2.8	21

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73	Dynamics of entanglement in one-dimensional spin systems. Physical Review A, 2004, 69, .	2.5	253
74	Spin wave contribution to entanglement in Heisenberg models. New Journal of Physics, 2004, 6, 124-124.	2.9	4
75	<title>Scaling, entanglement, and quantum phase transitions</title>. , 2003, , .		0
76	Exact Correlation Functions of the BCS Model in the Canonical Ensemble. Physical Review Letters, 2002, 88, 127003.	7.8	35
77	Quasi-classical descendants of disordered vertex models with boundaries. Nuclear Physics B, 2002, 644, 409-432.	2.5	22
78	Electrostatic Analogy for Integrable Pairing Force Hamiltonians. Annals of Physics, 2002, 299, 228-250.	2.8	29
79	Scaling of entanglement close to a quantum phase transition. Nature, 2002, 416, 608-610.	27.8	1,577
80	Integrable models for confined fermions: applications to metallic grains. Nuclear Physics B, 2001, 614, 449-466.	2.5	33
81	The BCS model and the off-shell Bethe ansatz for vertex models. Journal of Physics A, 2001, 34, 6425-6434.	1.6	35
82	Integrable Model for Interacting Electrons in Metallic Grains. Physical Review Letters, 2001, 86, 5759-5762.	7.8	88
83	Title is missing!. Journal of Low Temperature Physics, 2000, 118, 23-43.	1.4	5
84	ALGEBRAIC EQUIVALENCE BETWEEN CERTAIN MODELS FOR SUPERFLUIDâ€"INSULATOR TRANSITION. Modern Physics Letters B, 2000, 14, 759-766.	1.9	6
85	Fermionic long-range correlations realized by particles obeying deformed statistics. Journal of Physics A, 2000, 33, L487-L492.	1.6	18
86	Bethe Ansatz solution of a new class of Hubbard-type models. Journal of Physics A, 2000, 33, L87-L92.	1.6	15
87	Time-dependent mean-field theory of the superfluid-insulator phase transition. Physical Review B, 2000, 62, 1224-1237.	3.2	43
88	Exact solution of generalized Schulzâ€"Shastry type models. Nuclear Physics B, 2000, 588, 531-551.	2.5	24
89	Dynamical Mean Field Theory of the Bose-Hubbard Model. Physical Review Letters, 1998, 80, 2189-2192.	7.8	84
90	One-dimensional XXZ model for particles obeying fractional statistics. Physical Review B, 1998, 58, R1703-R1706.	3.2	34

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91	Supersolid phase in fully frustrated Josephson-junction arrays. Physical Review B, 1997, 55, 1100-1109.	3.2	6
92	Superfluidity of the Bose-Hubbard model: su (1,1) linearization scheme. Physica A: Statistical Mechanics and Its Applications, 1996, 230, 300-312.	2.6	4