Rosario Lo Franco

List of Publications by Year
in descending order

83	4,601	109137 35	98622 67
papers	citations	h-index	g-index

85	85	85	1350
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Non-Markovian Effects on the Dynamics of Entanglement. Physical Review Letters, 2007, 99, 160502.	2.9	695
2	Entanglement dynamics of two independent qubits in environments with and without memory. Physical Review A, 2008, 77, .	1.0	247
3	DYNAMICS OF QUANTUM CORRELATIONS IN TWO-QUBIT SYSTEMS WITHIN NON-MARKOVIAN ENVIRONMENTS. International Journal of Modern Physics B, 2013, 27, 1345053.	1.0	218
4	Experimental recovery of quantum correlations in absence of system-environment back-action. Nature Communications, 2013, 4, 2851.	5.8	205
5	Entanglement trapping in structured environments. Physical Review A, 2008, 78, .	1.0	193
6	Revival of quantum correlations without system-environment back-action. Physical Review A, 2012, 85, .	1.0	164
7	Cavity-based architecture to preserve quantum coherence and entanglement. Scientific Reports, 2015, 5, 13843.	1.6	141
8	Comparative investigation of the freezing phenomena for quantum correlations under nondissipative decoherence. Physical Review A, 2013, 88, .	1.0	135
9	Experimental on-demand recovery of entanglement by local operations within non-Markovian dynamics. Scientific Reports, 2015, 5, 8575.	1.6	132
10	Recovering entanglement by local operations. Annals of Physics, 2014, 350, 211-224.	1.0	105
11	Quantum entanglement of identical particles by standard information-theoretic notions. Scientific Reports, 2016, 6, 20603.	1.6	99
12	Hierarchy and dynamics of trace distance correlations. New Journal of Physics, 2013, 15, 093022.	1.2	98
13	Indistinguishability of Elementary Systems as a Resource for Quantum Information Processing. Physical Review Letters, 2018, 120, 240403.	2.9	98
14	Preserving entanglement and nonlocality in solid-state qubits by dynamical decoupling. Physical Review B, 2014, 90, .	1.1	93
15	Universal freezing of quantum correlations within the geometric approach. Scientific Reports, 2015, 5, 10177.	1.6	87
16	Observation of Time-Invariant Coherence in a Nuclear Magnetic Resonance Quantum Simulator. Physical Review Letters, 2016, 117, 160402.	2.9	87
17	Unified view of correlations using the square-norm distance. Physical Review A, 2012, 85, .	1.0	79
18	Dynamics of geometric and entropic quantifiers of correlations in open quantum systems. Physical Review A, 2012, 86, .	1.0	78

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19	Harnessing non-Markovian quantum memory by environmental coupling. Physical Review A, 2015, 92, .	1.0	76
20	Entanglement of photons in their dual wave-particle nature. Nature Communications, 2017, 8, 915.	5.8	63
21	Protecting entanglement by adjusting the velocities of moving qubits inside non-Markovian environments. Laser Physics Letters, 2017, 14, 055201.	0.6	62
22	Entanglement dynamics in superconducting qubits affected by local bistable impurities. Physica Scripta, 2012, T147, 014019.	1.2	56
23	Unifying approach to the quantification of bipartite correlations by Bures distance. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 405302.	0.7	56
24	Connection among entanglement, mixedness, and nonlocality in a dynamical context. Physical Review A, 2010, 81, .	1.0	51
25	Distributed correlations and information flows within a hybrid multipartite quantum-classical system. Physical Review A, 2015, 92, .	1.0	49
26	DYNAMICS AND EXTRACTION OF QUANTUM DISCORD IN A MULTIPARTITE OPEN SYSTEM. International Journal of Quantum Information, 2011, 09, 1665-1676.	0.6	46
27	Entanglement degradation in the solid state: Interplay of adiabatic and quantum noise. Physical Review A, 2010, 81, .	1.0	40
28	Generating and revealing a quantum superposition of electromagnetic-field binomial states in a cavity. Physical Review A, 2007, 76, .	1.0	39
29	Two-qubit entanglement dynamics for two different non-Markovian environments. Physica Scripta, 2010, T140, 014014.	1.2	39
30	Hidden entanglement, system-environment information flow and non-Markovianity. International Journal of Quantum Information, 2014, 12, 1461005.	0.6	39
31	Temperature effects on quantum non-Markovianity via collision models. Physical Review A, 2018, 97, .	1.0	39
32	Protecting quantum resources via frequency modulation of qubits in leaky cavities. Scientific Reports, 2018, 8, 14304.	1.6	38
33	Dynamics of non-classically-reproducible entanglement. Physical Review A, 2008, 78, .	1.0	37
34	Universality of Schmidt decomposition and particle identity. Scientific Reports, 2017, 7, 44675.	1.6	37
35	Dealing with indistinguishable particles and their entanglement. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170317.	1.6	37
36	Long-Time Preservation of Nonlocal Entanglement. Advanced Science Letters, 2009, 2, 459-462.	0.2	36

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37	Indistinguishability-enabled coherence for quantum metrology. Physical Review A, 2019, 100, .	1.0	35
38	Nonlocality threshold for entanglement under general dephasing evolutions: a case study. Quantum Information Processing, 2016, 15, 2393-2404.	1.0	34
39	Dynamics of correlations due to a phase-noisy laser. Physica Scripta, 2012, T147, 014004.	1.2	33
40	Robust entanglement preparation against noise by controlling spatial indistinguishability. Npj Quantum Information, 2020, 6, .	2.8	33
41	Efficient generation of N-photon binomial states and their use in quantum gates in cavity QED. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 2235-2242.	0.9	32
42	Validity of the Landauer principle and quantum memory effects via collisional models. Physical Review A, 2019, 99, .	1.0	31
43	Single-shot generation and detection of a two-photon generalized binomial state in a cavity. Physical Review A, 2006, 74, .	1.0	30
44	Switching quantum memory on and off. New Journal of Physics, 2015, 17, 081004.	1.2	29
45	Hidden entanglement in the presence of random telegraph dephasing noise. Physica Scripta, 2013, T153, 014014.	1.2	28
46	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>N</mml:mi></mml:math> identical particles and one particle to entangle them all. Physical Review A, 2017, 96, .	1.0	28
47	Experimental quantum entanglement and teleportation by tuning remote spatial indistinguishability of independent photons. Optics Letters, 2020, 45, 6410.	1.7	28
48	Bellâ€™s inequality violation for entangled generalized Bernoulli states in two spatially separate cavities. Physical Review A, 2005, 72, .	1.0	27
49	Entanglement dynamics of two independent cavity-embedded quantum dots. Physica Scripta, 2011, T143, 014004.	1.2	26
50	Coherence and entanglement dynamics of vibrating qubits. Optics Communications, 2018, 424, 26-31.	1.0	26
51	Generation of Entangled Two-Photon Binomial States in Two Spatially Separate Cavities. Open Systems and Information Dynamics, 2006, 13, 463-470.	0.5	24
52	Relations between entanglement and purity in non-Markovian dynamics. International Journal of Quantum Information, 2016, 14, 1650031.	0.6	24
53	Enabling quantum non-Markovian dynamics by injection of classical colored noise. Physical Review A, 2017, 95, .	1.0	23
54	Validating and controlling quantum enhancement against noise by the motion of a qubit. Physical Review A, 2020, 101, .	1.0	22

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55	Entanglement transfer in a noisy cavity network with parity-deformed fields. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 1858.	0.9	22
56	Comparison of non-Markovianity criteria in a qubit system under random external fields. Physica Scripta, 2013, T153, 014047.	1.2	21
57	Non-Markovianity and Coherence of a Moving Qubit inside a Leaky Cavity. Open Systems and Information Dynamics, 2017, 24, 1740006.	0.5	21
58	Activating remote entanglement in a quantum network by local counting of identical particles. Physical Review A, 2019, 99, .	1.0	21
59	Quantumness and memory of one qubit in a dissipative cavity under classical control. Annals of Physics, 2020, 414, 168073.	1.0	21
60	Witnessing non-Markovian effects of quantum processes through Hilbert-Schmidt speed. Physical Review A, 2020, 102, .	1.0	20
61	Simple non-Markovian microscopic models for the depolarizing channel of a single qubit. Physica Scripta, 2012, 86, 065004.	1.2	19
62	Dynamics of spatially indistinguishable particles and quantum entanglement protection. Physical Review A, 2020, 102, .	1.0	19
63	Entanglement Robustness via Spatial Deformation of Identical Particle Wave Functions. Entropy, 2021, 23, 708.	1.1	16
64	QUANTUM COMPUTATION WITH GENERALIZED BINOMIAL STATES IN CAVITY QUANTUM ELECTRODYNAMICS. International Journal of Quantum Information, 2009, 07, 155-162.	0.6	12
65	Correspondence between generalized binomial field states and coherent atomic states. European Physical Journal: Special Topics, 2008, 160, 247-257.	1.2	11
66	Activation of indistinguishability-based quantum coherence for enhanced metrological applications with particle statistics imprint. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	11
67	An optimized Bell test in a dynamical system. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 3007-3011.	0.9	9
68	Spin-echo entanglement protection from random telegraph noise. Physica Scripta, 2013, T153, 014043.	1.2	9
69	Hilbertâ€“Schmidt speed as an efficient figure of merit for quantum estimation of phase encoded into the initial state of open n-qubit systems. Scientific Reports, 2021, 11, 7128.	1.6	9
70	Foundations of quantum mechanics and their impact on contemporary society. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20180112.	1.6	8
71	Josephson Traveling Wave Parametric Amplifiers as non-classical light source for Microwave Quantum Illumination. Measurement: Sensors, 2021, 18, 100349.	1.3	8
72	Directly proving the bosonic nature of photons. Nature Photonics, 2021, 15, 638-639.	15.6	6

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73	Enhancing nonclassical bosonic correlations in a quantum walk network through experimental control of disorder. Physical Review Research, 2021, 3, .	1.3	5
74	Searching for exceptional points and inspecting non-contractivity of trace distance in (anti-)$$mathcal {PT}!$$-symmetric systems. Quantum Information Processing, 2022, 21, 1.	1.0	5
75	DECAY OF NONLOCALITY DUE TO ADIABATIC AND QUANTUM NOISE IN THE SOLID STATE. International Journal of Quantum Information, 2011, 09, 63-71.	0.6	4
76	Nonlocal properties of entangled two-photon generalized binomial states in two separate cavities. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2007, 103, 890-894.	0.2	3
77	Quantum enhancement of qutrit dynamics through driving field and photonic-band-gap crystal. Physical Review A, 2022, 105, .	1.0	3
78	Readout of quantum information spreading using a disordered quantum walk. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 2570.	0.9	2
79	Topological protection of highly entangled non-Gaussian two-photon states. Materials for Quantum Technology, 2021, 1, 035001.	1.2	1
80	Indistinguishability as a quantum information resource by localized measurements. , 2019, , .		0
81	Experimental enhancement of non-classical bosonic correlations via disordered Quantum Walk. , 2021, , .		0
82	Spreading of quantum information through a disordered quantum walk. , 2021, , .		0
83	Memory Effects in High-Dimensional Systems Faithfully Identified by Hilbertâ€“Schmidt Speed-Based Witness. Entropy, 2022, 24, 395.	1.1	0