

# Rosario Lo Franco

## List of Publications by Year in descending order

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83  
papers

4,601  
citations

109137

35  
h-index

98622

67  
g-index

85  
all docs

85  
docs citations

85  
times ranked

1350  
citing authors

#	ARTICLE	IF	CITATIONS
1	Memory Effects in High-Dimensional Systems Faithfully Identified by Hilbert-Schmidt Speed-Based Witness. Entropy, 2022, 24, 395.	1.1	0
2	Searching for exceptional points and inspecting non-contractivity of trace distance in (anti)-PT-symmetric systems. Quantum Information Processing, 2022, 21, 1.	1.0	5
3	Quantum enhancement of qutrit dynamics through driving field and photonic-band-gap crystal. Physical Review A, 2022, 105, .	1.0	3
4	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
5	Hilbert-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
6	Entanglement Robustness via Spatial Deformation of Identical Particle Wave Functions. Entropy, 2021, 23, 708.	1.1	16
7	Topological protection of highly entangled non-Gaussian two-photon states. Materials for Quantum Technology, 2021, 1, 035001.	1.2	1
8	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
9	Directly proving the bosonic nature of photons. Nature Photonics, 2021, 15, 638-639.	15.6	6
10	Enhancing nonclassical bosonic correlations in a quantum walk network through experimental control of disorder. Physical Review Research, 2021, 3, .	1.3	5
11	Josephson Traveling Wave Parametric Amplifiers as non-classical light source for Microwave Quantum Illumination. Measurement: Sensors, 2021, 18, 100349.	1.3	8
12	Experimental enhancement of non-classical bosonic correlations via disordered Quantum Walk. , 2021, , .		0
13	Spreading of quantum information through a disordered quantum walk. , 2021, , .		0
14	Witnessing non-Markovian effects of quantum processes through Hilbert-Schmidt speed. Physical Review A, 2020, 102, .	1.0	20
15	Robust entanglement preparation against noise by controlling spatial indistinguishability. Npj Quantum Information, 2020, 6, .	2.8	33
16	Quantumness and memory of one qubit in a dissipative cavity under classical control. Annals of Physics, 2020, 414, 168073.	1.0	21
17	Validating and controlling quantum enhancement against noise by the motion of a qubit. Physical Review A, 2020, 101, .	1.0	22
18	Dynamics of spatially indistinguishable particles and quantum entanglement protection. Physical Review A, 2020, 102, .	1.0	19

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19	Experimental quantum entanglement and teleportation by tuning remote spatial indistinguishability of independent photons. Optics Letters, 2020, 45, 6410.	1.7	28
20	Indistinguishability-enabled coherence for quantum metrology. Physical Review A, 2019, 100, .	1.0	35
21	Activating remote entanglement in a quantum network by local counting of identical particles. Physical Review A, 2019, 99, .	1.0	21
22	Validity of the Landauer principle and quantum memory effects via collisional models. Physical Review A, 2019, 99, .	1.0	31
23	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
24	Indistinguishability as a quantum information resource by localized measurements. , 2019, , .		0
25	Coherence and entanglement dynamics of vibrating qubits. Optics Communications, 2018, 424, 26-31.	1.0	26
26	Protecting quantum resources via frequency modulation of qubits in leaky cavities. Scientific Reports, 2018, 8, 14304.	1.6	38
27	Dealing with indistinguishable particles and their entanglement. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170317.	1.6	37
28	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
29	Temperature effects on quantum non-Markovianity via collision models. Physical Review A, 2018, 97, .	1.0	39
30	Indistinguishability of Elementary Systems as a Resource for Quantum Information Processing. Physical Review Letters, 2018, 120, 240403.	2.9	98
31	Universality of Schmidt decomposition and particle identity. Scientific Reports, 2017, 7, 44675.	1.6	37
32	Protecting entanglement by adjusting the velocities of moving qubits inside non-Markovian environments. Laser Physics Letters, 2017, 14, 055201.	0.6	62
33	Entanglement of photons in their dual wave-particle nature. Nature Communications, 2017, 8, 915.	5.8	63
34	Non-Markovianity and Coherence of a Moving Qubit inside a Leaky Cavity. Open Systems and Information Dynamics, 2017, 24, 1740006.	0.5	21
35	$N$ identical particles and one particle to entangle them all. Physical Review A, 2017, 96, .	1.0	28
36	Enabling quantum non-Markovian dynamics by injection of classical colored noise. Physical Review A, 2017, 95, .	1.0	23

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37	Quantum entanglement of identical particles by standard information-theoretic notions. Scientific Reports, 2016, 6, 20603.	1.6	99
38	Nonlocality threshold for entanglement under general dephasing evolutions: a case study. Quantum Information Processing, 2016, 15, 2393-2404.	1.0	34
39	Relations between entanglement and purity in non-Markovian dynamics. International Journal of Quantum Information, 2016, 14, 1650031.	0.6	24
40	Observation of Time-Invariant Coherence in a Nuclear Magnetic Resonance Quantum Simulator. Physical Review Letters, 2016, 117, 160402.	2.9	87
41	Harnessing non-Markovian quantum memory by environmental coupling. Physical Review A, 2015, 92, .	1.0	76
42	Distributed correlations and information flows within a hybrid multipartite quantum-classical system. Physical Review A, 2015, 92, .	1.0	49
43	Experimental on-demand recovery of entanglement by local operations within non-Markovian dynamics. Scientific Reports, 2015, 5, 8575.	1.6	132
44	Cavity-based architecture to preserve quantum coherence and entanglement. Scientific Reports, 2015, 5, 13843.	1.6	141
45	Universal freezing of quantum correlations within the geometric approach. Scientific Reports, 2015, 5, 10177.	1.6	87
46	Switching quantum memory on and off. New Journal of Physics, 2015, 17, 081004.	1.2	29
47	Hidden entanglement, system-environment information flow and non-Markovianity. International Journal of Quantum Information, 2014, 12, 1461005.	0.6	39
48	Unifying approach to the quantification of bipartite correlations by Bures distance. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 405302.	0.7	56
49	Recovering entanglement by local operations. Annals of Physics, 2014, 350, 211-224.	1.0	105
50	Preserving entanglement and nonlocality in solid-state qubits by dynamical decoupling. Physical Review B, 2014, 90, .	1.1	93
51	DYNAMICS OF QUANTUM CORRELATIONS IN TWO-QUBIT SYSTEMS WITHIN NON-MARKOVIAN ENVIRONMENTS. International Journal of Modern Physics B, 2013, 27, 1345053.	1.0	218
52	Comparison of non-Markovianity criteria in a qubit system under random external fields. Physica Scripta, 2013, T153, 014047.	1.2	21
53	Experimental recovery of quantum correlations in absence of system-environment back-action. Nature Communications, 2013, 4, 2851.	5.8	205
54	Hierarchy and dynamics of trace distance correlations. New Journal of Physics, 2013, 15, 093022.	1.2	98

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55	Hidden entanglement in the presence of random telegraph dephasing noise. <i>Physica Scripta</i> , 2013, T153, 014014.	1.2	28
56	Spin-echo entanglement protection from random telegraph noise. <i>Physica Scripta</i> , 2013, T153, 014043.	1.2	9
57	Comparative investigation of the freezing phenomena for quantum correlations under nondissipative decoherence. <i>Physical Review A</i> , 2013, 88, .	1.0	135
58	Simple non-Markovian microscopic models for the depolarizing channel of a single qubit. <i>Physica Scripta</i> , 2012, 86, 065004.	1.2	19
59	Unified view of correlations using the square-norm distance. <i>Physical Review A</i> , 2012, 85, .	1.0	79
60	Entanglement dynamics in superconducting qubits affected by local bistable impurities. <i>Physica Scripta</i> , 2012, T147, 014019.	1.2	56
61	Dynamics of geometric and entropic quantifiers of correlations in open quantum systems. <i>Physical Review A</i> , 2012, 86, .	1.0	78
62	Revival of quantum correlations without system-environment back-action. <i>Physical Review A</i> , 2012, 85, .	1.0	164
63	Dynamics of correlations due to a phase-noisy laser. <i>Physica Scripta</i> , 2012, T147, 014004.	1.2	33
64	Entanglement dynamics of two independent cavity-embedded quantum dots. <i>Physica Scripta</i> , 2011, T143, 014004.	1.2	26
65	DECAY OF NONLOCALITY DUE TO ADIABATIC AND QUANTUM NOISE IN THE SOLID STATE. <i>International Journal of Quantum Information</i> , 2011, 09, 63-71.	0.6	4
66	DYNAMICS AND EXTRACTION OF QUANTUM DISCORD IN A MULTIPARTITE OPEN SYSTEM. <i>International Journal of Quantum Information</i> , 2011, 09, 1665-1676.	0.6	46
67	Entanglement degradation in the solid state: Interplay of adiabatic and quantum noise. <i>Physical Review A</i> , 2010, 81, .	1.0	40
68	An optimized Bell test in a dynamical system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010, 374, 3007-3011.	0.9	9
69	Efficient generation of N-photon binomial states and their use in quantum gates in cavity QED. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010, 374, 2235-2242.	0.9	32
70	Connection among entanglement, mixedness, and nonlocality in a dynamical context. <i>Physical Review A</i> , 2010, 81, .	1.0	51
71	Two-qubit entanglement dynamics for two different non-Markovian environments. <i>Physica Scripta</i> , 2010, T140, 014014.	1.2	39
72	QUANTUM COMPUTATION WITH GENERALIZED BINOMIAL STATES IN CAVITY QUANTUM ELECTRODYNAMICS. <i>International Journal of Quantum Information</i> , 2009, 07, 155-162.	0.6	12

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73	Long-Time Preservation of Nonlocal Entanglement. <i>Advanced Science Letters</i> , 2009, 2, 459-462.	0.2	36
74	Correspondence between generalized binomial field states and coherent atomic states. <i>European Physical Journal: Special Topics</i> , 2008, 160, 247-257.	1.2	11
75	Entanglement dynamics of two independent qubits in environments with and without memory. <i>Physical Review A</i> , 2008, 77, .	1.0	247
76	Entanglement trapping in structured environments. <i>Physical Review A</i> , 2008, 78, .	1.0	193
77	Dynamics of non-classically-reproducible entanglement. <i>Physical Review A</i> , 2008, 78, .	1.0	37
78	Generating and revealing a quantum superposition of electromagnetic-field binomial states in a cavity. <i>Physical Review A</i> , 2007, 76, .	1.0	39
79	Non-Markovian Effects on the Dynamics of Entanglement. <i>Physical Review Letters</i> , 2007, 99, 160502.	2.9	695
80	Nonlocal properties of entangled two-photon generalized binomial states in two separate cavities. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2007, 103, 890-894.	0.2	3
81	Generation of Entangled Two-Photon Binomial States in Two Spatially Separate Cavities. <i>Open Systems and Information Dynamics</i> , 2006, 13, 463-470.	0.5	24
82	Single-shot generation and detection of a two-photon generalized binomial state in a cavity. <i>Physical Review A</i> , 2006, 74, .	1.0	30
83	Bell's inequality violation for entangled generalized Bernoulli states in two spatially separate cavities. <i>Physical Review A</i> , 2005, 72, .	1.0	27