Chiara Macchiavello

List of Publications by Year
in descending order

102	5,277	126708	85405
papers	citations	33 h-index	71 g-index

104	104	104	2417
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quantum Privacy Amplification and the Security of Quantum Cryptography over Noisy Channels. Physical Review Letters, 1996, 77, 2818-2821.	2.9	992
2	Optimal universal and state-dependent quantum cloning. Physical Review A, 1998, 57, 2368-2378.	1.0	468
3	Phase-covariant quantum cloning. Physical Review A, 2000, 62, .	1.0	266
4	Optimal Universal Quantum Cloning and State Estimation. Physical Review Letters, 1998, 81, 2598-2601.	2.9	246
5	Quantum Error Correction for Communication. Physical Review Letters, 1996, 77, 2585-2588.	2.9	228
6	Entanglement-enhanced information transmission over a quantum channel with correlated noise. Physical Review A, 2002, 65, .	1.0	217
7	Detection of the density matrix through optical homodyne tomography without filtered back projection. Physical Review A, 1994, 50, 4298-4302.	1.0	193
8	An artificial neuron implemented on an actual quantum processor. Npj Quantum Information, 2019, 5, .	2.8	160
9	Stabilization of Quantum Computations by Symmetrization. SIAM Journal on Computing, 1997, 26, 1541-1557.	0.8	136
10	Distributed Quantum Dense Coding. Physical Review Letters, 2004, 93, 210501.	2.9	130
11	Quantum hypergraph states. New Journal of Physics, 2013, 15, 113022.	1.2	118
12	Multi-partite entanglement can speed up quantum key distribution in networks. New Journal of Physics, 2017, 19, 093012.	1.2	110
13	Optimal state estimation for d-dimensional quantum systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 253, 249-251.	0.9	105
14	Optimal phase-covariant cloning for qubits and qutrits. Physical Review A, 2003, 67, .	1.0	94
15	Transition behavior in the channel capacity of two-qubit channels with memory. Physical Review A, 2004, 69, .	1.0	86
16	Economical phase-covariant cloning of qudits. Physical Review A, 2005, 71, .	1.0	84
17	Optimal Quantum Circuits for General Phase Estimation. Physical Review Letters, 2007, 98, 090501.	2.9	68
18	Multipartite Entanglement Detection via Structure Factors. Physical Review Letters, 2009, 103, 100502.	2.9	65

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19	Multipartite entanglement in quantum spin chains. Physical Review A, 2005, 72, .	1.0	63
20	Quantum cloning in spin networks. Physical Review A, 2004, 70, .	1.0	60
21	Quantum entanglement enhances the capacity of bosonic channels with memory. Physical Review A, 2005, 72, .	1.0	59
22	Experimental Realization of Optimal Noise Estimation for a General Pauli Channel. Physical Review Letters, 2011, 107, 253602.	2.9	51
23	Usefulness of entanglement-assisted quantum metrology. Physical Review A, 2016, 94, .	1.0	51
24	Detecting Non-Markovianity of Quantum Evolution via Spectra of Dynamical Maps. Physical Review Letters, 2017, 118, 080404.	2.9	49
25	DENSE CODING WITH MULTIPARTITE QUANTUM STATES. International Journal of Quantum Information, 2006, 04, 415-428.	0.6	48
26	Superbroadcasting of Mixed States. Physical Review Letters, 2005, 95, 060503.	2.9	46
27	Efficient superdense coding in the presence of non-Markovian noise. Europhysics Letters, 2016, 114, 10005.	0.7	46
28	Quantum implementation of an artificial feed-forward neural network. Quantum Science and Technology, 2020, 5, 044010.	2.6	46
29	Entanglement and nonclassical properties of hypergraph states. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 335303.	0.7	45
30	Quantum entanglement and classical communication through a depolarizing channel. Journal of Modern Optics, 2000, 47, 325-331.	0.6	42
31	Optimal estimation of multiple phases. Physical Review A, 2003, 67, .	1.0	41
32	Experimental Purification of Single Qubits. Physical Review Letters, 2004, 93, 170501.	2.9	37
33	Precision of quantum tomographic detection of radiation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 195, 31-37.	0.9	36
34	Dynamical memory effects in correlated quantum channels. Physical Review A, 2016, 94, .	1.0	33
35	Complementarity and Correlations. Physical Review Letters, 2015, 114, 130401.	2.9	32
36	On the analytical convergence of the QPA procedure. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 246, 385-388.	0.9	30

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37	Tight entropic uncertainty relations for systems with dimension three to five. Physical Review A, 2017, 95, .	1.0	30
38	Tomographic Quantum Cryptography: Equivalence of Quantum and Classical Key Distillation. Physical Review Letters, 2003, 91, 097901.	2.9	29
39	Hyperentangled Mixed Phased Dicke States: Optical Design and Detection. Physical Review Letters, 2010, 105, 250501.	2.9	29
40	Experimental Detection of Quantum Channel Capacities. Physical Review Letters, 2017, 119, 100502.	2.9	29
41	Multipartite steering inequalities based on entropic uncertainty relations. Physical Review A, 2018, 97, .	1.0	28
42	Optimal cloning for two pairs of orthogonal states. Journal of Physics A, 2001, 34, 6815-6819.	1.6	27
43	Cloning transformations in spin networks without external control. Physical Review A, 2005, 72, .	1.0	25
44	On the Entanglement Structure in Quantum Cloning. Foundations of Physics, 2003, 33, 1617-1628.	0.6	23
45	Joint measurements via quantum cloning. Journal of Optics B: Quantum and Semiclassical Optics, 2001, 3, 44-50.	1.4	22
46	Experimental Detection of Quantum Channels. Physical Review Letters, 2013, 111, 220501.	2.9	22
47	Quantum computing model of an artificial neuron with continuously valued input data. Machine Learning: Science and Technology, 2020, 1, 045008.	2.4	21
48	Detecting Lower Bounds to Quantum Channel Capacities. Physical Review Letters, 2016, 116, 140501.	2.9	20
49	Variationalâ€‰Learningâ€‰forâ€‰Quantumâ€‰Artificial Neural Networks. IEEE Transactions on Quantum Engineering, 2021, 2, 1-10.	2.9	19
50	Optimized phase detection. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 198, 286-294.	0.9	17
51	Cryptographic quantum metrology. Physical Review A, 2019, 99, .	1.0	17
52	Experimental Generation of Robust Entanglement from Classical Correlations via Local Dissipation. Physical Review Letters, 2015, 115, 160503.	2.9	16
53	Recovering quantum information through partial access to the environment. New Journal of Physics, 2011, 13, 103031.	1.2	15
54	Witnessing quantum capacities of correlated channels. Physical Review A, 2016, 94, .	1.0	15

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55	Noise-dependent optimal strategies for quantum metrology. Physical Review A, 2018, 97, .	1.0	15
56	Quantum error correction with degenerate codes for correlated noise. Physical Review A, 2011, 83, .	1.0	14
57	Information transmission over an amplitude damping channel with an arbitrary degree of memory. Physical Review A, 2015, 92, .	1.0	14
58	Randomized graph states and their entanglement properties. Physical Review A, 2014, 89, .	1.0	13
59	Multipartite correlations in mutually unbiased bases. Physical Review A, 2017, 95, .	1.0	13
60	Optimal phase estimation for qubits in mixed states. Physical Review A, 2005, 72, .	1.0	12
61	Qubit channels with small correlations. Physical Review A, 2008, 77, .	1.0	12
62	Experimental achievement of the entanglement-assisted capacity for the depolarizing channel. Physical Review A, 2013, 87, .	1.0	12
63	Variational learning for quantum artificial neural networks. , 2020, , .		12
64	Universal and phase-covariant superbroadcasting for mixed qubit states. Physical Review A, 2006, 74, .	1.0	11
65	Digital Quantum Estimation. Physical Review Letters, 2017, 119, 200502.	2.9	11
66	Frequency conversion and amplification of photon-number detection. Physical Review A, 1993, 48, 3947-3954.	1.0	10
67	IMPOSSIBILITY OF PERFECT QUANTUM SEALING OF CLASSICAL INFORMATION. International Journal of Quantum Information, 2005, 03, 435-440.	0.6	10
68	High-dimensional entanglement certification. Scientific Reports, 2016, 6, 27637.	1.6	10
69	Experimental ancilla-assisted phase estimation in a noisy channel. Physical Review A, 2018, 97, .	1.0	9
70	Bounds on the efficiency of cloning for two-state quantum systems. Journal of Optics B: Quantum and Semiclassical Optics, 2000, 2, 144-148.	1.4	8
71	On the role of entanglement in quantum information. Physica A: Statistical Mechanics and Its Applications, 2004, 338, 68-75.	1.2	8
72	Optimal phase estimation in quantum networks. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 7971-7984.	0.7	8

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73	Experimental detection of entanglement via witness operators and local measurements. Journal of Modern Optics, 2003, 50, 1079-1102.	0.6	8
74	Efficient Accessible Bounds to the Classical Capacity of Quantum Channels. Physical Review Letters, 2019, 123, 090503.	2.9	7
75	Optimal entanglement witnesses from limited local measurements. Physical Review A, 2020, 101, .	1.0	6
76	Amplification under the Standard Quantum Noise Limit. Physical Review Letters, 1994, 73, 3187-3190.	2.9	5
77	Isotropic phase squeezing and the arrow of time. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 268, 241-246.	0.9	5
78	How the First Partial Transpose was Written. Foundations of Physics, 2005, 35, 1921-1926.	0.6	5
79	Optimal time reversal of multiphase equatorial states. Physical Review A, 2005, 72, .	1.0	5
80	Entanglement detection by Bragg scattering. Physical Review A, 2013, 87, .	1.0	5
81	Entanglement production by quantum error correction in the presence of correlated environment. Europhysics Letters, 2004, 67, 714-720.	0.7	4
82	INFORMATION TRANSMISSION VIA ENTANGLED QUANTUM STATES IN GAUSSIAN CHANNELS WITH MEMORY. International Journal of Quantum Information, 2006, 04, 439-452.	0.6	4
83	Quantum neural network autoencoder and classifier applied to an industrial case study. Quantum Machine Intelligence, 2022, 4, .	2.7	4
84	Quantum tomography of mesoscopic superpositions of radiation states. Physical Review A, 1999, 59, 1816-1819.	1.0	3
85	Economical realization of phase-covariant devices in arbitrary dimensions (Invited). Journal of the Optical Society of America B: Optical Physics, 2007, 24, 363.	0.9	3
86	Witnessing entanglement in hybrid systems. Physical Review A, 2014, 90, .	1.0	3
87	Mixed-state certification of quantum capacities for noisy communication channels. Physical Review A, 2018, 97, .	1.0	3
88	Ancilla-assisted schemes are beneficial for Gaussian state phase estimation. Physical Review A, 2020, 101, .	1.0	3
89	Feasible phase detection with ideal sensitivity. Journal of Physics A, 1996, 29, 5605-5610.	1.6	2
90	Noise, Errors and Information in Quantum Amplification. International Journal of Modern Physics B, 1997, 11, 3385-3408.	1.0	2

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91	Superbroadcasting and classical information. Physical Review A, 2007, 75, .	1.0	2
92	Detection of Properties and Capacities of Quantum Channels. Open Systems and Information Dynamics, 2017, 24, 1740013.	0.5	2
93	Bounding the Classical Capacity of Multilevel Damping Quantum Channels. Advanced Quantum Technologies, 2020, 3, 2000013.	1.8	2
94	Experimental lower bounds to the classical capacity of quantum channels. Physical Review A, 2021, 103, .	1.0	2
95	Quantum statistics of photon cloning machines. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 283, 15-19.	0.9	1
96	Security aspects of quantum cryptography with D-dimensional systems. Journal of Modern Optics, 2003, 50, 1025-1033.	0.6	1
97	QUANTUM ERROR CORRECTION DRIVEN ENTANGLEMENT DYNAMICS IN THE PRESENCE OF CORRELATED NOISE. International Journal of Quantum Information, 2005, 03, 207-211.	0.6	1
98	Approximate Quantum Cloning. , 0, , 53-71.		1
99	EFFECTS OF NOISE ON SPIN NETWORK CLONING. International Journal of Quantum Information, 2006, 04, 487-493.	0.6	0
100	Estimation Strategies for Finite Dimensional Systems. International Journal of Theoretical Physics, 2008, 47, 2133-2140.	0.5	0
101	Publisher's Note: Qubit channels with small correlations [Phys. Rev. A77, 052323 (2008)]. Physical Review A, 2008, 77, .	1.0	0
102	Quantum computing and entanglement. , 2011, , 178-217.		0