Antonio Acin

List of Publications by Year
in descending order

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72	7,259	136950	98798
papers	citations	32 h-index	67 g-index

72	72	72	3430
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Device-Independent Security of Quantum Cryptography against Collective Attacks. Physical Review Letters, 2007, 98, 230501.	7.8	1,221
2	Random numbers certified by Bellâ€™s theorem. Nature, 2010, 464, 1021-1024.	27.8	1,021
3	Multidimensional quantum entanglement with large-scale integrated optics. Science, 2018, 360, 285-291.	12.6	554
4	A convergent hierarchy of semidefinite programs characterizing the set of quantum correlations. New Journal of Physics, 2008, 10, 073013.	2.9	414
5	Device-independent quantum key distribution secure against collective attacks. New Journal of Physics, 2009, 11, 045021.	2.9	379
6	Bounding the Set of Quantum Correlations. Physical Review Letters, 2007, 98, 010401.	7.8	321
7	Secure device-independent quantum key distribution with causally independent measurement devices. Nature Communications, 2011, 2, 238.	12.8	258
8	Quantum nonlocality in two three-level systems. Physical Review A, 2002, 65, .	2.5	224
9	Testing the Dimension of Hilbert Spaces. Physical Review Letters, 2008, 100, 210503.	7.8	208
10	Randomness versus Nonlocality and Entanglement. Physical Review Letters, 2012, 108, 100402.	7.8	183
11	Bell-Type Test of Energy-Time Entangled Qutrits. Physical Review Letters, 2004, 93, .	7.8	176
12	Certified randomness in quantum physics. Nature, 2016, 540, 213-219.	27.8	160
13	Detecting nonlocality in many-body quantum states. Science, 2014, 344, 1256-1258.	12.6	129
14	Operational Framework for Nonlocality. Physical Review Letters, 2012, 109, 070401.	7.8	128
15	A Combinatorial Approach to Nonlocality and Contextuality. Communications in Mathematical Physics, 2015, 334, 533-628.	2.2	125
16	Almost quantum correlations. Nature Communications, 2015, 6, 6288.	12.8	123
17	Full randomness from arbitrarily deterministic events. Nature Communications, 2013, 4, 2654.	12.8	116
18	Ultra-fast quantum randomness generation by accelerated phase diffusion in a pulsed laser diode. Optics Express, 2014, 22, 1645.	3.4	114

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19	Convergent Relaxations of Polynomial Optimization Problems with Noncommuting Variables. SIAM Journal on Optimization, 2010, 20, 2157-2180.	2.0	110
20	Two independent photon pairs versus four-photon entangled states in parametric down conversion. Journal of Modern Optics, 2004, 51, 1637-1649.	1.3	75
21	Unbounded randomness certification using sequences of measurements. Physical Review A, 2017, 95, .	2.5	75
22	Randomness in quantum mechanics: philosophy, physics and technology. Reports on Progress in Physics, 2017, 80, 124001.	20.1	72
23	Optimal randomness certification from one entangled bit. Physical Review A, 2016, 93, .	2.5	67
24	Unsupervised Phase Discovery with Deep Anomaly Detection. Physical Review Letters, 2020, 125, 170603.	7.8	51
25	Bell Inequalities Tailored to Maximally Entangled States. Physical Review Letters, 2017, 119, 040402.	7.8	50
26	Self-testing multipartite entangled states through projections onto two systems. New Journal of Physics, 2018, 20, 083041.	2.9	47
27	Fully Nonlocal, Monogamous, and Random Genuinely Multipartite Quantum Correlations. Physical Review Letters, 2012, 108, 100401.	7.8	43
28	Nonlocality in many-body quantum systems detected with two-body correlators. Annals of Physics, 2015, 362, 370-423.	2.8	43
29	Self-testing protocols based on the chained Bell inequalities. New Journal of Physics, 2016, 18, 035013.	2.9	43
30	Device-Independent Entanglement Certification of All Entangled States. Physical Review Letters, 2018, 121, 180503.	7.8	43
31	Security of Device-Independent Quantum Key Distribution in the Bounded-Quantum-Storage Model. Physical Review X, 2013, 3, .	8.9	37
32	Bounding the Sets of Classical and Quantum Correlations in Networks. Physical Review Letters, 2019, 123, 140503.	7.8	35
33	Scalable Bell Inequalities for Qubit Graph States and Robust Self-Testing. Physical Review Letters, 2020, 124, 020402.	7.8	35
34	Device-independent quantum key distribution with single-photon sources. Quantum - the Open Journal for Quantum Science, 0, 4, 260.	0.0	35
35	Efficient Device-Independent Entanglement Detection for Multipartite Systems. Physical Review X, 2017, 7, .	8.9	32
36	Device-independent quantum key distribution with asymmetric CHSH inequalities. Quantum - the Open Journal for Quantum Science, 0, 5, 443.	0.0	31

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37	Quantum Inflation: A General Approach to Quantum Causal Compatibility. Physical Review X, 2021, 11, .	8.9	30
38	Energy as a Detector of Nonlocality of Many-Body Spin Systems. Physical Review X, 2017, 7, .	8.9	27
39	Optimal quantum error correcting codes from absolutely maximally entangled states. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 075301.	2.1	27
40	Bellâ€™s inequalities and distillability inN-quantum-bit systems. Physical Review A, 2002, 66, .	2.5	26
41	Self-testing of Pauli observables for device-independent entanglement certification. Physical Review A, 2018, 98, .	2.5	26
42	Intensive temperature and quantum correlations for refined quantum measurements. Europhysics Letters, 2012, 98, 10009.	2.0	25
43	Translationally invariant multipartite Bell inequalities involving only two-body correlators. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 424024.	2.1	23
44	Quantum technologies in space. Experimental Astronomy, 2021, 51, 1677-1694.	3.7	23
45	Local temperature in quantum thermal states. Physical Review A, 2009, 79, .	2.5	21
46	Experimental investigation of partially entangled states for device-independent randomness generation and self-testing protocols. Physical Review A, 2019, 99, .	2.5	21
47	Locality of temperature in spin chains. New Journal of Physics, 2015, 17, 085007.	2.9	20
48	Frequency-bin entanglement of ultra-narrow band non-degenerate photon pairs. Quantum Science and Technology, 2018, 3, 014007.	5.8	19
49	Bell Nonlocality Is Not Sufficient for the Security of Standard Device-Independent Quantum Key Distribution Protocols. Physical Review Letters, 2021, 127, 050503.	7.8	18
50	Necessary detection efficiencies for secure quantum key distribution and bound randomness. Physical Review A, 2016, 93, .	2.5	16
51	Device-Independent Certification of Genuinely Entangled Subspaces. Physical Review Letters, 2020, 125, 260507.	7.8	16
52	Almost-Quantum Correlations Violate the No-Restriction Hypothesis. Physical Review Letters, 2018, 120, 200402.	7.8	14
53	Constructions of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>k</mml:mi></mml:math> -uniform and absolutely maximally entangled states beyond maximum distance codes. Physical Review Research, 2020, 2, .	3.6	14
54	Maximal randomness from partially entangled states. Physical Review Research, 2020, 2, .	3.6	14

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55	Optimization of device-independent witnesses of entanglement depth from two-body correlators. Physical Review A, 2019, 100, .	2.5	13
56	Maximally Nonlocal Theories Cannot Be Maximally Random. Physical Review Letters, 2015, 114, 160502.	7.8	12
57	Two independent photon pairs versus four-photon entangled states in parametric down conversion. Journal of Modern Optics, 2004, 51, 1637-1649.	1.3	11
58	Linear response theory for quantum Gaussian processes. New Journal of Physics, 2019, 21, 083036.	2.9	10
59	Bell inequalities tailored to the Greenbergerâ€“Horneâ€“Zeilinger states of arbitrary local dimension. New Journal of Physics, 2019, 21, 113001.	2.9	9
60	Randomness versus nonlocality in the Mermin-Bell experiment with three parties. Quantum - the Open Journal for Quantum Science, 0, 2, 82.	0.0	9
61	Unsupervised mapping of phase diagrams of 2D systems from infinite projected entangled-pair states via deep anomaly detection. SciPost Physics, 2021, 11, .	4.9	8
62	Supersolid-superfluid phase separation in the extended Bose-Hubbard model. Physical Review B, 2021, 104, .	3.2	8
63	Device-independent quantum key distribution with spin-coupled cavities. Physical Review A, 2013, 88, .	2.5	5
64	Implementations for device-independent quantum key distribution. Physica Scripta, 2016, 91, 043003.	2.5	4
65	Verifying the output of quantum optimizers with ground-state energy lower bounds. Physical Review Research, 2020, 2, .	3.6	3
66	Coarse-Grained Self-Testing. Physical Review Letters, 2021, 127, 240401.	7.8	3
67	Efficient training of energy-based models via spin-glass control. Machine Learning: Science and Technology, 2021, 2, 025026.	5.0	2
68	Locality of temperature and correlations in the presence of non-zero-temperature phase transitions. New Journal of Physics, 2021, 23, 073052.	2.9	2
69	Regularising data for practical randomness generation. Quantum Science and Technology, 2019, 4, 025007.	5.8	1
70	Connector Tensor Networks: A Renormalization-Type Approach to Quantum Certification. Physical Review X, 2020, 10, .	8.9	1
71	Studies of femtosecond time-bin entangled qubits for quantum communications. Fortschritte Der Physik, 2003, 51, 428-434.	4.4	0
72	Editorial Introduction to the JSTQE Special Issue on Photonics for Quantum Information Technologies. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-3.	2.9	0