

Antonio Acin

List of Publications by Year in descending order

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Version: 2024-02-01

72
papers

7,259
citations

136950

32
h-index

98798

67
g-index

72
all docs

72
docs citations

72
times ranked

3430
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient training of energy-based models via spin-glass control. Machine Learning: Science and Technology, 2021, 2, 025026.	5.0	2
2	Quantum Inflation: A General Approach to Quantum Causal Compatibility. Physical Review X, 2021, 11, .	8.9	30
3	Quantum technologies in space. Experimental Astronomy, 2021, 51, 1677-1694.	3.7	23
4	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
5	Locality of temperature and correlations in the presence of non-zero-temperature phase transitions. New Journal of Physics, 2021, 23, 073052.	2.9	2
6	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
7	Supersolid-superfluid phase separation in the extended Bose-Hubbard model. Physical Review B, 2021, 104, .	3.2	8
8	Coarse-Grained Self-Testing. Physical Review Letters, 2021, 127, 240401.	7.8	3
9	Unsupervised Phase Discovery with Deep Anomaly Detection. Physical Review Letters, 2020, 125, 170603.	7.8	51
10	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
11	Connector Tensor Networks: A Renormalization-Type Approach to Quantum Certification. Physical Review X, 2020, 10, .	8.9	1
12	Scalable Bell Inequalities for Qubit Graph States and Robust Self-Testing. Physical Review Letters, 2020, 124, 020402.	7.8	35
13	Device-Independent Certification of Genuinely Entangled Subspaces. Physical Review Letters, 2020, 125, 260507.	7.8	16
14	Constructions of k -uniform and absolutely maximally entangled states beyond maximum distance codes. Physical Review Research, 2020, 2, .	3.6	14
15	Verifying the output of quantum optimizers with ground-state energy lower bounds. Physical Review Research, 2020, 2, .	3.6	3
16	Maximal randomness from partially entangled states. Physical Review Research, 2020, 2, .	3.6	14
17	Bell inequalities tailored to the Greenberger-Horne-Zeilinger states of arbitrary local dimension. New Journal of Physics, 2019, 21, 113001.	2.9	9
18	Linear response theory for quantum Gaussian processes. New Journal of Physics, 2019, 21, 083036.	2.9	10

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19	Optimization of device-independent witnesses of entanglement depth from two-body correlators. <i>Physical Review A</i> , 2019, 100, .	2.5	13
20	Bounding the Sets of Classical and Quantum Correlations in Networks. <i>Physical Review Letters</i> , 2019, 123, 140503.	7.8	35
21	Regularising data for practical randomness generation. <i>Quantum Science and Technology</i> , 2019, 4, 025007.	5.8	1
22	Experimental investigation of partially entangled states for device-independent randomness generation and self-testing protocols. <i>Physical Review A</i> , 2019, 99, .	2.5	21
23	Multidimensional quantum entanglement with large-scale integrated optics. <i>Science</i> , 2018, 360, 285-291.	12.6	554
24	Frequency-bin entanglement of ultra-narrow band non-degenerate photon pairs. <i>Quantum Science and Technology</i> , 2018, 3, 014007.	5.8	19
25	Optimal quantum error correcting codes from absolutely maximally entangled states. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 075301.	2.1	27
26	Self-testing multipartite entangled states through projections onto two systems. <i>New Journal of Physics</i> , 2018, 20, 083041.	2.9	47
27	Self-testing of Pauli observables for device-independent entanglement certification. <i>Physical Review A</i> , 2018, 98, .	2.5	26
28	Device-Independent Entanglement Certification of All Entangled States. <i>Physical Review Letters</i> , 2018, 121, 180503.	7.8	43
29	Almost-Quantum Correlations Violate the No-Restriction Hypothesis. <i>Physical Review Letters</i> , 2018, 120, 200402.	7.8	14
30	Unbounded randomness certification using sequences of measurements. <i>Physical Review A</i> , 2017, 95, .	2.5	75
31	Efficient Device-Independent Entanglement Detection for Multipartite Systems. <i>Physical Review X</i> , 2017, 7, .	8.9	32
32	Energy as a Detector of Nonlocality of Many-Body Spin Systems. <i>Physical Review X</i> , 2017, 7, .	8.9	27
33	Bell Inequalities Tailored to Maximally Entangled States. <i>Physical Review Letters</i> , 2017, 119, 040402.	7.8	50
34	Randomness in quantum mechanics: philosophy, physics and technology. <i>Reports on Progress in Physics</i> , 2017, 80, 124001.	20.1	72
35	Certified randomness in quantum physics. <i>Nature</i> , 2016, 540, 213-219.	27.8	160
36	Implementations for device-independent quantum key distribution. <i>Physica Scripta</i> , 2016, 91, 043003.	2.5	4

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37	Necessary detection efficiencies for secure quantum key distribution and bound randomness. <i>Physical Review A</i> , 2016, 93, .	2.5	16
38	Optimal randomness certification from one entangled bit. <i>Physical Review A</i> , 2016, 93, .	2.5	67
39	Self-testing protocols based on the chained Bell inequalities. <i>New Journal of Physics</i> , 2016, 18, 035013.	2.9	43
40	Locality of temperature in spin chains. <i>New Journal of Physics</i> , 2015, 17, 085007.	2.9	20
41	A Combinatorial Approach to Nonlocality and Contextuality. <i>Communications in Mathematical Physics</i> , 2015, 334, 533-628.	2.2	125
42	Almost quantum correlations. <i>Nature Communications</i> , 2015, 6, 6288.	12.8	123
43	Maximally Nonlocal Theories Cannot Be Maximally Random. <i>Physical Review Letters</i> , 2015, 114, 160502.	7.8	12
44	Nonlocality in many-body quantum systems detected with two-body correlators. <i>Annals of Physics</i> , 2015, 362, 370-423.	2.8	43
45	Ultra-fast quantum randomness generation by accelerated phase diffusion in a pulsed laser diode. <i>Optics Express</i> , 2014, 22, 1645.	3.4	114
46	Translationally invariant multipartite Bell inequalities involving only two-body correlators. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 424024.	2.1	23
47	Detecting nonlocality in many-body quantum states. <i>Science</i> , 2014, 344, 1256-1258.	12.6	129
48	Full randomness from arbitrarily deterministic events. <i>Nature Communications</i> , 2013, 4, 2654.	12.8	116
49	Security of Device-Independent Quantum Key Distribution in the Bounded-Quantum-Storage Model. <i>Physical Review X</i> , 2013, 3, .	8.9	37
50	Device-independent quantum key distribution with spin-coupled cavities. <i>Physical Review A</i> , 2013, 88, .	2.5	5
51	Operational Framework for Nonlocality. <i>Physical Review Letters</i> , 2012, 109, 070401.	7.8	128
52	Fully Nonlocal, Monogamous, and Random Genuinely Multipartite Quantum Correlations. <i>Physical Review Letters</i> , 2012, 108, 100401.	7.8	43
53	Intensive temperature and quantum correlations for refined quantum measurements. <i>Europhysics Letters</i> , 2012, 98, 10009.	2.0	25
54	Randomness versus Nonlocality and Entanglement. <i>Physical Review Letters</i> , 2012, 108, 100402.	7.8	183

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55	Secure device-independent quantum key distribution with causally independent measurement devices. Nature Communications, 2011, 2, 238.	12.8	258
56	Random numbers certified by Bell's theorem. Nature, 2010, 464, 1021-1024.	27.8	1,021
57	Convergent Relaxations of Polynomial Optimization Problems with Noncommuting Variables. SIAM Journal on Optimization, 2010, 20, 2157-2180.	2.0	110
58	Local temperature in quantum thermal states. Physical Review A, 2009, 79, .	2.5	21
59	Device-independent quantum key distribution secure against collective attacks. New Journal of Physics, 2009, 11, 045021.	2.9	379
60	Testing the Dimension of Hilbert Spaces. Physical Review Letters, 2008, 100, 210503.	7.8	208
61	A convergent hierarchy of semidefinite programs characterizing the set of quantum correlations. New Journal of Physics, 2008, 10, 073013.	2.9	414
62	Bounding the Set of Quantum Correlations. Physical Review Letters, 2007, 98, 010401.	7.8	321
63	Device-Independent Security of Quantum Cryptography against Collective Attacks. Physical Review Letters, 2007, 98, 230501.	7.8	1,221
64	Bell-Type Test of Energy-Time Entangled Qutrits. Physical Review Letters, 2004, 93, .	7.8	176
65	Two independent photon pairs versus four-photon entangled states in parametric down conversion. Journal of Modern Optics, 2004, 51, 1637-1649.	1.3	75
66	Two independent photon pairs versus four-photon entangled states in parametric down conversion. Journal of Modern Optics, 2004, 51, 1637-1649.	1.3	11
67	Studies of femtosecond time-bin entangled qubits for quantum communications. Fortschritte Der Physik, 2003, 51, 428-434.	4.4	0
68	Bell's inequalities and distillability in N-quantum-bit systems. Physical Review A, 2002, 66, .	2.5	26
69	Quantum nonlocality in two three-level systems. Physical Review A, 2002, 65, .	2.5	224
70	Device-independent quantum key distribution with asymmetric CHSH inequalities. Quantum - the Open Journal for Quantum Science, 0, 5, 443.	0.0	31
71	Randomness versus nonlocality in the Mermin-Bell experiment with three parties. Quantum - the Open Journal for Quantum Science, 0, 2, 82.	0.0	9
72	Device-independent quantum key distribution with single-photon sources. Quantum - the Open Journal for Quantum Science, 0, 4, 260.	0.0	35