Toby Cubitt

List of Publications by Year
in descending order

43 papers	1,830 citations	331670 21 h-index	289244 40 g-index
43 all docs	43 docs citations	43 times ranked	1315 citing authors

#	Article	IF	Citations
1	Translationally Invariant Universal Quantum Hamiltonians in 1D. Annales Henri Poincare, 2022, 23, 223-254.	1.7	7
2	General Conditions for Universality of Quantum Hamiltonians. PRX Quantum, 2022, 3, .	9.2	2
3	Holographic duality between local Hamiltonians from random tensor networks. Journal of High Energy Physics, 2022, 2022, 1.	4.7	3
4	Undecidability of the Spectral Gap. Forum of Mathematics, Pi, 2022, 10, .	2.0	5
5	Computational complexity of the ground state energy density problem. , 2022, , .		3
6	Uncomputability of phase diagrams. Nature Communications, 2021, 12, 452.	12.8	7
7	Compact fermion to qubit mappings. Physical Review B, 2021, 104, .	3.2	32
8	Hamiltonian simulation algorithms for near-term quantum hardware. Nature Communications, 2021, 12, 4989.	12.8	22
9	Undecidability of the Spectral Gap in One Dimension. Physical Review X, 2020, 10, .	8.9	20
10	Toy models of holographic duality between local Hamiltonians. Journal of High Energy Physics, 2019, 2019, 1.	4.7	27
11	Translationally Invariant Universal Classical Hamiltonians. Journal of Statistical Physics, 2019, 176, 228-261.	1.2	7
12	Size-driven quantum phase transitions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 19-23.	7.1	13
13	Universal quantum Hamiltonians. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9497-9502.	7.1	49
14	The Complexity of Translationally Invariant Spin Chains with Low Local Dimension. Annales Henri Poincare, 2017, 18, 3449-3513.	1.7	14
15	Fundamental limitations in the purifications of tensor networks. Journal of Mathematical Physics, 2016, 57, .	1.1	22
16	Complexity Classification of Local Hamiltonian Problems. SIAM Journal on Computing, 2016, 45, 268-316.	1.0	33
17	The complexity of divisibility. Linear Algebra and Its Applications, 2016, 504, 64-107.	0.9	11
18	Simple universal models capture all classical spin physics. Science, 2016, 351, 1180-1183.	12.6	71

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19	Quantum reverse hypercontractivity. Journal of Mathematical Physics, 2015, 56, .	1.1	10
20	Area law for fixed points of rapidly mixing dissipative quantum systems. Journal of Mathematical Physics, 2015, 56, .	1.1	18
21	Unbounded number of channel uses may be required to detect quantum capacity. Nature Communications, 2015, 6, 6739.	12.8	62
22	Undecidability of the spectral gap. Nature, 2015, 528, 207-211.	27.8	158
23	Rapid mixing and stability of quantum dissipative systems. Physical Review A, 2015, 91, .	2.5	10
24	Stability of Local Quantum Dissipative Systems. Communications in Mathematical Physics, 2015, 337, 1275-1315.	2.2	38
25	Complexity Classification of Local Hamiltonian Problems. , 2014, , .		15
26	Bounds on Entanglement-Assisted Source-Channel Coding via the LovÃ¡sz (vartheta) Number and Its Variants. IEEE Transactions on Information Theory, 2014, 60, 7330-7344.	2.4	17
27	Preparing topological projected entangled pair states on a quantum computer. Physical Review A, 2013, 88, .	2.5	16
28	Extracting Dynamical Equations from Experimental Data is NP Hard. Physical Review Letters, 2012, 108, 120503.	7.8	39
29	An Extreme Form of Superactivation for Quantum Zero-Error Capacities. IEEE Transactions on Information Theory, 2012, 58, 1953-1961.	2.4	21
30	The Complexity of Relating Quantum Channels to Master Equations. Communications in Mathematical Physics, 2012, 310, 383-418.	2.2	30
31	Zero-Error Channel Capacity and Simulation Assisted by Non-Local Correlations. IEEE Transactions on Information Theory, 2011, 57, 5509-5523.	2.4	46
32	Superactivation of the Asymptotic Zero-Error Classical Capacity of a Quantum Channel. IEEE Transactions on Information Theory, 2011, 57, 8114-8126.	2.4	49
33	Entanglement can Completely Defeat Quantum Noise. Physical Review Letters, 2011, 107, 250504.	7.8	5
34	Improving Zero-Error Classical Communication with Entanglement. Physical Review Letters, 2010, 104, 230503.	7.8	90
35	Super-duper-activation of the zero-error quantum capacity. , 2010, , .		3
36	Nonsecret correlations can be used to distribute secrecy. Physical Review A, 2009, 79, .	2.5	11

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37	Counterexamples to Additivity of Minimum Output p-RÃ©nyi Entropy for p Close to 0. Communications in Mathematical Physics, 2008, 284, 281-290.	2.2	39
38	Assessing Non-Markovian Quantum Dynamics. Physical Review Letters, 2008, 101, 150402.	7.8	477
39	The structure of degradable quantum channels. Journal of Mathematical Physics, 2008, 49, .	1.1	85
40	Engineering Correlation and Entanglement Dynamics in Spin Systems. Physical Review Letters, 2008, 100, 180406.	7.8	31
41	On the dimension of subspaces with bounded Schmidt rank. Journal of Mathematical Physics, 2008, 49, .	1.1	57
42	Entanglement flow in multipartite systems. Physical Review A, 2005, 71, .	2.5	38
43	Separable States Can Be Used To Distribute Entanglement. Physical Review Letters, 2003, 91, 037902.	7.8	117