James R Wootton

List of Publications by Year
in descending order

40 papers	902 citations	471509 17 h-index	477307 29 g-index
41 all docs	41 docs citations	41 times ranked	678 citing authors

#	Article	IF	Citations
1	The History of Games for (Quantum) Computers. , 2022, , 345-367.		1
2	Hexagonal matching codes with two-body measurements. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 295302.	2.1	2
3	Teaching quantum computing with an interactive textbook. , 2021, , .		11
4	A quantum procedure for map generation. , 2020, , .		3
5	Benchmarking near-term devices with quantum error correction. Quantum Science and Technology, 2020, 5, 044004.	5.8	20
6	Procedural generation using quantum computation. , 2020, , .		5
7	Universal quantum computation in the surface code using non-Abelian islands. Physical Review A, 2019, 100, .	2.5	4
8	Theoretical and practical aspects of verification of quantum computers. , 2018, , .		3
9	Repetition code of 15 qubits. Physical Review A, 2018, 97, .	2.5	41
10	Demonstrating non-Abelian braiding of surface code defects in a five qubit experiment. Quantum Science and Technology, 2017, 2, 015006.	5.8	29
11	Conformal energy currents on the edge of a topological superconductor. Physical Review B, 2017, 95, .	3.2	3
12	Proposal for a minimal surface code experiment. Physical Review A, 2017, 96, .	2.5	11
13	Poking Holes and Cutting Corners to Achieve Clifford Gates with the Surface Code. Physical Review X, 2017, 7, .	8.9	78
14	Active error correction for Abelian and non-Abelian anyons. Physical Review A, 2016, 93, .	2.5	7
15	Continuous error correction for Ising anyons. Physical Review A, 2016, 93, .	2.5	6
16	Quantum memories at finite temperature. Reviews of Modern Physics, 2016, 88, .	45.6	131
17	Fractal hard drives for quantum information. New Journal of Physics, 2016, 18, 021006.	2.9	1
18	Parafermions in a Kagome Lattice of Qubits for Topological Quantum Computation. Physical Review X, 2015, 5, .	8.9	10

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19	Improved HDRG decoders for qudit and non-Abelian quantum error correction. New Journal of Physics, 2015, 17, 035017.	2.9	25
20	Error thresholds for Abelian quantum double models: Increasing the bit-flip stability of topological quantum memory. Physical Review A, 2015, 91, .	2.5	24
21	A Simple Decoder for Topological Codes. Entropy, 2015, 17, 1946-1957.	2.2	20
22	A family of stabilizer codes for $D({{\mathbb{Z}}_{2}})$ anyons and Majorana modes. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 215302.	2.1	14
23	Error Correction for Non-Abelian Topological Quantum Computation. Physical Review X, 2014, 4, .	8.9	28
24	Efficient Markov chain Monte Carlo algorithm for the surface code. Physical Review A, 2014, 89, .	2.5	52
25	Effective quantum-memory Hamiltonian from local two-body interactions. Physical Review A, 2014, 90, .	2.5	11
26	Lifetime of topological quantum memories in thermal environment. New Journal of Physics, 2013, 15, 025027.	2.9	9
27	Topological phases and self-correcting memories in interacting anyon systems. Physical Review A, 2013, 88, .	2.5	7
28	Enhanced thermal stability of the toric code through coupling to a bosonic bath. Physical Review A, 2013, 88, .	2.5	28
29	A witness for topological order and stable quantum memories in Abelian anyonic systems. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 395301.	2.1	3
30	Towards unambiguous calculation of the topological entropy for mixed states. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 215309.	2.1	1
31	High Threshold Error Correction for the Surface Code. Physical Review Letters, 2012, 109, 160503.	7.8	67
32	Incoherent dynamics in the toric code subject to disorder. Physical Review A, 2012, 85, .	2.5	30
33	Self-correcting quantum memory with a boundary. Physical Review A, 2012, 86, .	2.5	19
34	Quantum memories and error correction. Journal of Modern Optics, 2012, 59, 1717-1738.	1.3	26
35	Long-Distance Spin-Spin Coupling via Floating Gates. Physical Review X, 2012, 2, .	8.9	74
36	Bringing Order through Disorder: Localization of Errors in Topological Quantum Memories. Physical Review Letters, 2011, 107, 030503.	7.8	51

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37	Engineering complex topological memories from simple Abelian models. Annals of Physics, 2011, 326, 2307-2314.	2.8	13
38	Universal Quantum Computation with Abelian Anyon Models. Electronic Notes in Theoretical Computer Science, 2011, 270, 209-218.	0.9	4
39	Non-Abelian statistics from an Abelian model. Physical Review B, 2008, 78, .	3.2	16
40	Improving readout in quantum simulations with repetition codes. Quantum Science and Technology, 0, , .	5.8	9