

# James R Wootton

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8111512/publications.pdf>

Version: 2024-02-01

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	Quantum memories at finite temperature. <i>Reviews of Modern Physics</i> , 2016, 88, .	45.6	131
2	Poking Holes and Cutting Corners to Achieve Clifford Gates with the Surface Code. <i>Physical Review X</i> , 2017, 7, .	8.9	78
3	Long-Distance Spin-Spin Coupling via Floating Gates. <i>Physical Review X</i> , 2012, 2, .	8.9	74
4	High Threshold Error Correction for the Surface Code. <i>Physical Review Letters</i> , 2012, 109, 160503.	7.8	67
5	Efficient Markov chain Monte Carlo algorithm for the surface code. <i>Physical Review A</i> , 2014, 89, .	2.5	52
6	Bringing Order through Disorder: Localization of Errors in Topological Quantum Memories. <i>Physical Review Letters</i> , 2011, 107, 030503.	7.8	51
7	Repetition code of 15 qubits. <i>Physical Review A</i> , 2018, 97, .	2.5	41
8	Incoherent dynamics in the toric code subject to disorder. <i>Physical Review A</i> , 2012, 85, .	2.5	30
9	Demonstrating non-Abelian braiding of surface code defects in a five qubit experiment. <i>Quantum Science and Technology</i> , 2017, 2, 015006.	5.8	29
10	Enhanced thermal stability of the toric code through coupling to a bosonic bath. <i>Physical Review A</i> , 2013, 88, .	2.5	28
11	Error Correction for Non-Abelian Topological Quantum Computation. <i>Physical Review X</i> , 2014, 4, .	8.9	28
12	Quantum memories and error correction. <i>Journal of Modern Optics</i> , 2012, 59, 1717-1738.	1.3	26
13	Improved HDRG decoders for qudit and non-Abelian quantum error correction. <i>New Journal of Physics</i> , 2015, 17, 035017.	2.9	25
14	Error thresholds for Abelian quantum double models: Increasing the bit-flip stability of topological quantum memory. <i>Physical Review A</i> , 2015, 91, .	2.5	24
15	A Simple Decoder for Topological Codes. <i>Entropy</i> , 2015, 17, 1946-1957.	2.2	20
16	Benchmarking near-term devices with quantum error correction. <i>Quantum Science and Technology</i> , 2020, 5, 044004.	5.8	20
17	Self-correcting quantum memory with a boundary. <i>Physical Review A</i> , 2012, 86, .	2.5	19
18	Non-Abelian statistics from an Abelian model. <i>Physical Review B</i> , 2008, 78, .	3.2	16

#	ARTICLE	IF	CITATIONS
19	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
20	Engineering complex topological memories from simple Abelian models. Annals of Physics, 2011, 326, 2307-2314.	2.8	13
21	Effective quantum-memory Hamiltonian from local two-body interactions. Physical Review A, 2014, 90, .	2.5	11
22	Proposal for a minimal surface code experiment. Physical Review A, 2017, 96, .	2.5	11
23	Teaching quantum computing with an interactive textbook. , 2021, , .		11
24	Parafermions in a Kagome Lattice of Qubits for Topological Quantum Computation. Physical Review X, 2015, 5, .	8.9	10
25	Lifetime of topological quantum memories in thermal environment. New Journal of Physics, 2013, 15, 025027.	2.9	9
26	Improving readout in quantum simulations with repetition codes. Quantum Science and Technology, 0, , .	5.8	9
27	Topological phases and self-correcting memories in interacting anyon systems. Physical Review A, 2013, 88, .	2.5	7
28	Active error correction for Abelian and non-Abelian anyons. Physical Review A, 2016, 93, .	2.5	7
29	Continuous error correction for Ising anyons. Physical Review A, 2016, 93, .	2.5	6
30	Procedural generation using quantum computation. , 2020, , .		5
31	Universal Quantum Computation with Abelian Anyon Models. Electronic Notes in Theoretical Computer Science, 2011, 270, 209-218.	0.9	4
32	Universal quantum computation in the surface code using non-Abelian islands. Physical Review A, 2019, 100, .	2.5	4
33	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
34	Conformal energy currents on the edge of a topological superconductor. Physical Review B, 2017, 95, .	3.2	3
35	Theoretical and practical aspects of verification of quantum computers. , 2018, , .		3
36	A quantum procedure for map generation. , 2020, , .		3

#	ARTICLE	IF	CITATIONS
37	Hexagonal matching codes with two-body measurements. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 295302.	2.1	2
38	Towards unambiguous calculation of the topological entropy for mixed states. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 215309.	2.1	1
39	Fractal hard drives for quantum information. New Journal of Physics, 2016, 18, 021006.	2.9	1
40	The History of Games for (Quantum) Computers. , 2022, , 345-367.		1