Steven T Flammia

List of Publications by Year
in descending order

74 papers	5,607 citations	109321 35 h-index	98798 67 g-index
75 all docs	75 docs citations	75 times ranked	3428 citing authors

#	Article	IF	Citations
1	Quantum State Tomography via Compressed Sensing. Physical Review Letters, 2010, 105, 150401.	7.8	708
2	Efficient quantum state tomography. Nature Communications, 2010, 1, 149.	12.8	394
3	Entanglement and the power of one qubit. Physical Review A, 2005, 72, .	2.5	301
4	Direct Fidelity Estimation from Few Pauli Measurements. Physical Review Letters, 2011, 106, 230501.	7.8	276
5	Generalized Limits for Single-Parameter Quantum Estimation. Physical Review Letters, 2007, 98, 090401.	7.8	274
6	One-Way Quantum Computing in the Optical Frequency Comb. Physical Review Letters, 2008, 101, 130501.	7.8	238
7	Quantum tomography via compressed sensing: error bounds, sample complexity and efficient estimators. New Journal of Physics, 2012, 14, 095022.	2.9	226
8	Most Quantum States Are Too Entangled To Be Useful As Computational Resources. Physical Review Letters, 2009, 102, 190501.	7.8	203
9	Quantum Metrology: Dynamics versus Entanglement. Physical Review Letters, 2008, 101, 040403.	7.8	176
10	Topological Entanglement RÃ©nyi Entropy and Reduced Density Matrix Structure. Physical Review Letters, 2009, 103, 261601.	7.8	155
11	Graphical calculus for Gaussian pure states. Physical Review A, 2011, 83, .	2.5	130
12	Estimating the coherence of noise. New Journal of Physics, 2015, 17, 113020.	2.9	127
13	Local<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="script">P</mml:mi><mml:mi mathvariant="script">T</mml:mi></mml:mrow></mml:math>Symmetry Violates the No-Signaling Principle. Physical Review Letters, 2014, 112, 130404.	7.8	125
14	Ultrahigh Error Threshold for Surface Codes with Biased Noise. Physical Review Letters, 2018, 120, 050505.	7.8	119
15	Randomized benchmarking with confidence. New Journal of Physics, 2014, 16, 103032.	2.9	113
16	Efficient learning of quantum noise. Nature Physics, 2020, 16, 1184-1188.	16.7	112
17	Bias-preserving gates with stabilized cat qubits. Science Advances, 2020, 6, .	10.3	105
18	Building a Fault-Tolerant Quantum Computer Using Concatenated Cat Codes. PRX Quantum, 2022, 3, .	9.2	101

#	ARTICLE	IF	CITATIONS
19	The XZZX surface code. Nature Communications, 2021, 12, 2172.	12.8	94
20	Fault-Tolerant Logical Gates in the IBM Quantum Experience. Physical Review Letters, 2019, 122, 080504.	7.8	88
21	Ultracompact generation of continuous-variable cluster states. Physical Review A, 2007, 76, .	2.5	86
22	Quantum-limited metrology with product states. Physical Review A, 2008, 77, .	2.5	84
23	Comparing Experiments to the Fault-Tolerance Threshold. Physical Review Letters, 2016, 117, 170502.	7.8	83
24	Minimal Informationally Complete Measurements for Pure States. Foundations of Physics, 2005, 35, 1985-2006.	1.3	82
25	Tailoring Surface Codes for Highly Biased Noise. Physical Review X, 2019, 9, .	8.9	69
26	Fault-Tolerant Thresholds for the Surface Code in Excess of 5% Under Biased Noise. Physical Review Letters, 2020, 124, 130501.	7.8	63
27	Efficient Estimation of Pauli Channels. ACM Transactions on Quantum Computing, 2020, 1, 1-32.	4.3	57
28	Effect of noise correlations on randomized benchmarking. Physical Review A, 2016, 93, .	2.5	56
29	The optical frequency comb as a one-way quantum computer. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 114009.	1.5	51
30	Robust Shadow Estimation. PRX Quantum, 2021, 2, .	9.2	51
31	Adiabatic Gate Teleportation. Physical Review Letters, 2009, 103, 120504.	7.8	50
32	Phase transition of computational power in the resource states for one-way quantum computation. New Journal of Physics, 2008, 10, 023010.	2.9	44
33	Error compensation of single-qubit gates in a surface-electrode ion trap using composite pulses. Physical Review A, 2015, 92, .	2.5	42
34	On SIC-POVMs in prime dimensions. Journal of Physics A, 2006, 39, 13483-13493.	1.6	41
35	Constructing exact symmetric informationally complete measurements from numerical solutions. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 165302.	2.1	41
36	Performance of quantum error correction with coherent errors. Physical Review A, 2019, 99, .	2.5	39

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37	Practical adaptive quantum tomography. New Journal of Physics, 2017, 19, 113017.	2.9	38
38	The Lie algebraic significance of symmetric informationally complete measurements. Journal of Mathematical Physics, 2011, 52, .	1.1	37
39	SICs and Algebraic Number Theory. Foundations of Physics, 2017, 47, 1042-1059.	1.3	29
40	Quantum Coding with Low-Depth Random Circuits. Physical Review X, 2021, 11, .	8.9	28
41	Toric codes and quantum doubles from two-body Hamiltonians. New Journal of Physics, 2011, 13, 053039.	2.9	27
42	Thermalization, Error Correction, and Memory Lifetime for Ising Anyon Systems. Physical Review X, 2014, 4, .	8.9	26
43	Random unitary maps for quantum state reconstruction. Physical Review A, 2010, 81, .	2.5	25
44	Estimating the fidelity ofTgates using standard interleaved randomized benchmarking. Quantum Science and Technology, 2017, 2, 015008.	5.8	25
45	Statistical analysis of randomized benchmarking. Physical Review A, 2019, 99, .	2.5	23
46	Programmable quantum simulation by dynamic Hamiltonian engineering. New Journal of Physics, 2014, 16, 083027.	2.9	21
47	Tailored Codes for Small Quantum Memories. Physical Review Applied, 2017, 8, .	3.8	21
48	Multiqubit randomized benchmarking using few samples. Physical Review A, 2019, 100, .	2.5	21
49	Limits on the storage of quantum information in a volume of space. Quantum - the Open Journal for Quantum Science, 0, 1, 4.	0.0	21
50	Adiabatic cluster-state quantum computing. Physical Review A, 2010, 82, .	2.5	20
51	Stochastic estimation of dynamical variables. Quantum Science and Technology, 2019, 4, 035003.	5.8	18
52	Characterization of solvable spin models via graph invariants. Quantum - the Open Journal for Quantum Science, 0, 4, 278.	0.0	18
53	Computational Difficulty of Computing the Density of States. Physical Review Letters, 2011, 107, 040501.	7.8	17
54	Fast Estimation of Sparse Quantum Noise. PRX Quantum, 2021, 2, .	9.2	17

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55	Dimension towers of SICs. I. Aligned SICs and embedded tight frames. Journal of Mathematical Physics, 2017, 58, .	1.1	16
56	Adiabatic Quantum Transistors. Physical Review X, 2013, 3, .	8.9	15
57	Detecting topological order with ribbon operators. Physical Review B, 2016, 94, .	3.2	15
58	Free Fermions Behind the Disguise. Communications in Mathematical Physics, 2021, 388, 969-1003.	2.2	15
59	Sparse Quantum Codes From Quantum Circuits. IEEE Transactions on Information Theory, 2017, 63, 2464-2479.	2.4	14
60	Tight frames, Hadamard matrices and Zauner's conjecture. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 295301.	2.1	12
61	Adiabatic topological quantum computing. Physical Review A, 2015, 92, .	2.5	11
62	Classical simulation of quantum error correction in a Fibonacci anyon code. Physical Review A, 2017, 95, .	2.5	11
63	Constrained bounds on measures of entanglement. Physical Review A, 2007, 75, .	2.5	10
64	Topological quantum error correction in the Kitaev honeycomb model. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 083106.	2.3	10
65	Sparse Quantum Codes from Quantum Circuits. , 2015, , .		7
66	Approximate symmetries of Hamiltonians. Journal of Mathematical Physics, 2017, 58, .	1.1	7
67	Pauli error estimation via Population Recovery. Quantum - the Open Journal for Quantum Science, 0, 5, 549.	0.0	7
68	Weighing matrices and optical quantum computing. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 065302.	2.1	6
69	Symmetry-respecting real-space renormalization for the quantum Ashkin-Teller model. Physical Review E, 2015, 92, 042163.	2.1	6
70	Quantum Computer Crosscheck. Physics Magazine, 2020, 13, .	0.1	3
71	Quantum metrology from an information theory perspective. , 2009, , .		2
72	Quantum metrology with Bose-Einstein condensates. , 2009, , .		2

#	Article	IF	Citations
73	Playing the quantum harp: multipartite squeezing and entanglement of harmonic oscillators. , 2008, , .		0
74	Beating the classical limits of information transmission using a quantum decoder. Physical Review A, 2018, 97, .	2.5	0