Steven T Flammia

List of Publications by Year
in descending order

74	5,607	125106	111975
papers	citations	35 h-index	67 g-index

75	75	75	3901
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Building a Fault-Tolerant Quantum Computer Using Concatenated Cat Codes. PRX Quantum, 2022, 3, .	3.5	101
2	Fast Estimation of Sparse Quantum Noise. PRX Quantum, 2021, 2, .	3.5	17
3	The XZZX surface code. Nature Communications, 2021, 12, 2172.	5.8	94
4	Robust Shadow Estimation. PRX Quantum, 2021, 2, .	3.5	51
5	Quantum Coding with Low-Depth Random Circuits. Physical Review X, 2021, 11, .	2.8	28
6	Free Fermions Behind the Disguise. Communications in Mathematical Physics, 2021, 388, 969-1003.	1.0	15
7	Efficient learning of quantum noise. Nature Physics, 2020, 16, 1184-1188.	6.5	112
8	Quantum Computer Crosscheck. Physics Magazine, 2020, 13, .	0.1	3
9	Bias-preserving gates with stabilized cat qubits. Science Advances, 2020, 6, .	4.7	105
10	Fault-Tolerant Thresholds for the Surface Code in Excess of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>5</mml:mn><mml:mo>%</mml:mo></mml:math> Under Biased Noise. Physical Review Letters, 2020, 124, 130501.	2.9	63
11	Efficient Estimation of Pauli Channels. ACM Transactions on Quantum Computing, 2020, 1, 1-32.	2.6	57
12	Tight frames, Hadamard matrices and Zaunerâ€™s conjecture. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 295301.	0.7	12
13	Tailoring Surface Codes for Highly Biased Noise. Physical Review X, 2019, 9, .	2.8	69
14	Statistical analysis of randomized benchmarking. Physical Review A, 2019, 99, .	1.0	23
15	Stochastic estimation of dynamical variables. Quantum Science and Technology, 2019, 4, 035003.	2.6	18
16	Performance of quantum error correction with coherent errors. Physical Review A, 2019, 99, .	1.0	39
17	Fault-Tolerant Logical Gates in the IBM Quantum Experience. Physical Review Letters, 2019, 122, 080504.	2.9	88
18	Multiqubit randomized benchmarking using few samples. Physical Review A, 2019, 100, .	1.0	21

#	Article	IF	Citations
19	Constructing exact symmetric informationally complete measurements from numerical solutions. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 165302.	0.7	41
20	Ultrahigh Error Threshold for Surface Codes with Biased Noise. Physical Review Letters, 2018, 120, 050505.	2.9	119
21	Beating the classical limits of information transmission using a quantum decoder. Physical Review A, 2018, 97, .	1.0	0
22	Sparse Quantum Codes From Quantum Circuits. IEEE Transactions on Information Theory, 2017, 63, 2464-2479.	1.5	14
23	Classical simulation of quantum error correction in a Fibonacci anyon code. Physical Review A, 2017, 95, .	1.0	11
24	Topological quantum error correction in the Kitaev honeycomb model. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 083106.	0.9	10
25	Approximate symmetries of Hamiltonians. Journal of Mathematical Physics, 2017, 58, .	0.5	7
26	SICs and Algebraic Number Theory. Foundations of Physics, 2017, 47, 1042-1059.	0.6	29
27	Practical adaptive quantum tomography. New Journal of Physics, 2017, 19, 113017.	1.2	38
28	Tailored Codes for Small Quantum Memories. Physical Review Applied, 2017, 8, .	1.5	21
29	Dimension towers of SICs. I. Aligned SICs and embedded tight frames. Journal of Mathematical Physics, 2017, 58, .	0.5	16
30	Estimating the fidelity ofTgates using standard interleaved randomized benchmarking. Quantum Science and Technology, 2017, 2, 015008.	2.6	25
31	Detecting topological order with ribbon operators. Physical Review B, 2016, 94, .	1.1	15
32	Effect of noise correlations on randomized benchmarking. Physical Review A, 2016, 93, .	1.0	56
33	Comparing Experiments to the Fault-Tolerance Threshold. Physical Review Letters, 2016, 117, 170502.	2.9	83
34	Adiabatic topological quantum computing. Physical Review A, 2015, 92, .	1.0	11
35	Error compensation of single-qubit gates in a surface-electrode ion trap using composite pulses. Physical Review A, 2015, 92, .	1.0	42
36	Symmetry-respecting real-space renormalization for the quantum Ashkin-Teller model. Physical Review E, 2015, 92, 042163.	0.8	6

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37	Estimating the coherence of noise. New Journal of Physics, 2015, 17, 113020.	1.2	127
38	Sparse Quantum Codes from Quantum Circuits. , 2015, , .		7
39	Programmable quantum simulation by dynamic Hamiltonian engineering. New Journal of Physics, 2014, 16, 083027.	1.2	21
40	Randomized benchmarking with confidence. New Journal of Physics, 2014, 16, 103032.	1.2	113
41	Thermalization, Error Correction, and Memory Lifetime for Ising Anyon Systems. Physical Review X, 2014, 4, .	2.8	26
42	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.	2.9	125
43	Adiabatic Quantum Transistors. Physical Review X, 2013, 3, .	2.8	15
44	Quantum tomography via compressed sensing: error bounds, sample complexity and efficient estimators. New Journal of Physics, 2012, 14, 095022.	1.2	226
45	The Lie algebraic significance of symmetric informationally complete measurements. Journal of Mathematical Physics, 2011, 52, .	0.5	37
46	Graphical calculus for Gaussian pure states. Physical Review A, 2011, 83, .	1.0	130
47	Toric codes and quantum doubles from two-body Hamiltonians. New Journal of Physics, 2011, 13, 053039.	1.2	27
48	Direct Fidelity Estimation from Few Pauli Measurements. Physical Review Letters, 2011, 106, 230501.	2.9	276
49	Computational Difficulty of Computing the Density of States. Physical Review Letters, 2011, 107, 040501.	2.9	17
50	Adiabatic cluster-state quantum computing. Physical Review A, 2010, 82, .	1.0	20
51	Quantum State Tomography via Compressed Sensing. Physical Review Letters, 2010, 105, 150401.	2.9	708
52	Random unitary maps for quantum state reconstruction. Physical Review A, 2010, 81, .	1.0	25
53	Efficient quantum state tomography. Nature Communications, 2010, 1, 149.	5.8	394
54	Adiabatic Gate Teleportation. Physical Review Letters, 2009, 103, 120504.	2.9	50

#	Article	IF	Citations
55	Weighing matrices and optical quantum computing. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 065302.	0.7	6
56	Quantum metrology from an information theory perspective. , 2009, , .		2
57	Quantum metrology with Bose-Einstein condensates. , 2009, , .		2
58	The optical frequency comb as a one-way quantum computer. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 114009.	0.6	51
59	Topological Entanglement RÃ©nyi Entropy and Reduced Density Matrix Structure. Physical Review Letters, 2009, 103, 261601.	2.9	155
60	Most Quantum States Are Too Entangled To Be Useful As Computational Resources. Physical Review Letters, 2009, 102, 190501.	2.9	203
61	One-Way Quantum Computing in the Optical Frequency Comb. Physical Review Letters, 2008, 101, 130501.	2.9	238
62	Phase transition of computational power in the resource states for one-way quantum computation. New Journal of Physics, 2008, 10, 023010.	1.2	44
63	Quantum-limited metrology with product states. Physical Review A, 2008, 77, .	1.0	84
64	Quantum Metrology: Dynamics versus Entanglement. Physical Review Letters, 2008, 101, 040403.	2.9	176
65	Playing the quantum harp: multipartite squeezing and entanglement of harmonic oscillators. , 2008, , .		0
66	Generalized Limits for Single-Parameter Quantum Estimation. Physical Review Letters, 2007, 98, 090401.	2.9	274
67	Constrained bounds on measures of entanglement. Physical Review A, 2007, 75, .	1.0	10
68	Ultracompact generation of continuous-variable cluster states. Physical Review A, 2007, 76, .	1.0	86
69	On SIC-POVMs in prime dimensions. Journal of Physics A, 2006, 39, 13483-13493.	1.6	41
70	Minimal Informationally Complete Measurements for Pure States. Foundations of Physics, 2005, 35, 1985-2006.	0.6	82
71	Entanglement and the power of one qubit. Physical Review A, 2005, 72, .	1.0	301
72	Pauli error estimation via Population Recovery. Quantum - the Open Journal for Quantum Science, 0, 5, 549.	0.0	7

#	Article	IF	Citations
73	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
74	Characterization of solvable spin models via graph invariants. Quantum - the Open Journal for Quantum Science, 0, 4, 278.	0.0	18