

Stephen Bartlett

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

123
papers

5,548
citations

40
h-index

72
g-index

135
ext. papers

6,453
ext. citations

6.9
avg, IF

5.84
L-index

#	Paper	IF	Citations
123	Universal fault-tolerant quantum computing with stabilizer codes. <i>Physical Review Research</i> , 2022 , 4,	3.9	2
122	The XZZX surface code. <i>Nature Communications</i> , 2021 , 12, 2172	17.4	13
121	Probabilistic teleportation of a quantum dot spin qubit. <i>Npj Quantum Information</i> , 2021 , 7,	8.6	4
120	Coherent spin qubit transport in silicon. <i>Nature Communications</i> , 2021 , 12, 4114	17.4	14
119	Programming a quantum phase of matter. <i>Science</i> , 2021 , 374, 1200-1201	33.3	1
118	Symmetry-Protected Self-Correcting Quantum Memories. <i>Physical Review X</i> , 2020 , 10,	9.1	3
117	Fault-Tolerant Thresholds for the Surface Code in Excess of 5% under Biased Noise. <i>Physical Review Letters</i> , 2020 , 124, 130501	7.4	26
116	Dispersive Readout of Majorana Qubits. <i>PRX Quantum</i> , 2020 , 1,	6.1	8
115	Fault-tolerant quantum gates with defects in topological stabilizer codes. <i>Physical Review A</i> , 2020 , 102,	2.6	5
114	Quantum topology identification with deep neural networks and quantum walks. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	22
113	Silicon qubit fidelities approaching incoherent noise limits via pulse engineering. <i>Nature Electronics</i> , 2019 , 2, 151-158	28.4	76
112	Fast spin exchange across a multielectron mediator. <i>Nature Communications</i> , 2019 , 10, 1196	17.4	25
111	Tailoring Surface Codes for Highly Biased Noise. <i>Physical Review X</i> , 2019 , 9,	9.1	28
110	Locality-preserving logical operators in topological stabilizer codes. <i>Physical Review A</i> , 2018 , 97,	2.6	13
109	Phase diagram of the quantum Ising model with long-range interactions on an infinite-cylinder triangular lattice. <i>Physical Review B</i> , 2018 , 97,	3.3	10
108	Ultrahigh Error Threshold for Surface Codes with Biased Noise. <i>Physical Review Letters</i> , 2018 , 120, 050505	7.4	65
107	Spin of a Multielectron Quantum Dot and Its Interaction with a Neighboring Electron. <i>Physical Review X</i> , 2018 , 8,	9.1	13

106	Coupling two spin qubits with a high-impedance resonator. <i>Physical Review B</i> , 2018 , 97,	3.3	21
105	Contextuality as a resource for measurement-based quantum computation beyond qubits. <i>New Journal of Physics</i> , 2018 , 20, 103011	2.9	10
104	Robust symmetry-protected metrology with the Haldane phase. <i>Quantum Science and Technology</i> , 2018 , 3, 014010	5.5	2
103	Long-range entanglement for spin qubits via quantum Hall edge modes. <i>Physical Review B</i> , 2017 , 96,	3.3	9
102	Symmetry-protected topological order at nonzero temperature. <i>Physical Review A</i> , 2017 , 96,	2.6	18
101	Tensor networks with a twist: Anyon-permuting domain walls and defects in projected entangled pair states. <i>Physical Review B</i> , 2017 , 96,	3.3	9
100	Tailored Codes for Small Quantum Memories. <i>Physical Review Applied</i> , 2017 , 8,	4.3	13
99	Contextuality under weak assumptions. <i>New Journal of Physics</i> , 2017 , 19, 033030	2.9	6
98	Topological proofs of contextuality in quantum mechanics. <i>Quantum Information and Computation</i> , 2017 , 17, 1135-1166	0.9	8
97	Stacked codes: Universal fault-tolerant quantum computation in a two-dimensional layout. <i>Physical Review A</i> , 2016 , 93,	2.6	31
96	Spectral properties for a family of two-dimensional quantum antiferromagnets. <i>Physical Review B</i> , 2016 , 93,	3.3	3
95	Quantum metrology: The sensitive side of a spin. <i>Nature Nanotechnology</i> , 2016 , 11, 215-6	28.7	
94	Randomized benchmarking in measurement-based quantum computing. <i>Physical Review A</i> , 2016 , 94,	2.6	7
93	Atomic physics: A milestone in quantum computing. <i>Nature</i> , 2016 , 536, 35-6	50.4	1
92	Symmetry-protected adiabatic quantum transistors. <i>New Journal of Physics</i> , 2015 , 17, 053019	2.9	6
91	Weak values in a classical theory with an epistemic restriction. <i>New Journal of Physics</i> , 2015 , 17, 073015	2.9	10
90	Nonexponential fidelity decay in randomized benchmarking with low-frequency noise. <i>Physical Review A</i> , 2015 , 92,	2.6	36
89	Multiscale entanglement renormalization ansatz for spin chains with continuously varying criticality. <i>Physical Review B</i> , 2015 , 91,	3.3	14

88	Reducing the overhead for quantum computation when noise is biased. <i>Physical Review A</i> , 2015 , 92,	2.6	17
87	Symmetry-respecting real-space renormalization for the quantum Ashkin-Teller model. <i>Physical Review E</i> , 2015 , 92, 042163	2.4	2
86	Estimating Outcome Probabilities of Quantum Circuits Using Quasiprobabilities. <i>Physical Review Letters</i> , 2015 , 115, 070501	7.4	81
85	Quantum computing: powered by magic. <i>Nature</i> , 2014 , 510, 345-7	50.4	8
84	Graph states as ground states of two-body frustration-free Hamiltonians. <i>New Journal of Physics</i> , 2014 , 16, 073013	2.9	10
83	Perturbative 2-body parent Hamiltonians for projected entangled pair states. <i>New Journal of Physics</i> , 2014 , 16, 123056	2.9	4
82	Changing quantum reference frames. <i>Physical Review A</i> , 2014 , 89,	2.6	28
81	Suppressing qubit dephasing using real-time Hamiltonian estimation. <i>Nature Communications</i> , 2014 , 5, 5156	17.4	123
80	Tomography of a spin qubit in a double quantum dot. <i>Physical Review A</i> , 2013 , 88,	2.6	14
79	Self-consistent measurement and state tomography of an exchange-only spin qubit. <i>Nature Nanotechnology</i> , 2013 , 8, 654-9	28.7	171
78	Topological entanglement entropy with a twist. <i>Physical Review Letters</i> , 2013 , 111, 220402	7.4	23
77	Holonomic quantum computing in symmetry-protected ground states of spin chains. <i>New Journal of Physics</i> , 2013 , 15, 025020	2.9	14
76	Decomposition of any quantum measurement into extremals. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013 , 46, 375302	2	7
75	Hidden symmetry-breaking picture of symmetry-protected topological order. <i>Physical Review B</i> , 2013 , 88,	3.3	31
74	Non-negative subtheories and quasiprobability representations of qubits. <i>Physical Review A</i> , 2012 , 85,	2.6	26
73	Revisiting Consistency Conditions for Quantum States of Systems on Closed Timelike Curves: An Epistemic Perspective. <i>Foundations of Physics</i> , 2012 , 42, 656-673	1.2	6
72	Measurement-based quantum computation in a two-dimensional phase of matter. <i>New Journal of Physics</i> , 2012 , 14, 013023	2.9	32
71	Symmetry-protected phases for measurement-based quantum computation. <i>Physical Review Letters</i> , 2012 , 108, 240505	7.4	78

70	Reconstruction of Gaussian quantum mechanics from Liouville mechanics with an epistemic restriction. <i>Physical Review A</i> , 2012 , 86,	2.6	66
69	Observers can always generate nonlocal correlations without aligning measurements by covering all their bases. <i>Physical Review A</i> , 2012 , 85,	2.6	22
68	Optimizing qubit Hamiltonian parameter estimation algorithm using PSO 2012 ,		3
67	Symmetry protection of measurement-based quantum computation in ground states. <i>New Journal of Physics</i> , 2012 , 14, 113016	2.9	38
66	Multiple-copy state discrimination: Thinking globally, acting locally. <i>Physical Review A</i> , 2011 , 83,	2.6	14
65	Toric codes and quantum doubles from two-body Hamiltonians. <i>New Journal of Physics</i> , 2011 , 13, 053039.	2.9	23
64	Characterization of a qubit Hamiltonian using adaptive measurements in a fixed basis. <i>Physical Review A</i> , 2011 , 84,	2.6	50
63	Generating nonclassical correlations without fully aligning measurements. <i>Physical Review A</i> , 2011 , 83,	2.6	25
62	Optical one-way quantum computing with a simulated valence-bond solid. <i>Nature Physics</i> , 2010 , 6, 850-854.	4.2	37
61	Nonclassical correlations from randomly chosen local measurements. <i>Physical Review Letters</i> , 2010 , 104, 050401	7.4	48
60	Experimental feedback control of quantum systems using weak measurements. <i>Physical Review Letters</i> , 2010 , 104, 080503	7.4	95
59	Quantum computational renormalization in the Haldane phase. <i>Physical Review Letters</i> , 2010 , 105, 110502.	7.4	38
58	Efficient quantum state tomography. <i>Nature Communications</i> , 2010 , 1, 149	17.4	266
57	Optical spin-1 chain and its use as a quantum-computational wire. <i>Physical Review A</i> , 2010 , 82,	2.6	14
56	Quantum computation via measurements on the low-temperature state of a many-body system. <i>Physical Review A</i> , 2009 , 80,	2.6	12
55	Identifying phases of quantum many-body systems that are universal for quantum computation. <i>Physical Review Letters</i> , 2009 , 103, 020506	7.4	69
54	Characterizing measurement-based quantum gates in quantum many-body systems using correlation functions This paper was presented at the Theory CANADA 4 conference, held at Centre de recherches mathématiques, Montréal, Québec, Canada on 4-7 June 2008.. <i>Canadian Journal of Physics</i> , 2009 , 87, 219-224	1.1	5
53	Quantum communication using a bounded-size quantum reference frame. <i>New Journal of Physics</i> , 2009 , 11, 063013	2.9	45

52	Demonstrating Heisenberg-limited unambiguous phase estimation without adaptive measurements. <i>New Journal of Physics</i> , 2009 , 11, 073023	2.9	70
51	. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009 , 15, 1661-1672	3.8	19
50	Mixed state discrimination using optimal control. <i>Physical Review Letters</i> , 2009 , 103, 220503	7.4	22
49	Phase transitions and localizable entanglement in cluster-state spin chains with Ising couplings and local fields. <i>Physical Review A</i> , 2009 , 80,	2.6	40
48	Transitions in the computational power of thermal states for measurement-based quantum computation. <i>Physical Review A</i> , 2009 , 80,	2.6	14
47	How to perform the most accurate possible phase measurements. <i>Physical Review A</i> , 2009 , 80,	2.6	105
46	Quantum reference frames and the classification of rotationally invariant maps. <i>Journal of Mathematical Physics</i> , 2008 , 49, 032105	1.2	13
45	Spin lattices with two-body Hamiltonians for which the ground state encodes a cluster state. <i>Physical Review A</i> , 2008 , 78,	2.6	16
44	Reference frames, superselection rules, and quantum information. <i>Reviews of Modern Physics</i> , 2007 , 79, 555-609	40.5	436
43	Entanglement-free Heisenberg-limited phase estimation. <i>Nature</i> , 2007 , 450, 393-6	50.4	381
42	Degradation of a quantum directional reference frame as a random walk. <i>Journal of Modern Optics</i> , 2007 , 54, 2211-2221	1.1	13
41	Quantum control of a single qubit. <i>Physical Review A</i> , 2007 , 75,	2.6	45
40	Degradation of a quantum reference frame. <i>New Journal of Physics</i> , 2006 , 8, 58-58	2.9	62
39	Entanglement and symmetry: A case study in superselection rules, reference frames, and beyond. <i>Physical Review A</i> , 2006 , 74,	2.6	14
38	Observing a coherent superposition of an atom and a molecule. <i>Physical Review A</i> , 2006 , 74,	2.6	25
37	DIALOGUE CONCERNING TWO VIEWS ON QUANTUM COHERENCE: FACTIST AND FICTIONIST. <i>International Journal of Quantum Information</i> , 2006 , 04, 17-43	0.8	42
36	Simple nearest-neighbor two-body Hamiltonian system for which the ground state is a universal resource for quantum computation. <i>Physical Review A</i> , 2006 , 74,	2.6	57
35	Quantum nondemolition measurements for quantum information. <i>Physical Review A</i> , 2006 , 73,	2.6	71

34	Entanglement under restricted operations: Analogy to mixed-state entanglement. <i>Physical Review A</i> , 2006 , 73,	2.6	21
33	Random subspaces for encryption based on a private shared Cartesian frame. <i>Physical Review A</i> , 2005 , 72,	2.6	13
32	Demonstrating superior discrimination of locally prepared states using nonlocal measurements. <i>Physical Review Letters</i> , 2005 , 94, 220406	7.4	18
31	Relativistically invariant quantum information. <i>Physical Review A</i> , 2005 , 71,	2.6	54
30	Quantum methods for clock synchronization: Beating the standard quantum limit without entanglement. <i>Physical Review A</i> , 2005 , 72,	2.6	68
29	Pryde et al. Reply:. <i>Physical Review Letters</i> , 2005 , 95,	7.4	6
28	MIXED-STATE ENTANGLEMENT IN THE LIGHT OF PURE-STATE ENTANGLEMENT CONSTRAINED BY SUPERSELECTION RULES. <i>International Journal of Quantum Information</i> , 2005 , 03, 145-153	0.8	
27	Measuring a photonic qubit without destroying it. <i>Physical Review Letters</i> , 2004 , 92, 190402	7.4	105
26	Direct observation of nonclassical photon statistics in parametric down-conversion. <i>Physical Review Letters</i> , 2004 , 92, 113602	7.4	90
25	Energy as an entanglement witness for quantum many-body systems. <i>Physical Review A</i> , 2004 , 70,	2.6	81
24	Decoherence-full subsystems and the cryptographic power of a private shared reference frame. <i>Physical Review A</i> , 2004 , 70,	2.6	43
23	Optimal measurements for relative quantum information. <i>Physical Review A</i> , 2004 , 70,	2.6	31
22	Measuring entangled qutrits and their use for quantum bit commitment. <i>Physical Review Letters</i> , 2004 , 93, 053601	7.4	269
21	Classical dynamics as constrained quantum dynamics. <i>Journal of Physics A</i> , 2003 , 36, 1683-1704		11
20	Requirement for quantum computation. <i>Journal of Modern Optics</i> , 2003 , 50, 2331-2340	1.1	15
19	Quantum quincunx in cavity quantum electrodynamics. <i>Physical Review A</i> , 2003 , 67,	2.6	136
18	Quantum teleportation of optical quantum gates. <i>Physical Review Letters</i> , 2003 , 90, 117901	7.4	45
17	Classical and quantum communication without a shared reference frame. <i>Physical Review Letters</i> , 2003 , 91, 027901	7.4	130

16	Photon-number superselection and the entangled coherent-state representation. <i>Physical Review A</i> , 2003 , 68,	2.6	44
15	Entanglement constrained by superselection rules. <i>Physical Review Letters</i> , 2003 , 91, 097903	7.4	64
14	Entanglement gauge and the non-Abelian geometric phase with two photonic qubits. <i>Physical Review A</i> , 2003 , 67,	2.6	8
13	Efficient classical simulation of continuous variable quantum information processes. <i>Physical Review Letters</i> , 2002 , 88, 097904	7.4	215
12	Continuous-variable quantum teleportation of entanglement. <i>Physical Review A</i> , 2002 , 66,	2.6	31
11	Universal continuous-variable quantum computation: Requirement of optical nonlinearity for photon counting. <i>Physical Review A</i> , 2002 , 65,	2.6	112
10	Efficient classical simulation of optical quantum information circuits. <i>Physical Review Letters</i> , 2002 , 89, 207903	7.4	46
9	Quantum encodings in spin systems and harmonic oscillators. <i>Physical Review A</i> , 2002 , 65,	2.6	121
8	Vector coherent state representations, induced representations and geometric quantization: I. Scalar coherent state representations. <i>Journal of Physics A</i> , 2002 , 35, 5599-5623		11
7	Vector coherent state representations, induced representations and geometric quantization: II. Vector coherent state representations. <i>Journal of Physics A</i> , 2002 , 35, 5625-5651		6
6	Quantum walks in higher dimensions. <i>Journal of Physics A</i> , 2002 , 35, 2745-2753		166
5	Geometric phase in SU(N) interferometry. <i>European Physical Journal D</i> , 2001 , 51, 312-320		3
4	Geometric phase of three-level systems in interferometry. <i>Physical Review Letters</i> , 2001 , 86, 369-72	7.4	30
3	Unitary transformations for testing Bell inequalities. <i>Physical Review A</i> , 2001 , 63,	2.6	13
2	Angular-momentum projection of rotational model wave functions. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2000 , 472, 227-231	4.2	8
1	From estimation of quantum probabilities to simulation of quantum circuits. <i>Quantum - the Open Journal for Quantum Science</i> , 4, 223		9