

Carlton M Caves

List of Publications by Year in descending order

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139
papers

20,908
citations

27035

58
h-index

17891

125
g-index

146
all docs

146
docs citations

146
times ranked

8431
citing authors

#	ARTICLE	IF	CITATIONS
1	One from many: estimating a function of many parameters. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 014001.	0.7	20
2	Reframing SU(1,1) Interferometry. <i>Advanced Quantum Technologies</i> , 2020, 3, 1900138.	1.8	24
3	In situ characterization of linear-optical networks in randomized boson sampling. <i>Physical Review A</i> , 2020, 101, .	1.0	1
4	Qubit models of weak continuous measurements: markovian conditional and open-system dynamics. <i>Quantum Science and Technology</i> , 2018, 3, 024005.	2.6	65
5	Bosonic particle-correlated states: A nonperturbative treatment beyond mean field. <i>Physical Review A</i> , 2017, 96, .	1.0	5
6	Particle-number-conserving Bogoliubov approximation for Bose-Einstein condensates using extended catalytic states. <i>Physical Review A</i> , 2016, 93, .	1.0	6
7	Models of reduced-noise, probabilistic linear amplifiers. <i>Physical Review A</i> , 2016, 93, .	1.0	10
8	Fisher-Symmetric Informationally Complete Measurements for Pure States. <i>Physical Review Letters</i> , 2016, 116, 180402.	2.9	22
9	Sufficient Conditions for Efficient Classical Simulation of Quantum Optics. <i>Physical Review X</i> , 2016, 6, .	2.8	85
10	Novelty, efficacy, and significance of weak measurements for quantum tomography. <i>Physical Review A</i> , 2015, 92, .	1.0	21
11	Heisenberg-limited metrology with information recycling. <i>Physical Review A</i> , 2015, 91, .	1.0	26
12	Operational discord measure for Gaussian states with Gaussian measurements. <i>New Journal of Physics</i> , 2015, 17, 063037.	1.2	3
13	Noise in phase-preserving linear amplifiers. , 2014, , .		0
14	Quantum limits on postselected, probabilistic quantum metrology. <i>Physical Review A</i> , 2014, 89, .	1.0	73
15	Reduced dimensionality and spatial entanglement in highly anisotropic Bose-Einstein condensates. <i>Physical Review A</i> , 2014, 90, .	1.0	0
16	Optimal quantum-enhanced interferometry. <i>Physical Review A</i> , 2014, 90, .	1.0	59
17	Ancilla models for quantum operations: for what unitaries does the ancilla state have to be physical?. <i>Quantum Information Processing</i> , 2013, 12, 1999-2017.	1.0	3
18	Quantum limits on probabilistic amplifiers. <i>Physical Review A</i> , 2013, 88, .	1.0	58

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19	Measurement-based method for verifying quantum discord. <i>Physical Review A</i> , 2013, 87, .	1.0	22
20	Mixing nonclassical pure states in a linear-optical network almost always generates modal entanglement. <i>Physical Review A</i> , 2013, 88, .	1.0	43
21	Optimal Quantum-Enhanced Interferometry Using a Laser Power Source. <i>Physical Review Letters</i> , 2013, 111, 173601.	2.9	125
22	Mean-field dynamics of two-mode Bose-Einstein condensates in highly anisotropic potentials: interference, dimensionality and entanglement. <i>New Journal of Physics</i> , 2013, 15, 023008.	1.2	3
23	Quantum limits on phase-preserving linear amplifiers. <i>Physical Review A</i> , 2012, 86, .	1.0	80
24	Evading Quantum Mechanics: Engineering a Classical Subsystem within a Quantum Environment. <i>Physical Review X</i> , 2012, 2, .	2.8	87
25	ENTROPIC MEASURES OF NON-CLASSICAL CORRELATIONS. <i>International Journal of Quantum Information</i> , 2011, 09, 1553-1586.	0.6	44
26	Entanglement-based perturbation theory for highly anisotropic Bose-Einstein condensates. <i>Physical Review A</i> , 2011, 84, .	1.0	12
27	Fundamental Quantum Limit to Waveform Estimation. <i>Physical Review Letters</i> , 2011, 106, 090401.	2.9	165
28	Fundamental Quantum Limit to Waveform Estimation. , 2011, , .		2
29	Quantum-circuit guide to optical and atomic interferometry. <i>Optics Communications</i> , 2010, 283, 695-712.	1.0	16
30	Nonlinear interferometry with Bose-Einstein condensates. <i>Physical Review A</i> , 2010, 82, .	1.0	26
31	Coherent Quantum-Noise Cancellation for Optomechanical Sensors. <i>Physical Review Letters</i> , 2010, 105, 123601.	2.9	145
32	Graphical description of Pauli measurements on stabilizer states. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 025301.	0.7	6
33	Quantum Discord and the Geometry of Bell-Diagonal States. <i>Physical Review Letters</i> , 2010, 105, 150501.	2.9	181
34	Quantum-limited metrology and Bose-Einstein condensates. <i>Physical Review A</i> , 2009, 80, .	1.0	53
35	Quantum metrology from an information theory perspective. , 2009, , .		2
36	Quantum metrology with Bose-Einstein condensates. , 2009, , .		2

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37	Teleportation fidelity as a probe of sub-Planck phase-space structure. <i>Annals of Physics</i> , 2008, 323, 2685-2708.	1.0	17
38	Quantum Discord and the Power of One Qubit. <i>Physical Review Letters</i> , 2008, 100, 050502.	2.9	1,111
39	Nonlinear quantum metrology using coupled nanomechanical resonators. <i>New Journal of Physics</i> , 2008, 10, 125018.	1.2	72
40	DREAMS VERSUS REALITY: PLENARY DEBATE SESSION ON QUANTUM COMPUTING. <i>Fluctuation and Noise Letters</i> , 2008, 08, C27-C51.	1.0	0
41	Quantum-limited metrology with product states. <i>Physical Review A</i> , 2008, 77, .	1.0	84
42	Graphical description of the action of Clifford operators on stabilizer states. <i>Physical Review A</i> , 2008, 77, .	1.0	11
43	Quantum Metrology: Dynamics versus Entanglement. <i>Physical Review Letters</i> , 2008, 101, 040403.	2.9	176
44	Modeling Pauli measurements on graph states with nearest-neighbor classical communication. <i>Physical Review A</i> , 2007, 75, .	1.0	16
45	Qubit metrology and decoherence. <i>Physical Review A</i> , 2007, 76, .	1.0	96
46	Quantum entanglement and metrology. , 2007, , .		0
47	Generalized Limits for Single-Parameter Quantum Estimation. <i>Physical Review Letters</i> , 2007, 98, 090401.	2.9	274
48	Constrained bounds on measures of entanglement. <i>Physical Review A</i> , 2007, 75, .	1.0	10
49	Subjective probability and quantum certainty. <i>Studies in History and Philosophy of Science Part B - Studies in History and Philosophy of Modern Physics</i> , 2007, 38, 255-274.	1.4	125
50	On decoherence in quantum clock synchronization. <i>Laser Physics</i> , 2006, 16, 1525-1532.	0.6	14
51	Hypersensitivity and chaos signatures in the quantum baker's maps. <i>Journal of Physics A</i> , 2006, 39, 13405-13433.	1.6	15
52	Properties of the frequency operator do not imply the quantum probability postulate. <i>Annals of Physics</i> , 2005, 315, 123-146.	1.0	18
53	Minimal Informationally Complete Measurements for Pure States. <i>Foundations of Physics</i> , 2005, 35, 1985-2006.	0.6	82
54	Entanglement and the power of one qubit. <i>Physical Review A</i> , 2005, 72, .	1.0	301

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55	Optimal classical-communication-assisted local model of n-qubit Greenberger-Horne-Zeilinger correlations. <i>Physical Review A</i> , 2005, 72, .	1.0	12
56	Physical-resource requirements and the power of quantum computation. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, S801-S806.	1.4	6
57	Classical Phase-Space Descriptions of Continuous-Variable Teleportation. <i>Physical Review Letters</i> , 2004, 93, 040506.	2.9	40
58	Symmetric informationally complete quantum measurements. <i>Journal of Mathematical Physics</i> , 2004, 45, 2171-2180.	0.5	680
59	Gleason-Type Derivations of the Quantum Probability Rule for Generalized Measurements. <i>Foundations of Physics</i> , 2004, 34, 193-209.	0.6	72
60	Fidelity of Gaussian Channels. <i>Open Systems and Information Dynamics</i> , 2004, 11, 309-323.	0.5	19
61	Dreams Versus Reality: Plenary Debate Session on Quantum Computing. <i>Quantum Information Processing</i> , 2003, 2, 449-472.	1.0	4
62	Concurrence-based entanglement measures for isotropic states. <i>Physical Review A</i> , 2003, 67, .	1.0	164
63	Entangling power of the quantum baker's map. <i>Journal of Physics A</i> , 2003, 36, 9553-9576.	1.6	110
64	Physical-resource demands for scalable quantum computation. , 2003, 5111, 425.		1
65	Local Realistic Model for the Dynamics of Bulk-Ensemble NMR Information Processing. <i>Physical Review Letters</i> , 2002, 88, 167901.	2.9	31
66	Unknown quantum states: The quantum de Finetti representation. <i>Journal of Mathematical Physics</i> , 2002, 43, 4537-4559.	0.5	257
67	Quantum probabilities as Bayesian probabilities. <i>Physical Review A</i> , 2002, 65, .	1.0	280
68	Conditions for compatibility of quantum-state assignments. <i>Physical Review A</i> , 2002, 66, .	1.0	60
69	Climbing Mount Scalable: Physical Resource Requirements for a Scalable Quantum Computer. <i>Foundations of Physics</i> , 2002, 32, 1641-1670.	0.6	59
70	Quantum Bayes rule. <i>Physical Review A</i> , 2001, 64, .	1.0	100
71	Entanglement purification of unknown quantum states. <i>Physical Review A</i> , 2001, 63, .	1.0	24
72	Universal state inversion and concurrence in arbitrary dimensions. <i>Physical Review A</i> , 2001, 64, .	1.0	634

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73	Entanglement of Formation of an Arbitrary State of Two Rebits. Foundations of Physics Letters, 2001, 14, 199-212.	0.6	60
74	On quantum coding for ensembles of mixed states. Journal of Physics A, 2001, 34, 6767-6785.	1.6	36
75	Qutrit entanglement. Optics Communications, 2000, 179, 439-446.	1.0	79
76	Shifts on a Finite Qubit String: A Class of Quantum Baker's Maps. Applicable Algebra in Engineering, Communications and Computing, 2000, 10, 305-310.	0.3	29
77	Explicit product ensembles for separable quantum states. Journal of Modern Optics, 2000, 47, 387-399.	0.6	32
78	Predicting future duration from present age: A critical assessment. Contemporary Physics, 2000, 41, 143-153.	0.8	15
79	Classical model for bulk-ensemble NMR quantum computation. Physical Review A, 1999, 60, 4354-4362.	1.0	62
80	Quantum Error Correction and Reversible Operations. , 1999, 12, 707-718.		45
81	Separability of Very Noisy Mixed States and Implications for NMR Quantum Computing. Physical Review Letters, 1999, 83, 1054-1057.	2.9	475
82	Quantum Logic Gates in Optical Lattices. Physical Review Letters, 1999, 82, 1060-1063.	2.9	575
83	Information-theoretic approach to quantum error correction and reversible measurement. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 1998, 454, 277-304.	1.0	81
84	QUANTUM TELEPORTATION:Enhanced: A Tale of Two Cities. , 1998, 282, 637-638.		1
85	Reversible quantum operations and their application to teleportation. Physical Review A, 1997, 55, 2547-2556.	1.0	98
86	Unpredictability, information, and chaos. Complexity, 1997, 3, 46-57.	0.9	19
87	Quantum Nondemolition Measurements. Advanced Series in Applied Physics, 1997, , 94-104.	0.0	0
88	Noncommuting Mixed States Cannot Be Broadcast. Physical Review Letters, 1996, 76, 2818-2821.	2.9	520
89	Generalized Uncertainty Relations: Theory, Examples, and Lorentz Invariance. Annals of Physics, 1996, 247, 135-173.	1.0	566
90	Information-theoretic characterization of quantum chaos. Physical Review E, 1996, 53, 3257-3270.	0.8	66

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91	Chaos for Liouville probability densities. <i>Physical Review E</i> , 1996, 53, 3387-3401.	0.8	37
92	Mathematical techniques for quantum communication theory. <i>Open Systems and Information Dynamics</i> , 1995, 3, 345-356.	0.5	62
93	Bounds for Accessible Information in Quantum Mechanics. <i>Annals of the New York Academy of Sciences</i> , 1995, 755, 706-714.	1.8	1
94	Geometry of Quantum States. <i>Annals of the New York Academy of Sciences</i> , 1995, 755, 786-797.	1.8	6
95	Geometry of Quantum States. , 1995, , 21-30.		4
96	Hypersensitivity to perturbation in the quantum kicked top. <i>Physical Review E</i> , 1994, 50, 972-987.	0.8	56
97	Quantum limits on bosonic communication rates. <i>Reviews of Modern Physics</i> , 1994, 66, 481-537.	16.4	378
98	Is Boltzmann Entropy Time's Arrow's Archer?. <i>Physics Today</i> , 1994, 47, 11-117.	0.3	13
99	Ensemble-Dependent Bounds for Accessible Information in Quantum Mechanics. <i>Physical Review Letters</i> , 1994, 73, 3047-3050.	2.9	65
100	Statistical distance and the geometry of quantum states. <i>Physical Review Letters</i> , 1994, 72, 3439-3443.	2.9	2,154
101	Maximum-likelihood statistics of multiple quantum phase measurements. <i>Physical Review A</i> , 1993, 47, 1667-1696.	1.0	75
102	Hypersensitivity to perturbations in the quantum baker's map. <i>Physical Review Letters</i> , 1993, 71, 525-528.	2.9	55
103	Information and entropy. <i>Physical Review E</i> , 1993, 47, 4010-4017.	0.8	41
104	Information and entropy in the baker's map. <i>Physical Review Letters</i> , 1992, 69, 3413-3416.	2.9	20
105	Maximum-likelihood analysis of multiple quantum phase measurements. <i>Physical Review Letters</i> , 1992, 69, 2153-2156.	2.9	63
106	Wideband Quantum Communication: A New Frontier?. <i>NATO ASI Series Series B: Physics</i> , 1992, , 279-294.	0.2	3
107	Photon statistics of two-mode squeezed states and interference in four-dimensional phase space. <i>Physical Review A</i> , 1991, 43, 3854-3861.	1.0	95
108	Interpretation for a positive representation. <i>Physical Review A</i> , 1991, 43, 1153-1159.	1.0	73

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109	Wringing out better Bell inequalities. <i>Annals of Physics</i> , 1990, 202, 22-56.	1.0	185
110	Generation of superpositions of classically distinguishable quantum states from optical back-action evasion. <i>Physical Review A</i> , 1990, 41, 5261-5264.	1.0	149
111	Quantitative limits on the ability of a Maxwell demon to extract work from heat. <i>Physical Review Letters</i> , 1990, 64, 2111-2114.	2.9	27
112	Phase and homodyne statistics of generalized squeezed states. <i>Physical Review A</i> , 1990, 42, 4115-4119.	1.0	36
113	Photocount distributions for continuous-wave squeezed light. <i>Physical Review A</i> , 1990, 42, 6794-6804.	1.0	33
114	Comment on "Quantitative limits on the ability of a Maxwell demon to extract work from heat". <i>Physical Review Letters</i> , 1990, 65, 1387-1387.	2.9	17
115	Wringing out better Bell inequalities. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 1989, 6, 211-221.	0.5	17
116	Chained Bell Inequalities. , 1989, , 27-36.		3
117	Quantum rules: an Effect can have more than one Operation. <i>Foundations of Physics Letters</i> , 1988, 1, 3-12.	0.6	15
118	Information-Theoretic Bell Inequalities. <i>Physical Review Letters</i> , 1988, 61, 662-665.	2.9	138
119	Quantum wideband traveling-wave analysis of a degenerate parametric amplifier: erratum. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1988, 5, 1343.	0.9	0
120	Quantum mechanics of measurements distributed in time. II. Connections among formulations. <i>Physical Review D</i> , 1987, 35, 1815-1830.	1.6	54
121	Quantum-mechanical model for continuous position measurements. <i>Physical Review A</i> , 1987, 36, 5543-5555.	1.0	286
122	Squeezing more out of a laser. <i>Optics Letters</i> , 1987, 12, 971.	1.7	17
123	Quantum wideband traveling-wave analysis of a degenerate parametric amplifier. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1987, 4, 1535.	0.9	126
124	Measurements Distributed in Time. <i>NATO ASI Series Series B: Physics</i> , 1987, , 195-207.	0.2	0
125	Quantum mechanics of measurements distributed in time. A path-integral formulation. <i>Physical Review D</i> , 1986, 33, 1643-1665.	1.6	131
126	Defense of the Standard Quantum Limit for Free-Mass Position. <i>Physical Review Letters</i> , 1985, 54, 2465-2468.	2.9	67

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127	New formalism for two-photon quantum optics. II. Mathematical foundation and compact notation. Physical Review A, 1985, 31, 3093-3111.	1.0	464
128	New formalism for two-photon quantum optics. I. Quadrature phases and squeezed states. Physical Review A, 1985, 31, 3068-3092.	1.0	757
129	Quantum Nondemolition Measurements. , 1983, , 567-626.		6
130	Quantum limits on noise in linear amplifiers. Physical Review D, 1982, 26, 1817-1839.	1.6	1,394
131	Quantum-mechanical noise in an interferometer. Physical Review D, 1981, 23, 1693-1708.	1.6	2,467
132	Gravitational radiation and the ultimate speed in Rosen's bimetric theory of gravity. Annals of Physics, 1980, 125, 35-52.	1.0	63
133	On the measurement of a weak classical force coupled to a quantum-mechanical oscillator. I. Issues of principle. Reviews of Modern Physics, 1980, 52, 341-392.	16.4	1,084
134	Quantum-Mechanical Radiation-Pressure Fluctuations in an Interferometer. Physical Review Letters, 1980, 45, 75-79.	2.9	488
135	Microwave cavity gravitational radiation detectors. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1979, 80, 323-326.	1.5	43
136	Quantum Nondemolition Measurements of Harmonic Oscillators. Physical Review Letters, 1978, 40, 667-671.	2.9	206
137	Laboratory experiments to test relativistic gravity. Physical Review D, 1977, 15, 2047-2068.	1.6	157
138	Theoretical frameworks for testing relativistic gravity. V - Post-Newtonian limit of Rosen's theory. Astrophysical Journal, 1976, 206, 555.	1.6	39
139	Explicit product ensembles for separable quantum states. , 0, .		1