

Gerard J. Milburn

List of Publications by Year in descending order

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142
papers

17,772
citations

34016

52
h-index

12558

132
g-index

145
all docs

145
docs citations

145
times ranked

8489
citing authors

#	ARTICLE	IF	CITATIONS
1	A scheme for efficient quantum computation with linear optics. <i>Nature</i> , 2001, 409, 46-52.	13.7	4,737
2	Linear optical quantum computing with photonic qubits. <i>Reviews of Modern Physics</i> , 2007, 79, 135-174.	16.4	2,076
3	Quantum dynamics of an atomic Bose-Einstein condensate in a double-well potential. <i>Physical Review A</i> , 1997, 55, 4318-4324.	1.0	984
4	Generalized Uncertainty Relations: Theory, Examples, and Lorentz Invariance. <i>Annals of Physics</i> , 1996, 247, 135-173.	1.0	566
5	Quantum theory of optical feedback via homodyne detection. <i>Physical Review Letters</i> , 1993, 70, 548-551.	2.9	507
6	Intrinsic decoherence in quantum mechanics. <i>Physical Review A</i> , 1991, 44, 5401-5406.	1.0	426
7	Quantum theory of field-quadrature measurements. <i>Physical Review A</i> , 1993, 47, 642-662.	1.0	396
8	Effect of dissipation on quantum coherence. <i>Physical Review A</i> , 1985, 31, 2403-2408.	1.0	380
9	Quantum optical Fredkin gate. <i>Physical Review Letters</i> , 1989, 62, 2124-2127.	2.9	356
10	Dynamical tunnelling of ultracold atoms. <i>Nature</i> , 2001, 412, 52-55.	13.7	316
11	Quantum and classical Liouville dynamics of the anharmonic oscillator. <i>Physical Review A</i> , 1986, 33, 674-685.	1.0	310
12	Macroscopically distinct quantum-superposition states as a bosonic code for amplitude damping. <i>Physical Review A</i> , 1999, 59, 2631-2634.	1.0	308
13	Interpretation of quantum jump and diffusion processes illustrated on the Bloch sphere. <i>Physical Review A</i> , 1993, 47, 1652-1666.	1.0	294
14	Dissipative Quantum and Classical Liouville Mechanics of the Anharmonic Oscillator. <i>Physical Review Letters</i> , 1986, 56, 2237-2240.	2.9	286
15	Quantum-mechanical model for continuous position measurements. <i>Physical Review A</i> , 1987, 36, 5543-5555.	1.0	286
16	Teleportation with a Uniformly Accelerated Partner. <i>Physical Review Letters</i> , 2003, 91, 180404.	2.9	261
17	Pulsed quantum optomechanics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 16182-16187.	3.3	231
18	Reversible Optical-to-Microwave Quantum Interface. <i>Physical Review Letters</i> , 2012, 109, 130503.	2.9	222

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19	Optimal Quantum Measurements for Phase Estimation. <i>Physical Review Letters</i> , 1995, 75, 2944-2947.	2.9	198
20	Quantum teleportation with squeezed vacuum states. <i>Physical Review A</i> , 1999, 60, 937-942.	1.0	191
21	Quantum computation by communication. <i>New Journal of Physics</i> , 2006, 8, 30-30.	1.2	188
22	Beyond the Coherent Coupled Channels Description of Nuclear Fusion. <i>Physical Review Letters</i> , 2007, 99, 192701.	2.9	170
23	All-optical versus electro-optical quantum-limited feedback. <i>Physical Review A</i> , 1994, 49, 4110-4125.	1.0	167
24	Squeezing via feedback. <i>Physical Review A</i> , 1994, 49, 1350-1366.	1.0	148
25	Schrödinger cats and their power for quantum information processing. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, S828-S833.	1.4	139
26	Quantum nondemolition measurements via quadratic coupling. <i>Physical Review A</i> , 1983, 28, 2065-2070.	1.0	129
27	Universal Teleportation with a Twist. <i>Physical Review Letters</i> , 2000, 84, 3486-3489.	2.9	126
28	Efficient quantum computing using coherent photon conversion. <i>Nature</i> , 2011, 478, 360-363.	13.7	122
29	Single-spin measurement using single-electron transistors to probe two-electron systems. <i>Physical Review B</i> , 2000, 61, 2961-2972.	1.1	103
30	Decoherence in ion traps due to laser intensity and phase fluctuations. <i>Physical Review A</i> , 1998, 57, 3748-3752.	1.0	96
31	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
32	Teleportation in a non-inertial frame. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, S834-S843.	1.4	92
33	Controlling the Decoherence of a "Meter" via Stroboscopic Feedback. <i>Physical Review Letters</i> , 1997, 79, 2442-2445.	2.9	88
34	Giant Kerr Nonlinearities in Circuit Quantum Electrodynamics. <i>Physical Review Letters</i> , 2009, 103, 150503.	2.9	88
35	Analysis of a quantum measurement. <i>Physical Review D</i> , 1985, 32, 3208-3215.	1.6	86
36	Destruction of quantum coherence in a nonlinear oscillator via attenuation and amplification. <i>Physical Review A</i> , 1989, 39, 4628-4640.	1.0	82

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37	Squeezed states and intensity fluctuations in degenerate parametric oscillation. <i>Physical Review A</i> , 1983, 27, 392-394.	1.0	80
38	Qutrit entanglement. <i>Optics Communications</i> , 2000, 179, 439-446.	1.0	79
39	Interpretation for a positive representation. <i>Physical Review A</i> , 1991, 43, 1153-1159.	1.0	73
40	Nonlinear quantum metrology using coupled nanomechanical resonators. <i>New Journal of Physics</i> , 2008, 10, 125018.	1.2	72
41	Complementarity in a quantum nondemolition measurement. <i>Physical Review A</i> , 1989, 39, 694-702.	1.0	71
42	Continuous position measurements and the quantum Zeno effect. <i>Physical Review A</i> , 1993, 48, 132-142.	1.0	69
43	State reduction in quantum-counting quantum nondemolition measurements. <i>Physical Review A</i> , 1984, 30, 56-60.	1.0	67
44	Quantum-state protection in cavities. <i>Physical Review A</i> , 1998, 57, 4930-4944.	1.0	66
45	Ion Trap Simulations of Quantum Fields in an Expanding Universe. <i>Physical Review Letters</i> , 2005, 94, 220401.	2.9	63
46	Quantum coherence and classical chaos in a pulsed parametric oscillator with a Kerr nonlinearity. <i>Physical Review A</i> , 1991, 44, 4704-4711.	1.0	62
47	Decoherence and fidelity in ion traps with fluctuating trap parameters. <i>Physical Review A</i> , 1999, 59, 3766-3774.	1.0	62
48	Effect of dissipation on interference in phase space. <i>Physical Review A</i> , 1988, 38, 1087-1090.	1.0	61
49	Reconstructing the vibrational state of a trapped ion. <i>Physical Review A</i> , 1996, 54, R25-R28.	1.0	60
50	Quantum nondemolition measurements in optical cavities. <i>Physical Review A</i> , 1988, 37, 2970-2978.	1.0	59
51	Quantum limits to all-optical phase shifts in a Kerr nonlinear medium. <i>Physical Review A</i> , 1992, 45, 1919-1923.	1.0	59
52	Quantum open-systems approach to current noise in resonant tunneling junctions. <i>Physical Review B</i> , 1999, 59, 10748-10756.	1.1	56
53	Generation of squeezed states of light with a fiber-optic ring interferometer. <i>Physical Review A</i> , 1986, 33, 4008-4025.	1.0	54
54	Atomic-level shifts in a squeezed vacuum. <i>Physical Review A</i> , 1986, 34, 4882-4885.	1.0	52

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55	Homodyne measurements on a Bose-Einstein condensate. <i>Physical Review A</i> , 1998, 58, 2399-2406.	1.0	50
56	Mesoscopic One-Way Channels for Quantum State Transfer via the Quantum Hall Effect. <i>Physical Review Letters</i> , 2004, 93, 126804.	2.9	47
57	Photon-number-state preparation in nondegenerate parametric amplification. <i>Physical Review A</i> , 1989, 39, 2493-2501.	1.0	46
58	Quantum tunneling in a Kerr medium with parametric pumping. <i>Physical Review A</i> , 1993, 48, 2494-2496.	1.0	46
59	Breakdown of the Cross-Kerr Scheme for Photon Counting. <i>Physical Review Letters</i> , 2013, 110, 053601.	2.9	43
60	Linear amplifiers with phase-sensitive noise. <i>Physical Review A</i> , 1987, 35, 4443-4445.	1.0	42
61	The quantum Mellin transform. <i>New Journal of Physics</i> , 2006, 8, 328-328.	1.2	38
62	Multiscale photosynthetic and biomimetic excitation energy transfer. <i>Nature Physics</i> , 2012, 8, 562-567.	6.5	35
63	Lorentz invariant intrinsic decoherence. <i>New Journal of Physics</i> , 2006, 8, 96-96.	1.2	34
64	Experimental tests of quantum nonlinear dynamics in atom optics. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2003, 5, R83-R120.	1.4	33
65	Quantum nondemolition measurements via quantum counting. <i>Physical Review A</i> , 1983, 28, 2646-2648.	1.0	31
66	Quantum solutions of the damped harmonic oscillator. <i>American Journal of Physics</i> , 1983, 51, 1134-1136.	0.3	31
67	Hyperbolic phase and squeeze-parameter estimation. <i>Physical Review A</i> , 1994, 50, 801-804.	1.0	31
68	Quantum measurement theory of optical heterodyne detection. <i>Physical Review A</i> , 1987, 36, 5271-5279.	1.0	30
69	Hamiltonian mappings and circle packing phase spaces. <i>Physica D: Nonlinear Phenomena</i> , 2001, 155, 34-50.	1.3	30
70	Quantum Interface between an Electrical Circuit and a Single Atom. <i>Physical Review Letters</i> , 2012, 108, 130504.	2.9	30
71	Kicked quantized cavity mode: An open-systems-theory approach. <i>Physical Review A</i> , 1987, 36, 744-749.	1.0	28
72	Dynamics of statistical distance: Quantum limits for two-level clocks. <i>Physical Review A</i> , 1995, 51, 1820-1826.	1.0	28

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73	Measuring the vibrational energy of a trapped ion. <i>Physical Review A</i> , 1995, 52, 4755-4762.	1.0	27
74	Coherence and chaos in a quantum optical system. <i>Physical Review A</i> , 1990, 41, 6567-6570.	1.0	25
75	Squeezed-state Superpositions in a Damped Nonlinear Oscillator. <i>Journal of Modern Optics</i> , 1989, 36, 1607-1614.	0.6	24
76	Measurement-Based Teleportation along Quantum Spin Chains. <i>Physical Review Letters</i> , 2005, 95, 230501.	2.9	23
77	Quantum nondemolition measurements on coupled harmonic oscillators. <i>Physical Review A</i> , 1983, 27, 2804-2816.	1.0	22
78	Linear amplification and quantum cloning for non-Gaussian continuous variables. <i>New Journal of Physics</i> , 2010, 12, 103010.	1.2	22
79	Creating Metastable Schrödinger Cat States. <i>Physical Review Letters</i> , 1995, 75, 418-421.	2.9	21
80	Optimal Quantum Trajectories for Continuous Measurement. <i>Physical Review Letters</i> , 1995, 74, 4827-4830.	2.9	21
81	Nonlinear quantum dynamics at a classical second-order resonance. <i>Physical Review E</i> , 1993, 48, 969-978.	0.8	20
82	Measurements on trapped laser-cooled ions using quantum computations. <i>Physical Review A</i> , 1996, 54, 5141-5146.	1.0	20
83	Characterizing Greenberger-Horne-Zeilinger Correlations in Nondegenerate Parametric Oscillation via Phase Measurements. <i>Physical Review Letters</i> , 1998, 81, 4285-4288.	2.9	20
84	Quantum noise in a nanomechanical Duffing resonator. <i>New Journal of Physics</i> , 2008, 10, 105020.	1.2	20
85	The thermodynamics of clocks. <i>Contemporary Physics</i> , 2020, 61, 69-95.	0.8	19
86	Rydberg-atom phase-sensitive detection and the quantum Zeno effect. <i>Physical Review A</i> , 1992, 46, 1578-1585.	1.0	18
87	Fractional quantum revivals in the atomic gravitational cavity. <i>Physical Review A</i> , 1995, 51, 2328-2333.	1.0	18
88	Creating number states in the micromaser using feedback. <i>Physical Review A</i> , 1995, 51, 736-751.	1.0	17
89	Reduction in laser-intensity fluctuations by a feedback-controlled output mirror. <i>Physical Review A</i> , 1992, 46, 2853-2858.	1.0	16
90	Quantum Zeno effect induced by quantum-nondemolition measurement of photon number. <i>Physical Review A</i> , 1992, 45, 5228-5236.	1.0	14

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91	Quantum features in the scattering of atoms from an optical standing wave. <i>Physical Review A</i> , 1993, 47, R2484-R2487.	1.0	14
92	Weak-force detection using a double Bose-Einstein condensate. <i>Physical Review A</i> , 1999, 59, 4630-4635.	1.0	14
93	Non-Markovian homodyne-mediated feedback on a two-level atom: a quantum trajectory treatment. <i>Chemical Physics</i> , 2001, 268, 221-235.	0.9	14
94	Quantum nanoscience. <i>Contemporary Physics</i> , 2008, 49, 413-433.	0.8	14
95	Quantum Measurement and Control of Single Spins in Diamond. <i>Science</i> , 2010, 330, 1188-1189.	6.0	14
96	Integrated quantum photonic sensor based on Hong-Ou-Mandel interference. <i>Optics Express</i> , 2015, 23, 16008.	1.7	14
97	Chaos and coherence in an optical system subject to photon nondemolition measurement. <i>Physical Review A</i> , 1992, 46, 762-770.	1.0	13
98	Reply to "Comment on 'Intrinsic decoherence in quantum mechanics'". <i>Physical Review A</i> , 1993, 47, 2415-2416.	1.0	13
99	Parametric self pulsing in a quantum optomechanical system. <i>Fortschritte Der Physik</i> , 2009, 57, 1052-1063.	1.5	13
100	Noise reduction in a laser by nonlinear damping. <i>Physical Review A</i> , 1991, 44, 7815-7819.	1.0	12
101	Interference in a spherical phase space and asymptotic behavior of the rotation matrices. <i>Physical Review A</i> , 1993, 48, 1854-1860.	1.0	11
102	Noise reduction in the nondegenerate parametric oscillator with direct detection feedback. <i>Physical Review A</i> , 1994, 50, 793-800.	1.0	11
103	Quantum scattering of a two-level atom in the limit of large detuning. <i>Physical Review A</i> , 1994, 49, 4180-4188.	1.0	10
104	Quantum chaos in the atomic gravitational cavity. <i>Physical Review E</i> , 1997, 56, 351-354.	0.8	10
105	Decoherence and the conditions for the classical control of quantum systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2012, 370, 4469-4486.	1.6	10
106	Intracavity weak nonlinear phase shifts with single photon driving. <i>Optics Communications</i> , 2010, 283, 741-746.	1.0	9
107	The 20th anniversary of quantum state engineering. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 100201.	0.6	9
108	Comment on "Quantum chaotic system in the generalized Husimi representation". <i>Physical Review A</i> , 1989, 39, 2749-2750.	1.0	8

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109	Quantum-noise reduction in a driven cavity with feedback. <i>Physical Review A</i> , 1993, 47, 634-638.	1.0	8
110	Conditional variance reduction by measurements on correlated field modes. <i>Physical Review A</i> , 1997, 55, 1430-1436.	1.0	8
111	Nonconventional computing paradigms in the new millennium: a roundtable. <i>Computing in Science and Engineering</i> , 2001, 3, 82-99.	1.2	8
112	Quantum Measurement and Stochastic Processes in Mesoscopic Conductors. <i>Australian Journal of Physics</i> , 2000, 53, 477.	0.6	8
113	Nonlinear Dynamics in Atom Optics. <i>Australian Journal of Physics</i> , 1996, 49, 777.	0.6	8
114	Eavesdropping using quantum-nondemolition measurements. <i>Physical Review A</i> , 1993, 47, 639-641.	1.0	7
115	Entangling a nanomechanical resonator with a microwave field. <i>Journal of Modern Optics</i> , 2007, 54, 2223-2235.	0.6	7
116	Chaotic dynamics of cold atoms in far-off-resonant donut beams. <i>Physical Review E</i> , 1999, 59, 2842-2845.	0.8	6
117	Effective Generation of Cat and Kitten States. <i>Open Systems and Information Dynamics</i> , 2007, 14, 81-90.	0.5	6
118	Optimal quantum trajectories for discrete measurements. <i>Journal of Modern Optics</i> , 1997, 44, 2469-2484.	0.6	5
119	Classical and quantum noise in electronic systems. <i>Contemporary Physics</i> , 1998, 39, 67-79.	0.8	5
120	Designing a physical quantum agent. <i>Physical Review A</i> , 2021, 103, .	1.0	5
121	Correlated photons in parametric frequency conversion with initial two-mode squeezed states. <i>Optics Communications</i> , 1990, 76, 253-255.	1.0	4
122	Quantum nondemolition measurements using a fully quantized parametric interaction. <i>Physical Review A</i> , 1991, 43, 6177-6186.	1.0	4
123	Quantum theory for current noise in resonant tunnelling devices. <i>Superlattices and Microstructures</i> , 1998, 23, 883-891.	1.4	4
124	Sensitivity to measurement errors in the quantum kicked top. <i>Physical Review A</i> , 1999, 59, 1781-1787.	1.0	4
125	Quantum Noise Reduction by Photodetection with Feedback. <i>Journal of Modern Optics</i> , 1991, 38, 1973-1980.	0.6	3
126	Correcting the effects of spontaneous emission on cold-trapped ions. <i>Physical Review A</i> , 1997, 56, 640-644.	1.0	3

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127	Interference in hyperbolic space. <i>Physical Review A</i> , 1998, 57, 1529-1535.	1.0	3
128	Foundations of Quantum Technology. <i>Journal of Computational and Theoretical Nanoscience</i> , 2005, 2, 161-179.	0.4	3
129	Effect of noise and modulation on the reflection of atoms from an evanescent wave. <i>Physical Review A</i> , 1996, 54, 1510-1515.	1.0	2
130	Heuristic for estimation of multiqubit genuine multipartite entanglement. <i>International Journal of Quantum Information</i> , 2015, 13, 1550023.	0.6	2
131	An Atom-optical Maxwell Demon. <i>Australian Journal of Physics</i> , 1998, 51, 1.	0.6	2
132	Absorptive Quantum Measurements via Coherently Coupled Quantum Dots. <i>Australian Journal of Physics</i> , 2000, 53, 463.	0.6	2
133	Quantum nondemolition measurement of quantum beats and the enforcement of complementarity. <i>Physical Review A</i> , 1989, 40, 7087-7092.	1.0	1
134	Effect of dissipation and measurement on a tunneling system. <i>Physical Review A</i> , 1995, 52, 3323-3332.	1.0	1
135	A NEW APPROACH TO SHOT NOISE IN RESONANT TUNNELLING CURRENT. <i>International Journal of Modern Physics B</i> , 1999, 13, 505-509.	1.0	1
136	A new approach to current and noise in double quantum dot systems. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000, 6, 664-667.	1.3	1
137	Quantum chaos in atom optics. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 2000, 80, 2023-2056.	0.6	1
138	Demonstrating Uncertainty. <i>Science</i> , 2013, 339, 770-771.	6.0	1
139	Wiseman and Milburn reply. <i>Physical Review Letters</i> , 1994, 72, 4054-4054.	2.9	0
140	Milburn replies. <i>Physical Review Letters</i> , 1996, 77, 2337-2337.	2.9	0
141	Measurements on Trapped Laser-Cooled Ions Using Quantum Computations. <i>Fortschritte Der Physik</i> , 1998, 46, 707-712.	1.5	0
142	Avalanche inspiration. <i>Nature Photonics</i> , 2008, 2, 392-393.	15.6	0