David Edward Bruschi

List of Publications by Year
in descending order

45 papers	1,535 citations	331259 21 h-index	301761 39 g-index
45 all docs	45 docs citations	45 times ranked	858 citing authors

#	Article	IF	Citations
1	Unruh effect in quantum information beyond the single-mode approximation. Physical Review A, 2010, 82, .	1.0	226
2	Fermionic-mode entanglement in quantum information. Physical Review A, 2013, 87, .	1.0	85
3	Spacetime effects on satellite-based quantum communications. Physical Review D, 2014, 90, .	1.6	85
4	Quantum metrology for relativistic quantum fields. Physical Review D, 2014, 89, .	1.6	77
5	Relativistic Quantum Metrology: Exploiting relativity to improve quantum measurement technologies. Scientific Reports, 2014, 4, 4996.	1.6	76
6	Voyage to Alpha Centauri: Entanglement degradation of cavity modes due to motion. Physical Review D, 2012, 85, .	1.6	73
7	Phonon creation by gravitational waves. New Journal of Physics, 2014, 16, 085003.	1.2	71
8	Time evolution techniques for detectors in relativistic quantum information. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 165303.	0.7	65
9	Particle and antiparticle bosonic entanglement in noninertial frames. Physical Review D, 2012, 86, .	1.6	59
10	Quantum estimation of the Schwarzschild spacetime parameters of the Earth. Physical Review D, 2014, 90, .	1.6	53
11	Thermodynamics of creating correlations: Limitations and optimal protocols. Physical Review E, 2015, 91, 032118.	0.8	48
12	Motion generates entanglement. Physical Review D, 2012, 85, .	1.6	44
13	Localized projective measurement of a quantum field in non-inertial frames. Classical and Quantum Gravity, 2013, 30, 235006.	1.5	40
14	Space QUEST mission proposal: experimentally testing decoherence due to gravity. New Journal of Physics, 2018, 20, 063016.	1.2	36
15	Kinematic entanglement degradation of fermionic cavity modes. Physical Review D, 2012, 85, .	1.6	35
16	Testing the effects of gravity and motion on quantum entanglement in space-based experiments. New Journal of Physics, 2014, 16, 053041.	1.2	33
17	Relativistic Motion Generates Quantum Gates and Entanglement Resonances. Physical Review Letters, 2013, 111, 090504.	2.9	32
18	Quantum gates and multipartite entanglement resonances realized by nonuniform cavity motion. Physical Review D, 2012, 86, .	1.6	31

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19	On the robustness of entanglement in analogue gravity systems. New Journal of Physics, 2013, 15, 113016.	1.2	31
20	Quantum communications and quantum metrology in the spacetime of a rotating planet. EPJ Quantum Technology, 2017, 4, 7.	2.9	31
21	Mode-mixing quantum gates and entanglement without particle creation in periodically accelerated cavities. New Journal of Physics, 2013, 15, 073052.	1.2	23
22	Entanglement, coherence, and redistribution of quantum resources in double spontaneous down-conversion processes. Physical Review A, 2017, 95, .	1.0	23
23	Optimal estimation with quantum optomechanical systems in the nonlinear regime. Physical Review A, 2020, 101, .	1.0	21
24	Towards universal quantum computation through relativistic motion. Scientific Reports, 2016, 6, 18349.	1.6	20
25	Gravity in the quantum lab. Advances in Physics: X, 2018, 3, 1383184.	1.5	20
26	Repeat-until-success quantum repeaters. Physical Review A, 2014, 90, .	1.0	18
27	â€˜Mechano-opticsâ€™: an optomechanical quantum simulator. New Journal of Physics, 2018, 20, 065004.	1.2	18
28	Time-evolution of nonlinear optomechanical systems: interplay of mechanical squeezing and non-Gaussianity. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 075304.	0.7	18
29	Spacetime effects on wavepackets of coherent light. Physical Review D, 2021, 104, .	1.6	15
30	Thermal noise in BEC-phononic gravitational wave detectors. EPJ Quantum Technology, 2016, 3, .	2.9	14
31	Enhanced continuous generation of non-Gaussianity through optomechanical modulation. New Journal of Physics, 2019, 21, 055004.	1.2	13
32	Optimal estimation of time-dependent gravitational fields with quantum optomechanical systems. Physical Review Research, 2021, 3, .	1.3	13
33	General solution of the time evolution of two interacting harmonic oscillators. Physical Review A, 2021, 103, .	1.0	12
34	Quantum-metrology estimation of spacetime parameters of the Earth outperforming classical precision. Physical Review A, 2019, 99, .	1.0	11
35	Master-equation treatment of nonlinear optomechanical systems with optical loss. Physical Review A, 2021, 104, .	1.0	10
36	Time evolution of coupled multimode and multiresonator optomechanical systems. Journal of Mathematical Physics, 2019, 60, .	0.5	9

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37	Observer dependence of photon bunching: The influence of the relativistic redshift on Hong-Ou-Mandel interference. Physical Review D, 2022, 105, .	1.6	8
38	On the weight of entanglement. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 754, 182-186.	1.5	7
39	Thermodynamics of relativistic quantum fields confined in cavities. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126601.	0.9	7
40	Time evolution of two harmonic oscillators with cross-Kerr interactions. Journal of Mathematical Physics, 2020, 61, .	0.5	7
41	Quantum thermodynamics for a model of an expanding Universe. Classical and Quantum Gravity, 2016, 33, 035003.	1.5	6
42	Work drives time evolution. Annals of Physics, 2018, 394, 155-161.	1.0	5
43	Architectural considerations in hybrid quantum-classical networks (Invited Paper). , 2013, , .		4
44	Entanglement generation in relativistic cavity motion. Journal of Physics: Conference Series, 2013, 442, 012024.	0.3	2
45	CHARGED UNRUH EFFECT ON GEON SPACETIMES. , 2012, , .		0