

Fabio Benatti

List of Publications by Year in descending order

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158
papers

3,538
citations

159358

30
h-index

161609

54
g-index

159
all docs

159
docs citations

159
times ranked

1834
citing authors

#	ARTICLE	IF	CITATIONS
1	Pattern capacity of a single quantum perceptron. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 155301.	0.7	3
2	Vibrational coherent control of localized dâ€™d electronic excitation. Nature Physics, 2021, 17, 368-373.	6.5	10
3	Entanglement and Non-Locality in Quantum Protocols with Identical Particles. Entropy, 2021, 23, 479.	1.1	5
4	Exact Steady State of the Open $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll" \rangle \langle \text{mml:mi} \rangle X \langle / \text{mml:mi} \rangle \langle \text{mml:mi} \rangle X \langle / \text{mml:mi} \rangle \langle / \text{mml:math} \rangle$ -Spin Chain: Entanglement and Transport Properties. PRX Quantum, 2021, 2, .	3.5	6
5	On the Complete Positivity of the Chirardi-Rimini-Weber Model. Fundamental Theories of Physics, 2021, , 135-149.	0.1	0
6	Bath-assisted transport in a three-site spin chain: Global versus local approach. Physical Review A, 2020, 102, .	1.0	12
7	Entanglement in indistinguishable particle systems. Physics Reports, 2020, 878, 1-27.	10.3	52
8	Quasi-inversion of qubit channels. Physical Review A, 2020, 101, .	1.0	8
9	Two-qubit quantum probes for the temperature of an Ohmic environment. Physical Review A, 2020, 101, .	1.0	36
10	Time-dependent spontaneous localization processes. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126356.	0.9	0
11	Impact of nonideal cycles on the efficiency of quantum heat engines. European Physical Journal D, 2019, 73, 1.	0.6	2
12	Quantum model for impulsive stimulated Raman scattering. Journal of Physics B: Atomic, Molecular and Optical Physics, 2019, 52, 145502.	0.6	12
13	Quasi-Entropies and Non-Markovianity. Entropy, 2019, 21, 1020.	1.1	2
14	Continuous variable quantum perceptron. International Journal of Quantum Information, 2019, 17, 1941009.	0.6	4
15	Hadamard Completely Positive Semigroups. Open Systems and Information Dynamics, 2019, 26, 1950020.	0.5	3
16	Qubit entanglement generation by Gaussian non-Markovian dynamics. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 035305.	0.7	3
17	Quantum detailed balance conditions and fluctuation relations for thermalizing quantum dynamics. Physical Review E, 2018, 98, .	0.8	8
18	Quantum-enhanced measurements without entanglement. Reviews of Modern Physics, 2018, 90, .	16.4	257

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19	Quantum spin chain dissipative mean-field dynamics. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 325001.	0.7	21
20	Tensor power of dynamical maps and positive versus completely positive divisibility. <i>Physical Review A</i> , 2017, 95, .	1.0	25
21	Generation and detection of squeezed phonons in lattice dynamics by ultrafast optical excitations. <i>New Journal of Physics</i> , 2017, 19, 023032.	1.2	7
22	Entropy production and non-Markovian dynamical maps. <i>Scientific Reports</i> , 2017, 7, 12447.	1.6	41
23	Remarks on Entanglement and Identical Particles. <i>Open Systems and Information Dynamics</i> , 2017, 24, 1740004.	0.5	18
24	Dissipatively Generated Entanglement. <i>Springer INdAM Series</i> , 2017, , 33-45.	0.4	0
25	Quantum fluctuations in mesoscopic systems. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 423001.	0.7	8
26	Bound on dissipative effects from semileptonic neutral B-meson decays. <i>European Physical Journal C</i> , 2017, 77, 1.	1.4	0
27	Quantum Entropy and Complexity. <i>Open Systems and Information Dynamics</i> , 2017, 24, 1750005.	0.5	0
28	Long-Lived Mesoscopic Entanglement Between Two Damped Infinite Harmonic Chains. <i>Journal of Statistical Physics</i> , 2017, 168, 620-651.	0.5	2
29	Noisy effects in interferometric quantum gravity tests. <i>International Journal of Quantum Information</i> , 2017, 15, 1740014.	0.6	3
30	Entanglement in algebraic quantum mechanics: Majorana fermion systems. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 305303.	0.7	8
31	Dissipative entanglement of quantum spin fluctuations. <i>Journal of Mathematical Physics</i> , 2016, 57, 062208.	0.5	13
32	Correlations in quantum thermodynamics: Heat, work, and entropy production. <i>Scientific Reports</i> , 2016, 6, 35568.	1.6	56
33	Quantum interferences reconstruction with low homodyne detection efficiency. <i>EPJ Quantum Technology</i> , 2016, 3, .	2.9	2
34	Non-markovian mesoscopic dissipative dynamics of open quantum spin chains. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2016, 380, 381-389.	0.9	15
35	Photon number statistics uncover the fluctuations in non-equilibrium lattice dynamics. <i>Nature Communications</i> , 2015, 6, 10249.	5.8	23
36	Dissipative dynamics of quantum fluctuations. <i>Annalen Der Physik</i> , 2015, 527, 639-655.	0.9	8

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37	Semi-Classical Localisation Properties of Quantum Oscillators on a Noncommutative Configuration Space. <i>Open Systems and Information Dynamics</i> , 2015, 22, 1550021.	0.5	1
38	Complete Positivity and Thermodynamics in a Driven Open Quantum System. <i>Journal of Statistical Physics</i> , 2015, 159, 1127-1153.	0.5	6
39	Pulsed homodyne Gaussian quantum tomography with low detection efficiency. <i>New Journal of Physics</i> , 2014, 16, 043004.	1.2	15
40	Properties of subentropy. <i>Journal of Mathematical Physics</i> , 2014, 55, .	0.5	11
41	Violations of the second law of thermodynamics by a non-completely positive dynamics. <i>Europhysics Letters</i> , 2014, 107, 50007.	0.7	26
42	Gacs quantum algorithmic entropy in infinite dimensional Hilbert spaces. <i>Journal of Mathematical Physics</i> , 2014, 55, 082205.	0.5	5
43	Entanglement in fermion systems and quantum metrology. <i>Physical Review A</i> , 2014, 89, .	1.0	60
44	Entanglement of Identical Particles. <i>Open Systems and Information Dynamics</i> , 2014, 21, 1440003.	0.5	44
45	Entanglement and algebraic independence in fermion systems. <i>International Journal of Quantum Information</i> , 2014, 12, 1461002.	0.6	6
46	Dissipative quantum metrology in manybody systems of identical particles. <i>New Journal of Physics</i> , 2014, 16, 015023.	1.2	26
47	Environment induced entanglement in many-body mesoscopic systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2014, 378, 1700-1703.	0.9	7
48	Classical limits of quantum mechanics on a non-commutative configuration space. <i>Journal of Mathematical Physics</i> , 2013, 54, 063508.	0.5	4
49	Sub-shot-noise sensitivities without entanglement. <i>Physical Review A</i> , 2013, 87, .	1.0	25
50	Entanglement Witnesses for a Class of Bipartite States of n Qubits. <i>Open Systems and Information Dynamics</i> , 2013, 20, 1350005.	0.5	1
51	A non-Markovian Dissipative Maryland Model. <i>Open Systems and Information Dynamics</i> , 2013, 20, 1340001.	0.5	0
52	Quantum Dynamical Entropies and Algorithmic Entropy. <i>Entropy</i> , 2012, 14, 1259-1273.	1.1	2
53	Noise effects in perfect transmission of quantum states. <i>Physical Review A</i> , 2012, 86, .	1.0	5
54	Loss of coherence and memory effects in quantum dynamics. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2012, 45, 150201.	0.6	7

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55	Non-divisibility and non-Markovianity in a Gaussian dissipative dynamics. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2951-2954.	0.9	17
56	Entanglement robustness and geometry in systems of identical particles. Physical Review A, 2012, 85, .	1.0	45
57	Bipartite entanglement in systems of identical particles: The partial transposition criterion. Annals of Physics, 2012, 327, 1304-1319.	1.0	54
58	Entanglement and squeezing with identical particles: ultracold atom quantum metrology. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 091001.	0.6	57
59	Three qubits in a symmetric environment: Dissipatively generated asymptotic entanglement. Annals of Physics, 2011, 326, 740-753.	1.0	10
60	Asymptotic entanglement and Lindblad dynamics: a perturbative approach. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 155303.	0.7	11
61	Quantum contextuality in N -boson systems. Physical Review A, 2011, 84, .	1.0	2
62	ENTANGLED IDENTICAL PARTICLES AND NOISE. International Journal of Quantum Information, 2011, 09, 1745-1755.	0.6	22
63	Entangling two unequal atoms through a common bath. Physical Review A, 2010, 81, .	1.0	76
64	Sub-shot-noise quantum metrology with entangled identical particles. Annals of Physics, 2010, 325, 924-935.	1.0	69
65	DISSIPATIVELY INDUCED BIPARTITE ENTANGLEMENT. Lecture Notes Series, Institute for Mathematical Sciences, 2010, , 133-146.	0.2	1
66	Translation invariant states on twisted algebras on a lattice. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 115301.	0.7	1
67	Entanglement and entropy rates in open quantum systems. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 045304.	0.7	9
68	Bipartite Quantum Entanglement. Lecture Notes in Physics, 2010, , 109-149.	0.3	0
69	Asymptotic entanglement in open quantum systems. , 2010, , .		0
70	Quantum Algorithmic Complexities and Entropy. Open Systems and Information Dynamics, 2009, 16, 1-28.	0.5	18
71	Quantum measuring processes for trapped ultracold bosonic gases. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 035306.	0.7	3
72	Environment-induced entanglement in a refined weak-coupling limit. Europhysics Letters, 2009, 88, 20011.	0.7	36

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73	Quantum measures for density correlations in optical lattices. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 3516-3521.	0.9	2
74	Quantum Entropies. Theoretical and Mathematical Physics (United States), 2009, , .	0.0	6
75	Charge oscillations in superconducting nanodevices coupled to external environments. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 1968-1971.	0.9	3
76	Environment induced bipartite entanglement. Journal of Mathematical Physics, 2008, 49, .	0.5	19
77	Cooper pair boxes weakly coupled to external environments. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 235304.	0.7	9
78	POLARIZATION ENTANGLEMENT THROUGH NOISE. International Journal of Quantum Information, 2008, 06, 589-595.	0.6	1
79	Noise Induced Current in a Double-Well Trap. Open Systems and Information Dynamics, 2008, 15, 143-153.	0.5	2
80	Noise-induced interference fringes in trapped ultracold bosonic gases. Physical Review A, 2008, 78, .	1.0	1
81	The GRW model and Bell-like inequalities. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 2959-2970.	0.7	0
82	Redfield reduced dynamics and entanglement. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 1625-1632.	0.7	12
83	Extended reduction criterion and lattice states. Journal of Mathematical Physics, 2007, 48, 052103.	0.5	4
84	NON-POSITIVE SEMIGROUP DYNAMICS IN CONTINUOUS VARIABLE MODELS. International Journal of Quantum Information, 2007, 05, 189-198.	0.6	2
85	Entropy and algorithmic complexity in quantum information theory. Natural Computing, 2007, 6, 133-150.	1.8	7
86	Entangled finitely correlated quantum spin chains. Laser Physics, 2006, 16, 723-729.	0.6	0
87	Slipped nonpositive reduced dynamics and entanglement. Laser Physics, 2006, 16, 1395-1405.	0.6	6
88	Tests of Complete Positivity in Fiber Optics. Open Systems and Information Dynamics, 2006, 13, 229-238.	0.5	4
89	Entropy and Quantum Kolmogorov Complexity: A Quantum Brudno's Theorem. Communications in Mathematical Physics, 2006, 265, 437-461.	1.0	26
90	Entangling oscillators through environment noise. Journal of Physics A, 2006, 39, 2689-2699.	1.6	93

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91	Discrete dynamical systems embedded in Cantor sets. <i>Journal of Mathematical Physics</i> , 2006, 47, 022705.	0.5	1
92	ASYMPTOTIC ENTANGLEMENT OF TWO INDEPENDENT SYSTEMS IN A COMMON BATH. <i>International Journal of Quantum Information</i> , 2006, 04, 395-404.	0.6	18
93	Quantum dynamical entropies and quantum algorithmic complexities. , 2006, , .		0
94	Continuous limit of discrete sawtooth maps and its algebraic framework. <i>Journal of Mathematical Physics</i> , 2005, 46, 062702.	0.5	8
95	Multi-distributed entanglement in finitely correlated chains. <i>Europhysics Letters</i> , 2005, 72, 28-34.	0.7	7
96	Controlling entanglement generation in external quantum fields. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2005, 7, S429-S434.	1.4	54
97	Dissipative neutrino oscillations in randomly fluctuating matter. <i>Physical Review D</i> , 2005, 71, .	1.6	28
98	OPEN QUANTUM DYNAMICS: COMPLETE POSITIVITY AND ENTANGLEMENT. <i>International Journal of Modern Physics B</i> , 2005, 19, 3063-3139.	1.0	128
99	Quantum dynamical entropies in discrete classical chaos. <i>Journal of Physics A</i> , 2004, 37, 105-130.	1.6	12
100	Non-Decomposable Quantum Dynamical Semigroups and Bound Entangled States. <i>Open Systems and Information Dynamics</i> , 2004, 11, 325-338.	0.5	29
101	Quantum dynamical semigroups and non-decomposable positive maps. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2004, 326, 187-198.	0.9	20
102	Entanglement generation in uniformly accelerating atoms: Reexamination of the Unruh effect. <i>Physical Review A</i> , 2004, 70, .	1.0	114
103	Environment Induced Entanglement in Markovian Dissipative Dynamics. <i>Physical Review Letters</i> , 2003, 91, 070402.	2.9	347
104	Nonpositive evolutions in open system dynamics. <i>Physical Review A</i> , 2003, 67, .	1.0	21
105	Neutral kaons in random media. <i>Physical Review D</i> , 2003, 68, .	1.6	4
106	Broken symmetries in the entanglement of formation. <i>Journal of Mathematical Physics</i> , 2003, 44, 2402.	0.5	4
107	CLASSICAL LIMIT OF QUANTUM DYNAMICAL ENTROPIES. <i>Reviews in Mathematical Physics</i> , 2003, 15, 847-875.	0.7	8
108	On Deciding Whether a Boolean Function is Constant or Not. <i>International Journal of Quantum Information</i> , 2003, 01, 237-246.	0.6	0

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109	Complete positivity and entangled degrees of freedom. Journal of Physics A, 2002, 35, 4955-4972.	1.6	25
110	Complete positivity and dissipative factorized dynamics. Journal of Physics A, 2002, 35, L551-L556.	1.6	18
111	Dissipation and decoherence in photon interferometry. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, S238-S244.	1.4	2
112	Planck-scale dissipative effects in atom interferometry. Physical Review A, 2002, 66, .	1.0	6
113	Complete Positivity in Dissipative Quantum Dynamics. Lecture Notes in Physics, 2002, , 283-304.	0.3	1
114	Additivity of the entanglement of formation. Physical Review A, 2001, 63, .	1.0	12
115	Irreversibility and dissipation in neutral B-meson decays. Nuclear Physics B, 2001, 602, 541-571.	0.9	23
116	On the weak-coupling limit and complete positivity. Chaos, Solitons and Fractals, 2001, 12, 2631-2638.	2.5	7
117	Massless neutrino oscillations. Physical Review D, 2001, 64, .	1.6	68
118	Damped harmonic oscillators in the holomorphic representation. Journal of Physics A, 2000, 33, 8139-8153.	1.6	8
119	Effective dissipative dynamics for polarized photons. Physical Review D, 2000, 62, .	1.6	11
120	MULTI-TIME CORRELATIONS IN RELAXING QUANTUM DYNAMICAL SYSTEMS. Reviews in Mathematical Physics, 2000, 12, 921-944.	0.7	4
121	Open system approach to neutrino oscillations. Journal of High Energy Physics, 2000, 2000, 032-032.	1.6	88
122	DISSIPATIVE CONTRIBUTIONS TO $\hat{\mu}\hat{\epsilon}^2/\hat{\mu}$. Modern Physics Letters A, 1999, 14, 1519-1529.	0.5	6
123	Complete positivity and neutron interferometry. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 451, 422-429.	1.5	22
124	Complete positivity and correlated neutral kaons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 468, 287-293.	1.5	39
125	Dissipative effects in semileptonic B- decays. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 465, 260-270.	1.5	9
126	Optimal Decompositions with Respect to Entropy and Symmetries. Letters in Mathematical Physics, 1999, 47, 237-253.	0.5	3

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127	Non-standard Neutral Kaon Dynamics from Infinite Statistics. <i>Annals of Physics</i> , 1999, 273, 58-71.	1.0	32
128	Multi-time correlations in quantized toral automorphisms. <i>Reports on Mathematical Physics</i> , 1999, 44, 413-434.	0.4	2
129	On the decay law for unstable open systems. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1998, 428, 149-156.	1.5	16
130	Completely positive dynamics of correlated neutral kaons. <i>Nuclear Physics B</i> , 1998, 511, 550-576.	0.9	56
131	Statistics and quantum chaos. <i>Journal of Physics A</i> , 1998, 31, 9123-9130.	1.6	4
132	Complete positivity and neutral kaon decay. , 1998, , 124-147.		0
133	Complete positivity and the neutral kaon system. <i>Banach Center Publications</i> , 1998, 43, 71-85.	0.1	11
134	Testing Complete Positivity. <i>Modern Physics Letters A</i> , 1997, 12, 1465-1472.	0.5	24
135	Completely positive dynamical maps and the neutral kaon system. <i>Nuclear Physics B</i> , 1997, 488, 335-363.	0.9	68
136	Strong clustering in type III entropic K-systems. <i>Monatshefte Fur Mathematik</i> , 1997, 124, 287-307.	0.5	2
137	Experimental limits on complete positivity from the system. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1997, 401, 337-346.	1.5	32
138	Optimal decompositions of quantum states with respect to entropy. <i>Reports on Mathematical Physics</i> , 1996, 38, 123-141.	0.4	27
139	Complete positivity and the system. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1996, 389, 100-106.	1.5	22
140	Entropy of a subalgebra and quantum estimation. <i>Journal of Mathematical Physics</i> , 1996, 37, 5244-5258.	0.5	12
141	Describing the macroscopic world: Closing the circle within the dynamical reduction program. <i>Foundations of Physics</i> , 1995, 25, 5-38.	0.6	207
142	Testing macroscopic quantum coherence. <i>Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods</i> , 1995, 110, 593-610.	0.2	5
143	Quantum Mechanics with Spontaneous Localization and Experiments. <i>NATO ASI Series Series B: Physics</i> , 1995, , 263-279.	0.2	2
144	On some recent proposals for testing macrorealism versus quantum mechanics. <i>Foundations of Physics Letters</i> , 1994, 7, 105-126.	0.6	15

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145	Histories, Bell-like inequalities, and QMSL evolution. Foundations of Physics Letters, 1993, 6, 109-118.	0.6	1
146	Deterministic Chaos in Infinite Quantum Systems. , 1993, , .		43
147	Deterministic quantum noise and Kolmogorov systems. Letters in Mathematical Physics, 1992, 24, 31-40.	0.5	0
148	Bell-like inequality and spontaneous reduction processes. Foundations of Physics Letters, 1992, 5, 399-423.	0.6	2
149	Continuity equation in quantum mechanics with spontaneous localization. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1991, 106, 1125-1136.	0.2	4
150	Strong asymptotic abelianness for entropicK-systems. Communications in Mathematical Physics, 1991, 136, 231-250.	1.0	11
151	A non-commutative version of the Arnold cat map. Letters in Mathematical Physics, 1991, 21, 157-172.	0.5	35
152	On the mixing-enhancing structure of a class of quantum dynamical semigroups. Journal of Mathematical Physics, 1990, 31, 2399-2405.	0.5	4
153	The evolution of the harmonic oscillator in Quantum Mechanics with Spontaneous Localization. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1989, 103, 511-536.	0.2	7
154	Entropic dimension for completely positive maps. Journal of Statistical Physics, 1988, 53, 1273-1298.	0.5	4
155	Entropy behaviour under completely positive maps. Letters in Mathematical Physics, 1988, 15, 325-334.	0.5	45
156	Entropy divergence in the Ghirardi-Rimini-Weber model. Physics Letters, Section A: General, Atomic and Solid State Physics, 1988, 132, 13-19.	0.9	2
157	Operations involving momentum variables in non-Hamiltonian evolution equations. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1988, 101, 333-355.	0.2	68
158	Quantum mechanics with spontaneous localization and the quantum theory of measurement. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1987, 100, 27-41.	0.2	68