

Alberto Barchielli

List of Publications by Year in descending order

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77
papers

1,958
citations

394421

19
h-index

254184

43
g-index

81
all docs

81
docs citations

81
times ranked

548
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum optomechanical system in a Mach-Zehnder interferometer. <i>Physical Review A</i> , 2021, 104, .	2.5	1
2	Entropic measurement uncertainty relations for all the infinite components of a spin vector. <i>Journal of Physics Communications</i> , 2020, 4, 055003.	1.2	0
3	Measurement Uncertainty Relations for Discrete Observables: Relative Entropy Formulation. <i>Communications in Mathematical Physics</i> , 2018, 357, 1253-1304.	2.2	20
4	Measurement Uncertainty Relations for Position and Momentum: Relative Entropy Formulation. <i>Entropy</i> , 2017, 19, 301.	2.2	11
5	Quantum Stochastic Equations for an Opto-Mechanical Oscillator with Radiation Pressure Interaction and Non-Markovian Effects. <i>Reports on Mathematical Physics</i> , 2016, 77, 315-333.	0.8	4
6	Quantum Langevin equations for optomechanical systems. <i>New Journal of Physics</i> , 2015, 17, 083004.	2.9	23
7	Stochastic Schrödinger Equations for Markovian and non-Markovian Cases. <i>Open Systems and Information Dynamics</i> , 2014, 21, 1440008.	1.2	10
8	ENTANGLEMENT PROTECTION AND GENERATION UNDER CONTINUOUS MONITORING. <i>QP-PQ, Quantum Probability and White Noise Analysis</i> , 2013, , 17-42.	0.1	1
9	Quantum continuous measurements: The stochastic Schrödinger equations and the spectrum of the output. <i>Quantum Measurements and Quantum Metrology</i> , 2013, 1, 34-56.	3.3	16
10	Quantum trajectories: Memory and continuous observation. <i>Physical Review A</i> , 2012, 86, .	2.5	17
11	Quantum measurements in continuous time, non-Markovian evolutions and feedback. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2012, 370, 5364-5385.	3.4	19
12	Quantum stochastic differential equations and continuous measurements: unbounded coefficients. <i>Reports on Mathematical Physics</i> , 2011, 67, 229-254.	0.8	5
13	Jump-diffusion unravelling of a non-Markovian generalized Lindblad master equation. <i>Journal of Mathematical Physics</i> , 2010, 51, 112104.	1.1	12
14	Stochastic Schrödinger equations with coloured noise. <i>Europhysics Letters</i> , 2010, 91, 24001.	2.0	25
15	Feedback control of the fluorescence light squeezing. <i>Europhysics Letters</i> , 2009, 85, 14006.	2.0	10
16	Continuous Measurements and Instruments. <i>Lecture Notes in Physics</i> , 2009, , 77-110.	0.7	0
17	Quantum Trajectories and Measurements in Continuous Time. <i>Lecture Notes in Physics</i> , 2009, , .	0.7	162
18	A Two-Level Atom: Heterodyne and Homodyne Spectra. <i>Lecture Notes in Physics</i> , 2009, , 183-220.	0.7	0

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19	The Stochastic Schrödinger Equation. Lecture Notes in Physics, 2009, , 11-49.	0.7	1
20	The Stochastic Master Equation: Part II. Lecture Notes in Physics, 2009, , 111-123.	0.7	0
21	Quantum Optical Systems. Lecture Notes in Physics, 2009, , 145-150.	0.7	0
22	A Two-Level Atom: General Setup. Lecture Notes in Physics, 2009, , 151-182.	0.7	0
23	The Stochastic Master Equation: Part I. Lecture Notes in Physics, 2009, , 51-75.	0.7	0
24	QUANTUM TRAJECTORIES, FEEDBACK AND SQUEEZING. International Journal of Quantum Information, 2008, 06, 581-587.	1.1	7
25	INFORMATION GAIN IN QUANTUM CONTINUAL MEASUREMENTS. , 2008, , .		1
26	QUANTUM CONTINUOUS MEASUREMENTS: THE SPECTRUM OF THE OUTPUT. , 2008, , .		3
27	ENTROPIC BOUNDS AND CONTINUAL MEASUREMENTS. , 2007, , .		2
28	Continual Measurements in Quantum Mechanics and Quantum Stochastic Calculus. , 2006, , 207-292.		26
29	Instruments and Channels in Quantum Information Theory. Optics and Spectroscopy (English) Tj ETQq1 1 0.784314 rgBT / Overlock 10 0.6 14	0.8	14
30	On the Asymptotic Behaviour of Some Stochastic Differential Equations for Quantum States. Infinite Dimensional Analysis, Quantum Probability and Related Topics, 2003, 06, 223-243.	0.5	15
31	A quantum stochastic approach to the spectrum of a two-level atom. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, 272-282.	1.4	9
32	Entropy and Information Gain in Quantum Continual Measurements. , 2002, , 49-57.		6
33	Stochastic Differential Equations for Trace-Class Operators and Quantum Continual Measurements. , 2002, , 53-68.		2
34	Quantum stochastic models of two-level atoms and electromagnetic cross sections. Journal of Mathematical Physics, 2000, 41, 7181-7205.	1.1	13
35	On stochastic differential equations and semigroups of probability operators in quantum probability. Stochastic Processes and Their Applications, 1998, 73, 69-86.	0.9	26
36	Photoemissive sources and quantum stochastic calculus. Banach Center Publications, 1998, 43, 53-62.	0.1	1

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37	On the Quantum Theory of Direct Detection. , 1997, , 243-252.		2
38	A note on a formula of the Lévy-Khinchin type in quantum probability. Nagoya Mathematical Journal, 1996, 141, 29-43.	0.8	10
39	On a class of stochastic differential equations used in quantum optics. Milan Journal of Mathematics, 1996, 66, 355-376.	0.1	8
40	Detection theory in quantum optics: stochastic representation. Quantum and Semiclassical Optics: Journal of the European Optical Society Part B, 1996, 8, 133-156.	0.9	22
41	Constructing quantum measurement processes via classical stochastic calculus. Stochastic Processes and Their Applications, 1995, 58, 293-317.	0.9	68
42	Stochastic differential equations and a posteriori states in quantum mechanics. International Journal of Theoretical Physics, 1993, 32, 2221-2233.	1.2	41
43	An analogue of Hunt's representation theorem in quantum probability. Journal of Theoretical Probability, 1993, 6, 231-265.	0.8	12
44	On the quantum theory of measurements continuous in time. Reports on Mathematical Physics, 1993, 33, 21-34.	0.8	12
45	A note on processes on bialgebras, quantum flows, and convolution semigroups of instruments. QP-PQ, Quantum Probability and White Noise Analysis, 1993, , 71-79.	0.1	0
46	Semigroups of Positive Definite Maps on *-Bialgebras. QP-PQ, Quantum Probability and White Noise Analysis, 1992, , 15-29.	0.1	0
47	Measurements continuous in time and a posteriori states in quantum mechanics. Journal of Physics A, 1991, 24, 1495-1514.	1.6	237
48	A quantum analogue of Hunt's representation theorem for the generator of convolution semigroups on Lie groups. Probability Theory and Related Fields, 1991, 88, 167-194.	1.8	8
49	Detection theory in quantum optics and quantum stochastic calculus. , 1991, , 179-189.		2
50	Applications of quantum stochastic calculus to quantum optics. QP-PQ, Quantum Probability and White Noise Analysis, 1991, , 111-125.	0.1	3
51	Relativistic corrections to the quark-antiquark potential and the quarkonium spectrum. Il Nuovo Cimento A, 1990, 103, 59-83.	0.2	95
52	Some Markov semigroups in quantum probability. Lecture Notes in Mathematics, 1990, , 86-98.	0.2	2
53	Direct and heterodyne detection and other applications of quantum stochastic calculus to quantum optics. Journal of the European Optical Society Part B: Quantum Optics, 1990, 2, 423-441.	1.2	76
54	Probability operators and convolution semigroups of instruments in quantum probability. Probability Theory and Related Fields, 1989, 82, 1-8.	1.8	10

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55	Convolution semigroups in quantum probability and quantum stochastic calculus. Lecture Notes in Mathematics, 1989, , 107-127.	0.2	7
56	On a systematic derivation of the quark-antiquark potential. Nuclear Physics B, 1988, 296, 625-656.	2.5	92
57	Input and output channels in quantum systems and quantum stochastic differential equations. Lecture Notes in Mathematics, 1988, , 37-51.	0.2	9
58	Quantum stochastic differential equations: an application to the electron shelving effect. Journal of Physics A, 1987, 20, 6341-6355.	1.6	41
59	Markovian limit for a reduced operation-valued stochastic process. Journal of Mathematical Physics, 1987, 28, 818-826.	1.1	0
60	Measurement theory and stochastic differential equations in quantum mechanics. Physical Review A, 1986, 34, 1642-1649.	2.5	131
61	Comment on "Quantum mechanics of measurements distributed in time. A path-integral formulation". Physical Review D, 1986, 34, 2527-2530.	4.7	6
62	Stochastic processes and continual measurements in quantum mechanics. Lecture Notes in Physics, 1986, , 14-23.	0.7	9
63	On the Quantum Theory of Continuous Measurements. NATO ASI Series Series B: Physics, 1986, , 65-73.	0.2	3
64	Dilations of operation valued stochastic processes. Lecture Notes in Mathematics, 1985, , 57-66.	0.2	13
65	Quantum stochastic calculus, operation valued stochastic processes, and continual measurements in quantum mechanics. Journal of Mathematical Physics, 1985, 26, 2222-2230.	1.1	82
66	Continuous observations in quantum mechanics: An application to gravitational-wave detectors. Physical Review D, 1985, 32, 347-367.	4.7	22
67	Continual Observations in Quantum Mechanics. NATO ASI Series Series B: Physics, 1985, , 321-344.	0.2	3
68	Continual measurements for quantum open systems. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1983, 74, 113-138.	0.2	106
69	Statistics of continuous trajectories in quantum mechanics: Operation-valued stochastic processes. Foundations of Physics, 1983, 13, 779-812.	1.3	92
70	A model for the macroscopic description and continual observations in quantum mechanics. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1982, 72, 79-121.	0.2	232
71	Jahn-Teller effect in crystals: Optical response function and vibronic states. Physica A: Statistical Mechanics and Its Applications, 1982, 110, 451-470.	2.6	1
72	Open-system approach to Jahn-Teller systems. Physical Review B, 1981, 24, 3166-3185.	3.2	6

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73	HOMOGENEOUS BROADENING OF ZERO-PHONON LINES FOR A MULTILEVEL SYSTEM IN A CRYSTAL : THE ROLE OF THE ELECTRON-PHONON INTERACTIONS. Journal De Physique Colloque, 1981, 42, C6-475-C6-477.	0.2	0
74	A new treatment of macroscopic observables in quantum mechanics. Physica A: Statistical Mechanics and Its Applications, 1979, 99, 77-102.	2.6	0
75	Quantum-dynamical semi-groups and nucleon-nucleus scattering. Il Nuovo Cimento A, 1978, 47, 187-199.	0.2	4
76	Quantum mechanics with only positive-time evolution for an isolated system. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1978, 44, 241-264.	0.2	6
77	Instruments and mutual entropies in quantum information. , 0, , .		19