# Alberto Barchielli

List of Publications by Year
in descending order



| 77 | 1,958 | 394421 19 | 254184 43 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 81 | 81 | 81 | 548 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Measurements continuous in time and a posteriori states in quantum mechanics. Journal of Physics A, 1991, 24, 1495-1514. | 1.6 | 237 |
| 2 | 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 |
| 3 | Quantum Trajectories and Measurements in Continuous Time. Lecture Notes in Physics, 2009, , . | 0.7 | 162 |
| 4 | Measurement theory and stochastic differential equations in quantum mechanics. Physical Review A, 1986, 34, 1642-1649. | 2.5 | 131 |
| 5 | 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 |
| 6 | Relativistic corrections to the quark-antiquark potential and the quarkonium spectrum. Il Nuovo Cimento A, 1990, 103, 59-83. | 0.2 | 95 |
| 7 | Statistics of continuous trajectories in quantum mechanics: Operation-valued stochastic processes. Foundations of Physics, 1983, 13, 779-812. | 1.3 | 92 |
| 8 | On a systematic derivation of the quark-antiquark potential. Nuclear Physics B, 1988, 296, 625-656. | 2.5 | 92 |
| 9 | Quantum stochastic calculus, operation valued stochastic processes, and continual measurements in quantum mechanics. Journal of Mathematical Physics, 1985, 26, 2222-2230. | 1.1 | 82 |
| 10 | 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 |
| 11 | Constructing quantum measurement processes via classical stochastic calculus. Stochastic Processes and Their Applications, 1995, 58, 293-317. | 0.9 | 68 |
| 12 | Quantum stochastic differential equations: an application to the electron shelving effect. Journal of Physics A, 1987, 20, 6341-6355. | 1.6 | 41 |
| 13 | Stochastic differential equations anda posteriori states in quantum mechanics. International Journal of Theoretical Physics, 1993, 32, 2221-2233. | 1.2 | 41 |
| 14 | On stochastic differential equations and semigroups of probability operators in quantum probability. Stochastic Processes and Their Applications, 1998, 73, 69-86. | 0.9 | 26 |
| 15 | Continual Measurements in Quantum Mechanics and Quantum Stochastic Calculus. , 2006, , 207-292. | | 26 |
| 16 | Stochastic SchrÃ¶dinger equations with coloured noise. Europhysics Letters, 2010, 91, 24001. | 2.0 | 25 |
| 17 | Quantum Langevin equations for optomechanical systems. New Journal of Physics, 2015, 17, 083004. | 2.9 | 23 |
| 18 | Continuous observations in quantum mechanics: An application to gravitational-wave detectors. Physical Review D, 1985, 32, 347-367. | 4.7 | 22 |

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| 19 | 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 |
| 20 | Measurement Uncertainty Relations for Discrete Observables: Relative Entropy Formulation. Communications in Mathematical Physics, 2018, 357, 1253-1304. | 2.2 | 20 |
| 21 | Quantum measurements in continuous time, non-Markovian evolutions and feedback. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 5364-5385. | 3.4 | 19 |
| 22 | Instruments and mutual entropies in quantum information. , 0, , . | | 19 |
| 23 | Quantum trajectories: Memory and continuous observation. Physical Review A, 2012, 86, . | 2.5 | 17 |
| 24 | Quantum continuous measurements: The stochastic SchrÃ¶dinger equations and the spectrum of the output. Quantum Measurements and Quantum Metrology, 2013, 1, 34-56. | 3.3 | 16 |
| 25 | 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 |
| 26 | Instruments and Channels in Quantum Information Theory. Optics and Spectroscopy (English) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 | 0.6 | 14 |
| 27 | Dilations of operation valued stochastic processes. Lecture Notes in Mathematics, 1985, , 57-66. | 0.2 | 13 |
| 28 | Quantum stochastic models of two-level atoms and electromagnetic cross sections. Journal of Mathematical Physics, 2000, 41, 7181-7205. | 1.1 | 13 |
| 29 | An analogue of Hunt's representation theorem in quantum probability. Journal of Theoretical Probability, 1993, 6, 231-265. | 0.8 | 12 |
| 30 | On the quantum theory of measurements continuous in time. Reports on Mathematical Physics, 1993, 33, 21-34. | 0.8 | 12 |
| 31 | Jump-diffusion unravelling of a non-Markovian generalized Lindblad master equation. Journal of Mathematical Physics, 2010, 51, 112104. | 1.1 | 12 |
| 32 | Measurement Uncertainty Relations for Position and Momentum: Relative Entropy Formulation. Entropy, 2017, 19, 301. | 2.2 | 11 |
| 33 | Probability operators and convolution semigroups of instruments in quantum probability. Probability Theory and Related Fields, 1989, 82, 1-8. | 1.8 | 10 |
| 34 | A note on a formula of the LÃ©vy-Khinchin type in quantum probability. Nagoya Mathematical Journal, 1996, 141, 29-43. | 0.8 | 10 |
| 35 | Feedback control of the fluorescence light squeezing. Europhysics Letters, 2009, 85, 14006. | 2.0 | 10 |
| 36 | Stochastic SchrÃ¶dinger Equations for Markovian and non-Markovian Cases. Open Systems and Information Dynamics, 2014, 21, 1440008. | 1.2 | 10 |

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|---|---|---|---|
| 37 | Stochastic processes and continual measurements in quantum mechanics. Lecture Notes in Physics, 1986, , 14-23. | 0.7 | 9 |
| 38 | Input and output channels in quantum systems and quantum stochastic differential equations. Lecture Notes in Mathematics, 1988, , 37-51. | 0.2 | 9 |
| 39 | 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 |
| 40 | 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 |
| 41 | On a class of stochastic differential equations used in quantum optics. Milan Journal of Mathematics, 1996, 66, 355-376. | 0.1 | 8 |
| 42 | Convolution semigroups in quantum probability and quantum stochastic calculus. Lecture Notes in Mathematics, 1989, , 107-127. | 0.2 | 7 |
| 43 | QUANTUM TRAJECTORIES, FEEDBACK AND SQUEEZING. International Journal of Quantum Information, 2008, 06, 581-587. | 1.1 | 7 |
| 44 | 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 |
| 45 | Open-system approach to Jahn-Teller systems. Physical Review B, 1981, 24, 3166-3185. | 3.2 | 6 |
| 46 | Comment on "Quantum mechanics of measurements distributed in time. A path-integral formulation". Physical Review D, 1986, 34, 2527-2530. | 4.7 | 6 |
| 47 | Entropy and Information Gain in Quantum Continual Measurements. , 2002, , 49-57. | | 6 |
| 48 | Quantum stochastic differential equations and continuous measurements: unbounded coefficients. Reports on Mathematical Physics, 2011, 67, 229-254. | 0.8 | 5 |
| 49 | Quantum-dynamical semi-groups and nucleon-nucleus scattering. Il Nuovo Cimento A, 1978, 47, 187-199. | 0.2 | 4 |
| 50 | Quantum Stochastic Equations for an Opto-Mechanical Oscillator with Radiation Pressure Interaction and Non-Markovian Effects. Reports on Mathematical Physics, 2016, 77, 315-333. | 0.8 | 4 |
| 51 | Continual Observations in Quantum Mechanics. NATO ASI Series Series B: Physics, 1985, , 321-344. | 0.2 | 3 |
| 52 | On the Quantum Theory of Continuous Measurements. NATO ASI Series Series B: Physics, 1986, , 65-73. | 0.2 | 3 |
| 53 | QUANTUM CONTINUOUS MEASUREMENTS: THE SPECTRUM OF THE OUTPUT. , 2008, , . | | 3 |
| 54 | Applications of quantum stochastic calculus to quantum optics. QP-PQ, Quantum Probability and White Noise Analysis, 1991, , 111-125. | 0.1 | 3 |

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| 55 | Some Markov semigroups in quantum probability. Lecture Notes in Mathematics, 1990, , 86-98. | 0.2 | 2 |
| 56 | Detection theory in quantum optics and quantum stochastic calculus. , 1991, , 179-189. | | 2 |
| 57 | Stochastic Differential Equations for Trace-Class Operators and Quantum Continual Measurements. , 2002, , 53-68. | | 2 |
| 58 | ENTROPIC BOUNDS AND CONTINUAL MEASUREMENTS. , 2007, , . | | 2 |
| 59 | On the Quantum Theory of Direct Detection. , 1997, , 243-252. | | 2 |
| 60 | 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 |
| 61 | INFORMATION GAIN IN QUANTUM CONTINUAL MEASUREMENTS. , 2008, , . | | 1 |
| 62 | ENTANGLEMENT PROTECTION AND GENERATION UNDER CONTINUOUS MONITORING. QP-PQ, Quantum Probability and White Noise Analysis, 2013, , 17-42. | 0.1 | 1 |
| 63 | Quantum optomechanical system in a Mach-Zehnder interferometer. Physical Review A, 2021, 104, . | 2.5 | 1 |
| 64 | The Stochastic SchrÃ¶dinger Equation. Lecture Notes in Physics, 2009, , 11-49. | 0.7 | 1 |
| 65 | Photoemissive sources and quantum stochastic calculus. Banach Center Publications, 1998, 43, 53-62. | 0.1 | 1 |
| 66 | A new treatment of macroscopic observables in quantum mechanics. Physica A: Statistical Mechanics and Its Applications, 1979, 99, 77-102. | 2.6 | 0 |
| 67 | Markovian limit for a reduced operationâ€valued stochastic process. Journal of Mathematical Physics, 1987, 28, 818-826. | 1.1 | 0 |
| 68 | Continuous Measurements and Instruments. Lecture Notes in Physics, 2009, , 77-110. | 0.7 | 0 |
| 69 | Entropic measurement uncertainty relations for all the infinite components of a spin vector. Journal of Physics Communications, 2020, 4, 055003. | 1.2 | 0 |
| 70 | A Two-Level Atom: Heterodyne and Homodyne Spectra. Lecture Notes in Physics, 2009, , 183-220. | 0.7 | 0 |
| 71 | The Stochastic Master Equation: Part II. Lecture Notes in Physics, 2009, , 111-123. | 0.7 | 0 |
| 72 | Quantum Optical Systems. Lecture Notes in Physics, 2009, , 145-150. | 0.7 | 0 |

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| 73 | A Two-Level Atom: General Setup. Lecture Notes in Physics, 2009, , 151-182. | 0.7 | 0 |
| 74 | The Stochastic Master Equation: Part I. Lecture Notes in Physics, 2009, , 51-75. | 0.7 | 0 |
| 75 | Semigroups of Positiveâ€“Definite Maps on *-Bialgebras. QP-PQ, Quantum Probability and White Noise Analysis, 1992, , 15-29. | 0.1 | 0 |
| 76 | 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 |
| 77 | 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 |