Mikio Nakahara

List of Publications by Year
in descending order

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94 papers	2,083 citations	394421 19 h-index	377865 34 g-index
97 all docs	97 docs citations	97 times ranked	1333 citing authors

#	Article	IF	Citations
1	Concatenated Composite Pulses Applied to Liquid-State Nuclear Magnetic Resonance Spectroscopy. Scientific Reports, 2020, 10, 2126.	3.3	6
2	Controllable non-Markovianity in phase relaxation. New Journal of Physics, 2020, 22, 103048.	2.9	1
3	Theoretical Study on Spin-Selective Coherent Electron Transfer in a Quantum Dot Array. Universe, 2020, 6, 2.	2.5	2
4	On the explicit constructions of certain unitaryt-designs. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 495301.	2.1	5
5	Acoustic black holes in curved spacetime and the emergence of analogue Minkowski spacetime. Physical Review D, 2019, 99, .	4.7	23
6	Effects of a magnetic field on vortex states in superfluid <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mmultiscripts><mml:mi mathvariant="normal">He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts><mml:mtext>â˜</mml:mtext><mml:mi>B</mml:mi></mml:mrow></mml:math>. Physical Review B, 2019, 99, .	3.2	5
7	Spin-selective electron transfer in a quantum dot array. Physical Review B, 2018, 97, .	3.2	8
8	Fast-forward scaling theory for phase imprinting on a BEC: creation of a wave packet with uniform momentum density and loading to Bloch states without disturbance. New Journal of Physics, 2018, 20, 025008.	2.9	6
9	Three-dimensional skyrmions in spin-2 Boseâ€“Einstein condensates. New Journal of Physics, 2018, 20, 055011.	2.9	17
10	Counterdiabatic vortex pump in spinor Bose-Einstein condensates. Physical Review A, 2017, 95, .	2.5	10
11	Quantum knots in Bose-Einstein condensates created by counterdiabatic control. Physical Review A, 2017, 96, .	2.5	5
12	Fast control of topological vortex formation in Bose-Einstein condensates by counterdiabatic driving. Physical Review A, 2016, 93, .	2.5	13
13	Maximal noiseless code rates for collective rotation channels on qudits. Quantum Information Processing, 2015, 14, 4039-4055.	2.2	1
14	Construction of arbitrary robust one-qubit operations using planar geometry. Physical Review A, 2014, 90, .	2.5	2
15	Recursive encoding and decoding of the noiseless subsystem for qudits. Physical Review A, 2014, 89, .	2.5	2
16	Multiple half-quantum vortices in rotating superfluid<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow /><mml:mn>3</mml:mn></mml:msup></mml:math>He. Physical Review B, 2014, 89, .	3.2	3
17	Efficient entanglement operator for a multi-qubit system. Physica Scripta, 2014, 89, 085102.	2.5	2
18	A quantum genetic algorithm with quantum crossover and mutation operations. Quantum Information Processing, 2014, 13, 737-755.	2.2	34

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19	Non-Adiabatic Universal Holonomic Quantum Gates Based on Abelian Holonomies. Journal of the Physical Society of Japan, 2014, 83, 034001.	1.6	11
20	Two-Qubit Gate Operation on Selected Nearest-Neighbor Neutral Atom Qubits. Journal of the Physical Society of Japan, 2014, 83, 044005.	1.6	4
21	COMPOSITE QUANTUM GATES FOR PRECISE QUANTUM CONTROL. , 2014, , .		0
22	MY LIFE AS A QUANTUM PHYSICIST. , 2014, , .		0
23	A SIMPLE OPERATOR QUANTUM ERROR CORRECTION SCHEME AVOIDING FULLY CORRELATED ERRORS. , 2014, , .		0
24	RECURSIVE CONSTRUCTION OF NOISELESS SUBSYSTEM FOR QUDITS. , 2014, , .		0
25	Publisherâ€™s Note: Minimal and robust composite two-qubit gates with Ising-type interaction [Phys. Rev. A87, 022323 (2013)]. Physical Review A, 2013, 87, .	2.5	0
26	Minimal and robust composite two-qubit gates with Ising-type interaction. Physical Review A, 2013, 87, .	2.5	11
27	Implementation of a simple operator-quantum-error-correction scheme. Physical Review A, 2013, 88, .	2.5	6
28	Concatenated Composite Pulses Compensating Simultaneous Systematic Errors. Journal of the Physical Society of Japan, 2013, 82, 014004.	1.6	44
29	Estimation of coupling constants of a three-spin chain: a case study of Hamiltonian tomography with nuclear magnetic resonance. New Journal of Physics, 2012, 14, 013043.	2.9	13
30	IMPLEMENTATION OF A SELECTIVE TWO-QUBIT GATE OPERATION IN A NEUTRAL ATOM QUANTUM COMPUTER. , 2012, , .		0
31	Half-Quantum Vortices in Thin Film of Superfluid3He. Journal of the Physical Society of Japan, 2012, 81, 104603.	1.6	6
32	COMPUTING WITH QUANTA. , 2012, , .		1
33	Dynamical invariants for quantum control of four-level systems. Physical Review A, 2012, 86, .	2.5	37
34	Geometric aspects of composite pulses. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 4671-4689.	3.4	28
35	Non-adiabatic Fast Control of Mixed States Based on Lewisâ€“Riesenfeld Invariant. Journal of the Physical Society of Japan, 2012, 81, 024007.	1.6	19
36	Recovery in quantum error correction for general noise without measurement. Quantum Information and Computation, 2012, 12, 149-158.	0.3	7

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37	IDENTIFICATION OF THE HAMILTONIAN OF A 3-PARTICLE ISING MODEL WITH LOCAL TRANSVERSE FIELDS. , 2012, , .		0
38	ENTANGLEMENT OPERATOR FOR A MULTI-QUBIT SYSTEM. , 2012, , .		0
39	Scalable Neutral Atom Quantum Computer with Interaction on Demand: Proposal for Selective Application of Two-Qubit Gate. Journal of the Physical Society of Japan, 2011, 80, 114003.	1.6	6
40	Designing robust unitary gates: Application to concatenated composite pulses. Physical Review A, 2011, 84, .	2.5	22
41	Hamiltonian Determination with Restricted Access in Transverse Field Ising Chain. Journal of the Physical Society of Japan, 2011, 80, 044002.	1.6	1
42	Tractable measure of nonclassical correlation using density matrix truncations. Quantum Information Processing, 2011, 10, 431-447.	2.2	2
43	Efficient quantum error correction for fully correlated noise. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 3255-3258.	2.1	16
44	Recursive encoding and decoding of the noiseless subsystem and decoherence-free subspace. Physical Review A, 2011, 84, .	2.5	10
45	QUANTUM ORACLES IN TERMS OF UNIVERSAL GATE SET. International Journal of Quantum Information, 2011, 09, 1363-1381.	1.1	3
46	Quantum Computing with p-Wave Superfluid Vortices. Journal of the Physical Society of Japan, 2010, 79, 104602.	1.6	5
47	Economical(k,m)-threshold controlled quantum teleportation. Physical Review A, 2009, 79, .	2.5	26
48	Variants of Controlled Quantum Teleportation: Use of W-like States. , 2009, , .		0
49	Molecular electron-spin quantum computers and quantum information processing: pulse-based electron magnetic resonance spin technology applied to matter spin-qubits. Journal of Materials Chemistry, 2009, 19, 3739.	6.7	133
50	Geometric quantum gates in liquid-state NMR based on a cancellation of dynamical phases. Physical Review A, 2009, 80, .	2.5	20
51	YET ANOTHER FRAMEWORK FOR QUANTUM SIMULTANEOUS NONCOOPERATIVE BIMATRIX GAMES. , 2009, , .		1
52	HOLONOMIC QUANTUM GATES USING ISOSPECTRAL DEFORMATION OF ISING MODEL. , 2009, , .		0
53	QUANTUM WIPE EFFECT. , 2009, , .		0
54	COHERENCE CONSERVATION OF A QUBIT COUPLED TO A DISSIPATING THERMAL ENVIRONMENT. International Journal of Quantum Information, 2008, 06, 779-785.	1.1	0

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55	EVALUATING MEASURES OF NONCLASSICAL CORRELATION IN A MULTIPARTITE QUANTUM SYSTEM. International Journal of Quantum Information, 2008, 06, 787-793.	1.1	6
56	Nonclassical correlation in a multipartite quantum system: Two measures and evaluation. Physical Review A, 2008, 77, .	2.5	22
57	Implementation of holonomic quantum gates by an isospectral deformation of an Ising dimer chain. Physical Review A, 2008, 78, .	2.5	5
58	QUANTUM COMPUTING: AN OVERVIEW. , 2008, , .		0
59	NUMERICAL COMPUTATION OF TIME-DEPENDENT MULTIPARTITE NONCLASSICAL CORRELATION. , 2008, , .		0
60	BANG-BANG CONTROL OF ENTANGLEMENT IN SPIN-BUS-BOSON MODEL. , 2008, , .		0
61	Bang-Bang Control of Entanglement in Spin-Busâ€“Boson Model. Journal of the Physical Society of Japan, 2007, 76, 114007.	1.6	1
62	Generation and Suppression of Decoherence in Artificial Environment for Qubit System. Journal of the Physical Society of Japan, 2007, 76, 074002.	1.6	11
63	Single-experiment-detectable multipartite entanglement witness for ensemble quantum computing. Physical Review A, 2007, 75, .	2.5	7
64	Implementation of molecular spin quantum computing by pulsed ENDOR technique: Direct observation of quantum entanglement and spinor. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 40, 363-366.	2.7	15
65	Reducing execution time of quantum algorithms by additional permutation gates. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 350, 27-30.	2.1	2
66	Liquid-State NMR Quantum Computer: Hamiltonian Formalism and Experiments. , 2006, , .		3
67	DiVincenzo Criteria and Beyond. , 2006, , .		0
68	TOPOLOGICAL VORTEX FORMATION IN A BOSE-EINSTEIN CONDENSATE OF ALKALI-METAL ATOMS. , 2006, , .		0
69	Topological Phase Imprinting in BEC in Presence of Gravitational Field. Journal of Low Temperature Physics, 2005, 138, 699-704.	1.4	2
70	Exact solutions of the isoholonomic problem and the optimal control problem in holonomic quantum computation. Journal of Mathematical Physics, 2005, 46, 022101.	1.1	20
71	Topological vortex formation in a Bose-Einstein condensate under gravitational field. Physical Review A, 2004, 70, .	2.5	9
72	Demonstrating quantum algorithm acceleration with NMR quantum computer. Physical Review A, 2004, 70, .	2.5	7

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73	ACCELERATION OF QUANTUM ALGORITHMS USING THREE-QUBIT GATES. International Journal of Quantum Information, 2004, 02, 1-10.	1.1	10
74	Exact solutions of holonomic quantum computation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 325, 199-205.	2.1	12
75	Implementing Shorâ€™s algorithm on Josephson charge qubits. Physical Review A, 2004, 70, .	2.5	15
76	Realization of arbitrary gates in holonomic quantum computation. Physical Review A, 2003, 67, .	2.5	22
77	Method to create a vortex in a Bose-Einstein condensate. Physical Review A, 2002, 66, .	2.5	42
78	Continuous creation of a vortex in a BoseÂEinstein condensate with hyperfine spinFÂ 2. Journal of Physics Condensed Matter, 2002, 14, 13481-13491.	1.8	27
79	Optimal holonomic quantum gates. Quantum Information and Computation, 2002, 2, 560-577.	0.3	6
80	A simple method to create a vortex in Boseâ€“Einstein condensate of alkali atoms. Physica B: Condensed Matter, 2000, 284-288, 17-18.	2.7	58
81	Creation of a persistent current and vortex in a Bose-Einstein condensate of alkali-metal atoms. Physical Review A, 2000, 61, .	2.5	159
82	Left-Right Symmetric Model from Geometric Formulation of Gauge Theory in M4 xZ2 xZ2. Progress of Theoretical Physics, 1999, 101, 1105-1118.	2.0	5
83	Grand Unification from Gauge Theory in M4 xZN. Progress of Theoretical Physics, 1998, 100, 165-177.	2.0	4
84	Stability of a polaron in polyacetylene. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 236, 97-102.	2.1	1
85	Fredholm determinant and the Sturm-Liouville problems in quantum mechanics. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 186, 51-58.	2.1	0
86	Consistent picture of supersymmetry breaking at finite temperature: Self-consistent loop-expansion method. Physical Review D, 1986, 33, 2851-2862.	4.7	5
87	The nature of the zero-energy singularity in supersymmetry breakdown at finite temperature. Physica D: Nonlinear Phenomena, 1985, 15, 163-170.	2.8	6
88	Tunneling in heavy fermion systems. Journal of Magnetism and Magnetic Materials, 1985, 52, 161-164.	2.3	10
89	Supersymmetry at finite temperature. Physical Review D, 1984, 29, 2838-2850.	4.7	34
90	Spin waves in superfluidHe3â˜Bin a rotating cylinder. Physical Review B, 1983, 27, 4181-4185.	3.2	16

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91	Pulsed nuclear magnetic resonance and soliton lattice inHe3âˆ'A. Physical Review B, 1983, 27, 4456-4458.	3.2	2
92	Quantum corrections to solitons in polyacetylene. Physical Review B, 1982, 25, 7789-7797.	3.2	101
93	Soliton lattices in polyacetylene. Physical Review B, 1981, 24, 1045-1048.	3.2	44
94	Solitons in polyacetylene: Optical absorption in lightly doped polyacetylene. Physical Review B, 1981, 23, 5005-5010.	3.2	33