Jiannis K Pachos

List of Publications by Year
in descending order

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Version: 2024-02-01

73	2,585	218381	205818
papers	citations	26 h-index	48 g-index

74	74	74	1809
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Topological Contextuality and Anyonic Statistics of Photonic-Encoded Parafermions. PRX Quantum, 2021, 2, .	3.5	8
2	Edge density of bulk states due to relativity. Physical Review B, 2021, 104, .	1.1	0
3	Emergence of gaussianity in the thermodynamic limit of interacting fermions. Physical Review B, 2021, 104, .	1.1	3
4	Equivalence between vortices, twists, and chiral gauge fields in the Kitaev honeycomb lattice model. Physical Review B, 2020, 102, .	1.1	2
5	Seeing topological edge and bulk currents in time-of-flight images. Physical Review B, 2020, 102, .	1.1	1
6	Topological bulk states and their currents. Physical Review B, 2020, 102, .	1.1	3
7	Geometric description of the Kitaev honeycomb lattice model. Physical Review B, 2020, 101, .	1.1	8
8	Effective field theories for interacting boundaries of 3D topological crystalline insulators through bosonisation. Scientific Reports, 2020, 10, 21998.	1.6	1
9	Efficiency of free auxiliary models in describing interacting fermions: From the Kohn-Sham model to the optimal entanglement model. Physical Review B, 2019, 100, .	1.1	1
10	Thermally induced metallic phase in a gapped quantum spin liquid: Monte Carlo study of the Kitaev model with parity projection. Physical Review B, 2019, 99, .	1.1	12
11	Interaction distance in the extended XXZ model. Physical Review B, 2019, 100, .	1.1	5
12	Specific heat of 2D interacting Majorana fermions from holography. Scientific Reports, 2019, 9, 17308.	1.6	5
13	Free-fermion descriptions of parafermion chains and string-net models. Physical Review B, 2018, 97, .	1.1	17
14	Photonic implementation of Majorana-based Berry phases. Science Advances, 2018, 4, eaat6533.	4.7	17
15	Conformal energy currents on the edge of a topological superconductor. Physical Review B, 2017, 95, .	1.1	3
16	Optimal free descriptions of many-body theories. Nature Communications, 2017, 8, 14926.	5.8	21
17	Journeys from quantum optics to quantum technology. Progress in Quantum Electronics, 2017, 54, 19-45.	3.5	41
18	Topological Quantum Liquids with Long-Range Couplings. Physical Review Letters, 2017, 118, 267002.	2.9	36

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19	Topological aspects of quantum information processing. Texts and Readings in Physical Sciences, 2017, , 471-500.	0.2	0
20	A Short Introduction to Topological Quantum Computation. SciPost Physics, 2017, 3, .	1.5	142
21	Quantum Computation and Information: Multi-Particle Aspects. Entropy, 2016, 18, 339.	1.1	0
22	Holographic correspondence in topological superconductors. Annals of Physics, 2016, 372, 175-181.	1.0	18
23	Nested defects on the boundary of topological superconductors. Physical Review B, 2016, 94, .	1.1	3
24	Entropic manifestations of topological order in three dimensions. Physical Review B, 2016, 93, .	1.1	9
25	Quantum memories at finite temperature. Reviews of Modern Physics, 2016, 88, .	16.4	131
26	Simulating the exchange of Majorana zero modes with a photonic system. Nature Communications, 2016, 7, 13194.	5.8	47
27	Induced Topological Phases at the Boundary of 3D Topological Superconductors. Physical Review Letters, 2015, 114, 016801.	2.9	3
28	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mo>(</mml:mo><mml:mrow><mml:mn>3</mml:mn><mml:mo>+</mml:m topological quantum field theory from a tight-binding model of interacting spinless fermions. Physical Review B, 2014, 90, .	1.1	16
29	Non-Abelian Chern-Simons theory from a Hubbard-like model. Physical Review D, 2014, 90, .	1.6	13
30	Entropic Barriers for Two-Dimensional Quantum Memories. Physical Review Letters, 2014, 112, 120503.	2.9	17
31	Seeing Majorana fermions in time-of-flight images of staggered spinless fermions coupled bys-wave pairing. Physical Review A, 2013, 88, .	1.0	15
32	Lifetime of topological quantum memories in thermal environment. New Journal of Physics, 2013, 15, 025027.	1.2	9
33	Abelian Chern-Simons-Maxwell Theory from a Tight-Binding Model of Spinless Fermions. Physical Review Letters, 2013, 110, 211603.	2.9	16
34	Topological Quantum Computation. Lecture Notes in Computer Science, 2013, , 150-179.	1.0	3
35	Topological liquid nucleation induced by vortex-vortex interactions in Kitaev's honeycomb model. Physical Review B, 2012, 86, .	1.1	54
36	Incoherent dynamics in the toric code subject to disorder. Physical Review A, 2012, 85, .	1.0	30

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37	Conformal flatness, non-Abelian Kaluzaâ€“Klein reduction and quaternions. Journal of Geometry and Physics, 2012, 62, 344-351.	0.7	0
38	Bringing Order through Disorder: Localization of Errors in Topological Quantum Memories. Physical Review Letters, 2011, 107, 030503.	2.9	51
39	Quantum Walks with Non-Abelian Anyons. Physical Review Letters, 2011, 106, 230404.	2.9	10
40	Anyonic quantum walks. Annals of Physics, 2010, 325, 664-681.	1.0	8
41	Topological phase transitions driven by gauge fields in an exactly solvable model. Physical Review B, 2010, 81, .	1.1	27
42	Cold Atom Simulation of Interacting Relativistic Quantum Field Theories. Physical Review Letters, 2010, 105, 190403.	2.9	110
43	Non-Abelian statistics as a Berry phase in exactly solvable models. New Journal of Physics, 2009, 11, 093027.	1.2	27
44	Yangâ€“Mills gauge theories from simple fermionic lattice models. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 2542-2545.	0.9	11
45	Conformally flat Kaluzaâ€“Klein spaces, pseudo-/para-complex space forms and generalized gravitational kinks. Journal of Geometry and Physics, 2009, 59, 1314-1325.	0.7	2
46	Centrifugal deformations of the gravitational kink. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 2616-2619.	0.9	3
47	Manifestations of topological effects in graphene. Contemporary Physics, 2009, 50, 375-389.	0.8	43
48	Universal features of dimensional reduction schemes from general covariance breaking. Annals of Physics, 2008, 323, 2044-2072.	1.0	12
49	Spectrum of the non-abelian phase in Kitaevâ€™s honeycomb lattice model. Annals of Physics, 2008, 323, 2286-2310.	1.0	50
50	Non-Abelian statistics from an Abelian model. Physical Review B, 2008, 78, .	1.1	16
51	Graphene with Geometrically Induced Vorticity. Physical Review Letters, 2008, 100, 156806.	2.9	23
52	Why should anyone care about computing with anyons?. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 1-24.	1.0	54
53	Chiral entanglement in triangular lattice models. Physical Review A, 2008, 77, .	1.0	19
54	AN INDEX THEOREM FOR GRAPHENE. International Journal of Modern Physics B, 2007, 21, 5113-5120.	1.0	20

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55	Single atom quantum walk with 1D optical superlatticesÂ§. Journal of Modern Optics, 2007, 54, 1627-1638.	0.6	9
56	The wavefunction of an anyon. Annals of Physics, 2007, 322, 1254-1264.	1.0	49
57	Geometric phases and criticality in spin systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 3463-3476.	1.6	25
58	QUANTUM COMPUTATION WITH ABELIAN ANYONS ON THE HONEYCOMB LATTICE. International Journal of Quantum Information, 2006, 04, 947-954.	0.6	22
59	Graph-state preparation and quantum computation with global addressing of optical lattices. Physical Review A, 2006, 73, .	1.0	36
60	THREE-SPIN INTERACTIONS AND ENTANGLEMENT IN OPTICAL LATTICES. International Journal of Quantum Information, 2006, 04, 541-549.	0.6	3
61	A constructive algorithm for the Cartan decomposition of SU(2N). Journal of Mathematical Physics, 2005, 46, 082108.	0.5	17
62	Chiral phase from three-spin interactions in an optical lattice. Physical Review A, 2005, 72, .	1.0	26
63	Geometric Phases and Criticality in Spin-Chain Systems. Physical Review Letters, 2005, 95, 157203.	2.9	205
64	Effective three-body interactions in triangular optical lattices. Physical Review A, 2004, 70, .	1.0	55
65	Decoherence-free dynamical and geometrical entangling phase gates. Physical Review A, 2004, 69, .	1.0	36
66	Three-Spin Interactions in Optical Lattices and Criticality in Cluster Hamiltonians. Physical Review Letters, 2004, 93, 056402.	2.9	190
67	Quantum computation in optical lattices via global laser addressing. New Journal of Physics, 2004, 6, 126-126.	1.2	29
68	Geometrical phases for the G(4,2) Grassmannian manifold. Journal of Mathematical Physics, 2003, 44, 2463.	0.5	5
69	Quantum Computation with a One-Dimensional Optical Lattice. Physical Review Letters, 2003, 91, 107902.	2.9	127
70	Quantum Computation with Trapped Ions in an Optical Cavity. Physical Review Letters, 2002, 89, 187903.	2.9	189
71	QUANTUM HOLONOMIES FOR QUANTUM COMPUTING. International Journal of Modern Physics B, 2001, 15, 1257-1285.	1.0	100
72	Universal quantum computation by holonomic and nonlocal gates with imperfections. Physical Review A, 2001, 64, .	1.0	26

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73	Quantifying the effect of interactions in quantum many-body systems. , 0, , .		9