

Claudio Chamon

List of Publications by Year in descending order

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126
papers

6,171
citations

57758

44
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71685

76
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127
all docs

127
docs citations

127
times ranked

3680
citing authors

#	ARTICLE	IF	CITATIONS
1	Fractional Quantum Hall States at Zero Magnetic Field. <i>Physical Review Letters</i> , 2011, 106, 236804.	7.8	712
2	Electron Fractionalization in Two-Dimensional Graphenelike Structures. <i>Physical Review Letters</i> , 2007, 98, 186809.	7.8	378
3	Quantum Glassiness in Strongly Correlated Clean Systems: An Example of Topological Overprotection. <i>Physical Review Letters</i> , 2005, 94, 040402.	7.8	344
4	Adiabatic Quantum Pump of Spin-Polarized Current. <i>Physical Review Letters</i> , 2002, 89, 146802.	7.8	182
5	Masses in graphenelike two-dimensional electronic systems: Topological defects in order parameters and their fractional exchange statistics. <i>Physical Review B</i> , 2009, 80, .	3.2	165
6	Fractional topological liquids with time-reversal symmetry and their lattice realization. <i>Physical Review B</i> , 2011, 84, .	3.2	138
7	Isolated flat bands and spin-1 conical bands in two-dimensional lattices. <i>Physical Review B</i> , 2010, 82, .	3.2	131
8	Junctions of Three Quantum Wires and the Dissipative Hofstadter Model. <i>Physical Review Letters</i> , 2003, 91, 206403.	7.8	123
9	Quantum Pump for Spin and Charge Transport in a Luttinger Liquid. <i>Physical Review Letters</i> , 2001, 87, 096401.	7.8	121
10	Entanglement and topological entropy of the toric code at finite temperature. <i>Physical Review B</i> , 2007, 76, .	3.2	121
11	Junctions of three quantum wires. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2006, 2006, P02008-P02008.	2.3	114
12	Solitons in carbon nanotubes. <i>Physical Review B</i> , 2000, 62, 2806-2812.	3.2	112
13	Topological order in a three-dimensional toric code at finite temperature. <i>Physical Review B</i> , 2008, 78, .	3.2	111
14	Wire deconstructionism of two-dimensional topological phases. <i>Physical Review B</i> , 2014, 90, .	3.2	109
15	Optimizing Variational Quantum Algorithms Using Pontryagin's Minimum Principle. <i>Physical Review X</i> , 2017, 7, .	8.9	99
16	From quantum mechanics to classical statistical physics: Generalized Rokhsar-Kivelson Hamiltonians and the Stochastic Matrix Form-decomposition. <i>Annals of Physics</i> , 2005, 318, 316-344.	2.8	97
17	Heterogeneous Aging in Spin Glasses. <i>Physical Review Letters</i> , 2002, 88, 237201.	7.8	93
18	Conformal quantum mechanics as the CFT1 dual to AdS2. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2011, 701, 503-507.	4.1	90

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19	Topological quantum glassiness. Philosophical Magazine, 2012, 92, 304-323.	1.6	88
20	Occupation of topological Floquet bands in open systems. Physical Review B, 2015, 91, .	3.2	86
21	Electron fractionalization for two-dimensional Dirac fermions. Physical Review B, 2008, 77, .	3.2	75
22	Quantum topological phase transition at the microscopic level. Physical Review B, 2008, 77, .	3.2	75
23	Topological many-body scar states in dimensions one, two, and three. Physical Review Research, 2019, 1, .	3.6	75
24	Spatially heterogeneous ages in glassy systems. Physical Review B, 2003, 68, .	3.2	74
25	Measuring the quantum geometry of Bloch bands with current noise. Physical Review B, 2013, 87, .	3.2	69
26	Two-Component Structure in the Entanglement Spectrum of Highly Excited States. Physical Review Letters, 2015, 115, 267206.	7.8	68
27	Materials Design from Nonequilibrium Steady States: Driven Graphene as a Tunable Semiconductor with Topological Properties. Physical Review Letters, 2013, 110, 176603.	7.8	63
28	Quantum mechanical and information theoretic view on classical glass transitions. Physical Review B, 2010, 81, .	3.2	62
29	Schwinger-Keldysh approach to disordered and interacting electron systems: Derivation of Finkelstein's renormalization-group equations. Physical Review B, 1999, 60, 2239-2254.	3.2	61
30	Irrational Versus Rational Charge and Statistics in Two-Dimensional Quantum Systems. Physical Review Letters, 2008, 100, 110405.	7.8	60
31	Enhancing the stability of a fractional Chern insulator against competing phases. Physical Review B, 2012, 86, .	3.2	60
32	Separation of Time Scales and Reparametrization Invariance for Aging Systems. Physical Review Letters, 2002, 89, 217201.	7.8	57
33	Deconfined fractional electric charges in graphene at high magnetic fields. Physical Review B, 2010, 81, .	3.2	55
34	Emergent Irreversibility and Entanglement Spectrum Statistics. Physical Review Letters, 2014, 112, 240501.	7.8	55
35	Nonuniversal entanglement level statistics in projection-driven quantum circuits. Physical Review B, 2020, 101, .	3.2	55
36	Toric-boson model: Toward a topological quantum memory at finite temperature. Physical Review B, 2009, 79, .	3.2	52

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37	Superconductivity on the surface of topological insulators and in two-dimensional noncentrosymmetric materials. <i>Physical Review B</i> , 2010, 81, .	3.2	52
38	Braiding photonic topological zero modes. <i>Nature Physics</i> , 2020, 16, 989-993.	16.7	51
39	Noncommutative geometry for three-dimensional topological insulators. <i>Physical Review B</i> , 2012, 86, .	3.2	49
40	Theory of the superglass phase. <i>Physical Review B</i> , 2008, 78, .	3.2	47
41	Non-Abelian Braiding of Light. <i>Physical Review Letters</i> , 2016, 117, 073901.	7.8	47
42	Junctions of three quantum wires for spin- $\frac{1}{2}$ electrons. <i>Physical Review B</i> , 2008, 77, .	3.2	46
43	Time-reversal symmetric hierarchy of fractional incompressible liquids. <i>Physical Review B</i> , 2011, 84, .	3.2	46
44	Fractional (Chern and topological) insulators. <i>Physica Scripta</i> , 2015, T164, 014005.	2.5	46
45	Non-Abelian topological spin liquids from arrays of quantum wires or spin chains. <i>Physical Review B</i> , 2016, 93, .	3.2	44
46	Topological order and topological entropy in classical systems. <i>Physical Review B</i> , 2007, 76, .	3.2	43
47	Entanglement complexity in quantum many-body dynamics, thermalization, and localization. <i>Physical Review B</i> , 2017, 96, .	3.2	43
48	Multicritical Fermi Surface Topological Transitions. <i>Physical Review Letters</i> , 2019, 123, 207202.	7.8	40
49	Fractional Chern Insulators with Strong Interactions that Far Exceed Band Gaps. <i>Physical Review Letters</i> , 2014, 112, 126806.	7.8	38
50	Microscopic model of a phononic refrigerator. <i>Physical Review B</i> , 2012, 86, .	3.2	37
51	Stroboscopic symmetry-protected topological phases. <i>Physical Review B</i> , 2015, 92, .	3.2	37
52	Wire constructions of Abelian topological phases in three or more dimensions. <i>Physical Review B</i> , 2016, 93, .	3.2	37
53	Fluctuations in glassy systems. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007, 2007, P07022-P07022.	2.3	36
54	Aging dynamics of quantum spin glasses of rotors. <i>Physical Review B</i> , 2001, 64, .	3.2	35

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55	Topological Hubbard Model and Its High-Temperature Quantum Hall Effect. <i>Physical Review Letters</i> , 2012, 108, 046806.	7.8	35
56	Floquet systems coupled to particle reservoirs. <i>Physical Review B</i> , 2015, 91, .	3.2	34
57	Optimal Control for Unitary Preparation of Many-Body States: Application to Luttinger Liquids. <i>Physical Review Letters</i> , 2011, 107, 016402.	7.8	33
58	Catastrophe theory classification of Fermi surface topological transitions in two dimensions. <i>Physical Review Research</i> , 2020, 2, .	3.6	33
59	Junctions of multiple quantum wires with different Luttinger parameters. <i>Physical Review B</i> , 2012, 86, .	3.2	32
60	Excitations and quantum fluctuations in site-diluted two-dimensional antiferromagnets. <i>Physical Review B</i> , 2004, 69, .	3.2	30
61	Fluctuations in the coarsening dynamics of the $O(N)$ model with $N \rightarrow \infty$: are they similar to those in glassy systems?. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2006, 2006, P01006-P01006.	2.3	30
62	General method for calculating the universal conductance of strongly correlated junctions of multiple quantum wires. <i>Physical Review B</i> , 2012, 85, .	3.2	30
63	Cooling through optimal control of quantum evolution. <i>Physical Review A</i> , 2013, 87, .	2.5	30
64	Single T gate in a Clifford circuit drives transition to universal entanglement spectrum statistics. <i>SciPost Physics</i> , 2020, 9, .	4.9	29
65	Irreversibility and entanglement spectrum statistics in quantum circuits. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P12007.	2.3	27
66	Time Reparametrization Group and the Long Time Behavior in Quantum Glassy Systems. <i>Physical Review Letters</i> , 2001, 86, 1622-1625.	7.8	26
67	Topological superconductors as nonrelativistic limits of Jackiw-Rossi and Jackiw-Rebbi models. <i>Physical Review B</i> , 2010, 82, .	3.2	25
68	Counting Majorana zero modes in superconductors. <i>Physical Review B</i> , 2011, 83, .	3.2	23
69	How to Find Conductance Tensors of Quantum Multiwire Junctions through Static Calculations: Application to an Interacting Y-Junction. <i>Physical Review Letters</i> , 2010, 105, 226803.	7.8	22
70	Density of states for dirty d-wave superconductors: A unified and dual approach for different types of disorder. <i>Physical Review B</i> , 2001, 63, .	3.2	20
71	Growing dynamical length, scaling, and heterogeneities in the 3D Edwards-Anderson model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007, 2007, P05001-P05001.	2.3	20
72	Heat Pumping in Nanomechanical Systems. <i>Physical Review Letters</i> , 2011, 106, 135504.	7.8	20

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73	Photoinduced superconductivity in semiconductors. Physical Review B, 2015, 91, .	3.2	19
74	Nonperturbative Saddle Point for the Effective Action of Disordered and Interacting Electrons in 2D. Physical Review Letters, 2000, 85, 5607-5610.	7.8	18
75	Quantum three-coloring dimer model and the disruptive effect of quantum glassiness on its line of critical points. Physical Review B, 2005, 72, .	3.2	18
76	Long tunneling contact as a probe of fractional quantum Hall neutral edge modes. Physical Review B, 2009, 80, .	3.2	18
77	Topological gaps without masses in driven graphene-like systems. Physical Review B, 2014, 89, .	3.2	18
78	Dynamical obstruction in a constrained system and its realization in lattices of superconducting devices. Physical Review B, 2004, 69, .	3.2	17
79	Masses and Majorana fermions in graphene. Physica Scripta, 2012, T146, 014013.	2.5	17
80	Ground-state degeneracy of non-Abelian topological phases from coupled wires. Physical Review B, 2019, 99, .	3.2	17
81	Generalized energy and time-translation invariance in a driven dissipative system. Physical Review B, 2013, 88, .	3.2	16
82	Dissipationless conductance in a topological coaxial cable. Physical Review B, 2016, 94, .	3.2	16
83	Topological qubits in graphenelike systems. Physical Review B, 2010, 82, .	3.2	15
84	Model of chiral spin liquids with Abelian and non-Abelian topological phases. Physical Review B, 2017, 96, .	3.2	15
85	Elementary formula for the Hall conductivity of interacting systems. Physical Review B, 2012, 86, .	3.2	14
86	Anomalous quantum diffusion at the superfluid-insulator transition. Physical Review B, 2002, 66, .	3.2	13
87	High-temperature criticality in strongly constrained quantum systems. Physical Review B, 2006, 73, .	3.2	13
88	Constructing Quantum Spin Liquids Using Combinatorial Gauge Symmetry. Physical Review Letters, 2020, 125, 067203.	7.8	13
89	Coupled spin- $\frac{1}{2}$ ladders as microscopic models for non-Abelian chiral spin liquids. Physical Review B, 2017, 95, .	3.2	12
90	Dynamic scaling of topological ordering in classical systems. Physical Review B, 2018, 97, .	3.2	12

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91	Lattice Clifford fractons and their Chern-Simons-like theory. SciPost Physics Core, 2021, 4, .	2.8	12
92	Nonequilibrium tunneling into general quantum Hall edge states. Physical Review B, 2000, 62, 7298-7302.	3.2	11
93	P-wave pairing and ferromagnetism in the metal-insulator transition in two dimensions. Physical Review B, 2001, 64, .	3.2	11
94	Fluctuations of two-time quantities and time-reparameterization invariance in spin glasses. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P08015.	2.3	11
95	Magnetic translation algebra with or without magnetic field in the continuum or on arbitrary Bravais lattices in any dimension. Physical Review B, 2012, 86, .	3.2	11
96	Hierarchical Majoranas in a programmable nanowire network. Physical Review B, 2019, 99, .	3.2	11
97	Experimental realization of classical \mathbb{Z}_2 spin liquids in a programmable quantum device. Physical Review B, 2021, 104, .	3.2	10
98	Field Theories for type-II fractons. SciPost Physics, 2022, 12, .	4.9	10
99	Adsorption on Carbon Nanotubes: Quantum Spin Tubes, Magnetization Plateaus, and Conformal Symmetry. Physical Review Letters, 2000, 85, 4128-4131.	7.8	9
100	Heterogeneous slow dynamics in a two dimensional doped classical antiferromagnet. Physical Review B, 2005, 72, .	3.2	9
101	Virtual Parallel Computing and a Search Algorithm Using Matrix Product States. Physical Review Letters, 2012, 109, 030503.	7.8	9
102	Accessing topological order in fractionalized liquids with gapped edges. Physical Review B, 2014, 90, .	3.2	9
103	Band-edge superconductivity. Physical Review B, 2015, 92, .	3.2	7
104	Scrambling via braiding of nonabelions. Physical Review B, 2019, 99, .	3.2	7
105	Networks of quantum wire junctions: A system with quantized integer Hall resistance without vanishing longitudinal resistivity. Physical Review B, 2013, 87, .	3.2	6
106	Topological BF theory of the quantum hydrodynamics of incompressible polar fluids. Physical Review B, 2014, 90, .	3.2	6
107	d-wave superconductivity in boson+fermion dimer models. Physical Review B, 2017, 95, .	3.2	6
108	Fractional Statistics and Duality: Strong Tunneling Behavior of Edge States of Quantum Hall Liquids in the Jain Sequence. Physical Review Letters, 2007, 98, .	7.8	5

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109	Tensor network method for reversible classical computation. Physical Review E, 2018, 97, 033303.	2.1	4
110	Model of spin liquids with and without time-reversal symmetry. Physical Review B, 2019, 99, .	3.2	4
111	Dynamics of single polymers under extreme confinement. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P09022-P09022.	2.3	3
112	From particles to spins: Eulerian formulation of supercooled liquids and glasses. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15263-15268.	7.1	3
113	Geometric frustration and magnetization plateaus in quantum spin and Bose-Hubbard models on tubes. Physical Review B, 2002, 65, .	3.2	2
114	Rényi entropies as a measure of the complexity of counting problems. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P04008.	2.3	2
115	Obstacles to quantum annealing in a planar embedding of XORSAT. Physical Review B, 2019, 100, .	3.2	2
116	\mathbb{Z}_2 topological order and first-order quantum phase transitions in systems with combinatorial gauge symmetry. Physical Review B, 2021, 104, .	3.2	2
117	Superconducting Circuit Realization of Combinatorial Gauge Symmetry. PRX Quantum, 2021, 2, .	9.2	2
118	A sigma-model approach to glassy dynamics. Pramana - Journal of Physics, 2005, 64, 1075-1085.	1.8	1
119	\mathbb{Z}_3 Quantum Double in a Superconducting Wire Array. PRX Quantum, 2021, 2, .	9.2	1
120	Spanning trees for the geometry and dynamics of compact polymers. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, L03004.	2.3	0
121	Reply to 'Comment on 'Elementary formula for the Hall conductivity of interacting systems''. Physical Review B, 2014, 89, .	3.2	0
122	Effective field theory for the bulk-edge correspondence in a two-dimensional \mathbb{Z}_2 topological insulator with Rashba interactions. Physical Review B, 2014, 90, .	3.2	0
123	Quantum oscillations and criticality in a fermionic and bosonic dimer model for the cuprates. Physical Review B, 2018, 98, .	3.2	0
124	Ultraslow dynamics in a translationally invariant spin model for multiplication and factorization. Physical Review Research, 2019, 1, .	3.6	0
125	Experimental observation of braiding topological zero modes in a photonic waveguide array. , 2020, , .		0
126	Electron Fractionalization in Celebration of Roman Jackiw's 80th Birthday. , 2020, , 17-24.		0