Shu Chen

List of Publications by Year in Descending Order

136 papers	3,136 citations	29 h-index	49 g-index
145 ext. papers	4,106 ext. citations	3 avg, IF	6 L-index

#	Paper	IF	Citations
136	Exact mobility edges and topological phase transition in two-dimensional non-Hermitian quasicrystals. *Science China: Physics, Mechanics and Astronomy*, **2022**, 65, 1	3.6	2
135	Exact non-Hermitian mobility edges in one-dimensional quasicrystal lattice with exponentially decaying hopping and its dual lattice. *Physical Review B*, **2021**, 103,	3.3	6
134	Dynamical evolution in a one-dimensional incommensurate lattice with PT symmetry. *Physical Review A*, **2021**, 103,	2.6	7
133	Exact mobility edges, PT-symmetry breaking, and skin effect in one-dimensional non-Hermitian quasicrystals. *Physical Review B*, **2021**, 103,	3.3	16
132	Localization transition, spectrum structure, and winding numbers for one-dimensional non-Hermitian quasicrystals. *Physical Review B*, **2021**, 104,	3.3	4
131	Exact Solution of Non-Hermitian Systems with Generalized Boundary Conditions: Size-Dependent Boundary Effect and Fragility of the Skin Effect. *Physical Review Letters*, **2021**, 127, 116801	7.4	3
130	Exact zeros of the Loschmidt echo and quantum speed limit time for the dynamical quantum phase transition in finite-size systems. *Physical Review B*, **2021**, 104,	3.3	1
129	Non-Hermitian mobility edges in one-dimensional quasicrystals with parity-time symmetry. *Physical Review B*, **2020**, 101,	3.3	26
128	Topological invariants, zero mode edge states and finite size effect for a generalized non-reciprocal Su-Schrieffer-Heeger model. *European Physical Journal B*, **2020**, 93, 1	1.2	12
127	Dynamical observation of mobility edges in one-dimensional incommensurate optical lattices. *New Journal of Physics*, **2020**, 22, 013036	2.9	11
126	Fate of zero modes in a finite Su-Schrieffer-Heeger model with PT symmetry. *Physical Review A*, **2020**, 101,	2.6	5
125	Helical damping and dynamical critical skin effect in open quantum systems. *Physical Review Research*, **2020**, 2,	3.9	21
124	One-Dimensional Quasiperiodic Mosaic Lattice with Exact Mobility Edges. *Physical Review Letters*, **2020**, 125, 196604	7.4	15
123	Diagnosis of bulk phase diagram of nonreciprocal topological lattices by impurity modes. *Physical Review B*, **2020**, 102,	3.3	2
122	Interaction-induced dynamical PT-symmetry breaking in dissipative Fermi-Hubbard models. *Physical Review A*, **2020**, 102,	2.6	5
121	Topological Bose-Mott insulators in one-dimensional non-Hermitian superlattices. *Physical Review B* , **2020**, 102,	3.3	14
120	Interacting non-Hermitian ultracold atoms in a harmonic trap: Two-body exact solution and a high-order exceptional point. *Physical Review A*, **2019**, 99,	2.6	12

119	Observation of a Dynamical Quantum Phase Transition by a Superconducting Qubit Simulation. *Physical Review Applied*, **2019**, 11,	4.3	48
118	Characterization of Phase Transition Points for Topological Gapped Systems **2019**, 1-43		
117	Topological classification of non-Hermitian systems with reflection symmetry. *Physical Review B*, **2019**, 99,	3.3	64
116	The nontrivial topological phases of a one-dimensional non-Hermitian dimerized lattice with spin-orbit coupling and Zeeman field. *Physica E: Low-Dimensional Systems and Nanostructures*, **2019**, 110, 68-73	3	2
115	Topological Mott insulator with bosonic edge modes in one-dimensional fermionic superlattices. *Physical Review A*, **2019**, 100,	2.6	7
114	Interplay of non-Hermitian skin effects and Anderson localization in nonreciprocal quasiperiodic lattices. *Physical Review B*, **2019**, 100,	3.3	84
113	Topological classification of defects in non-Hermitian systems. *Physical Review B*, **2019**, 100,	3.3	31
112	Properties and applications of one dimensional quasiperiodic lattices. *Wuli Xuebao/Acta Physica Sinica*, **2019**, 68, 040301	0.6	3
111	Topological invariant in quench dynamics. *Wuli Xuebao/Acta Physica Sinica*, **2019**, 68, 220304	0.6	4
110	Mass-Imbalanced Atoms in a Hard-Wall Trap: An Exactly Solvable Model Associated with D Symmetry. *IScience*, **2019**, 22, 181-194	6.1	1
109	Signature of a nonequilibrium quantum phase transition in the long-time average of the Loschmidt echo. *Physical Review B*, **2019**, 100,	3.3	7
108	High-order exceptional points in ultracold Bose gases. *Physical Review A*, **2019**, 99,	2.6	27
107	Dynamical topological invariant after a quantum quench. *Physical Review B*, **2018**, 97,	3.3	45
106	Quench dynamics in the Aubry□Andr□Harper model with p-wave superconductivity. *New Journal of Physics*, **2018**, 20, 053012	2.9	5
105	Phase diagram of a generalized off-diagonal Aubry□Andr□model withp-wave pairing. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2018**, 51, 025301	1.3	4
104	Transition from a nodal-loop phase to a nodal-chain phase in a periodically modulated optical lattice. *Physical Review A*, **2018**, 97,	2.6	1
103	Characterization of Lifshitz transitions in topological nodal line semimetals. *European Physical Journal B*, **2018**, 91, 1	1.2	2
102	Zeros of Loschmidt echo in the presence of Anderson localization. *Physical Review A*, **2018**, 97,	2.6	10

101	Dynamical evolutions in non-Hermitian triple-well systems with a complex potential. *Physical Review A*, **2018**, 97,	2.6	9
100	Many-body stabilization of a resonant p-wave Fermi gas in one dimension. *Physical Review A*, **2018**, 98,	2.6	1
99	Effect of an incommensurate potential on nodal-link semimetals. *Physical Review B*, **2018**, 98,	3.3	4
98	Topological invariants and phase diagrams for one-dimensional two-band non-Hermitian systems without chiral symmetry. *Physical Review A*, **2018**, 98,	2.6	70
97	Geometrical meaning of winding number and its characterization of topological phases in one-dimensional chiral non-Hermitian systems. *Physical Review A*, **2018**, 97,	2.6	149
96	Quantum walks in the commensurate off-diagonal Aubry-Andr□Harper model. *Physical Review A*, **2017**, 95,	2.6	6
95	The nontrivial states in one-dimensional nonlinear bichromatic superlattices. *Physica E: Low-Dimensional Systems and Nanostructures*, **2017**, 90, 183-188	3	4
94	Chiral topological insulating phases from three-dimensional nodal loop semimetals. *Physical Review B*, **2017**, 95,	3.3	9
93	Caution on emergent continuous symmetry: A Monte Carlo investigation of the transverse-field frustrated Ising model on the triangular and honeycomb lattices. *Physical Review B*, **2017**, 96,	3.3	15
92	Dynamical signature of localization-delocalization transition in a one-dimensional incommensurate lattice. *Physical Review B*, **2017**, 95,	3.3	25
91	Spectroscopy and spin dynamics for strongly interacting few-spinor bosons in one-dimensional traps. *Physical Review A*, **2017**, 95,	2.6	3
90	Fate of Weyl semimetals in the presence of incommensurate potentials. *Physical Review A*, **2017**, 95,	2.6	3
89	2□Flux loop semimetals. *Physical Review B*, **2017**, 96,	3.3	11
88	Exact ordering of energy levels for one-dimensional interacting Fermi gases with SU(N) symmetry. *Physical Review B*, **2017**, 96,	3.3	7
87	Almost mobility edges and the existence of critical regions in one-dimensional quasiperiodic lattices. *European Physical Journal B*, **2017**, 90, 1	1.2	3
86	Characterization of topological phases of dimerized Kitaev chain via edge correlation functions. *Physical Review B*, **2017**, 96,	3.3	17
85	Topological phase transition and charge pumping in a one-dimensional periodically driven optical lattice. *Physical Review A*, **2017**, 96,	2.6	9
84	Anderson localization in the non-Hermitian Aubry-Andr□Harper model with physical gain and loss. *Physical Review A*, **2017**, 95,	2.6	38

83	Transport through a quantum dot coupled to two Majorana bound states. *Frontiers of Physics*, **2017**, 12, 1	3.7	16
82	Non-Hermitian Kitaev chain with complex on-site potentials. *Physical Review A*, **2016**, 94,	2.6	28
81	Topological invariants for phase transition points of one-dimensional Z2 topological systems. *European Physical Journal B*, **2016**, 89, 1	1.2	12
80	PT-symmetry breaking for the scattering problem in a one-dimensional non-Hermitian lattice model. *Physical Review A*, **2016**, 93,	2.6	10
79	Strongly interacting one-dimensional quantum gas mixtures with weak p-wave interactions. *Physical Review A*, **2016**, 93,	2.6	16
78	Bosonic edge states in gapped honeycomb lattices. *Physical Review B*, **2016**, 93,	3.3	9
77	Fractional topological states in quantum spin chains with periodical modulation. *Physical Review B*, **2016**, 93,	3.3	4
76	Spectral statistics, finite-size scaling and multifractal analysis of quasiperiodic chain with p-wave pairing. *European Physical Journal B*, **2016**, 89, 1	1.2	16
75	Many-body ground state localization and coexistence of localized and extended states in an interacting quasiperiodic system. *European Physical Journal B*, **2016**, 89, 1	1.2	14
74	Strongly interacting Bose–Fermi mixtures in one dimension. *New Journal of Physics*, **2016**, 18, 025009	2.9	19
73	Generalized Aubry-André-Harper model with p-wave superconducting pairing. *Physical Review B*, **2016**, 94,	3.3	26
72	Kaleidoscope of symmetry-protected topological phases in one-dimensional periodically modulated lattices. *Physical Review B*, **2015**, 91,	3.3	31
71	Interplay between Fano resonance and PT symmetry in non-Hermitian discrete systems. *Physical Review A*, **2015**, 91,	2.6	16
70	Hidden-symmetry-protected topological phases on a one-dimensional lattice. *Europhysics Letters*, **2015**, 109, 40006	1.6	12
69	Quantum walks accompanied by spin flipping in one-dimensional optical lattices. *Physical Review A*, **2015**, 92,	2.6	5
68	Quantum Hall effects in a non-Abelian honeycomb lattice. *Physical Review A*, **2015**, 92,	2.6	2
67	Characterization of symmetry-protected topological phases in polymerized models by trajectories of Majorana stars. *Physical Review B*, **2015**, 91,	3.3	16
66	Complete phase diagram and topological properties of interacting bosons in one-dimensional superlattices. *Physical Review B*, **2015**, 91,	3.3	12

65	Characterization of topological phase transitions via topological properties of transition points. *Physical Review B*, **2015**, 92,	3.3	27
64	Winding numbers of phase transition points for one-dimensional topological systems. *Europhysics Letters*, **2015**, 112, 10004	1.6	22
63	Topological incommensurate magnetization plateaus in quasi-periodic quantum spin chains. *Scientific Reports*, **2015**, 5, 8433	4.9	9
62	Effect of incommensurate potential on the resonant tunneling through Majorana bound states on the topological superconductor chains. *European Physical Journal B*, **2014**, 87, 1	1.2	4
61	Topological phases of generalized Su-Schrieffer-Heeger models. *Physical Review B*, **2014**, 89,	3.3	108
60	PT symmetry in the non-Hermitian Su-Schrieffer-Heeger model with complex boundary potentials. *Physical Review A*, **2014**, 89,	2.6	153
59	Topological nature of magnetization plateaus in periodically modulated quantum spin chains. *Physical Review B*, **2014**, 90,	3.3	19
58	Dynamical Anderson transition in one-dimensional periodically kicked incommensurate lattices. *Physical Review B*, **2014**, 90,	3.3	18
57	Topologically protected mid-gap states induced by impurity in one-dimensional superlattices. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2014**, 47, 065302	1.3	5
56	Topological superconductor to Anderson localization transition in one-dimensional incommensurate lattices. *Physical Review Letters*, **2013**, 110, 176403	7.4	78
55	Quantum dynamics in driven sawtooth lattice under uniform magnetic field. *Physical Review A*, **2013**, 87,	2.6	4
54	Fractional topological states of dipolar fermions in one-dimensional optical superlattices. *Physical Review Letters*, **2013**, 110, 215301	7.4	49
53	Ferromagnetic to antiferromagnetic transition of one-dimensional spinor Bose gases with spin-orbit coupling. *European Physical Journal D*, **2013**, 67, 1	1.3	1
52	Wigner crystal versus fermionization for one-dimensional Hubbard models with and without long-range interactions. *Journal of Physics Condensed Matter*, **2013**, 25, 055601	1.8	5
51	The Euler number of Bloch states manifold and the quantum phases in gapped fermionic systems. *Europhysics Letters*, **2013**, 103, 10008	1.6	20
50	Topological Mott insulators of ultracold atomic mixtures induced by interactions in one-dimensional optical superlattices. *Physical Review B*, **2013**, 88,	3.3	25
49	Edge states and topological phases in one-dimensional optical superlattices. *Physical Review Letters* , **2012**, 108, 220401	7.4	199
48	Majorana fermions in density-modulated p-wave superconducting wires. *Physical Review B*, **2012**, 86,	3.3	48

47	Dynamical properties of hard-core anyons in one-dimensional optical lattices. *Physical Review A*, **2012**, 86,	2.6	27
46	Quantum criticality of a one-dimensional Bose-Fermi mixture. *Physical Review A*, **2012**, 85,	2.6	14
45	Absence of Wigner molecules in one-dimensional few-fermion systems with short-range interactions. *Physical Review B*, **2012**, 86,	3.3	23
44	Lowest scattering state of one-dimensional Bose gases with attractive interactions. *Physical Review A*, **2011**, 83,	2.6	4
43	Quantum criticality and universal scaling of strongly attractive spin-imbalanced Fermi gases in a one-dimensional harmonic trap. *Physical Review A*, **2011**, 84,	2.6	15
42	Quantum criticality in disordered bosonic optical lattices. *Physical Review A*, **2011**, 83,	2.6	9
41	Effective super Tonks-Girardeau gases as ground states of strongly attractive multicomponent fermions. *Physical Review A*, **2011**, 83,	2.6	9
40	Abelian and non-Abelian quantum geometric tensor. *Physical Review B*, **2010**, 81,	3.3	48
39	Universal Tomonaga-Luttinger liquid phases in one-dimensional strongly attractive SU(N) fermionic cold atoms. *Physical Review A*, **2010**, 82,	2.6	18
38	Transition from a Tonks-Girardeau gas to a super-Tonks-Girardeau gas as an exact many-body dynamics problem. *Physical Review A*, **2010**, 81,	2.6	37
37	Realization of effective super Tonks-Girardeau gases via strongly attractive one-dimensional Fermi gases. *Physical Review A*, **2010**, 81,	2.6	29
36	Superfluid-to-Bose-glass transition of hard-core bosons in a one-dimensional incommensurate optical lattice. *Physical Review A*, **2010**, 81,	2.6	24
35	Super-Tonks-Girardeau gas of spin-1/2 interacting fermions. *Physical Review Letters*, **2010**, 105, 175301	7.4	36
34	Ground-state and dynamical properties of hard-core bosons in one-dimensional incommensurate optical lattices with a harmonic trap. *Physical Review A*, **2010**, 81,	2.6	12
33	Quantum phases of the Bose-Hubbard model in optical superlattices. *Physical Review A*, **2010**, 81,	2.6	25
32	Mixture of Tonks-Girardeau gas and Fermi gas in one-dimensional optical lattices. *Physical Review A*, **2010**, 82,	2.6	6
31	Preparation of stable excited states in an optical lattice via sudden quantum quench. *Physical Review A*, **2010**, 81,	2.6	12
30	Quantum phase transition and elementary excitations of a Bose-Fermi mixture in a one-dimensional optical lattice. *Physical Review B*, **2009**, 80,	3.3	3

29	Cavity-enhanced detection of magnetic order in lattice spin models. *Physical Review A*, **2009**, 79,	2.6	6
28	Ground-state properties of interacting two-component Bose gases in a hard-wall trap. *Physical Review A*, **2009**, 79,	2.6	24
27	Yang-Yang thermodynamics of a Bose-Fermi mixture. *Physical Review A*, **2009**, 79,	2.6	16
26	Ground-state properties of hard-core anyons in one-dimensional optical lattices. *Physical Review A*, **2009**, 79,	2.6	35
25	Spontaneous trimerization in two-dimensional antiferromagnets. *Journal of Physics Condensed Matter*, **2009**, 21, 456009	1.8	11
24	Mathematical calculation for exact solutions of infinitely strongly interacting Fermi gases in tight waveguides. *Journal of Physics A: Mathematical and Theoretical*, **2009**, 42, 385210	2	7
23	Two-component interacting Tonks-Girardeau gas in a one-dimensional optical lattice. *Europhysics Letters*, **2009**, 85, 60004	1.6	11
22	Exact solutions of a one-dimensional mixture of spinor bosons and spinor fermions. *Nuclear Physics B*, **2009**, 820, 753-779	2.8	
21	Geometric phase and quantum phase transition in an inhomogeneous periodic XY spin-12 model. *Physical Review A*, **2009**, 79,	2.6	30
20	Quantum entanglement of particles on a ring with fractional statistics. *Physical Review A*, **2009**, 80,	2.6	15
19	Density-functional theory of two-component Bose gases in one-dimensional harmonic traps. *Physical Review A*, **2009**, 80,	2.6	32
18	Exact solution for infinitely strongly interacting Fermi gases in tight waveguides. *Physical Review Letters*, **2009**, 102, 160402	7.4	94
17	Magnetism of cold fermionic atoms on the p band of an optical lattice. *Physical Review A*, **2008**, 78,	2.6	14
16	Ground-state properties of one-dimensional anyon gases. *Physical Review A*, **2008**, 78,	2.6	40
15	Ground-state properties of a few-boson system in a one-dimensional hard-wall split potential. *Physical Review A*, **2008**, 78,	2.6	29
14	Intrinsic relation between ground-state fidelity and the characterization of a quantum phase transition. *Physical Review A*, **2008**, 77,	2.6	124
13	Properties of a class of topological phase transitions. *Physical Review B*, **2008**, 78,	3.3	11
12	Fidelity and quantum phase transition for the Heisenberg chain with next-nearest-neighbor interaction. *Physical Review E*, **2007**, 76, 061108	2.4	113

11	One-dimensional fermionic gases with attractive p-wave interaction in a hard-wall trap. *Physical Review A*, **2007**, 76,	2.6	23
10	Ground-state competition of two-component bosons in an optical lattice near a Feshbach resonance. *Physical Review A*, **2007**, 75,	2.6	2
9	Two-dimensional spin-1 frustrated Heisenberg model with valence-bond ground states. *Physical Review B*, **2007**, 76,	3.3	6
8	Exact ground state and elementary excitations of the spin tetrahedron chain. *Physical Review B*, **2006**, 74,	3.3	10
7	Density distributions for trapped one-dimensional spinor gases. *Physical Review A*, **2006**, 73,	2.6	11
6	Ground-state properties of one-dimensional ultracold Bose gases in a hard-wall trap. *Physical Review A*, **2006**, 73,	2.6	68
5	Exact ground states for spin-1 systems with spin-orbital coupling. *Physical Review B*, **2005**, 72,	3.3	1
4	Exact spontaneous plaquette ground states for high-spin ladder models. *Physical Review B*, **2005**, 72,	3.3	41
3	Ground state and excitation of an asymmetric spin ladder model. *Physical Review B*, **2003**, 67,	3.3	29
2	Chen, BEtner, and Voit Reply. *Physical Review Letters*, **2002**, 89,	7.4	5
1	Phase diagram of an asymmetric spin ladder. *Physical Review Letters*, **2001**, 87, 087205	7.4	28