

Sandro Wimberger

List of Publications by Year in descending order

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129
papers

2,740
citations

159358

30
h-index

233125

45
g-index

133
all docs

133
docs citations

133
times ranked

1470
citing authors

#	ARTICLE	IF	CITATIONS
1	Classical model for survival resonances close to the Talbot time. <i>Physical Review A</i> , 2022, 105, .	1.0	0
2	Atomic interactions for qubit-error compensation. <i>Physical Review A</i> , 2022, 105, .	1.0	1
3	Kuramoto synchronization of quantum tunneling polarons for describing the dynamic structure in cuprate superconductors. <i>Physical Review B</i> , 2022, 105, .	1.1	5
4	Embedded quantum-error correction and controlled-phase gate for molecular spin qubits. <i>AIP Advances</i> , 2021, 11, .	0.6	15
5	Finite-size effects in a bosonic Josephson junction. <i>Physical Review A</i> , 2021, 103, .	1.0	9
6	One-dimensional fuzzy dark matter models: Structure growth and asymptotic dynamics. <i>Physical Review D</i> , 2021, 103, .	1.6	3
7	Quantum Simulation of Three-Body Interactions in Weakly Driven Quantum Systems. <i>Physical Review Letters</i> , 2021, 126, 250504.	2.9	13
8	The Renewed Role of Sweep Functions in Noisy Shortcuts to Adiabaticity. <i>Entropy</i> , 2021, 23, 897.	1.1	1
9	Counteracting dephasing in Molecular Nanomagnets by optimized qudit encodings. <i>Npj Quantum Information</i> , 2021, 7, .	2.8	20
10	Quantum to classical walk transitions tuned by spontaneous emissions. <i>Physical Review Research</i> , 2021, 3, .	1.3	5
11	Evolution of Charge-Lattice Dynamics across the Kuramoto Synchronization Phase Diagram of Quantum Tunneling Polarons in Cuprate Superconductors. <i>Condensed Matter</i> , 2021, 6, 52.	0.8	3
12	Noninteracting many-particle quantum transport between finite reservoirs. <i>Physical Review A</i> , 2020, 102, .	1.0	5
13	Molecular Nanomagnets as Qubits with Embedded Quantum-Error Correction. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 8610-8615.	2.1	48
14	Resonant Quantum Kicked Rotor as A Continuous-Time Quantum Walk. <i>Condensed Matter</i> , 2020, 5, 4.	0.8	9
15	Many Body Quantum Chaos. <i>Condensed Matter</i> , 2020, 5, 41.	0.8	1
16	Quantum search with a continuous-time quantum walk in momentum space. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2020, 53, 065301.	0.6	9
17	Optimized three-level quantum transfers based on frequency-modulated optical excitations. <i>Scientific Reports</i> , 2020, 10, 2185.	1.6	18
18	Dephasingâ€“rephasing dynamics of one-dimensional tunneling quasicondensates. <i>New Journal of Physics</i> , 2020, 22, 073020.	1.2	8

#	ARTICLE	IF	CITATIONS
19	Experimental realization of a momentum-space quantum walk. <i>Physical Review A</i> , 2019, 99, .	1.0	18
20	Accelerating adiabatic protocols for entangling two qubits in circuit QED. <i>Physical Review A</i> , 2019, 99, .	1.0	18
21	Effect of Phase Errors on a Quantum Control Protocol Using Fast Oscillations. <i>Condensed Matter</i> , 2019, 4, 34.	0.8	5
22	Impact of Lattice Vibrations on the Dynamics of a Spinor Atom-Optics Kicked Rotor. <i>Condensed Matter</i> , 2019, 4, 10.	0.8	4
23	A Quantum Model for the Dynamics of Cold Dark Matter. <i>Condensed Matter</i> , 2019, 4, 89.	0.8	2
24	Spontaneous emission in quantum walks of a kicked Bose-Einstein condensate. <i>Physical Review A</i> , 2019, 99, .	1.0	4
25	Asymmetric many-body loss in a bosonic double well. <i>Physical Review A</i> , 2018, 97, .	1.0	1
26	Fast adiabatic evolution by oscillating initial Hamiltonians. <i>Physical Review A</i> , 2018, 98, .	1.0	39
27	Landauer-Büttiker equation for bosonic carriers. <i>Physical Review A</i> , 2018, 98, .	1.0	17
28	Two-Time Correlation Functions in Dissipative and Interacting Bose-Hubbard Chains. <i>Condensed Matter</i> , 2018, 3, 2.	0.8	4
29	Quantum Walk in Momentum Space with a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2018, 121, 070402.	2.9	66
30	Quantum walks of kicked Bose-Einstein condensates. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2018, 51, 275301.	0.7	8
31	Models for a multimode bosonic tunneling junction. <i>Annalen Der Physik</i> , 2017, 529, 1600327.	0.9	5
32	Mean-Field Transport of a Bose-Einstein Condensate. <i>Springer Proceedings in Physics</i> , 2017, , 49-58.	0.1	0
33	Two-dimensional simulation of quantum reflection. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2017, 50, 095001.	0.6	5
34	Classical synchronization indicates persistent entanglement in isolated quantum systems. <i>Nature Communications</i> , 2017, 8, 14829.	5.8	68
35	Generation of robust entangled states in a non-Hermitian periodically driven two-band Bose-Hubbard system. <i>Physical Review A</i> , 2017, 95, .	1.0	0
36	Occupation-Constrained Interband dynamics of a Non-Hermitian Two-Band Bose-Hubbard Hamiltonian. <i>Fluctuation and Noise Letters</i> , 2017, 16, 1750023.	1.0	0

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37	Quantum walk of a Bose-Einstein condensate in the Brillouin zone. <i>Physical Review A</i> , 2017, 96, .	1.0	17
38	Superadiabatic driving of a three-level quantum system. <i>Physical Review A</i> , 2017, 96, .	1.0	14
39	Hamiltonian Ratchets with Ultra-Cold Atoms. <i>Annalen Der Physik</i> , 2017, 529, 1600335.	0.9	20
40	Extracting Lyapunov exponents from the echo dynamics of Bose-Einstein condensates on a lattice. <i>Physical Review A</i> , 2017, 96, .	1.0	13
41	Quantum coherent tractor beam effect for atoms trapped near a nanowaveguide. <i>Scientific Reports</i> , 2016, 6, 28905.	1.6	15
42	Applications of fidelity measures to complex quantum systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016, 374, 20150153.	1.6	8
43	Quantum random walk of a Bose-Einstein condensate in momentum space. <i>Physical Review A</i> , 2016, 93, .	1.0	29
44	Spectral analysis of two-dimensional Bose-Hubbard models. <i>Physical Review A</i> , 2016, 93, .	1.0	11
45	Initial-state dependence of a quantum resonance ratchet. <i>Physical Review A</i> , 2016, 94, .	1.0	18
46	Steering random walks with kicked ultracold atoms. <i>Physical Review A</i> , 2015, 92, .	1.0	17
47	Chaotic level mixing in a two-band Bose-Hubbard model. <i>Annalen Der Physik</i> , 2015, 527, 656-662.	0.9	2
48	Negative Differential Conductivity in an Interacting Quantum Gas. <i>Physical Review Letters</i> , 2015, 115, 050601.	2.9	92
49	Non-equilibrium dynamics in dissipative Bose-Hubbard chains. <i>Annalen Der Physik</i> , 2015, 527, 619-628.	0.9	38
50	The dissipative Bose-Hubbard model. <i>European Physical Journal: Special Topics</i> , 2015, 224, 2127-2171.	1.2	57
51	Exact numerical methods for a many-body Wannier-Stark system. <i>Computer Physics Communications</i> , 2015, 186, 19-30.	3.0	8
52	Nonlinear Dynamics and Quantum Chaos. <i>Graduate Texts in Physics</i> , 2014, , .	0.1	45
53	Quantum diffusion and thermalization at resonant tunneling. <i>Physical Review A</i> , 2014, 89, .	1.0	19
54	Aspects of Quantum Chaos. <i>Graduate Texts in Physics</i> , 2014, , 103-202.	0.1	0

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55	Bosonic transport through a chain of quantum dots. <i>European Physical Journal B</i> , 2013, 86, 1.	0.6	34
56	Dynamical tunneling of a Bose-Einstein condensate in periodically driven systems. <i>Physical Review E</i> , 2013, 88, 034901.	0.8	20
57	Two-band Bose-Hubbard model for many-body resonant tunneling in the Wannier-Stark system. <i>Physical Review A</i> , 2013, 88, .	1.0	29
58	Engineering quantum correlations to enhance transport in cold atoms. <i>Physical Review A</i> , 2013, 87, .	1.0	20
59	THEORETICAL PROPOSAL FOR THE DYNAMICAL CONTROL OF THE NONLINEAR OPTICAL RESPONSE FREQUENCY. <i>Fluctuation and Noise Letters</i> , 2013, 12, 1350003.	1.0	1
60	Noise-assisted transport in the Wannier-Stark system. <i>New Journal of Physics</i> , 2013, 15, 045008.	1.2	5
61	Scale-free relaxation of a wave packet in a quantum well with power-law tails. <i>New Journal of Physics</i> , 2013, 15, 033033.	1.2	5
62	Quantum reflection from an oscillating surface. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 141002.	0.6	5
63	Fidelity of the quantum $\hat{\rho}$ -kicked accelerator. <i>Physical Review E</i> , 2013, 87, 020902.	0.8	16
64	Decay and fragmentation in an open Bose-Hubbard chain. <i>Physical Review A</i> , 2013, 87, .	1.0	39
65	LANDAU-ZENER TRANSITIONS IN THE PRESENCE OF HARMONIC NOISE. <i>Fluctuation and Noise Letters</i> , 2013, 12, 1340005.	1.0	3
66	ENGINEERING TRANSPORT BY CONCATENATED MAPS. <i>Fluctuation and Noise Letters</i> , 2013, 12, 1340004.	1.0	3
67	Resonant driving of a nonlinear Hamiltonian system. <i>Journal of Physics: Conference Series</i> , 2013, 442, 012063.	0.3	1
68	Non-hermitian approach to decaying ultracold bosonic systems. <i>Journal of Physics: Conference Series</i> , 2013, 442, 012029.	0.3	8
69	Manifold Approach for a Many-Body Wannier-Stark System: Localization and Chaos in Energy Space. <i>Acta Physica Polonica A</i> , 2013, 124, 1091-1097.	0.2	6
70	Energetically constrained co-tunneling of cold atoms. <i>New Journal of Physics</i> , 2012, 14, 075002.	1.2	11
71	Dissipation-induced macroscopic entanglement in an open optical lattice. <i>Europhysics Letters</i> , 2012, 100, 30007.	0.7	39
72	Induced delocalization by correlation and interaction in the one-dimensional Anderson model. <i>Physical Review B</i> , 2012, 85, .	1.1	30

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73	Controlling the momentum current of an off-resonant ratchet. <i>Physical Review A</i> , 2012, 86, .	1.0	18
74	Wave-function-renormalization effects in resonantly enhanced tunneling. <i>Physical Review A</i> , 2012, 85, .	1.0	13
75	Fidelity for kicked atoms with gravity near a quantum resonance. <i>Physical Review E</i> , 2012, 85, 036205.	0.8	7
76	Phase-selected momentum transport in ultra-cold atoms. <i>European Physical Journal D</i> , 2012, 66, 1.	0.6	8
77	Beyond mean-field dynamics in open Bose-Hubbard chains. <i>Physical Review A</i> , 2011, 83, .	1.0	100
78	Dynamical enhancement of spatial entanglement in massive particles. <i>Physical Review A</i> , 2011, 84, .	1.0	5
79	A Pseudoclassical Method for the Atom-Optics Kicked Rotor. <i>Advances in Atomic, Molecular and Optical Physics</i> , 2011, 60, 315-369.	2.3	43
80	Two-photon-driven nonlinear dynamics and entanglement of an atom in a nonuniform cavity. <i>Physical Review A</i> , 2011, 84, .	1.0	7
81	Fidelity of the near-resonant quantum kicked rotor. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011, 44, 335101.	0.7	3
82	Effective spin model for interband transport in a Wannier-Stark lattice system. <i>European Physical Journal D</i> , 2011, 63, 47-53.	0.6	17
83	Decay of a Bose-Einstein condensate in a dissipative lattice – the mean-field approximation and beyond. <i>European Physical Journal D</i> , 2011, 63, 63-71.	0.6	33
84	StÃ¼ckelberg-interferometry with ultra-cold atoms. <i>European Physical Journal D</i> , 2011, 65, 199-205.	0.6	13
85	Editorial: Hybrid quantum systems – new perspectives on quantum state control. <i>European Physical Journal D</i> , 2011, 63, 1-2.	0.6	2
86	Engineering of Landau–Zener tunneling. <i>Applied Physics B: Lasers and Optics</i> , 2011, 102, 489-495.	1.1	6
87	Detection of avoided crossings by fidelity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011, 390, 1363-1369.	1.2	10
88	Engineering interband transport by time-dependent disorder. <i>Physical Review A</i> , 2011, 84, .	1.0	5
89	Nonlinear dynamics of two coupled nano-electromechanical resonators. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 215402.	0.6	14
90	Collapse and revival in inter-band oscillations of a two-band Bose–Hubbard model. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2010, 43, 081001.	0.6	18

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91	Time-resolved measurement of Landau-Zener tunneling in different bases. <i>Physical Review A</i> , 2010, 82, .	1.0	37
92	Nonlinear resonant tunneling of Bose-Einstein condensates in tilted optical lattices. <i>Physical Review A</i> , 2010, 82, .	1.0	29
93	Pseudoclassical theory for fidelity of nearly resonant quantum rotors. <i>Physical Review E</i> , 2009, 80, 035206.	0.8	11
94	Time-Resolved Measurement of Landau-Zener Tunneling in Periodic Potentials. <i>Physical Review Letters</i> , 2009, 103, 090402.	2.9	105
95	Pseudo-classical theory for directed transport at quantum resonance. <i>New Journal of Physics</i> , 2009, 11, 083027.	1.2	15
96	Dissipation-induced coherence and stochastic resonance of an open two-mode Bose-Einstein condensate. <i>Physical Review A</i> , 2009, 79, .	1.0	52
97	Resonant tunneling of Bose-Einstein condensates in optical lattices. <i>New Journal of Physics</i> , 2008, 10, 053038.	1.2	38
98	Dissipation Induced Coherence of a Two-Mode Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2008, 101, 200402.	2.9	98
99	Many-body Landau-Zener tunneling in the Bose-Hubbard model. <i>Physical Review A</i> , 2008, 77, .	1.0	26
100	Engineering many-body quantum dynamics by disorder. <i>Physical Review A</i> , 2008, 77, .	1.0	11
101	Scaling law and stability for a noisy quantum system. <i>Physical Review E</i> , 2008, 78, 025206.	0.8	13
102	Mean-field dynamics of a two-mode Bose-Einstein condensate subject to noise and dissipation. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 171001.	0.6	50
103	Driven collective quantum tunneling of ultracold atoms in engineered optical lattices. <i>Europhysics Letters</i> , 2007, 77, 40005.	0.7	10
104	Bose-Einstein condensates in accelerated double-periodic optical lattices: Coupling and crossing of resonances. <i>Physical Review A</i> , 2007, 75, .	1.0	31
105	Resonantly Enhanced Tunneling of Bose-Einstein Condensates in Periodic Potentials. <i>Physical Review Letters</i> , 2007, 98, 120403.	2.9	92
106	Many-Body Interband Tunneling as a Witness of Complex Dynamics in the Bose-Hubbard Model. <i>Physical Review Letters</i> , 2007, 98, 130402.	2.9	35
107	Engineered quantum tunnelling in extended periodic potentials. <i>Journal of Physics: Conference Series</i> , 2007, 67, 012060.	0.3	3
108	Multifractal fluctuations in the survival probability of an open quantum system. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 376, 266-274.	1.2	9

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109	Nonexponential decay of Bose-Einstein condensates: a numerical study based on the complex scaling method. <i>Applied Physics B: Lasers and Optics</i> , 2007, 86, 385-390.	1.1	31
110	Nonlinear dynamics in double square-well potentials. <i>Theoretical and Mathematical Physics</i> (Russian) 107, 107-115.	0.3	4
111	Quantum Chaos, Transport, and Control in Quantum Optics. <i>Advances in Atomic, Molecular and Optical Physics</i> , 2006, 53, 33-73.	2.3	23
112	Saturation of fidelity in the atom-optics kicked rotor. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006, 39, L145-L151.	0.6	22
113	Can quantum fractal fluctuations be observed in an atom-optics kicked rotor experiment?. <i>Journal of Physics A</i> , 2006, 39, 2477-2491.	1.6	6
114	Tunnelling rates for the nonlinear Wannier-Stark problem. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006, 39, 729-740.	0.6	30
115	Resonance-Assisted Decay of Nondispersive Wave Packets. <i>Physical Review Letters</i> , 2006, 97, 043001.	2.9	15
116	Transient localization in the kicked Rydberg atom. <i>Physical Review A</i> , 2006, 74, .	1.0	5
117	Chaotic ratchet dynamics with cold atoms in a pair of pulsed optical lattices. <i>Physical Review A</i> , 2006, 74, .	1.0	37
118	The role of quasi-momentum in the resonant dynamics of the atom-optics kicked rotor. <i>Journal of Physics A</i> , 2005, 38, 10549-10557.	1.6	14
119	Ballistic and Localized Transport for the Atom Optics Kicked Rotor in the Limit of a Vanishing Kicking Period. <i>Physical Review Letters</i> , 2005, 94, 174103.	2.9	39
120	Nonlinearity-induced destruction of resonant tunneling in the Wannier-Stark problem. <i>Physical Review A</i> , 2005, 72, .	1.0	46
121	Resonant Nonlinear Quantum Transport for a Periodically Kicked Bose Condensate. <i>Physical Review Letters</i> , 2005, 94, 130404.	2.9	51
122	Delocalized and resonant quantum transport in nonlinear generalizations of the kicked rotor model. <i>Physical Review E</i> , 2005, 71, 036220.	0.8	18
123	Experimental verification of a one-parameter scaling law for the quantum and classical resonances of the atom-optics kicked rotor. <i>Physical Review A</i> , 2005, 71, .	1.0	25
124	Classical Scaling Theory of Quantum Resonances. <i>Physical Review Letters</i> , 2004, 92, 084102.	2.9	58
125	Decoherence as a probe of coherent quantum dynamics. <i>Physical Review E</i> , 2004, 69, 027201.	0.8	30
126	Decay, interference, and chaos. <i>European Physical Journal D</i> , 2003, 26, 21-26.	0.6	8

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127	Quantum resonances and decoherence for \hat{A} -kicked atoms. <i>Nonlinearity</i> , 2003, 16, 1381-1420.	0.6	107
128	Decay Rates and Survival Probabilities in Open Quantum Systems. <i>Physical Review Letters</i> , 2002, 89, 263601.	2.9	27
129	Signatures of Anderson localization in the ionization rates of periodically driven Rydberg states. <i>Journal of Physics A</i> , 2001, 34, 7181-7193.	1.6	18